

DIGITAL WORKSTATION MONITOR SPEAKER
Tyros2 / TRS-MS02

SERVICE MANUAL



Tyros2



TRS-MS02

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IMPORTANT NOTICE

This manual has been provided for the use of authorized Yamaha Retailers and their service personnel. It has been assumed that basic service procedures inherent to the industry, and more specifically Yamaha Products, are already known and understood by the users, and have therefore not been restated.

WARNING: Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components and failure of the product to perform as specified. For these reasons, we advise all Yamaha product owners that all service required should be performed by an authorized Yamaha Retailer or the appointed service representative.

IMPORTANT: This presentation or sale of this manual to any individual or firm does not constitute authorization, certification, recognition of any applicable technical capabilities, or establish a principal-agent relationship of any form.

The data provided is believed to be accurate and applicable to the unit(s) indicated on the cover. The research engineering, and service departments of Yamaha are continually striving to improve Yamaha products. Modifications are, therefore, inevitable and changes in specification are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

WARNING: Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground buss in the unit (heavy gauge black wires connect to this buss).

IMPORTANT: Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

WARNING: CHEMICAL CONTENT NOTICE!

The solder used in the production of this product contains LEAD. In addition, other electrical / electronic and / or plastic (where applicable) components may also contain traces of chemicals found by the California Health and Welfare Agency (and possibly other entities) to cause cancer and / or birth defects or other reproductive harm.

DO NOT PLACE SOLDER, ELECTRICAL / ELECTRONIC OR PLASTIC COMPONENTS IN YOUR MOUTH FOR ANY REASON WHAT SO EVER!

Avoid prolonged, unprotected contact between solder and your skin! When soldering, do not inhale solder fumes or expose eyes to solder / flux vapor!

If you come in contact with solder or components located inside the enclosure of this product, wash your hands before handling food.

IMPORTANT NOTICE FOR THE UNITED KINGDOM Connecting the Plug and Cord


IMPORTANT. The wires in this mains lead are coloured in accordance with the following code:

BLUE : NEUTRAL
BROWN : LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.
The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.
Making sure that neither core is connected to the earth terminal of the three pin plug.

■ WARNING

Components having special characteristics are marked  and must be replaced with parts having specification equal to those originally installed.

■ SAVING DATA

Saving and backing up your data

The data of the types listed below are lost when you turn off the power to the instrument.

Save the data to the User drive or appropriate external media.

■ SPECIFICATIONS (Tyros2)

Sound Source	AWM Dynamic Stereo Sampling	
Keyboard	61 keys (C1 – C6) Initial touch/Aftertouch	
LCD Display	640 x 480 dots VGA Color LCD	
	Music Score, Lyrics	Yes
	Text	Yes
	RAM Capacity per a text	approx. 60 KB
	Wallpaper Customize	Yes
Voice	Polyphony (max)	128
	Voice Selection	504 voices (486 Normal + 18 Mega) + 10 Organ Flute + 480 XG voices + 256 GM2 Voices + 23 Drum kits + 6 SFX Kits (And GS Voices for GS Song playback)
	MegaVoices	(18 voices) Small Strings, Large Strings, Brass, Tenor Sax, Trumpet, Nylon Guitar, Solid Guitar 1/2, Steel Guitar, Hi String Guitar, 12Strings Guitar, Clean Guitar, Overdrive, Distortion, Acoustic Bass, Finger Bass, Pick Bass, Fretless Bass
	Sweet! Voices	(23 voices) Jazz/Pop/Ballad TenorSax, Growl Sax, Tenor Sax, Alto Sax, Soprano Sax, Jazz/Silver/Golden Trumpet, Cornet, Trumpet, Mute Trumpet, Flugel Horn, Trombone, Violin, Harmonica, Mandolin, Oboe, Clarinet, Flute, Pan Flute, Classical Flute
	Live! Voices	(58 voices) Dynamic Strings, Spiccato, Dynamic Brass, Power Brass, French Horn, Sax Section, Dynamic Steel Guitar, Grand Piano, Dynamic Nylon Guitar, Gospel Choir, etc.
	Live! Drums	(9 drum kits) Live! PowerKit 1/2, Live! Studio, Live! Standard 1/2, Live! Brush, Live! Symphony, Live! PopLatin, Live! Cuban
	Cool! Voices	(39 voices) Sparkle Stack, Curved Bars, Slide Solid, Clean Guitar, Jazz Guitar, Power Lead, etc.
	Organ Flutes!	10 presets
Super Articulation Voices	(42 voices) Concert Strings, Tremolo Bowing 1/2, Big Band Brass, Brass Fall f/mf, Trumpet, Trumpet Shake1/2, Saxophone, Concert Guitar, Flamenco Guitar, Steel Guitar, Warm Solid, Guitar Hero, Feedbacker, Magic Bell, etc.	
Orchestration	Upper	Right 1 – 3
	Lower	Left
	Split	Left (default point: F#2) Style (default point: F#2) Right 3 (default point: G2)
Voice Expandability	Function	Voice setting Editor / Voice Creator with Wave Assign
	Pre- Installed Memory size	4 MB
	Additional Memory	1024 MB (Optional)
	Maximum size Slot	168 pin DIMM x 2
Hard Disk Recorder	Control	PLAY, PAUSE, STOP, REC, PREV, NEXT
	Playlist	Repeat, Sort, Shuffle, Marking
	File format	Wave (16-bit, 44.1 kHz, stereo)
Effects	Effect Blocks	Reverb/Chorus/DSP 6 Microphone 1
	Effect Types	Reverb/Chorus/DSP Reverb: 34 presets + 3 users Chorus: 30 presets + 3 users DSP Effect For Style: 189 presets + 3 users DSP Effect For R1/R2/R3/Left: 189 presets + 10 users DSP Effect For Mic: 189 presets + 10 users
	Mic Effects	Noise Gate x 1, Compressor x 1, 3Band EQ x 1
	Master EQ (5 band)	5 presets + 2 users
	Master Compressor	5 presets + 5 users
	Part EQ (2 band)	29 Parts (R1, R2, R3, Left, MultiPad, Style x 8, Song x 16)
	Poly/Mono	ON/OFF
	Vocal Harmony	60 presets + 10 users
	Harmony/Echo	17 presets
	Upper Octave	-1, 0, +1
	Part Octave	-2, -1, 0, +1, +2
	Pitch Bend Wheel	Available
	Modulation Wheel	Available

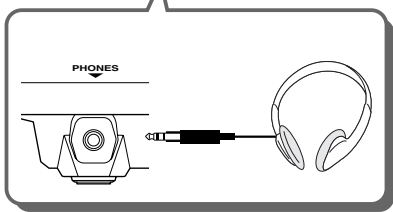
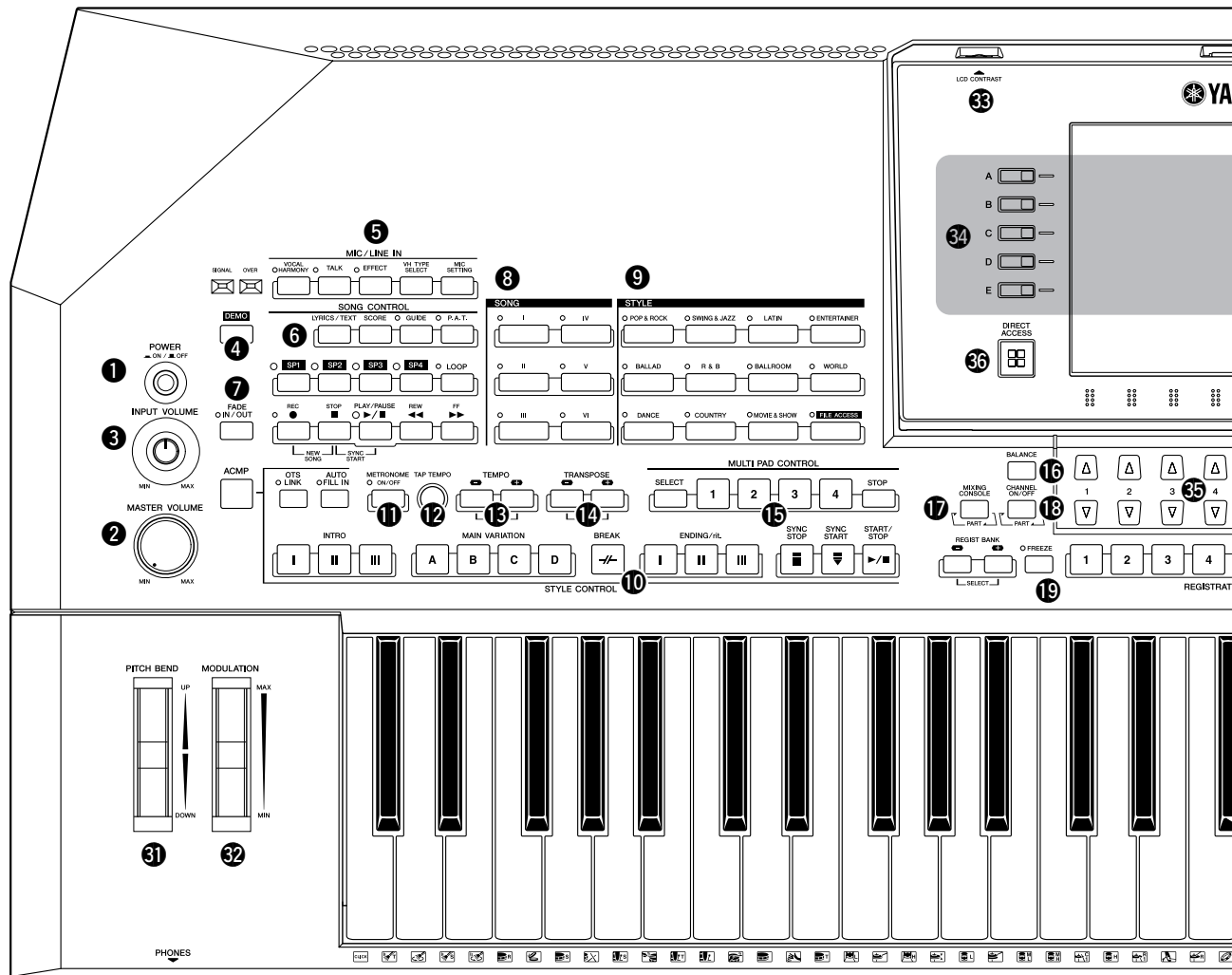
Accompaniment Style	Accompaniment Styles	400 (11 categories)	
	Pro Styles	357	
	Session Styles	43	
	MegaVoice Styles	(Using by preset styles)	
	Fingering	Single Finger, Fingered, Fingered On Bass, Multi Finger, AI Fingered, Full Keyboard, AI Full Keyboard	
	Control	Intro x 3, Fill In x 4, Main x 4, Break x 1, Ending x 3, Fade In/Out, Tap Tempo	
	Style Creator	YES	
	OTS (One Touch Setting)	4 for Each Style (Programmable)	
OTS Link	YES		
Music Finder	Preset	1,835 records	
	Edit	Programmable. Up to 2,500 records.	
	RAM Capacity per a style	approx. 120 KB	
Song	Preset Songs	5	
	Control	PLAY, PAUSE, STOP, REC, FF, REW	
	Song Position Jump	4 point / Loop	
	Tracks	16	
	Guide	Follow Lights, Any Key, Karao-Key, Vocal CueTIME	
	Performance assistant Technology	YES	
	Recording	Quick Recording, Multi Recording, Step Recording, Song Editing	
	Record Channels	16	
	RAM Capacity per a song	approx. 300 KB	
Multi Pad	Preset	120	
	Control	Pad 1 – 4, Stop, Select	
Tempo		5 – 500, Tap Tempo	
Transpose		-12 – 0 – 12 (Assignable Keyboard/Song/Master)	
Tuning		414.8 – 440 – 466.8 Hz	
Internet Direct Connection		External Adapter (via USB to DEVICE)	
Memory Device	Internal Flash Memory for user drive	3.2 MB	
	Hard Disk Drive (Internal)	2.5-inch IDE (Optional)	
	Storage devices (via USB to DEVICE)	USB Flash Memory, USB Hard Disk Drive, etc.	
Registration Memory	Buttons	8	
	Control	Bank +/-, Regist Sequence, Freeze	
Others	Demo	YES	
	Language for Display	5 Languages (English, German, French, Spanish, Italian)	
	Direct Access	YES	
	Scale Type	9 presets	
	Metronome	YES	
Terminals	USB to HOST	YES	
	USB to DEVICE	YES (2 terminals: Front / Back)	
	MIDI	MIDI A (IN/OUT), MIDI B (IN/OUT)	
	Control	Foot Pedal 1 (Sustain) / 2 (S. Articulation) / 3 (Volume) Function Assignable	
	Video Out	NTSC / PAL Composite	
	RGB Out	YES	
	Audio	PHONES Main Line Output (L/L+R, R) Sub Output 1, Sub Output 2 Loop Send (L/L+R, R) / AUX Out (Level Fixed): Selectable Loop Return (L/L+R, R) / Aux In MIC / LINE IN (Stereo)	
	For Option Speaker	To Satellite Speaker (L/R), To Sub Woofer (L/R)	
	Power Supply	AC (Inlet)	
	Dimensions [W x D x H] (with the Music Rest)		1,140 x 450 x 137 mm (1,140 x 536 x 371 mm)
Weight (with the Music Rest)		14.5 kg (15.5 kg)	
Packing List	AC Power cord X 1		
	Music rest and brackets		
	CD-ROM		
	Owner's Manual, Data List, Installation Guide		
	Screws for installing the optional hard disk drive		
Optional Accessories	Speaker	TRS-MS02	
	Headphones	HPE-150/HPE-160/HPE-170	
	Foot Switch	FC4/FC5	
	Foot Controller	FC7	
	MIDI Foot Controller	MFC-10	
	Floppy Disk Drive	UD-FD01	
	Keyboard Stand	L-7/L-7S	

■ SPECIFICATIONS (TRS-MS02)

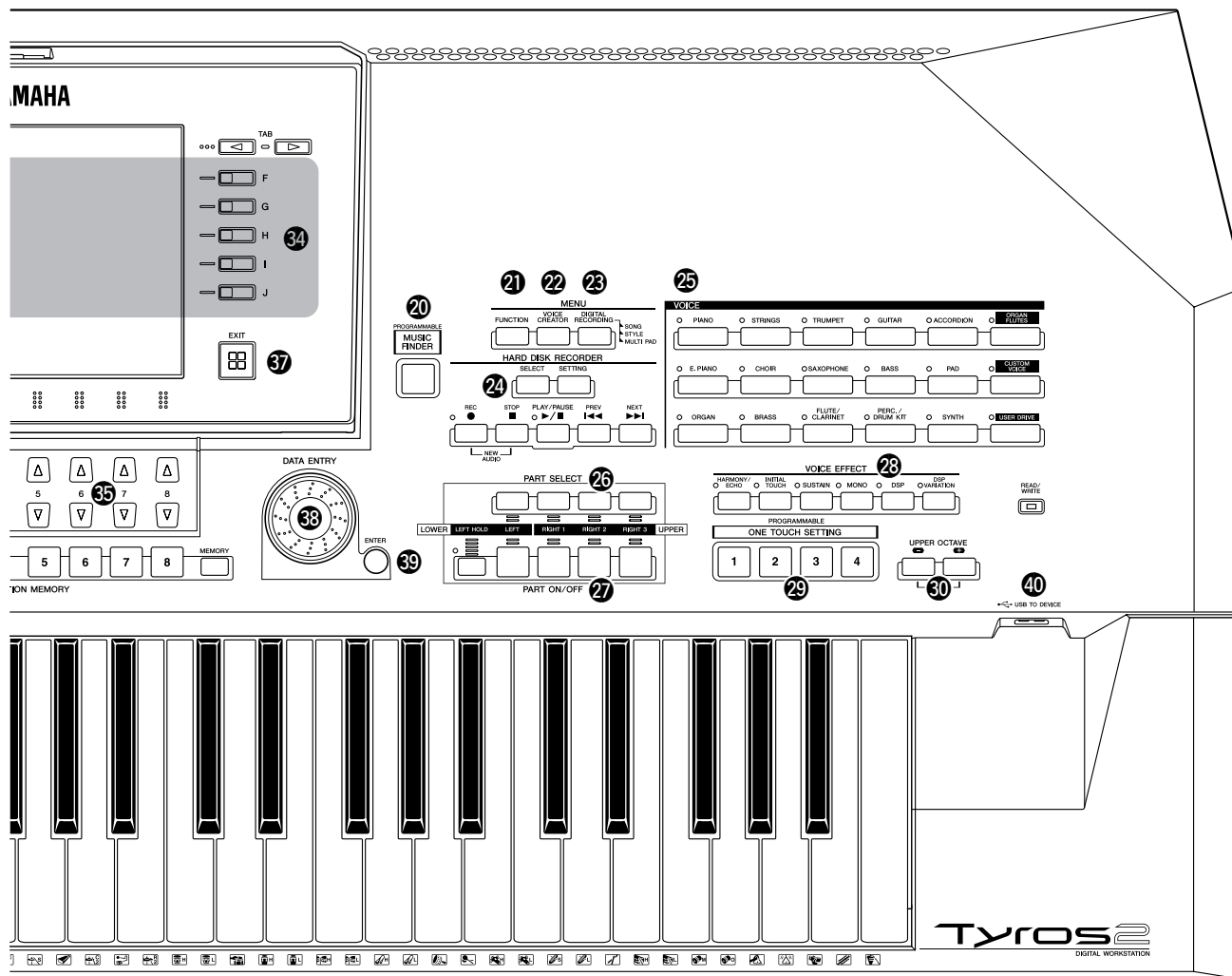
Type	Advanced Active Servo Technology
Output power	Satellite speakers..... 20 W + 20 W (1 kHz, 4 Ω at T.H.D.=10%) Subwoofer..... 40 W (100 Hz, 5 Ω at T.H.D.=10%)
Frequency response	32 Hz to 20 kHz
Speaker unit	Satellite speakers Tweeter..... 1.9 cm (3/4") dome, magnetic shielding Midrange..... 8 cm (3") cone, magnetic shielding Subwoofer..... 16 cm (6.5") cone, magnetic shielding
Power consumption	65W
Power supply	U.S.A. and Canada models.....AC 120 V, 60 Hz Australia model.....AC 240 V, 50 Hz U.K. and Europe models.....AC 230 V, 50 Hz
Dimensions (W x H x D)	Satellite speakers.....97 (3.8") x 174 (6.9") x 178 (7")mm Subwoofer.....350 (13.8") x 210 (8.3") x 321 (12.6") mm
Weight	Satellite speakers.....0.7 kg (1 lb. 9 oz.) x 2 Subwoofer.....8.0 kg (17 lbs. 10 oz.)
Accessories	Speaker brackets x 2, RCA pin cables x 2, RCA pin/8-pin combination cable x 1

■ PANEL LAYOUT(Tyros2)

● FRONT PANEL

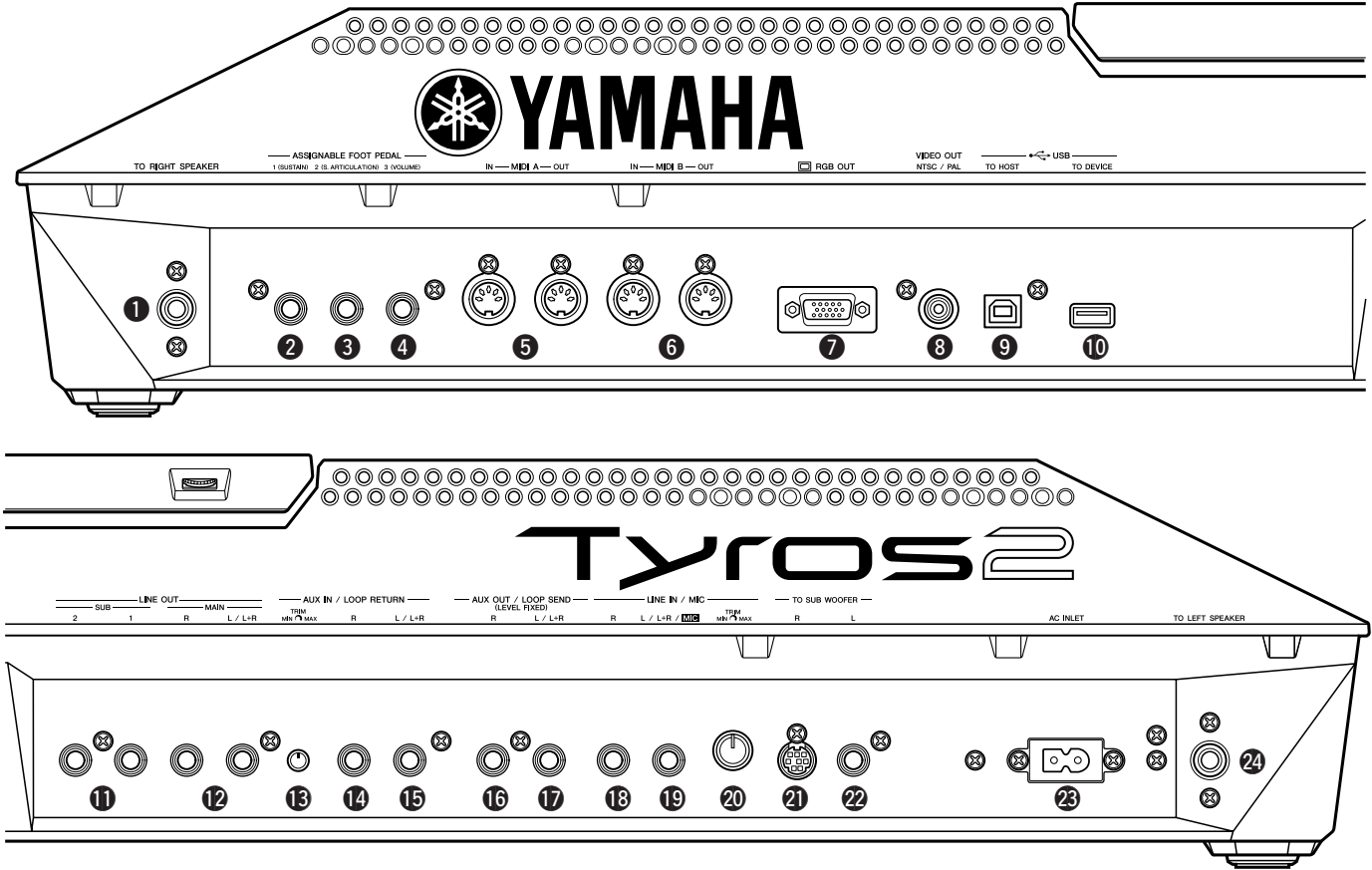


- | | |
|-------------------------|------------------------------------|
| ① POWER ON/OFF switch | ⑪ METRONOME button |
| ② MASTER VOLUME control | ⑫ TAP TEMPO button |
| ③ INPUT VOLUME control | ⑬ TEMPO buttons |
| ④ DEMO button | ⑭ TRANSPOSE buttons |
| ⑤ MIC/LINE IN buttons | ⑮ MULTIPAD CONTROL buttons |
| ⑥ SONG CONTROL buttons | ⑯ BALANCE button |
| ⑦ FADE IN/OUT buttons | ⑰ MIXING CONTROL button |
| ⑧ SONG buttons | ⑱ CHANNEL ON/OFF button |
| ⑨ STYLE buttons | ⑲ REGISTRATION MEMORY buttons |
| ⑩ STYLE CONTROL buttons | ⑳ PROGRAMMABLE MUSIC FINDER button |



- 21 FUNCTION button
- 22 VOICE CREATOR button
- 23 DIGITAL RECORDING button
- 24 HARD DISK RECORDER buttons
- 25 VOICE buttons
- 26 PART SELECT buttons
- 27 PART ON/OFF buttons
- 28 VOICE EFFECT buttons
- 29 PROGRAMMABLE ONE TOUCH SETTING buttons
- 30 USER OCTAVE buttons
- 31 PITCH BEND wheel
- 32 MODULATION wheel
- 33 LCD CONTRAST
- 34 LCD A-J buttons
- 35 LCD 1-8 up/down buttons
- 36 DIRECT ACCESS button
- 37 EXIT button
- 38 DATA ENTRY dial
- 39 ENTRY button
- 40 USB TO DEVICE terminal

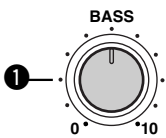
● REAR PANEL



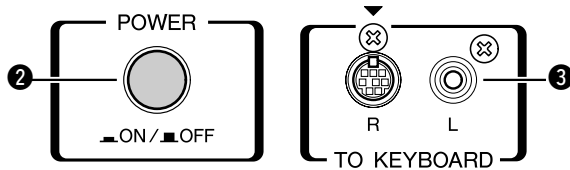
- | | |
|--|--|
| <p>① TO RIGHT SPEAKER jack</p> <p>② ASSIGNABLE FOOT PEDAL [SUSTAIN] jack</p> <p>③ ASSIGNABLE FOOT PEDAL [S.ARTICULATION] jack</p> <p>④ ASSIGNABLE FOOT PEDAL [VOLUME] jack</p> <p>⑤ MIDI A [IN],[OUT] jack</p> <p>⑥ MIDI B [IN],[OUT] jack</p> <p>⑦ RGB OUT jack</p> <p>⑧ VIDEO OUT jack</p> <p>⑨ USB jack (TO HOST)</p> <p>⑩ USB jack (TO DEVICE)</p> <p>⑪ LINE OUT SUB [1], [2] jack</p> <p>⑫ LINE OUT MAIN [R],[L/L+R] jack</p> | <p>⑬ AUX IN / LOOP RETURN TRIM control</p> <p>⑭ AUX IN / LOOP RETURN [R] jack</p> <p>⑮ AUX IN / LOOP RETURN [L/L+R] jack</p> <p>⑯ AUX OUT / LOOP SEND [R] jack</p> <p>⑰ AUX OUT / LOOP SEND [L/L+R] jack</p> <p>⑱ LINE IN / MIC [R] jack</p> <p>⑲ LINE IN / MIC [L/L+R/MIC] jack</p> <p>⑳ LINE IN / MIC TRIM control</p> <p>㉑ TO SUB WOOFER [R] jack</p> <p>㉒ TO SUB WOOFER [L] jack</p> <p>㉓ AC INLET</p> <p>㉔ TO LEFT SPEAKER jack</p> |
|--|--|

■ PANEL LAYOUT (TRS-MS02)

SUBWOOFER FRONT



SUBWOOFER REAR



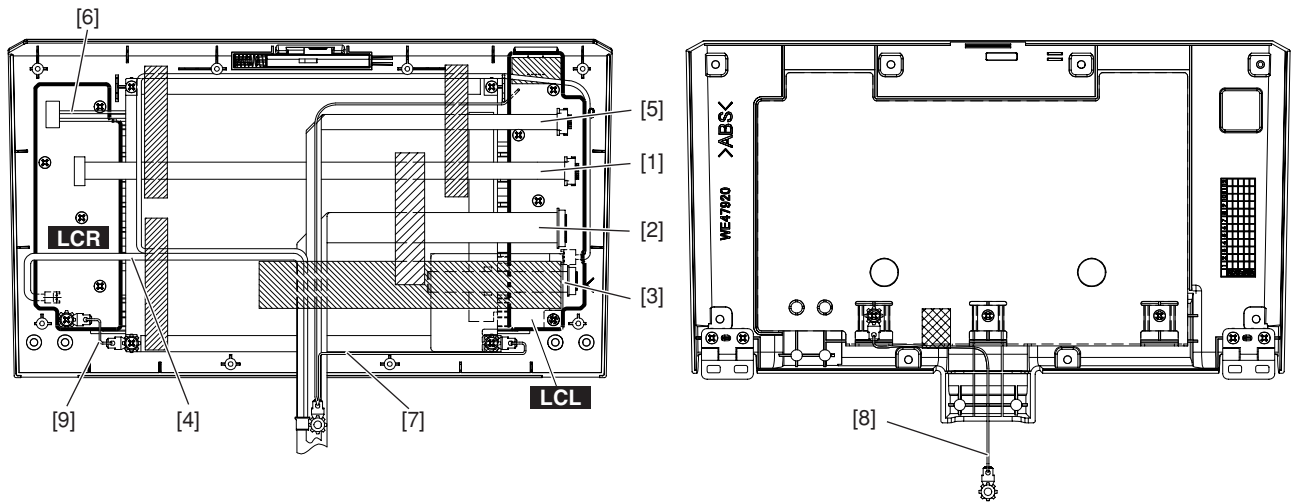
SATELLITE SPEAKER REAR



- ① BASS control knob
- ② Main POWER switch
- ③ TO KEYBOARD L,R jack (WOOFER)
- ④ TO KEYBOARD jack (Satellite)

■ CIRCUIT BOARD LAYOUT

● LCD Panel Assembly

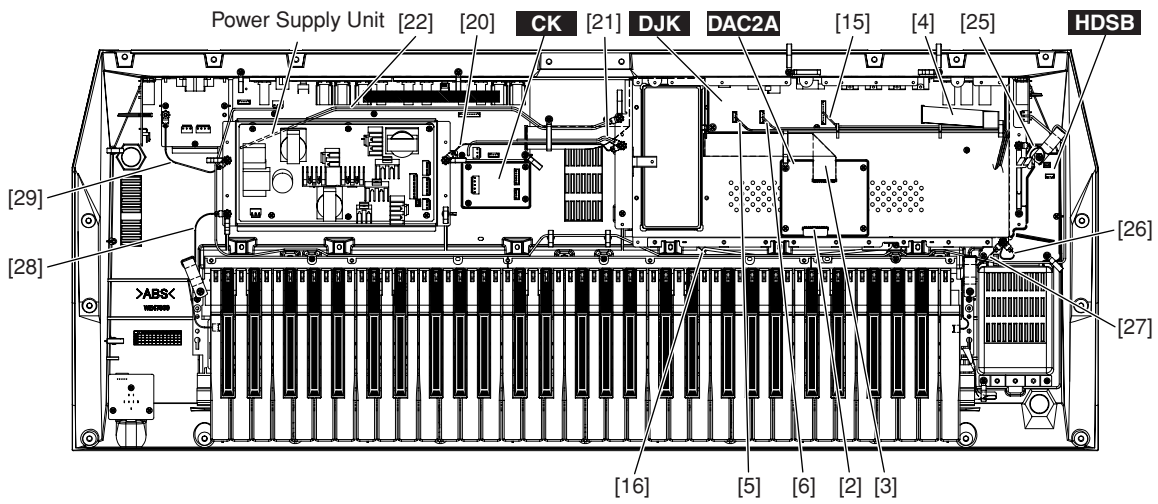
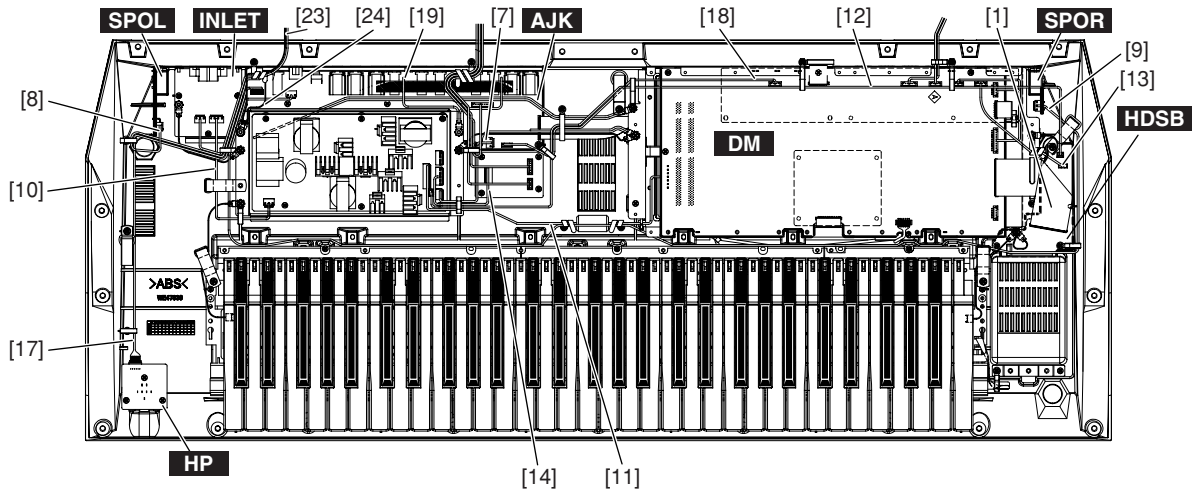


● LCD Panel Assembly

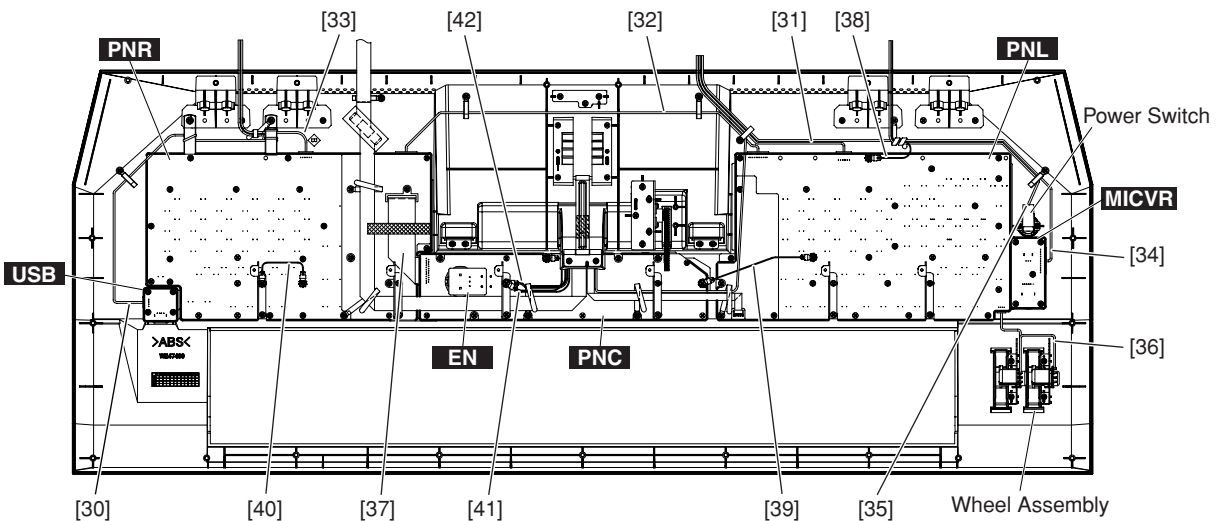
No.	Location	Part No.	Connector Assembly	Discription		Remarks
				Source	Destination	
1	130	WE844800	FFC(LCLR)	LCL-CN3	LCR-CN5	9P L=260
2	140	WF761300	FFC(LCD-B)	LCL-CN1	DM-CN2	30P L=950
3	150	WG168600	FFC(LCD)	LCL-CN2	LCD-CN1	20P L=120
4	160	(WE84640)	LC-PWR	LCL-CN7	CK-CN92	5P - 2P,3P
				LCL-CN8		
5	170	WE844700	FFC(PNL-LCL)	LCL-CN4	PNL-CN1	8P L=550
6	60	-----	LCD	LCD Backlight	LCR-CN6	
7	LCL-W1	(WG26430)	EPB1	LCL circuit board	Panel holder (R side of PNC)	GND wire
				LCD		
8	300	(WG26440)	EPC1	LCD support stay	PNC circuit board	
9	340	(WG26470)	EPSS1	LCL circuit board	LCD	

* The parts with "()" in "Part No." are not available as spare parts.

● Lower Case Side



● Upper Case Side



●Lower Case Side

No.	Location	Part No.	Connector Assembly	Discription		Remarks
				Source	Destination	
1	300	WF761200	FFC1	HDSB-CN5	DM-CN32	40P L=180
2	310	WE844400	FFC(DAC)	DAC2A-CN101	DM-CN406	26P L=70
3	320	WE844500	FFC(AJK)	AJK-CN1	DAC2A-CN801	24P L=550
4	330	WE844600	FFC(DJK)	DJK-CN10	DM-CN1	17P L=150
5	340	(WE84520)	USB(DR)	DJK-CN60	DM-CN902	5P L=400
6	350	(WE84530)	USB(H)	DJK-CN70	DM-CN8	6P L=350
7	360	(WE84540)	AJK-PWR	Power supply unit-CN3	AJK-CN2	3P L=130
8	AJK-W1	(WE84550)	SPL	AJK-W1-R/W1-W	SPOL-CN303	2P L=250
9	380	(WE84560)	SPR	SPOR- CN302	AJK-CN5	3P L=1500
10	390	(WE84570)	INLET	Power supply unit-CN1	INLET-CN301	4,2P L=290
11	400	WE845800	DM-PWR1	Power supply unit-CN2	DM-CN36	7P L=370
12	420	(WE84610)	REG-PWR	Power supply unit-CN6	HDSB-CN1	2P L=900
13	430	(WE84620)	USB-PWR	HDSB-CN2	DM-CN35	4P L=160
14	450	(WF50110)	CK-PWR	Power supply unit-CN5	CK-CN90	5P L=130
15	500	(WE84670)	VIDEO	DJK-CN80	DM-CN6	12P L=300
16	510	(WF51230)	EBUSK-LF	EMKS-FD-CN4	DM-CN30	7P L=550
17	520	(WF51240)	HP-LF	HP-CN100	AJK-CN6	6P L=600
18	570	(WF51250)	JKDET-LF	AJK-CN7	DM-CN407	5P L=550
19	AJK-W4	(WG23500)	EPA1	AC lower frame assembly	AJK W3,W4	GND wire
20	650	(WG26480)	EPSS2	AC lower frame assembly	Shield lower cover	GND wire
21	AJK-W2	(WG23510)	EPA2	AJK-W2,W10	Shield lower cover	GND wire
22	AJK-W6	(WG23520)	EPA3	AJK-W6,W9	Shield lower cover	GND wire
23	870	(WG26490)	EPSS3	Upper case assembly	AC lower frame assembly	GND wire
24	AJK-W3	(WG23490)	EP70	AJK-W3	AC lower frame assembly	GND wire
25	HDSB-W2	(WG23480)	EP50	HDSB-W2	Shield lower cover	GND wire
26	HDSB-W1	(WG23480)	EP50	HDSB-W1	Shield lower cover	GND wire
27	660	(WG26500)	EPPH1	FSX keyboard(MKH)-CN5	Shield lower cover	GND wire
28	660	(WG26500)	EPPH1	FSX keyboard(MK61L)-CN2	AC lower frame assembly	GND wire
29	680	(WG26460)	EPLS2	INLET circuit board	AC lower frame assembly	GND wire

●Upper Case Side

No.	Location	Part No.	Connector Assembly	Discription		Remarks
				Source	Destination	
30	420	(WG27700)	USB-LF	USB-CN4	DM-CN901	5P L=600
31	430	(WE84600)	PNL-PWR	PNL-CN3	CK-CN91	6P L=450
32	440	(WE84650)	PNLR	PNL-CN5	PNR-CN1	11P L=500
33	450	WF512600	EBUSP-LF	PNR-CN2	DM-CN31	7P L=400
34	510	(WE84860)	VOL	MICVR-CN200	AJK-CN3	11P L=700
35	520	(WE84690)	PSW	Power switch	INLET-CN300	2P L=500
36	WHEEL-70	(WE84700)	WHEEL	Wheel assembly	PNL-CN2	4P L=170
37	900	WG168900	FFC(PNR-PNC)	PNC-CN1	PNR-CN3	23P L=140
38	870	(WG26490)	EPSS3	PNL circuit board	AC lower frame assembly	GND wire
39	880	(WG26460)	EPLS2	PNL circuit board	PNC circuit board	GND wire
40	890	(WG26450)	EPLS1	PNR circuit board	Panel holder	GND wire
41	LCL-W1	(WG26430)	EPB1	LCL-W1 LCD frame	Panel holder	GND wire
42	LCD-300	(WG26440)	EPC1	LCD support stay	Panel holder PNC circuit board	GND wire

* The parts with "()" in "Part No." are not available as spare parts.

■ DISASSEMBLY PROCEDURE

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Tyros2

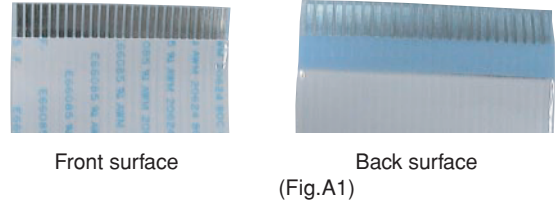
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2. AC Power Cord	24

NOTES

- When installing the unit, attach the filament tapes and the cord binders as before.
- Attention : Flat cable (FFC cable)
You can see the contact points from the back side.
Take care not to insert the flat cable into the connector in the reverse direction. (Fig.A1)



Electrical Check After Disassembling

The DM circuit board is installed upside down, using some screws.

Also, the DJK and DAC2A circuit boards are installed under the DM circuit board.

When testing these circuit boards, you can perform the electrical check by using a test sheet (X7275Z00) and four connector assemblies supplied as service parts. (Fig.A2)

The connection procedure is as follows.

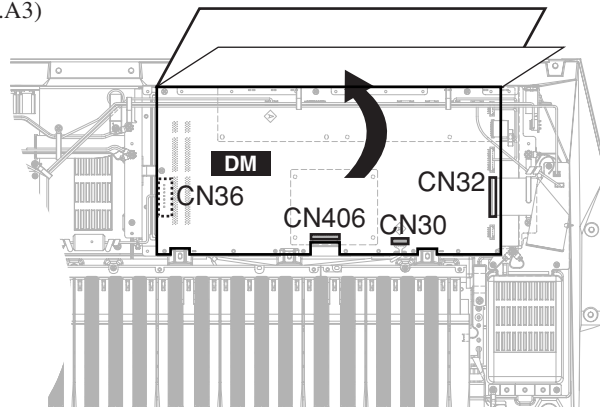
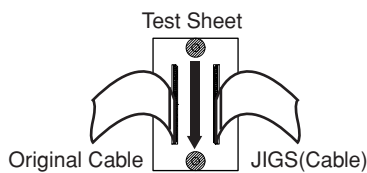
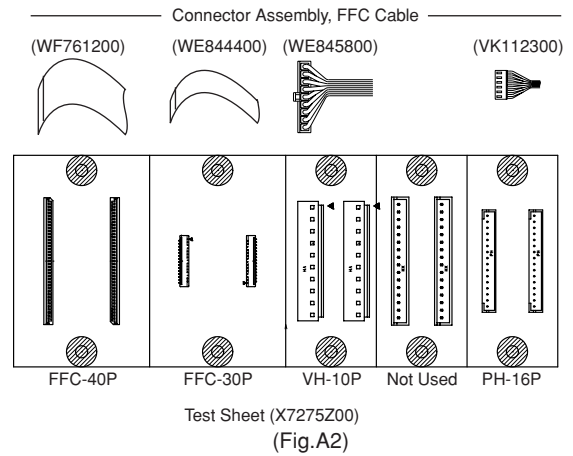
A-1 Remove all the screws on the DM circuit board.

A-2 Extend the length of the original connector assemblies and the FFC cable by using the test sheet and the connector assemblies as service parts.

Then, raise the DM circuit board vertically and check it. (Fig.A3)

- * As for the number of pins of the connectors on the test sheet, it is different from that of the original cables.

When connecting each original cable to the test sheet, connect the cable so that the edge of it can match the edge of the connector. (Fig.A3)



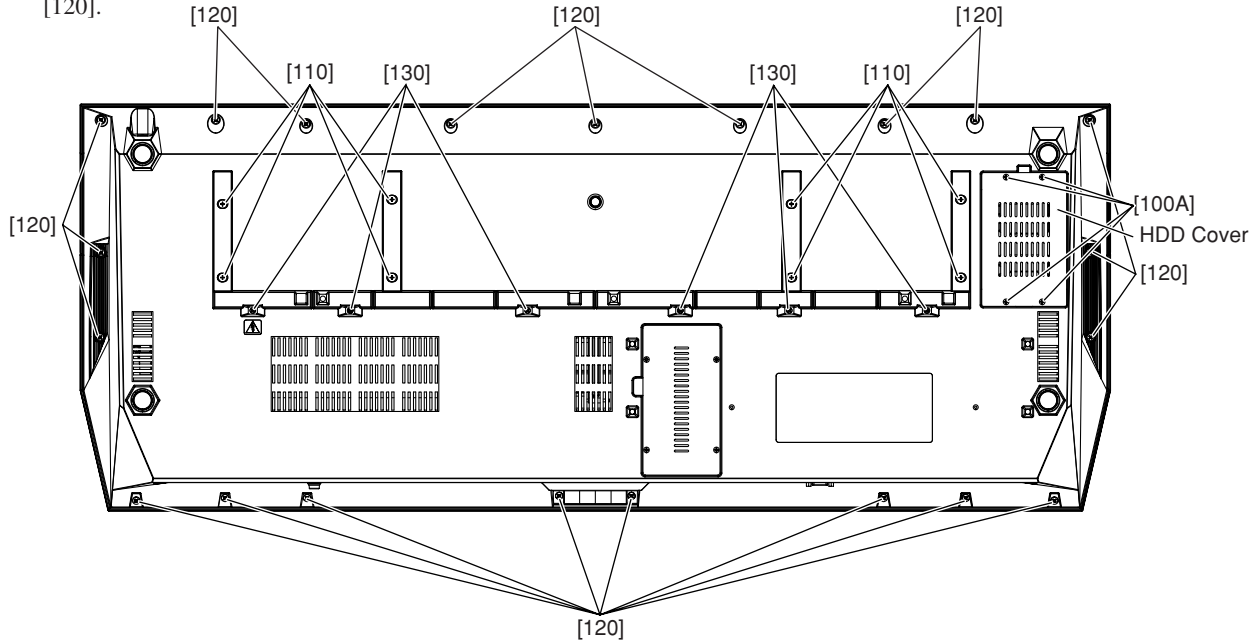
CONNECTOR	JIGS(Cable + Test Sheet)
CN30	VK112300 Connector Assembly + Test Sheet PH-16P
CN32	WE844400 Connector Assembly+ Test Sheet FFC-40P
CN36	WE845800 Connector Assembly + Test Sheet VH-10P
CN406	WF761200 Connector Assembly + Test Sheet FFC-30P

(Fig.A3)

1. Separating the Unit into the Upper Case Assembly and the Lower Case Assembly (Time required: About 3 minutes)

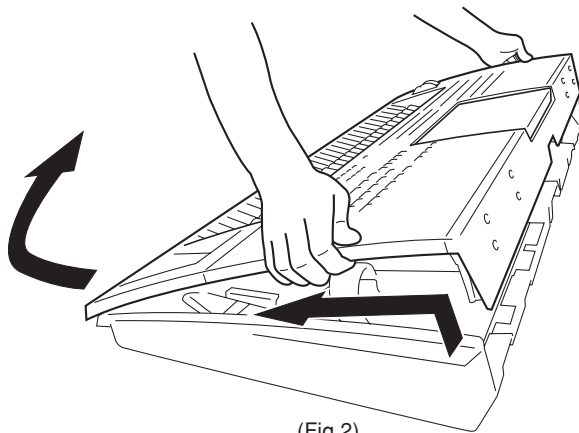
- 1-1 Remove the twenty one (21) screws marked [120]. (Fig.1)
- 1-2 Remove the six (6) screws marked [130]. (Fig.1)
- 1-3 Lay the unit right side up, lift the rear of the upper case assembly and pull it diagonally downward to remove. (Fig.2)
- * When installing the unit, tighten the six (6) screws marked [130] first, and then tighten the screws marked [120].

- 2-2 Remove the thirty one (31) screws marked [240]. The shield upper cover can then be removed. (Fig.3)
- * There are some products for which the shield upper cover has not been used.
- 2-3 Remove the four (4) screws marked [610]. The DM circuit board can then be removed. (Fig.4)
- * When installing the shield upper cover, insert the two projections of the shield lower cover into the positioning holes of the DM circuit board first. (Fig.4)



- [100]: Bonding Screw 3.0X8 MFZN2B3 (WE997500)
- [110]: Truss Head Tapping Screw-B 4.0X12 MFZN2B3 (WF010600)
- [120]: Bind Head Tapping Screw-B 4.0X12 MFZN2B3 (WE998600)
- [130]: Bind Head Tapping Screw-B 3.0X12 MFZN2B3 (WE998100)

(Fig.1)



(Fig.2)

2. DM Circuit Board (Time required: About 7 minutes)

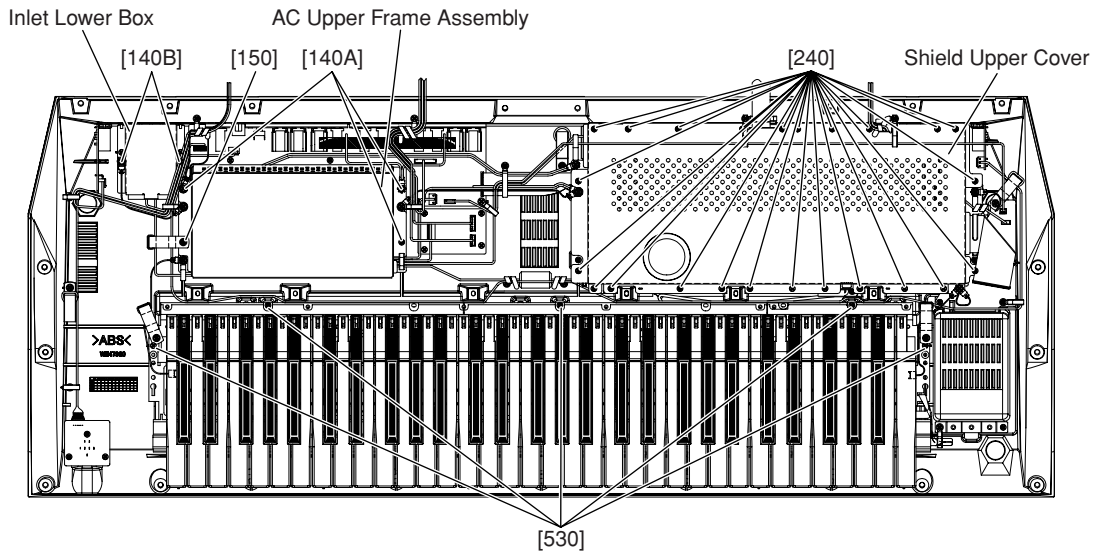
- 2-1 Separate the main into the upper case assembly and the lower case assembly. (See procedure 1.)

3. DJK Circuit Board (Time required: About 9 minutes)

- 3-1 Separate the unit into the upper case assembly and the lower case assembly. (See procedure 1.)
- 3-2 Remove the DM circuit board. (See procedure 2.)
- 3-3 Remove the three (3) screws marked [530E], the eight (8) screws marked [540A] and the two (2) hexagonal locking screws marked [130]. The DJK circuit board can then be removed. (Fig.4, Fig.5)

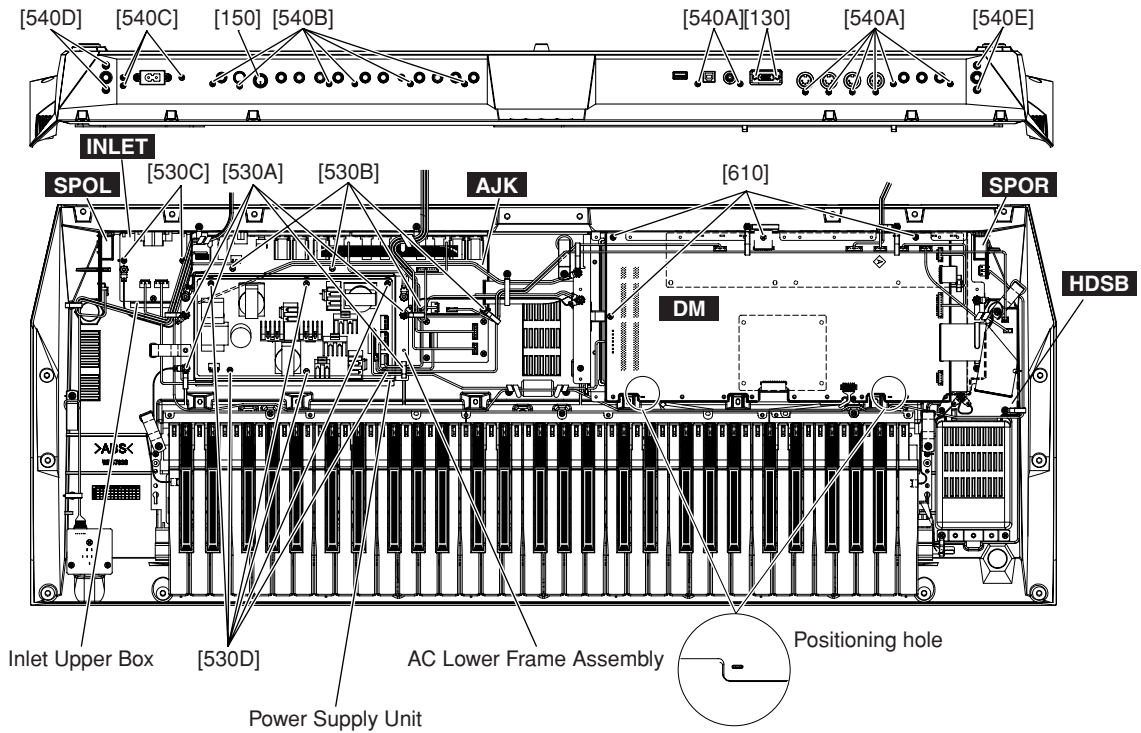
4. DAC2 Circuit Board (Time required: About 8 minutes)

- 4-1 Separate the unit into the upper case assembly and the lower case assembly. (See procedure 1.)
- 4-2 Remove the DM circuit board. (See procedure 2.)
- 4-3 Remove the four (4) screws marked [530E]. The DAC2 circuit board can then be removed. (Fig.5)



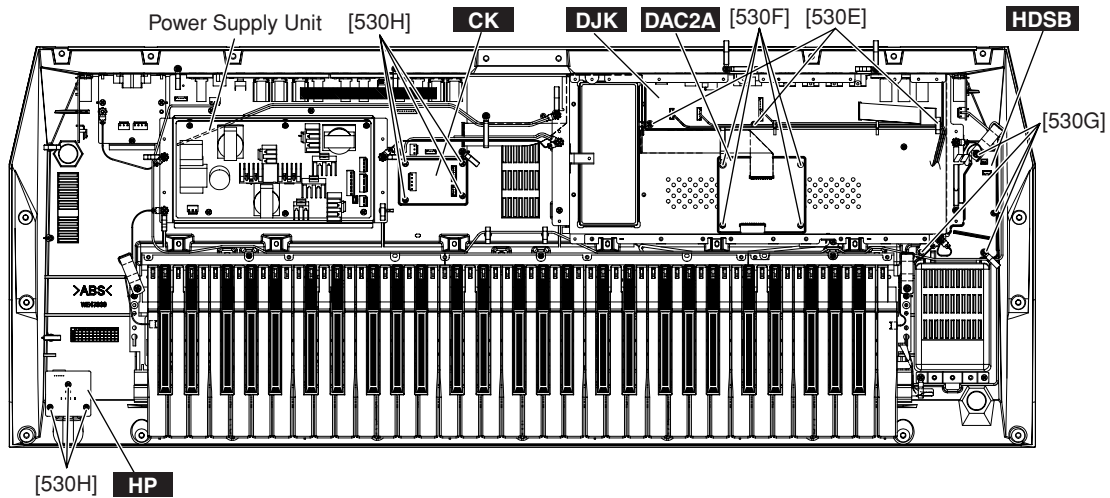
- [140]: Bind Head Tapping Screw-B 3.0X8 MFZN2W3 (WE774300)
- [150]: PW Head Tapping Screw-B 3.0X12 MFZN2W3 (WF002100)
- [240]: Bind Head Machine Screw 3.0X8 MFZN2B3 (WE983600)
- [530]: Bind Head Tapping Screw-B 3.0X8 MFZN2Y (EP600250)
- [530]: Bind Head Tapping Screw-B 3.0X8 MFZN2W3 (WE774300)

(Fig.3)



- [130]: Hex. Locking Screw HFS-4S-B1W (V6706600)
- [150]: Knob (V2300100)
- [530]: Bind Head Tapping Screw-B 3.0X8 MFZN2Y (EP600250)
- [530]: Bind Head Tapping Screw-B 3.0X8 MFZN2W3 (WE774300)
- [540]: Bind Head Tapping Screw-B 3.0X8 MFZN2B3 (WE774400)
- [610]: Bind Head Machine Screw 3.0X8 MFZN2B3 (WE983600)

(Fig.4)



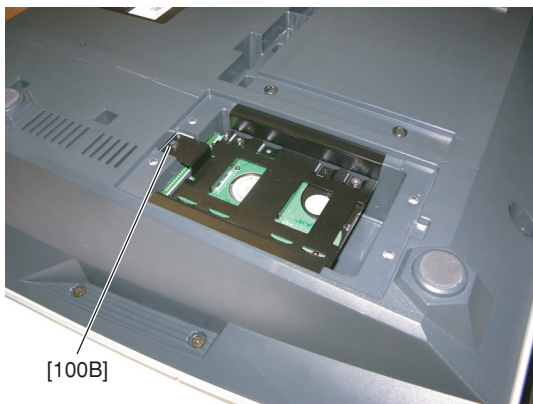
[530]: Bind Head Tapping Screw-B 3.0X8 MFZN2Y (EP600250)
 [530]: Bind Head Tapping Screw-B 3.0X8 MFZN2W3 (WE774300)
 (Fig.5)

5-A. 2.5" HDD (Option)
(Time required: About 1 minute)

- 5-A-1 Remove the four (4) screws marked [100A]. The HDD cover can then be removed. (Fig.1)
- 5-A-2 Remove the screw marked [100B]. The HDD with the support can then be removed. (Fig.5A, Fig.5B)

5-B. HDSB Circuit Board
(Time required: About 4 minutes)

- 5-B-1 Separate the unit into the upper case assembly and the lower case assembly. (See procedure 1.)
- 5-B-2 In case that the HDD has been installed, remove the HDD first. (See procedure 5-A.)
- 5-B-3 Remove the four (4) screws marked [530G]. The HDSB circuit board can then be removed. (Fig.5)



(Fig.5A)



(Fig.5B)

**6. Power Supply Unit
(Time required: About 6 minutes)**

- 6-1 Separate the unit into the upper case assembly and the lower case assembly. (See procedure 1.)
- 6-2 Remove the three (3) screws marked [140A] and the screw marked [150]. The AC upper frame assembly can then be removed. (Fig.3)
- 6-3 Remove the six (6) screws marked [530D]. The power supply unit can then be removed. (Fig.4)

**7. AJK Circuit Board
(Time required: About 6 minutes)**

- 7-1 Separate the unit into the upper case assembly and the lower case assembly. (See procedure 1.)
- 7-2 Remove the four (4) screws marked [530A]. The AC lower frame cover assembly can then be removed. (Fig.4)
- 7-3 Remove the knob(MIC.TRIM) marked [150]. (Fig.4)
- 7-4 Remove the four (4) screws marked [530B] and the six (6) screws marked [540B]. The AJK circuit board can then be removed. (Fig.4)

**8. INLET Circuit Board
(Time required: About 6 minutes)**

- 8-1 Separate the unit into the upper case assembly and the lower case assembly. (See procedure 1.)
- 8-2 Remove the two (2) screws marked [140B]. The inlet lower box can then be removed. (Fig.3, Fig.4)
- 8-3 Remove the two (2) screws marked [530C] and the three (3) screws marked [540C]. The inlet upper box can then be removed. (Fig.4)
- 8-4 Remove the screw marked [530] and the two (2) screws marked [540]. The INLET circuit board can then be removed. (Fig.6)

- * When installing the inlet upper box, tighten the three (3) screws marked [540C] first, and then tighten the two (2) screws marked [530C]. (Fig.4)

**9. CK Circuit Board
(Time required: About 4 minutes)**

- 9-1 Separate the unit into the upper case assembly and the lower case assembly. (See procedure 1.)
- 9-2 Remove the four (4) screws marked [530H]. The CK circuit board can then be removed. (Fig.5)

**10. SPOL Circuit Board
(Time required: About 4 minutes)**

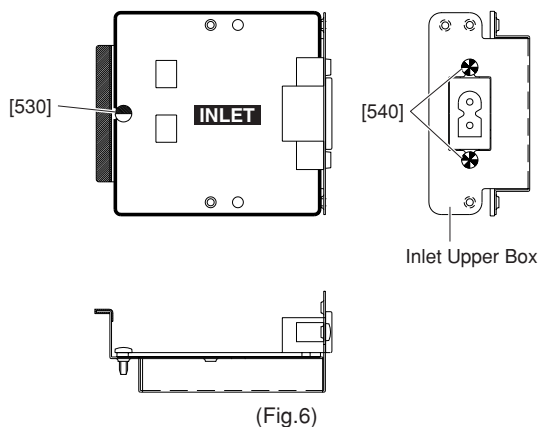
- 10-1 Separate the unit into the upper case assembly and the lower case assembly. (See procedure 1.)
- 10-2 Remove the two (2) screw marked [540D]. The SPOL circuit board can then be removed. (Fig.4)

**11. SPOR Circuit Board
(Time required: About 4 minutes)**

- 11-1 Separate the unit into the upper case assembly and the lower case assembly. (See procedure 1.)
- 11-2 Remove the two (2) screw marked [540E]. The SPOR circuit board can then be removed. (Fig.4)

**12. HP Circuit Board
(Time required: About 4 minutes)**

- 12-1 Separate the unit into the upper case assembly and the lower case assembly. (See procedure 1.)
- 12-2 Remove the three (3) screws marked [530H]. The HP circuit board can then be removed. (Fig.5)



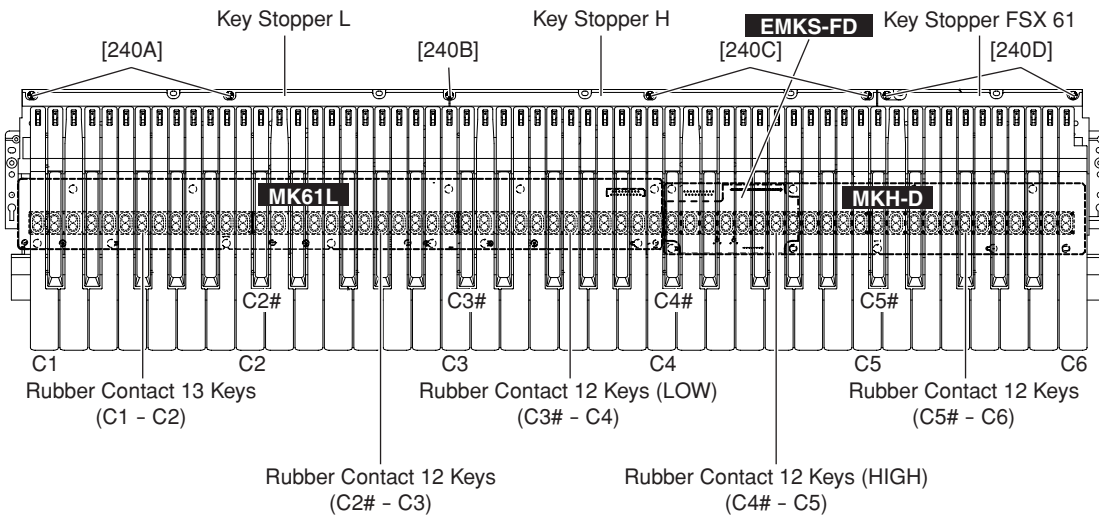
**13. FSX Keyboard Assembly
(Time required: About 5 minutes)**

- 13-1 Remove the eight (8) screws marked [110]. (See procedure 1.)
- 13-2 Separate the unit into the upper case assembly and the lower case assembly. (See procedure 1.)
- 13-3 Remove the five (5) screws marked [530]. The FSX keyboard assembly can then be removed. (Fig.3)

14. White (Black) Key

- 14-1 Separate the unit into the upper case assembly and the lower case assembly. (See procedure 1.)
- 14-2 Depending on the key to be replaced, remove only the necessary key stopper such as L, H or 61. (Fig.7)
The key stopper L can be removed by the two (2) screws marked [240A] and the screw marked [240B]. (Fig.7)
The key stopper H can be removed by the screw marked [240B] and the two (2) screws marked [240C]. (Fig.7)
The key stopper 61 can be removed by the two (2) screws marked [240D]. (Fig.7)
- 14-3 White Key
 - 14-3-1 While pressing the white key backward keeping it in a horizontal position, lift and remove it. (Fig.7A)
 - * At that time, the key guide cap may come off. Be careful of it. (Fig.7C)

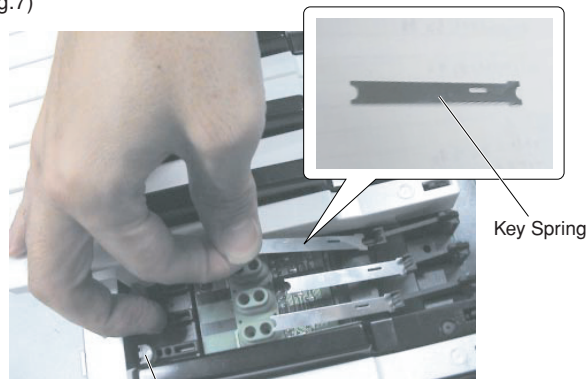
	Rubber Contact 13 Keys	Rubber Contact 12Keys	Rubber Contact 12Keys (LOW)	Rubber Contact 12Keys (HIGH)	Rubber Contact 12 Keys
Application Circuit Board	MK61	MK61	MK61	MK61	MKH-D
Remove Key Stopper	L	L, H	L, H	H	FSX61
Remove Key	C1 - C2	C2# - C3	C3# - C4	C4# - C5	C5# - C6



[240]: Bind Head Tapping Screw-P 3.0X16 MFZN2B3 (WE983200)
(Fig.7)



(Fig.7A)

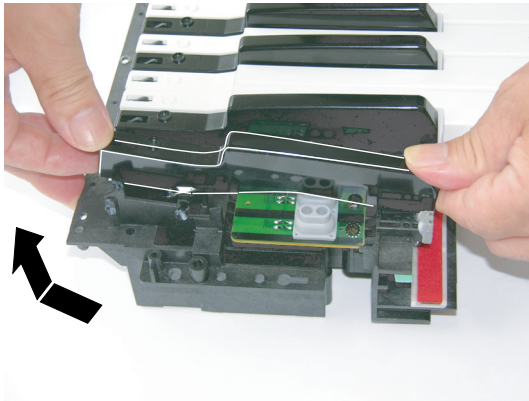


Key Guide Cap (Fig.7C)

14-4 Black Key

14-4-1 Remove both adjacent white keys first. (Fig.7A)

14-4-2 While pressing the black key backward keeping it in a horizontal position, lift and remove it. (Fig.7B)



(Fig.7B)

15. Assembling White (Black) Key

15-1 White Key

15-1-1 While pressing the white key backward keeping it in a horizontal position, lower and insert it into the frame. (Fig.7A)

* At that time, do not lower the near side of the white key too much and take care not to bend the key guide cap. (Fig.7C)

* Install the black key first, and then install both adjacent white keys.

15-2 Black Key

15-2-1 Install the black key in the same manner as the white key. (See procedure 15-1-1.) (Fig.7B)

15-2-2 Install the removed key stoppers L, H and 61. (Fig.7)

16. Rubber Contact

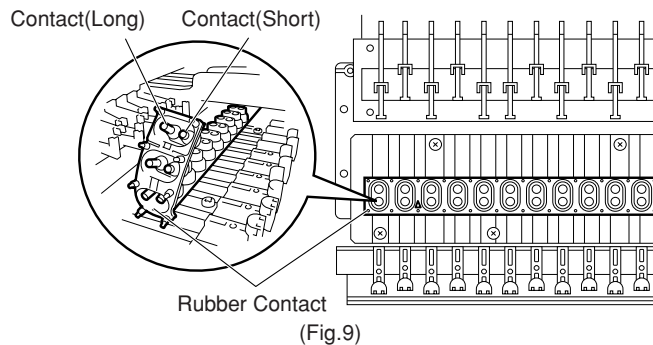
16-1 Separate the unit into the upper case assembly and the lower case assembly. (See procedure 1.)

16-2 Remove the necessary key stopper and the key referring to the table in Fig.7. (Fig.7)

16-3 Pull and remove the rubber contact. (Fig.9)

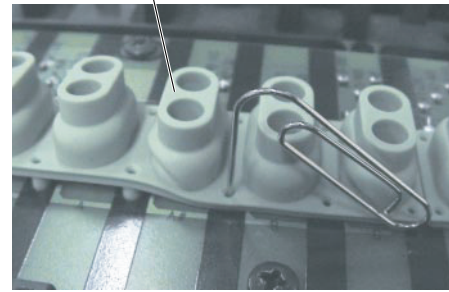
* As for the rubber contact, the direction of the installation is specified. Take care not to install the rubber contact reversly. (Fig.9)

* When installing the rubber contact, confirm that a dust does not adhere to the contact points first. Then, push the rubber contact using the tip of clip and install it. (Fig.7D)



(Fig.9)

Rubber Contact



(Fig.7D)

17. MK61L Circuit Board
(Time required: About 7 minutes)

17-1 Separate the unit into the upper case assembly and the lower case assembly. (See procedure 1.)

17-2 Remove the key stoppers L and H. (See procedure 14-2.)

17-2 Remove the keys and the key springs from C1 to C4. (See procedure 14.)

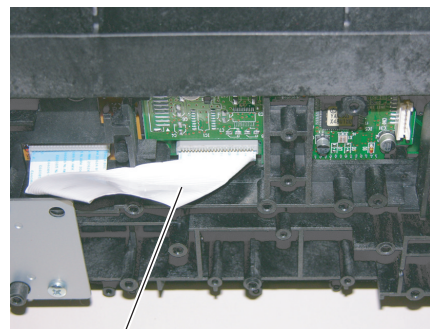
17-3 Remove the thirteen (13) screws marked [250A], and remove the FFC cable for CN1 from the back side of the keyboard assembly.

The MK61 circuit board can then be removed. (Fig.8, Fig.7E)

* When installing the MK61 circuit board, put the circuit board under the positioning ribs first, and then tighten the screws. (Fig.8)

* As for the service parts, the rubber contact is not included in the MK61L circuit board.

When replacing the MK61L circuit board, remove all the rubber contacts from the circuit board to be replaced, and install them to new circuit board.



FFC Cable

(Fig.7E)

18. MKH-D and EMKS-FD Circuit Boards
(Time required: About 6 minutes)

18-1 Separate the unit into the upper case assembly and the lower case assembly. (See procedure 1.)

18-2 Remove the key stoppers H and 61. (See procedure 14-2.)

18-3 Remove the keys and the key springs from C#4 to C6. (See procedure 15.)

18-4 Remove the nine (9) screws marked [250B]. (Fig.8)

18-5 Remove the FFC cable (for CN4) from the back side of the keyboard assembly. The MKH-D and EMKS-FD circuit boards can then be removed. (Fig.8, Fig.7E)

- * The EMKS-FD circuit board has been soldered to the MKH-D circuit board by connectors.
When replacing one of them, use a soldering iron.
- * MKH-D Circuit Board
When installing the MKH-D circuit board, put the circuit board under the positioning ribs first, and then tighten the screws. (Fig.8)
- * As for the service parts, the rubber contact is not included in the MKH-D circuit board.
When replacing the MKH-D circuit board, remove all the rubber contacts from the circuit board to be replaced, and install them to new circuit board.

**19. PNL Circuit Board
(Time required: About 7 minutes)**

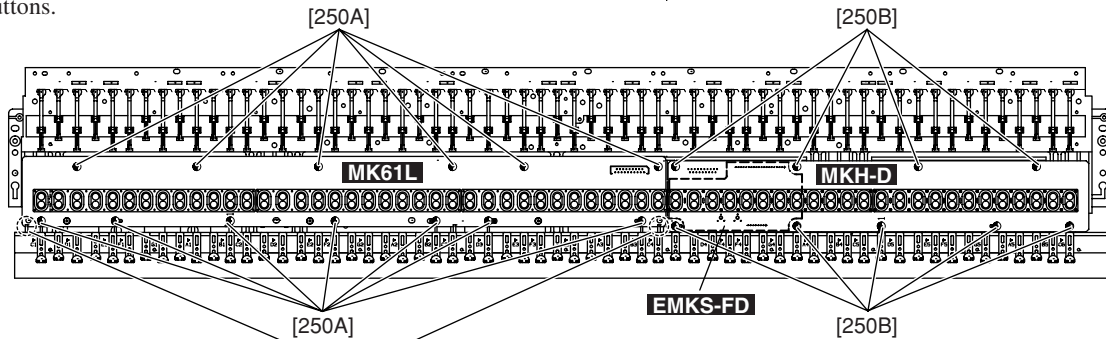
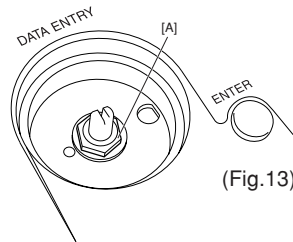
- 19-1 Separate the unit into the upper case assembly and the lower case assembly. (See procedure 1.)
- 19-2 Remove the four (4) screws marked [480A]. The two panel holders A can then be removed. (Fig.10)
- 19-3 Remove the twenty six (26) screws marked [480B]. The PNL circuit board can then be removed. (Fig.10)
- * When installing the PNL circuit board, place the vibration-proof sheet L in between the circuit board and the panel buttons.

Also, place the protection sheet L on the reverse side of the circuit board. Then, tighten the screws. (Fig.14)

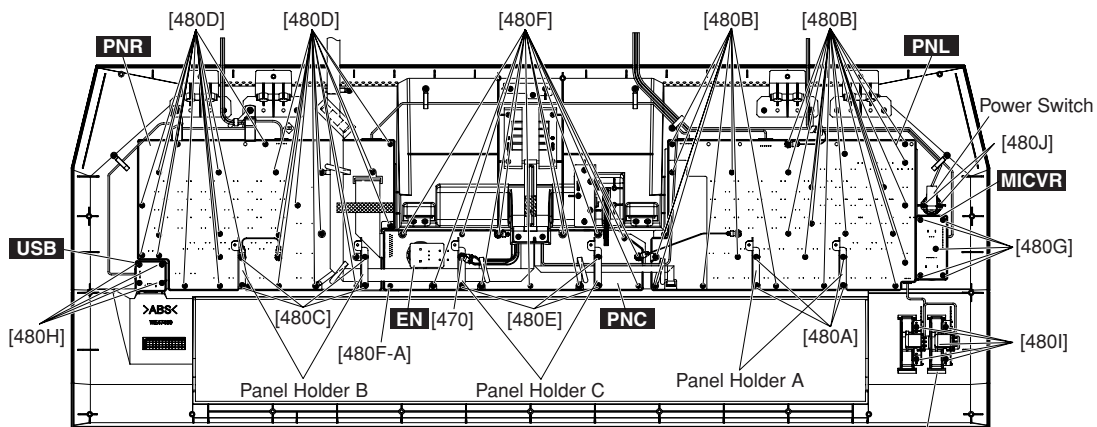
**20. PNR Circuit Board
(Time required: About 7 minutes)**

- 20-1 Separate the unit into the upper case assembly and the lower case assembly. (See procedure 1.)
- 20-2 Remove the four (4) screws marked [480C]. The two panel holders B can then be removed. (Fig.10)
- 20-3 Remove the twenty six (26) screws marked [480D]. The PNR circuit board can then be removed. (Fig.10)
- * When installing the PNR circuit board, place the vibration-proof sheet R in between the circuit board and the panel buttons.

Also, place the protection sheet L on the reverse side of the circuit board. Then, tighten the screws. (Fig.14)



Circuit Board bobber prevention rib
[250]: Bind Head Tapping Screw-P 3.0X8 MFZN2B3 (WF266600)
(Fig.8)



[470]: PW Head Tapping Screw-B 3.0X12 MFZN2W3 (WF002100)
[480]: Bind Head Tapping Screw-B 3.0X8 MFZN2Y (EP600250)
[480]: Bind Head Tapping Screw-B 3.0X8 MFZN2W3 (WE774300)
Wheel Assembly

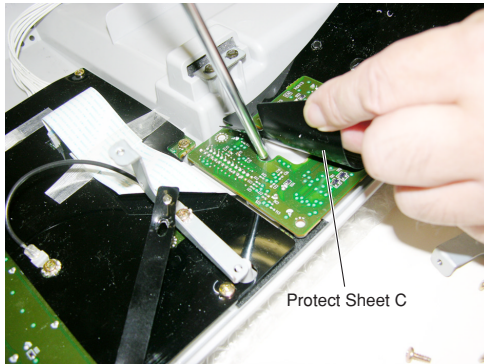
(Fig.10)

21. PNC and EN Circuit Boards

21-A EN Circuit Board

(Time required: About 6 minutes)

- 21A-1 Separate the unit into the upper case assembly and the lower case assembly. (See procedure 1.)
- 21A-2 Remove the screw marked [480F-A] and bend the protection sheet C so that you can see the hole on the EN circuit board.
Insert a screw driver (which is not sharp-edged) into the hole, and push out the encoder knob marked [60]. (Fig.10, Fig.12, Fig.14A)
(It may damage the encoder knob to push continuously the same point on it. So push out the encoder knob little by little rotating it.)
- 21A-3 Remove the hexagonal nut marked [A]. The EN circuit board can then be removed. (Fig.10, Fig.13)
- * The EN circuit board has been soldered to the PNC circuit board by ribbon cables. When replacing it, use a soldering iron.

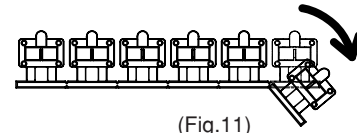


(Fig.14A)

21-B PNC Circuit Board

(Time required: About 7 minutes)

- 21B-1 Separate the unit into the upper case assembly and the lower case assembly. (See procedure 1.)
- 21B-2 Remove the EN circuit board. (See procedure 21-A.)
- 21B-3 Remove the three (3) screws marked [480E] and the screw marked [470]. The two panel holders C can then be removed. (Fig.10)
- 21B-4 Remove the twelve (12) screws marked [480F]. The PNC circuit board can then be removed.
- * Note for the panel button replacement
The replacement part of the panel button marked [660] is sixfold.
When replacing these buttons, separate an unnecessary piece from the replacement part. (Fig.11)
As for the location of the multifold button, do not arrange and use some single buttons.
- * When installing the PNC circuit board, place the vibration-proof sheet C in between the circuit board and the panel buttons.
Also, place the protection sheet C on the reverse side of the circuit board. Then, tighten the screws. (Fig.14)



(Fig.11)

22. MICVR Circuit Board

(Time required: About 5 minutes)

- 22-1 Separate the unit into the upper case assembly and the lower case assembly. (See procedure 1.)
- 22-2 Remove the VR knob marked [40] and the VR knob marked [50]. (Fig.12)
- 22-3 Remove the five (5) screws marked [480G]. The MICVR circuit board can then be removed. (Fig.10)

23. USB Circuit Board

(Time required: About 4 minutes)

- 23-1 Separate the unit into the upper case assembly and the lower case assembly. (See procedure 1.)
- 23-2 Remove the four (4) screws marked [480H]. The USB circuit board can then be removed. (Fig.10)

24. Wheel Assembly

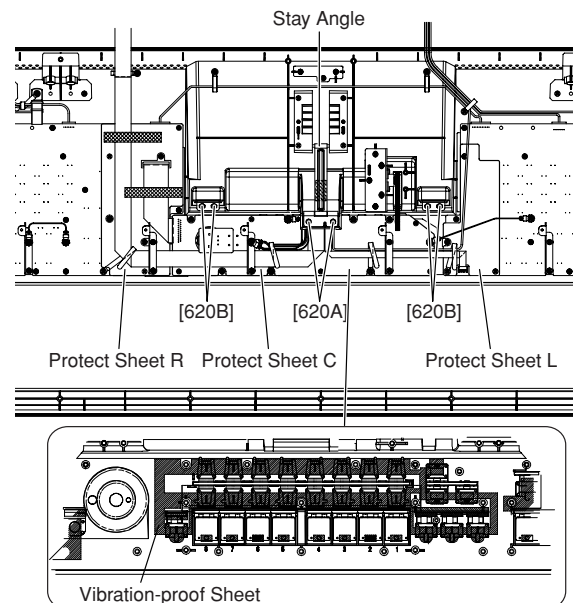
(Time required: About 4 minutes)

- 24-1 Separate the unit into the upper case assembly and the lower case assembly. (See procedure 1.)
- 24-2 Remove the four (4) screws marked [480I]. The wheel assembly can then be removed. (Fig.10)

25. Power Switch

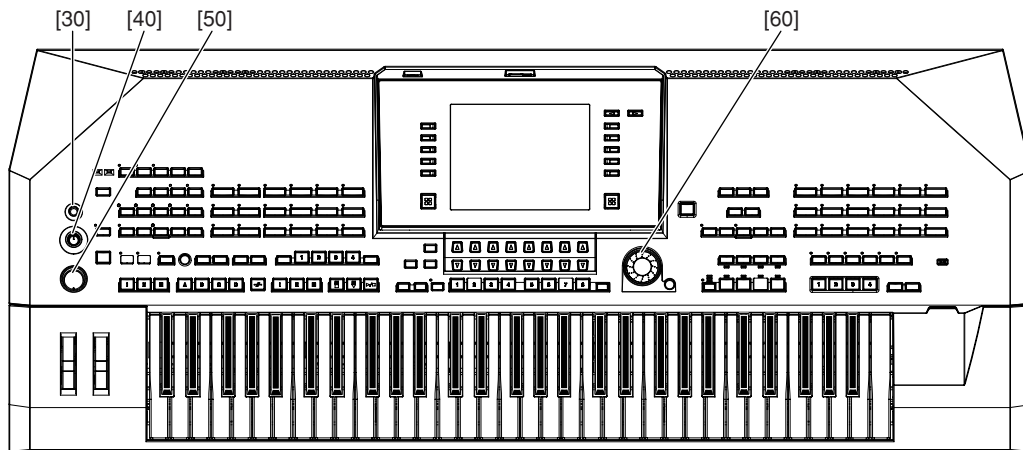
(Time required: About 4 minutes)

- 25-1 Separate the unit into the upper case assembly and the lower case assembly. (See procedure 1.)
- 25-2 Remove the two (2) screws marked [480J]. The power switch can then be removed. (Fig.10)



[620]: Bind Head Tapping Screw-B 3.0X12 MFZN2B3 (WE998100)

(Fig.14)



- [30]: Push Knob BLACK (V7151200)
- [40]: Knob (V2300100)
- [50]: Knob PSR-310 (VQ218900)
- [60]: Encoder Knob SILVER (V7761500)

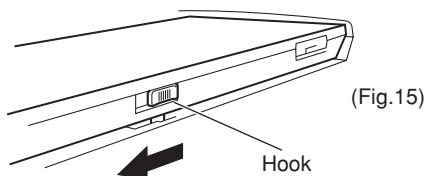
(Fig.12)

26. LCD Panel Assembly

(Time required: About 6 minutes)

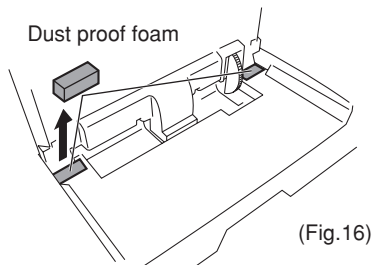
- 26-1 Separate the unit into the upper case assembly and the lower case assembly. (See procedure 1.)
- 26-2 Remove the two (2) screws marked [620A] to remove the stay bar. (Fig.14)
- 26-3 Remove the four (4) screws marked [620B]. (Fig.14)
- 26-4 Remove the screw marked [470]. The two GND wires can then be removed. (Fig.10)
- 26-5 Lay the upper case assembly right side up, unlock the hook of LCD panel assembly and raise the LCD unit upright. (Fig.15)

- * After removing the LCD panel assembly, take care not to lose the two dust proof foams.
- * After installing the LCD panel assembly, follow the procedure below and confirm that its angle can be adjusted correctly.
 - (1) Lay the upper case assembly right side up.
 - (2) Unlock the hook, raise the panel forward, and confirm that the panel can be steadied at four notches. (Fig.18)



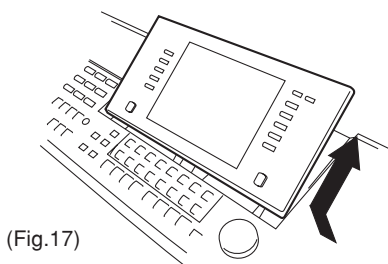
(Fig.15)

- 26-6 Remove the two (2) dust proof foams. (Fig.16)

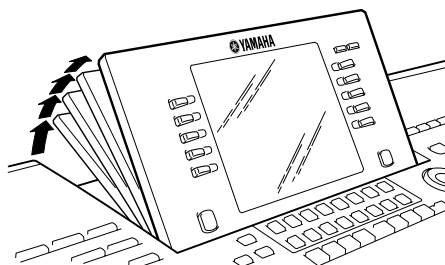


(Fig.16)

- 26-7 Pull out the LCD panel assembly to remove. (Fig.17)

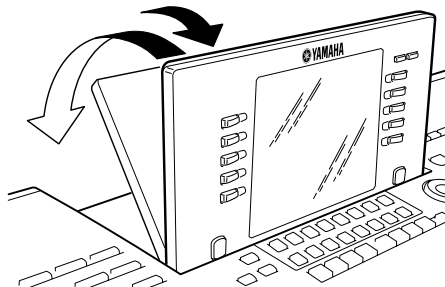


(Fig.17)



(Fig.18)

- (3) After raising the panel assembly completely, confirm that it can be laid down smoothly. (Fig.19)



(Fig.19)

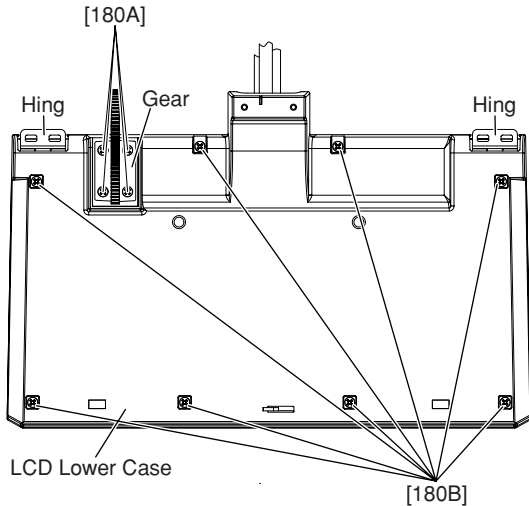
27. Disassembling the LCD Panel Assembly

27a. Gear (Time required: About 7 minutes)

- 27a-1 Remove the LCD panel assembly. (See procedure 26.)
- 27a-2 Remove the four (4) screws marked [180A]. The gear can then be removed. (Fig.20)

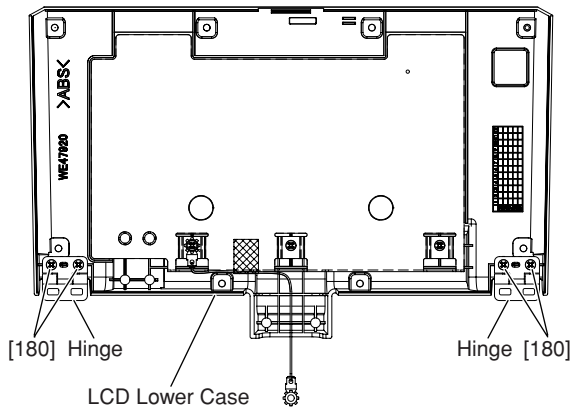
27b. Hinge (Time required: About 7 minutes)

- 27b-1 Remove the LCD panel assembly. (See procedure 26.)
- 27b-2 Remove the eight (8) screws marked [180B]. The LCD lower case can then be removed. (Fig.20)



[180]: Bind Head Tapping Screw-B 3.0X12 MFZN2B3 (WE998100)
(Fig.20)

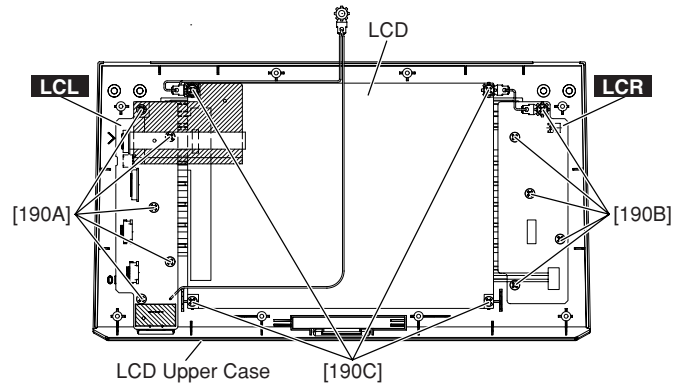
- 27b-3 Remove the two (2) screws marked [180] . The hinges can then be removed. (Fig.21)



[180]: Bind Head Tapping Screw-B 3.0X12 MFZN2B3 (WE998100)
(Fig.21)

27c. LCL Circuit Board (Time required: About 12 minutes)

- 27c-1 Remove the LCD panel assembly. (See procedure 26.)
- 27c-2 Remove the LCD lower case. (See procedure 27b-2.)
- 27c-3 Remove the five (5) screws marked [190A]. The LCL circuit board can then be removed. (Fig.22)
- * When removing the FFC cable connected to CN1,CN2,CN3 and CN4, release the lock of the connector first. Also, after connecting it, do not forget to lock it.



[190]: Bind Head Tapping Screw-B 3.0X8 MFZN2W3 (WE774300)
(Fig.22)

27d. LCR Circuit Board (Time required: About 12 minutes)

⚠ *There may be high voltage components. Make sure to disassemble the components after turning the power switch off.*

- 27d-1 Remove the LCD panel assembly. (See procedure 26.)
- 27d-2 Remove the LCD lower case. (See procedure 27b-2.)
- 27d-3 Remove the five (5) screws marked [190B]. The LCR circuit board can then be removed. (Fig.22)
- * When removing the FFC cable connected to CN5, release the lock of the connector first. Also, after connecting it, do not forget to lock it.

27e LCD (Time required: About 12 minutes)

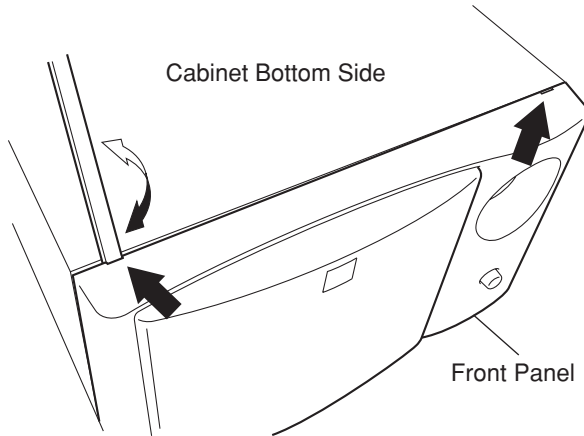
- 27e-1 Remove the LCD panel assembly. (See procedure 26.)
- 27e-2 Remove the LCD lower case. (See procedure 27b-2.)
- 27e-3 Remove the four (4) screws marked [190C]. The LCD can then be removed. (Fig.22)

■ DISASSEMBLY PROCEDURE (TRS-MS02)

1. Grille Assembly

(Time required: About 2 minutes)

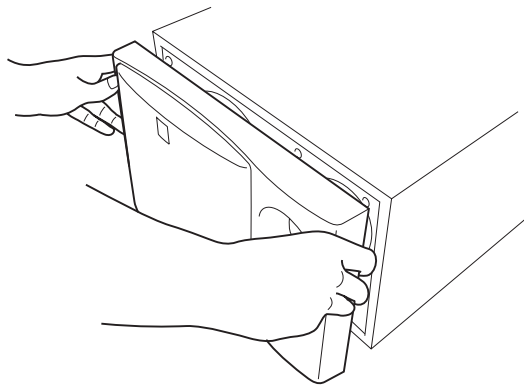
- 1-1 Lay the unit upside down, insert a thin plate such as a ruler into the two slits on the bottom, then unclench slightly the front panel. (Fig.1)



(Fig.1)

- * Take great care not to damage the cabinet. Stop unclenching when a small clearance is formed.

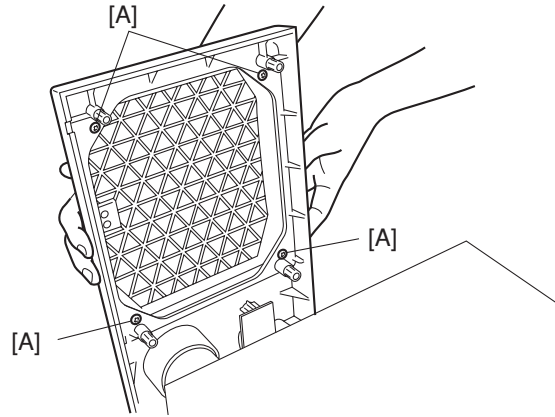
- 1-2 Pull the front panel forward to remove. (Fig.2)



(Fig.2)

- * The front panel is fixed on the cabinet by six dowels, so take care not to force diagonally too much.

- 1-3 Remove the four (4) screws marked [A]. The grille assembly can then be removed. (Fig.3)



(Fig.3)

2. AC Power Cord

(Time required: About 3 minutes)

- 2-1 Remove the eight (8) screws marked [B]. The rear panel can then be removed.

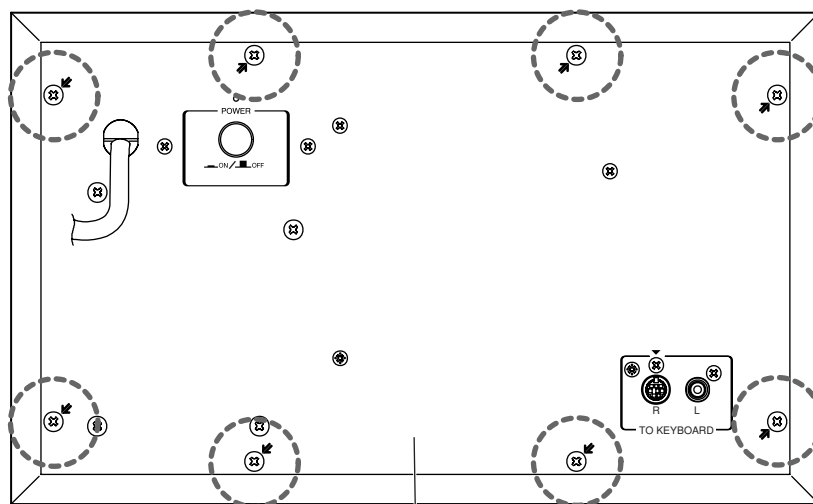
(The screws to be removed are indicated by arrows '->' on the rear panel.) (Fig.4)

- * When reinstalling the rear panel, confirm that the packing is not damaged to avoid air leakage. (Fig.5)

- 2-2 Remove the soldering portions of the AC power cord from the AMP assembly. (Fig.5)

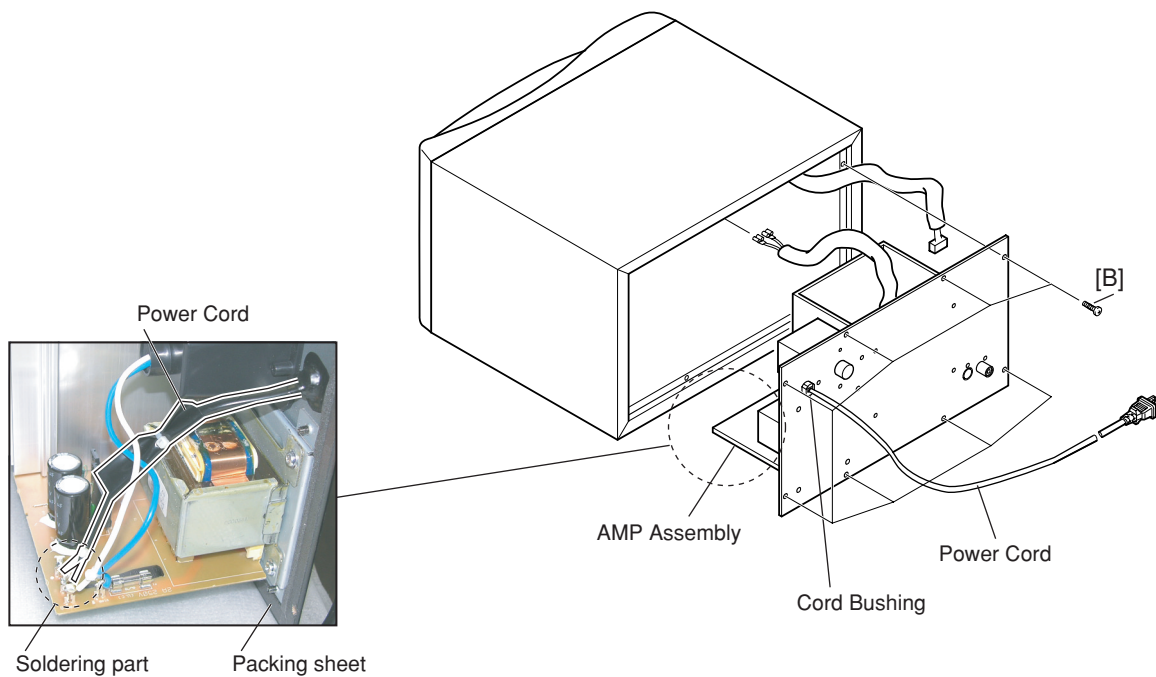
- 2-3 Remove the cord bushing from the rear panel. The AC power cord can then be removed. (Fig.5)

- * When reinstalling the rear panel, confirm that the packing is not damaged to avoid air leakage. (Fig.5)



Rear Panel

(Fig.4)



(Fig.5)

■ LSI PIN DESCRIPTION

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● HD6417727F160CV (X2890B00) CPU

DM: IC6

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION	
1	Vcc-RTC	-	Power supply for RTC (1.9V)	121	PTM[4]/PINT[4]/AFE_RDET /USB1d_TXDMNS	I	Not in use	
2	XTAL2	-	Not in use (XTAL for internal RTC)	122	Reserved/USB1d_SUSPEND	O	USB function VBUS	
3	EXTAL2	-		123	USB1_ovr_cmt/USBF_VBUS	-		USB2_HOST2 over current detection
4	Vss-RTC	-		124	USB2_ovr_cmt	-		
5	MD1	-	125	RTS2_/USB1d_TXENL	O	USB1 voltage control		
6	MD2	-	126	PTE[2]/USB1_pwr_en	O		USB2 voltage control	
7	NMI	-	127	PTE[1]/USB2_pwr_en	O	Enable (SDRAM)		
8	IRQ0/IRL0_/PTH[0]	I	External interrupt request	128	CKE/PTK[5]		O	RAS for SDRAM
9	IRQ1/IRL1_/PTH[1]	I		129	/RAS3/PTJ[0]	O	Not in use	
10	IRQ2/IRL2_/PTH[2]	I		130	Reserved/PTJ[1]	O		CAS for SDRAM
11	IRQ3/IRL3_/PTH[3]	I		131	Reserved/CAS/PTJ[2]	O	VssQ	
12	IRQ4/PTH[4]	I		132	VssQ	-		Output port (DAC Reset)
13	VEPWC	O	133	Reserved/PTJ[3]	-	VccQ		
14	VCPWC	-	134	VccQ	-		Output port (SIO Reset)	
15	MD5	-	135	Reserved/PTJ[4]	O	Output port (DAC Mute)		
16	/BREQ	-	136	Reserved/PTJ[5]	O		Vss	
17	/BACK	-	137	Vss	-	LCD line clock		
18	VssQ	-	138	PTD[5]/CL1	O		LCD DISPLAY ON	
19	CKIO2	-	139	Vcc	-	LCD alternater		
20	VccQ	-	140	PTD[7]/DON	O		LCD frame line marker	
21	D31/PTB[7]	I/O	141	PTE[6]/M_DISP	O	JTAG (test data output)		
22	D30/PTB[6]	I/O	142	PTE[3]/FLM	O		DMA request acceptance	
23	D29/PTB[5]	I/O	143	PTE[0]/TDO	O	DMA acknowledge		
24	D28/PTB[4]	I/O	144	PCC0RESET/DRACK0	O		Hardware wait request	
25	D27/PTB[3]	I/O	145	PCC0DRV_/DACK0_	O	Manual reset request		
26	D26/PTB[2]	I/O	146	/WAIT	-		Analog A/D trigger	
27	D25/PTB[1]	I/O	147	/RESETM	-	Not in use		
28	D24/PTB[0]	I/O	148	/ADTRG/PTH[5]	I		Not in use	
29	VssQ	-	149	/IOIS16/PTG[7]	I	Data bus		
30	D23/PTA[7]	I/O	150	/ASEMD0	-		Data bus	
31	VccQ	-	151	PTG[5]/ASEBRKAK_	-	VccQ		
32	D22/PTA[6]	I/O	152	PTG[4]	I		Not in use	
33	D21/PTA[5]	I/O	153	PCC0BVD2/PTG[3]/AUDATA[3]	I	Vss		
34	D20/PTA[4]	I/O	154	PCC0BVD1/PTG[2]/AUDATA[2]	I		Not in use	
35	Vss	-	155	Vss	-	Vss		
36	D19/PTA[3]	I/O	156	PCC0CD2/PTG[1]/AUDATA[1]	I		Vcc	
37	Vcc	-	157	Vcc	-	Not in use		
38	D18/PTA[2]	I/O	158	PCC0CD1/PTG[0]/AUDATA[0]	I		VssQ	
39	D17/PTA[1]	I/O	159	VssQ	-	Not in use		
40	D16/PTA[0]	I/O	160	PTF[7]/PINT[15]/TRST_	I		VccQ	
41	D15	-	161	VccQ	-	Data bus		
42	VssQ	-	162	PTF[6]/PINT[14]/TMS	I		Data bus	
43	D14	-	163	PTF[5]/PINT[13]/TDI	I	VccQ		
44	VccQ	-	164	PTF[4]/PINT[12]/TCK	I		Not in use	
45	D13	-	165	PTF[3]/PINT[11]/Reserved	I	Data bus		
46	D12	-	166	PCCREG_/PTF[2]/Reserved	I		Data bus	
47	D11	-	167	PCC0VS1_/PTF[1]/Reserved	I	Data bus		
48	D10	-	168	PCC0VS2_/PTF[0]/Reserved	I		Data bus	
49	D9	-	169	MD0	-	Clock mode setting		
50	D8	-	170	Vcc-PLL1	-		Power supply for Vcc_PLL1 - PLL1 (1.9V)	
51	D7	-	171	CAP1	-	External capacitance for CAP1 _PLL1		
52	D6	-	172	Vss-PLL1	-		Power supply for Vss_PLL1 _PLL1 (0V)	
53	VssQ	-	173	Vss-PLL2	-	Power supply for Vss_PLL2 _PLL2 (0V)		
54	D5	-	174	CAP2	-		External capacitance for CAP2 _PLL2	
55	VccQ	-	175	Vcc-PLL2	-	Power supply for Vcc_PLL2 _PLL2 (1.9V)		
56	D4	-	176	PCC0WAIT_/PTH[6]/AUDCK	I		Not in use	
57	D3	-	177	Vss	-	Vss		
58	D2	-	178	Vcc	-		Vcc	
59	D1	-	179	XTAL	-	Clock oscillator		
60	D0	-	180	EXTAL	-		External clock	
61	A0	-	181	LCD15/PTM[3]/PINT[10]	I	Not in use		
62	A1	-	182	LCD14/PTM[2]/PINT[9]	I		Not in use	
63	A2	-	183	LCD13/PTM[1]/PINT[8]	I			Input port (Flash ROM RY/BY)
64	VssQ	-	184	LCD12/PTM[0]	I	Output port (Flash ROM write protect)		
65	A3	-	185	STATUS0/PTJ[6]	O		Output port (Flash ROM ACC)	
66	VccQ	-	186	STATUS1/PTJ[7]	O	LCD clock output		
67	A4	-	187	CL2/PTH[7]	O		VssQ	
68	A5	-	188	VssQ	-	System clock input/output (for SDRAM)		
69	A6	-	189	CKIO	-		VccQ	
70	A7	-	190	VccQ	-	Output port for SCI		
71	A8	-	191	TxD0/SCPT[0]	O		Not in use	
72	A9	-	192	SCX0/SCPT[1]	O	Output port for SCI		
73	A10	-	193	TxD_SIO/SCPT[2]	O		Not in use	
74	A11	-	194	SIOMCLK/SCPT[3]	O	Output port for SCI		
75	VssQ	-	195	TxD2/SCPT[4]	O		Not in use	
76	A12	-	196	SCK_SIO/SCPT[5]	O	Not in use		
77	VccQ	-	197	SIOFSYNC/SCPT[6]	O		Receiving data 0	
78	A13	-	198	RxD0/SCPT[0]	I	Not in use		
79	A14	-	199	RxD_SIO/SCPT[2]	I		Vss	
80	A15	-	200	Vss	-	Receiving data 2		
81	A16	-	201	RxD2/SCPT[4]	I		Vcc	
82	A17	-	202	Vcc	-	Not in use		
83	A18	-	203	SCPT[7]/CTS2_/IRQ5	I		Output port (PLG CLOCK ON/OFF)	
84	A19	-	204	LCD11/PTC[7]/PINT[3]	O	Not in use		
85	A20	-	205	LCD10/PTC[6]/PINT[2]	O		VssQ	
86	VssQ	-	206	LCD9/PTC[5]/PINT[1]	O	Not in use		
87	A21	-	207	VssQ	-		VccQ	
88	VccQ	-	208	LCD8/PTC[4]/PINT[0]	O	Not in use		
89	A22	-	209	VccQ	-		LCD DATA7	
90	A23	-	210	LCD7/PTD[3]	O	LCD DATA6		
91	Vss	-	211	LCD6/PTD[2]	O		LCD DATA5	
92	A24	-	212	LCD5/PTC[3]	O	LCD DATA4		
93	Vcc	-	213	LCD4/PTC[2]	O		LCD DATA3	
94	A25	-	214	LCD3/PTC[1]	O	LCD DATA2		
95	BS_/PTK[4]	O	215	LCD2/PTC[0]	O		LCD DATA1	
96	RD	-	216	LCD1/PTD[1]	O	LCD DATA0		
97	WE0_/DOMLL	O	217	LCD0/PTD[0]	O		DMA request	
98	WE1_/DOMLU/WE	O	218	DREQ0_/PTD[4]	I	USB clock		
99	WE2_/DOMUL/CIORD_/PTK[6]	O	219	LCK/UCLK/PTD[6]	I		Power on reset request	
100	VssQ	-	220	/RESETP	-	Hardware standby request		
101	WE3_/DOMU/CIOWR_/PTK[7]	O	221	CA	-		Bus width setting for area0	
102	VccQ	-	222	MD3	-	Test pin (fixed to 3.3V)		
103	RD/WR	O	223	MD4	-		USB analog power supply (3.3V)	
104	PTE[7]/PCCORDY/AUDSYNC_	O	224	/Scan_testen	-	USB1 data input/output (+)		
105	/CS0	-	225	Avcc_USB	-		USB1 data input/output (-)	
106	/CS2	-	226	USB1_P	I/O	USB analog power supply (0V)		
107	/CS3	-	227	USB1_M	I/O		USB2 data input/output (+)	
108	/CS4/PTK[2]	O	228	Avss_USB	-	USB2 data input/output (-)		
109	/CS5/CE1A_/PTK[3]	O	229	USB2_P	I/O		USB analog power supply (3.3V)	
110	/CS6/CE1B	O	230	USB2_M	I/O	A/D analog power supply (0V)		
111	CE2A_/PTE[4]	O	231	Avcc_USB	-		AD converter input	
112	CE2B_/PTE[5]	O	232	Avss	-	A/D analog power supply (3.3V)		
113	AFE_HC1/USB1d_DP/LS/PTK[0]	O	233	AN[2]/PTL[2]	I		A/D converter input	
114	AFE_RLYCNT_/USB1d_DMNS/PTK[1]	O	234	AN[3]/PTL[3]	I	A/D converter input		
115	VssQ	-	235	AN[4]/PTL[4]	I		DA converter output (LCD contrast)	
116	AFE_SCLK/USB1d_TXDPLS	I	236	AN[5]/PTL[5]	I	A/D analog power supply (0V)		
117	VccQ	-	237	Avcc	-		Not in use	
118	PTM[7]/PINT[7]/AFE_FS/USB1d_RCV	I	238	AN[6]/PTL[6]/DA[1]	I	Not in use		
119	PTM[6]/PINT[6]/AFE_RXIN/USB1d_SPEED	I	239	AN[7]/PTL[7]/DA[0]	I		Not in use	
120	PTM[5]/PINT[5]/AFE_TXOUT/USB1d_TXSE0	I	240	Avss	-			

● HD6417709SHF200BV (X2687B00) CPU (SH3)

DM: IC407

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION	
1	MD1	I	Mode control	105	CKE/PTK5	I/O	CK enable / Port K	
2	MD2	I		106	RAS3L/PTJ0	I/O	RAS address bus / Port J	
3	Vcc(RTC)	-	Power supply +2.0 V	107	PTJ1	I/O	Port J	
4	XTAL2	O	Crystal oscillator	108	CASL/PTJ2	I/O	CAS address bus / Port J	
5	EXTAL2	I		109	VssQ	-	Ground	
6	Vss(RTC)	-	Ground	110	CASU/PTJ3	I/O	CAS address bus / Port J	
7	NMI	-	Non-maskable interrupt request	111	VccQ	-	Power supply +3.3 V	
8	IRQ0/IRL0/PTH0	I	Interrupt request / Port H	112	PTJ4	I/O	Port J	
9	IRQ1/IRL1/PTH1	I		113	PTJ5	I/O		
10	IRQ2/IRL2/PTH2	I		114	DACK0/PTD5	I/O		DMA acknowledge / Port D
11	IRQ3/IRL3/PTH3	I		115	DACK1/PTD7	I/O		
12	IRQ4/PTH4	I		116	PTE6	I/O	Port E	
13	D31/PTB7	I/O	117	PTE3	I/O			
14	D30/PTB6	I/O	118	RAS3U/PTE2	I/O	RAS address bus / Port E		
15	D29/PTB5	I/O	Data bus / Port B	119	PTE1	I/O	Port E	
16	D28/PTB4	I/O		120	TDO/PTE0	I/O	Test data / Port E	
17	D27/PTB3	I/O		121	BACK	O	Bus acknowledge	
18	D26/PTB2	I/O		122	BREQ	I	Bus request	
19	VssQ	-		Ground	123	WAIT	I	Hardware wait request
20	D25/PTB1	I/O	Data bus / Port B	124	RESETM	I	Manual reset	
21	VccQ	-	Power supply +3.3 V	125	ADTRG/PTH5	I	Analog trigger / Port H	
22	D24/PTB0	I/O	Data bus / Port B	126	IOIS16/PTG7	I	Write protect / Port G	
23	D23/PTA7	I/O	Data bus / Port A	127	ASEMD0/PTG6	I	ASE mode / Port G	
24	D22/PTA6	I/O		128	ASEBRKAK/PTG5	I/O	ASE break acknowledge / Port G	
25	D21/PTA5	I/O		129	PTG4/CKIO2	I/O	Port G / Clock output	
26	D20/PTA4	I/O		130	AUDATA3/PTG3	I/O	AUD data / Port G	
27	Vss	-		Ground	131	AUDATA2/PTG2		I/O
28	D19/PTA3	I/O	Data bus / Port A	132	Vss	-	Ground	
29	Vcc	-	Power supply +1.8 V	133	AUDATA1/PTG1	I/O	AUD data / Port G	
30	D18/PTA2	I/O	Data bus / Port A	134	Vcc	-	Power supply +2.0 V	
31	D17/PTA1	I/O		135	AUDATA0/PTG0	I/O	AUD data / Port G	
32	D16/PTA0	I/O		136	TRST/PTF7/PINT15	I	Test reset / Port F / Port interruption	
33	VssQ	-		Ground	137	TMS/PTF6/PINT14	I	Test mode switch / Port F / Port interruption
34	D15	I/O	Data bus	138	TDI/PTF5/PINT13	I	Test data / Port F / Port interruption	
35	VccQ	-	Power supply +3.3 V	139	TCK/PTF4/PINT12	I	Test clock / Port F / Port interruption	
36	D14	I/O	Data bus	140	IRLS3/PTF3/PINT11	I	Interrupt request / Port F / Port interruption	
37	D13	I/O		141	IRL2/PTF2/PINT10	I		
38	D12	I/O		142	IRLS1/PTF1/PINT9	I		
39	D11	I/O		143	IRLS0/PTF0/PINT8	I		
40	D10	I/O		144	MD0	I		Mode control
41	D9	I/O		145	Vcc(PLL1)	-		Power supply +2.0 V
42	D8	I/O		146	CAP1	-		Capacitor
43	D7	I/O		147	Vss(PLL1)	-		Ground
44	D6	I/O	148	Vss(PLL2)	-	Ground		
45	VssQ	-	Ground	149	CAP2	-	Capacitor	
46	D5	I/O	Data bus	150	VCC(PLL2)	-	Power supply +2.0 V	
47	VccQ	-	Power supply +3.3 V	151	AUDCK/PTH6	I	AUD clock / Port H	
48	D4	I/O	Data bus	152	Vss	-	Ground	
49	D3	I/O		153	Vss	-		
50	D2	I/O		154	Vcc	-	Power supply +2.0 V	
51	D1	I/O		155	XTAL	O	Crystal oscillator	
52	D0	I/O		156	EXTAL	I		
53	A0	O	Address bus	157	STATUS0/PTJ6	I/O	Processor status / Port J	
54	A1	O		158	STATUS1/PTJ7	I/O		
55	A2	O		159	TCLK/PTH7	I/O	Timer clock / Port H	
56	A3	O		160	/IRQOUT	O	Interrupt request output	
57	VssQ	-		Ground	161	VssQ	-	Ground
58	A4	O	Address bus	162	CKIO	I/O	System clock input / output	
59	VccQ	-	Power supply +3.3 V	163	VccQ	-	Power supply +3.3 V	
60	A5	O	Address bus	164	TXD0/SCPT0	O	Data transmission / SCI port	
61	A6	O		165	SCK0/SCPT1	I/O	Serial clock / SCI port	
62	A7	O		166	TXD1/SCPT2	O	Data transmission / SCI port	
63	A8	O		167	SCK1/SCPT3	I/O	Serial clock / SCI port	
64	A9	O		168	TXD2/SCPT4	O	Data transmission / SCI port	
65	A10	O		169	SCK2/SCPT5	I/O	Serial clock / SCI port	
66	A11	O		170	RTS2/SCPT6	I/O	Transmit request / SCI port	
67	A12	O		171	RXD0/SCPT0	I	Data reception / SCI port	
68	A13	O		172	RXD1/SCPT2	I		
69	VssQ	-		Ground	173	Vss	-	Ground
70	A14	O	Address bus	174	RXD2/SCPT4	I	Data reception / SCI port	
71	VccQ	-	Power supply +3.3 V	175	Vcc	-	Power supply +2.0 V	
72	A15	O	Address bus	176	CTS2/IRQ5/SCPT7	I/O	Mask ROM chip select / Port C / Port interruption	
73	A16	O		177	MCS7/PTC7/PINT7	I/O		
74	A17	O		178	MCS6/PTC6/PINT6	I/O	Mask ROM chip select / Port C / Port interruption	
75	A18	O		179	MCS5/PTC5/PINT5	I/O		
76	A19	O		180	MCS4/PTC4/PINT4	I/O	Ground	
77	A20	O		181	VssQ	-		
78	A21	O		182	WAKEUP/PTD3	I/O	Standby mode Interrupt request output / Port D	
79	Vss	-		Ground	183	VccQ	-	Power supply +3.3 V
80	A22	O	Address bus	184	RESETOUT/PTD2	I/O	Reset output / Port D	
81	Vcc	-	Power supply +2.0 V	185	MCS3/PTC3/PINT3	I/O	Mask ROM chip select / Port C / Port interruption	
82	A23	O	Address bus	186	MCS2/PTC2/PINT2	I/O		
83	VssQ	-	Ground	187	MCS1/PTC1/PINT1	I/O		
84	A24	O	Address bus	188	MCS0/PTC0/PINT0	I/O		
85	VccQ	-	Power supply +3.3 V	189	DRAK0/PTD1	I/O	DMA acknowledge / Port D	
86	A25	O	Address bus	190	DRAK1/PTD0	I/O		
87	BS/PTK4	I/O	Bus cycle / Port K	191	DREQ0/PTD4	I	DMA request / Port D	
88	RD	O	Read strobe	192	DREQ1/PTD6	I		
89	WE0/DQMLL	O	Select signal (D7-D0) / D QM (SDRAM)	193	RESETP	I	Power on reset	
90	WE1/DQMLU/WE	O	Select signal (D15-D8) / D QM (SDRAM) / Write enable	194	CA	I	Chip active	
91	WE2/DQMLIC/IRD/PTK6	I/O	Select signal (D23-D16) / D QM (SDRAM) / I/O read / Port K	195	MD3	I	Mode control	
92	WE3/DQMLIIC/WR/PTK7	I/O	Select signal (D31-D24) / D QM (SDRAM) / I/O write / Port K	196	MD4	I		
93	RD/WR	O	Read / Write	197	MD5	I		
94	AUDSYNC/PTE7	I/O	AUD cycle / Port E	198	AVss	-		Analog ground
95	VssQ	-	Ground	199	AN0/PTL0	I	Analog input / Port L	
96	CS0/MCS0	O	Chip select / Mask ROM chip select	200	AN1/PTL1	I		
97	VccQ	-	Power supply +3.3V	201	AN2/PTL2	I		
98	CS2/PTK0	I/O	Chip select / Port K	202	AN3/PTL3	I		
99	CS3/PTK1	I/O		203	AN4/PTL4	I		
100	CS4/PTK2	I/O		204	AN5/PTL5	I		
101	CS5/CE1A/PTK3	I/O	Chip select / Chip enable / Port K	205	AVcc	-	Analog power supply +3.3 V	
102	CS6/CE1B	I/O	Chip select / Chip enable	206	AN6/DA1/PTL6	I/O	Analog input / Analog output / Port L	
103	CE2A/PTE4	O	Chip enable / Port E	207	AN7/DA0/PTL7	I/O		
104	CE2B/PTE5	I/O		208	AVss	-	Analog ground	

● M38869M8A-112GPUO (XZ878100) CPU (EBUS HOST)

DM: IC51

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION	
1	P60/AN0	I/O	CMOS 8Bit Input Output Port	41	P15	I/O	CMOS 8Bit Input Output Port	
2	P77/SCL	I/O		42	P14	I/O		
3	P76/SDA	I/O		43	P13	I/O		
4	P75/INT41	I/O		44	P12	I/O		
5	P74/INT31	I/O	CMOS 8Bit Input Output Port	45	P11	I/O	CMOS 8Bit Input Output Port	
6	P73/SRDY2/INT21	I/O		46	P10	I/O		
7	P72/SCLK2	I/O		47	P07	I/O		
8	P71/SOUT2	I/O		48	P06	I/O		
9	P70/SIN2	I/O	CMOS 8Bit Input Output Port	49	P05	I/O	CMOS 8Bit Input Output Port	
10	P57/DA2/PWM11	I/O		50	P04	I/O		
11	P56/DA1/PWM01	I/O		51	P03	I/O		
12	P55/CNTR1	I/O		52	P02	I/O		
13	P54/CNTR0	I/O	CMOS 8Bit Input Output Port	53	P01	I/O	CMOS 8Bit Input Output Port	
14	P53/INT40/W	I/O		54	P00/P3REF	I/O		
15	P52/INT30/R	I/O		55	P37	I/O		
16	P51/INT20/So	I/O		56	P36	I/O		
17	P50/A0	I/O	CMOS 8Bit Input Output Port	57	P35	I/O	CMOS 8Bit Input Output Port	
18	P47/SRDY1/S1	I/O		58	P34	I/O		
19	P46/SCLK1/OBF10	I/O		59	P33	I/O		
20	P45/TxD	I/O		60	P32	I/O		
21	P44/RxD	I/O	CMOS 8Bit Input Output Port	61	P31/PWM10	I/O	CMOS 8Bit Input Output Port	
22	P43/INT1/OBF01	I/O		62	P30/PWM00	I/O		
23	P42/INT0/OBF00	I/O		63	P87/DQ7	I/O		
24	CNVSS	I		64	P86/DQ6	I/O		
25	RESET	I	Reset Input	65	P85/DQ5	I/O	CMOS 8Bit Input Output Port	
26	P41/XCIN	I/O	CMOS 8Bit Input Output Port	66	P84/DQ4	I/O		
27	P40/XCOUT	I/O	CMOS 8Bit Input Output Port	67	P83/DQ3	I/O		
28	XIN	I	Main Clock Input	68	P82/DQ2	I/O		
29	XOUT	O	Main Clock Output	69	P81/DQ1	I/O	Power Supply A/D D/A Power Supply input Analog Power Supply input	
30	VSS		Power Supply	70	P80/DQ0	I/O		
31	P27	I/O		71	VCC			
32	P26	I/O		72	VREF	I		
33	P25	I/O		73	AVSS	I		
34	P24	I/O	CMOS 8Bit Input Output Port	74	P67/AN7	I/O	CMOS 8Bit Input Output Port	
35	P23	I/O			75	P66/AN6		I/O
36	P22	I/O			76	P65/AN5		I/O
37	P21	I/O			77	P64/AN4		I/O
38	P20	I/O	CMOS 8Bit Input Output Port	78	P63/AN3	I/O	CMOS 8Bit Input Output Port	
39	P17	I/O			79	P62/AN2		I/O
40	P16	I/O		CMOS 8Bit Input Output Port	80	P61/AN1		I/O

● AK5381VT-E2 (X5219A00) A/D CONVERTER

DAC2A: IC401

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	AINR	I	Rch Analog input pin	9	SDTO	O	Audio serial data output pin
2	AINL	I	Lch Analog input pin	10	LRCK	I/O	Output channel clock pin
3	CKS1	I	Mode select 1 pin	11	MCLK	I	Master clock input pin
4	VCOM	O	Common voltage output pin	12	SCLK	I/O	Audio serial data clock pin
5	AGND	-	Analog ground	13	PDN	I	Power down mode pin
6	VA	-	Analog power supply	14	DIF	I	Audio interface format pin
7	VD	-	Digital power supply	15	CKS2	I	Mode select 2 pin
8	DGND	-	Digital ground	16	CKS0	I	Mode select 0 pin

● UPD780031AYGK-N05 (XZ916200) CPU (LED DRIVER/SWITCH SCAN)

PNL: IC2, PNR: IC2

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	P50/A8	I/O	Port 5 / Higher address bus	33	P10/ANI0	I	Port 1 / A/D converter analog input
2	P51/A9	I/O		34	AVREF	I	
3	P51/A10	I/O		35	AVDD	-	Analog power supply
4	P53/A11	I/O		36	RESET	I	System reset input
5	P54/A12	I/O		37	XT2	-	Subsystem clock oscillation
6	P55/A13	I/O		38	XT1	I	
7	P56/A14	I/O		39	IC	-	Internally connected
8	P57/A15	I/O		40	X2	-	Main system clock oscillation
9	Vss0	-	41	X1	I		
10	VDD0	-	42	Vss1	-	Ground	
11	P30	I/O	Port 3	43	P00/INTP0	I/O	Port 0 / External interrupt request input
12	P31	I/O		44	P01/INTP1	I/O	
13	P32/SDA0	I/O	Port 3 / Serial data input/output	45	P02/INTP2	I/O	Port 0 / External interrupt request input / Trigger signal input
14	P33/SCL0	I/O	Port 3 / Serial clock input/output	46	P03/INTP3/ADTRG	I/O	
15	P34	I/O	Port 3	47	P70/TI00/TO0	I/O	Port 7 / External count clock input / 16-bit timer/event counter 0 output
16	P35	I/O		48	P71/TI01	I/O	Port 7 / Capture trigger input
17	P36	I/O		49	P72/TI50/TO50	I/O	Port 7 / External count clock input / 8-bit timer/event counter 50 output
18	P20/SI30	I/O	Port 2 / Serial data input	50	P73/TI51/TO51	I/O	Port 7 / External count clock input / 8-bit timer/event counter 51 output
19	P21/SO30	I/O	Port 2 / Serial data output	51	P74/PCL	I/O	Port 7 / Clock output
20	P22/SCK30	I/O	Port 2 / Serial clock input/output	52	P75/BUZ	I/O	Port 7 / Buzzer output
21	P23/RxD0	I/O	Port 2 / Serial data input	53	P64/RD	I/O	Port 6 / Strobe signal output for reading
22	P24/TxD0	I/O	Port 2 / Serial data output	54	P65/WR	I/O	Port 6 / Strobe signal output for writing
23	P25/ASCK0	I/O	Port 2 / Serial clock input/output	55	P66/WAIT	I/O	Port 6 / Wait insertion
24	VDD1	-	Power supply	56	P67/ASTB	I/O	Port 6 / Strobe output
25	AVss	-	Ground	57	P40/AD0	I/O	Port 4 / Lower address/data bus
26	P17/ANI7	I	Port 1 / A/D converter analog input	58	P41/AD1	I/O	
27	P16/ANI6	I		59	P42/AD2	I/O	
28	P15/ANI5	I		60	P43/AD3	I/O	
29	P14/ANI4	I		61	P44/AD4	I/O	
30	P13/ANI3	I		62	P45/AD5	I/O	
31	P12/ANI2	I		63	P46/AD6	I/O	
32	P11/ANI1	I		64	A47/AD7	I/O	

● HD6433693B14HV (X4801200) CPU

EMKS-FD: IC005

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	NC		Not used	33	NC		Not used
2	NC			34	NC		
3	AVcc	-	Power supply	35	NMI	I	Non maskable interrupt
4	X2	O	Crystal resonator	36	P80/FTCI	I/O	8-bit I/O port / External event input
5	X1	I		37	P81/FTIOA	I/O	8-bit I/O port / Output compare
6	VCL	-	Power supply	38	P82/FTIOB	I/O	8-bit I/O port / Output / input capture
7	RES	I	Reset pin	39	P83/FTIOC	I/O	8-bit I/O port / Input PWM
8	TEST	I	Test pin	40	P84/FTIOD	I/O	8-bit I/O port / Output
9	Vss	-	Ground	41	P85	I/O	8-bit I/O port
10	OSC2	O	Crystal or ceramic resonator	42	P86	I/O	
11	OSC1	I		43	P87	I/O	
12	Vcc	-	Power supply	44	P20/SCK3	I/O	3-bit I/O port / Clock
13	P50/WKP0	I/O	8-bit I/O port / Interrupt request	45	P21/RXD	I/O	3-bit I/O port / Receive data input
14	P51/WKP1	I/O		46	P22/TXD	I/O	3-bit I/O port / Transmit data output
15	NC		Not used	47	NC		
16	NC			48	NC		
17	NC			49	NC		
18	NC			50	NC		
19	P52/WKP2	I/O	8-bit I/O port / Interrupt request	51	P14/IRQ0	I/O	7-bit I/O port / Interrupt request
20	P53/WKP3	I/O		52	P15/IRQ1	I/O	
21	P54/WKP4	I/O	8-bit I/O port / Interrupt request / A/D converter trigger	53	P16/IRQ2	I/O	7-bit I/O port / Interrupt request / Trigger input
22	P55/WKP5/ADTRG	I/O		54	P17/IRQ3/TRGV	I/O	
23	P10/TMOW	I/O	7-bit I/O port	55	PB4/AN4	I/O	8-bit I/O port / Analog input
24	P11	I/O		56	PB5/AN5	I/O	
25	P12	I/O	IIC data I/O pin	57	PB6/AN6	I/O	
26	P56/SDA	I/O		58	PB7/AN7	I/O	
27	P57/SCL	I/O	3-bit I/O port / Timer	59	PB3/AN3	I/O	
28	P74/TMRIV	I/O		60	PB2/AN2	I/O	
29	P75/TMCIV	I/O	Not used	61	PB1/AN1	I/O	
30	P76/TMOV	I/O		62	PB0/AN0	I/O	
31	NC		Not used	63	NC		
32	NC			64	NC		

● M34519M6-521FP (X5646200) CPU(LSC)

PNC: IC1, PNR: IC1

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION	
1	LB12	I/O	4-bit I/O port P1	22	VDD	-	Power supply	
2	LB11	I/O		23	VDCE	I	Voltage drop detection circuit enable	
3	LB10	I/O		24	L0	I/O	INT0 } Interrupt input INT1 }	
4	LB09	I/O		25	L1	I/O		
5	LB08	I/O		1-bit I/O port D Input is examined by skip decision.	26	L2	I/O	4-bit I/O port P3
6	LB07	I/O	27		L3	I/O	4-bit I/O port P6	
7	LB06	I/O	28		L4	I/O		
8	LB05	I/O	CNTR0 } Timer input/output CNTR1 }	29	NC		AIN0 } Analog input	
9	LB04	I/O		30	NC			
10	LB03	I/O	4-bit I/O port P5	31	NC		AIN4 } Analog input AIN5 } AIN6 } AIN7 }	
11	LB02	I/O		32	D0	I/O		
12	LB01	I/O		33	D1	I/O		4-bit I/O port P4
13	LB00	I/O		34	D2	I/O		4-bit I/O port P0
14	NC			35	D3	I/O		
15	NC		36	LB19	I/O			
16	NC		Not used	37	LB18	I/O	4-bit I/O port P0	
17	RESET	I/O		38	LB17	I/O		
18	CNVSS	-	Reset input /output Connect CNVss to Vss and apply "L"(0V) to CNCss certainly.	39	LB16	I/O	4-bit I/O port P1	
19	XOUT	O	Main clock output	40	LB15	I/O		
20	XIN	I	Main clock input	41	LB14	I/O		
21	VSS	-	Ground	42	LB13	I/O		

● AK4393VF-E2 (XW029A00) D/A CONVERTER

DAC2A: IC201,IC301

PIN No.	NAME	I/O	FUNCTION	PIN No.	NAME	I/O	FUNCTION
1	DVSS	-	Digital Ground Pin	15	BVSS	I	Substrate Ground Pin, 0V
2	DVDD	-	Digital Power Supply Pin, 3.3V or 5.0V	16	VREFL	I	Low Level Voltage Reference Input Pin
3	MCLK	I	Master Clock Input Pin	17	VREFH	-	High Level Voltage Reference Input Pin
4	PD	I	Power-Down Mode Pin When at "L", the Ak4393 is in power-down mode and is held in reset. The AK4393 should always be reset upon power-up.	18	AVDD	-	Analog Power Supply Pin, 5V
5	BICK	I	Audio Serial Data Clock Pin The clock of 64fs or more than is recommended to be input on this pin.	19	AVSS	O	Analog Ground Pin, 0V
6	SDATA	I	Audio Serial Data Input Pin 2's complement MSB-first data is input on this pin.	20	AOUTR-	O	Rch Negative analog output Pin
7	LRCK	I	L/R Clock Pin	21	AOUTR+	O	Rch Positive analog output Pin
8	SMUTE	I	Soft Mute Pin When this pin goes "H", soft mute cycle is initiated. When returning "L", the output mute releases.	22	AOUTL-	O	Lch Negative analog output Pin
9	\overline{CS}	I	Chip Select Pin in serial mode	23	AOUTL+	O	Lch Positive analog output Pin
	DFS	I	Double speed sampling mode Pin (Internal pull-down pin) "L": Normal Speed, "H": Double Speed	24	VCOM	O	Common Voltage Output Pin, 2.6V
10	DEM0	I	De-emphasis Enable pin	25	P/ \overline{S}	I	Parallel/Serial Select Pin (Internal pull-up pin) "L": Serial control mode, "H": Parallel control mode
	CCLK	I	Control Data Clock Pin in serial mode	26	CKS0	I	Master Clock Select Pin
11	DEM1	I	De-emphasis Enable pin	27	CKS1	I	
	CDTI	I	Control Data Input Pin in serial mode	28	CKS2	I	
12	DIF0	I	Digital Input Format Pin				
13	DIF1	I					
14	DIF2	I					

● LC4256V-75TN100 CP (X6046B00) CPLD (MEL)

DM:IC53

PinNo.	NAME	I/O	FUNCTION/CONNECTION	PinNo.	NAME	I/O	FUNCTION/CONNECTION	
1	GND	-	DGND	51	GND	-	DGND	
2	TDI	I	for CPLD data writing (JTAG pin)	52	TMS	-	for CPLD data communication (JTAG pin)	
3	DGA_AUDIO_IN	O	Digital audio signal output	53	MELO_0	O	Data for Playback tracks1 and 2	
4	I/O		(to +3.3V _D)	54	I/O		(to +3.3V _D)	
5	DGA_OUT	I	Digital audio signal input	55	MELO_2	O	Data for PLAYBACK tracks 3 and 4	
6	I/O		(to +3.3V _D)	56	MELI_0	I	Data for RECORD tracks 1 and 2	
7	GND	-	DGND	57	GND	-	DGND	
8	I/O		(to +3.3V _D)	58	I/O		} (to +3.3V _D)	
9	IDERD_O	I	IDE READ signal (active-low)	59	I/O			
10	IDEWR_O	I	IDE WRITE signal (active-low)	60	I/O			
11	IDEMACK_O	I	DMA ACKNOWLEDGE signal (active-low)	61	I/O			
12	CLOCK_INPUT	I	DMA REQUEST signal(active-low)	62	I		} Power supply +3.3V _D	
13	VCCO	-	Power supply +3.3V _D	63	VCCO	-		
14	DMACLR	I	DMA CLEAR signal (active-low)	64	I/O		} (to +3.3V _D)	
15	I/O		} (to +3.3V _D)	65	I/O			
16	I/O							
17	I/O							
18	GND	-	DGND	66	I/O		} System master clock (22.5792MHz)	
19	HDIRQ	I	INTERRUPT signal (HDD to CPU) (active-high)	67	DGAMCLK	O		
20	XHDIRQ	O	INTERRUPT signal (HDD to CPU) (active-low)	68	GND	-	DGND	
21	I/O		} (to +3.3V _D)	69	DGAWCLK	O	System word clock (44.1kHz)	
22	I/O							
23	FS64DGA	I	Bit clock for data between DGA and MAT	70	I/O		(to +3.3V _D)	
24	TCK	I	Clock for CPLD data communication (JTAG pin)	71	IDEMARQ512D	O	IDE DMA request	
25	VCC	-	Power supply +3.3V _D	72	DMAERR	O	(Not used)	
26	GND	-	DGND	73	I	I	(to DGND)	
27	I		} (to +3.3V _D)	74	TDD	O	for CPLD data communication	
28	I/O							
29	I/O							
30	I/O							
31	I/O		} Power supply +3.3V _D	75	VCCO	-	Power supply +3.3V _D	
32	GND	-		DGND	76	GND	-	DGND
33	VCCO	-		Power supply +3.3V _D	77	I		(to +3.3V _D)
34	I/O		} (to +3.3V _D)	78	I/O		(to DGND)	
35	I/O							
36	I/O		} (to +3.3V _D)	79	WCLK1	O	Word clock for DAC (Not used)	
37	I/O							
38	CK512	I	Master clock (22.5792KHz)	80	I/O		(to DGND)	
39	FS128	I	Bit clock for data between SWP50 and MAT (11.2894MHz)	81	WCLK0	O	Word clock for DAC (Not used)	
40	I/O		} (to +3.3V _D)	82	GND	-	DGND	
41	I/O							
42	I/O							
43	I/O							
44	I/O		} Power supply +3.3V _D	83	VCCO	-	Power supply +3.3V _D	
45	VCCO	-		Power supply +3.3V _D	84	ADLR	O	LR signal for DAC (Not used)
46	GND	-	DGND	85	I/O		(to DGND)	
47	I/O		} (to +3.3V _D)	86	FS640UT	O	Maste clock for DAC (Not used)	
48	I/O							
49	I/O							
50	I/O			87	I/O/GOE1		(to DGND)	
				88	FS	I	Sampling frequency (44.1kHz)	
				89	FS256	I	256FS (11.2896MHz)	
				90	VCCO	-	Powe supply +3.3V _D	
				91	I/O/GOE0		} (to +3.3V _D)	
				92	I/O			
				93	I/O			
				94	I/O			
				95	VCCO	-	Power supply +3.3V _D	
				96	GND	-	Ground	
				97	I/O		} (to +3.3V _D)	
				98	I/O			
				99	I/O			
				100	IDMARQ_0512HDL	O	Output in case that the DMA request signal is negated by the rising or falling edge of 512FS. (Not used.)	

●M4A3-64/64-10VNC (X2987A00) CPLD

PNL: IC1

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	GND		Ground	51	GND		Ground
2	TDI	I	Test data in	52	ENABLE		Program
3	A1	I/O	Data bus block A	53	C1	I/O	Data bus block C
4	A3	I/O	Data bus block A	54	C3	I/O	Data bus block C
5	A5	I/O	Data bus block A	55	C5	I/O	Data bus block C
6	A7	I/O	Data bus block A	56	C7	I/O	Data bus block C
7	A9	I/O	Data bus block A	57	C9	I/O	Data bus block C
8	A11	I/O	Data bus block A	58	C11	I/O	Data bus block C
9	A13	I/O	Data bus block A	59	C13	I/O	Data bus block C
10	A15	I/O	Data bus block A	60	C15	I/O	Data bus block C
11	I0/CLK1	I		61	I3/CLK2		
12	VCC		Power supply	62	VCC		Power supply
13	GND		Ground	63	GND		Ground
14	I1/CLK1	I		64	I4/CLK3		
15	B15	I/O	Data bus block B	65	D15	I/O	Data bus block D
16	B13	I/O	Data bus block B	66	D13	I/O	Data bus block D
17	B11	I/O	Data bus block B	67	D11	I/O	Data bus block D
18	B9	I/O	Data bus block B	68	D9	I/O	Data bus block D
19	B7	I/O	Data bus block B	69	D7	I/O	Data bus block D
20	B5	I/O	Data bus block B	70	D5	I/O	Data bus block D
21	B3	I/O	Data bus block B	71	D3	I/O	Data bus block D
22	B1	I/O	Data bus block B	72	D1	I/O	Data bus block D
23	TMS		Test mode select	73	TRST		Test reset
24	TCK		Test clock	74	TDO	O	Test data out
25	GND		Ground	75	GND		Ground
26	GND		Ground	76	GND		Ground
27	GND		Ground	77	GND		Ground
28	B14	I/O	Data bus block B	78	D14	I/O	Data bus block D
29	B12	I/O	Data bus block B	79	D12	I/O	Data bus block D
30	B10	I/O	Data bus block B	80	D10	I/O	Data bus block D
31	B8	I/O	Data bus block B	81	D8	I/O	Data bus block D
32	B6	I/O	Data bus block B	82	D6	I/O	Data bus block D
33	B4	I/O	Data bus block B	83	D4	I/O	Data bus block D
34	B2	I/O	Data bus block B	84	D2	I/O	Data bus block D
35	B0	I/O	Data bus block B	85	D0	I/O	Data bus block D
36	I2	I		86	I5	I	
37	VCC		Power supply	87	VCC		Power supply
38	GND		Ground	88	GND		Ground
39	GND		Ground	89	GND		Ground
40	VCC		Power supply	90	VCC		Power supply
41	C0	I/O	Data bus block C	91	A0	I/O	Data bus block A
42	C2	I/O	Data bus block C	92	A2	I/O	Data bus block A
43	C4	I/O	Data bus block C	93	A4	I/O	Data bus block A
44	C6	I/O	Data bus block C	94	A6	I/O	Data bus block A
45	C8	I/O	Data bus block C	95	A8	I/O	Data bus block A
46	C10	I/O	Data bus block C	96	A10	I/O	Data bus block A
47	C12	I/O	Data bus block C	97	A12	I/O	Data bus block A
48	C14	I/O	Data bus block C	98	A14	I/O	Data bus block A
49	GND		Ground	99	GND		Ground
50	GND		Ground	100	GND		Ground

● S1L52502F24J000 (X2688A00) Gate Array(DGA)

DM: IC25

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	LVDD		Power supply +3.3V	105	HVDD		Power supply +5V
2	XDACK	I	CPU DMA acknowledge	106	LEDD0	O	Port/Test output
3	XDRACK	I	CPU DREQ request acknowledge	107	LEDD1	O	
4	XDREQ	O	CPU DMA request	108	LEDD2	O	
5	ATPGEN	I	ATPG test input	109	LEDD3	O	
6	VSS		Ground	110	VSS		Ground
7	ENCA0	I	Encoder0 A input	111	LVDD		Power supply +3.3V
8	ENCB0	I	Encoder0 B input	112	XTA22I	I	XTAL input terminal
9	ENCA1	I	Encoder1 A input	113	VSS		Ground
10	ENCB1	I	Encoder1 B input	114	XTA22O	O	XTAL output terminal
11	HVDD		Power supply +5V	115	LVDD		Power supply +3.3V
12	ENCA2	I	Encoder2 A input	116	HVDD		Power supply +5V
13	ENCB2	I	Encoder2 B input	117	LEDD4	O	Port/Test output
14	ENCA3	I	Encoder3 A input	118	LEDD5	O	
15	ENCB3	I	Encoder3 B input	119	LEDD6	O	
16	VSS		Ground	120	LEDD7	O	
17	ENCA4	I	Encoder4 A input	121	VSS		Ground
18	ENCB4	I	Encoder4 B input	122	VCOI	I	VCO clock input
19	ENCA5	I	Encoder5 A input	123	HVDD		Power supply +5V
20	ENCB5	I	Encoder5 B input	124	PDOOUT	O	PLL phase comparator output
21	HVDD		Power supply +5V	125	VSS		Ground
22	TSTEN	I	Test mode change	126	XRESET	I	Reset signal input
23	XIDCS0	O	IDE chip select	127	EXTWCI	I	External synchronization WC input
24	XIDCS1	O					
25	XIDDOE	O	IDE bus buffer DIR signal	128	SDIN	I	Digital sound input
26	VSS		Ground	129	SDOUT	O	Digital sound output
27	HVDD		Power supply +5V	130	HVDD		Power supply +5V
28	XIDWR	O	IDE write signal	131	XDSPCS0	O	DSP6 chip select
29	XIDRD	O	IDE read signal	132	XDSPCS2	O	DSP chip select (reserve)
30	XIDMACK	O	IDE DMA acknowledge	133	XDSPCS1	O	DSP7 chip select
31	IDMARQ	I	IDE DMA request	134	VSS		Ground
32	VSS		Ground	135	AUDIOIN0	I	Audio data input
33	IDD0	I/O	IDE data bus	136	AUDIOIN1	I	
34	IDD1	I/O					
35	IDD2	I/O	Power supply +5V	137	AUDIOOUT0	O	Audio data output
36	IDD3	I/O					
37	HVDD		Power supply +5V	138	LVDD		Power supply +3.3V
38	IDD4	I/O					
39	IDD5	I/O	IDE data bus	139	AUDIOOUT1	O	Audio data output
40	IDD6	I/O					
41	IDD7	I/O	Ground	140	AUDIOOUT2	O	
42	VSS						
43	IDD8	I/O	IDE data bus	141	AUDIOOUT3	O	Ground
44	IDD9	I/O					
45	IDD10	I/O	Power supply +5V	142	VSS		
46	IDD11	I/O					
47	HVDD		Power supply +5V	143	AUDIOOUT4	O	Audio data output
48	IDD12	I/O					
49	IDD13	I/O	IDE data bus	144	AUDIOOUT5	O	
50	IDD14	I/O					
51	IDD15	I/O	Ground	145	AUDIOOUT6	O	
52	VSS						
53	LVDD		Power supply +3.3V	146	LVDD		Power supply +3.3V
54	SDRD0	I/O	SDRAM data bus	147	HVDD		Power supply +5V
55	SDRD1	I/O					
56	SDRD2	I/O	Ground	148	CK512	O	FS512 clock
57	SDRD3	I/O					
58	VSS		Power supply +5V	149	FS256	O	FS256 clock
59	SDRD4	I/O					
60	SDRD5	I/O	SDRAM data bus	150	FS128	O	FS128 clock
61	SDRD6	I/O					
62	SDRD7	I/O	Power supply +3.3V	151	VSS		Ground
63	LVDD						
64	SDRD8	I/O	SDRAM data bus	152	XFS64	O	FS64 clock (reverse)
65	SDRD9	I/O					
66	SDRD10	I/O	Ground	153	ALRCK	O	System WC (FS)
67	SDRD11	I/O					
68	VSS		Power supply +3.3V	154	XSSYNC	O	DSP synchronizing signal output
69	SDRD12	I/O					
70	SDRD13	I/O	SDRAM data bus	155	HVDD		Power supply +5V
71	SDRD14	I/O					
72	SDRD15	I/O	Power supply +3.3V	156	VSS		Ground
73	LVDD						
74	SDRA0	O	SDRAM address output	157	LVDD		Power supply +3.3V
75	SDRA1	O					
76	SDRA2	O	Ground	158	HVDD		Power supply +5V
77	SDRA3	O					
78	VSS		Power supply +3.3V	159	XDLCSS	O	Data buffer enable
79	LVDD						
80	SDRA4	O	SDRAM address output	160	XLCDCS0	O	LCD driver chip select
81	SDRA5	O					
82	SDRA6	O	Ground	161	XLCDCS1	O	
83	SDRA7	O					
84	VSS		Power supply +3.3V	162	VSS		Ground
85	SDRA8	O					
86	SDRA9	O	SDRAM address output	163	CD0	I/O	CPU data bus
87	SDRA10	O					
88	SDRA11	O	Power supply +3.3V	164	CD1	I/O	
89	LVDD						
90	SDRA12	O	SDRAM address output	165	CD2	I/O	CPU data bus
91	SDRA13	O					
92	XSDRWE	O	SDRAM write signal	166	CD3	I/O	
93	XSDRRAS	O					
94	VSS		SDRAM column address strobe	167	LVDD		Power supply +3.3V
95	XSDRCAS	O					
96	XSDRCS0	O	SDRAM chip select	168	CD4	I/O	CPU data bus
97	XSDRCS1	O					
98	SDRDQM	O	SDRAM data enable	169	CD5	I/O	
99	LVDD						
100	SDRCLK	O	Power supply +3.3V	170	CD6	I/O	CPU data bus
101	XTCLR	I					
102	HVDD		Power supply +5V	171	CD7	I/O	Ground
103	TESTRAM	I					
104	VSS		Ground	172	VSS		
				173	CD8	I/O	CPU data bus
				174	CD9	I/O	
				175	CD10	I/O	Power supply +3.3V
				176	CD11	I/O	
				177	LVDD		Power supply +3.3V
				178	CD12	I/O	
				179	CD13	I/O	CPU data bus
				180	CD14	I/O	
				181	CD15	I/O	Ground
				182	VSS		
				183	LVDD		Power supply +3.3V
				184	CA1	I	CPU address input
				185	CA2	I	
				186	CA3	I	
				187	CA4	I	
				188	VSS		Ground
				189	CA5	I	CPU address input
				190	CA6	I	
				191	CA7	I	
				192	CA12	I	
				193	LVDD		Power supply +3.3V
				194	CA13	I	CPU address input
				195	CA16	I	
				196	XCCS5	I	CPU chip select
				197	XCCS6	I	
				198	VSS		Ground
				199	XCRD	I	CPU read signal
				200	XCWR	O	CPU write signal
				201	XCIRQ	O	CPU interrupt request
				202	XFTMIRQ1	O	
				203	LVDD		Power supply +3.3V
				204	XFTMIRQ2	O	CPU interrupt request
				205	XFTMIRQ3	O	
				206	FSPLAY	O	FS count signal
				207	SCANEN	I	Scan enable input
				208	VSS		Ground

● S1L50553F21Y000 (X4195A00) Gate Array(MCI)

DM: IC406

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	CLKI	I	} Clock	41	VDD	-	Power supply
2	CLKO	O		42	RESET	I	Reset
3	VDD	-	Power supply	43	VSS	-	Ground
4	SCANENB	I/O	Scan enable	44	OUT4	O	} Output
5	ATPGENB	I/O		45	OUT3	O	
6	VSS	-	Ground	46	INP2	I	} Input
7	PLLTEST	I	Test	47	INP1	I	
8	PLLRES	I	Reset	48	INP0	I	
9	PLLVSS	-	Ground	49	TESTENB	I/O	Test enable
10	MVDD	-	Power supply	50	VSS	-	Ground
11	PLLVSS	-	Ground	51	OSCO	-	
12	AVDD	-	Analog power supply	52	VDD	-	Power supply
13	CHG0	-		53	OSCI	-	
14	LPVSS	-	} Ground	54	VSS	-	Ground
15	VSS	-		55	SIRQ	I/O	Interrupt request
16	MIRQ	I/O	Interrupt request	56	SCS	I	Control port
17	MCS	I	Control port	57	SWR	I	Write
18	MWR	I	Write	58	SRD	I	Read
19	MRD	I	Read	59	SA	-	
20	MA	-		60	VSS	-	Ground
21	VDD	-	Power supply	61	VDD	-	Power supply
22	MD0	I/O	} DRAM data bus	62	SD0	I/O	} Serial data
23	MD1	I/O		63	SD1	I/O	
24	MD2	I/O		64	SD2	I/O	
25	MD3	I/O		65	SD3	I/O	
26	MD4	I/O		66	SD4	I/O	
27	MD5	I/O		67	SD5	I/O	
28	MD6	I/O		68	SD6	I/O	
29	MD7	I/O	69	SD7	I/O		
30	VSS	-	Ground	70	VSS	-	Ground
31	MD8	I/O	DRAM data bus	71	SD8	I/O	Serial data
32	VDD	-	Power supply	72	VDD	-	Power supply
33	MD9	I/O	} DRAM data bus	73	SD9	I/O	} Serial data
34	MD10	I/O		74	SD10	I/O	
35	MD11	I/O		75	SD11	I/O	
36	MD12	I/O		76	SD12	I/O	
37	MD13	I/O		77	SD13	I/O	
38	MD14	I/O		78	SD14	I/O	
39	MD15	I/O		79	SD15	I/O	
40	VSS	-	Ground	80	VSS	-	Ground

● YGV628-VZ (X6356A00) RGB CONTROLLER

DM: IC302

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION		
1	A23	I	Address bus	89	SA13	O	Address bus output pin for video memories		
2	A22	I		90	VDD	-		Power supply +3.3V	
3	A21	I		91	SA11	O	Address bus output pins for video memories		
4	A20	I		92	SA12	O			
5	VDD	-	93	SA9	O				
6	A19	I	94	SA10	O				
7	VSS	-	Ground	95	SA8	O	Ground		
8	A18	I		96	SA0	O			
9	A17	I	Address bus	97	VSS	-	Ground		
10	A16	I		98	SA1	O			
11	A15	I		99	SA6	O	Address bus output pins for video memories		
12	A14	I		100	SA7	O			
13	A13	I	Address bus	101	VDD	-	Power supply +3.3V		
14	A12	I		102	SA2	O			
15	A11	I	Address bus	103	SA5	O	Address bus output pins for video memories		
16	A10	I		104	SA3	O			
17	A9	I		105	SA4	O			
18	A8	I		106	VSS	-	Ground		
19	VDD	-	107	GCK2OUT	O	Dot clock output			
20	VSS	-	Ground	108	VDD	-	Power supply +3.3V		
21	A7	I		109	DRO0	O			
22	A6	I	Address bus	110	DRO1	O	Digital RGB input		
23	A5	I		111	DRO2	O			
24	A4	I		112	DRO3	O			
25	A3	I		113	DRO4	O			
26	A2	I	Address bus	114	DRO5	O	Digital RGB input		
27	A1	I		115	DGO0	O			
28	WRH_N	I		116	DGO1	O			
29	WRL_N	I		117	VSS	-		Ground	
30	RD_N	I	118	DGO2	O				
31	RESET_N	I	Reset (schmitt trigger type input)	119	DGO3	O	Digital RGB input		
32	VSS	-	Ground	120	VDD	-			
33	CS_N	I	Chip selection input	121	DGO4	O	Digital RGB input		
34	VDD	-	Power supply +3.3V	122	DGO5	O			
35	DREQ_N	O	DMA request signal output	123	DBO0	O			
36	INT_N	O	Interrupt signal output	124	DBO1	O			
37	READY_N	O	CPU bus ready (3-state output)	125	DBO2	O	Ground		
38	WAIT_N	O	CPU bus wait (3-state output)	126	DBO3	O			
39	D15	I/O	Data bus	127	VSS	-	Ground		
40	D14	I/O		128	DBO4	O		Digital RGB input	
41	D13	I/O		129	DBO5	O			
42	D12	I/O		130	YS_N	O	YS signal output		
43	VSS	-	Ground	131	BRANK_N	O	Display timing output		
44	D11	I/O		132	VDD	-	Power supply +3.3V		
45	D10	I/O	Data bus	133	DACVSS	-	Power supply for built-in PLL, +3.3V		
46	VDD	-		Power supply +3.3V	134	R	Analog R, G and B output		
47	D9	I/O		135	G	O			
48	D8	I/O		136	B	O			
49	D7	I/O	Data bus	137	IREF	-	Analog: Reference current input pin for RGB DAC		
50	D6	I/O		138	DACVDD	-	Analog power supply pin for built-in DAC, +3.3V		
51	D5	I/O		139	TEST2_N	I	Test mode setting pins for a device test		
52	D4	I/O		140	TEST1_N	I			
53	VSS	-	Ground	141	TEST0_N	I			
54	D3	I/O		142	CSYNC_N	O	Horizontal synchronization/compound synchronization signal output		
55	D2	I/O		143	VSYN_N	O	Vertical synchronization signal output		
56	D1	I/O		144	GCK1OUT	O	Dot clock output		
57	D0	I/O	Data bus	145	VDD	-	Power supply +3.3V		
58	VDD	-		Power supply +3.3V	146	GCK2IN	I	Input pin of dot clock and capture clock	
59	SDQ0	I/O		Data input/output bus pins for video memories	147	DRIO	I	Digital RGB input	
60	SDQ15	I/O		Data input/output bus pins for video memories	148	VSS	-	Ground	
61	VSS	-	Ground		149	DR11	I		
62	SDQ1	I/O	150		DR12	I	Digital RGB input		
63	SDQ14	I/O	151		DR13	I			
64	SDQ2	I/O	152	DR14	I				
65	SDQ13	I/O	153	DR15	I				
66	SDQ3	I/O	Data input/output bus pins for video memories	154	DG10	I	Digital RGB input		
67	VSS	-		Ground	155	DG11		I	
68	SDQ12	I/O		Data input/output bus pin for video memories	156	DG12		I	
69	VDD	-		Power supply +3.3V	157	DG13		I	
70	SDQ4	I/O	Data input/output bus pins for video memories	158	VDD	-	Power supply +3.3V		
71	SDQ11	I/O		159	DG14	I	Digital RGB input		
72	SDQ5	I/O		160	VSS	-	Ground		
73	SDQ10	I/O		161	DG15	I			
74	VSS	-	Ground	162	DB10	I	Digital RGB input		
75	SDQ6	I/O		163	DB11	I			
76	SDQ9	I/O		164	DB12	I			
77	SDQ7	I/O		165	DB13	I			
78	SDQ8	I/O	Data input/output bus pins for video memories	166	DB14	I	Digital RGB input		
79	VDD	-		Power supply +3.3V	167	DB15		I	
80	LDQM	O		Data mask signal output for video memories (for SDQ15-8)	168	HSIN_N		I	Horizontal synchronized signal input
81	VSS	-		Ground	169	VSIN_N		I	Vertical synchronized signal input
82	WE_N	O	Write strobe output to the video memories	170	VDD	-	Power supply +3.3V		
83	UDQM	O	Data mask signal output for video memories (for SDQ7-0)	171	VSS	-	Ground		
84	CAS_N	O	Column address strobe output pin to the video memories	172	GCK1IN	I		Input pin of dot clock and capture clock	
85	SDCKOUT	O	Clock output pin for video memories	173	SYCKIN	I	Input pin for system clock		
86	RAS_N	O	Row address strobe output pin to video memories	174	PLLVD	-	Analog power supply pin for built-in PLL, +3.3V		
87	VSS	-	Ground	175	PLLVSS	-	Analog power supply pin for built-in PLL, Ground		
88	SCS_N	O		Chip selection output pin to video memories	176	FILTER	-	Analog: Filter connection pin for built-in PLL	

● MB3516APF-G-BND (X2314A00) RGB ENCODER

DM: IC306

PIN No.	NAME	I/O	FUNCTION	PIN No.	NAME	I/O	FUNCTION
1	GND1	-	Ground Pin for circuits other than 75Ω output driver Analog RGB input pins With CSYNC-IN at the "L" level, the R-IN, G-IN and B-IN pins are clamped. During the "L" level period, the R-IN, G-IN and B-IN pins input pedestal levels. (100% = 1 Vp-p)	13	N.C.	-	Unused pin
2	R-IN	I		14	N.C.	-	Unused pin
3	G-IN	I		15	CROMA-OUT	O	Chroma signal output pin Capable of directly driving a 75Ω load.
4	B-IN	I		16	Y-OUT	O	Y-signal output pin Capable of directly driving a 75Ω load.
5	N.C.	-	Unused pin	17	Y-TRAP	-	Luminance signal band control pin Capable of adjusting the frequency characteristic of the luminance signal at the composite video signal output pin by connecting a capacitor or a capacitor and an inductor in series to GND1.
6	fsc-IN	I	Subcarrier input pin Inputs sine wave of 1.0 to 5.0 Vp-p or a pulse carrier.	18	N.C.	-	Unused pin
7	NTSC/PAL-IN	I	NTSC/PAL sector pin "H" level: Selects the NTSC mode. "L" level: Selects the PAL mode.	19	Vcc2	-	Power-supply pin for the 75Ω output driver circuit
8	N.C.	-	Unused pin	20	VIDEO-OUT	O	Composite video signal output pin Capable of directly driving a 75Ω load.
9	N.C.	-	Unused pin	21	B-OUT	O	Analog RGB signal output pins Capable of directly driving a 75Ω load.
10	CSYNC-N	I	Composite sync signal input pin CSYNC-IN = "L" level : Outputs a composite sync signal while clamping R-IN, G-IN and B-IN.	22	G-OUT		
11	N.C.	-	Unused pin	23	R-OUT		
12	Vcc1	-	Power-supply pin for circuits other than 75Ω output driver.	24	GND2	-	Ground pin for 75Ω output driver circuit

● TUSB2046BVF (X4704A00) 4-PORT USB HUB

DM: IC901

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	DP0	I/O	Differential data plus	17	PWRON3	O	Power-on/-off control signal
2	DM0	I/O	Differential data minus	18	OVRCUR3	I	Over-current input
3	Vcc	-	Power supply	19	DM3	I/O	Differential data minus
4	RESET	I	Reset	20	DP3	I/O	Differential data plus
5	EECLK	O	EEPROM serial clock	21	PWRON4	O	Power-on/-off control signal
6	EEDATA/GANGED	I/O	EEPROM serial data / Power management mode indicator	22	OVRCUR4	I	Over-current input
7	GND	-	Ground	23	DM4	I/O	Differential data minus
8	BUSPWR	I	Power source indicator	24	DP4	I/O	Differential data plus
9	PWRON1	O	Power-on/-off control signal	25	Vcc	-	Power supply
10	OVRCUR1	I	Over-current input	26	EXTMEM	I	EEPROM read enable
11	DM1	I/O	Differential data minus	27	TSTPLL	I/O	Test pin
12	DP1	I/O	Differential data plus	28	GND	-	Ground
13	PWRON2	O	Power-on/-off control signal	29	XTAL2	O	Crystal oscillator
14	OVRCUR2	I	Over-current input	30	XTAL1	I	
15	DM2	I/O	Differential data minus	31	TSTMODE	I	Test pin
16	DP2	I/O	Differential data plus	32	SUSPND	O	Suspend status

● T8F02TB-0102 (X0060A00) SWP50 (Tone Generator)

DM: IC404,IC405

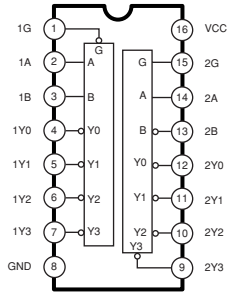
PIN NO.	OUTER NO.	NAME	I/O	FUNCTION	PIN NO.	OUTER NO.	NAME	I/O	FUNCTION	
1	E5	VSS2	-	Ground	106	E22	VSS2	-	Ground	
2	D4	VDDC	-	Power supply +1.5 V	107	D23	VDDC	-	Power supply +1.5 V	
3	C3	CD15	I/O	Data bus of internal register	108	C24	HMA15	O	Wave memory address bus	
4	B2	CD13	I/O		109	B25	HMA16	O		
5	A1	CD14	I/O		110	A26	HMA22	O		
6	D5	CD6	I/O		111	E23	HMA25	O		
7	E6	CD2	I/O	112	F22	VDDS	-	Power supply +3 V		
8	C4	CD9	I/O	113	D24	HMA27	O	Wave memory address bus		
9	B3	CD11	I/O	114	C25	HMA0	O			
10	A2	CD12	I/O	115	B26	HMA23	O			
11	A3	CD10	I/O	116	C26	HMA24	O			
12	D6	CD1	-	Data bus of internal register	117	F23	VDDS	-	Power supply +3 V	
13	E7	VSS	-		118	G22	HMA26	O	Wave memory address bus	
14	C5	CD5	I/O		119	E24	HMA30	O		
15	B4	CD8	I/O		120	D25	HMA28	O		
16	A4	CD7	I/O	121	D26	HMA29	O			
17	D7	VSS2	-	Ground	122	G23	LMA17	O	Wave memory address bus (Lower data memory)	
18	C6	CD0	I/O	Data bus of internal register	123	F24	LMA19	O		
19	E8	VSS	-	Ground	124	H22	VSS	-	Ground	
20	D8	VDDS	-	Power supply +3 V	125	H23	VDDS	-	Power supply +3 V	
21	B5	CD4	I/O	Data bus of internal register	126	E25	LMA20	O	Wave memory address bus (Lower data memory)	
22	A5	CD3	I/O		127	E26	LMA21	O		
23	C7	CA2	I/O		128	G24	LMA9	O		
24	B6	CA0	I/O		129	F25	LMA18	O		
25	E9	CA8	I/O	Address bus of internal register	130	J22	LMA12	O	Wave memory address bus (Lower data memory)	
26	D9	CA9	I/O		131	J23	LMA4	O		
27	C8	CA5	I/O		132	H24	LMA6	O		
28	A6	CA1	I/O		133	F26	LMA8	O		
29	B7	CA3	I/O	134	G25	LMA7	O	Wave memory address bus (Lower data memory)		
30	A7	CA4	I/O	135	G26	LMA10	O			
31	E10	VSS2	-	Ground	136	K22	VSS2		-	Ground
32	D10	VDDC	-	Power supply +1.5 V	137	K23	VDDC		-	Power supply +1.5 V
33	C9	CA10	I/O	Address bus of internal register	138	J24	LMA13	O	Wave memory address bus (Lower data memory)	
34	B8	CA6	I/O		139	H25	LMA11	O		
35	A8	CA7	I/O		140	H26	LMA5	O		
36	B9	CA11	I/O		141	J25	LMA3	O		
37	E11	CA14	I/O	142	L22	LMA16	O	Wave memory address bus (Lower data memory)		
38	D11	CA15	I/O	143	L23	LMA0	O			
39	C10	CA13	I/O	144	K24	LMA2	O			
40	A9	CA12	I/O	145	J26	LMA14	O			
41	B10	CSN0	I/O	Chip select	146	K25	LMA15	O	Wave memory address bus (Lower data memory)	
42	A10	CSN1	I/O		147	K26	LMA1	O		
43	E12	VSS	-	Ground	148	M22	VSS	-	Ground	
44	D12	VDDS	-	Power supply +3 V	149	M23	VDDS	-	Power supply +3 V	
45	C11	WRN	I/O	Write strobe	150	L24	LMA22	O	Wave memory address bus (Lower data memory)	
46	B11	RDN	I/O	Read strobe	151	L25	LMA23	O		
47	A11	WAIT0	I/O	Hardware wait request	152	L26	LMA24	O		
48	C12	IRQ0	I/O	Interrupt request	153	M24	LMA27	O		
49	B12	DREQ0	O	Test pin	154	M25	LMA28	O	Wave memory address bus (Lower data memory)	
50	E13	TCK	I		155	N22	LMA25	O		
51	D13	TRST	I		156	N23	LMA26	O		
52	C13	VSS	-		Ground	157	N24	LMA30		O
53	A12	XO	O	Crystal osc. output	158	M26	LMA29	O	Wave memory output enable	
54	B13	XI	I	Crystal osc. input	159	N25	MOEN	O		
55	A13	VDDS	-	Power supply +3 V	160	N26	MWEN	O	Wave memory write enable	
56	A14	SLAVE	I	Master/Slave select	161	P26	LMD15	I/O	Wave memory data bus (Lower 16 bit)	
57	E14	TMS	I/O	Test pin	162	P22	VSS	-	Ground	
58	D14	TDO	O		163	P23	VDDS	-	Power supply +3 V	
59	C14	ICN	I/O		Initial clear	164	P24	LMD13	I/O	Wave memory data bus (Lower 16 bit)
60	B14	RFCLK0	O		PLL Clock	165	P25	LMD14	I/O	
61	B15	PLL_TSTN	I/O	Power supply	166	R25	LMD11	I/O		
62	C15	PLL_BP	I	Power supply +3 V	167	R24	LMD10	I/O	Power supply +3 V	
63	D15	VDDS	-		168	R23	VDDS	-		Ground
64	E15	VSS	-		169	R22	VSS	-		
65	A15	RFCLK1	I		PLL Clock	170	R26	LMD12		
66	A16	VDDC	-	Power supply +1.5 V	171	T26	LMD9	I/O	Wave memory data bus (Lower 16 bit)	
67	B16	TMODE	I	Test pin	172	T25	LMD8	I/O		
68	C16	PLL_AVD	-	Power supply (PLL)	173	T24	LMD7	I/O		
69	D16	NC	-	Not used	174	T23	VSS2	-		Ground
70	E16	NC	-	Not used	175	T22	VSS	-	Ground	
71	A17	PLL_AVS	I/O	Power supply (PLL)	176	U26	LMD6	I/O	Wave memory data bus (Lower 16 bit)	
72	B17	TEST1	I	Test pin	177	U25	LMD5	I/O		
73	A18	VSS	-	Ground	178	V26	LMD3	I/O		
74	C17	SY1	I	Sync. clock	179	U24	LMD4	I/O		
75	D17	VDDC	-	Power supply +1.5 V	180	U23	VDDC	-	Power supply +3 V	
76	E17	VSS2	-	Ground	181	U22	VSS2	-	Ground	
77	B18	KONTRG0	I/O	Key on data	182	V25	LMD2	I/O	Wave memory data bus (Lower 16 bit)	
78	A19	KONTRG1	I/O		183	W26	LMD0	I/O		
79	C18	CK512	O		Master clock (256 Fs)	184	V24	LMD1		I/O
80	B19	CK128	O		Master clock (64 Fs)	185	W25	DCSL0		-
81	D18	BCLK	O	Sync. clock	186	V23	VDDS	-	Power supply +3 V	
82	E18	SY0	O	Sync. clock	187	V22	VDDC	-	Power supply +1.5 V	
83	C19	HMA20	O	Wave memory address bus	188	W24	DCSL1	O	MASK signal	
84	A20	HMA21	O		189	Y26	DCML3	O		
85	B20	HMA19	O		190	Y25	DCML1	O		
86	C20	HMA18	O		191	Y24	DMAL14	O		
87	D19	VDDS	-	Power supply +1.5 V	192	W23	VDDS	-	Address bus (DIMM, SDRAM)	
88	E19	VSS	-	Ground	193	W22	VSS	-	Power supply +3 V	
89	A21	HMA9	O	Wave memory address bus	194	AA26	DMAL13	O	Ground	
90	B21	HMA7	O		195	AA25	DMAL12	O		
91	A22	HMA6	O		196	AB26	DMAL9	O		
92	D20	HMA8	O		197	Y23	VSS	-		
93	C21	HMA10	O	Wave memory address bus	198	AA24	DMAL11	O	Address bus (DIMM, SDRAM)	
94	E20	HMA17	O		199	Y22	VSS	-		
95	D21	VDDS	-		Power supply +1.5 V	200	AA23	DMAL10		O
96	B22	HMA11	O		Wave memory address bus	201	AB25	DMAL9		O
97	A23	HMA4	O	202		AC26	DMAL6	O		
98	C22	HMA5	O	203		AB24	DMAL7	O		
99	B23	HMA13	O	204		AC25	DMAL5	O		
100	E21	VSS	-	Ground	205	AA22	VSS2	-	Ground	
101	D22	HMA12	O	Wave memory address bus	206	AB23	VSS	-	Ground	
102	C23	HMA3	O		207	AC24	DMAL4	O		
103	A24	HMA14	O		208	AD26	DMAL3	O		
104	B24	HMA2	O		209	AD25	DMAL2	O		
105	A25	HMA1	O	210	AE26	DMAL0	O			

PIN NO.	OUTER NO.	NAME	I/O	FUNCTION	PIN NO.	OUTER NO.	NAME	I/O	FUNCTION
211	AB22	VSS2	-	Ground	316	AB5	VSS2	-	Ground
212	AC23	VDDC	-	Power supply +1.5 V	317	AC4	VDDC	-	Power supply +1.5 V
213	AD24	DMAL1	O	Address bus (DIMM, SDRAM)	318	AD3	MELI6	I	MEL wave data input
214	AE25	DCSL2	O		319	AE2	MELI7	I	
215	AF26	DRAS0	O	Power supply +3 V	320	AF1	ADLR	O	Power supply +3 V
216	AC22	DCAS0	O		321	AB4	DITO	O	
217	AB21	VDD5	-	Power supply +3 V	322	AA5	VSS	-	Ground
218	AD23	DCLKIN	I	MASK signal	323	AC3	AFRM	I/O	
219	AE24	DQML2	O		324	AD2	ACLK	I/O	
220	AF25	DCSL3	O	MASK signal	325	AE1	ADIR	O	
221	AF24	DQML0	O		326	AD1	ADAT0	I/O	
222	AC21	VDD5	-	Power supply +3 V	327	AA4	VDD5	-	Power supply +3 V
223	AB20	VSS	-	Ground	328	Y5	ADAT9	I/O	Data bus (ABUS)
224	AD22	DWEN0	O	329	AB3	ADAT3	I/O		
225	AE23	DCLK0	O	330	AC2	ADAT1	I/O		
226	AF23	DCLK1	O	331	AC1	ADAT2	I/O		
227	AC20	DCLKE	I/O	Wave memory data bus (Upper data memory)	332	Y4	ADAT10	I/O	
228	AD21	HMD13	I/O		333	AA3	ADAT6	I/O	
229	AB19	VSS	-	Ground	334	W5	VSS	-	Ground
230	AC19	VDD5	-	Power supply +3 V	335	W4	VDD5	-	Power supply +3 V
231	AE22	HMD15	I/O	Wave memory data bus (Upper data memory)	336	AB2	ADAT4	I/O	
232	AF22	HMD14	I/O		337	AB1	ADAT5	I/O	
233	AD20	HMD10	I/O		338	Y3	ADAT11	I/O	
234	AE21	HMD12	I/O		339	AA2	ADAT7	I/O	
235	AB18	VDDC	-	Power supply +1.5 V	340	V5	ADAT14	I/O	Data bus (ABUS)
236	AC18	VDD5	-	Power supply +3 V	341	V4	ADAT15	I/O	
237	AD19	HMD7	I/O	Wave memory data bus (Upper data memory)	342	W3	ADAT13	I/O	
238	AF21	HMD11	I/O		343	AA1	ADAT8	I/O	
239	AE20	HMD9	I/O	344	Y2	ADAT12	I/O		
240	AF20	HMD8	I/O	Ground	345	Y1	TDI	I	
241	AB17	VSS2	-		Ground	346	U5	VSS2	-
242	AC17	VDDC	-	Power supply +1.5 V	347	U4	VDDC	-	Power supply +1.5 V
243	AD18	HMD4	I/O	Wave memory data bus (Upper data memory)	348	V3	HRD13	I/O	
244	AE19	HMD6	I/O		349	W2	HRD15	I/O	
245	AF19	HMD5	I/O		350	W1	HRD14	I/O	
246	AE18	HMD3	I/O		351	V2	HRD12	I/O	
247	AB16	VSS	-	Ground	352	T5	HRD7	I/O	DRAM data bus
248	AC16	VSS2	-	Ground	353	T4	HRD6	I/O	
249	AD17	HMD1	I/O	Wave memory data bus (Upper data memory)	354	U3	HRD10	I/O	
250	AF18	HMD2	I/O		355	V1	HRD11	I/O	
251	AE17	HMD0	I/O		356	U2	HRD9	I/O	
252	AF17	DCSH0	O	Ground	357	U1	HRD8	I/O	
253	AB15	VSS	-		Ground	358	R5	VSS	-
254	AC15	VDD5	-	Power supply +3 V	359	R4	VDD5	-	Power supply +3 V
255	AD16	DCSH1	O	MASK signal	360	T3	HRD5	I/O	
256	AE16	DQMH3	O		361	T2	HRD4	I/O	
257	AF16	DQMH1	O		362	T1	HRD3	I/O	
258	AD15	DMAH14	O		363	R3	HRD2	I/O	
259	AE15	DMAH13	O	Address bus (DIMM, SDRAM)	364	R2	HRD1	I/O	
260	AB14	VSS	-		Ground	365	P5	VDD5	-
261	AC14	VSS2	-	Ground	366	P4	HRD0	I/O	DRAM data bus
262	AD14	DMAH11	O	Address bus (DIMM, SDRAM)	367	P3	RWEN	O	DRAM write enable
263	AF15	DMAH12	O		368	R1	RQML	O	
264	AE14	DMAH10	O		369	P2	RCAS	O	DRAM column address strobe (RAS signal)
265	AF14	DMAH9	O		370	P1	RRAS	O	DRAM row address strobe (RAS signal)
266	AF13	DMAH8	O	Power supply +3 V	371	N1	RA13	O	DRAM address bus
267	AB13	VDD5	-		Power supply +3 V	372	N5	VDD5	-
268	AC13	VDD5	-	Power supply +3 V	373	N4	VDD5	-	Power supply +3 V
269	AD13	DMAH6	O	Address bus (DIMM, SDRAM)	374	N3	RA10	O	
270	AE13	DMAH7	O		375	N2	RA12	O	
271	AE12	DMAH4	O		376	M2	RA1	O	
272	AD12	DMAH3	O		377	M3	RA2	O	
273	AC12	VDD5	-	Power supply +1.5 V	378	M4	VDD5	-	Power supply +3 V
274	AB12	VSS	-	Ground	379	M5	VSS	-	Ground
275	AF12	DMAH5	O	Address bus (DIMM, SDRAM)	380	M1	RA0	O	
276	AF11	DMAH2	O		381	L1	RA3	O	
277	AE11	DMAH1	O		382	L2	RA4	O	
278	AD11	DMAH0	O		383	L3	RA5	O	
279	AC11	VSS	-	Ground	384	L4	VSS2	-	Ground
280	AB11	VSS	-	Ground	385	L5	VSS	-	Ground
281	AF10	DRAS1	O	MASK signal	386	K1	RA6	O	
282	AE10	DCSH2	O		387	K2	RA7	O	
283	AF9	DQMH2	O		388	J1	RA9	O	
284	AD10	DCSH3	O		389	K3	RA8	O	
285	AC10	VDDC	-	Power supply +1.5 V	390	K4	VDDC	-	Power supply +1.5 V
286	AB10	VSS2	-	Ground	391	K5	VSS2	-	Ground
287	AE9	DQMH0	O	MASK signal	392	J2	RA11	O	DRAM address bus
288	AF8	DWEN1	O		393	H1	RCLK	O	
289	AD9	DCAS1	O	Power supply +3 V	394	J3	RCLKE	O	
290	AE8	DCLK2	O		395	H2	RCLKIN	I	
291	AC9	VDD5	-	Power supply +3 V	396	J4	VDD5	-	Power supply +3 V
292	AB9	VDDC	-	Power supply +1.5 V	397	J5	VDDC	-	Power supply +1.5 V
293	AD8	DCLK3	O	MEL wave data output	398	H3	RQMH	O	
294	AF7	MELO0	O		399	G1	LRD15	I/O	
295	AE7	MELO1	O	MEL wave data output	400	G2	LRD14	I/O	
296	AD7	MELO2	O		401	G3	LRD13	I/O	
297	AC8	VDD5	-	Ground	402	H4	VDD5	-	Power supply +3 V
298	AB8	VSS	-		403	H5	VSS	-	Ground
299	AF6	MELO3	O	MEL wave data output	404	F1	LRD12	I/O	
300	AE6	MELO4	O		405	F2	LRD11	I/O	
301	AF5	MELO5	O	Ground	406	E1	LRD8	I/O	
302	AC7	MELO6	O		407	G4	VDD5	-	Ground
303	AD6	MELO7	O	For DAC LR clock	408	F3	LRD10	I/O	
304	AB7	WCLK0	O		409	G5	VDD5	-	Ground
305	AC6	WCLK1	O	For DAC LR clock	410	F4	LRD9	I/O	
306	AE5	EIRQ	O		411	E2	LRD7	I/O	
307	AF4	EICN	O	DRAM data bus (Lower data)	412	D1	LRD5	I/O	
308	AD5	ESDA	I/O		413	E3	LRD6	I/O	
309	AE4	ESCL	I/O	Ground	414	D2	LRD4	I/O	
310	AB6	MELI0	I		415	F5	VSS2	-	Ground
311	AC5	MELI1	I	Ground	416	E4	VSS	-	Ground
312	AD4	MELI2	I		417	D3	LRD3	I/O	
303	AF3	MELI3	I	MEL wave data input	418	C1	LRD2	I/O	
314	AE3	MELI4	I		419	C2	LRD1	I/O	
315	AF2	MELI5	I		420	B1	LRD0	I/O	

IC BLOCK DIAGRAM

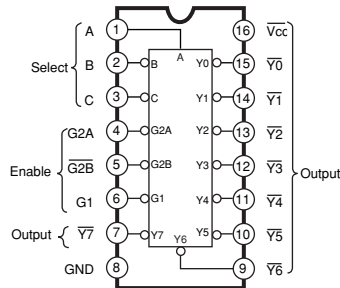
● **HD74LVC139FPEL** (XS048A00)
Dual 2 to 4 Demultiplexer

DM: IC32



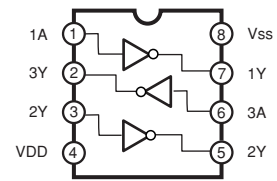
● **HD74LVC138FPEL-E** (XS963A00)
3 to 8 Demultiplexer

DM: IC30,IC401



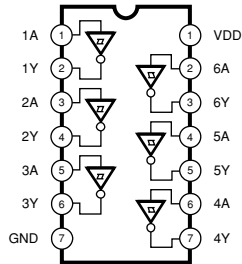
● **TC7W04FU** (XQ805A00)
Inverter

DM: IC300,IC301



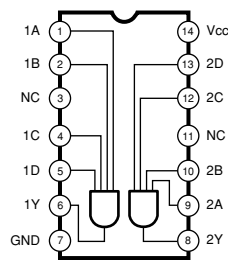
● **TC74VHC14FT(EL,K)** (XV890B00)
Hex Inverter

DM: IC4,IC5,IC10,IC49,IC410



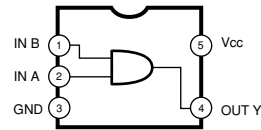
● **HD74LV21AFPEL-E** (IS002100)
Dual 4 Input AND

DM: IC23,IC419



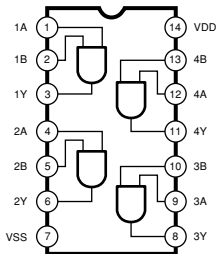
● **TC7SH08FU** (XR680A00)
2 Input AND Gate

DM: IC55



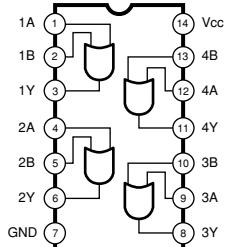
● **HD74LVC08FPEL** (XU720A00)
Quad 2 Input AND

DM: IC33



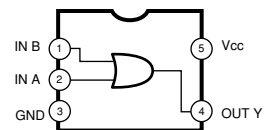
● **HD74LV32AFPEL-E** (IS003200)
Quad 2 Input OR

DM:IC1

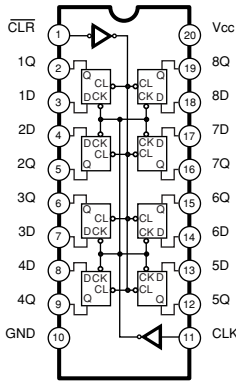


● **TC7SH32FU** (XW633A00)
2 Input OR Gate

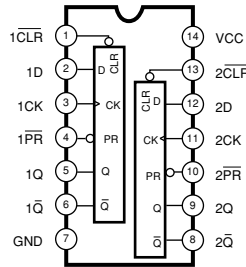
DM: IC56



- **HD74LV273AFPEL-E** (IS027300)
Octal 3-State D-Type Flip Flop
DM: IC37

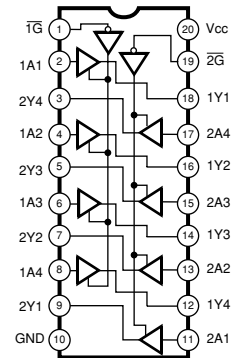


- **TC74ACT74FT(EL)** (X6536A00)
Dual D-Type Flip-Flop
DM: IC303

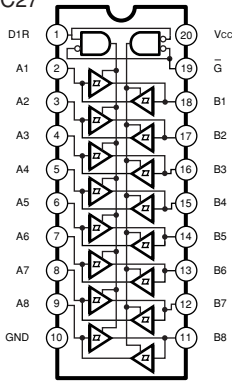


INPUTS				OUTPUTS	
CLR	PR	D	CK	Q	Q-bar
L	H	X	X	L	H
H	L	X	X	H	L
L	L	X	X	H	H
H	H	L	f	L	H
H	H	H	f	H	L
H	H	X	l	Q _n	Q _n

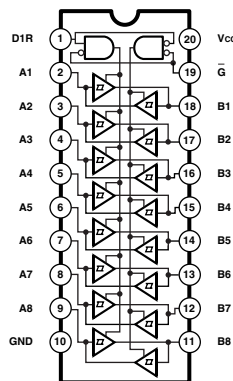
- **TC74ACT244FT(EL)** (X6537A00)
Octal 3-State Bus Buffer
DM: IC305



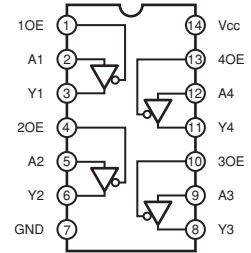
- **TC74VHC245FT** (XU797A00)
- **TC74VHCT245AFT** (XT744B00)
Octal 3-State Bus Transceiver
DM: IC54
DM: IC27



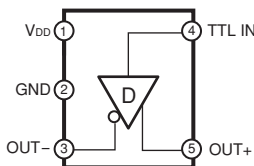
- **HD74LVLC245A** (XW148A00)
TRANSCEIVER
DM: IC19, IC20, IC21, IC22, IC28, IC29, IC46, IC421, IC422, IC423, IC424



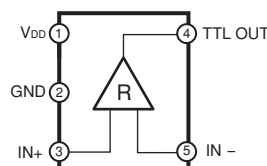
- **HD74LV126ATELL** (X3123A00)
Quad 3-State Bus Buffer
DM: IC9



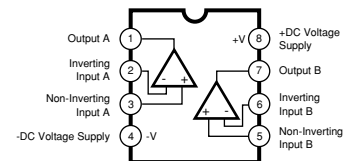
- **DS90LV011ATMF/NOPB** (X6788A00)
LVDS Driver
DM: IC42



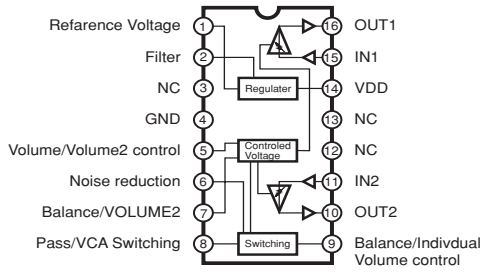
- **DS90LV012ATMF/NOPB** (X6789A00)
LVDS Receiver
LCL: IC2



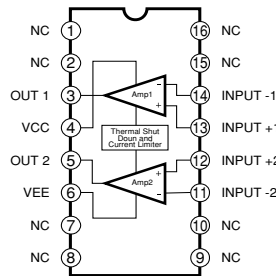
- **NJM4580E(TE2)** (X2331A00)
- **NJM2100V(TE2)** (X2538A00)
- **UPC4570G2-T1-A** (XF291A00)
Dual Operational Amplifier
AJK: IC2, IC4, IC5, IC7, IC8
EMKS-FD: IC002
DAC2A: IC202, IC302, IC402, IC403, IC404



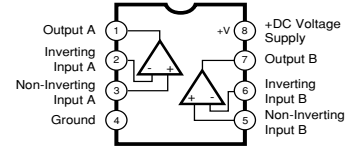
- **M51132L (XE470A00)**
VCA
AJK: IC3



- **LA6517M (XT131A00)**
Dual Power Operational Amplifier
AJK: IC6

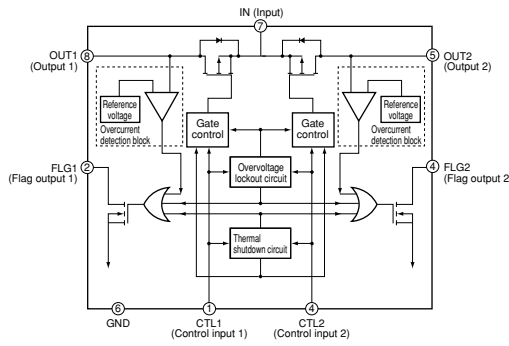
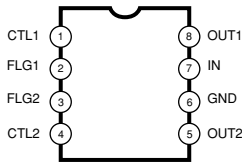


- **NJM12904M(TE1) (X5475A00)**
Dual Operational Amplifier
LCL: IC1



- **UPD16875G-E2-A (X4722A00)**
USB Power switch

DM: IC904,IC906



Pin No.	Pin Name	Pin Function
1/4	CTL1/CTL2	Control input: Active-low, TTL input
2/3	FLG1/FLG2	Detection flag (output): Active-low, Nch open-drain
6	GND	Ground
7	IN	Power input: Source of MOSFET for output. Power supply to internal circuitry of IC.
8/5	OUT1/OUT2	Switch output: Drain of MOSFET for output. Usually, connected to load.

■ CIRCUIT BOARDS

CONTENTS

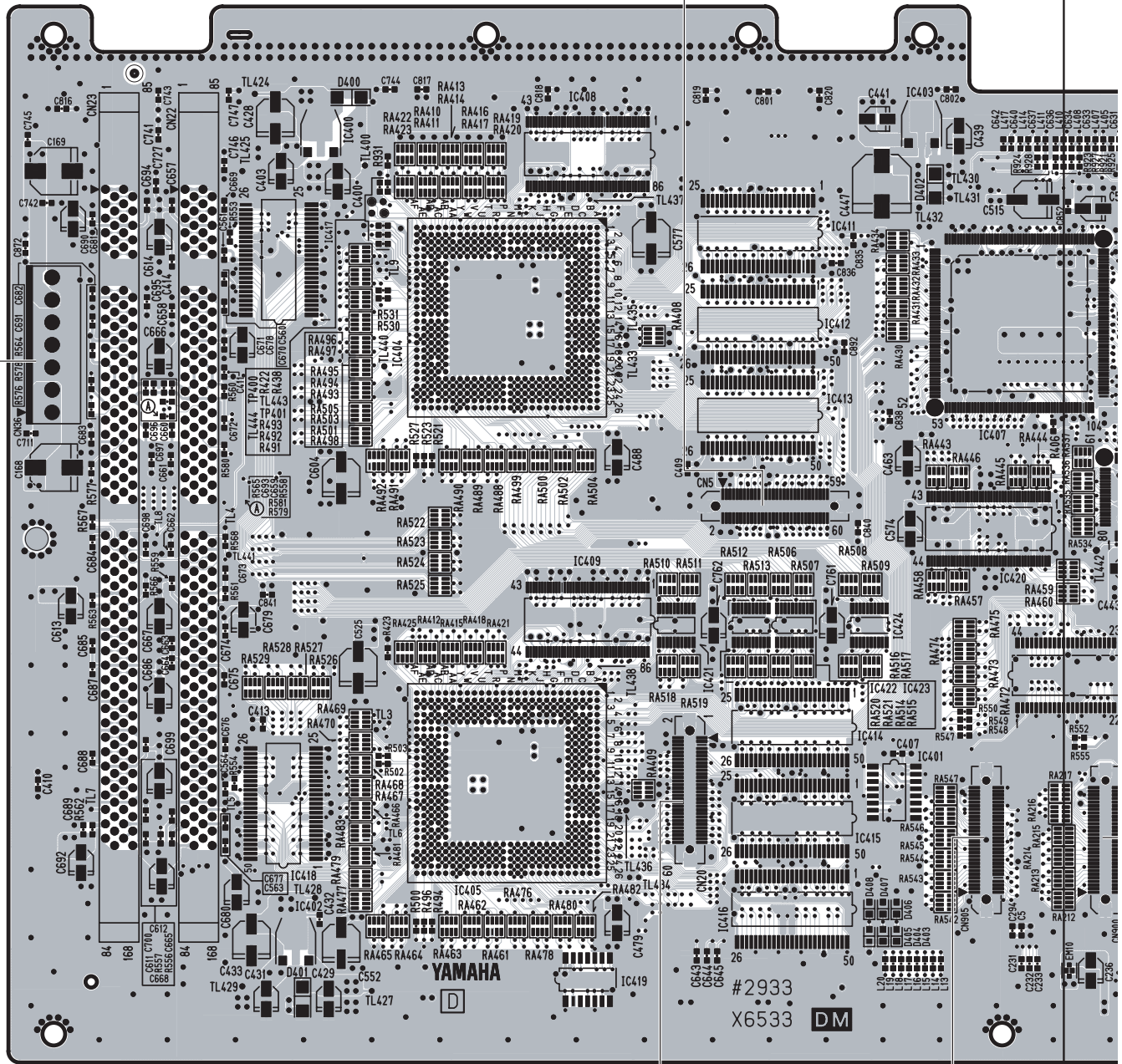
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• CK Circuit Board (X6042C0)	74
• DAC2A Circuit Board (X5175C0)	70
• DJK Circuit Board (X6042C0)	50
• DM Circuit Board (X6533D0)	44
• EMKS-FD Circuit Board (X6577A0)	75
• EN Circuit Board (X6013C0)	72
• HDSB Circuit Board (X6800B0)	71
• HP Circuit Board (X6042C0)	73
• INLET Circuit Board (X6042C0)	74
• LCL Circuit Board (X6232C0)	72
• LCR Circuit Board (X6232C0)	73
• MICVR Circuit Board (X6042C0)	76
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• PNC Circuit Board (X6013C0)	52
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• DM Circuit Board

to SW. Power Supply Unit -CN2

Not Installed

E



Not Installed

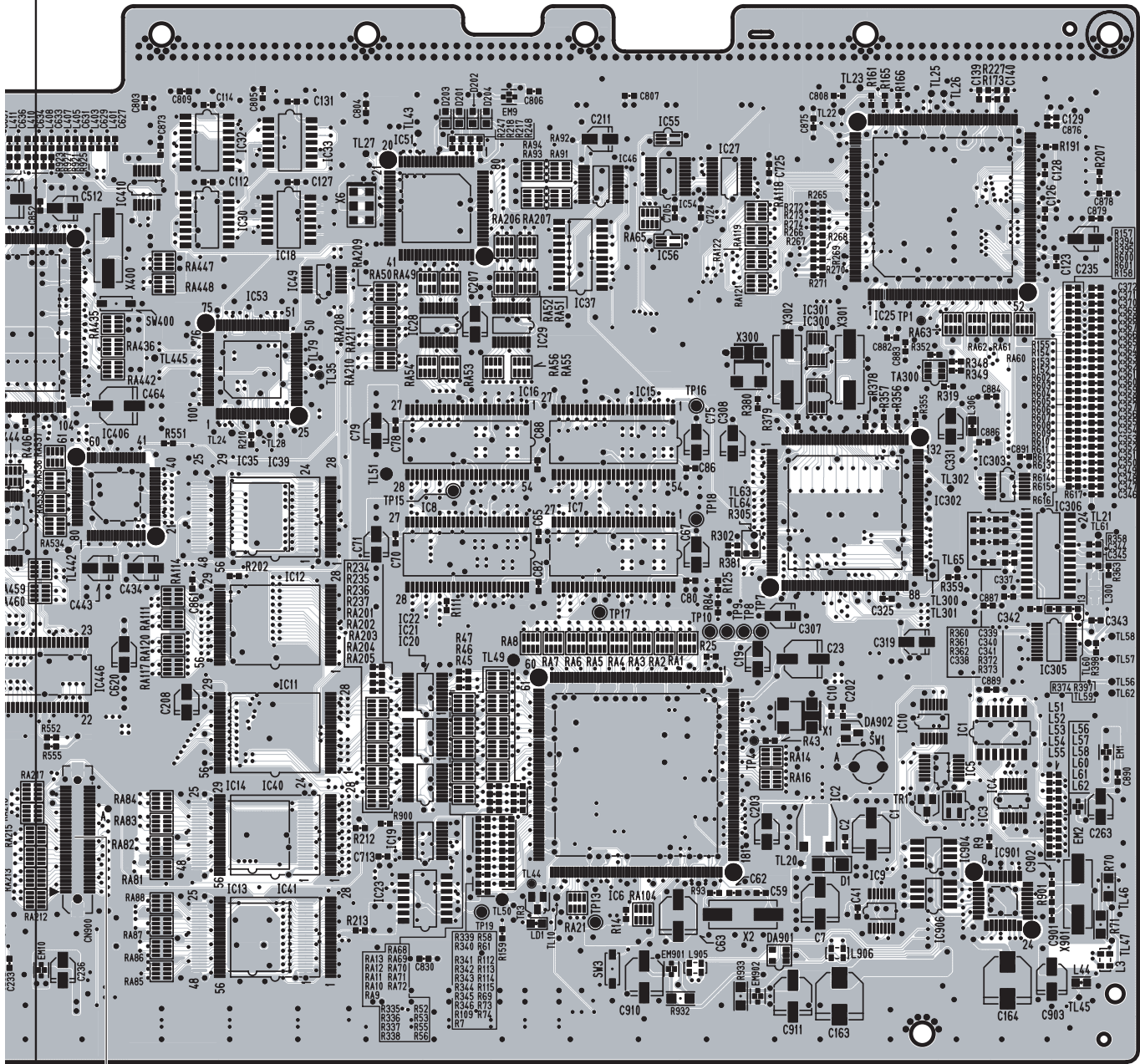
Not Installed

Not

E'

Note: See parts list for details of circuit board component parts.

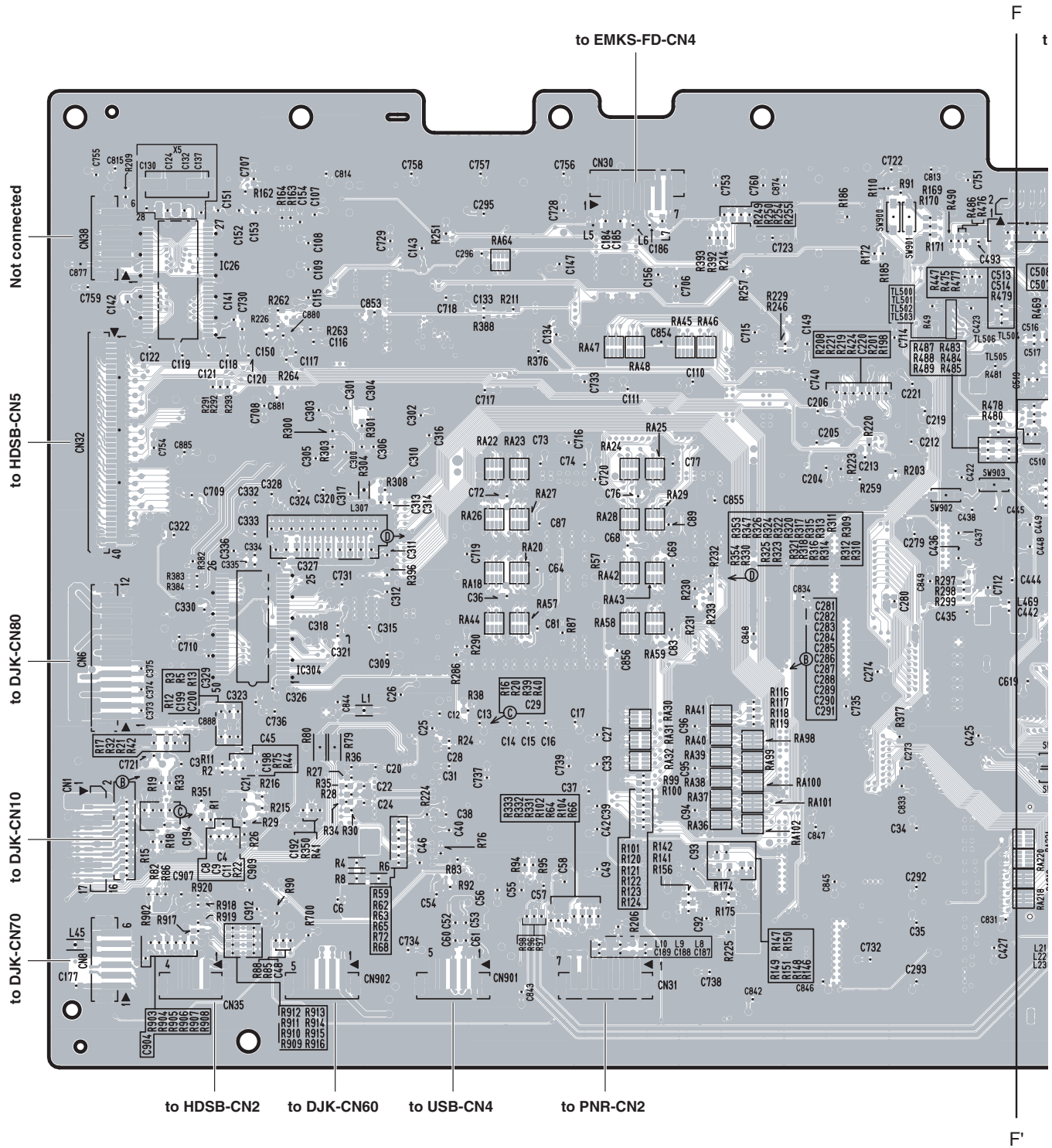
E
E'



Not Installed

Component Side

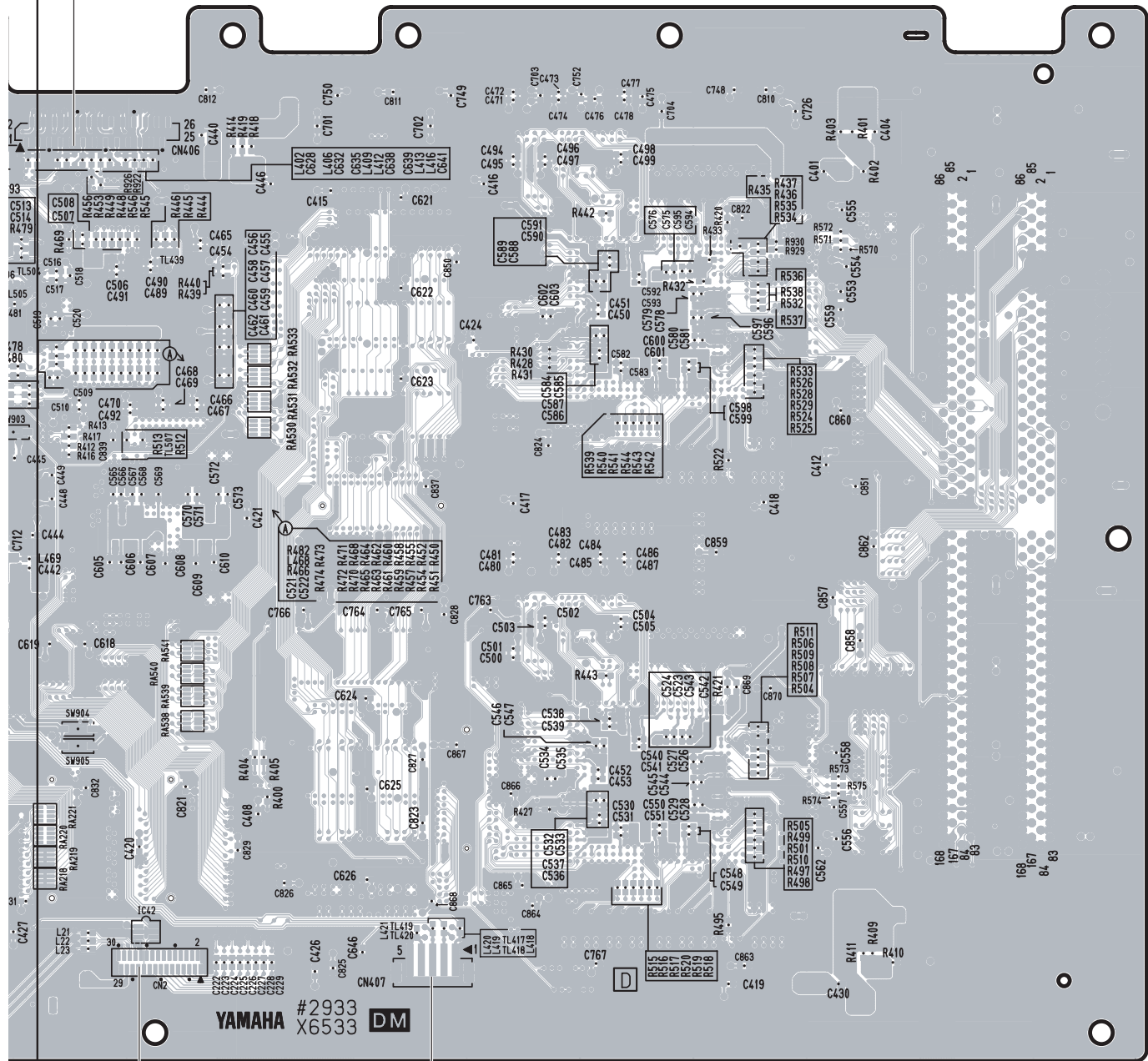
• DM Circuit Board



Note: See parts list for details of circuit board component parts.

F

to DAC2A-CN101



YAMAHA #2933 X6533 DM

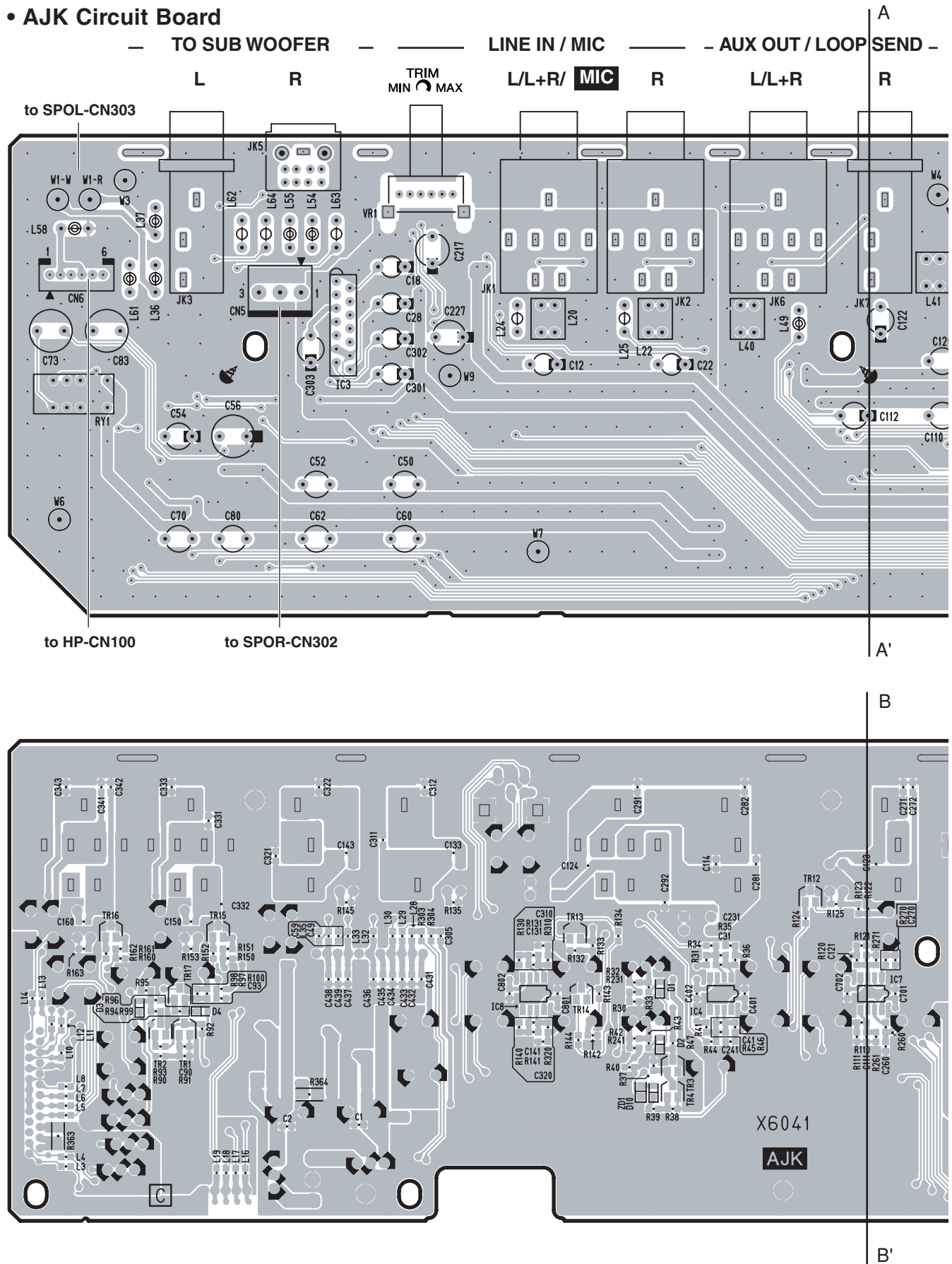
F'

to LCL-CN1

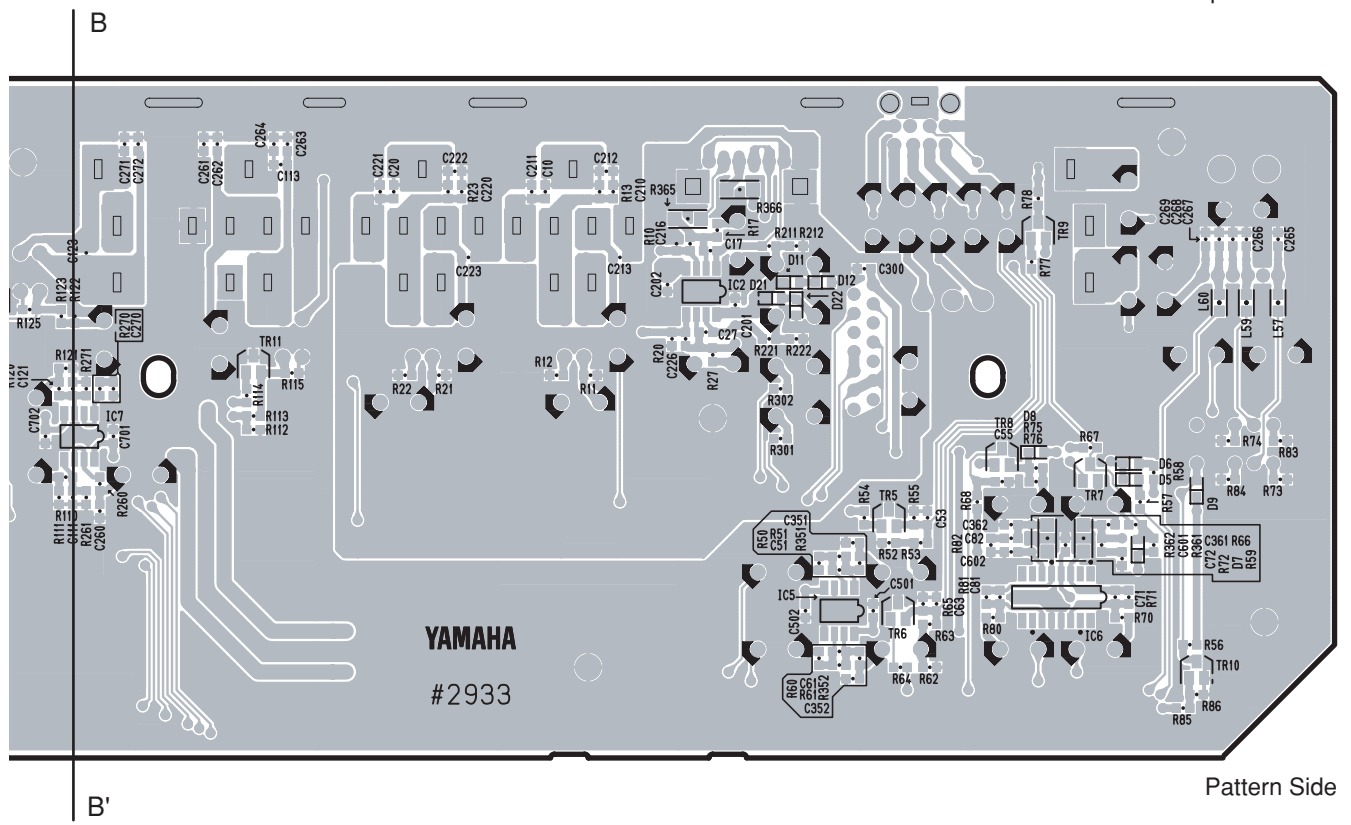
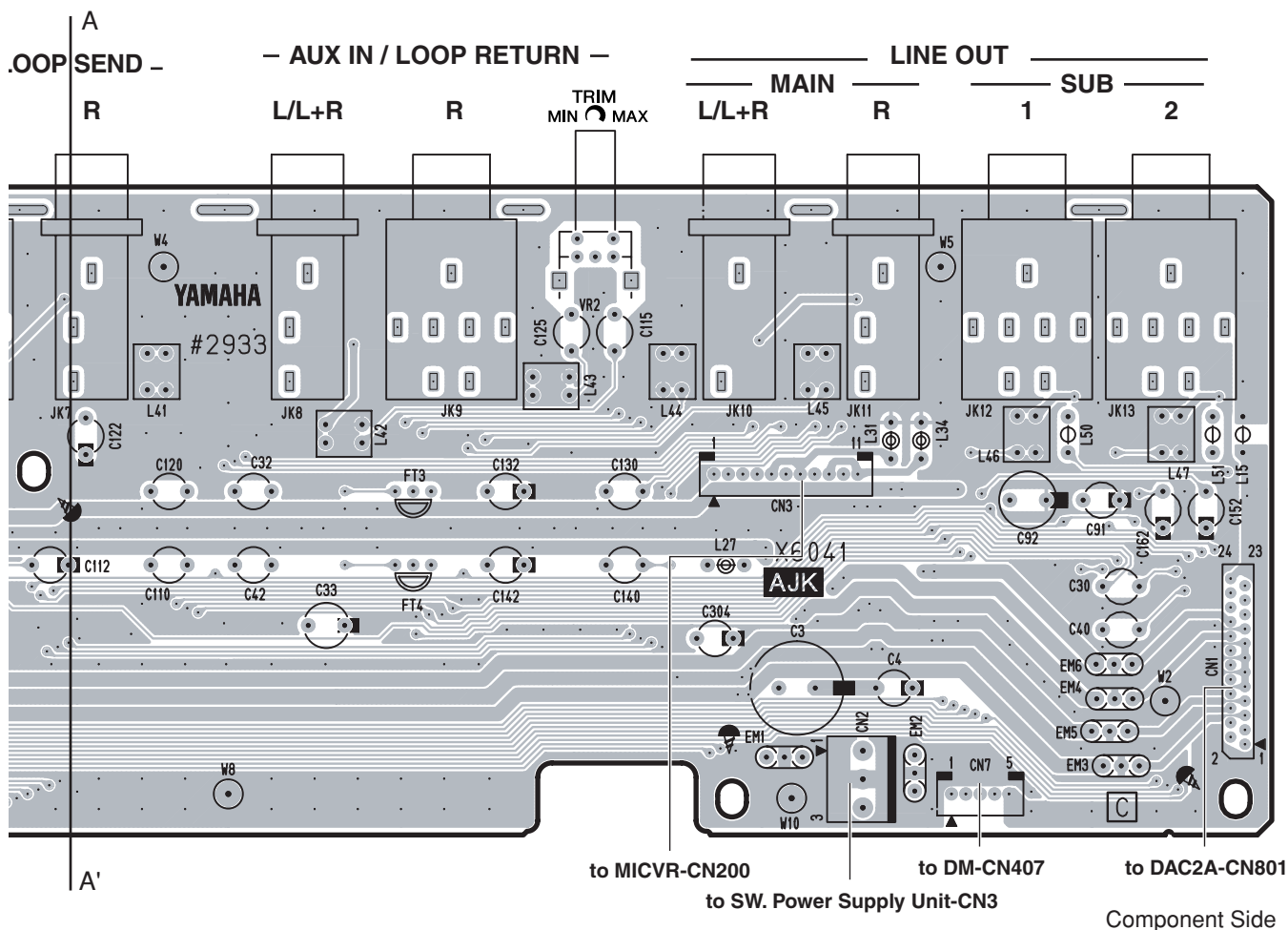
to AJK-CN7

Pattern Side

• AJK Circuit Board



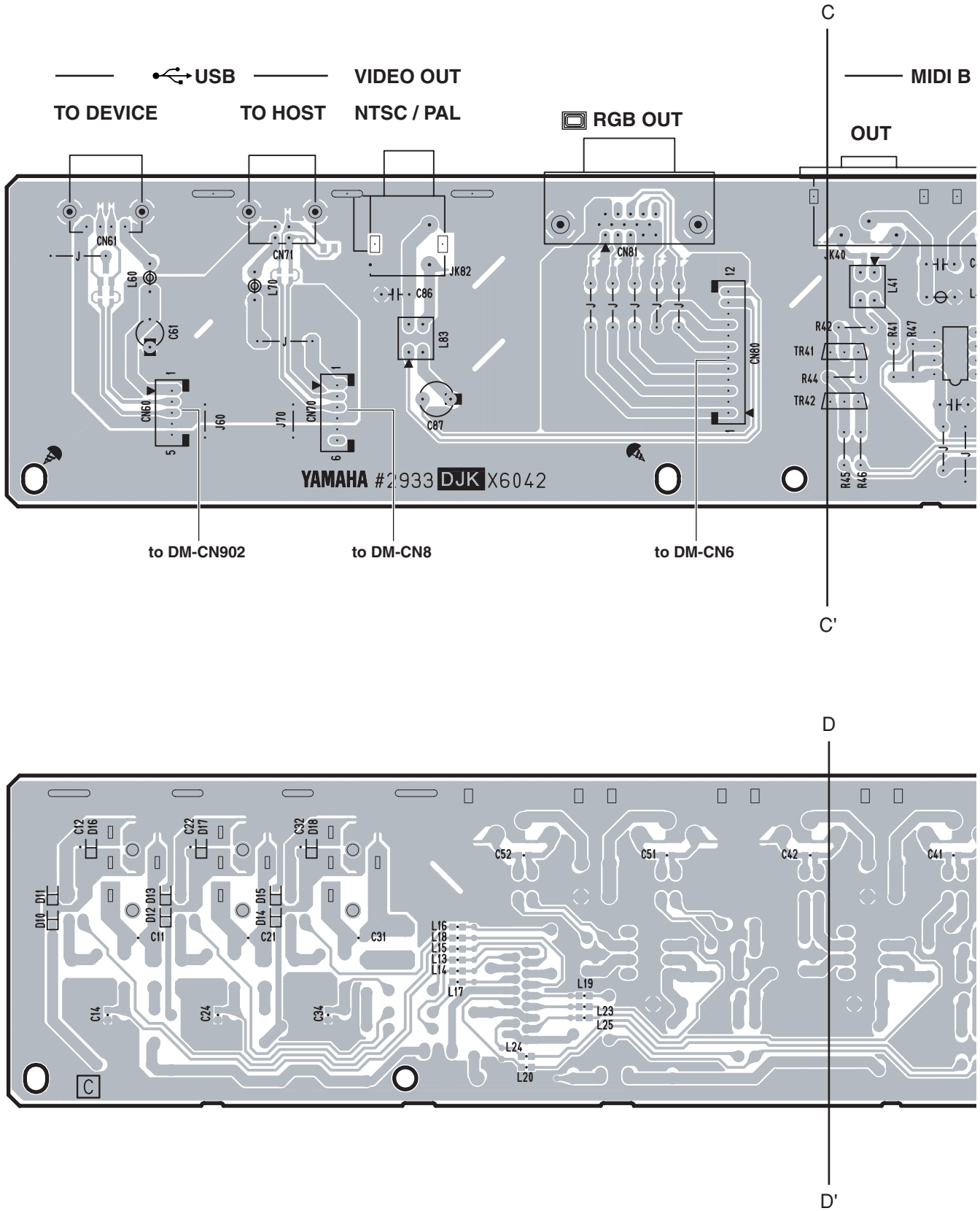
Note: See parts list for details of circuit board component parts.



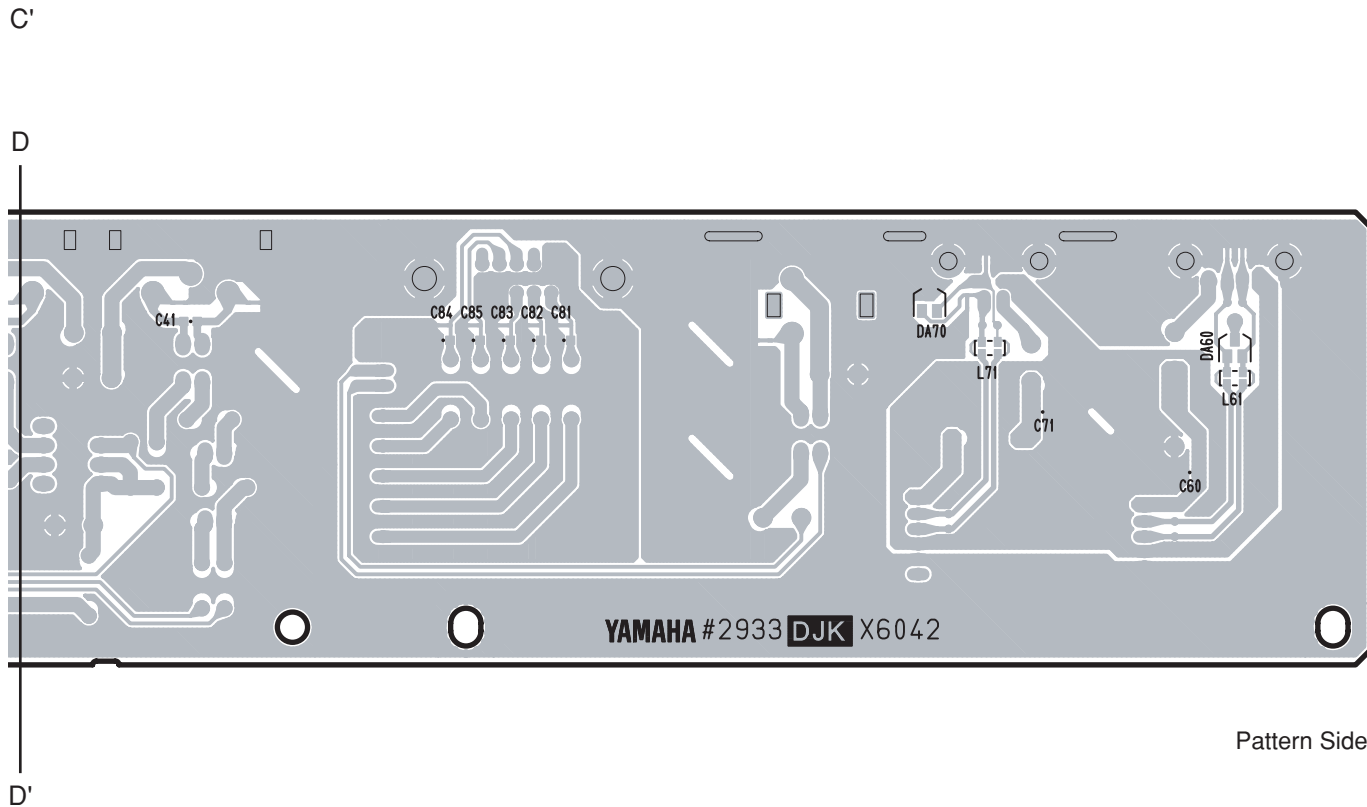
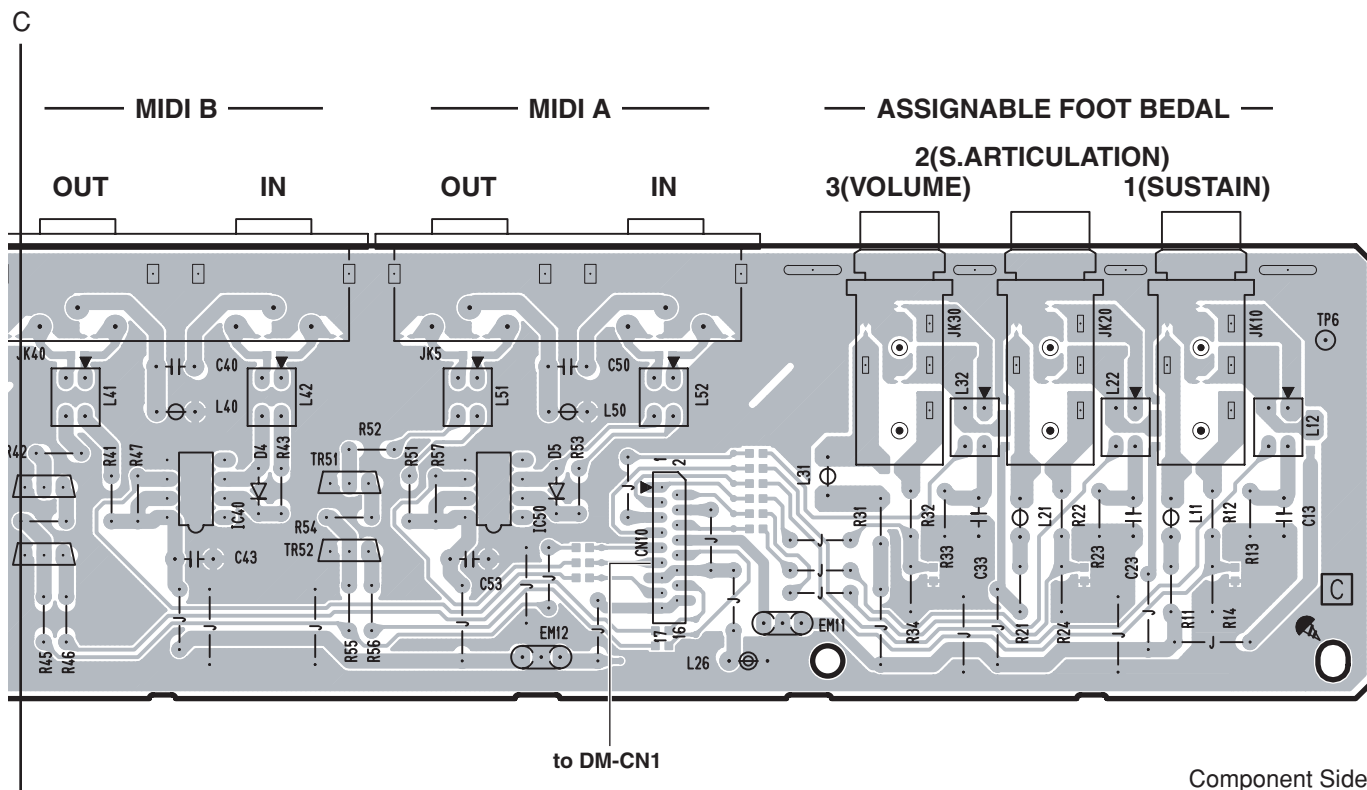
2NA-WF32870

Note: See parts list for details of circuit board component parts.

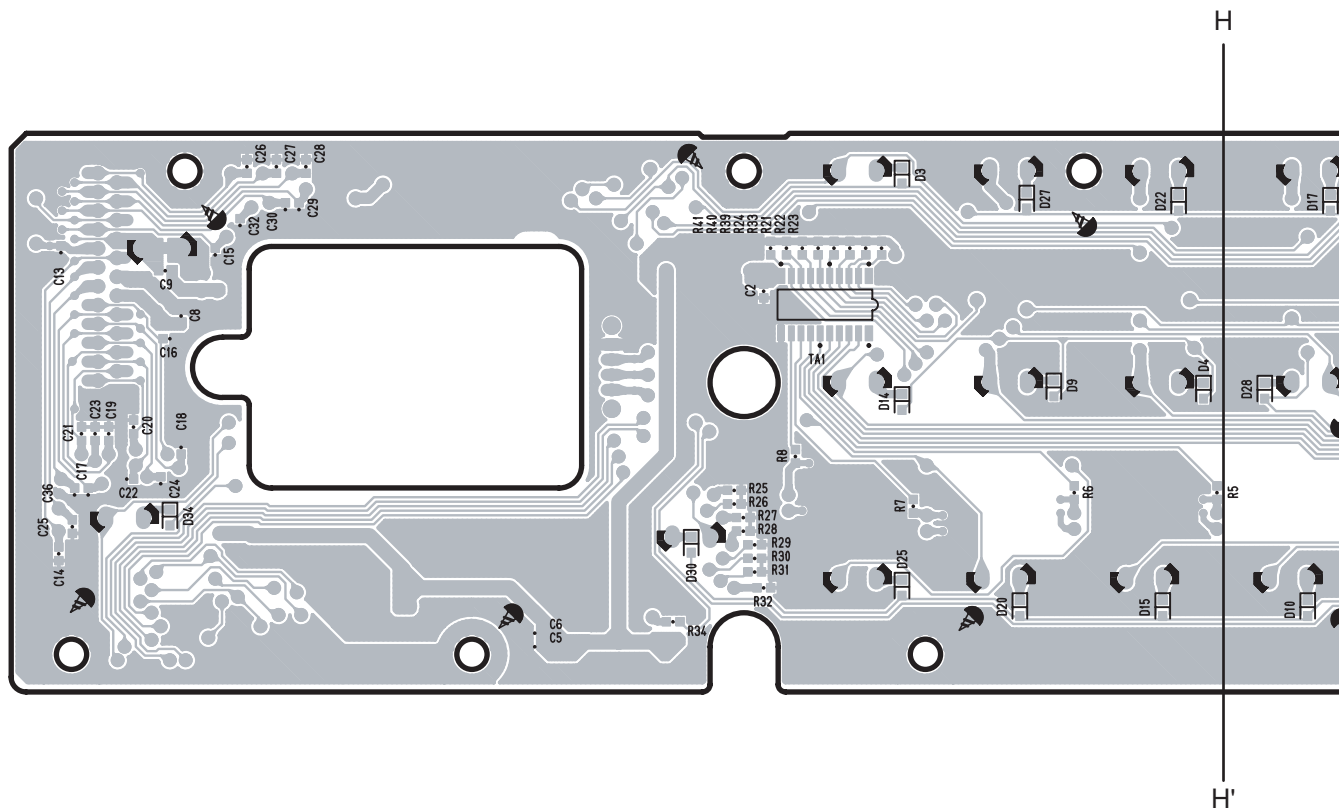
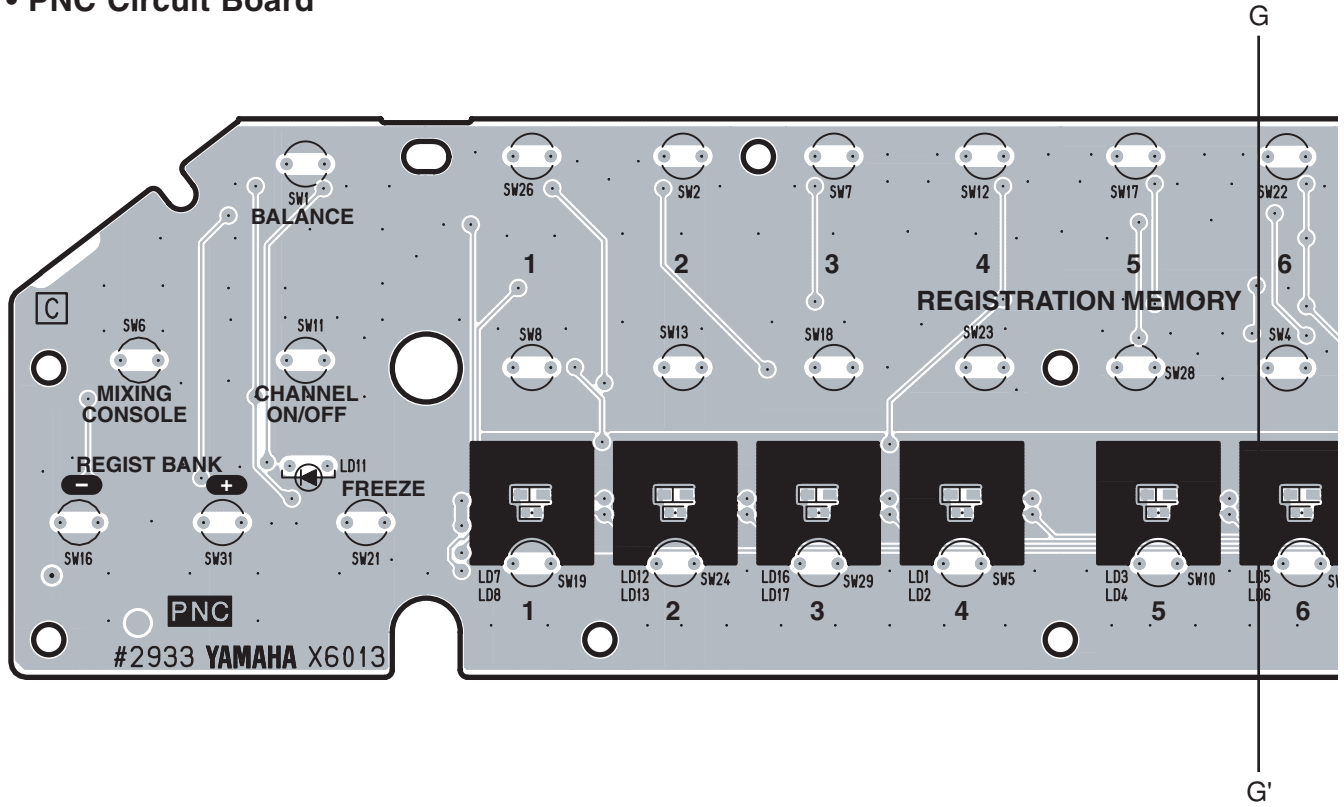
• DJK Circuit Board



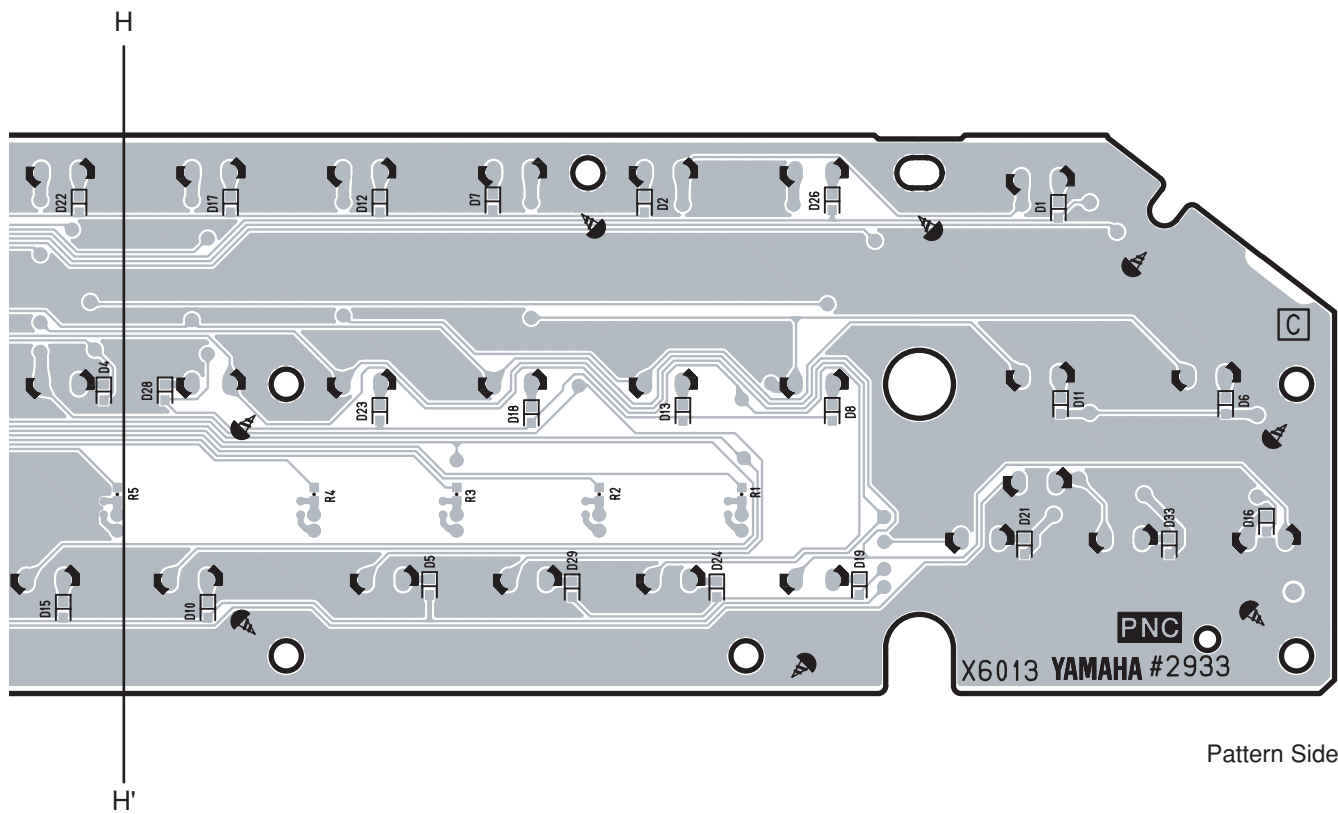
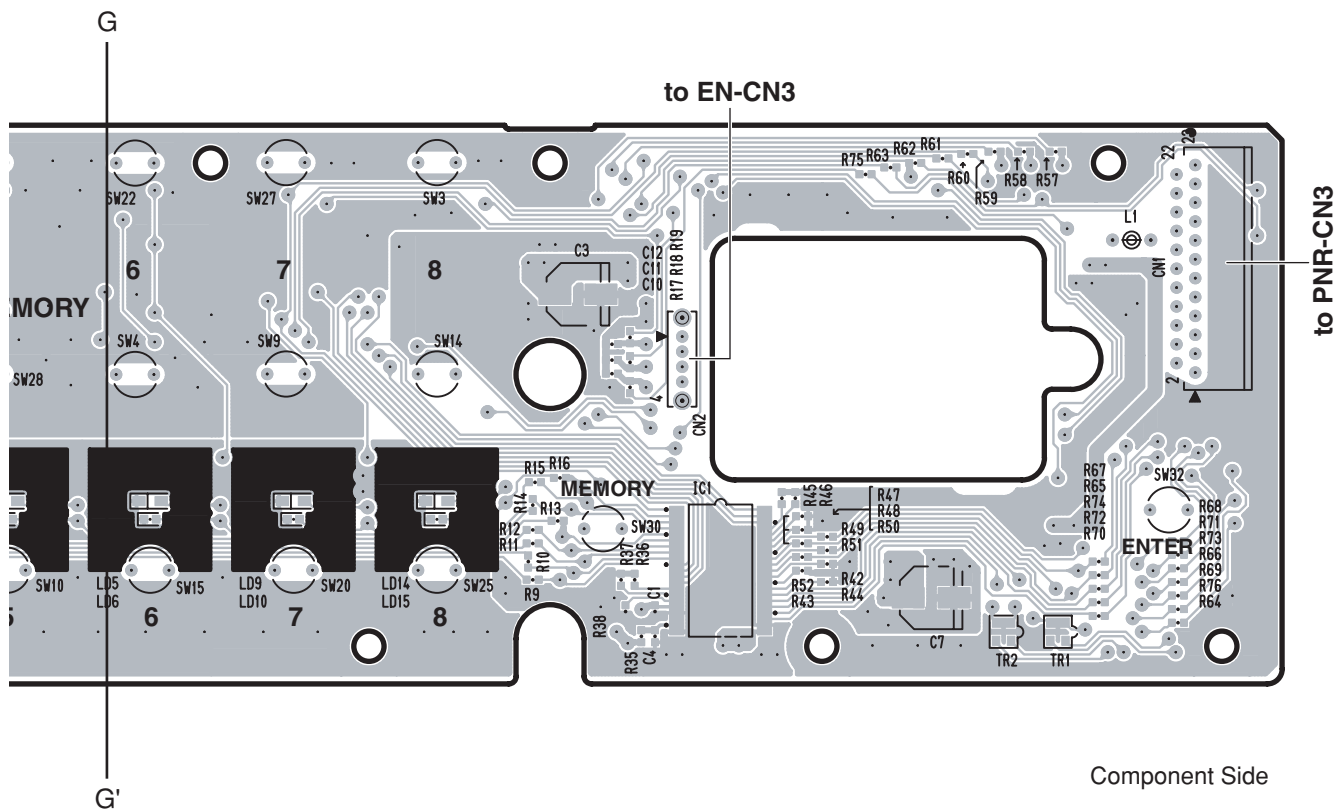
Note: See parts list for details of circuit board component parts.



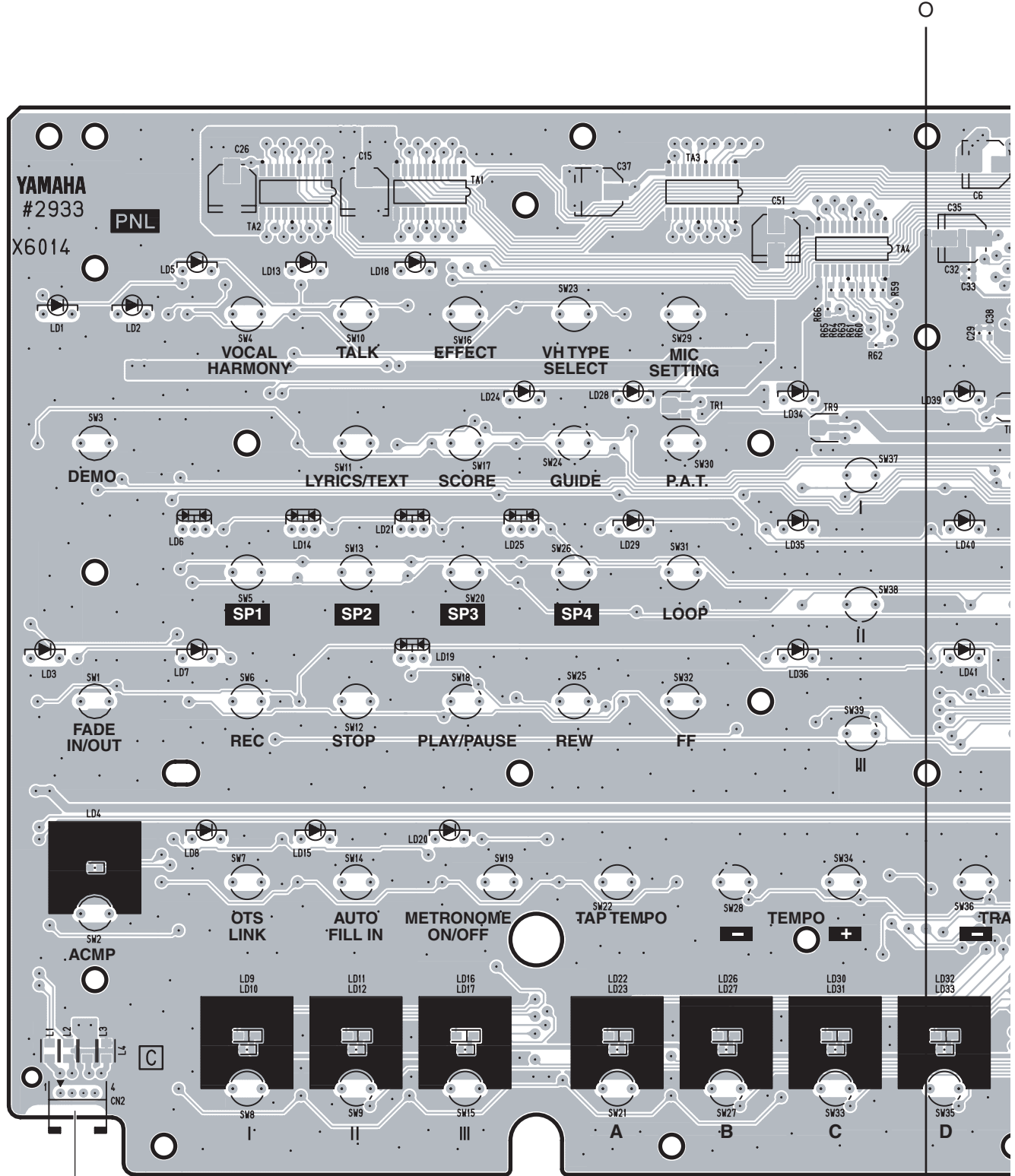
• PNC Circuit Board



Note: See parts list for details of circuit board component parts.



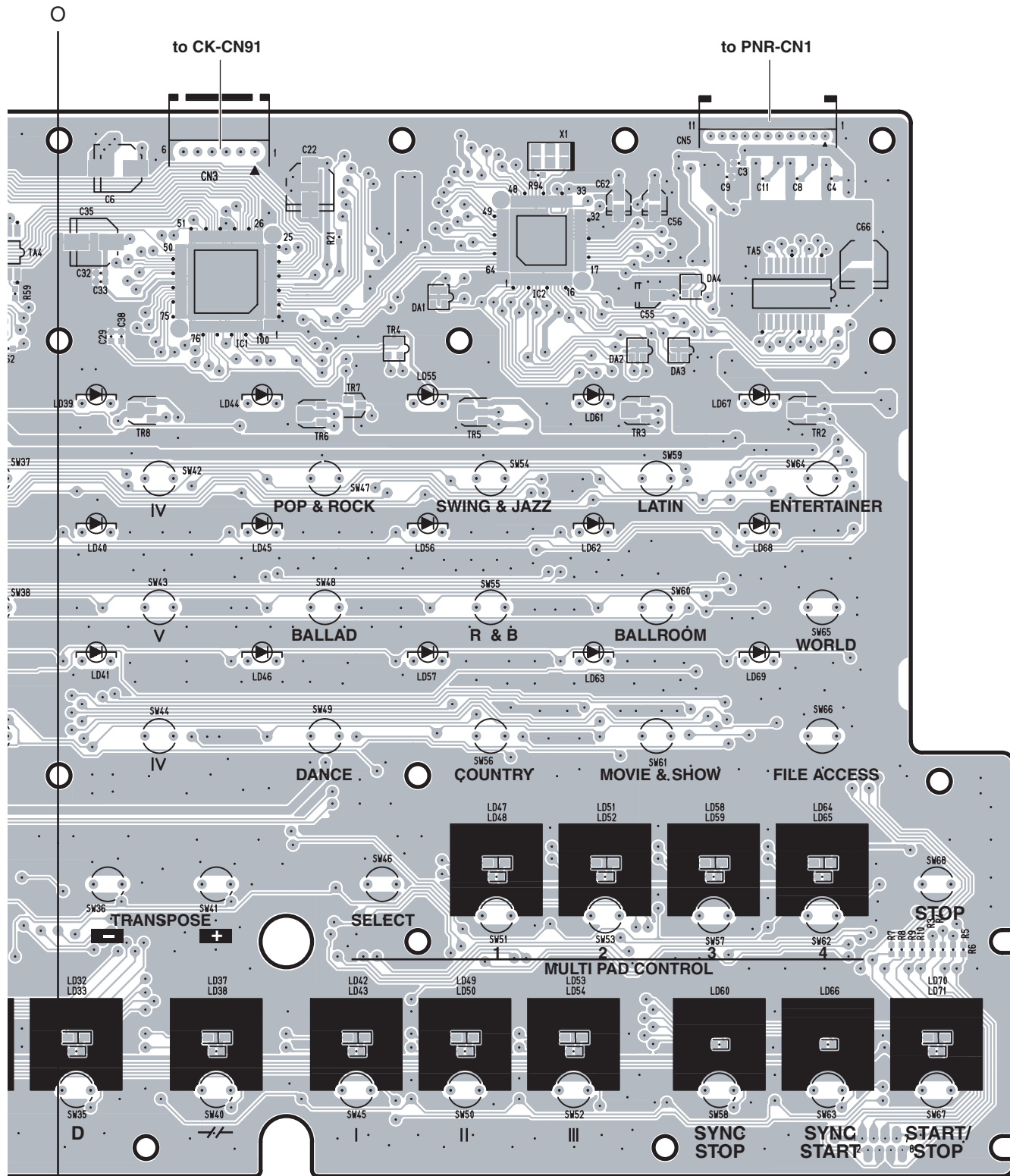
• PNL(Version C) Circuit Board



to Wheel Assembly

Note: As for "TA4" on Version C, use a transistor array M54564FP-DB1J(V3117600) as a spare part.

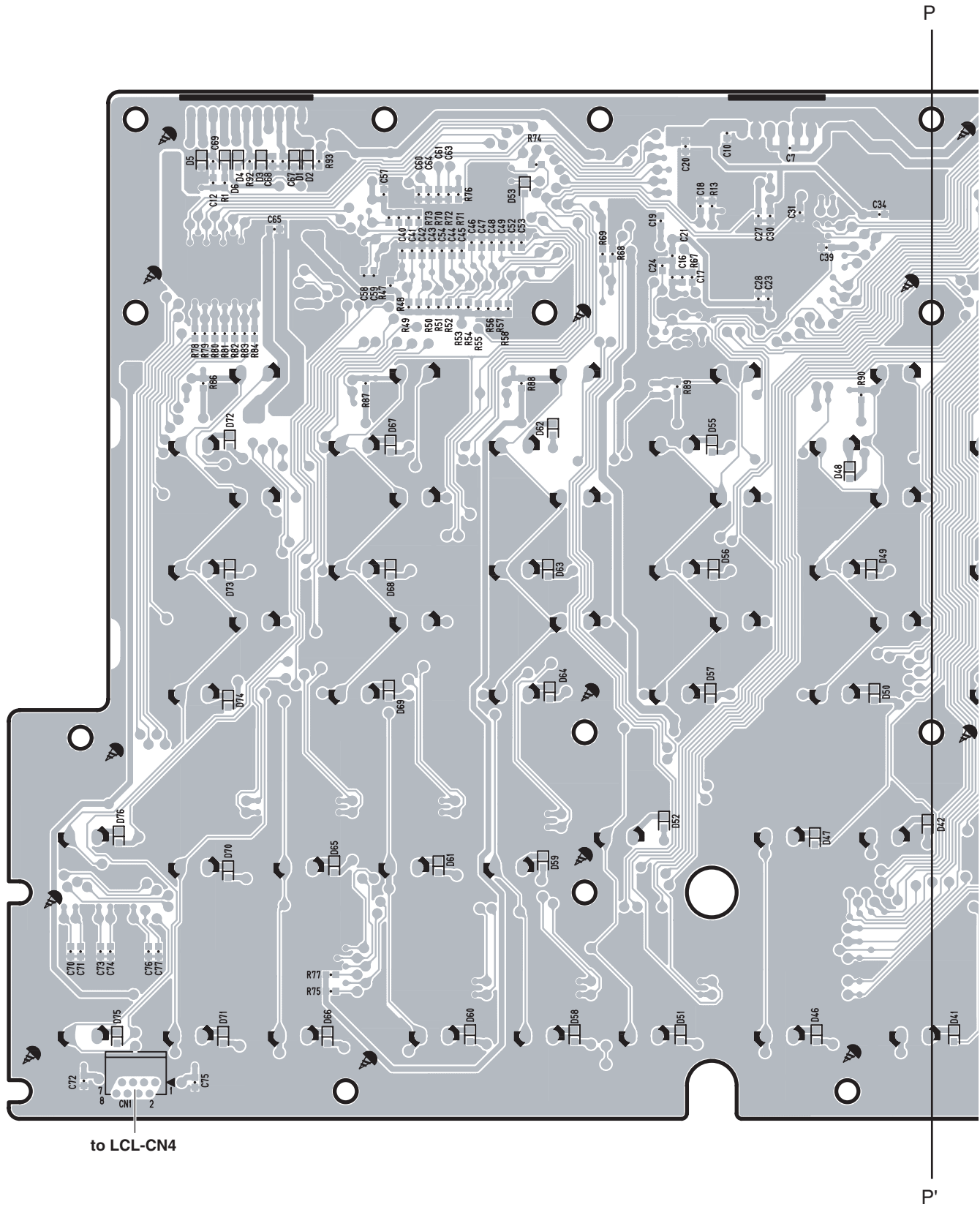
Note: See parts list for details of circuit board component parts.



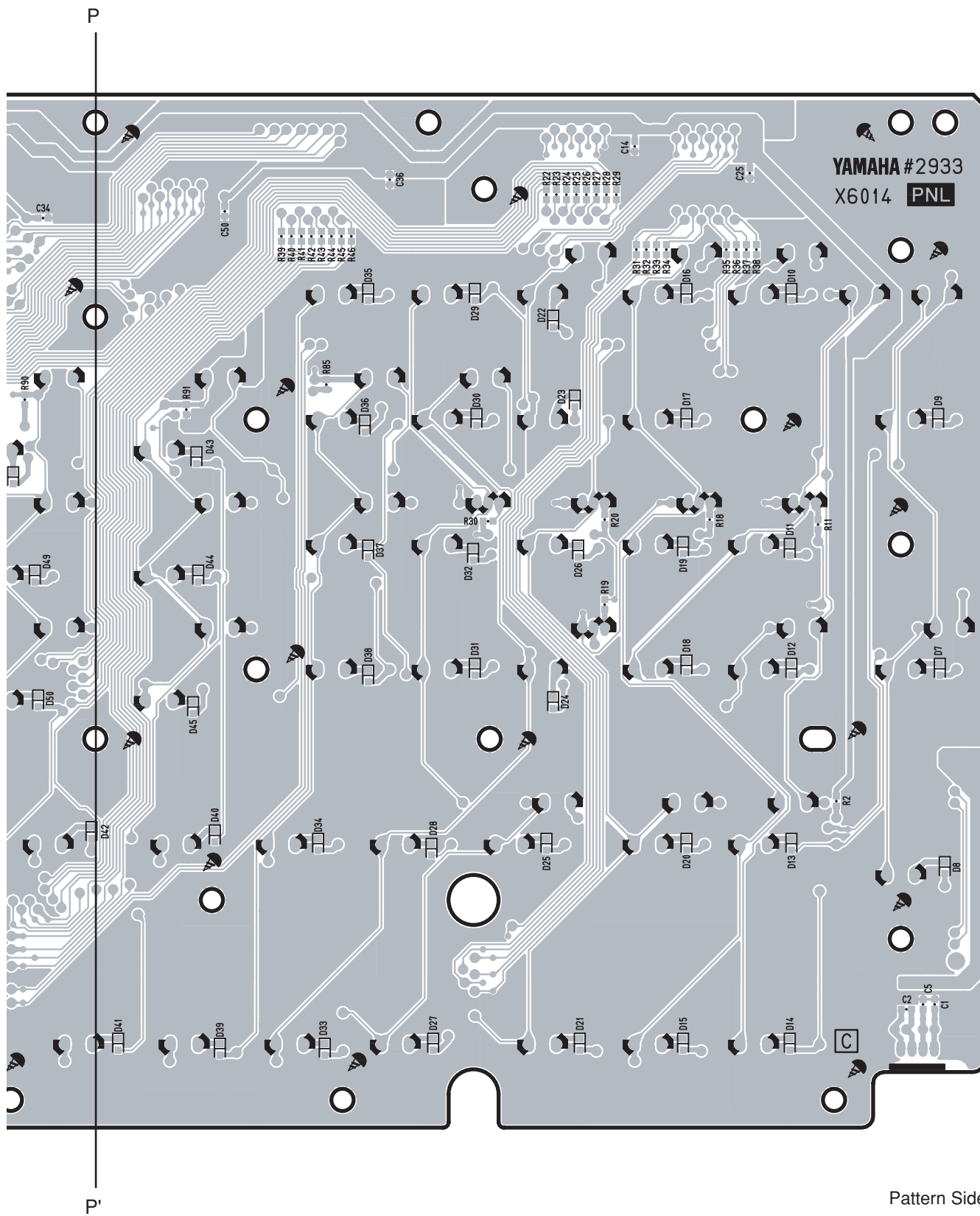
Component Side

Note: See parts list for details of circuit board component parts.

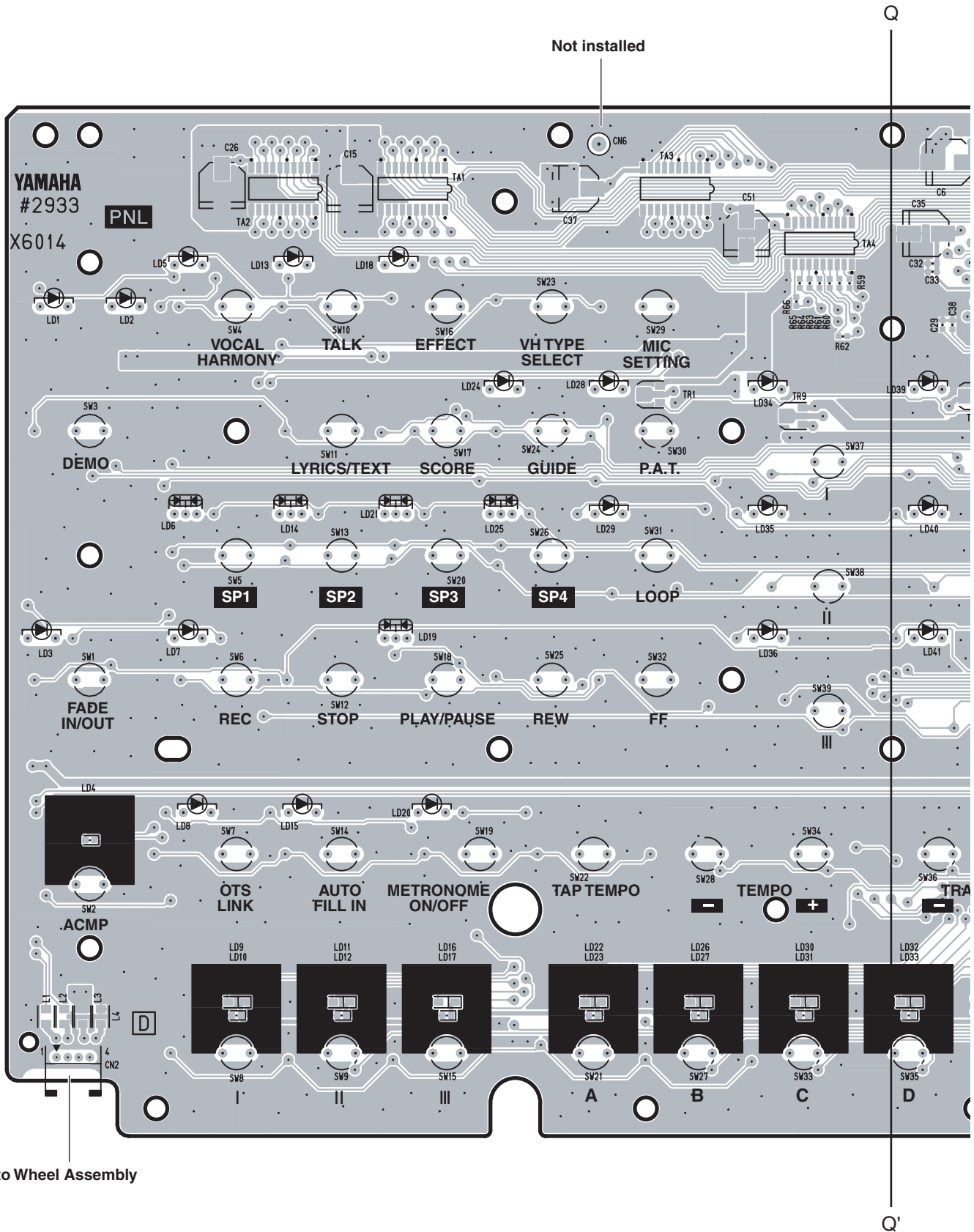
• PNL(Version C) Circuit Board



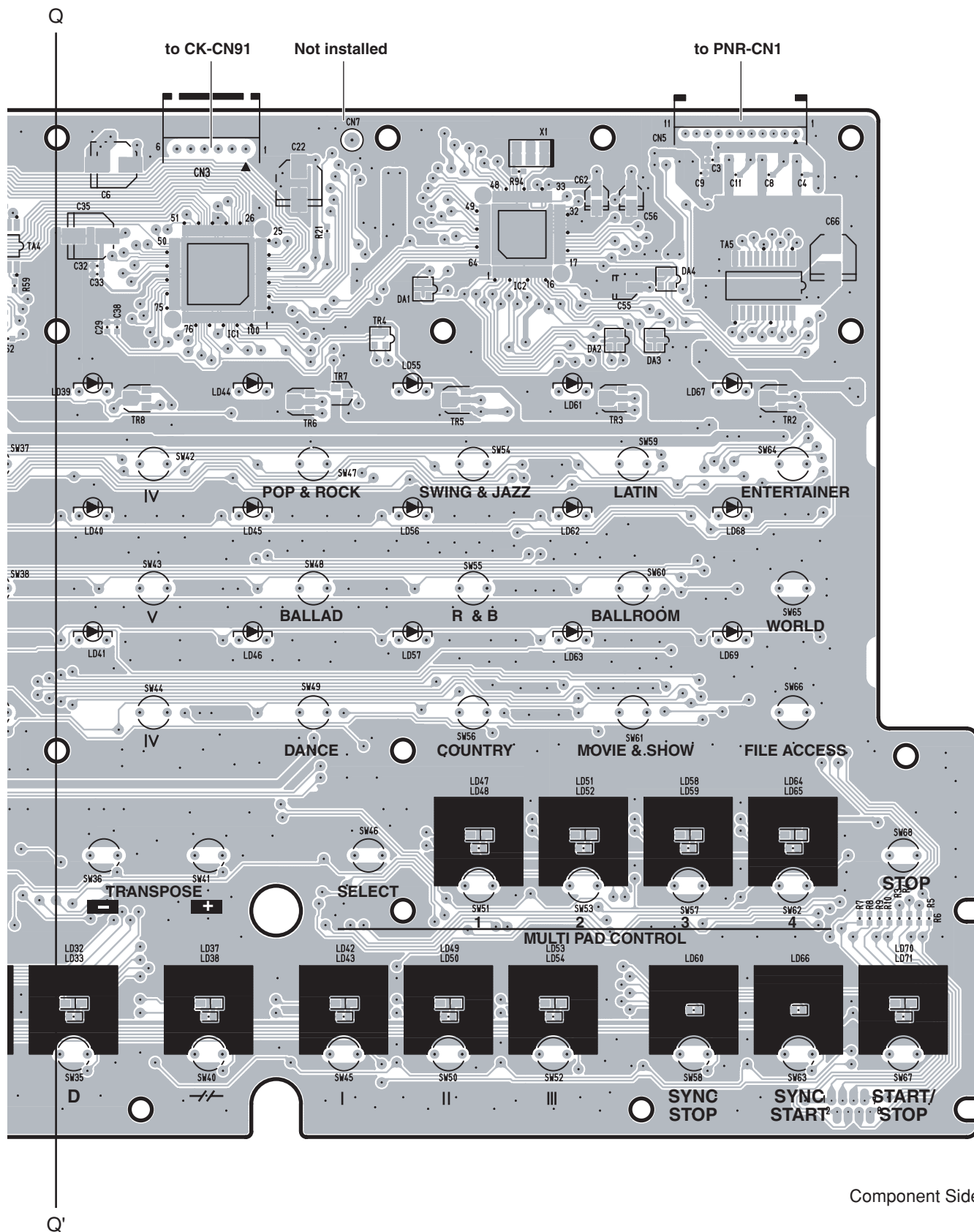
Note: See parts list for details of circuit board component parts.



• PNL(Version D) Circuit Board

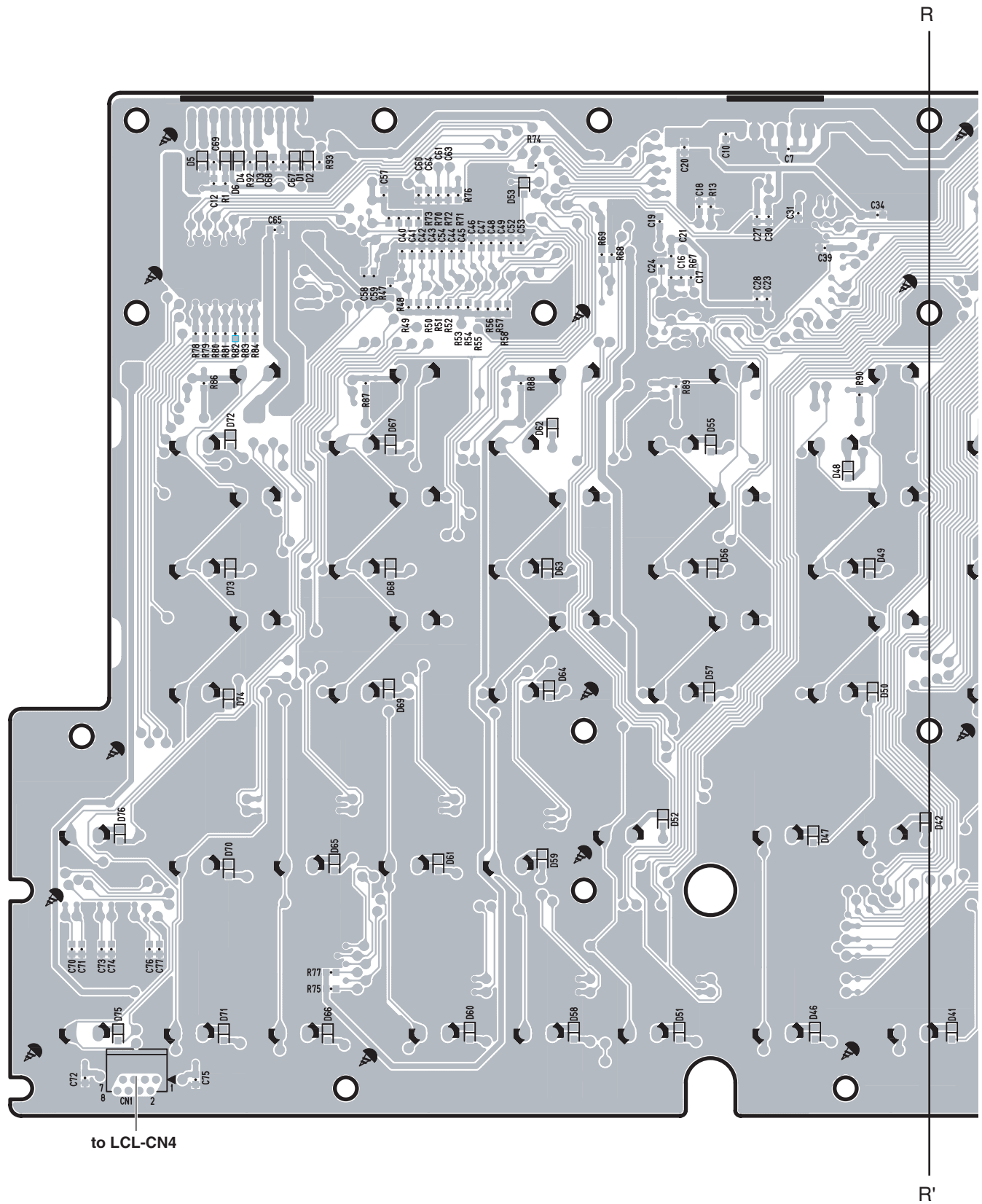


Note: See parts list for details of circuit board component parts.

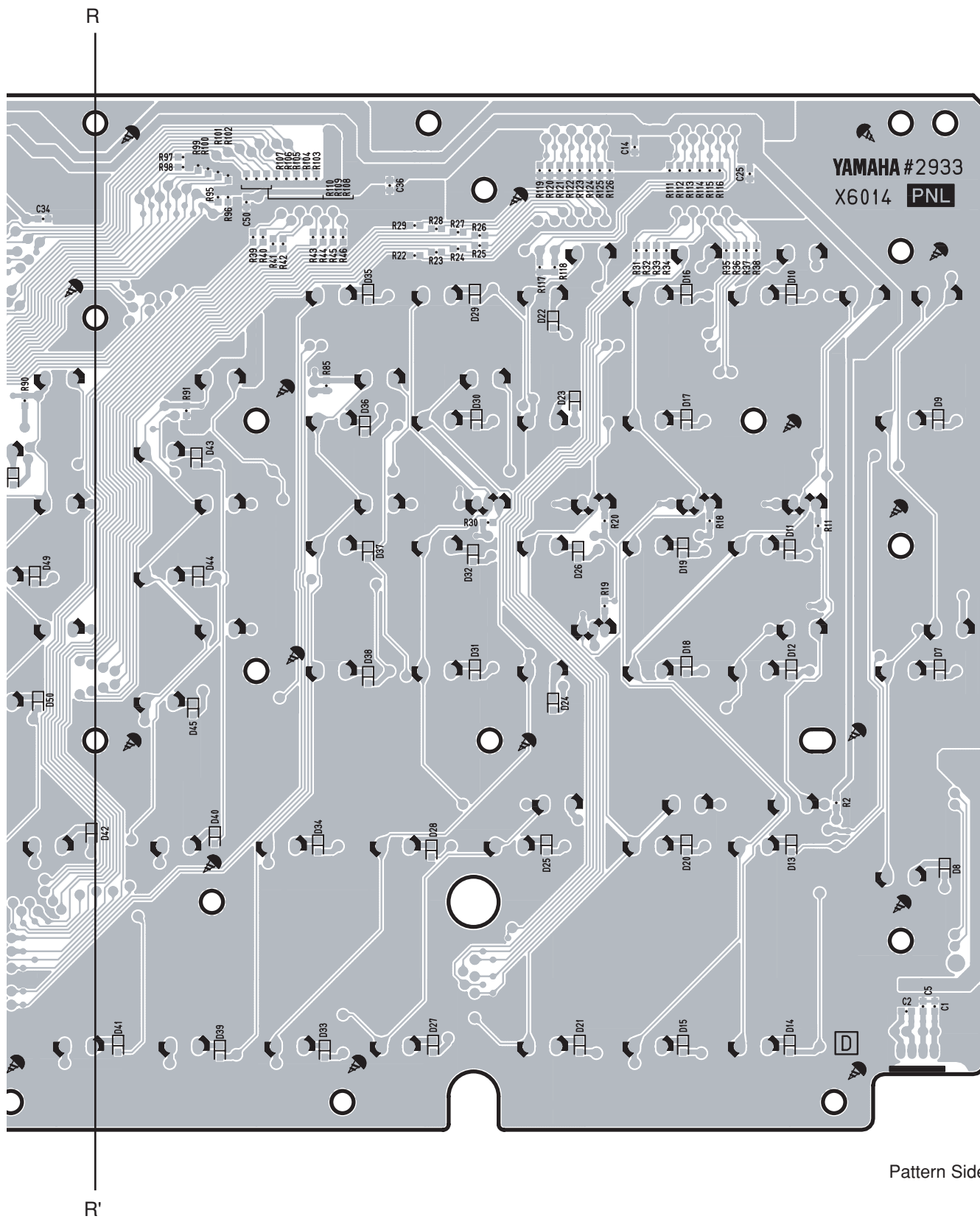


Note: See parts list for details of circuit board component parts.

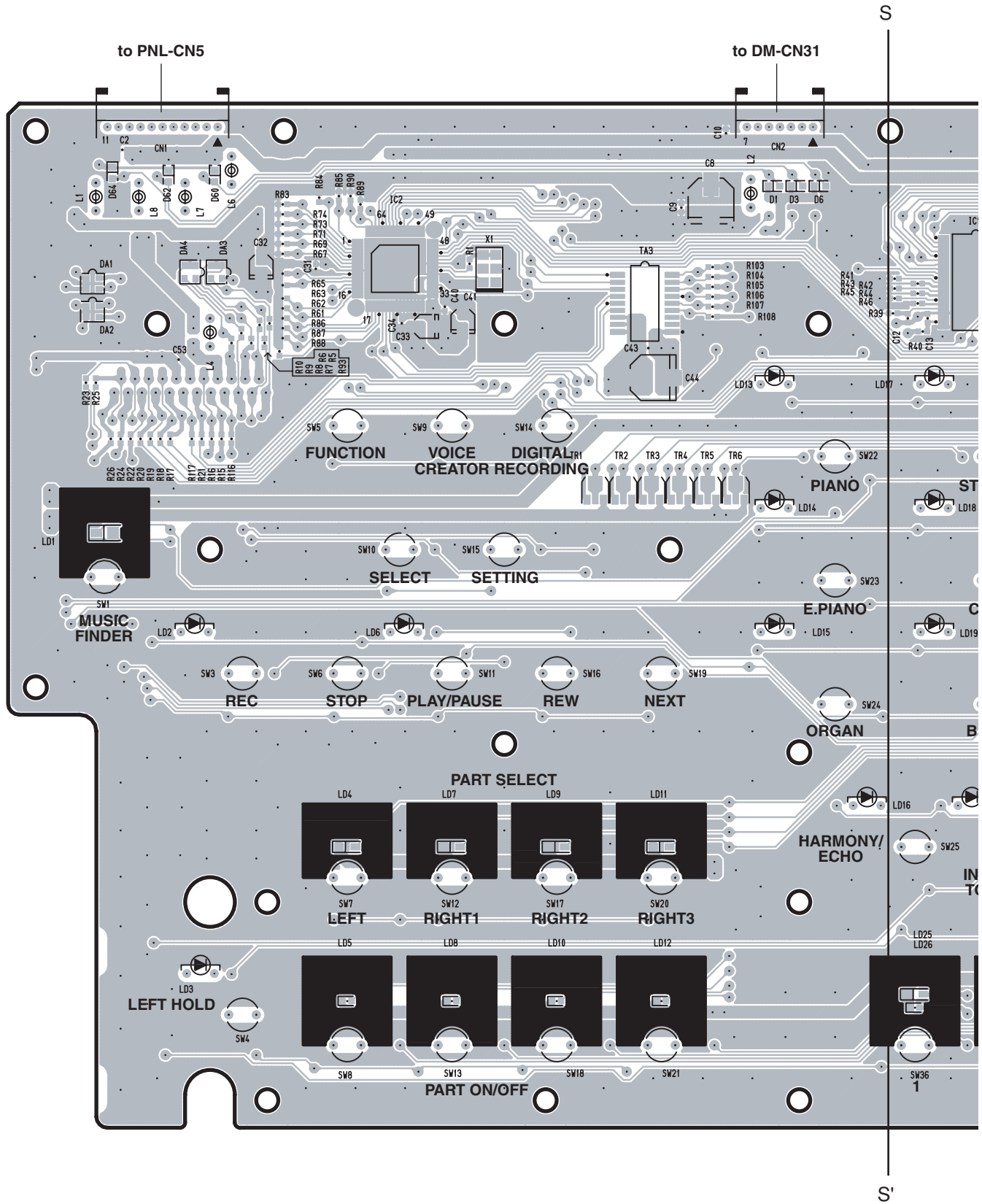
• PNL(Version D) Circuit Board



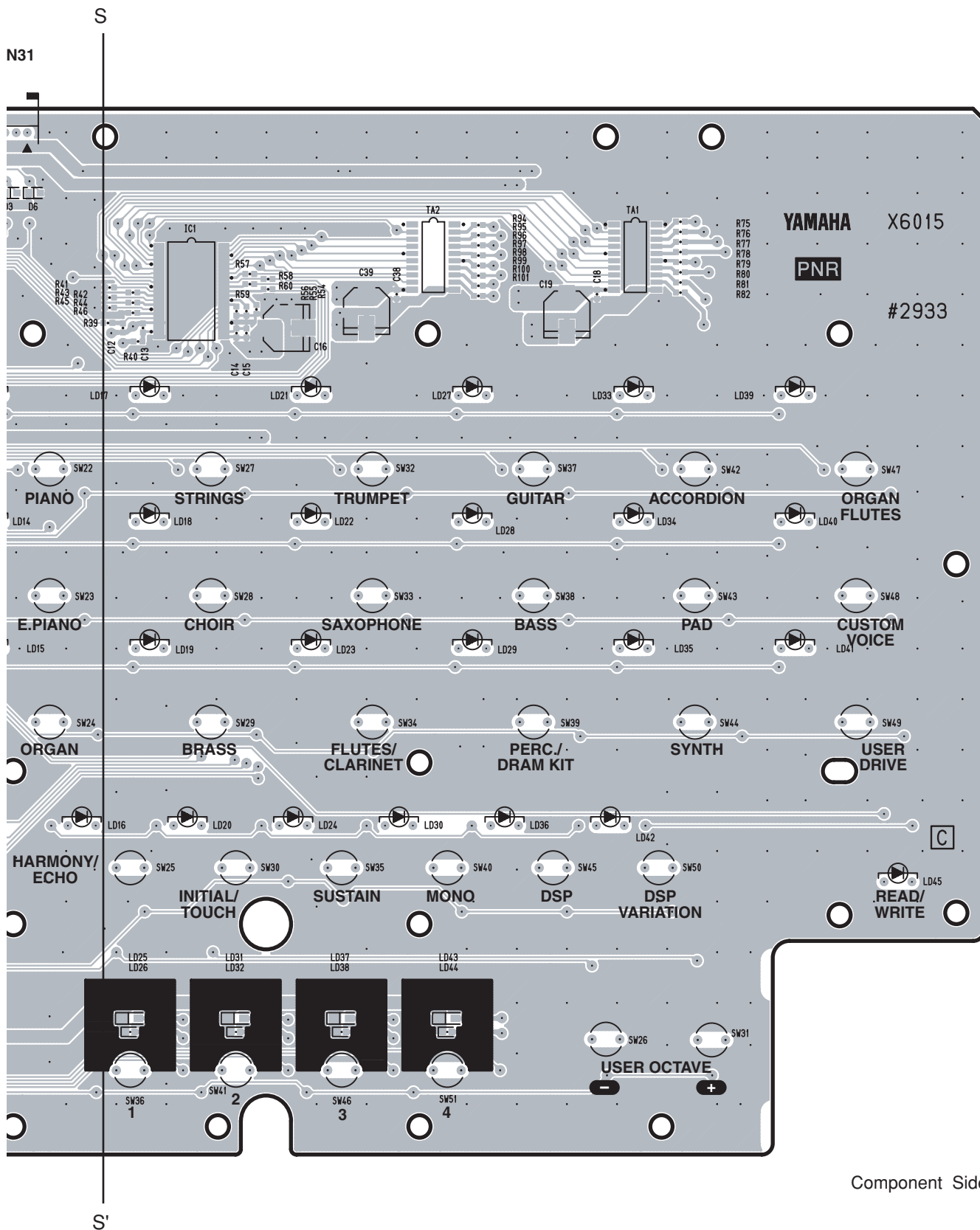
Note: See parts list for details of circuit board component parts.



• PNR Circuit Board

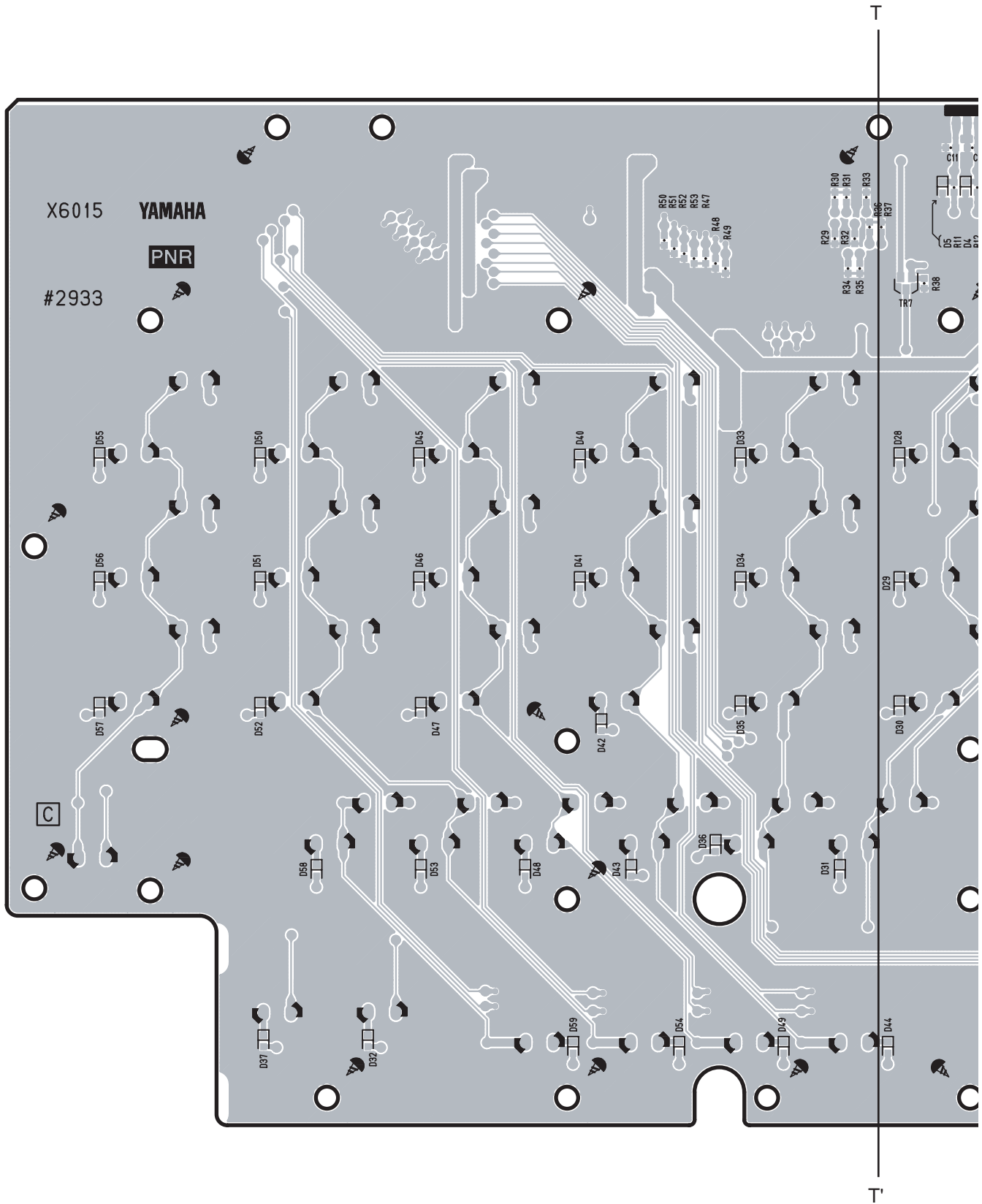


Note: See parts list for details of circuit board component parts.

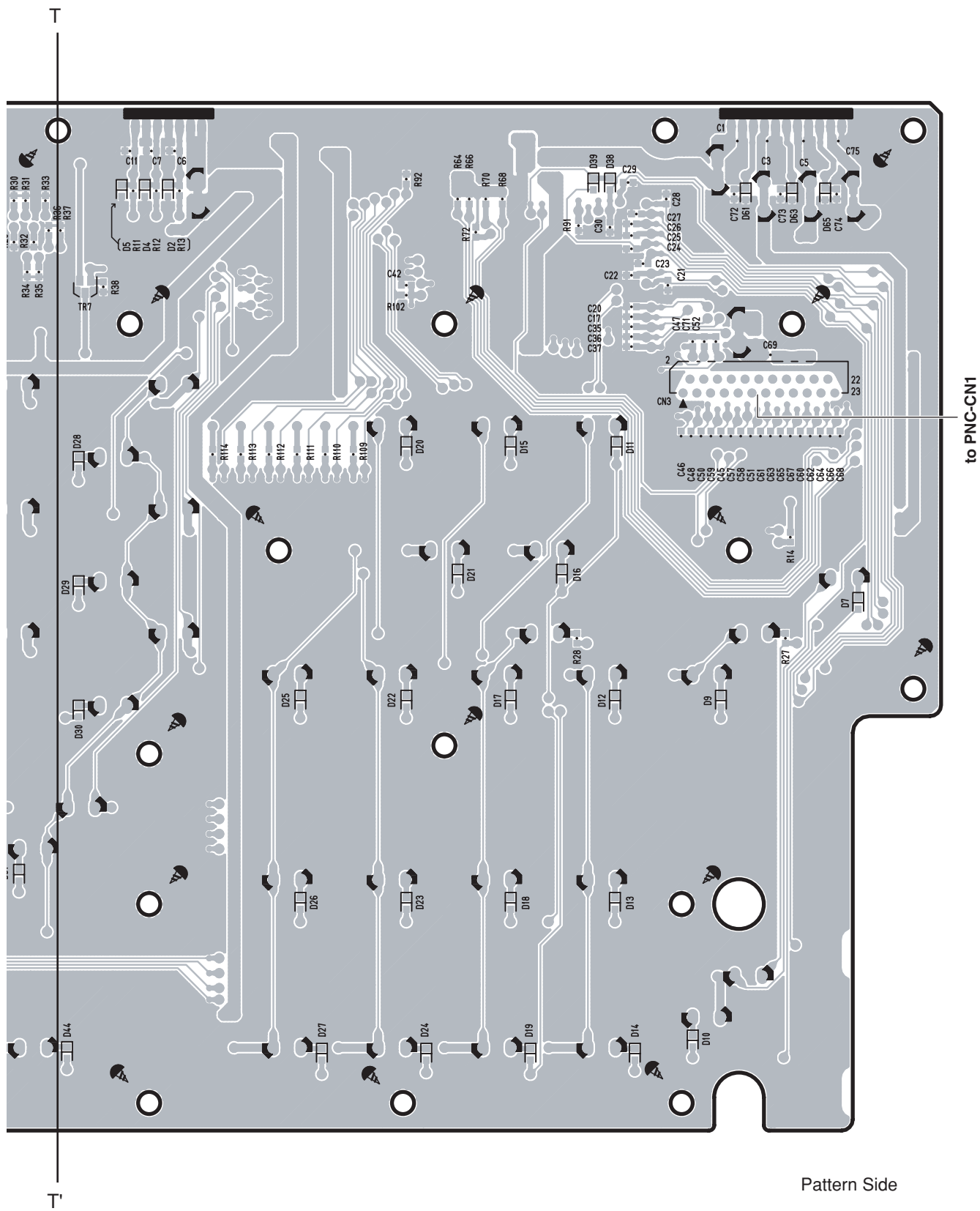


Note: See parts list for details of circuit board component parts.

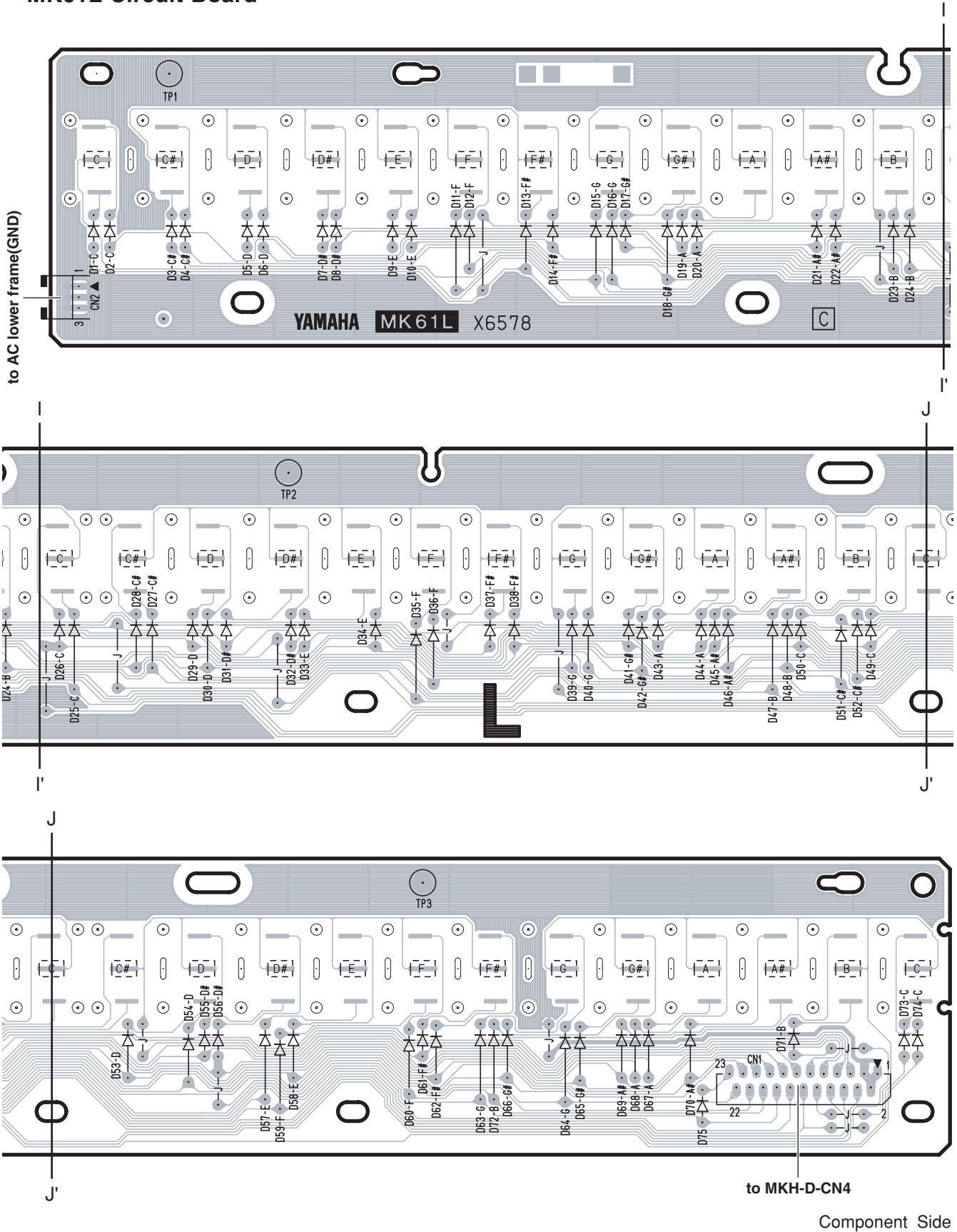
• PNR Circuit Board



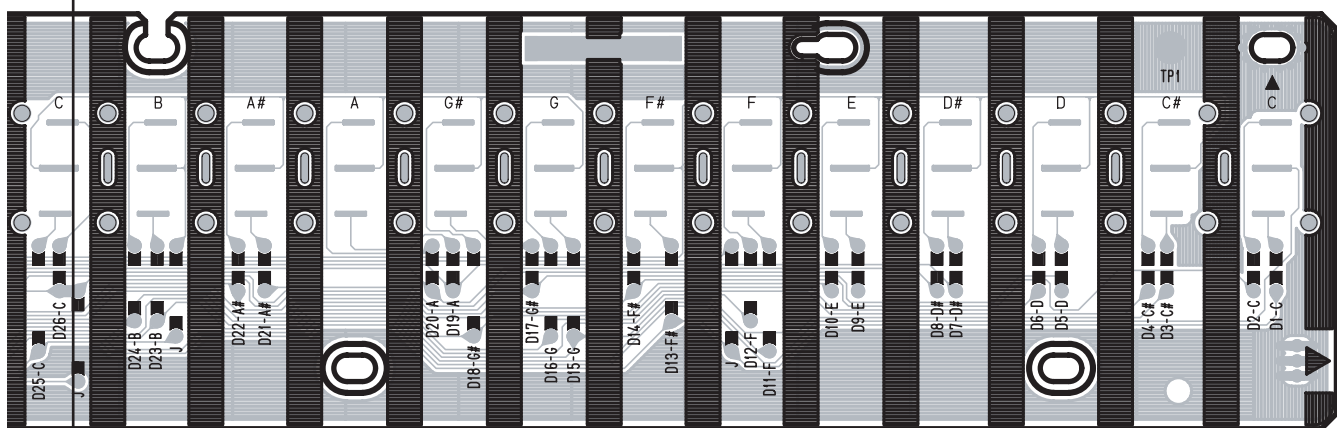
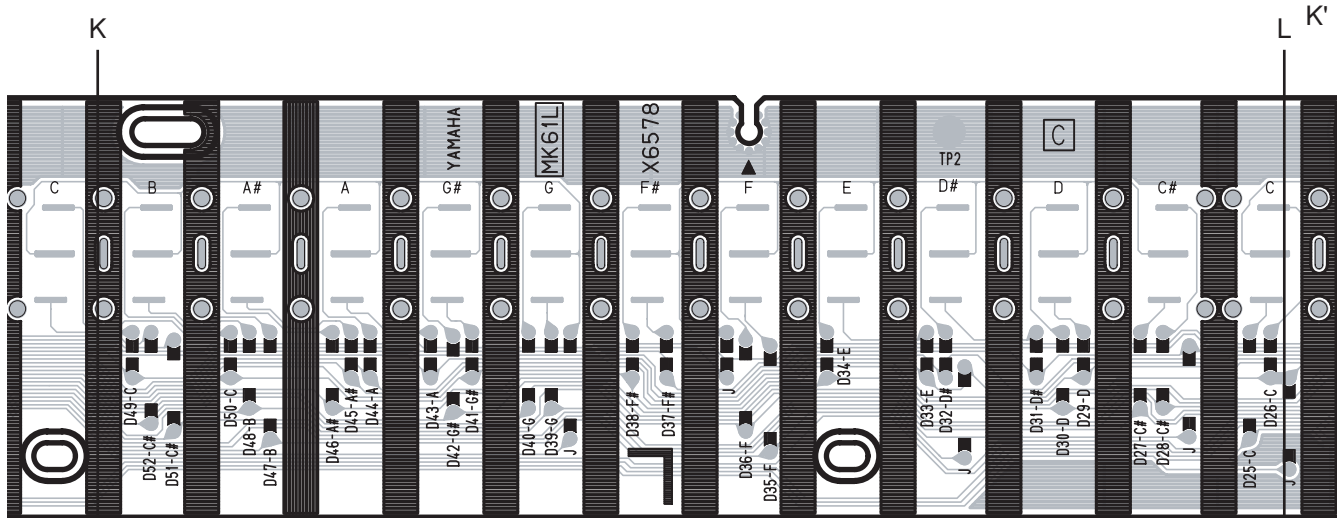
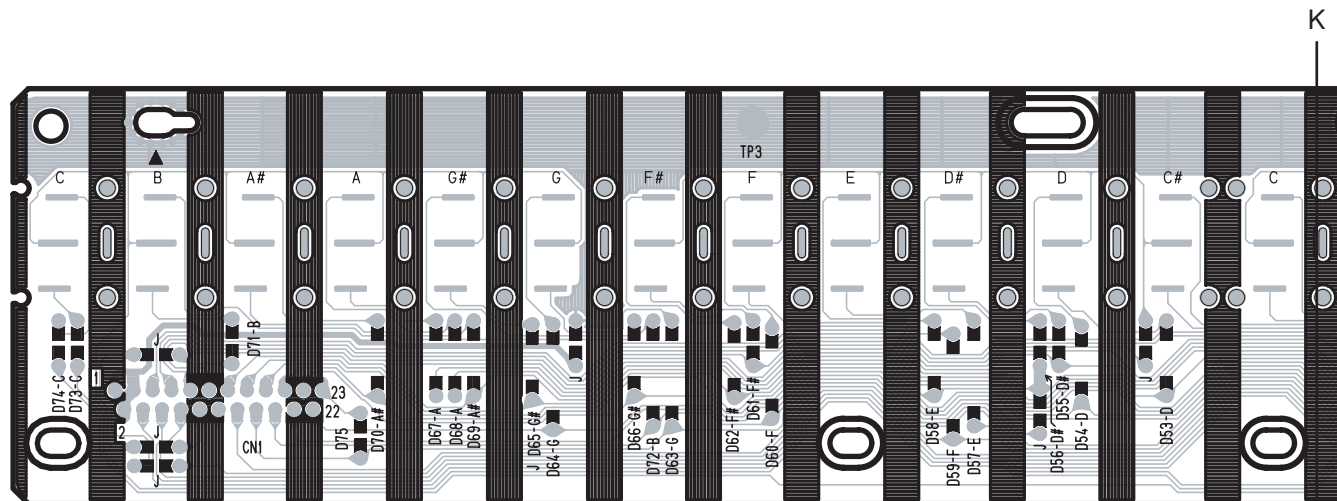
Note: See parts list for details of circuit board component parts.



• MK61L Circuit Board

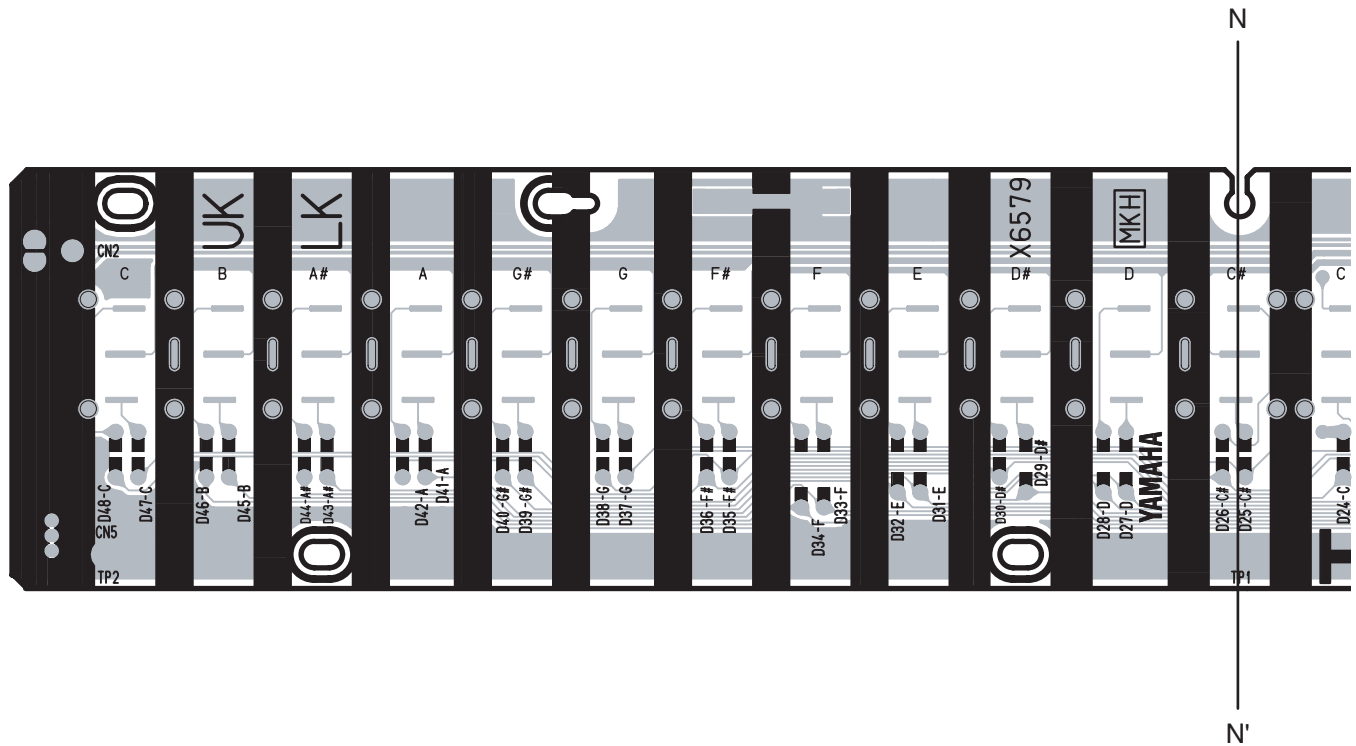
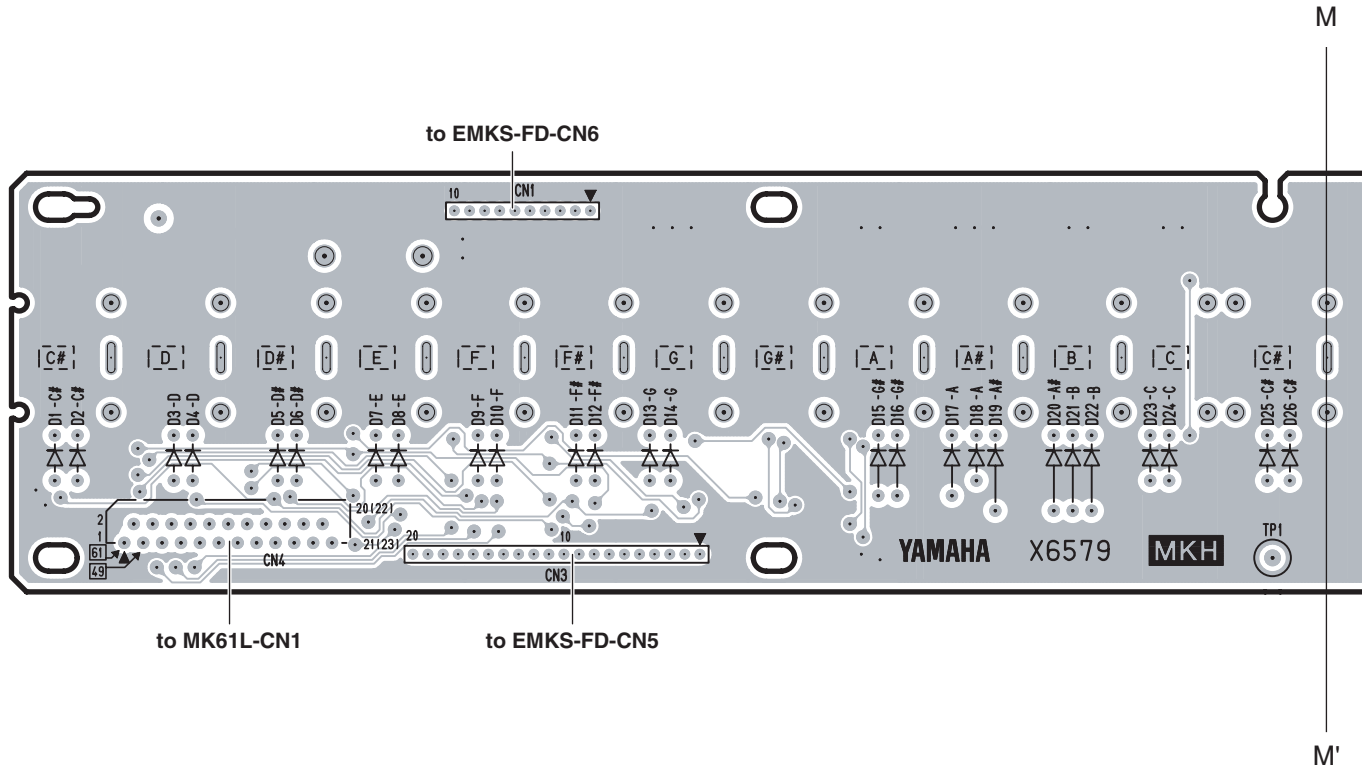


Note: See parts list for details of circuit board component parts.

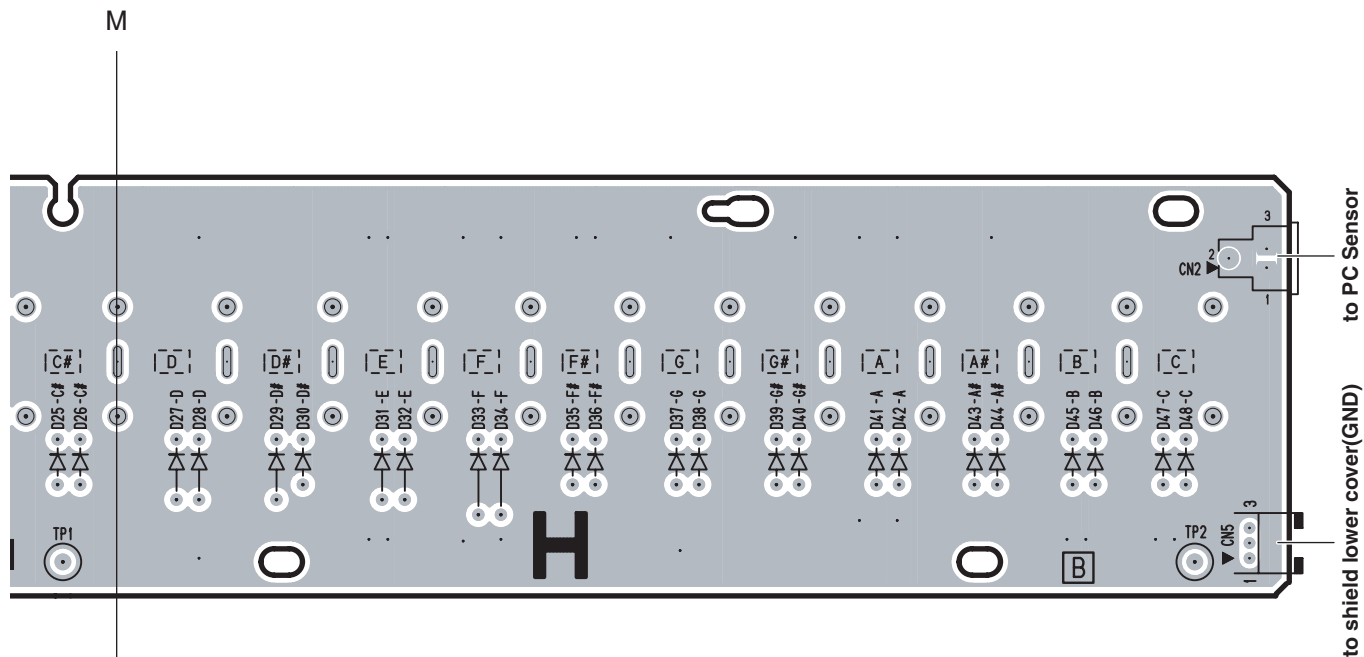


Pattern Side

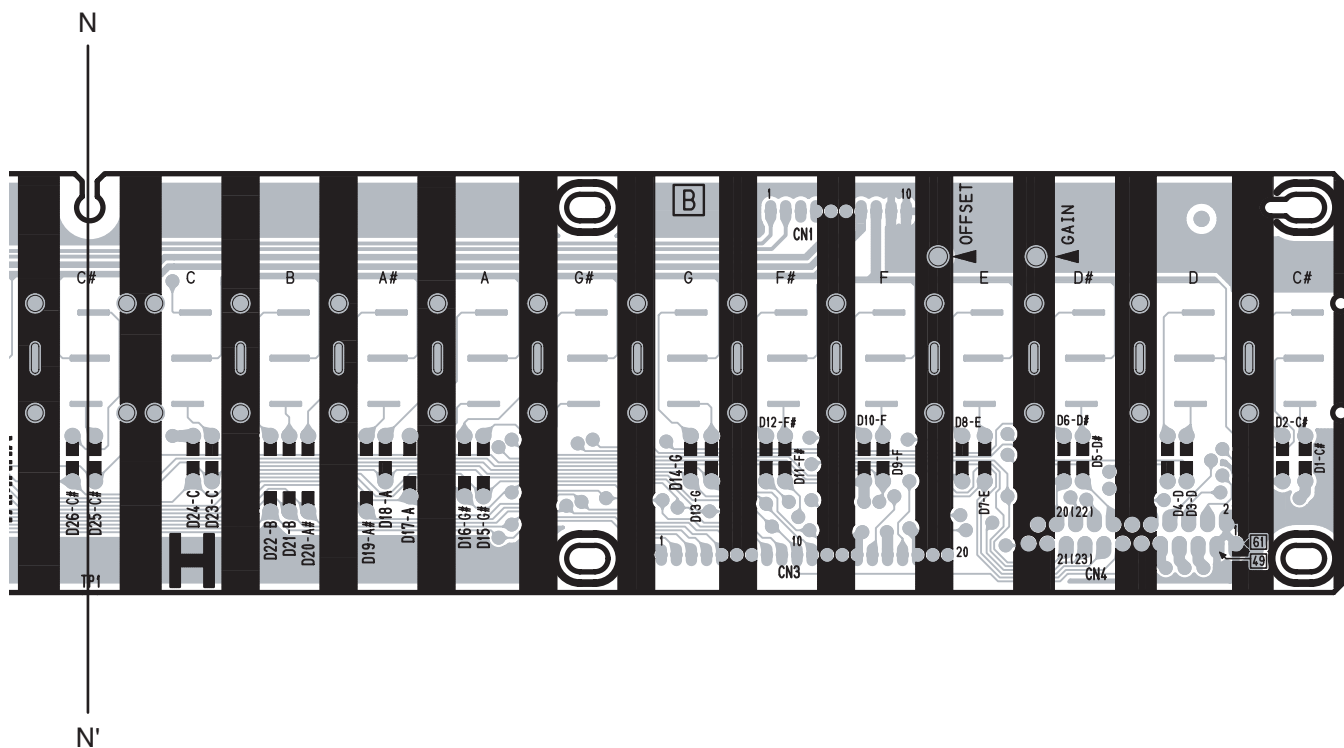
• MKH-D Circuit Board



Note: See parts list for details of circuit board component parts.

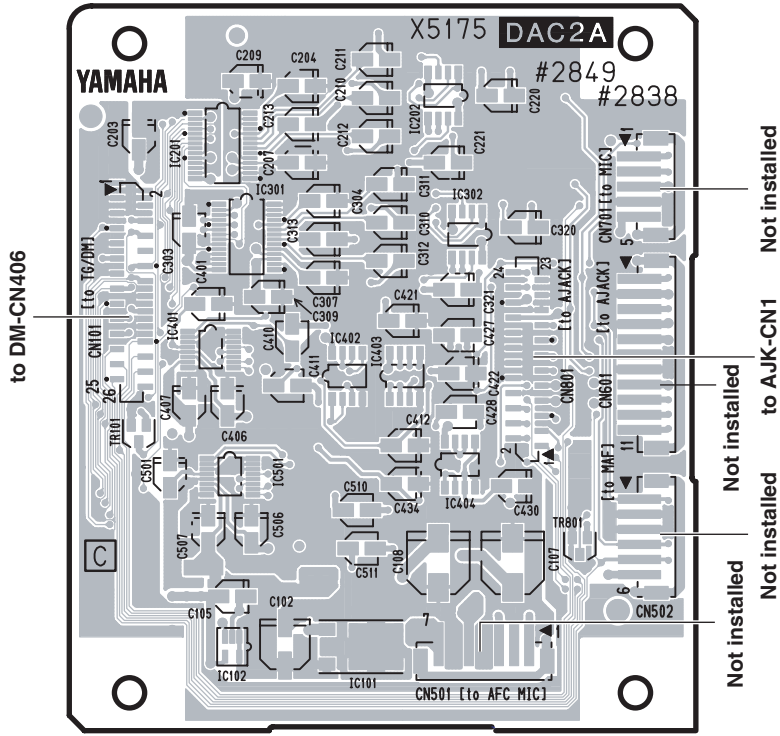


Component Side

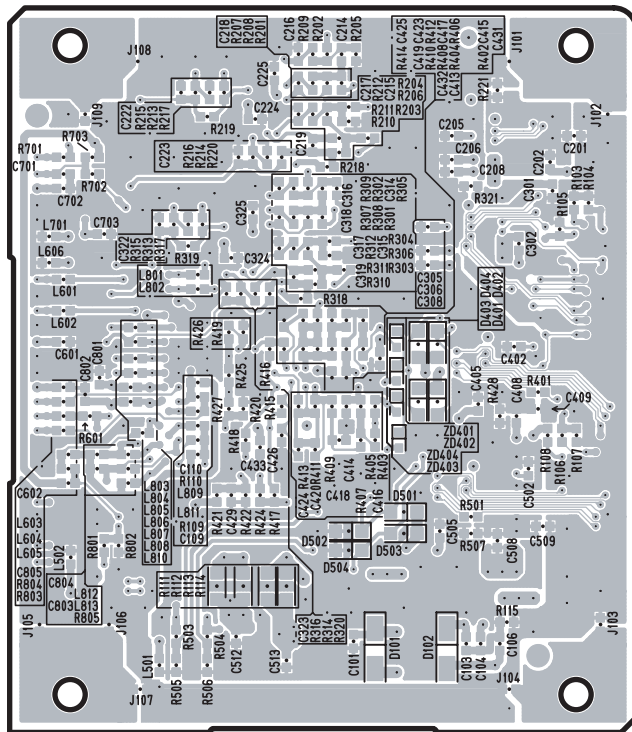


Pattern Side

• DAC2A Circuit Board



Component Side

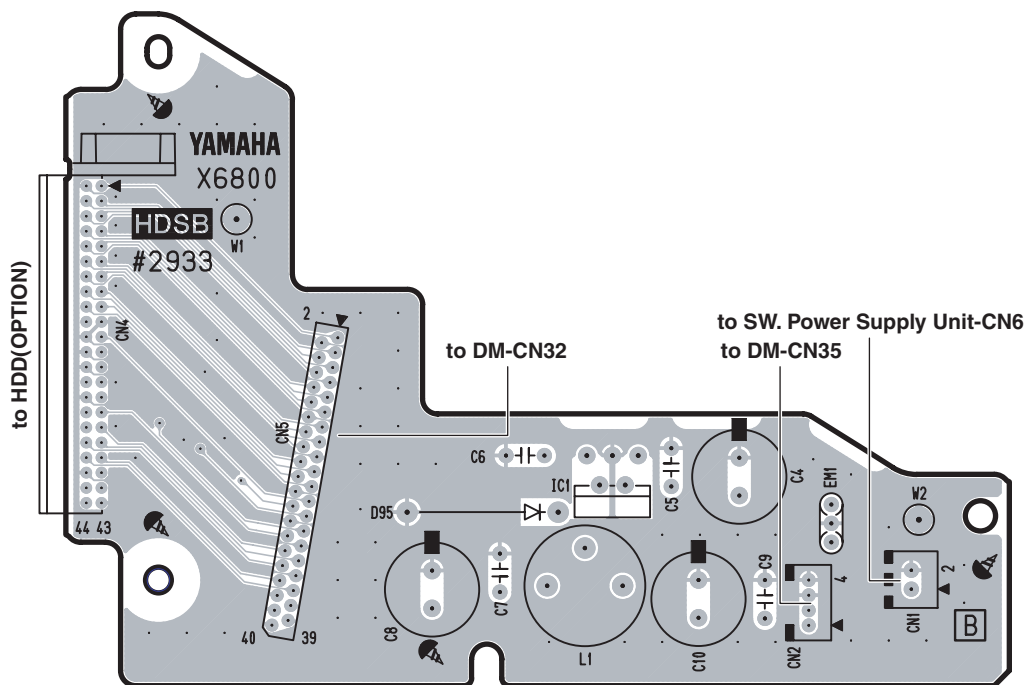


Pattern Side

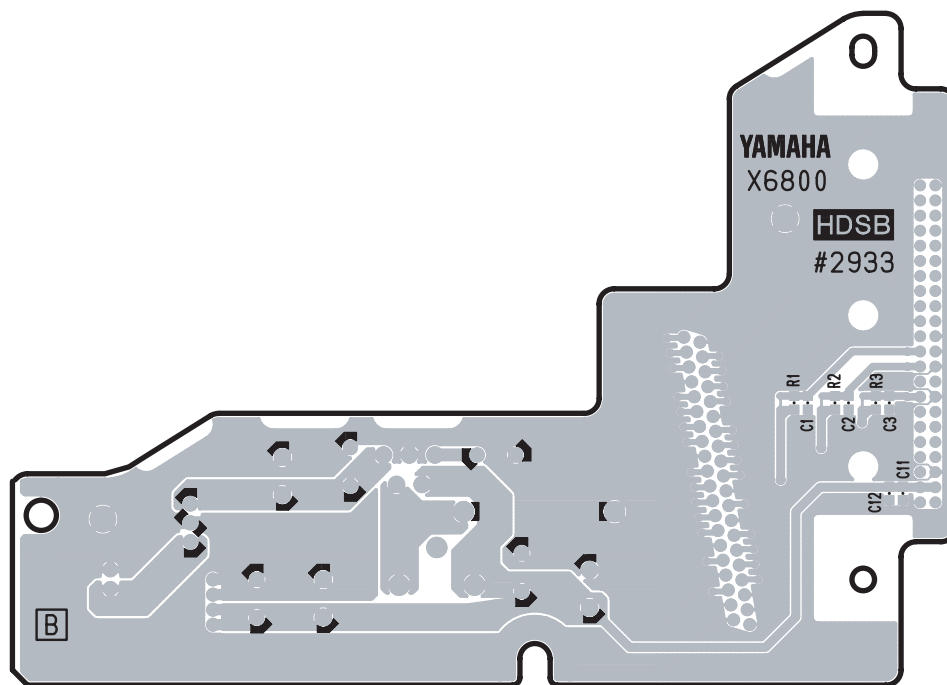
Note: See parts list for details of circuit board component parts.

2NA-WC74890

• HDSB Circuit Board

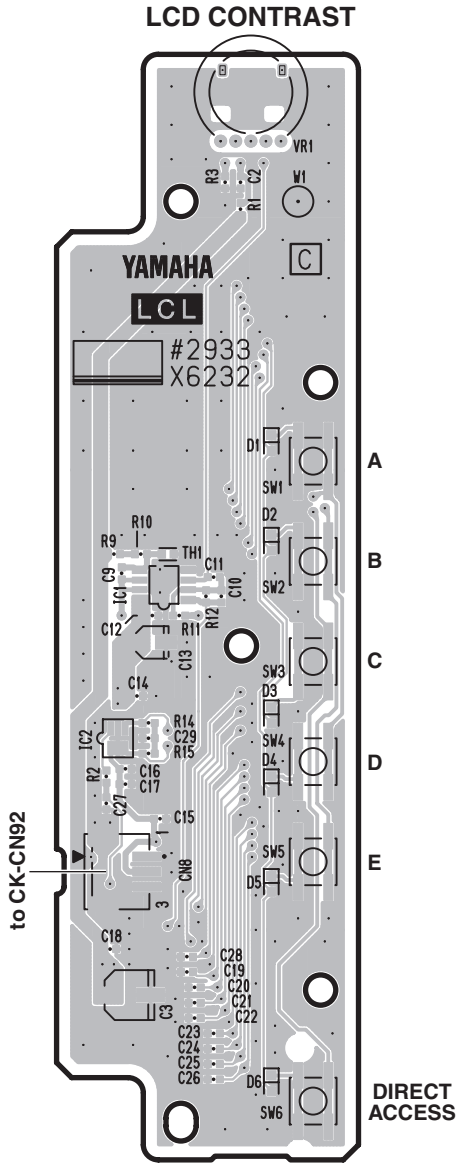


Component Side

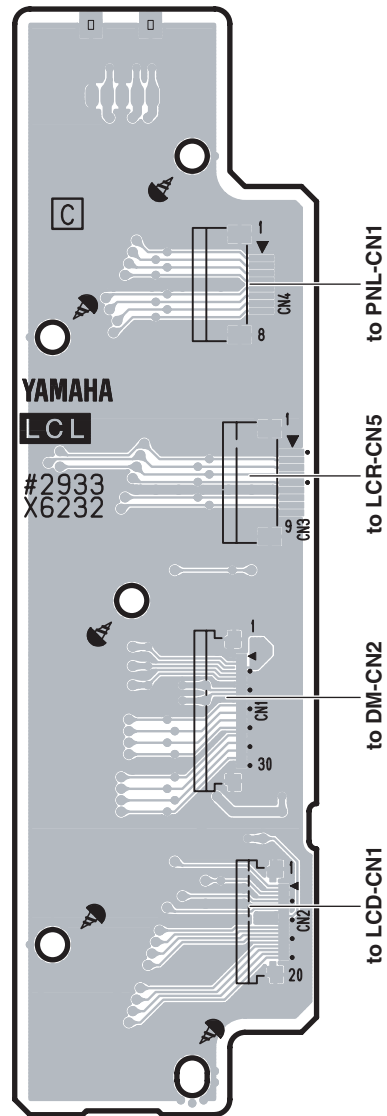


Pattern Side

• LCL Circuit Board

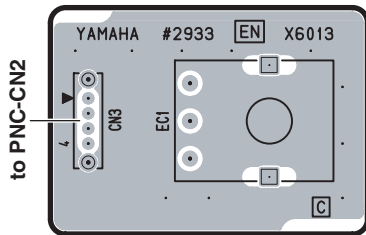


Component Side

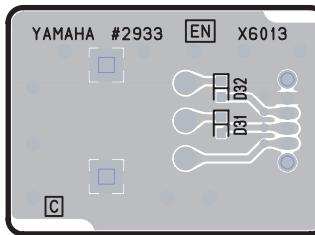


Pattern Side

• EN Circuit Board





Component Side

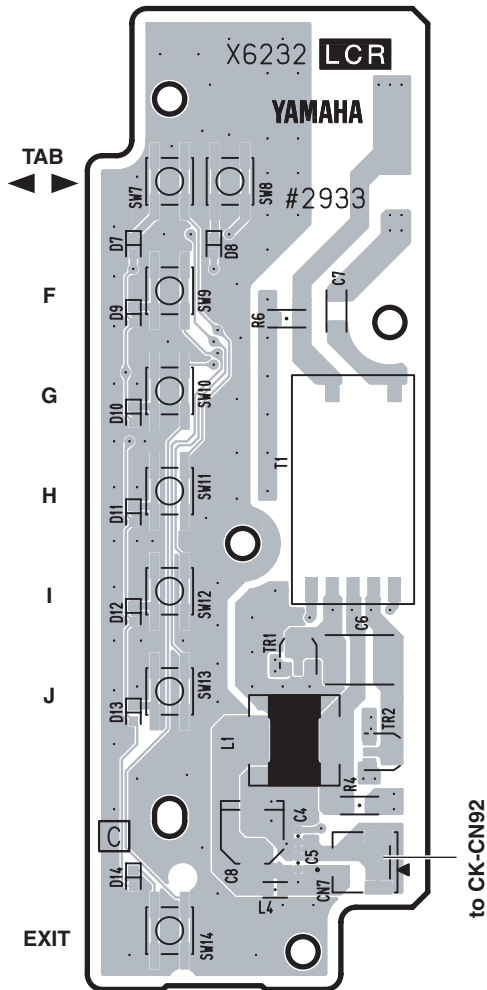


Pattern Side

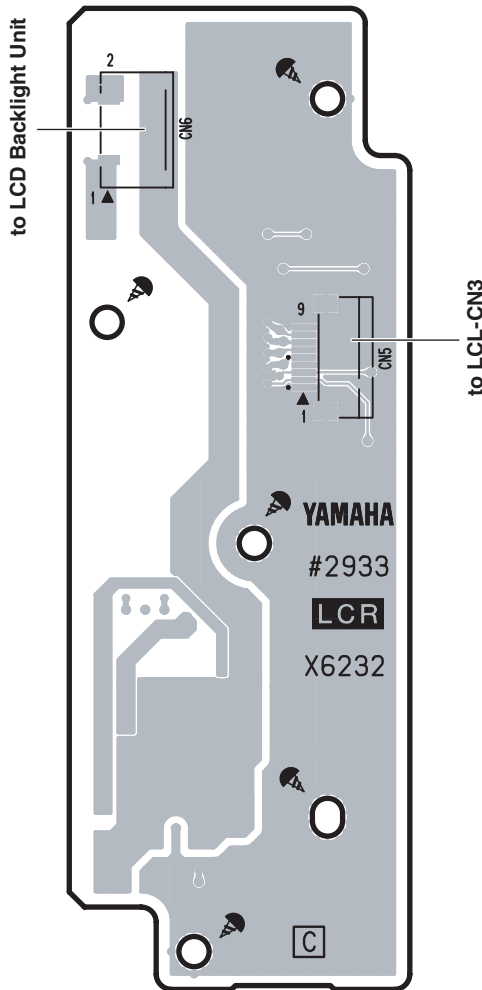
Note: See parts list for details of circuit board component parts.

LCL: 2NA-WE81760 
 EN: 2NA-WF32840 

• LCR Circuit Board

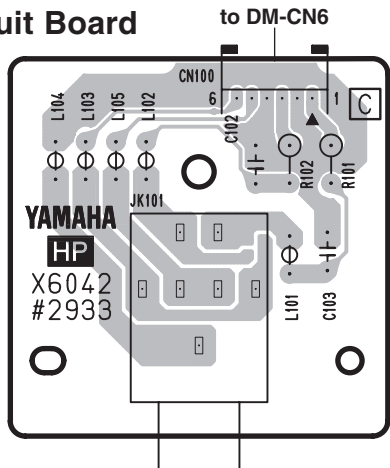


Component Side



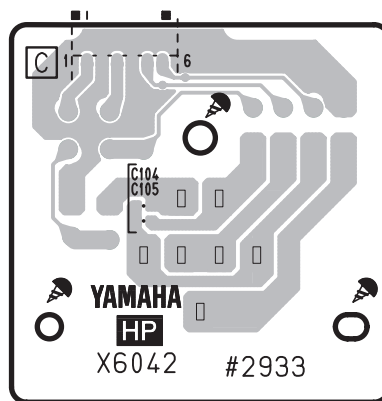
Pattern Side

• HP Circuit Board





PHONES

Component Side

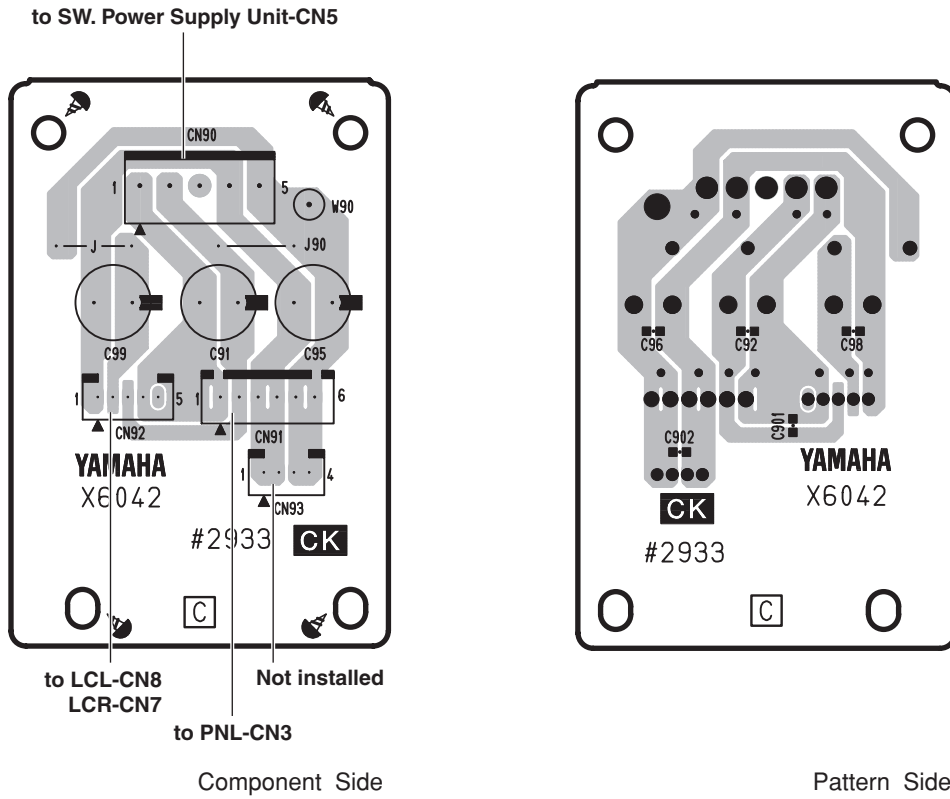


Pattern Side

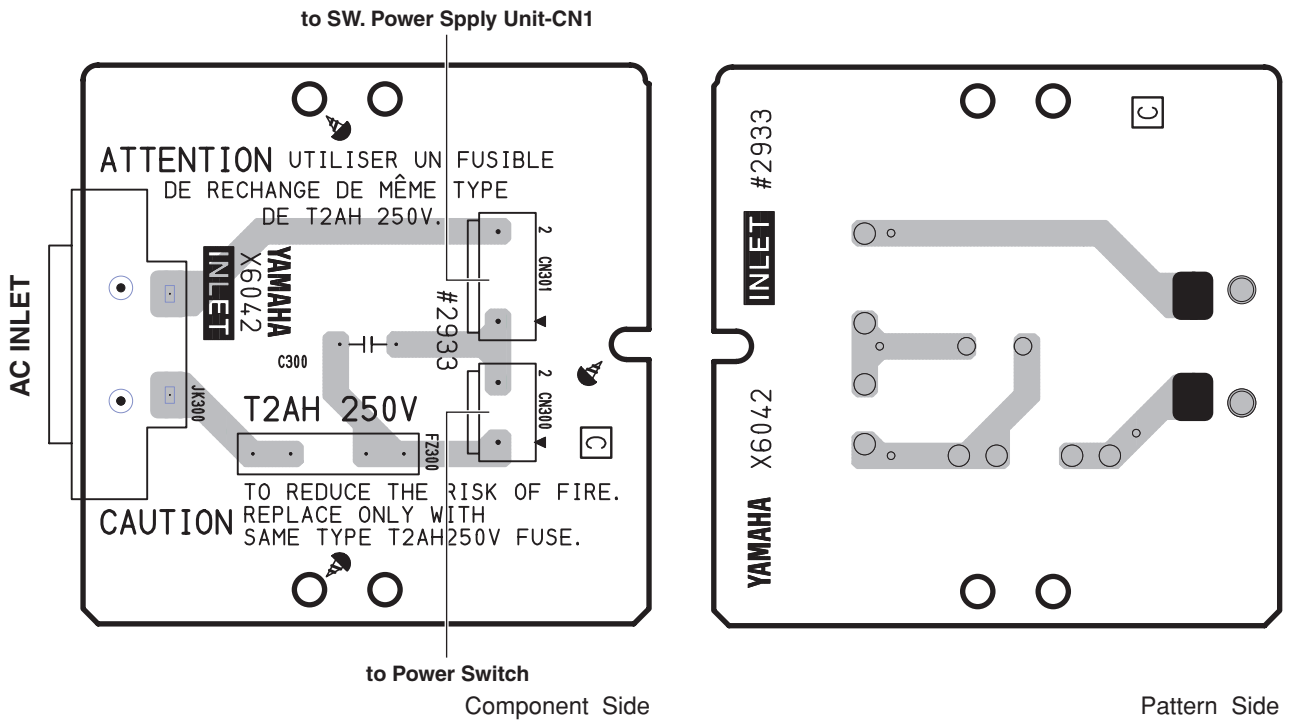
LCR: 2NA-WE81760 
 HP: 2NA-WE81600 

Note: See parts list for details of circuit board component parts.

• CK Circuit Board



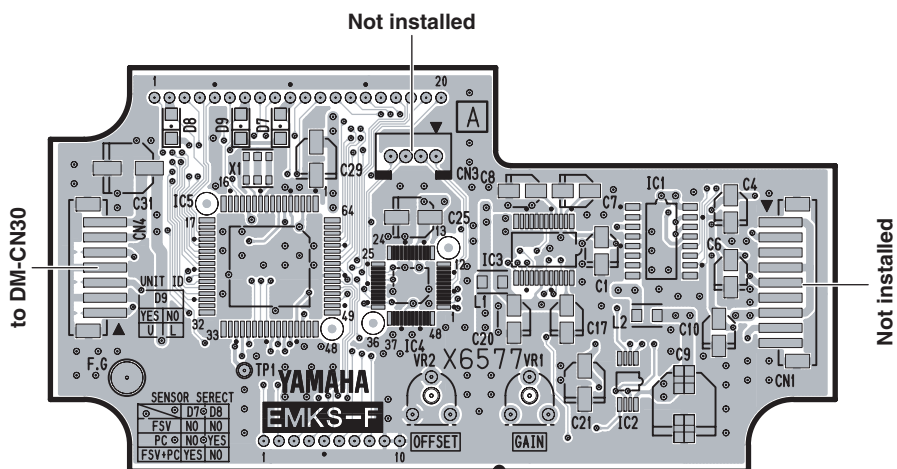
• INLET Circuit Board



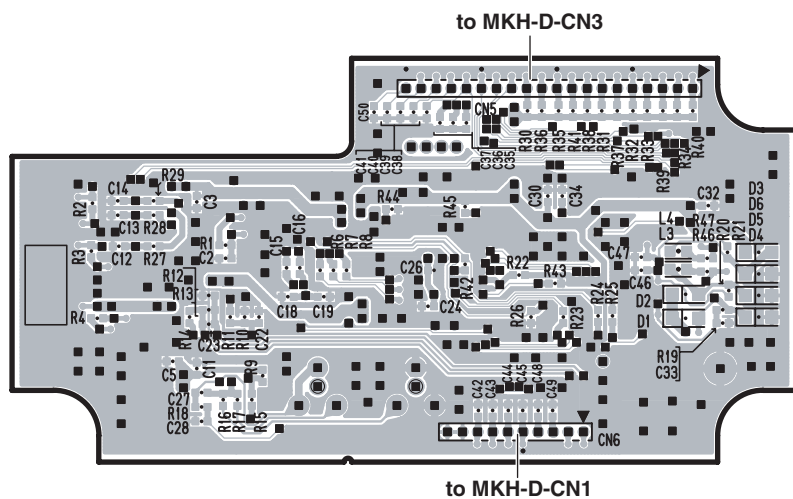
Note: See parts list for details of circuit board component parts.

CK: 2NA-WE81600 ⚠
 INLET: 2NA-WE81600 ⚠

• EMKS-FD Circuit Board

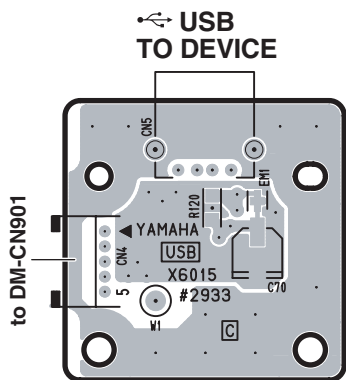


Component Side

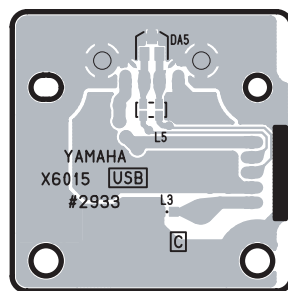


Pattern Side

• USB Circuit Board



Component Side

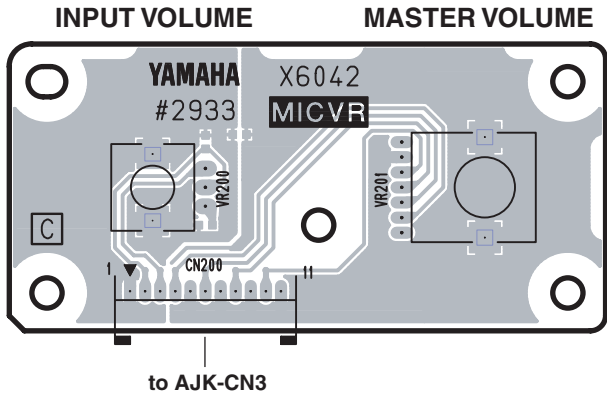


Pattern Side

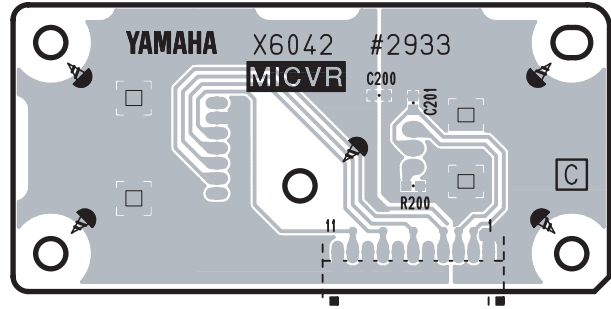
EMKS-FD: 2NAKZ-WE62240
 USB: 2NA-WE81730

Note: See parts list for details of circuit board component parts.

• MICVR Circuit Board

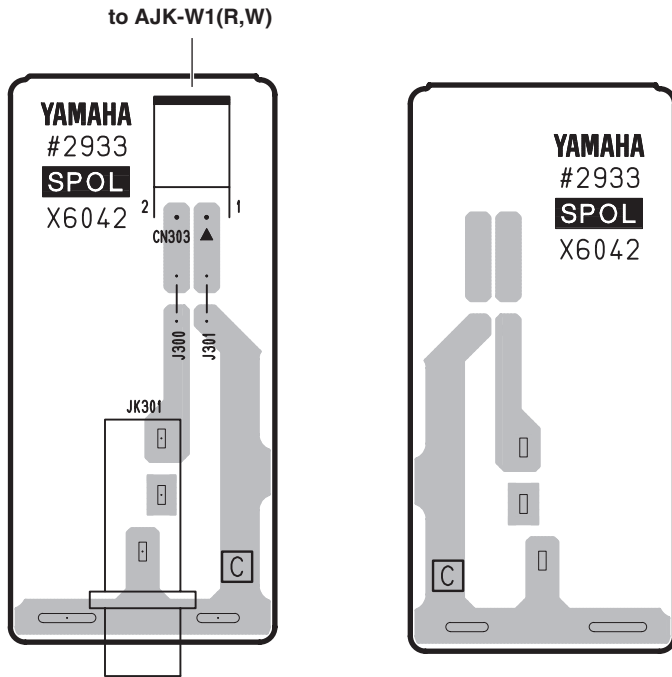


Component Side



Pattern Side

• SPOL Circuit Board

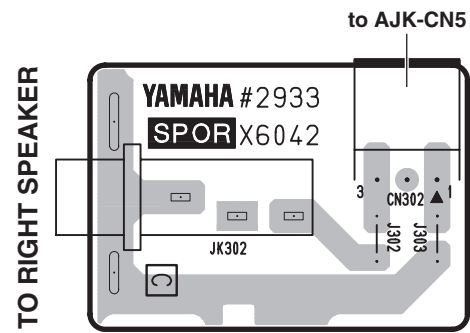


TO LEFT SPEAKER

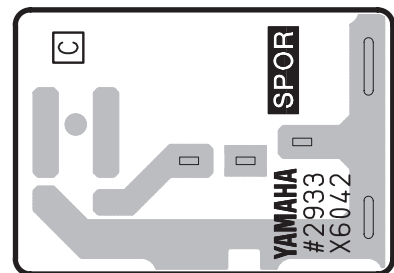
Component Side

Pattern Side

• SPOR Circuit Board






Component Side



Pattern Side

Note: See parts list for details of circuit board component parts.

- MICVR: 2NA-WE81600 
- SPOL: 2NA-WE81600 
- SPOR: 2NA-WE81600 

TEST PROGRAM

1. Preparation

To check the unit, the following measuring instruments and jigs are required.

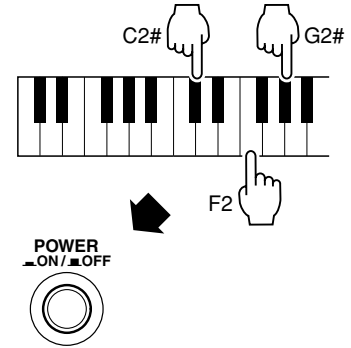
Measuring instruments:

- Frequency counter (with accuracy of two decimal point digits or more)
- Level meter (with JIS-C filter)
- Oscillator (for balance/unbalance)

Note: Unless otherwise specified, use a stereo plug with a load of 33 ohms and measure at the [PHONES] jack.

Jigs:

- Stereo phone Jack cable (33 ohm load or 30 ohm load)
- Monaural phone Jack cable (10k ohm load) (x 2)
- Mini DIN8PIN cable (470 ohm load)
- Foot volume (FC-7)
- MIDI cable (x 2)
- Microphone, Headphones
- Computer
- USB cable (A - B type)
- Color CRT monitor for RGB input (NTSC,PAL)
- Video cable (75 ohm, coaxial)
- RGB cable (Mini D-Sub15 pin)
- Optional speaker (TRS-MS02 or equivalent)
- 2.5" Hard disk drive (1-137GB, Formatted with Tyros2)
- DIMM (Transcend TS64ML64V6 (512MB) or equivalent) (x2)
- USB storage device



(Fig.1)

2. How to Enter the Test Program

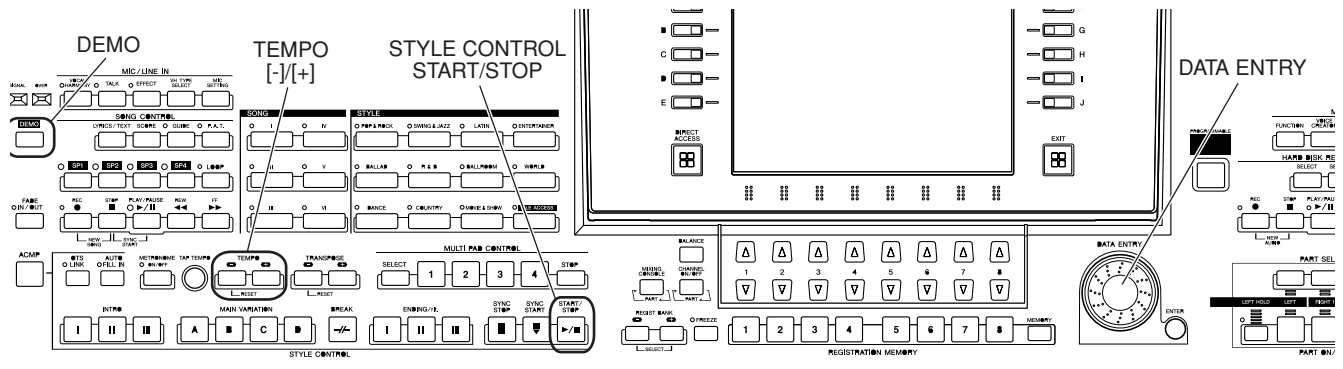
While pressing the [C#2], [F2] and [G#2] keys, turn the power on. (Fig.1)

3. Test Procedure

- 1) When the test program starts to run, the LCD shows "TEST".
- 2) Press the [TEMPO-] / [TEMPO+] button or turn the [DATA ENTRY] dial to select test item.
- 3) Press the [STYLE CONTROL START/STOP] button to execute the current test item.

If the test result is OK, press the [STYLE CONTROL START/STOP] button or the lowest key(C1) to return to the wait state.

If the test result is NG, press the lowest key(C1) or the [DEMO] button to return to the wait state.



4. Test Items

No.	LCD display	Test Function and Judgment Criteria
	---: Device Connection Check	<p>Checks the device connections. Install two DIMMs and a hard disk drive. Confirm that the LCD shows “DIMM:Device Found” and “HDD:Device Found”.</p> <p>In case of NG, the following messages are indicated on the LCD. “SwErr” (The panel switch is pressed.) “DIMM:No Device” or “HDD:No Device”</p>
	---:	<p>LCD Contrast Check. Confirm that the LCD contrast can be adjusted by turning the LCD CONTRAST knob.</p>
1	001:Version	<p>Displays each ROM version. ROM versions are displayed alternately on the LCD. Press the TAB[<] or TAB[>] to switch the version pages. The first page Model Name : Tyros2(E) Main Program : X.XX Sub Program : X.XX BitMap : X.XX Contents1 : X.XX Contents2 : X.XX Wave1 : X.XX</p> <p>The second page Main Boot : X.XX Sub1 Boot : X.XX</p> <p>In case of NG, the LCD shows “0.00”. (X.XX: Version)</p>
2	002:ROM Chk1	<p>Checks all ROMs connected to the CPU bus. Confirm that the LCD shows “OK”.</p> <p>In case of NG, the following messages are indicated on the LCD. “xxxxxx NG” or “xxxxxx No Card” (xxxxxx: ROM's name)</p>
3	003:RAM Chk1	<p>Checks all RAMs connected to the CPU bus. Confirm that the LCD shows “OK”.</p> <p>In case of NG, the following messages are indicated on the LCD. “xxxxxx NG” or “xxxxxx No Card” (xxxxxx: RAM's name)</p>
4	004:Flash Chk1	<p>Checks all the flash memories connected to the CPU bus. (It takes about 15 seconds.) Confirm that the LCD shows “OK”.</p> <p>In case of NG, the LCD shows “NG”.</p> <p>* Never turn off the product while executing the test.</p>
5	005:Wave ROM Chk1	<p>Checks all wave ROMs. Confirm that the LCD shows “OK”.</p> <p>In case of NG, the LCD shows “NG”.</p>
6	006:Wave RAM(SDRAM) Chk1	<p>Checks all wave RAMs(SDRAM). Confirm that the LCD shows “OK”.</p> <p>In case of NG, the following messages are indicated on the LCD. “xxxxxx NG” or “xxxxxx No Card” (xxxxxx: SDRAM's name)</p>

7	007:Wave RAM(DIMM) Chk1	<p>Checks all wave RAMs(DIMM). Confirm that the LCD shows the memory capacity of DIMM as follows. (The capacity is not checked automatically). “OK(DIMM H:512MB.L:512MB)” In case of NG, the LCD shows “NG(DIMM H:512MB,L:512MB)xxxxxx NG”. (xxxxxx: DIMM's name)</p>
8	008:Effect RAM Chk1	<p>Checks all effect RAMs. Confirm that the LCD shows “OK”. In case of NG, the LCD shows “xxxxxx NG”.(xxxxxx:RAM's name)</p>
9	009:TG 1 Chk	<p>Checks the tone generator 1. The sine waves from C2 to G4 automatically sound in order. Confirm that no noise or no abnormal sound is generated. When the test is finished, the LCD shows “End”.</p>
10	010:TG2 Chk	<p>Checks the tone generator 2. The sine waves from C2 to G4 automatically sound in order. Confirm that no noise or no abnormal sound is generated. When the test is finished, the LCD shows “End”.</p>
14	014:Pitch Chk	<p>Checks pitch. Connect a frequency counter to the [PHONES] jack (either L or R) with a load of 33 ohm and set the [MASTER VOLUME] knob to maximum. Confirm that the frequency counter shows “441.43 ±0.22Hz”.</p>
15	015:Output R Chk	<p>Checks the output level of R channel.</p> <ol style="list-style-type: none"> 1) Connect a level meter to the [PHONES] jack (L, R) with a load of 33 ohm and set the [MASTER VOLUME] knob to maximum. Confirm the output levels are as follows. L: -55.0 dBu or less R: +1.0 ±2 dBu 2) Connect a level meter to the [LINE OUT] jack (MAIN L/L+R, R) with a load of 10k ohm and set the [MASTER VOLUME] knob to maximum. (using two monaural jacks at the same time) Confirm the output levels are as follows. L: -75.0dBu or less R: +9.5 ±2dBu 3) Connect a level meter to the [AUX OUT/LOOP SEND] jack (L/L+R, R) with a load of 10k ohm and set the [MASTER VOLUME] knob to any position. (using two monaural jacks). Confirm the output levels are as follows. L: -75.0dBu or less R: +5.0 ±2dBu 4) Connect a level meter to the [WOOFER] jack (R) with a load of 470 ohm and set the [MASTER VOLUME] knob to maximum. (L: Pin6-Pin3, R: Pin5-Pin3, Pin3: GND) Confirm the output levels are as follows. L: -65.0dBu or less R: +5.5 ±2dBu 5) Connect optional speakers and disconnect the plug from the [PHONES] jack. Confirm that only the speaker of R channel generates sound.

16	016:Output L Chk	<p>Output L Check.</p> <ol style="list-style-type: none"> 1) Connect a level meter to the [PHONES] jack (L, R) with a load of 33 ohm and set the [MASTER VOLUME] knob to maximum. Confirm the output levels are as follows. L: +1.0 ±2dBu R: -55.0dBu or less 2) Connect a level meter to the [LINE OUT] jack (MAIN L/L+R, R) with a load of 10k ohm and set the [MASTER VOLUME] knob to maximum. (using two monaural jacks at the same time) Confirm the output levels are as follows. L: +9.5 ±2dBu R: -75.0dBu or less 3) Connect a level meter to the [AUX OUT/LOOP SEND] jack (L/L+R, R) with a load of 470 ohm and set the [MASTER VOLUME] knob to any position. (using two monaural jacks). Confirm the output levels are as follows. L: +5.0 ±2dBu R: -75 dBu or less 4) Connect a level meter to the [WOOFER] jack (R) with a load of 470 ohm and set the [MASTER VOLUME] knob to maximum. (L: Pin6-Pin3, R: Pin5-Pin3, Pin3: GND) Confirm the output levels are as follows. L: +5.5 ±2dBu R: -65 dBu or less 5) Connect optional speakers and disconnect the plug from the [PHONES] jack. Confirm that only the speaker of L channel generates sound.
17	017:Output Sub-1 Chk	<p>Checks the output level of LINE OUT SUB1. Connect a level meter to the [LINE OUT] jack (SUB1, SUB2) with a load of 10k ohm and set the [MASTER VOLUME] knob to maximum. Confirm the output levels are as follows. SUB1: +3.0 ±2dBu SUB2: -75.0dBu or less</p>
18	018:Output Sub-2 Chk	<p>Checks the output level of LINE OUT SUB2. Connect a level meter to the [LINE OUT] jack (SUB1, SUB2) with a load of 10k ohm and set the [MASTER VOLUME] knob to maximum. Confirm the output levels are as follows. SUB1: -75.0dBu or less SUB2: +3.0 ±2dBu</p>
-	Noise Level Check	<ol style="list-style-type: none"> 1) Connect a level meter to the [PHONES] jack (L, R) with a load of 33 ohm and set the [MASTER VOLUME] knob to maximum. Confirm the noise levels are as follows. L: -80.0dBu or less R: -80.0dBu or less 2) Connect a level meter to the [LINE OUT] jack (MAIN L/L+R, R) with a load of 10k ohm and set the [MASTER VOLUME] knob to maximum. (using two monaural jacks at the same time) Confirm the noise levels are as follows. L: -75.0dBu or less R: -75.0dBu or less

		<p>3) Connect a level meter to the [WOOFER] jack (R) with a load of 470 ohm and set the [MASTER VOLUME] knob to maximum. (L: Pin6-Pin3, R: Pin5-Pin3, Pin3: GND) Confirm the noise levels are as follows. L: -80.0dBu or less R: -80.0dBu or less</p> <p>4) Connect a level meter to the [LINE OUT] jack (SUB1) with a load of 10k ohm and set the [MASTER VOLUME] knob to maximum. Confirm that the noise level is -80.0 dBu or less.</p> <p>5) Connect a level meter to the [LINE OUT] jack (SUB2) with a load of 10k ohm and set the [MASTER VOLUME] knob to maximum. Confirm that the noise level is -80.0 dBu or less.</p>
19	019:EQ Low Chk	<p>Checks the frequency of EQ LOW. The sine wave of about 65.4Hz is output from the [LINE OUT] jack (MAIN L/L+R, MAIN R, SUB1, SUB2).</p>
20	020:EQ Mid Chk	<p>Checks the frequency of EQ MID. The sine wave of about 523Hz is output from the [LINE OUT] jack (MAIN L/L+R, MAIN R, SUB1, SUB2).</p>
21	021:EQ High Chk	<p>Checks the frequency of EQ HIGH. The sine wave of about 4186Hz is output from the [LINE OUT] jack (MAIN L/L+R, MAIN R, SUB1, SUB2).</p>
22	022:SP MUTE Chk	<p>Checks the SP mute. When the test is executed, the sine wave of about 4186Hz is output from the [LINE OUT] jack (MAIN L/L+R, MAIN R). Confirm that the 'ON' and 'OFF' of SP MUTE can be toggled by pressing the TAB[<] button or the TAB[>] button.</p>
23	023:Mute Chk	<p>Checks the mute. When the test is executed, the sine wave of about 4186Hz is output from the [LINE OUT] jack (MAIN L/L+R, MAIN R). Confirm that the 'ON' and 'OFF' of MUTE can be toggled by pressing the TAB[<] button or the TAB[>] button.</p>
25	025:MIC L Chk	<p>Checks the input levels of MIC/LINE IN L. Connect a level meter to the [AUX OUT/LOOP SEND] jack (L/L+R, R) with a load of 10k ohm. Apply a 1kHz sine wave at -45dBu to the [MIC/LINE IN L/L+R] jack with a load of 10k ohm, and set the [INPUT VOLUME] and [MIC/LINE IN TRIM] knobs to maximum. Confirm that the level meter reads the following value. L: +13.0 ±2dBu</p>
26	026:MIC R Chk	<p>Checks the input levels of MIC/LINE IN R. Connect a level meter to the [AUX OUT/LOOP SEND] jack (L/L+R, R) with a load of 10k ohm. Apply a 1kHz sine wave at -45dBu to the [MIC/LINE IN R] jack with a load of 10k ohm, and set the [INPUT VOLUME] and [MIC/LINE IN TRIM] knobs to maximum. Confirm that the level meter reads the following value. R: +13.0 ±2dBu</p>

-	AUX IN/LOOP RETURN Chk	<p>Checks the input levels of AUX IN/LOOP RETURN.</p> <p>Connect a level meter to the [LINE OUT] jack (MAIN L/L+R) with a load of 10k ohm.</p> <p>Apply a 1kHz sine wave at -20dBu to the [AUX IN/LOOP RETURN] jack (L/L+R,R), and set the [AUX IN/LOOP RETURN TRIM VOLUME] and [MASTER VOLUME] knobs to maximum.</p> <p>Confirm that the level meter reads the following value.</p> <p>L: +2.0 ±2dBu R: +2.0 ±2dBu</p>
27	027:SW,LED Chk	<p>Checks all switches and LEDs on the panel.</p> <p>When the test is executed, the LCD shows the name of switches in order. Press the switch indicated on the LCD.</p> <p>When it is normal, the note corresponding to the switch sounds. (See Page 87 TABLE1.)</p> <p>If it is a LED-attached switch, the LED lights. (In case of dual-colour LED, the LED illuminates red.)</p> <p>In case of NG, the following messages are indicated on the LCD.</p> <ol style="list-style-type: none"> 1) “NG(ID 0:***,X:***)” O:***: ID of the switch to be pressed X:***: ID of the pressed switch 2) “OverTwoSW” (When plural switches are pressed at the same time.) After all the switch tests are finished, the LCD shows “DIAL DOWN 50”. Turn the [DATA ENTRY] dial counterclockwise. At that time, confirm that the value on the LCD decreases. Then the LCD shows “DIAL UP 0”. So turn the [DATA ENTRY] dial clockwise. At that time, confirm that the value on the LCD increases. When the value reaches “100”, confirm that the LCD shows “END”.
28	028:All LED On	<p>All LEDs light up.</p> <p>Confirm that all LEDs on the panel light up.</p> <p>The lighting area is divided into two.</p> <p>The area can be switched by pressing the TAB[<] or TAB[>] button.</p> <p>*In case of dual-colour LED, the LED illuminates orange.</p>
29	029:Red LED On	<p>All of red LEDs light up.</p> <p>Confirm that all of red LEDs on the panel light up.</p> <p>The lighting area is divided into two.</p> <p>The area can be switched by pressing the TAB[<] or TAB[>] button.</p> <p>* In case of dual-colour LED, the LED illuminates red.</p>
30	030:Green LED On	<p>All of green LEDs light up.</p> <p>Confirm that all of green LEDs on the panel light up.</p> <p>The lighting area is divided into two.</p> <p>The area can be switched by pressing the TAB[<] or TAB[>] button.</p> <p>* In case of tri-color LED, the LED illuminates green.</p>
31	031:Other LED On	<p>Checks all the LEDs other than red and green.</p> <p>Confirm that the following LEDs light up.</p> <p>LED(orange): PLAY/PAUSE of HARD DISK RECORDER LED(white): MUSIC FINDER.</p>
33	033:All LCD On	<p>Chk All dots of the LCD turn on</p> <p>Confirm that all dots of the LCD turn on. (The whole screen turns to black.)</p>
34	034:All LCD Off Chk	<p>All dots of the LCD turn off</p> <p>Confirm that all dots of the LCD turn off. (The whole screen turns to white.)</p>

37	037:LCD Pattern Chk	<p>Checks the three LCD patterns.</p> <p>Confirm that the RGB colour bar pattern (Red, Green and Blue) appears on the LCD correctly.</p> <p>The three patterns (RGB, rainbow and flicker noise patterns) can be switched by pressing the TAB[<] or TAB[>] button.</p>
41	041:Pitch Bend Wheel Chk	<p>Checks the pitch bend wheel.</p> <p>When the test is executed, the LCD shows “Pitch Bend Down”.</p> <p>Turn the pitch bend wheel toward ‘DOWN’ and confirm that the value on the LCD changes from 64 to 0.</p> <p>When the wheel reaches the ‘DOWN’ position, confirm that the note of C3 sounds and the LCD shows “Pitch Bend Wheel Up”.</p> <p>Then, turn the wheel backward ‘UP’ and confirm that the value changes from 0 to 127.</p> <p>When the wheel reaches the ‘UP’ position, confirm that the note of G3 sounds and the LCD shows “Pitch Bend Wheel Center”.</p> <p>Bring back the wheel to the center, and confirm that the value changes to 64, the note of C4 sounds and the LCD shows “OK”.</p>
42	042:Modulation Wheel Chk	<p>Checks the modulation wheel.</p> <p>Turn the modulation wheel forward fully ‘MIN’ and execute the test.</p> <p>The LCD shows “Modulation Up”, so turn the wheel backward ‘MAX’ and confirm that the value on the LCD changes from 0 to 127.</p> <p>When the wheel reaches the ‘MAX’ position, confirm that the note of C3 sounds and the LCD shows “Modulation Down”.</p> <p>Then, turn the wheel forward ‘MIN’ and confirm that the value changes from 127 to 0.</p> <p>When the wheel reaches the ‘MIN’ position, confirm that the note of C4 sounds and the LCD shows “OK”.</p>
47	047:Pedal 1 Chk	<p>Checks the pedal 1.</p> <p>When the test is executed, the LCD shows “No Pedal”.</p> <p>Connect the FC-7 to the [ASSIGNABLE FOOT PEDAL] jack (1) and execute the test with the pedal completely released.</p> <p>Confirm that the LCD shows “Pedal 1 Up” at that time.</p> <p>When the pedal is depressed, confirm that the LCD shows “Pedal 1 Down” and the note of C3 sounds.</p> <p>When the pedal is released, confirm that the LCD shows “Pedal 1 Out” and the note of G3 sounds.</p> <p>Disconnect the pedal from the jack and confirm that the LCD shows “OK” and the note of C4 sounds.</p>
48	048:Pedal 2 Chk	<p>Checks the pedal 2.</p> <p>When the test is executed, the LCD shows “No Pedal”.</p> <p>Connect the FC-7 to the [ASSIGNABLE FOOT PEDAL] jack (2) and execute the test with the pedal completely released.</p> <p>Confirm that the LCD shows “Pedal 2 Up” at that time.</p> <p>When the pedal is depressed, confirm that the LCD shows “Pedal 2 Down” and the note of C3 sounds.</p> <p>When the pedal is released, confirm that the LCD shows “Pedal 2 Out” and the note of G3 sounds. Disconnect the pedal from the jack and confirm that the LCD shows “OK” and the note of C4 sounds.</p>

49	049:Pedal 3 Chk	<p>Checks the pedal 3.</p> <p>When the test is executed, the LCD shows “No Pedal”.</p> <p>Connect the FC-7 to the [ASSIGNABLE FOOT PEDAL] jack (3) and execute the test with the pedal completely released.</p> <p>Confirm that the LCD shows “Pedal 3 Up” at that time.</p> <p>When the pedal is depressed, confirm that the LCD shows “Pedal 3 Down” and the note of C3 sounds.</p> <p>When the pedal is released, confirm that the LCD shows “Pedal 3 Out” and the note of G3 sounds.</p> <p>Disconnect the pedal from the jack and confirm that the LCD shows “OK” and the note of C4 sounds.</p>
54	054:MIDI Chk	<p>Checks the MIDI.</p> <p>Connect ‘IN’ and ‘OUT’ of the [MIDI A] jack, ‘IN’ and ‘OUT’ of the [MIDI B] jack respectively via a MIDI cable and execute the test.</p> <p>Confirm that the LCD shows “MIDI-A Check OK” and the note of C3 sounds. Also, confirm that the LCD shows “MIDI-B Check OK” and the note of C4 sounds.</p>
55	055:Loop Send/Return Chk	<p>Checks the Loop Send/Return.</p> <p>Connect a level meter to the [LINE OUT] jack (MAIN L/L+R, R) with a load of 10k ohm and set the [MASTER VOLUME] knob to maximum.</p> <p>At that time, confirm that the LCD shows “LOOP SEND NOT Inserted” and the level meter reads the following value.</p> <p>L+L/R: +9.5 ±2dBu</p> <p>Then, connect a plug to the [AUX OUT/ LOOP SEND L/L+R] jack.</p> <p>At that time, confirm that the LCD shows “LOOP SEND Inserted” and the level meter reads the following value.</p> <p>L+L/R: -75.0dBu or less</p>
56	056:Sub Out Chk	<p>Detects a plug insertion at the Sub Out</p> <p>When executing the test, confirm that the LCD shows “No Sub1,No SUB2”.</p> <p>Insert a plug into the [LINE OUT] jack (SUB1) and confirm that the note of C3 sounds and the LCD shows “Sub1 In”.</p> <p>Disconnect the plug from the [LINE OUT] jack (SUB1) and confirm that the note of C4 sounds and the LCD shows “Sub1 OK”.</p> <p>Insert a plug into the [LINE OUT] jack (SUB2) and confirm that the note of C3 sounds and the LCD shows “Sub2 In”.</p> <p>Disconnect the plug from the [LINE OUT] jack (SUB2) and confirm that the note of C4 sounds and the LCD shows “OK”.</p>
57	057:VIDEO OUT NTSC RGB	<p>Checks VIDEO OUT(NTSC RGB).</p> <p>Connect the video input jack of a TV set and the [VIDEO OUT] jack of the product, and execute the test.</p> <p>Confirm the red, blue and green bars are displayed on the monitor.</p>
58	058:VIDEO OUT PAL RGB	<p>Checks VIDEO OUT(PAL RGB).</p> <p>Connect the video input jack of a TV set and the [VIDEO OUT] jack of the product, and execute the test.</p> <p>Confirm the red, blue and green bars are displayed on the monitor.</p>
59	059:RGB Chk	<p>Checks RGB OUT.</p> <p>Connect the video input jack of a RGB monitor and the [RGB OUT] jack of the product, and execute the test.</p> <p>Confirm the red, blue and green bars are displayed on the monitor.</p>

60	060:USB Connect Chk	<p>Checks the USB connections.</p> <p>Start testing without connecting a USB cable.</p> <p>Connect the [USB TO HOST] terminal and the [USB TO DEVICE] on the rear panel.</p> <p>Confirm that the LCD shows “Device-Host1 Chk OK”.</p> <p>Also, connect a USB storage device to the [USB TO DEVICE] terminal on the front panel.</p> <p>Confirm that the LCD shows “Device-Host2 Chk OK”.</p> <p>In case of NG, the LCD shows “NG”.</p>
61	061:USB Strage Chk	<p>Checks the USB storage device.</p> <p>Connect the USB storage device to the [USB TO DEVICE] terminal on the front panel.</p> <p>Confirm that the LCD shows “OK” at that time.</p> <p>In case of NG, the following messages are indicated on the LCD.</p> <p>“NG”: (Read/Write error)</p> <p>“NO DISK”: (Media not ready)</p> <p>“UNFOTMAT DISK”: (Media unformatted)</p> <p>“PROTECT DISK”: (Media write protected)</p>
63	063:DGA(HDD) Chk	<p>Checks DGA(HDD).</p> <p>Confirm that the LCD shows “DGA(HDD) Chk OK”.</p> <p>In case of NG, the following messages are indicated on the LCD.</p> <p>“NG(DGA SDRAM)”: SDRAM wire connection error</p> <p>“NG(HDD CONNECT)”: HDD connection error</p> <p>“NG(HDD READ)”: HDD read error</p> <p>“NG(HDD WRITE)”: HDD write error</p> <p>“NG(HDD-DGA)”: DMA transfer error between HDD and DGA</p> <p>“NG(HDD-CPU)”: DMA transfer error between HDD and CPU</p> <p>“NG(DGA IRQ*)”: IRQ* wire connection error (*: 0,4,5)</p>
64	064:DGA(TG) Chk	<p>Checks DGA(TG).</p> <p>Connect the headphones to the [PHONES] jack and confirm that the specified note sounds as follows.</p> <p>Switch the two signal lines (LINE-A and LINE-B) by pressing the TAB[<] or TAB[>] button.</p> <p>LINE-A: The note of A3 is heard from the center.</p> <p>LINE-B: The note of A7 is heard from the right. (It sounds for three seconds, stops for 0.5 seconds, and repeats it.)</p>
65	065:Keybord Type Chk	<p>Checks the keyboard type.</p> <p>Confirm that the LCD shows “OK(FSX61)”.</p> <p>In case of NG, the LCD shows “NG(*****)”. (*****: Keyboard name)</p>
69	069:After Touch Chk	<p>Checks the after touch.</p> <p>After the LCD shows “After Touch Chk Start”, press any key.</p> <p>Confirm that the note of C3 sounds at that time.</p> <p>Confirm that the value on the LCD increases according to the pressed strength.</p> <p>Confirm that the note of C4 sounds and the LCD shows “OK” when the value reaches 127 (maximum).</p> <p>*At this test, pressing the leftmost key does not make the system return to the wait state.</p> <p>Press the [STYLE START/STOP] button to return to the wait state.</p>
71	071:ROM Chk2	<p>Checks all ROMs connected to the CPU bus. (It takes about 30 seconds.)</p> <p>Confirm that the LCD shows “OK”.</p> <p>In case of NG, the LCD shows “***** NG”. (*****: ROM's name)</p>

72	072:RAM Chk2	Checks all RAMs connected to the CPU bus. Confirm that the LCD shows “OK”. In case of NG, the LCD shows “***** NG”. (*****:RAM's name)
73	073:Flash Chk2	Checks all the flash memories connected to the CPU bus. (It takes about 4 minutes.) * Never turn off the product while executing the test. Confirm that the LCD shows “OK”. In case of NG, the LCD shows “NG”.
74	074:Wave ROM Chk2	Checks all wave ROMs. (It takes about 2 minutes.) Confirm that the LCD shows “OK”. In case of NG, the LCD shows “NG”.
75	075:Wave RAM(SDRAM) Chk2	Checks all wave RAMs(SDRAM). Confirm that the LCD shows “OK”. In case of NG, the LCD shows “***** NG” or “***** No Card”. (*****: SDRAM's name)
76	076:Wave RAM(DIMM) Chk2	Checks all wave RAMs(DIMM). Confirm that the LCD shows the memory capacity of DIMM as follows. (The capacity is not checked automatically.) “OK(DIMM H:512MB.L:512MB)” In case of NG, the LCD shows “NG(DIMM:512MB.L:512MB)*****”. (*****: DIMM's name)
77	077:Effect RAM Chk2	Checks all effect RAMs. (It takes about 20 seconds.) Confirm that the LCD shows the following messages. “Effect Chk2 OK” In case of NG, the LCD shows “***** NG” (*****: RAM's name)
94	094:Factory Set	Factory set The data of flash ROM is initialized to factory preset when the power is turned on again. Confirm that the LCD shows “OK”.
95	095:Test Exit	Test Exit The system exits the test program and returns to the play mode.

* 0dBu=0.775Vrms

* If a 30 ohm load is used instead of a 33 ohm load, the actual value becomes -0.6dB lower than the value written in this test item list.

■ TABLE 1

Order No.	Switch Name	LED	Note	Order No.	Switch Name	LED	Note
1	VOCAL HARMONY	VOCAL HARMONY	C2	50	MULTI PAD 1	MULTI PAD 1	C2
2	TALK	TALK	C#2	51	MULTI PAD 2	MULTI PAD 2	C#2
3	EFFECT	EFFECT	D2	52	MULTI PAD 3	MULTI PAD 3	D2
4	VH TYPE SELECT	-	D#2	53	MULTI PAD 4	MULTI PAD 4	D#2
5	MIC SETTING	-	E2	54	STOP	-	E2
6	DEMO	-	F2	55	INTRO 1	INTRO 1	F2
7	LYRICS/TEXT	-	F#2	56	INTRO 2	INTRO 2	F#2
8	SCORE	-	G2	57	INTRO 3	INTRO 3	G2
9	GUIDE	GUIDE	G#2	58	MAIN A	MAIN A	G#2
10	P.A.T.	PERFORMANCE ASSISTANT	A2	59	MAIN B	MAIN B	A2
11	SP1	SP1	A#2	60	MAIN C	MAIN C	A#2
12	SP2	SP2	B2	61	MAIN D	MAIN D	B2
13	SP3	SP3	C3	62	BAEAK	BREAK	C3
14	SP4	SP4	C#3	63	ENDING 1	ENDING 1	C#3
15	LOOP	LOOP	D3	64	ENDING 2	ENDING 2	D3
16	FADE IN/OUT	FADE IN/OUT	D#3	65	ENDING 3	ENDING 3	D#3
17	REC	REC	E3	66	SYNC STOP	SYNC STOP	E3
18	STOP	-	F3	67	SYNC START	SYNC START	F3
19	PLAY/PAUSE	PLAY/PAUSE	F#3	68	START/STOP	START/STOP	F#3
20	REW	-	G3	69	A	-	G3
21	FF	-	G#3	70	B	-	G#3
22	SONG1	SONG1	A3	71	C	-	A3
23	SONG4	SONG4	A#3	72	D	-	A#3
24	SONG2	SONG2	B3	73	E	-	B3
25	SONG5	SONG5	C4	74	DIRECT ACCESS	-	C4
26	SONG3	SONG3	C#4	75	TAB <	-	C#4
27	SONG6	SONG6	D4	76	TAB >	-	D4
28	POP & ROCK	POP&ROCK	D#4	77	F	-	D#4
29	SWING & JAZZ	SWING & JAZZ	E4	78	G	-	E4
30	LATIN	LATIN	F4	79	H	-	F4
31	ENTERTAINER	ENTERTAINER	F#4	80	I	-	F#4
32	BALLAD	BALLAD	G4	81	J	-	G4
33	R & B	R & B	G#4	82	EXIT	-	G#4
34	BALLROOM	BALLROOM	A4	83	BALANCE	-	A4
35	WORLD	WORLD	A#4	84	1-U	-	A#4
36	DANCE	DANCE	B4	85	2-U	-	B4
37	COUNTRY	COUNTRY	C5	86	3-U	-	C5
38	MOVIE & SHOW	MOVIE & SHOW	C#5	87	4-U	-	C#5
39	FILE ACCESS	FILE ACCESS	D5	88	5-U	-	D5
40	ACMP	ACMP	D#5	89	6-U	-	D#5
41	OTS LINK	OTS LINK	E5	90	7-U	-	E5
42	AUTO FILL IN	AUTO FILL IN	F5	91	8-U	-	F5
43	METRONOME ON/OFF	METRONOME ON/OFF	F#5	92	MIXING CONSOLE	-	F#5
44	TAP TEMPO	-	G5	93	CHANNEL ON/OFF	-	G5
45	TEMPO-	-	G#5	94	1-L	-	G#5
46	TEMPO+	-	A5	95	2-L	-	A5
47	TRANSPOSE-	-	A#5	96	3-L	-	A#5
48	TRANSPOSE+	-	B5	97	4-L	-	B5
49	SELECT	-	C6	98	5-L	-	C6

Order No.	Switch Name	LED	Note	Order No.	Switch Name	LED	Note
99	6-L	-	C2	132	PART ON/OFF R1	PART ON/OFF R1	A4
100	7-L	-	C#2	133	PART ON/OFF R2	PART ON/OFF R2	A#4
101	8-L	-	D2	134	PART ON/OFF R3	PART ON/OFF R3	B4
102	REGIST -	-	D#2	135	PIANO	PIANO	C5
103	REGIST +	-	E2	136	STRINGS	STRINGS	C#5
104	FREEZE	FREEZE	F2	137	TRUMPET	TRAMPET	D5
105	REGIST 1	REGIST 1	F#2	138	GUITAR	GUITAR	D#5
106	REGIST 2	REGIST 2	G2	139	ACCORDION	ACCORDION	E5
107	REGIST 3	REGIST 3	G#2	140	ORGAN FLUTES	ORGAN FLUTES	F5
108	REGIST 4	REGIST 4	A2	141	E.PIANO	E.PIANO	F#5
109	REGIST 5	REGIST 5	A#2	142	CHOIR	CHOIR	G5
110	REGIST 6	REGIST 6	B2	143	SAXOPHONE	SAXOPHONE	G#5
111	REGIST 7	REGIST 7	C3	144	BASS	BASS	A5
112	REGIST 8	REGIST 8	C#3	145	PAD	PAD	A#5
113	MEMORY	-	D3	146	CUSTOM VOICE	CUSTOM VOICE	B5
114	ENTER	-	D#3	147	ORGAN	ORGAN	C6
115	FUNCTION	-	E3	148	BRASS	BRASS	C2
116	VOICE CREATOR	-	F3	149	FLUTE/CLARINET	FLUTE/CLARINET	C#2
117	DIGITAL RECORDING	-	F#3	150	PERC./DRUM KIT	PERC./DRUM KIT	D2
118	MUSIC FINDER	MUSIC FINDER	G3	151	SYNTH	SYNTH	D#2
119	HDR SELECT	-	G#3	152	USER DRIVE	USER DRIVE	E2
120	HDR SETTING	-	A3	153	HARMONY/ECHO	HARMONY/ECHO	F2
121	REC	REC	A#3	154	INITIAL TOUCH	INITIAL TOUCH	F#2
122	STOP	-	B3	155	SUSTAIN	SUSTAIN	G2
123	PLAY/PAUSE	PLAY/PAUSE	C4	156	POLY/MONO	POLY/MONO	G#2
124	REW	-	C#4	157	DSP	DSP	A2
125	FF	-	D4	158	DSP VARIATION	DSP VARIATION	A#2
126	PART SELECT LEFT	PART SELECT LEFT	D#4	159	OTS 1	OTS 1	B2
127	PART SELECT R1	PART SELECT R1	E4	160	OTS 2	OTS 2	C3
128	PART SELECT R2	PART SELECT R2	F4	161	OTS 3	OTS 3	C#3
129	PART SELECT R3	PART SELECT R3	F#4	162	OTS 4	OTS 4	D3
130	LEFT HOLD	LEFT HOLD	G4	163	UPPER OCTAVE -	-	D#3
131	PART ON/OFF LEFT	PART ON/OFF LEFT	G#4	164	UPPER OVTAVE +	-	E3

■ SYSTEM RESET

The explanations here apply to the [FUNCTION] → UTILITY → SYSTEM RESET display.

The screenshot shows the 'UTILITY' menu with 'SYSTEM RESET' selected. A 'CAUTION!' warning states: 'All User files and folders are lost when "FILES&FOLDERS" is selected and Factory Reset is executed.' The menu lists: SYSTEM SETUP FILES, MIDI SETUP FILES, USER EFFECT FILES, MUSIC FINDER FILES, FACTORY RESET EXECUTE, and a list of items to be reset: SYSTEM SETUP (checked), MIDI SETUP, USER EFFECT, MUSIC FINDER, FILES&FOLDERS, REGIST, and CUSTOM VOICE. A 'MARK' button is also visible.

Factory Reset (factory programmed settings)

2 Press this to execute the Factory Reset operation for all items checkmarked below.

1 Checkmark the box of the item to be reset to the factory programmed settings.

Custom Reset (your own custom settings)

These four settings allow you to program your own reset settings for each of the indicated categories. Press the appropriate LCD button to call up the Open/Save display for the corresponding category and select a File.

Factory Reset – Restoring the factory programmed settings

This function lets you restore the status of the Tyros2 to the original factory settings. You can set whether or not each of the following six items is to be restored to its original factory settings before executing the operation.

SYSTEM SETUP	Restores the System Setup parameters to the original factory settings. You can also restore only the System Setup settings by simultaneously holding down the highest key on the keyboard (C7) and turning on the power. Refer to the separate Data List booklet for details about which parameters belong to the System Setup.
MIDI SETUP	Restores the MIDI settings including the MIDI templates on the User drive to the original factory status.
USER EFFECT	Restores the User Effect settings including the user effect types, user master EQ types, user compressor types, and user vocal harmony types created via the Mixing Console display to the original factory settings.
MUSIC FINDER	Restores the Music Finder data (all records) to the original factory settings.
FILES & FOLDERS	Deletes all files and folders stored in the User drive.
REGIST	Temporarily deletes the current Registration Memory settings of the selected Bank. The same can be done also by turning the [POWER] switch ON while holding the B6 key (right-most B key on the keyboard).
CUSTOM VOICE	Deletes all Custom Voices on the Preset drive.

Custom Reset – Recalling your own custom settings

The four categories of settings below allow you to call up your own custom reset settings from the saved to the User of Disk drive.

SYSTEM SETUP FILES	Parameters set on the various displays such as the [FUNCTION] → UTILITY and microphone setting display are handled as a single System Setup file. Refer to the separate Data List booklet for details about which parameters belong to the System Setup.
MIDI SETUP FILES	The MIDI settings including the MIDI templates on the User drive are handled as a single file.
USER EFFECT FILES	The User Effect settings including the user effect types, user master EQ types, user compressor types, and user vocal harmony types created via the Mixing Console displays are managed as a single file.
MUSIC FINDER FILES	All the preset and created records of the Music Finder are handled as a single file.

■ OS UPDATE

CAUTIONS

- While updating the program software, do not turn off the power or do not pull out the USB memory.
- It takes about 5 minutes to update the program software.

1. Preparation

Download the Tyros2 updated program from the download page on the YSISS home page to the USB memory.

(YSISS URL>><http://plaza.yamaha.co.jp/ysiss/exindex.nsf>)

(Insert the USB memory containing only the update program into the USB terminal of the Tyros2.)

Tools required for update:

USB memory

(containing only the update program to be installed)

The program software in the USB memory

- Installer:
INSTALL.PRG
- The main body of the program data (Boot part):
TYROS2MAINBOOT.PRG
- The main body of the program data:
TYROS2mainprg1.prg - TYROS2mainprg4.prg

2. Executing the software update

2-1 Connect the USB memory to the Tyros2.

Connect the USB memory containing only the update program data to the [USB TO DEVICE] terminal on the front panel.

CAUTIONS: Make sure of the direction of the USB memory before inserting it.

(The reverse insertion may cause the damage on the [USB TO DEVICE] terminal.)



2-2 Installing the update program

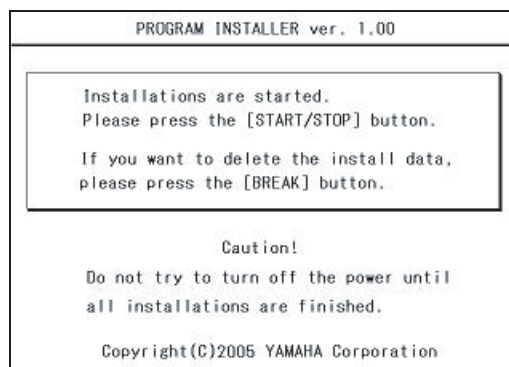
2-2-1 Turn the power on with the [START/STOP] button pressed and held.



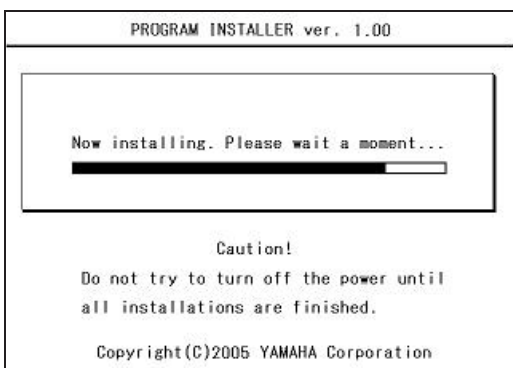
2-2-2 Keep pressing the [START/STOP] button until the following screen is displayed on the LCD.



2-2-3 After a while, the following screen is displayed. (Occasionally, it might take more time.)



2-2-4 Press the [START/STOP] button to start the installation.



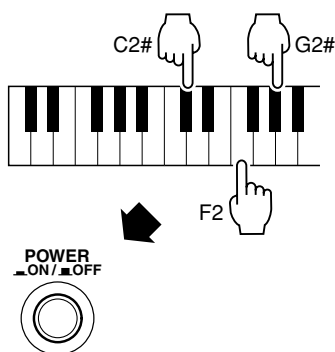
2-2-5 When the installations are finished, the following screen is displayed on the LCD.



2-2-6 Turn the power off.

3. Verifying the program version

3-1 Turn the power on with the [C2#], [F2] and [G2#] keys (C2# major chord) pressed and held.



- 3-2 “TEST” display appears, and the test mode starts.
- 3-3 Turn the DATA ENTRY dial clockwise to display “001: Version”.
- 3-4 Press the [START/STOP] button to display the version of each data.
- 3-5 Confirm that the version of the main program is the same as the version installed this time.
- 3-6 Press the [START/STOP] button again to return to the wait state for test number.

4. Executing the factory set

- 4-1 Turn the [DATA ENTRY] dial counterclockwise to display “094:Factory Set”.
- 4-2 Press the [START/STOP] button to execute the factory set.
- 4-3 “Factory Set OK” appears on the LCD.
- 4-4 Press the [START/STOP] button again to return to the wait state for test number.
- 4-5 Turn the [DATA ENTRY] dial clockwise to display “095:Test Exit”.
- 4-6 Press the [START/STOP] button to reboot the Tyros2.
- 4-7 When the main screen appears normally, the factory set is completed.
(Occasionally, it might take a few minutes.)
- 4-8 Turn the power off.

5. Ending the program installation

The program installation is completed here.

■ DATA BACKUP

- The backup function provides a convenient backup if the internal memory is damaged.
- Contents of the backup include the settings of the instrument and the data contained in the USER drive, and can be saved to a USB storage device as one file (Tyros2.bup).

PREPERATION

Tool required for data backup: USB Memory

To back up the data

1. Connect the optional USB storage device to the instrument.
2. Press the [BACKUP] LCD button ([D] button) in the OWNER display above.

To load the backup file to the instrument (restore)

1. Connect the device that contains the backup data to the instrument.
2. Press the [RESTORE] LCD button ([E] button) in the OWNER display.

■ MIDI IMPLEMENTATION CHART

YAMAHA [Digital Workstation]

Date:21-June-2005

Model Tyros2 MIDI Implementation Chart

Version : 1.00

Function...	Transmitted	Recognized	Remarks
Basic Default Channel Changed	1 - 16 1 - 16	1 - 16 1 - 16	
Mode Default Messages Altered	3 x *****	3 x x	
Note Number : True voice	0 - 127 *****	0 - 127 0 - 127	
Velocity Note ON Note OFF	o 9nH, v=1-127 x 9nH, v=0	o 9nH, v=1-127 x	
After Key's Touch Ch's	x o	o o	
Pitch Bend	o	o 0-24 semi	
Control Change	0,32 o 1,5,7,10,11 o 6,38 o 64,65,66,67 o 71,72,73,74 o 84 o 91,93,94 o 96,97 x 98,99 o 100,101 o	o o o o o o o o o o	Bank Select Data Entry Sound Controller Portamento Cntrl Effect Depth RPN Inc,Dec NRPN LSB,MSB RPN LSB,MSB
Prog Change : True #	o 0 - 127 *****	o 0 - 127	
System Exclusive	o	o	
: Song Pos. Common : Song Sel. : Tune	x x x	x x x	
System :Clock Real Time:Commands	o o	o o	
Aux :All Sound OFF :Reset All Cntrls :Local ON/OFF :All Notes OFF Mes- :Active Sense sages:Reset	x x x x o x	o(120,126,127) o(121) o(122) o(123-125) o x	
Notes:			

Mode 1 : OMNI ON , POLY
Mode 3 : OMNI OFF, POLY

Mode 2 : OMNI ON , MONO
Mode 4 : OMNI OFF, MONO

o : Yes
x : No

■ MIDI DATA FORMAT

Many MIDI messages listed in the MIDI Data Format are expressed in decimal numbers, binary numbers and hexadecimal numbers. Hexa-decimal numbers may include the letter "H" as a suffix. Also, "n" can freely be defined as any whole number. To enter data/values, refer to the table below.

Decimal	Hexadecimal	Binary
0	00	0000 0000
1	01	0000 0001
2	02	0000 0010
3	03	0000 0011
4	04	0000 0100
5	05	0000 0101
6	06	0000 0110
7	07	0000 0111
8	08	0000 1000
9	09	0000 1001
10	0A	0000 1010
11	0B	0000 1011
12	0C	0000 1100
13	0D	0000 1101
14	0E	0000 1110
15	0F	0000 1111
16	10	0001 0000
17	11	0001 0001
18	12	0001 0010
19	13	0001 0011
20	14	0001 0100
21	15	0001 0101
22	16	0001 0110
23	17	0001 0111
24	18	0001 1000
25	19	0001 1001
26	1A	0001 1010
27	1B	0001 1011
28	1C	0001 1100
29	1D	0001 1101
30	1E	0001 1110
31	1F	0001 1111

Decimal	Hexadecimal	Binary
32	20	0010 0000
33	21	0010 0001
34	22	0010 0010
35	23	0010 0011
36	24	0010 0100
37	25	0010 0101
38	26	0010 0110
39	27	0010 0111
40	28	0010 1000
41	29	0010 1001
42	2A	0010 1010
43	2B	0010 1011
44	2C	0010 1100
45	2D	0010 1101
46	2E	0010 1110
47	2F	0010 1111
48	30	0011 0000
49	31	0011 0001
50	32	0011 0010
51	33	0011 0011
52	34	0011 0100
53	35	0011 0101
54	36	0011 0110
55	37	0011 0111
56	38	0011 1000
57	39	0011 1001
58	3A	0011 1010
59	3B	0011 1011
60	3C	0011 1100
61	3D	0011 1101
62	3E	0011 1110
63	3F	0011 1111

Decimal	Hexadecimal	Binary
64	40	0100 0000
65	41	0100 0001
66	42	0100 0010
67	43	0100 0011
68	44	0100 0100
69	45	0100 0101
70	46	0100 0110
71	47	0100 0111
72	48	0100 1000
73	49	0100 1001
74	4A	0100 1010
75	4B	0100 1011
76	4C	0100 1100
77	4D	0100 1101
78	4E	0100 1110
79	4F	0100 1111
80	50	0101 0000
81	51	0101 0001
82	52	0101 0010
83	53	0101 0011
84	54	0101 0100
85	55	0101 0101
86	56	0101 0110
87	57	0101 0111
88	58	0101 1000
89	59	0101 1001
90	5A	0101 1010
91	5B	0101 1011
92	5C	0101 1100
93	5D	0101 1101
94	5E	0101 1110
95	5F	0101 1111

Decimal	Hexadecimal	Binary
96	60	0110 0000
97	61	0110 0001
98	62	0110 0010
99	63	0110 0011
100	64	0110 0100
101	65	0110 0101
102	66	0110 0110
103	67	0110 0111
104	68	0110 1000
105	69	0110 1001
106	6A	0110 1010
107	6B	0110 1011
108	6C	0110 1100
109	6D	0110 1101
110	6E	0110 1110
111	6F	0110 1111
112	70	0111 0000
113	71	0111 0001
114	72	0111 0010
115	73	0111 0011
116	74	0111 0100
117	75	0111 0101
118	76	0111 0110
119	77	0111 0111
120	78	0111 1000
121	79	0111 1001
122	7A	0111 1010
123	7B	0111 1011
124	7C	0111 1100
125	7D	0111 1101
126	7E	0111 1110
127	7F	0111 1111

• Except the table above, for example 144-159(decimal)/9nH/10010000-1001 1111(binary) denotes the Note On Message for each channel (1-16). 176-191/BnH/1011 0000-1011 1111 denotes the Control Change Message for each channel (1-16). 192-207/CnH/ 1100 0000-1100 1111 denotes the Program Change Message for each channel (1-16). 240/FOH/1111 0000 denotes the start of a System Exclusive Message. 247/F7H/1111 0111 denotes the end of a System Exclusive Message.

- aaH (hexadecimal)/0aaaaaaa (binary) denotes the data address. The address contains High, Mid, and Low.
- bbH/0bbbbbbb denotes the byte count.
- ccH/0ccccccc denotes the check sum.
- ddH/0ddddddd denotes the data/value.

MIDI CHANNEL MESSAGE (1)

MIDI Events	Status byte	1st Data byte		2nd Data byte		Voice		[MIDI]					[Song Creator]									
		Status	Data (HEX)	Parameter	Data (HEX)	Parameter	Regular/ Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	Right1 Right2 Right3 Left	Keyboard	Style	Extra	Right1 Right2 Right3 Left	M.Pad	Style	Song	Upper Lower	PLAY	REW	REC	
Key Off [GM1] [GM2]	8nH (n:Channel Number)	kk	Key no. (0-127)	ww	Velocity(0-127)	0	0 (Harmony Channel/ Melody Channel)	0	0	0	0	0	0	X	X	0	0	X	0	X	X	
Key On [GM1] [GM2]	9nH (n:Channel Number)	kk	Key no. (0-127)	ww	Key On : ww=1-127 Key Off : ww=0	0	0 (Harmony Channel/ Melody Channel)	0	0	0	0	0	●	0	0	0	0	●	0	X	0	
Control Change	BnH	0 (00H)	Bank Select MSB [GM2]	0 (00H) 8 (08H) 62 (3EH) 63 (3FH) 64 (40H) 120 (78H) 121 (79H) 126 (7EH) 127 (7FH)	Normal MegaVoice S.Articulation Voice Drum Custom Voice Custom Voice SFX voice GM2 Rhythm GM2 Normal SFX kit Drum kit	0	X	0	0	0 (Regist)	0	0	●	0	●	●	X	0	0	0		
		1 (01H)	Modulation [GM1] [GM2]	0-127 (00H...7FH)	Data	0	X	0	0	0 (All Keyboard parts)	0	0	0	●	0	0	0	●	0	0	0	
		5 (05H)	Portamento Time [GM2]	0-127 (00H...7FH)	Data	0	X	(Except Organ Flutes)	0	0	0 (All Keyboard parts)	X	0	0	●	0	X	0	X	0	0	0
		6 (06H)	Data Entry MSB [GM2]	0-127 (00H...7FH)	Data	0	0 (Harmony Channel/ Melody Channel)	0	0	0 (All Keyboard parts)	0	0	0	0	●	0	0	0	X	0	X	0
		7 (07H)	Main Volume [GM1] [GM2]	0-127 (00H...7FH)	Data	0	0 (A/D Part Receive Channel)	0	0	0 (All Keyboard parts)	0	0	0	0	●	0	●	●	X	0	0	0
		10 (0AH)	Panpot [GM1] [GM2]	0-127 (00H...7FH)	L64...C...R63	0	0 (A/D Part Receive Channel)	0	0	0 (All Keyboard parts)	0	0	0	0	●	0	●	●	X	0	0	0
		11 (0BH)	Expression [GM1] [GM2]	0-127 (00H...7FH)	Data	0	X	0	0	0 (All Keyboard parts)	0	0	0	0	●	●	●	●	●	0	0	0
		32 (20H)	Bank Select LSB [GM2]	0-127 (00H...7FH)	Data	0	X	0	0	0 (Regist)	0	0	0	0	●	0	●	●	X	0	0	0
		38 (26H)	Data Entry LSB [GM2]	0-127 (00H...7FH)	Data	0	X	0	0	0 (All Keyboard parts)	X	0	0	0	●	0	X	0	X	0	X	0
		64 (40H)	Sustain (Damper) [GM1] [GM2]	0-127 (00H...7FH)	Data	0	0 (Harmony Channel/ Melody Channel)	0	0	0 (All Keyboard parts)	X	0	0	0	●	0	X	0	●	0	0	0
		65 (41H)	Portamento [GM2]	0-127 (00H...7FH)	0...63, 64...127 (OFF, ON)	0	X	(Except Organ Flutes)	0	0	0 (All Keyboard parts)	X	0	0	●	0	X	0	●	0	0	0
		66 (42H)	Sostenuto [GM2]	0-127 (00H...7FH)	0...63, 64...127 (OFF, ON)	0	X	0	0	0 (All Keyboard parts)	X	0	0	0	●	0	X	0	●	0	0	0
		67 (43H)	Soft Pedal [GM2]	0-127 (00H...7FH)	0...63, 64...127 (OFF, ON)	0	X	0	0	0 (All Keyboard parts)	X	0	0	0	●	0	X	0	●	0	0	0
		71 (47H)	Harmonic Content [GM2]	0-127 (00H...7FH)	-64...0...+63	0	X	0	0	0 (All Keyboard parts)	0	0	0	0	●	0	●	●	X	0	0	0
		72 (48H)	Release Time [GM2]	0-127 (00H...7FH)	-64...0...+63	0	X	0	0	0 (All Keyboard parts)	0	0	0	0	●	0	0	0	X	0	0	0
		73 (49H)	Attack Time [GM2]	0-127 (00H...7FH)	-64...0...+63	0	X	0	0	0 (All Keyboard parts)	0	0	0	0	●	0	0	0	X	0	0	0
		74 (4AH)	Brightness [GM2]	0-127 (00H...7FH)	-64...0...+63	0	X	0	0	0 (All Keyboard parts)	0	0	0	0	●	0	●	●	X	0	0	0
		75 (4BH)	Decay Time [GM2]	0-127 (00H...7FH)	-64...0...+63	0	X	0	0	0 (All Keyboard parts)	0	0	0	0	X	X	X	0	X	0	0	X
		76 (4CH)	Vibrato Rate [GM2]	0-127 (00H...7FH)	-64...0...+63	0	X	0	0	0 (All Keyboard parts)	0	0	0	0	X	X	X	0	X	0	0	X
		77 (4DH)	Vibrato Depth [GM2]	0-127 (00H...7FH)	-64...0...+63	0	X	0	0	0 (All Keyboard parts)	0	0	0	0	X	X	X	0	X	0	0	X
78 (4EH)	Vibrato Delay [GM2]	0-127 (00H...7FH)	-64...0...+63	0	X	0	0	0 (All Keyboard parts)	0	0	0	0	X	X	X	0	X	0	0	X		
84 (54H)	Portamento Control	0-127 (00H...7FH)	Key no. (0-127)	0	X	0	0	0	X	0	0	0	0	0	●	0	X	0	X	0		
91 (5BH)	Effect1 Depth (Reverb Send Level) [GM2]	0-127 (00H...7FH)	Data	0	0 (A/D Part Receive Channel)	0	0	0 (All Keyboard parts)	0	0	0	0	●	●	●	●	X	0	0	0		
93 (5DH)	Effect3 Depth (Chorus Send Level) [GM2]	0-127 (00H...7FH)	Data	0	0 (A/D Part Receive Channel)	0	0	0 (All Keyboard parts)	0	0	0	0	●	●	●	●	X	0	0	0		
94 (5EH)	Effect4 Depth (Variation Send Level)	0-127 (00H...7FH)	Data	0	X	0	0	0 (All Keyboard parts)	0	0	0	0	0	0	●	●	X	0	0	X		

MIDI Events	Status byte	[MIDI]																[Song Creator]							
		1st Data byte		2nd Data byte		Voice		MIDI Reception					MIDI Transmission					PLAY	REW	REC					
		Data (HEX)	Parameter	Data (HEX)	Parameter	Regular/Drum/Natural/Organ Voice	Mic/Vocal Harmony	Song	Right1 Right2 Right3 Left	Keyboard	Style	Extra	Right1 Right2 Right3 Left	M.Pad	Style	Song	Upper Lower			From panel (Right1/Right2/Left)					
		96 (60H)	RPN Increment	-	-	The data byte is ignored.	O	O (Harmony Channel/Melody Channel)	O	O	X	O	O	X	O	X	O	X	O	X	O	X	X		
		97 (61H)	RPN Decrement	-	-	The data byte is ignored.	O	O (Harmony Channel/Melody Channel)	O	O	X	O	O	X	O	X	O	X	O	X	O	X	X		
		98 (62H)	NRPN LSB	0-127 (00H...7FH)	Data		O (Harmony Channel/Melody Channel)	O	O	X	O	O	●	O	O	O	X	O	O	O	X	O	O	O	
		99 (63H)	NRPN MSB	0-127 (00H...7FH)	Data		O (Harmony Channel/Melody Channel)	O	O	X	O	O	●	O	O	O	X	O	O	O	X	O	O	O	
		100 (64H)	RPN LSB [GM2]	0-127 (00H...7FH)	Data		O (Harmony Channel/Melody Channel)	O	O	O (All Keyboard parts)	O	O	●	O	O	O	X	O	O	O	X	O	O	O	
		101 (65H)	RPN MSB [GM2]	0-127 (00H...7FH)	Data		O (Harmony Channel/Melody Channel)	O	O	O (All Keyboard parts)	O	O	●	O	O	O	X	O	O	O	X	O	O	O	
Mode Message	BnH (n:Channel Number)	120 (78H)	All Sound Off [GM2]	0 (00H)	Data		O	X	O	O	O (All Keyboard parts)	O	O	X	O	X	O	X	O	X	O	X	X	X	
		121 (79H)	Reset All Controllers [GM1] [GM2]	0 (00H)	Data		O	X	O	X	X	X	X	X	O	X	O	X	O	X	O	X	X	X	
		122 (7AH)	Local Control	0 127 (00H) (7FH)	OFF ON		-	-			O			X	X	X	X	X	X	X	X	X	X	X	
		123 (7BH)	All Note Off [GM1] [GM2]	0 (00H)	Data		O (Harmony Channel/Melody Channel)	O	O	O (All Keyboard parts)	O	O	X	O	X	O	X	O	X	O	X	O	X	X	
		124 (7CH)	Omni Off [GM2]	0 (00H)	Data		O	X	O	X	X	X	X	X	O	X	O	X	O	X	O	X	X	X	
		125 (7DH)	Omni On [GM2]	0 (00H)	Data		O	X	O	X	X	X	X	X	O	X	O	X	O	X	O	X	X	X	
		126 (7EH)	Mono [GM2]	0-16 (00H...10H)	Data		O	X	O	X	X	X	X	X	O	X	O	X	O	X	O	X	X	X	
		127 (7FH)	Poly [GM2]	0 (00H)	Data		O	X	O	X	X	X	X	X	O	X	O	X	O	X	O	X	X	X	
Program Change [GM1] [GM2]	CnH (n:Channel Number)	pp (00H...7FH)	Voice Number	-	-		O	X	O	O	O (Regist)	O	O	●	O	●	●	X	O	O	O	O	O	O	
Channel After Touch [GM1] [GM2]	DnH (n:Channel Number)	vv (00H...7FH)	Data	-	-		O	X	O	O	O (All Keyboard parts)	X	O	X	O	X	O	X	O	X	O	X	O	O	
Polyphonic After Touch	AnH (n:Channel Number)	kk (00H...7FH)	Key no. (0-127)	vv (00H...7FH)	Data		O	X	O	X	X	X	X	X	X	X	O	X	O	X	O	X	X	X	
Pitch Bend Change [GM1] [GM2]	EnH (n:Channel Number)	cc (00H...7FH)	LSB	dd (00H...7FH)	MSB		O	O (Harmony Channel/Melody Channel)	O	O	O (All Keyboard parts)	O	O	●	O	O	O	●	O	O	O	●	O	O	O
Realtime Message	F8H MIDI Clock	-	-	-	-		-	-	O (Received when the Clock is set to MIDI A, MIDI B, USB1, or USB2.)					O (Transmitted when the Clock is set to Internal and the Transmit Clock is set to on.)					-	-	-				
	FAH Start	-	-	-	-		-	-	O (Received when the Clock is set to MIDI A, MIDI B, USB1, or USB2.)					O (Transmitted when the Transmit Clock is set to on.)					-	-	-				
	FBH Continue	-	-	-	-		-	-	X					X					-	-	-				
	FCH Stop	-	-	-	-		-	-	O (Received when the Clock is set to MIDI A, MIDI B, USB1, or USB2.)					O (Transmitted when the Transmit Clock is set to on.)					-	-	-				
	FEH Active Sense [GM2]	-	-	-	-		-	-	O					O					-	-	-				
	FFH System Reset	-	-	-	-		-	-	X					X					-	-	-				

● : Transmitted via panel operations and keyboard/controller performances. O: Available

About Mic/Vocal Harmony column:

Harmony Channel/Melody Channel: The relevant parameters are received by the song part designated by the Effect's Harmony Channel Parameter or Melody Channel Parameter.

A/D Part Receive Channel: The relevant parameters are received by the song part designated by the AD Part Receive Channel of the XG format.

[GM1]...GM Required Parameter

[GM2]...GM Level2 Required Parameter

MIDI CHANNEL MESSAGE (2)

NRPN

[MIDI]

[Song Creator]

NRPN		Data Entry		Parameter	Data Range	Voice		MIDI Reception					MIDI Transmission					PLAY		REC
MSB	LSB	MSB	LSB			Regular/ Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	Right1 Right2 Right3 Left	Keyboard	Style	Extra	Right1 Right2 Right3 Left	M.Pad	Style	Song	Upper Lower	PLAY	REW	From panel (Right1/ Right2/ Left)
01H	08H	mmH	--	Vibrato Rate	mm : 00H-40H-7FH (-64...0...+63)	O	O (Harmony Channel/ Melody Channel)	O	O	X	O	O	●	O	O	O	X	O	O	O
01H	09H	mmH	--	Vibrato Depth	mm : 00H-40H-7FH (-64...0...+63)	O	O (Harmony Channel/ Melody Channel)	O	O	X	O	O	●	O	O	O	X	O	O	O
01H	0AH	mmH	--	Vibrato Delay	mm : 00H-40H-7FH (-64...0...+63)	O	O (Harmony Channel/ Melody Channel)	O	O	X	O	O	●	O	O	O	X	O	O	O
01H	20H	mmH	--	Low Pass Filter Cutoff Frequency	mm : 00H-40H-7FH (-64...0...+63)	O	X	O	X	X	O	X	X	O	X	O	X	O	O	X
01H	21H	mmH	--	Low Pass Filter Resonance	mm : 00H-40H-7FH (-64...0...+63)	O	X	O	X	X	O	X	X	O	X	O	X	O	O	X
01H	30H	mmH	--	EQ Bass Gain	mm : 00H-40H-7FH (-64...0...+63)	O	X	O	X	X	O	X	X	X	X	O	X	O	O	X
01H	31H	mmH	--	EQ Treble Gain	mm : 00H-40H-7FH (-64...0...+63)	O	X	O	X	X	O	X	X	X	X	O	X	O	O	X
01H	34H	mmH	--	EQ Bass Frequency	mm : 04H-28H (32...2.0K[Hz])	O	X	O	X	X	X	X	X	X	X	O	X	O	O	X
01H	35H	mmH	--	EQ Treble Frequency	mm : 1CH-3AH (500...16.0K[Hz])	O	X	O	X	X	X	X	X	X	X	O	X	O	O	X
01H	63H	mmH	--	EG Attack Time	mm : 00H-40H-7FH (-64...0...+63)	O	X	O	X	X	O	X	X	O	X	O	X	O	O	X
01H	64H	mmH	--	EG Decay Time	mm : 00H-40H-7FH (-64...0...+63)	O	X	O	O	X	O	O	●	O	O	O	X	O	O	O
01H	66H	mmH	--	EG Release	mm : 00H-40H-7FH (-64...0...+63)	O	X	O	X	X	O	X	X	O	X	O	X	O	O	X
14H	rrH	mmH	--	Drum Low Pass Filter Cutoff Frequency	rr : drum instrument note number mm : 00H-40H-7FH (-64...0...+63)	O (Drum Only)	X	O	X	X	X	X	X	X	O	O	X	O	X	X
15H	rrH	mmH	--	Drum Low Pass Filter Resonance	rr : drum instrument note number mm : 00H-40H-7FH (-64...0...+63)	O (Drum Only)	X	O	X	X	X	X	X	X	O	O	X	O	X	X
16H	rrH	mmH	--	Drum EG Attack Rate	rr : drum instrument note number mm : 00H-40H-7FH (-64...0...+63)	O (Drum Only)	X	O	X	X	X	X	X	X	O	O	X	O	X	X
17H	rrH	mmH	--	Drum EG Decay Rate	rr : drum instrument note number mm : 00H-40H-7FH (-64...0...+63)	O (Drum Only)	X	O	X	X	X	X	X	X	O	O	X	O	X	X
18H	rrH	mmH	--	Drum Pitch Coarse	rr : drum instrument note number mm : 00H-40H-7FH (-64...0...+63)	O (Drum Only)	X	O	X	X	X	X	X	X	O	O	X	O	X	X
19H	rrH	mmH	--	Drum Pitch Fine	rr : drum instrument note number mm : 00H-40H-7FH (-64...0...+63)	O (Drum Only)	X	O	X	X	X	X	X	X	O	O	X	O	X	X
1AH	rrH	mmH	--	Drum Level	rr : drum instrument note number mm : 00H-7FH (0...127)	O (Drum Only)	X	O	X	X	X	X	X	X	O	O	X	O	X	X
1CH	rrH	mmH	--	Drum Pan	rr : drum instrument note number mm : 00H, 01H- 40H-7FH (RND, L63...C...R63)	O (Drum Only)	X	O	X	X	X	X	X	X	O	O	X	O	X	X
1DH	rrH	mmH	--	Drum Reverb Send Level	rr : drum instrument note number mm : 00H-7FH (0...127)	O (Drum Only)	X	O	X	X	X	X	X	X	O	O	X	O	X	X
1EH	rrH	mmH	--	Drum Chorus Send Level	rr : drum instrument note number mm : 00H-7FH (0...127)	O (Drum Only)	X	O	X	X	X	X	X	X	O	O	X	O	X	X
1FH	rrH	mmH	--	Drum Variation Send Level	rr : drum instrument note number mm : 00H-7FH (0...127) (Variation Connection= SYSTEM) mm : 00H, 01H- 7FH (OFF, ON) (Variation Connection= INSERTION)	O (Drum Only)	X	O	X	X	X	X	X	X	O	O	X	O	X	X
30H	rrH	mmH	--	Drum EQ Bass Gain	rr : drum instrument note number mm : 00H-7FH (0...127)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
31H	rrH	mmH	--	Drum EQ Treble Gain	rr : drum instrument note number mm : 00H-7FH (0...127)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
34H	rrH	mmH	--	Drum EQ Bass Frequency	rr : drum instrument note number mm : 04H-28H (32...2.0[Hz])	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
35H	rrH	mmH	--	Drum EQ Treble Frequency	rr : drum instrument note number mm : 1CH-3AH (500...16.0[Hz])	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

● : Transmitted via panel operations and keyboard/controller performances. O : Available

NRPN MSB: 14H-35H (for drums) message is accepted as long as the channel is set with a drum voice.
Data Entry LSB: Ignored.

NRPN (VocalHarmony)

NRPN				Data Entry	Parameter	Data Range	Voice		[MIDI]					[Song Creator]							
MSB	LSB	MSB	LSB				Regular/ Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	Right1 Right2 Right3 Left	Keyboard	Style	Extra	Right1 Right2 Right3 Left	M.Pad	Style	Song	Upper Lower	PLAY	REW	From panel (Right1/ Right2/ Left)
00H	00H	mmH	--	Harmony Mute	mm : 00H-3FH, 40H-7FH (Off, On)	X	O (Harmony Channel)	X	X	X	X	X	X	X	X	X	O	X	O	X	X
01H	1AH	mmH	--	Detune Modulation	mm : 00H-7FH (0...127)	X	O (Harmony Channel)	X	X	X	X	X	X	X	X	X	O	X	O	X	X
02H	10H	mmH	--	Harmony1 Volume	mm : 00H-7FH (0...127)	X	O (Harmony Channel)	X	X	X	X	X	X	X	X	X	●	X	O	X	X
02H	11H	mmH	--	Harmony2 Volume	mm : 00H-7FH (0...127)	X	O (Harmony Channel)	X	X	X	X	X	X	X	X	X	●	X	O	X	X
02H	12H	mmH	--	Harmony3 Volume	mm : 00H-7FH (0...127)	X	O (Harmony Channel)	X	X	X	X	X	X	X	X	X	●	X	O	X	X
02H	20H	mmH	--	Harmony1 Pan	mm : 00H, 01H-40H-7FH (RND, L63...C...R63)	X	O (Harmony Channel)	X	X	X	X	X	X	X	X	X	●	X	O	X	X
02H	21H	mmH	--	Harmony2 Pan	mm : 00H, 01H-40H-7FH (RND, L63...C...R63)	X	O (Harmony Channel)	X	X	X	X	X	X	X	X	X	●	X	O	X	X
02H	22H	mmH	--	Harmony3 Pan	mm : 00H, 01H-40H-7FH (RND, L63...C...R63)	X	O (Harmony Channel)	X	X	X	X	X	X	X	X	X	●	X	O	X	X
02H	30H	mmH	--	Harmony1 Detune	mm : 00H-40H-7FH (-64...0...+63)	X	O (Harmony Channel)	X	X	X	X	X	X	X	X	X	●	X	O	X	X
02H	31H	mmH	--	Harmony2 Detune	mm : 00H-40H-7FH (-64...0...+63)	X	O (Harmony Channel)	X	X	X	X	X	X	X	X	X	●	X	O	X	X
02H	32H	mmH	--	Harmony3 Detune	mm : 00H-40H-7FH (-64...0...+63)	X	O (Harmony Channel)	X	X	X	X	X	X	X	X	X	●	X	O	X	X

● : Transmitted via panel operations and keyboard/controller performances. O: Available

Data Entry LSB: Ignored.

RPN

RPN				Data Entry	Parameter	Data Range	Voice		[MIDI]					[Song Creator]							
MSB	LSB	MSB	LSB				Regular/ Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	Right1 Right2 Right3m Left	Keyboard	Style	Extra	Right1 Right2 Right3 Left	M.Pad	Style	Song	Upper Lower	PLAY	REW	From panel (Right1/ Right2/ Left)
00H	00H	mmH	--	Pitch Bend Sensitivity [GM1][GM2]	mm : 00H-18H (0...+24 [semitones])	O	O (Harmony Channel/ Melody Channel)	O	O	O	O	O	O	●	O	O	O	X	O	O	O
00H	01H	mmH	IIIH	Fine Tune [GM1][GM2]	mm II : 00H 00H -100[cent] ... mm II : 40H 00H 0[cent] ... mm II : 7FH 7FH 100[cent]	O	X	O	O	O	O	O	O	●	O	O	O	X	O	O	O
00H	02H	mmH	--	Coarse Tune [GM1][GM2]	mm : 28H-40H-58H (-24...0...+24[semitones])	O	X	O	O	O	O	O	O	X	O	O	O	X	O	O	X
00H	05H	mmH	IIIH	Modulation Sensitivity [GM2]	mm : Specified in semitone steps II : Specified in 100/128 cent steps	O	X	O	X	X	X	X	X	X	X	X	O	X	O	X	X
7FH	7FH	--	--	Null [GM2]	-	O	O	O	O	O	O	O	O	X	O	O	O	X	O	X	X

● : Transmitted via panel operations and keyboard/controller performances. O: Available

About Mic/Vocal Harmony column:

The relevant parameters are received by the song part designated by the Effect's Harmony Channel Parameter or Melody Channel Parameter.

[GM1]...GM Required Parameter

[GM2]...GM Leve2 Required Parameter

XG PARAMETER CHANGE TABLE

* Not received when Receive System Exclusive Message Parameters is set to off.
 * Not transmitted when Transmit System Exclusive Message Parameters is set to off.

MIDI Parameter Change table (XG SYSTEM)

Address (H)	Size (H)	Data (H)	Parameter	Description	XG Default (H)	[MIDI]											[Song Creator]																					
						Voice		MIDI Reception				MIDI Transmission					PLAY		REC																			
						Regular/Drum/Natural/Organ Voice	Mic/Vocal Harmony	Song	Right1 Right2 Right3 Left	Keyboard	Style	Extra	Right1 Right2 Right3 Left	M.Pad	Style	Song	Upper Lower	PLAY	REW	From panel (Right1/Right2/Left)																		
00 00 00	4	00-0F	MASTER TUNE	-102.4...0...+102.3[cent] 1st bit3-0 bit15-12 2nd bit3-0 bit11-8 3rd bit3-0 bit7-4 4th bit3-0 bit3-0	*Panel setting value																																	
	01 02 03																																					
	04	1	00-7F	MASTER VOLUME	0...127	7F																																
	05	1	00-7F	MASTER ATTENUATOR	0...127	00																																
	06	1	28-58	TRANSPOSE	-24...0...+24 [semitones]	40																																
	7D	1	N	DRUM SETUP RESET	N:Drum setup number	-																																
	7E	1	00	XG SYSTEM ON	00=XG system ON	-																																
	7F	1	00	ALL PARAMETER RESET	00=ON	-																																

TOTAL SIZE 07

● : Transmitted via panel operations ○ : Available

MIDI Parameter Change table (SYSTEM INFORMATION)

Address (H)	Size (H)	Data (H)	Parameter	Description	[MIDI]											[Song Creator]																							
					Voice		MIDI Reception				MIDI Transmission					PLAY		REC																					
					Regular/Drum/Natural/Organ Voice	Mic/Vocal Harmony	Song	Right1 Right2 Right3 Left	Keyboard	Style	Extra	Right1 Right2 Right3 Left	M.Pad	Style	Song	Upper Lower	PLAY	REW	From panel (Right1/Right2/Left)																				
01 00 00	E	20-7F	Model Name 1	32...127(ASCII CHATACTER)																																			
	0D 0E 0F	1	20-7F	Model Name 14 NOT USED	32...127(ASCII CHATACTER)																																		

TOTAL SIZE 10

Transmitted in response to Dump Request. Not received.

MIDI Parameter Change table (EFFECT1)

Address (H)	Size (H)	Data (H)	Parameter	Description	XG Default (H)	[MIDI]											[Song Creator]																					
						Voice		MIDI Reception				MIDI Transmission					PLAY		REC																			
						Regular/Drum/Natural/Organ Voice	Mic/Vocal Harmony	Song	Right1 Right2 Right3 Left	Keyboard	Style	Extra	Right1 Right2 Right3 Left	M.Pad	Style	Song	Upper	PLAY	REW	From panel (Right1/Right2/Left)																		
02 01 00	2	00-7F	REVERB TYPE MSB	Refer to Effect Parameter List	01(=HALL1)																																	
	02	1	00-7F	REVERB TYPE LSB	Refer to Effect Parameter List	00																																
	03	1	00-7F	REVERB PARAMETER 1	Refer to Effect Parameter List	Depends on Reverb Type																																
	04	1	00-7F	REVERB PARAMETER 2	Refer to Effect Parameter List	Depends on Reverb Type																																
	05	1	00-7F	REVERB PARAMETER 3	Refer to Effect Parameter List	Depends on Reverb Type																																
	06	1	00-7F	REVERB PARAMETER 4	Refer to Effect Parameter List	Depends on Reverb Type																																
	07	1	00-7F	REVERB PARAMETER 5	Refer to Effect Parameter List	Depends on Reverb Type																																
	08	1	00-7F	REVERB PARAMETER 6	Refer to Effect Parameter List	Depends on Reverb Type																																
	09	1	00-7F	REVERB PARAMETER 7	Refer to Effect Parameter List	Depends on Reverb Type																																
	0A	1	00-7F	REVERB PARAMETER 8	Refer to Effect Parameter List	Depends on Reverb Type																																
	0B	1	00-7F	REVERB PARAMETER 9	Refer to Effect Parameter List	Depends on Reverb Type																																
	0C	1	00-7F	REVERB PARAMETER 10	Refer to Effect Parameter List	Depends on Reverb Type																																
	0D	1	01-7F	REVERB RETURN	- dB...0dB...+6dB (0...64...127)	40																																
				REVERB PAN	L63...C...R63	40																																

TOTAL SIZE 0E

	02	11	1	00-7F	REVERB PARAMETER 11	Refer to Effect Parameter List	Depends on Reverb Type																																
					REVERB PARAMETER 12	Refer to Effect Parameter List	Depends on Reverb Type																																
					REVERB PARAMETER 13	Refer to Effect Parameter List	Depends on Reverb Type																																
					REVERB PARAMETER 14	Refer to Effect Parameter List	Depends on Reverb Type																																
					REVERB PARAMETER 15	Refer to Effect Parameter List	Depends on Reverb Type																																
					REVERB PARAMETER 16	Refer to Effect Parameter List	Depends on Reverb Type																																

TOTAL SIZE 06

● : Transmitted via panel operations ○ : Available

						[MIDI]							[Song Creator]							
Address (H)	Size (H)	Data (H)	Parameter	Description	XG Default (H)	Voice		MIDI Reception			MIDI Transmission					PLAY	REW	REC		
						Regular/ Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	Right1 Right2 Right3 Left	Keyboard	Style	Extra	Right1 Right2 Right3 Left	M.Pad	Style	Song	Upper Lower			From panel (Right1/ Right2/ Left)
02	01	20	2	00-7F CHORUS TYPE MSB	Refer to Effect Parameter List	41(=CHORUS1)	o	o												
				00-7F CHORUS TYPE LSB	Refer to Effect Parameter List	00														
			22	1 00-7F CHORUS PARAMETER 1	Refer to Effect Parameter List	Depends on Chorus Type	o	o		o										
			23	1 00-7F CHORUS PARAMETER 2	Refer to Effect Parameter List	Depends on Chorus Type	o	o		o										
			24	1 00-7F CHORUS PARAMETER 3	Refer to Effect Parameter List	Depends on Chorus Type	o	o		o										
			25	1 00-7F CHORUS PARAMETER 4	Refer to Effect Parameter List	Depends on Chorus Type	o	o		o										
			26	1 00-7F CHORUS PARAMETER 5	Refer to Effect Parameter List	Depends on Chorus Type	o	o		o										
			27	1 00-7F CHORUS PARAMETER 6	Refer to Effect Parameter List	Depends on Chorus Type	o	o		o										
			28	1 00-7F CHORUS PARAMETER 7	Refer to Effect Parameter List	Depends on Chorus Type	o	o		o										
			29	1 00-7F CHORUS PARAMETER 8	Refer to Effect Parameter List	Depends on Chorus Type	o	o		o										
			2A	1 00-7F CHORUS PARAMETER 9	Refer to Effect Parameter List	Depends on Chorus Type	o	o		o										
			2B	1 00-7F CHORUS PARAMETER 10	Refer to Effect Parameter List	Depends on Chorus Type	o	o		o										
			2C	1 00-7F CHORUS RETURN	Refer to Effect Parameter List	40	o	o		o										
					- dB...0dB...+6dB (0...64...127)	40														
			2D	1 01-7F CHORUS PAN	Refer to Effect Parameter List	L63...C...P63	40	o	o		o									X
			2E	1 00-7F SEND CHORUS TO REVERB	Refer to Effect Parameter List	40	o	o		o										X
					- dB...0dB...+6dB (0...64...127)	00														

TOTAL SIZE 0F

02	01	30	1	00-7F CHORUS PARAMETER 11	Refer to Effect Parameter List	Depends on Chorus Type	o	o		o										
			31	1 00-7F CHORUS PARAMETER 12	Refer to Effect Parameter List	Depends on Chorus Type	o	o		o										
			32	1 00-7F CHORUS PARAMETER 13	Refer to Effect Parameter List	Depends on Chorus Type	o	o		o										
			33	1 00-7F CHORUS PARAMETER 14	Refer to Effect Parameter List	Depends on Chorus Type	o	o		o										
			34	1 00-7F CHORUS PARAMETER 15	Refer to Effect Parameter List	Depends on Chorus Type	o	o		o										
			35	1 00-7F CHORUS PARAMETER 16	Refer to Effect Parameter List	Depends on Chorus Type	o	o		o										

TOTAL SIZE 06

						[MIDI]							[Song Creator]							
Address (H)	Size (H)	Data (H)	Parameter	Description	XG Default (H)	Voice		MIDI Reception			MIDI Transmission					PLAY	REW	REC		
						Regular/ Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	Right1 Right2 Right3 Left	Keyboard	Style	Extra	Right1 Right2 Right3 Left	M.Pad	Style	Song	Upper Lower			From panel (Right1/ Right2/ Left)
02	01	40	2	00-7F VARIATION TYPE MSB	Refer to Effect Parameter List	05(=DELAY L,C,R)	o	o		o										
				00-7F VARIATION TYPE LSB	Refer to Effect Parameter List	00														
			42	2 00-7F VARIATION PARAMETER 1 MSB	Refer to Effect Parameter List	Depends on Variation Type	o	o		o										
				00-7F VARIATION PARAMETER 1 LSB	Refer to Effect Parameter List															
			44	2 00-7F VARIATION PARAMETER 2 MSB	Refer to Effect Parameter List	Depends on Variation Type	o	o		o										
				00-7F VARIATION PARAMETER 2 LSB	Refer to Effect Parameter List															
			46	2 00-7F VARIATION PARAMETER 3 MSB	Refer to Effect Parameter List	Depends on Variation Type	o	o		o										
				00-7F VARIATION PARAMETER 3 LSB	Refer to Effect Parameter List															
			48	2 00-7F VARIATION PARAMETER 4 MSB	Refer to Effect Parameter List	Depends on Variation Type	o	o		o										
				00-7F VARIATION PARAMETER 4 LSB	Refer to Effect Parameter List															
			4A	2 00-7F VARIATION PARAMETER 5 MSB	Refer to Effect Parameter List	Depends on Variation Type	o	o		o										
				00-7F VARIATION PARAMETER 5 LSB	Refer to Effect Parameter List															
			4C	2 00-7F VARIATION PARAMETER 6 MSB	Refer to Effect Parameter List	Depends on Variation Type	o	o		o										
				00-7F VARIATION PARAMETER 6 LSB	Refer to Effect Parameter List															
			4E	2 00-7F VARIATION PARAMETER 7 MSB	Refer to Effect Parameter List	Depends on Variation Type	o	o		o										
				00-7F VARIATION PARAMETER 7 LSB	Refer to Effect Parameter List															
			50	2 00-7F VARIATION PARAMETER 8 MSB	Refer to Effect Parameter List	Depends on Variation Type	o	o		o										
				00-7F VARIATION PARAMETER 8 LSB	Refer to Effect Parameter List															
			52	2 00-7F VARIATION PARAMETER 9 MSB	Refer to Effect Parameter List	Depends on Variation Type	o	o		o										
				00-7F VARIATION PARAMETER 9 LSB	Refer to Effect Parameter List															
			54	2 00-7F VARIATION PARAMETER 10 MSB	Refer to Effect Parameter List	Depends on Variation Type	o	o		o										
				00-7F VARIATION PARAMETER 10 LSB	Refer to Effect Parameter List															
			56	1 00-7F VARIATION RETURN	Refer to Effect Parameter List	40	o	o		o										
					- dB...0dB...+6dB (0...64...127)	40														
			57	1 01-7F VARIATION PAN	Refer to Effect Parameter List	L63...C...P63	40	o	o		o									X
			58	1 00-7F SEND VARIATION TO REVERB	Refer to Effect Parameter List	40	o	o		o										X
					- dB...0dB...+6dB (0...64...127)	00														
			59	1 00-7F SEND VARIATION TO CHORUS	Refer to Effect Parameter List	40	o	o		o										X
					- dB...0dB...+6dB (0...64...127)	00														
			5A	1 00-01 VARIATION CONNECTION	INSERATION, SYSTEM	00	o	o		o										
			5B	1 00-7F VARIATION PART NUMBER	Reception : Part1...16(0...15) Transmission : Part1...16(0...15) AD(64) OFF(127)	7F	o	o		o										
			5C	1 00-7F MW VARIATION CONTROL DEPTH	Refer to Effect Parameter List	-64...0...+63	40	o	o		o									X
			5D	1 00-7F BEND VARIATION CONTROL DEPTH	Refer to Effect Parameter List	-64...0...+63	40	o	o		o									X
			5E	1 00-7F CAT VARIATION CONTROL DEPTH	Refer to Effect Parameter List	-64...0...+63	40	o	o		o									X
			5F	1 00-7F AC1 VARIATION CONTROL DEPTH	Refer to Effect Parameter List	-64...0...+63	40	o	o		o									X
			60	1 00-7F AC2 VARIATION CONTROL DEPTH	Refer to Effect Parameter List	-64...0...+63	40	o	o		o									X

TOTAL SIZE 21

Address (H)	Size (H)	Data (H)	Parameter	Description	XG Default (H)	[MIDI]										[Song Creator]																						
						Voice		MIDI Reception					MIDI Transmission					PLAY		REC																		
						Regular/ Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	Right1 Right2 Right3 Left	Keyboard	Style	Extra	Right1 Right2 Right3 Left	M.Pad	Style	Song	Upper Lower	PLAY	REW		From panel (Right1/ Right2/ Left)																	
02	01	70	1	00-7F VARIATION PARAMETER 11	Refer to Effect Parameter List	Depends on Variation Type	O	O																														
		71	1	00-7F VARIATION PARAMETER 12	Refer to Effect Parameter List	Depends on Variation Type	O	O																														
		72	1	00-7F VARIATION PARAMETER 13	Refer to Effect Parameter List	Depends on Variation Type	O	O																														
		73	1	00-7F VARIATION PARAMETER 14	Refer to Effect Parameter List	Depends on Variation Type	O	O																														
		74	1	00-7F VARIATION PARAMETER 15	Refer to Effect Parameter List	Depends on Variation Type	O	O																														
		75	1	00-7F VARIATION PARAMETER 16	Refer to Effect Parameter List	Depends on Variation Type	O	O																														

TOTAL SIZE 06
 ● : Transmitted via panel operations O: Available

MIDI Parameter Change table (MULTI EQ)

Address (H)	Size (H)	Data (H)	Parameter	Description	* The MULTI EQ Parameter cannot be reset to its factory setting with XG SYSTEM ON.	[MIDI]										[Song Creator]																									
						Voice		MIDI Reception					MIDI Transmission					PLAY		REC																					
						Regular/ Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	Right1 Right2 Right3 Left	Keyboard	Style	Extra	Right1 Right2 Right3 Left	M.Pad	Style	Song	Upper Lower	PLAY	REW		From panel (Right1/ Right2/ Left)																				
02	40	00	1	00-04 EQ TYPE	flat, jazz, pops, rock, classic	O	O																																		
		01	1	34-4C EQ GAIN1	-12...0...+12[dB]	O	O																																		
		02	1	04-28 EQ FREQUENCY1	32...2.0k[Hz]	O	O																																		
		03	1	01-78 EQ Q1	0.1...12.0	O	O																																		
		04	1	00-01 EQ SHAPE1	shelving, peaking	O	O																																		
		05	1	34-4C EQ GAIN2	-12...0...+12[dB]	O	O																																		
		06	1	0E-36 EQ FREQUENCY2	100...10.0k[Hz]	O	O																																		
		07	1	01-78 EQ Q2	0.1...12.0	O	O																																		
		08	1		NOT USED	-	-																																		
		09	1	34-4C EQ GAIN3	-12...0...+12[dB]	O	O																																		
		0A	1	0E-36 EQ FREQUENCY3	100...10.0k[Hz]	O	O																																		
		0B	1	01-78 EQ Q3	0.1...12.0	O	O																																		
		0C	1		NOT USED	-	-																																		
		0D	1	34-4C EQ GAIN4	-12...0...+12[dB]	O	O																																		
		0E	1	0E-36 EQ FREQUENCY4	100...10.0k[Hz]	O	O																																		
		0F	1	01-78 EQ Q4	0.1...12.0	O	O																																		
		10	1		NOT USED	-	-																																		
		11	1	34-4C EQ GAIN5	-12...0...+12[dB]	O	O																																		
		12	1	1C-3A EQ FREQUENCY5	0.5k...16.0k[Hz]	O	O																																		
		13	1	01-78 EQ Q5	0.1...12.0	O	O																																		
		14	1	00-01 EQ SHAPE5	shelving, peaking	O	O																																		

TOTAL SIZE 15
 ● : Transmitted via panel operations O: Available

MIDI Parameter Change table (EFFECT2)

Address (H)	Size (H)	Data (H)	Parameter	Description	* The EFFECT2 Parameter cannot be reset to its factory setting with XG SYSTEM ON.	[MIDI]										[Song Creator]																								
						Voice		MIDI Reception					MIDI Transmission					PLAY		REC																				
						Regular/ Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	Right1 Right2 Right3 Left	Keyboard	Style	Extra	Right1 Right2 Right3 Left	M.Pad	Style	Song	Upper Lower	PLAY	REW		From panel (Right1/ Right2/ Left)																			
03	n	00	2	00-7F INSERTION EFFECT TYPE MSB	Refer to Effect Parameter List	O	O																																	
		00-7F INSERTION EFFECT TYPE LSB	Refer to Effect Parameter List																																					
		02	1	00-7F INSERTION EFFECT PARAMETER 1	Refer to Effect Parameter List	O	O																																	
		03	1	00-7F INSERTION EFFECT PARAMETER 2	Refer to Effect Parameter List	O	O																																	
		04	1	00-7F INSERTION EFFECT PARAMETER 3	Refer to Effect Parameter List	O	O																																	
		05	1	00-7F INSERTION EFFECT PARAMETER 4	Refer to Effect Parameter List	O	O																																	
		06	1	00-7F INSERTION EFFECT PARAMETER 5	Refer to Effect Parameter List	O	O																																	
		07	1	00-7F INSERTION EFFECT PARAMETER 6	Refer to Effect Parameter List	O	O																																	
		08	1	00-7F INSERTION EFFECT PARAMETER 7	Refer to Effect Parameter List	O	O																																	
		09	1	00-7F INSERTION EFFECT PARAMETER 8	Refer to Effect Parameter List	O	O																																	
		0A	1	00-7F INSERTION EFFECT PARAMETER 9	Refer to Effect Parameter List	O	O																																	
		0B	1	00-7F INSERTION EFFECT PARAMETER 10	Refer to Effect Parameter List	O	O																																	
		0C	1	00-7F INSERTION EFFECT PART NUMBER	Reception : Part1...16(0...15) Transmission Part1...16(0...15) AD(64) OFF(127)	O	O																																	
		0D	1	00-7F MW INSERTION CONTROL DEPTH	-64...0...+63	O	O																																	
		0E	1	00-7F BEND INSERTION CONTROL DEPTH	-64...0...+63	O	O																																	
		0F	1	00-7F CAT INSERTION CONTROL DEPTH	-64...0...+63	O	O																																	
		10	1	00-7F AC1 INSERTION CONTROL DEPTH	-64...0...+63	O	O																																	
		11	1	00-7F AC2 INSERTION CONTROL DEPTH	-64...0...+63	O	O																																	

TOTAL SIZE 12

Address (H)	Size (H)	Data (H)	Parameter	Description	* The EFFECT2 Parameter cannot be reset to its factory setting with XG SYSTEM ON.	[MIDI]											[Song Creator]					
						Voice		MIDI Reception					MIDI Transmission				PLAY		REC			
						Regular/ Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	Right1 Right2 Right3 Left	Keyboard	Style	Extra	Right1 Right2 Right3 Left	M.Pad	Style	Song	Upper Lower	PLAY	REW	From panel (Right1/ Right2/ Left)		
	20	1	00-7F	INSERTION EFFECT PARAMETER 11	Refer to Effect Parameter List		○	○		○							●			○	○	○
	21	1	00-7F	INSERTION EFFECT PARAMETER 12	Refer to Effect Parameter List		○	○		○							●			○	○	○
	22	1	00-7F	INSERTION EFFECT PARAMETER 13	Refer to Effect Parameter List		○	○		○							●			○	○	○
	23	1	00-7F	INSERTION EFFECT PARAMETER 14	Refer to Effect Parameter List		○	○		○							●			○	○	○
	24	1	00-7F	INSERTION EFFECT PARAMETER 15	Refer to Effect Parameter List		○	○		○							●			○	○	○
	25	1	00-7F	INSERTION EFFECT PARAMETER 16	Refer to Effect Parameter List		○	○		○							●			○	○	○

TOTAL SIZE 6

	30	2	00-7F	INSERTION EFFECT PARAMETER 1 MSB	Refer to Effect Parameter List		○	○		○							●			○	○	○
			00-7F	INSERTION EFFECT PARAMETER 1 LSB	Refer to Effect Parameter List																	
	32	2	00-7F	INSERTION EFFECT PARAMETER 2 MSB	Refer to Effect Parameter List		○	○		○							●			○	○	○
			00-7F	INSERTION EFFECT PARAMETER 2 LSB	Refer to Effect Parameter List																	
	34	2	00-7F	INSERTION EFFECT PARAMETER 3 MSB	Refer to Effect Parameter List		○	○		○							●			○	○	○
			00-7F	INSERTION EFFECT PARAMETER 3 LSB	Refer to Effect Parameter List																	
	36	2	00-7F	INSERTION EFFECT PARAMETER 4 MSB	Refer to Effect Parameter List		○	○		○							●			○	○	○
			00-7F	INSERTION EFFECT PARAMETER 4 LSB	Refer to Effect Parameter List																	
	38	2	00-7F	INSERTION EFFECT PARAMETER 5 MSB	Refer to Effect Parameter List		○	○		○							●			○	○	○
			00-7F	INSERTION EFFECT PARAMETER 5 LSB	Refer to Effect Parameter List																	
	3A	2	00-7F	INSERTION EFFECT PARAMETER 6 MSB	Refer to Effect Parameter List		○	○		○							●			○	○	○
			00-7F	INSERTION EFFECT PARAMETER 6 LSB	Refer to Effect Parameter List																	
	3C	2	00-7F	INSERTION EFFECT PARAMETER 7 MSB	Refer to Effect Parameter List		○	○		○							●			○	○	○
			00-7F	INSERTION EFFECT PARAMETER 7 LSB	Refer to Effect Parameter List																	
	3E	2	00-7F	INSERTION EFFECT PARAMETER 8 MSB	Refer to Effect Parameter List		○	○		○							●			○	○	○
			00-7F	INSERTION EFFECT PARAMETER 8 LSB	Refer to Effect Parameter List																	
	40	2	00-7F	INSERTION EFFECT PARAMETER 9 MSB	Refer to Effect Parameter List		○	○		○							●			○	○	○
			00-7F	INSERTION EFFECT PARAMETER 9 LSB	Refer to Effect Parameter List																	
	42	2	00-7F	INSERTION EFFECT PARAMETER 10 MSB	Refer to Effect Parameter List		○	○		○							●			○	○	○
			00-7F	INSERTION EFFECT PARAMETER 10 LSB	Refer to Effect Parameter List																	

TOTAL SIZE 14

● : Transmitted via panel operations ○ : Available

The second byte of the address is considered as an insertion effect number.
n : insertion effect number (n=0-4)

For effect types that do not require MSB, the Parameters for Address 02-0B will be received and the Parameters for Address 30-42 will not be received.
For effect types that require MSB, the Parameters for Address 30-42 will be received and the Parameters for Address 02-0B will not be received.
When Bulk Dumps that include Effect Type data are transmitted, the Parameters for Address 02-0B will always be transmitted. But, effects that require MSB, when the bulk dump is received the Parameters for Address 02-0B will not be received.

MIDI Parameter Change table (SPECIAL EFFECT)

Address (H)	Size (H)	Data (H)	Parameter	Description	* The SPECIAL EFFECT Parameter cannot be reset to its factory setting with XG SYSTEM ON.	[MIDI]											[Song Creator]						
						Voice		MIDI Reception					MIDI Transmission				PLAY		REC				
						Regular/ Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	Right1 Right2 Right3 Left	Keyboard	Style	Extra	Right1 Right2 Right3 Left	M.Pad	Style	Song	Upper Lower	PLAY	REW	From panel (Right1/ Right2/ Left)			
04	00	00	2	00-7F	INSERTION EFFECT TYPE MSB	Vocoder(89), Chordal(90), Detune(91), Chromatic(92), Thru(0...88, 93...127)		X	○		○							●			○	○	X
				00-7F	INSERTION EFFECT TYPE LSB																		
	02	1	00-7F	INSERTION EFFECT PARAMETER 1 Harmony Mode			X	○		○								●			○	○	X
	03	1	00-7F	INSERTION EFFECT PARAMETER 2 Harmony Gender Type	Off(0), Auto(1)		X	○		○								●			○	○	X
	04	1	00-7F	INSERTION EFFECT PARAMETER 3 Lead Gender Type	Off(0), Unison(1), Male(2), Female(3)		X	○		○								●			○	○	X
	05	1	00-7F	INSERTION EFFECT PARAMETER 4 Lead Gender Depth	-64...0...+63(0...127)		X	○		○								●			○	○	X
	06	1	00-7F	INSERTION EFFECT PARAMETER 5 Lead Pitch Correction	Free(0), Correct(1)		X	○		○								●			○	○	X
	07	1	00-7F	INSERTION EFFECT PARAMETER 6 Auto Upper Gender Threshold	0...12(0...12)		X	○		○								●			○	○	X

Address (H)	Size (H)	Data (H)	Parameter	Description	XG Default (H)	[MIDI]											[Song Creator]							
						Voice		MIDI Reception						MIDI Transmission					PLAY		REC			
						Regular/ Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	Right1 Right2 Right3 Left	Keyboard	Style	Extra	Right1 Right2 Right3 Left	M.Pad	Style	Song	Upper Lower	PLAY	REW	From panel (Right1/ Right2/ Left)				
	1F	1	00-7F	MW AMPLITUDE CONTROL	-100...0...+100[%]	40																		
	20	1	00-7F	MW LFO PMOD DEPTH	0...127	0A							•											
	21	1	00-7F	MW LFO FMOD DEPTH	0...127	00							•											
	22	1	00-7F	MW LFO AMOD DEPTH	0...127	00							•											
	23	1	28-58	BEND PITCH CONTROL	-24...0...+24[semitones]	42																		
	24	1	00-7F	BEND LOW PASS FILTER CONTROL	-9600...0...+9450[cent]	40																		
	25	1	00-7F	BEND AMPLITUDE CONTROL	-100...0...+100[%]	40																		
	26	1	00-7F	BEND LFO PMOD DEPTH	0...127	00																		
	27	1	00-7F	BEND LFO FMOD DEPTH	0...127	00																		
	28	1	00-7F	BEND LFO AMOD DEPTH	0...127	00																		
TOTAL SIZE 29																								

	30	1	00-01	Rcv PITCH BEND	OFF, ON	01																		
	31	1	00-01	Rcv CH AFTER TOUCH(CAT)	OFF, ON	01																		
	32	1	00-01	Rcv PROGRAM CHANGE	OFF, ON	01																		
	33	1	00-01	Rcv CONTROL CHANGE	OFF, ON	01																		
	34	1	00-01	Rcv POLY AFTER TOUCH(PAT)	OFF, ON	01																		
	35	1	00-01	Rcv NOTE MESSAGE	OFF, ON	01																		
	36	1	00-01	Rcv RPN	OFF, ON	01																		
	37	1	00-01	Rcv NRPN	OFF, ON	XGmode=01, GMmode=00																		
	38	1	00-01	Rcv MODULATION	OFF, ON	01																		
	39	1	00-01	Rcv VOLUME	OFF, ON	01																		
	3A	1	00-01	Rcv PAN	OFF, ON	01																		
	3B	1	00-01	Rcv EXPRESSION	OFF, ON	01																		
	3C	1	00-01	Rcv HOLD1	OFF, ON	01																		
	3D	1	00-01	Rcv PORTAMENTO	OFF, ON	01																		
	3E	1	00-01	Rcv SOSTENUTO	OFF, ON	01																		
	3F	1	00-01	Rcv SOFT PEDAL	OFF, ON	01																		
	40	1	00-01	Rcv BANK SELECT	OFF, ON	01																		
	41	1	00-7F	SCALE TUNING C	-64...0...+63[cent]	40							•											
	42	1	00-7F	SCALE TUNING C#	-64...0...+63[cent]	40							•	X										
	43	1	00-7F	SCALE TUNING D	-64...0...+63[cent]	40							•	X										
	44	1	00-7F	SCALE TUNING D#	-64...0...+63[cent]	40							•	X										
	45	1	00-7F	SCALE TUNING E	-64...0...+63[cent]	40							•	X										
	46	1	00-7F	SCALE TUNING F	-64...0...+63[cent]	40							•	X										
	47	1	00-7F	SCALE TUNING F#	-64...0...+63[cent]	40							•	X										
	48	1	00-7F	SCALE TUNING G	-64...0...+63[cent]	40							•	X										
	49	1	00-7F	SCALE TUNING G#	-64...0...+63[cent]	40							•	X										
	4A	1	00-7F	SCALE TUNING A	-64...0...+63[cent]	40							•	X										
	4B	1	00-7F	SCALE TUNING A#	-64...0...+63[cent]	40							•	X										
	4C	1	00-7F	SCALE TUNING B	-64...0...+63[cent]	40							•	X										
	4D	1	28-58	CAT PITCH CONTROL	-24...0...+24[semitones]	40																		
	4E	1	00-7F	CAT LOW PASS FILTER CONTROL	-9600...0...+9450[cent]	40							•											
	4F	1	00-7F	CAT AMPLITUDE CONTROL	-100...0...+100[%]	40																		
	50	1	00-7F	CAT LFO PMOD DEPTH	0...127	00							•											
	51	1	00-7F	CAT LFO FMOD DEPTH	0...127	00							•											
	52	1	00-7F	CAT LFO AMOD DEPTH	0...127	00							•											
	53	1	28-58	PAT PITCH CONTROL	-24...0...+24[semitones]	40																		
	54	1	00-7F	PAT LOW PASS FILTER CONTROL	-9600...0...+9450[cent]	40																		
	55	1	00-7F	PAT AMPLITUDE CONTROL	-100...0...+100[%]	40																		
	56	1	00-7F	PAT LFO PMOD DEPTH	0...127	00																		
	57	1	00-7F	PAT LFO FMOD DEPTH	0...127	00																		
	58	1	00-7F	PAT LFO AMOD DEPTH	0...127	00																		
	59	1	00-5F	AC1 CONTROLLER NUMBER	0...95	10																		
	5A	1	28-58	AC1 PITCH CONTROL	-24...0...+24[semitones]	40																		
	5B	1	00-7F	AC1 LOW PASS FILTER CONTROL	-9600...0...+9450[cent]	40																		
	5C	1	00-7F	AC1 AMPLITUDE CONTROL	-100...0...+100[%]	40																		
	5D	1	00-7F	AC1 LFO PMOD DEPTH	0...127	00																		
	5E	1	00-7F	AC1 LFO FMOD DEPTH	0...127	00																		
	5F	1	00-7F	AC1 LFO AMOD DEPTH	0...127	00																		
	60	1	00-5F	AC2 CONTROLLER NUMBER	0...95	11																		
	61	1	28-58	AC2 PITCH CONTROL	-24...0...+24[semitones]	40																		
	62	1	00-7F	AC2 LOW PASS FILTER CONTROL	-9600...0...+9450[cent]	40																		
	63	1	00-7F	AC2 AMPLITUDE CONTROL	-100...0...+100[%]	40																		
	64	1	00-7F	AC2 LFO PMOD DEPTH	0...127	00																		
	65	1	00-7F	AC2 LFO FMOD DEPTH	0...127	00																		
	66	1	00-7F	AC2 LFO AMOD DEPTH	0...127	00																		
	67	1	00-01	PORTAMENTO SWITCH	OFF, ON	00																		
	68	1	00-7F	PORTAMENTO TIME	0...127	00																		
	69	1	00-7F	PITCH EG INITIAL LEVEL	-64...0...+63	40																		
	6A	1	00-7F	PITCH EG ATTACK TIME	-64...0...+63	40																		
	6B	1	00-7F	PITCH EG RELEASE LEVEL	-64...0...+63	40																		
	6C	1	00-7F	PITCH EG RELEASE TIME	-64...0...+63	40																		
	6D	1	01-7F	VELOCITY LIMIT LOW	1...127	01																		
	6E	1	01-7F	VELOCITY LIMIT HIGH	1...127	7F																		
TOTAL SIZE 3F																								

Address (H)	Size (H)	Data (H)	Parameter	Description	XG Default (H)	[MIDI]											[Song Creator]				
						Voice		MIDI Reception				MIDI Transmission					PLAY		REC		
						Regular/ Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	Right1 Right2 Right3 Left	Keyboard	Style	Extra	Right1 Right2 Right3 Left	M.Pad	Style	Song	Upper Lower	PLAY	REW	From panel (Right1/ Right2/ Left)	
	70	1	NOT USED		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	71	1	NOT USED		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	72	1	00-7F	EQ BASS GAIN	-12dB...+12dB	40	O	X	O	O	X	O	O	●	●	●	●	X	O	O	O
	73	1	00-7F	EQ TREBLE GAIN	-12dB...+12dB	40	O	X	O	O	X	O	O	●	●	●	●	X	O	O	O

TOTAL SIZE 04

	74	1	NOT USED		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	75	1	NOT USED		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	76	1	04-2B	EQ BASS FREQUENCY	32...2.0k[Hz]	0C	O	X	O	O	X	X	O	●	O	X	O	X	O	O	O
	77	1	1C-3A	EQ TREBLE FREQUENCY	500...16.0k[Hz]	36	O	X	O	O	X	X	O	●	O	X	O	X	O	O	O
	78	1	NOT USED		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	79	1	NOT USED		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7A	1	NOT USED		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7B	1	NOT USED		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7C	1	NOT USED		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7D	1	NOT USED		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7E	1	NOT USED		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7F	1	NOT USED		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TOTAL SIZE 0C

0A	nn	40	1	00-7F	MW OFFSET LEVEL CONTROL	-100 - 100[%]	40	O	-	O	O	X	X	O	●	O	X	O	X	O	O	O
		41	1	00-7F	BEND OFFSET LEVEL CONTROL	-100 - 100[%]	40	O	-	O	X	X	X	X	X	X	X	O	X	O	O	X
		42	1	00-7F	CAT OFFSET LEVEL CONTROL	-100 - 100[%]	40	O	-	O	O	X	X	O	●	O	X	O	X	O	O	O
		43	1	00-7F	PAT OFFSET LEVEL CONTROL	-100 - 100[%]	40	O	-	O	X	X	X	X	X	X	X	O	X	O	O	X
		44	1	00-7F	AC1 OFFSET LEVEL CONTROL	-100 - 100[%]	40	O	-	O	X	X	X	X	X	X	X	O	X	O	O	X
		45	1	00-7F	AC2 OFFSET LEVEL CONTROL	-100 - 100[%]	40	O	-	O	X	X	X	X	X	X	X	O	X	O	O	X

TOTAL SIZE 06

● : Transmitted via panel operations O : Available

nn : PART NUMBER

If there is a Drum Voice assigned to the part, the following parameters are ineffective.

- BANK SELECT LSB
- PORTAMENTO
- MONO/POLY
- SCALE TUNING
- POLY AFTER TOUCH
- PITCH EG

MIDI Parameter Change table (A/D PART)

Address (H)	Size (H)	Data (H)	Parameter	Description		[MIDI]											[Song Creator]				
						Voice		MIDI Reception				MIDI Transmission					PLAY		REC		
						Regular/ Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	Right1 Right2 Right3 Left	Keyboard	Style	Extra	Right1 Right2 Right3 Left	M.Pad	Style	Song	Upper Lower	PLAY	REW	From panel (Right1/ Right2/ Left)	
10	0n	00	1	00-01	INPUT GAIN	MIC. LINE		X	X			X				X			X	X	X
		01	1	00-7F	BANK SELECT MSB	0...127		X	X			X				X			X	X	X
		02	1	00-7F	BANK SELECT LSB	0...127		X	X			X				X			X	X	X
		03	1	00-7F	PROGRAM NUMBER	1...128		X	X			X				X			X	X	X
		04	1	00-0F,7F	Rcv CHANNEL	1...16,OFF		X	O			O				O			O	X	X
		05	1	NOT USED				-	-			-				-			-	-	-
		06	1	NOT USED				-	-			-				-			-	-	-
		07	1	NOT USED				-	-			-				-			-	-	-
		08	1	NOT USED				-	-			-				-			-	-	-
		09	1	NOT USED				-	-			-				-			-	-	-
		0A	1	NOT USED				-	-			-				-			-	-	-
		0B	1	00-7F	VOLUME	0...127		X	O			O				●			O	X	X
		0C	1	NOT USED				-	-			-				-			-	-	-
		0D	1	NOT USED				-	-			-				-			-	-	-
		0E	1	01-7F	PAN	L63...C...R63		X	O			O				●			O	X	X
		0F	1	NOT USED				-	-			-				-			-	-	-
		10	1	NOT USED				-	-			-				-			-	-	-
		11	1	00-7F	DRY LEVEL	0...127		X	O			O				●			O	X	X
		12	1	00-7F	CHORUS SEND	0...127		X	O			O				●			O	X	X
		13	1	00-7F	REVERB SEND	0...127		X	O			O				●			O	X	X
		14	1	00-7F	VARIATION SEND	0...127		X	O			O				●			O	X	X

TOTAL SIZE 15

● : Transmitted via panel operations O : Available

n : A/D Part Number (0)

The A/D PART parameter cannot be reset to its factory setting with XG System On.

MIDI Parameter Change table (DRUM SETUP)

Address (H)	Size (H)	Data (H)	Parameter	Description	XG Default (H)	[MIDI]										[Song Creator]						
						Voice		MIDI Reception					MIDI Transmission					PLAY		REC		
						Regular/ Drum/Natural/ Organ Voice	Mic/Vocal Harmony	Song	Right1 Right2 Right3 Left	Keyboard	Style	Extra	Right1 Right2 Right3 Left	M.Pad	Style	Song	Upper Lower	PLAY	REW	From panel (Right1/ Right2/ Left)		
3n	rr	00	1	00-7F	PITCH COARSE	-64...0...+63	40	O(Drum Only)	X	O(Available only for song parts)					O					O	X	X
		01	1	00-7F	PITCH FINE	-64...0...+63[cent]	40	O(Drum Only)	X	O(Available only for song parts)					O					O	X	X
		02	1	00-7F	LEVEL	0...127	Depends on the note	O(Drum Only)	X	O(Available only for song parts)					O					O	X	X
		03	1	00-7F	ALTERNATE GROUP	OFF, 1...127	Depends on the note	O(Drum Only)	X	O(Available only for song parts)					O					O	X	X
		04	1	00-7F	PAN	RND, L63...C...R63	Depends on the note	O(Drum Only)	X	O(Available only for song parts)					O					O	X	X
		05	1	00-7F	REVERB SEND	0...127	Depends on the note	O(Drum Only)	X	O(Available only for song parts)					O					O	X	X
		06	1	00-7F	CHORUS SEND	0...127	Depends on the note	O(Drum Only)	X	O(Available only for song parts)					O					O	X	X
		07	1	00-7F	VARIATION SEND	0...127	7F	O(Drum Only)	X	O(Available only for song parts)					O					O	X	X
		08	1	00-01	KEY ASSIGN	SINGLE, MULTI	00	O(Drum Only)	X	O(Available only for song parts)					O					O	X	X
		09	1	00-01	Rcv NOTE OFF	OFF, ON	Depends on the note	O(Drum Only)	X	O(Available only for song parts)					O					O	X	X
		0A	1	00-01	Rcv NOTE ON	OFF, ON	01	O(Drum Only)	X	O(Available only for song parts)					O					O	X	X
		0B	1	00-7F	LOW PASS FILTER CUTOFF FREQUENCY	-64...0...+63	40	O(Drum Only)	X	O(Available only for song parts)					O					O	X	X
		0C	1	00-7F	LOW PASS FILTER RESONANCE	-64...0...+63	40	O(Drum Only)	X	O(Available only for song parts)					O					O	X	X
		0D	1	00-7F	EG ATTACK RATE	-64...0...+63	40	O(Drum Only)	X	O(Available only for song parts)					O					O	X	X
		0E	1	00-7F	EG DECAY1 RATE	-64...0...+63	40	O(Drum Only)	X	O(Available only for song parts)					O					O	X	X
		0F	1	00-7F	EG DECAY2 RATE	-64...0...+63	40	O(Drum Only)	X	O(Available only for song parts)					O					O	X	X

TOTAL SIZE 10

Address (H)	Size (H)	Data (H)	Parameter	Description	XG Default (H)	[MIDI]										[Song Creator]						
						Voice		MIDI Reception					MIDI Transmission					PLAY		REC		
						Regular/ Drum/Natural/ Organ Voice	Mic/Vocal Harmony	Song	Right1 Right2 Right3 Left	Keyboard	Style	Extra	Right1 Right2 Right3 Left	M.Pad	Style	Song	Upper Lower	PLAY	REW	From panel (Right1/ Right2/ Left)		
		20	1	00-7F	EQ BASS GAIN	-12...+12[dB]	40	X	X	X					X					X	X	X
		21	1	00-7F	EQ TREBLE GAIN	-12...+12[dB]	40	X	X	X					X					X	X	X
		22	1		NOT USED	-	-	-	-	-					-					-	-	-
		23	1		NOT USED	-	-	-	-	-					-					-	-	-
		24	1	04-28	EQ BASS FREQUENCY	32...2.0k[Hz]	0C	X	X	X					X					X	X	X
		25	1	1C-3A	EQ TREBLE FREQUENCY	500...16.0k[Hz]	36	X	X	X					X					X	X	X
		26	1		NOT USED	-	-	-	-	-					-					-	-	-
		27	1		NOT USED	-	-	-	-	-					-					-	-	-
		28	1		NOT USED	-	-	-	-	-					-					-	-	-
		29	1		NOT USED	-	-	-	-	-					-					-	-	-
		2A	1		NOT USED	-	-	-	-	-					-					-	-	-
		2B	1		NOT USED	-	-	-	-	-					-					-	-	-
		2C	1		NOT USED	-	-	-	-	-					-					-	-	-
		2D	1		NOT USED	-	-	-	-	-					-					-	-	-

TOTAL SIZE 0E

n : Drum Setup Number (0-1)

rr : note number(0D-5B)

In the following cases, the instrument will initialize all Drum Setups.

- XG SYSTEM ON received
- GM SYSTEM ON received
- GM LEVEL2 SYSTEM ON received
- DRUM SETUP RESET received (only when in XG mode)

[Note]

When a part to which a Drum Setup is assigned receives a program change, the assigned Drum Setup will be initialized.
If the same Drum Setup is assigned to two or more parts, changes in Drum Setup parameters (including program changes) will apply to all parts to which it is assigned.

SYSTEM EXCLUSIVE MESSAGES (1)

[GM1]...GM Required Parameter
 [GM2]...GM Leve2 Required Parameter

Not received when Receive System Exclusive Message Parameters is set to off.
 Not transmitted when Transmit System Exclusive Message Parmeters is set to off.

System Exclusive Messages (Universal Real Time Messages)

MIDI Event	Data Format	[MIDI]										[Song Creator]				
		Voice		MIDI Reception				MIDI Transmission				PLAY		REC		
		Regular/ Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	Right1 Right2 Right3 Left	Keyboard	Style	Extra	Right1 Right2 Right3 Left	M.Pad	Style	Song	Upper Lower	PLAY	REW	From panel operations
Master Volume [GM2]	F0 7F XN 04 01 SS TT F7 11110000 F0 = Exclusive status 01111111 7F = Universal Real Time 0xxxxnnn XN = When N is received N=0-F, whichever is received. X=ignored 00000100 04 = Sub-ID #1=Device Control Message 00000001 01 = Sub-ID #2=Master Volume 0sssssss SS = Volume LSB 0ttttttt TT = Volume MSB 11110111 F7 = End of Exclusive	0	X						O					O	O	X
Master Fine Tuning [GM2]	F0 7F XN 04 03 SS TT F7 11110000 F0 = Exclusive status 01111111 7F = Universal Real Time 0xxxxnnn XN = When N is received N=0-F, whichever is received. X=ignored 00000100 04 = Sub-ID #1=Device Control Message 00000011 03 = Sub-ID #2=Master Fine Tuning 0sssssss SS = Fine Tuning LSB 0ttttttt TT = Fine Tuning MSB 11110111 F7 = End of Exclusive	0	X						O					O	X	X
Master Coarse Tuning [GM2]	F0 7F XN 04 04 SS TT F7 11110000 F0 = Exclusive status 01111111 7F = Universal Real Time 0xxxxnnn XN = When N is received N=0-F, whichever is received. X=ignored 00000100 04 = Sub-ID #1=Device Control Message 00000100 04 = Sub-ID #2=Master Coarse Tuning 00000000 00 0ttttttt TT = Coarse Tuning MSB 11110111 F7 = End of Exclusive	0	X						O					O	X	X
Reverb Parameter [GM2]	F0 7F XN 04 05 01 01 01 01 01 PP VV ... F7 11110000 F0 = Exclusive status 01111111 7F = Universal Real Time 0xxxxnnn XN = When N is received N=0-F, whichever is received. X=ignored 00000100 04 = Sub-ID #1=Device Control Message 00000101 05 = Sub-ID #2=Global Parameter Control 00000001 01 = Slot path length = 1 00000001 01 = Parameter ID width = 1 00000001 01 = Value width = 1 00000001 01 = Slot path MSB = 1 00000001 01 = Slot path LSB = 1 (Reverb) 0ppppppp PP = Parameter to be controlled. 0vvvvvvv VV = Value for the Parameter. : : 11110111 F7 = End of Exclusive Parameter(pp) Value(vv) Display ----- pp=0 Reverb Type 0...8 0:RoomS 1:RoomM 2:RoomL 3:HallM 4:HallL(default) 8:GM Plate pp=1 Reverb Time 0...127 0...11.0s	0	O						O					O	O	X
Chorus Parameter [GM2]	F0 7F XN 04 05 01 01 01 01 02 PP VV ... F7 11110000 F0 = Exclusive status 01111111 7F = Universal Real Time 0xxxxnnn XN = When N is received N=0-F, whichever is received. X=ignored 00000100 04 = Sub-ID #1=Device Control Message 00000101 05 = Sub-ID #2=Global Parameter Control 00000001 01 = Slot path length = 1 00000001 01 = Parameter ID width = 1 00000001 01 = Value width = 1 00000001 01 = Slot path MSB = 1 00000010 02 = Slot path LSB = 2 (Chorus) 0ppppppp PP = Parameter to be controlled. 0vvvvvvv VV = Value for the Parameter. : : 11110111 F7 = End of Exclusive Parameter(pp) Value(vv) Display ----- pp=0 Chorus Type 0...5 0:GM Chorus1 1:GM Chorus2 2:GM Chorus3 (default) 3:GM Chorus4 4:FB Chorus 5:GM Flanger pp=1 Mod Rate 0...127 0...15.5Hz pp=2 Mod Depth 0...127 pp=3 Feedback 0...127 pp=4 Send to Reverb 0...127	0	O						O					O	O	X

MIDI Event	Data Format	[MIDI]							[Song Creator]																																			
		Voice		MIDI Reception			MIDI Transmission				PLAY		REC																															
		Regular/ Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	Right1 Right2 Right3 Left	Keyboard	Style	Extra	Right1 Right2 Right3 Left	M.Pad	Style	Song	Upper Lower	PLAY	REW	From panel operations																												
Channel Pressure (Aftertouch) [GM2]	<p>F0 7F XN 09 01 0M PP RR ... F7</p> <p>11110000 F0 = Exclusive status 01111111 7F = Universal Real Time 0xxxxnnn XN = When N is received N=0-F, whichever is received. X=ignored 00001001 09 = Sub-ID #1=Controller Destination Setting 00000001 01 = Sub-ID #2=Controller Type:01(Channel Pressure) 0000mmmm 0M = MIDI Channel (00-0F) 0pppppppp PP = Controlled Parameter 0rrrrrrrr RR = Data : : 11110111 F7 = End of Exclusive</p> <p>Make sure to set both the controlled parameter and the range. Parameters not set will be restored to their default values.</p> <table border="1"> <thead> <tr> <th>Control Parameter(pp)</th> <th>Data(RR)</th> <th>Description</th> <th>Default Value</th> </tr> </thead> <tbody> <tr> <td>pp=00 Pitch Control</td> <td>28H-58H</td> <td>-24...0...+24semitones</td> <td>40H</td> </tr> <tr> <td>pp=01 Filter Cutoff Control</td> <td>00H-7FH</td> <td>-9600...0...+9450cents</td> <td>40H</td> </tr> <tr> <td>pp=02 Amplitude Control</td> <td>00H-7FH</td> <td>-100...0...+100%</td> <td>40H</td> </tr> <tr> <td>pp=03 LFO Pitch Depth</td> <td>00H-7FH</td> <td>0...127</td> <td>00H</td> </tr> <tr> <td>pp=04 LFO Filter Depth</td> <td>00H-7FH</td> <td>0...127</td> <td>00H</td> </tr> <tr> <td>pp=05 LFO Amplitude Depth</td> <td>00H-7FH</td> <td>0...127</td> <td>00H</td> </tr> </tbody> </table>	Control Parameter(pp)	Data(RR)	Description	Default Value	pp=00 Pitch Control	28H-58H	-24...0...+24semitones	40H	pp=01 Filter Cutoff Control	00H-7FH	-9600...0...+9450cents	40H	pp=02 Amplitude Control	00H-7FH	-100...0...+100%	40H	pp=03 LFO Pitch Depth	00H-7FH	0...127	00H	pp=04 LFO Filter Depth	00H-7FH	0...127	00H	pp=05 LFO Amplitude Depth	00H-7FH	0...127	00H	O	X	O	X	X	X	X	X	X	X	O	X	O	X	X
Control Parameter(pp)	Data(RR)	Description	Default Value																																									
pp=00 Pitch Control	28H-58H	-24...0...+24semitones	40H																																									
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pp=05 LFO Amplitude Depth	00H-7FH	0...127	00H																																									
Controller (Control Change) [GM2]	<p>F0 7F XN 09 03 0M CC PP RR ... F7</p> <p>11110000 F0 = Exclusive status 01111111 7F = Universal Real Time 0xxxxnnn XN = When N is received N=0-F, whichever is received. X=ignored 00001001 09 = Sub-ID #1=Controller Destination Setting 00000011 03 = Sub-ID #2=Controller Type:03(Control Change) 0000mmmm 0M = MIDI Channel (00-0F) 0ccccccc CC = Controller Number (01H-1FH, 40H-5FH) 0pppppppp PP = Controlled Parameter 0rrrrrrrr RR = Range : : 11110111 F7 = End of Exclusive</p> <p>Make sure to set both the controlled parameter and the range. Parameters not set will be restored to their default values.</p> <table border="1"> <thead> <tr> <th>Control Parameter(pp)</th> <th>Data(RR)</th> <th>Description</th> <th>Default Value</th> </tr> </thead> <tbody> <tr> <td>pp=00 Pitch Control</td> <td>28H-58H</td> <td>-24...0...+24semitones</td> <td>40H</td> </tr> <tr> <td>pp=01 Filter Cutoff Control</td> <td>00H-7FH</td> <td>-9600...0...+9450cents</td> <td>40H</td> </tr> <tr> <td>pp=02 Amplitude Control</td> <td>00H-7FH</td> <td>-100...0...+100%</td> <td>40H</td> </tr> <tr> <td>pp=03 LFO Pitch Depth</td> <td>00H-7FH</td> <td>0...127</td> <td>00H</td> </tr> <tr> <td>pp=04 LFO Filter Depth</td> <td>00H-7FH</td> <td>0...127</td> <td>00H</td> </tr> <tr> <td>pp=05 LFO Amplitude Depth</td> <td>00H-7FH</td> <td>0...127</td> <td>00H</td> </tr> </tbody> </table>	Control Parameter(pp)	Data(RR)	Description	Default Value	pp=00 Pitch Control	28H-58H	-24...0...+24semitones	40H	pp=01 Filter Cutoff Control	00H-7FH	-9600...0...+9450cents	40H	pp=02 Amplitude Control	00H-7FH	-100...0...+100%	40H	pp=03 LFO Pitch Depth	00H-7FH	0...127	00H	pp=04 LFO Filter Depth	00H-7FH	0...127	00H	pp=05 LFO Amplitude Depth	00H-7FH	0...127	00H	O	X	O	X	X	X	X	X	X	X	O	X	O	X	X
Control Parameter(pp)	Data(RR)	Description	Default Value																																									
pp=00 Pitch Control	28H-58H	-24...0...+24semitones	40H																																									
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pp=04 LFO Filter Depth	00H-7FH	0...127	00H																																									
pp=05 LFO Amplitude Depth	00H-7FH	0...127	00H																																									
Key-Based Instrument Control [GM2]	<p>F0 7F XN 0A 01 0M KK CC VV ... F7</p> <p>11110000 F0 = Exclusive status 01111111 7F = Universal Real Time 0xxxxnnn XN = When N is received N=0-F, whichever is received. X=ignored 00001010 0A = Sub-ID #1=Key-Based Instrument Control 00000001 01 = Sub-ID #2=Controller 0000mmmm 0M = MIDI Channel (00-0F) 0kkkkkkk KK = Key Number 0ccccccc CC = Controller Number 0vvvvvvv VV = Value : : 11110111 F7 = End of Exclusive</p> <p>Make sure to set both the controlled number and the value.</p> <table border="1"> <thead> <tr> <th>Control Number(CC)</th> <th>Value(VV)</th> <th>Description</th> <th>Default Value</th> </tr> </thead> <tbody> <tr> <td>CC=07H Volume</td> <td>00H-7FH</td> <td>-100...0...+100%</td> <td>40H</td> </tr> <tr> <td>CC=0AH Pan</td> <td>00H-7FH</td> <td>L63...C...R63 (absolute)</td> <td>(Preset value)</td> </tr> <tr> <td>CC=5BH Reverb Send Level</td> <td>00H-7FH</td> <td>0...Max (absolute)</td> <td>(Preset value)</td> </tr> <tr> <td>CC=5DH Chorus Send Level</td> <td>00H-7FH</td> <td>0...Max (absolute)</td> <td>(Preset value)</td> </tr> </tbody> </table>	Control Number(CC)	Value(VV)	Description	Default Value	CC=07H Volume	00H-7FH	-100...0...+100%	40H	CC=0AH Pan	00H-7FH	L63...C...R63 (absolute)	(Preset value)	CC=5BH Reverb Send Level	00H-7FH	0...Max (absolute)	(Preset value)	CC=5DH Chorus Send Level	00H-7FH	0...Max (absolute)	(Preset value)	O (Drum Only)	X	O	X	X	X	X	X	X	X	O	X	O	X	X								
Control Number(CC)	Value(VV)	Description	Default Value																																									
CC=07H Volume	00H-7FH	-100...0...+100%	40H																																									
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System Exclusive Messages (Universal Non-Real Time Messages)

MIDI Event	Data Format	[MIDI]											[Song Creator]				
		Voice		MIDI Reception				MIDI Transmission					PLAY		REC		
		Regular/ Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	Right1 Right2 Right3 Left	Keyboard	Style	Extra	Right1 Right2 Right3 Left	M.Pad	Style	Song	Upper Lower	PLAY	REW	From panel operations	
GM1 System On [GM1] [GM2]	F0 7E XN 09 01 F7 11110000 F0 = Exclusive status 01111110 7E = Universal Non-Real Time 0xxxxnnnn XN = When N is received N=0-F, whichever is received. X=ignored 00001001 09 = Sub-ID #1=General MIDI Message 00000001 01 = Sub-ID #2=General MIDI On 11110111 F7 = End of Exclusive	O	-														
GM2 System On [GM2]	F0 7E XN 09 03 F7 11110000 F0 = Exclusive status 01111110 7E = Universal Non-Real Time 0xxxxnnnn XN = When N is received N=0-F, whichever is received. X=ignored 00001001 09 = Sub-ID #1=General MIDI Message 00000011 03 = Sub-ID #2=General MIDI2 On 11110111 F7 = End of Exclusive	O	-														X
General MIDI System Off [GM1] [GM2]	F0 7E XN 09 02 F7 11110000 F0 = Exclusive status 01111110 7E = Universal Non-Real Time 0xxxxnnnn XN = When N is received N=0-F, whichever is received. X=ignored 00001001 09 = Sub-ID #1=General MIDI Message 00000010 02 = Sub-ID #2=General MIDI Off 11110111 F7 = End of Exclusive	O	-														X
Scale/ Octave Tuning [GM2]	F0 7E XN 08 08 JJ GG MM SS ... F7 11110000 F0 = Exclusive status 01111110 7E = Universal Non-Real Time 0xxxxnnnn XN = When N is received N=0-F, whichever is received. X=ignored 00001000 08 = Sub-ID #1=MIDI Tuning Standard 00001000 08 = Sub-ID #2=scale/octave tuning 1byte form 0jjjjjjjj JJ = Channel/option byte1 bits 0 to 1 = channel 15 to 16 bits 2 to 6 = reserved 0ggggggg GG = Channel byte2 - bits0 to 6 = channel 8 to 14 0mmmmmmm MM = Channel byte2 - bits0 to 6 = channel 1 to 7 0sssssss SS = 12byte tuning offset of 12 semitones from C to B 00H means -64cent 40H means 0cent 7FH means +63cent : : 11110111 F7 = End of Exclusive	O	X														X

SYSTEM EXCLUSIVE MESSAGES (2)

* Not received when Receive System Exclusive Message Parameters is set to off.
 * Not transmitted when Transmit System Exclusive Message Parameters is set to off.

System Exclusive Messages (Style)

MIDI Event	Data Format	[MIDI]												
		Voice		MIDI Reception				MIDI Transmission						
		Regular/ Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	Right1 Right2 Right3 Left	Keyboard	Style	Extra	Right1 Right2 Right3 Left	M.Pad	Style	Song	Upper Lower	
Section Control	FO 43 7E 00 ss dd F7 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 01111110 7E = Style 00000000 00 = 0sssssss ss = Switch No. 00H INTRO A 01H INTRO B 02H INTRO C 03H INTRO D 08H MAIN A 09H MAIN B 0AH MAIN C 0BH MAIN D 10H FILL IN AA 11H FILL IN BB 12H FILL IN CC 13H FILL IN DD 18H BREAK FILL 20H ENDING A 21H ENDING B 22H ENDING C 23H ENDING D 0ddddddd dd = Switch On/Off 00H(Off) 7FH(On) 11110111 F7 = End of Exclusive	-	-											●
Tempo Control	FO 43 7E 01 t4 t3 t2 t1 F7 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 01111110 7E = Style 00000001 01 = 0ttttttt t4 = tempo4 0ttttttt t3 = tempo3 0ttttttt t2 = tempo2 0ttttttt t1 = tempo1 11110111 F7 = End of Exclusive	-	-											●
Chord Control	FO 43 7E tt d1 d2 d3 d4 F7 Type1 (tt=02) 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 01111110 7E = Style 00000010 02 = type 1 0ddddddd d1 = chord root(cr) 0ddddddd d2 = chord type(ct) 0ddddddd d3 = bass note(bn) 0ddddddd d4 = bass type(bt) 11110111 F7 = End of Exclusive cr : Chord Root 0fffnnnn fff: b or #, nnnn: note(root) 0000nnnn 0n bbb 0fff0000 x0 reserved 0010nnnn 1n bb 0fff0001 x1 C 0010nnnn 2n b 0fff0010 x2 D 0011nnnn 3n natural 0fff0011 x3 E 0100nnnn 4n # 0fff0100 x4 F 0101nnnn 5n ## 0fff0101 x5 G 0110nnnn 6n ### 0fff0110 x6 A 0fff0111 x7 B ct : Chord Type 0 - 34,127 00000000 00 0 Maj 00010010 12 18 dim7 00000001 01 1 Maj6 00010011 13 19 7th 00000010 02 2 Maj7 00010100 14 20 7sus4 00000011 03 3 Maj7(#11) 00010101 15 21 7b5 00000100 04 4 Maj7(9) 00010110 16 22 7(9) 00000101 05 5 Maj7(9) 00010111 17 23 7(#11) 00000110 06 6 Maj6(9) 00011000 18 24 7(13) 00000111 07 7 aug 00011001 19 25 7(b9) 00010000 08 8 min 00011010 1A 26 7(b13) 00010001 09 9 min6 00011011 1B 27 7(#9) 00010100 0A 10 min7 00011100 1C 28 Maj7aug 00010101 0B 11 min7b5 00011101 1D 29 7aug 00011000 0C 12 min(9) 00011110 1E 30 1+8 00011001 0D 13 min7(9) 00011111 1F 31 1+5 00011100 0E 14 min7(11) 00100000 20 32 sus4 00011101 0F 15 minMaj7 00100001 21 33 1+2+5 00010000 10 16 minMaj7(9) 00100010 22 34 cc 00010001 11 17 dim bn : On Bass Note Same as Chord root 127:No bass chord bt : Bass Chord Same as Chord type 127:No bass chord * Not received when Receive Chord System Exclusive Message Parameters is set to off. * Not transmitted when Transmit Chord System Exclusive Message Parameters is set to off.	-	-										●	
	Type2 (tt=03) 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 01111110 7E = Style 00000011 03 = type 2 0ddddddd dd = note1 0ddddddd dd = note2 0ddddddd dd = note3 : : 0ddddddd dd = note10 11110111 F7 = End of Exclusive	-	-											X

● : Transmitted via panel operations O : Available

System Exclusive Messages (XG)

MIDI Event	Data Format	[MIDI]											
		Voice		MIDI Reception					MIDI Transmission				
		Regular/ Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	Right1 Right2 Right3 Left	Keyboard	Style	Extra	Right1 Right2 Right3 Left	M.Pad	Style	Song	Upper Lower
XG Parameter Changes	F0 43 1n 4C hh mm ll dd ... F7 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 0001nnnn 1n = Device Number n=always 0(when transmit), n=0-F(when receive) 01001100 4C = Model ID 0hhhhhhh hh = Address High 0mmmmmmm mm= Address Mid 01111111 ll = Address Low 0ddddddd dd = Data : : 11110111 F7 = End of Exclusive	-	-										
XG Bulk Dump	F0 43 0n 4C aa bb hh mm ll dd ... dd cc F7 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 0000nnnn 0n = Device Number n=always 0(when transmit), n=0-F(when receive) 01001100 4C = Model ID 0aaaaaaa aa = Byte Count MSB 0bbbbbbb bb = Byte Count LSB 0hhhhhhh hh = Address High 0mmmmmmm mm= Address Mid 01111111 ll = Address Low 0ddddddd dd = Data : : 0ddddddd dd = Data 0ccccccc cc = Checksum 11110111 F7 = End of Exclusive	-	-										
XG Parameter Request	F0 43 3n 4C hh mm ll F7 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 0011nnnn 3n = Device Number n=always 0(when transmit), n=0-F(when receive) 01001100 4C = Model ID 0hhhhhhh hh = Address High 0mmmmmmm mm= Address Mid 01111111 ll = Address Low 11110111 F7 = End of Exclusive	-	-										
XG Dump Request	F0 43 2n 4C hh mm ll F7 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 0010nnnn 2n = Device Number n=always 0(when transmit), n=0-F(when receive) 01001100 4C = Model ID 0hhhhhhh hh = Address High 0mmmmmmm mm= Address Mid 01111111 ll = Address Low 11110111 F7 = End of Exclusive	-	-										

System Exclusive Messages (Hard Disk Recorder Control)

MIDI Event	Data Format	[MIDI]													
		Voice		MIDI Reception					MIDI Transmission						
		Regular/ Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	Right1 Right2 Right3 Left	Keyboard	Style	Extra	Right1 Right2 Right3 Left	M.Pad	Style	Song	Upper Lower		
Hard Disk Recorder Control	F0 43 73 01 50 19 00 00 dd F7 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 01110011 73 = Tyros ID 00000001 01 = Model ID 01010000 50 = SubID 00011001 19 = SubID (Hard Disk Recorder Control) 00000000 00 = SubID 00000000 00 = SubID (Start/Stop Control) 0ddddddd dd = data dd=00H:Start, 01H:Stop, 02H:Pause 11110111 F7 = End of Exclusive Controls start/stop of the audio song, but this is not synchronized with the MIDI song.	X	X								X	X	X	O	X

System Exclusive Messages Special Operators (Vocal Harmony Additional Parameters)

MIDI Event	Data Format	[MIDI]												
		Voice		MIDI Reception				MIDI Transmission						
		Regular/ Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	Right1 Right2 Right3 Left	Keyboard	Style	Extra	Right1 Right2 Right3 Left	M.Pad	Style	Song	Upper Lower	
Vocal Harmony Pitch to Note ON/OFF	F0 43 73 01 11 0n 50 00 dd F7 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 01110011 73 = Tyros ID 00000001 01 = Model ID 00010001 11 = Special Operators 0000nnnn 0n = Channel No. (Always 00) 01010000 50 = Vocal Harmony Additional Parameter Control No. 00000000 00 = Pitch to Note Parameter No. 0ddddd dd = data (00H : Off, 01H : On) 11110111 F7 = End of Exclusive	X	O			O							●	
Vocal Harmony Pitch to Note Part	F0 43 73 01 11 0n 50 01 dd F7 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 01110011 73 = Tyros ID 00000001 01 = Model ID 00010001 11 = Special Operators 0000nnnn 0n = Channel No. (Always 00) 01010000 50 = Vocal Harmony Additional Parameter Control No. 00000001 01 = Pitch to Note Part Parameter No. 0ddddd dd = data 00H : Right1 01H : Right2 02H : Left 03H : (not used) 04H : Upper 11110111 F7 = End of Exclusive	X	O			O							●	
Vocal Harmony Vocoder Part (Harmony Part(Panel))	F0 43 73 01 11 0n 50 10 dd F7 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 01110011 73 = Tyros ID 00000001 01 = Model ID 00010001 11 = Special Operators 0000nnnn 0n = Channel No. (Always 00) 01010000 50 = Vocal Harmony Additional Parameter Control No. 00010000 10 = Vocoder Part Parameter No. 0ddddd dd = data 00H : Off 01H : Upper 02H : Lower 11110111 F7 = End of Exclusive	X	O			O							●	

● : Transmitted via panel operations O : Available

System Exclusive Messages (Others)

MIDI Event	Data Format	[MIDI]												
		Voice		MIDI Reception				MIDI Transmission						
		Regular/ Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	Right1 Right2 Right3 Left	Keyboard	Style	Extra	Right1 Right2 Right3 Left	M.Pad	Style	Song	Upper Lower	
Internal Clock	F0 43 73 01 02 F7 00000001 01 = Model ID 00000010 02 = Internal Clock Substatus	-	-			O			X					
External Clock	F0 43 73 01 03 F7 00000001 01 = Model ID 00000011 03 = External Clock Substatus	-	-			O					X			
Organ Flutes data Bulk Dump	F0 43 73 01 06 0B 00 00 01 06 0n [Bulk Data] sum F7 01H Model ID 06H Bulk ID 0BH Bulk No. (Organ Flutes data Bulk Dump) 00H,00H,01H,06H Data Length :16bytes 1st Channel No. 0nH 2nd Footage [1] 00 - 08H 3rd [1 1/3] 00 - 08H 4th [1 3/5] 00 - 08H 5th [2] 00 - 08H 6th [2 2/3] 00 - 08H 7th [4] 00 - 08H 8th [5 1/3] 00 - 08H 9th [8] 00 - 08H 10th [16] 00 - 08H 11th [Attack 2] 00 - 08H 12th [Attack 2 2/3] 00 - 08H 13th [Attack 4] 00 - 08H 14th Settings [Attack Length] 00 - 08H 15th [Response] 00 - 08H 16th [Attack Mode] 00 - 01H 00H: Each, 01H: First 17th [Wave Variation] 00 - 01H 00H: Sine, 01H: Vintage 18th [Volume] 01 - 09H 19th [aux] 00H 20th [aux] 00H 21th [aux] 00H 22th [aux] 00H sum Check Sum = 0-sum(BULK DATA)	O (Organ Flute)	X	O	O	X	X	O	●	X	X	O	X	
MIDI Master Tuning	F0 43 1n 27 30 00 00 0m 0l cc F7 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 0001nnnn 1n n= always 0(when transmit), n=0-F(when receive) 00100111 27 = Model ID of TG100 00110000 30 = Address High 00000000 00 = Address Mid 00000000 00 = Address Low 0000mmmm 0m = Master Tune MSB 0000llll 0l = Master Tune LSB 0ccccccc cc = don't care 11110111 F7 = End of Exclusive	O	O			O						X		

● : Transmitted via panel operations O : Available

Song System Exclusive Message List

Data Format	Parameter	Description	Note
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Guide

F0 43 73 01 1F 00 cc dd F7	Guide Mode	cch = Part Select No 00H (RIGHT CH=ON, LEFT CH=ON) 01H (RIGHT CH=OFF, LEFT CH=ON) 02H (RIGHT CH=ON, LEFT CH=OFF) 03H (RIGHT CH=OFF, LEFT CH=OFF) ddH = Mode 00H=Guide OFF 01H=Follow Lights 02H=Any Key 03H=Karao-Key 04H=Vocal CueTIME	Entered to the song from the [SONG CREATOR]->CHANNEL->SETUP display.
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Score

F0 43 73 01 50 12 00 00 dd F7	Left Part indication On/Off	00H: OFF, 7FH:ON	Entered to the song from the [SONG CREATOR]->CHANNEL->SETUP display.
F0 43 73 01 50 12 00 01 dd F7	Right Part indication On/Off	00H: OFF, 7FH:ON	
F0 43 73 01 50 12 00 02 dd F7	Lyrics indication On/Off	00H: OFF, 7FH:ON	
F0 43 73 01 50 12 00 03 dd F7	Chord indication On/Off	00H: OFF, 7FH:ON	
F0 43 73 01 50 12 00 04 dd F7	N.Name indication On/Off	00H: OFF, 7FH:ON	
F0 43 73 01 50 12 00 05 dd F7	Size designation	00H:SMALL, 01H:MIDDLE, 02H:LARGE, 03H:X-LARGE	
F0 43 73 01 50 12 00 06 dd F7	Left Ch	00H-0FH=CH, 7EH=OFF, 7FH=AUTO	
F0 43 73 01 50 12 00 07 dd F7	Right Ch	00H-0FH=CH, 7EH=OFF, 7FH=AUTO	
F0 43 73 01 50 12 00 08 dd F7	Quantize triplet On/Off	00H: Triplet OFF, 7FH: Triplet ON	
F0 43 73 01 50 12 00 09 dd F7	Quantize	00H: quarter, 01H: eighth, 02H: sixteenth, 03H: thirty-second	
F0 43 73 01 50 12 00 0A dd F7	NoteName	00H:ABC, 01H:FixedDo, 02H:MovableDo	
F0 43 73 01 50 12 00 0B dd F7	Color Note	00H:OFF, 7FH:ON	

Style

F0 43 73 01 51 00 00 03 10 00 dd F7	STYLE SPLIT POINT	dd=STYLE SPLIT POINT (Note Number)	Entered to the song from the [SONG CREATOR]->CHANNEL->SETUP display.
F0 43 73 01 51 00 03 04 00 00 dd dd F7	Style No.	dd dd = Style No.	Entered when recording.
F0 43 7E 00 ss dd F7	Section Control	Refer to the MIDI Data Format.	Entered when recording.

Hard Disk Recorder

F0 43 73 01 50 19 00 00 dd F7	Hard Disk Recorder Control	Controls start/pause/stop of the audio song, but this is not synchronized with the MIDI song. 00H:Start, 01H:Stop,02H:Pause	Edited from the [SONG CREATOR]->SYS->EX display.
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Song Meta Event List

Data Format	Parameter	Description	Note
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FF 05 len [Data]	Lyrics	len=Data length, [Data]=Lyrics Data	-
FF 06 len [Data]	Marker	len=Data length, [Data]=Marker	Used as a Song Position Jump Marker.
FF 51 03 t1 t2 t3	Set Tempo	t1 t2 t3 =Tempo value B7 1B 00-01 D4 C0 (Tempo 5-500)	Entered when recording.
FF 58 04 nn dd cc bb	Beat	nn=Numerator, dd=Denominator (2n) cc=MIDI clock per metronome click, bb=Number of thirty-second notes in MIDI quarter note	Entered when recording.
FF 59 02 sf mi	Key Signature	sf=-7-7 mi=0: Major key, 1: minor key	Entered from the [Score] -> SETUP display.

YAMAHA META EVENT

FF 7F 06 43 73 0A 00 07 dd	Score Start Bar	ddH: Start from this measure dd= -100-1, 1-100	Same as ScBar entered from the [SONG CREATOR] ->SYS/EX. Display
FF 7F len 43 73 0D 01 [Data]	Keyboard Voice	Voice settings for the RIGHT1-3 and LEFT	Entered to the song from the [SONG CREATOR]->CHANNEL ->SETUP display.

YAMAHA XF META EVENT

FF 7F 07 43 7B 01 cr ct bn bt	Chord Name	Refer to ÓChord ControlÓ in the MIDI Data Format (System Exclusive Messages)	Entered when recording.
FF 7F 05 43 7B 03 dd 08	Phrase Mark	dd Phrase mark 0hfcoccc bit6(h) 0:Right, 1:Left Right hand/Left hand bit5(f) 0:Channel available, 1:Channel not available Flag for whether channel information (bit 4-0) is valid or not Phrases common to all channels assigned to 1 bit4-0(ccccc) CH(0:1ch-31:32ch) Channel information whose phrase mark is available	Used when performing the Phrase Mark repeat playback.
FF 7F 04 43 7B 04 dd	Phrase Max	Max Phrase Number	Used when performing the Phrase Mark repeat playback.
FF 7F 05 43 7B 0C rr ll	Guide Track Flag	Sets the TRACK1 and TRACK2 parameters on the [FUNCTION]-> [SONG SETTING] display. rr = TRACK1 (0: OFF, 1-16CH) ll = TRACK2 (0: OFF, 1-16CH)	Entered when recording.
FF 7F len 43 7B 21 00 pp [Data]	Lyrics Bitmap	Specifies the background picture of the Lyrics display. pp=Display type (0: Center, 1: Title) [Data]=File Path	Entered to the song from the [SONG CREATOR]->CHANNEL ->SETUP display.

DIGITAL WORKSTATION
Tyros2

PARTS LIST

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Note) DESTINATION ABBREVIATIONS

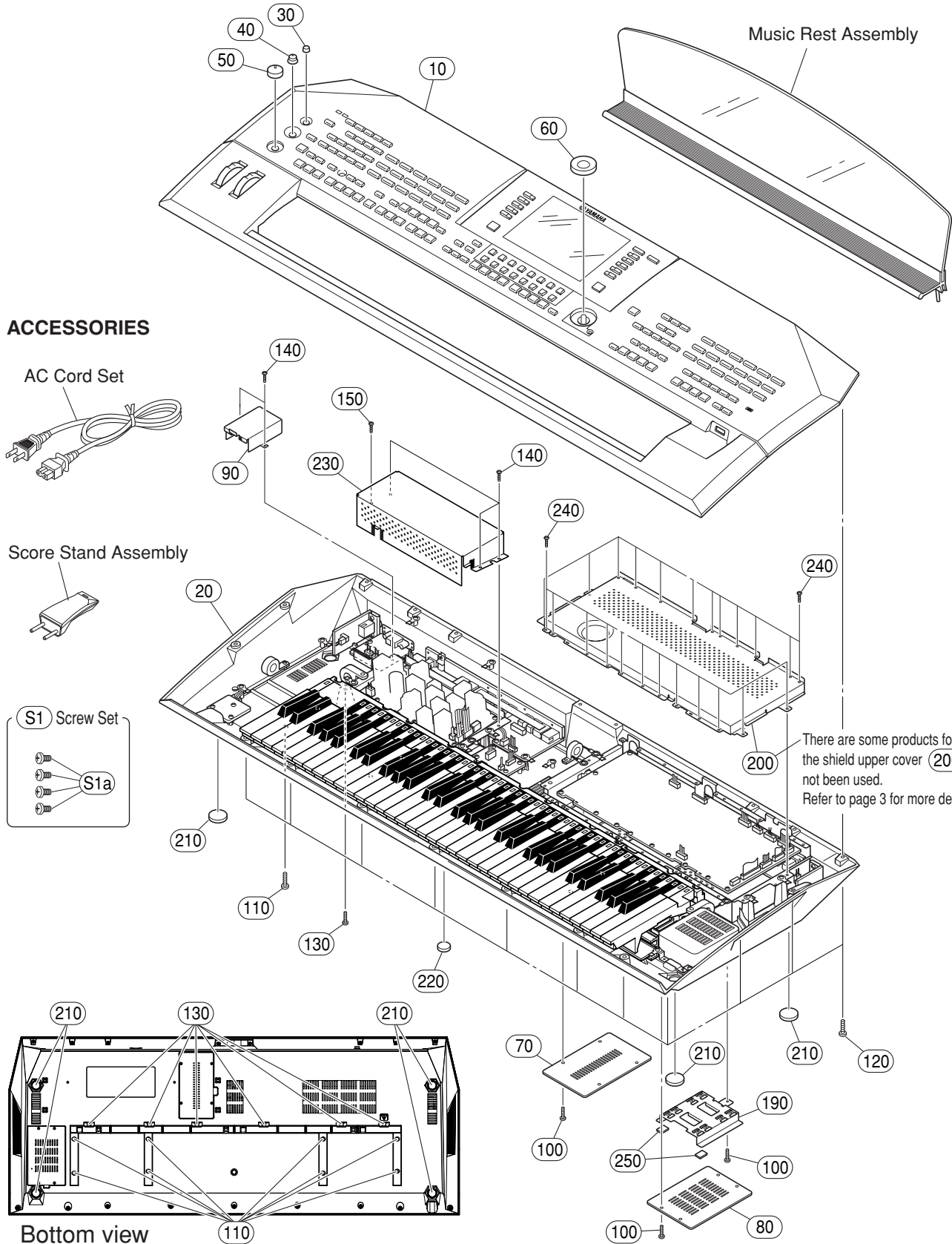
A: Australian model	O: Chinese model
B: British model	Q: South-east Asia model
C: Canadian model	T: Taiwan model
D: German model	U: U.S.A. model
E: European model	V: General export model (110V)
F: French model	W: General export model (220V)
H: North European model	N,X: General export model
I: Indonesian model	Y: Export model
J: Japanese model	K: Korean model
M: South African model	

■ WARNING

Components having special characteristics are marked Δ and must be replaced with parts having specifications equal to those originally installed.

- The numbers in "QTY" shows quantities for each unit.
- The parts with "--" in "Part No." are not available as spare parts.
- The second letter of the shaded () part number is I, not one.
- The second letter of the shaded () part number is O, not zero.

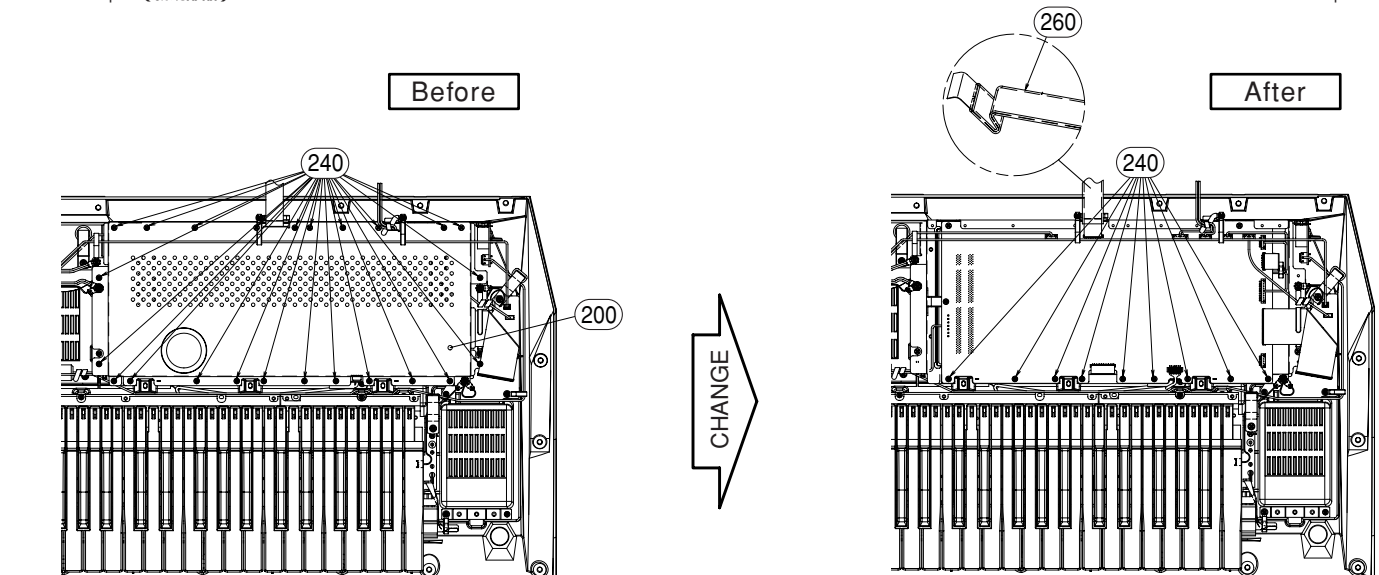
OVERALL ASSEMBLY



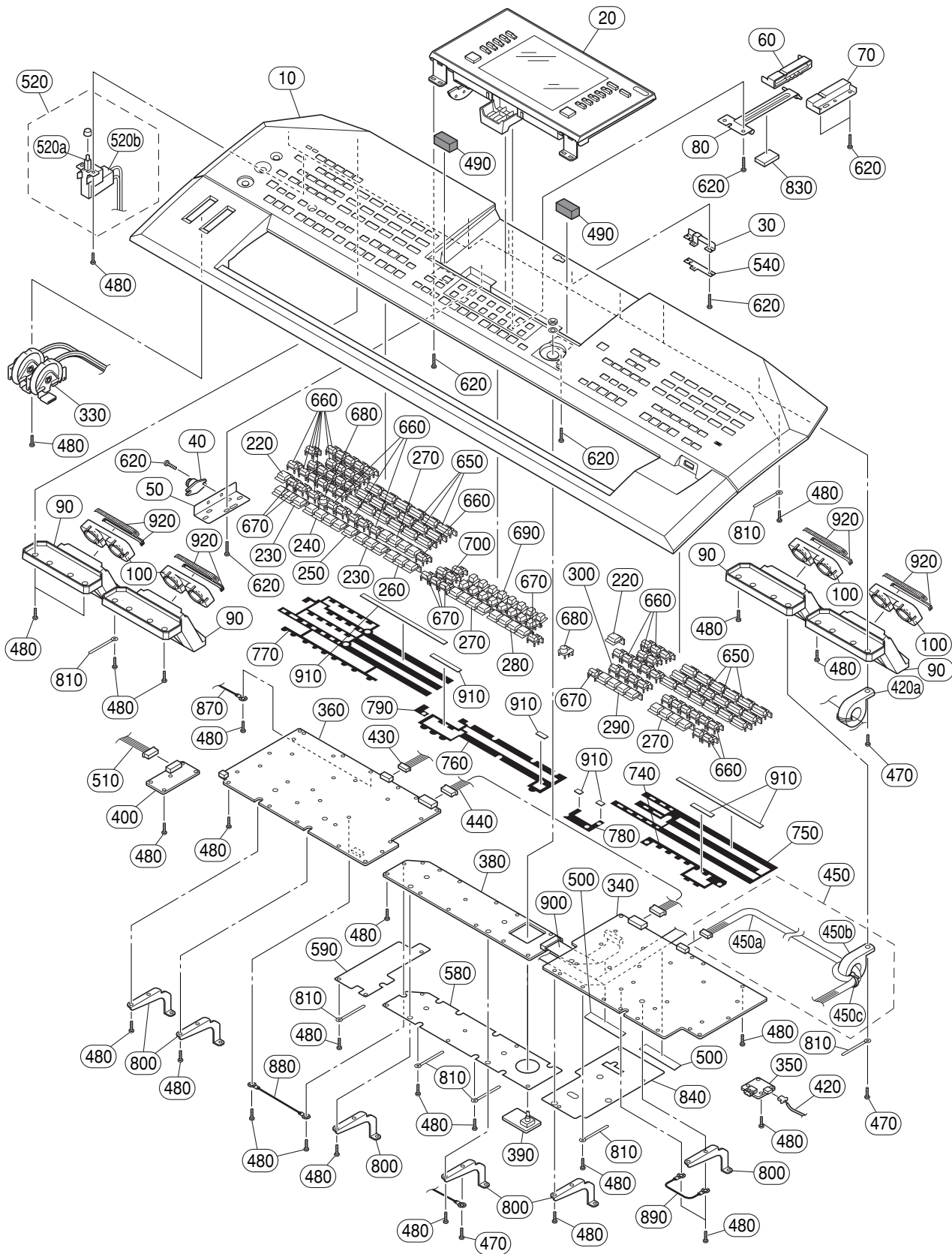
REF. NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
		OVERALL ASSEMBLY		TYROS2		
10	--	Overall Assembly	PT	(WE47080)		
20	--	Upper Case Assembly		(WE47090)		
30	--	Lower Case Assembly		(WE47100)		
	V7151200	Push Knob	BLACK	POWER ON/OFF		01
40	V2300100	Knob		INPUT VOLUME		04
50	VQ218900	Knob	PSR-310	MASTER VOLUME		03
60	V7761500	Encoder Knob	SILVER	DATA ENTRY		03
70	WE806200	Back Cover				
80	WE621100	HDD Cover				
90	--	Inlet Lower Box		(WF32910)		
100	WE997500	Bonding Screw	3.0X8 MFZN2B3		9	
110	WF010600	Truss Head Tapping Screw-B	4.0X12 MFZN2B3		8	
120	WE998600	Bind Head Tapping Screw-B	4.0X12 MFZN2B3		21	
130	WE998100	Bind Head Tapping Screw-B	3.0X12 MFZN2B3		6	01
140	WE774300	Bind Head Tapping Screw-B	3.0X8 MFZN2W3		5	01
150	WF002100	PW Head Tapping Screw-B	3.0X12 MFZN2W3			01
190	WE806300	HDD Support				
200	--	Shield Upper Cover		(WG28280)		
210	V9281800	Foot	T1.6		4	01
220	CB043750	Foot	T1.6			01
230	--	AC Upper Frame Assembly		(WF32810)		
240	WE983600	Bind Head Machine Screw	3.0X8 MFZN2B3		24	
250	--	Damper Sheet HDD		(WG21780)	2	
260	--	Antivibration Foam	F-2	(WF75990)		
		ACCESSORIES				
	X6522A00	CD-ROM	CD 12cm			
	V2917100	AC Cord Set	E 2P 2.5m 2.5A	E		05
	V2917000	AC Cord Set	U 2P 2.44m 7A	U		06
	VT016000	AC Cord Set	B 2P 2.5m	B		08
	V8464700	Music Rest Assembly				15
	WF180100	Score Stand Assembly			2	
S1	WF328800	Screw Set				
S1a	VG048000	Bind Head Screw	3.0X4 MFNI33		4	01
		JIGS		TYROS2		
	X7275Z00	Test Sheet				
	VK112300	Connector Assembly	KRD-KRD 7P--550			03
	WF761200	Connector Assembly	FFC1			
	WE845800	Connector Assembly	DM-PWR1 7P-370			
	WE844400	FFC Cable	26P- (DAC)			

* : New part (新規部品)

RANK : Japan only



■ UPPER CASE ASSEMBLY



REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
		UPPER CASE ASSEMBLY		TYROS2		
	--	Upper Case Assembly		(WE47090)		
* 10	WE471500	Upper Case				
* 20	WE478900	LCD Panel Assembly				
30	--	LCD Lock Plate		(WF30630)		
40	V9287600	Rotary Damper	PT			06
50	--	Damper Stay		(WF30600)		
60	V9136600	Stay Guide Molding L	LEFT			02
70	V9136700	Stay Guide Molding R	RIGHT			02
* 80	WF306100	Stay Angle				
* 90	WF106800	Shaft Holder				4
* 100	WF110200	Stabilizer				4
* 220	WF307300	Button Assembly	PT	ACMP,MUSIC FINDER		2
* 230	WF307000	Button Assembly	PT	INTRO(I,II,III), ENDING/rit.(I,II,III)		2
* 240	WF306900	Button Assembly	PT	MAIN VARIATION(A-D)		
* 250	WF307200	Button Assembly	PT	STYLE CONTROL(BREAK)		
* 260	WF307100	Button Assembly	PT	SYNC STOP,SYNC START START/STOP		
* 270	WF306700	Button Assembly	PT	REGISTRATION MEMORY(1-4), ONE TOUCH SETTING(1-4)		3
* 280	WF306800	Button Assembly	PT	REGISTRATION MEMORY(5-8)		
* 290	WF306600	Button Assembly	PT	MULTI PAD CONTROL(1-4), PART ON/OFF (LEFT, RIGHT 1-3)		
* 300	WF307400	Button Assembly	PT	PART SELECT (LEFT, RIGHT 1-3)		
330	--	Wheel Assembly		(WF33840)		
* 340	WE817400	Circuit Board	PNR	(WE81730)(X6015C0)		
* 350	WE817500	Circuit Board	USB	(WE81730)(X6015C0)		
* 360	WE816900	Circuit Board	PNL	(X6014D0)		
* 380	WE815900	Circuit Board	PNC	(WF32840)(X6013C0)		
* 390	WE853700	Circuit Board	EN	(WF32840)(X6013C0)		
* 400	WE816800	Circuit Board	MICVR	(WE81600)(X6042C0)		
420	--	Connector Assembly	USB-LF 5P-600	(WG27700)		
420a	V3122900	Data Line Filter	K1 NFT-13BK2			06
420a	VD947800	Data Line Filter				05
430	--	Connector Assembly	PNL-PWR 6P-450	(WE84600)		
440	--	Connector Assembly	PNLR 11P-500	(WE84650)		
* 450	WF512600	Connector Assembly	EBUSP-LF 7P-400			
450a	VK107900	Connector Assembly	KRD-KRD 7P-400			05
450b	V3122900	Data Line Filter	K1 NFT-13BK2			06
450b	VD947800	Data Line Filter	ESD-R-25D-B			05
450c	CB069250	Cord Holder	BK-1			01
450c	VV558400	Cord Binder	AZ-100			01
* 470	WF002100	PW Head Tapping Screw-B	3.0X12 MFZN2W3			3
480	WE774300	Bind Head Tapping Screw-B	3.0X8 MFZN2W3			91
490	--	Dust Proof Cloth	F-2	(V929030)		2
500	VN195400	Adhesive Tape	12X70			03
510	--	Connector Assembly	VOL 11P-700	(WE84680)		
520	--	Connector Assembly	PSW 2P-500	(WE84690)		
520a	VC843500	Push Switch	SDDL1 J.U.C.S.VD	POWER ON/OFF		03
520b	V5800800	Switch Cover	IVORY,BLACK			01
540	--	Lock Plate Cover		(WF30640)		
580	--	Protect Sheet C	C	(WF33530)		
590	--	Protect Sheet L	L	(WF33540)		
* 620	WE998100	Bind Head Tapping Screw-B	3.0X12 MFZN2B3	SONG(I,II,III,IV,V,VI), STYLE (POP&ROCK,LATIN SWING&JAZZ,ENTERTAINER, BALLAD,R&B,BALLROOM, WORLD,DANCE,COUNTRY, MOVIE&SHOW,FILE ACCESS), VOICE (PIANO,STRINGS, TRUMPET,GUITAR,ACCORDION, ORGAN,FLUTE,E.PIANO,CHOIR, SAXOPHONE,BASS,PAD, CUSTOM,VOICE,OGAN, BRASS,FLUTECLARINET, SYNTH,PERC./DRUM KIT USER DRIVE)		18
* 650	WF299100	Panel Button				6

* : New part (新規部品)

RANK : Japan only

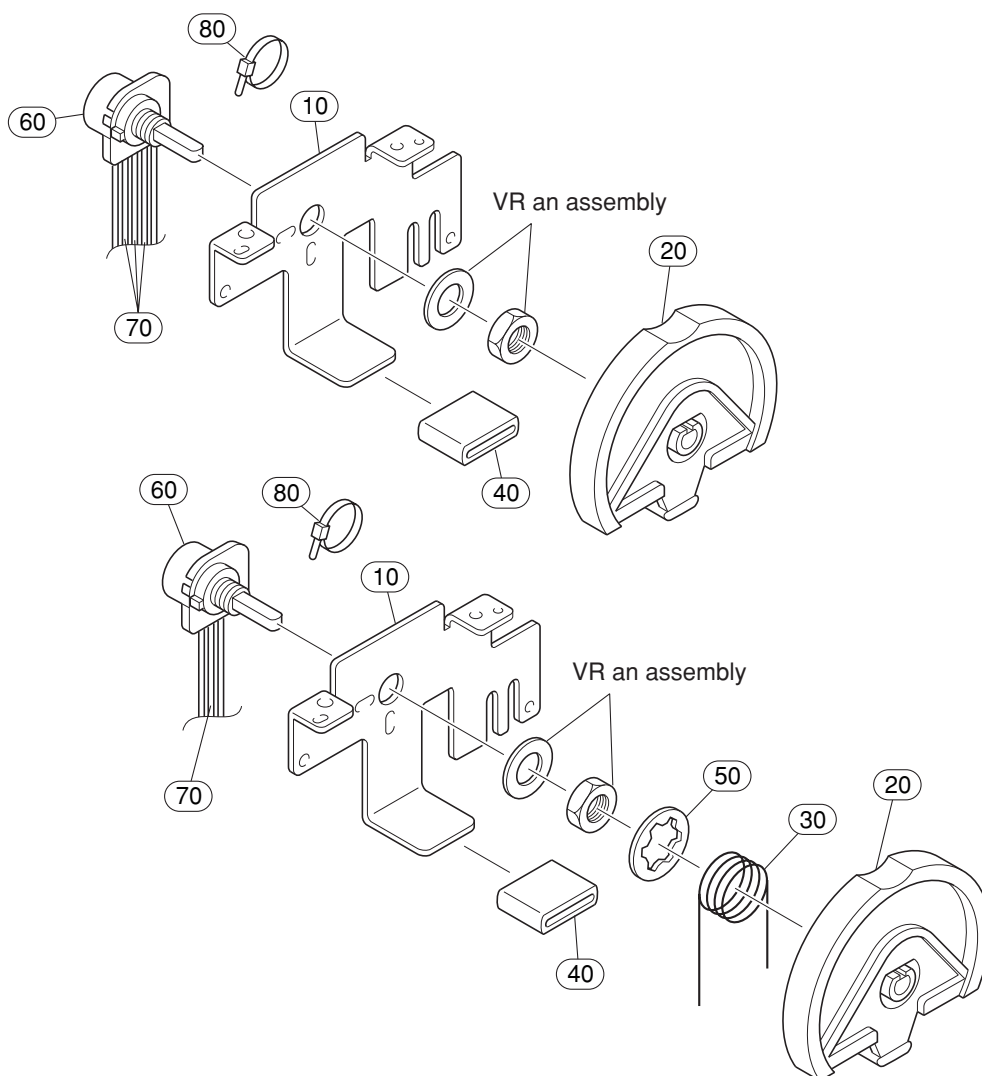
Tyros2

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
* 660	WF273400	Panel Button		MIC/LINE IN(MIC SETTING VOCAL HARMONY,TALK, EFFECT,VH TYPE SELECT) SONG CONTROL (LYRICS/ TEXT,SCORE,GUIDE,PA.T., SP1,SP2,SP3,SP4,LOOP, REC STOP,PLAYPAUSE, REW,FF) DEMO,FADE IN/OUT METRONOME ON/OFF TEMPO(-,+), TRANSPOSE(-,+), MULTI PAD CONTROL (STOP SELECT) MENU (DIGITAL RECORDING FUNCTION,VOICE CREATOR) HARD DISK RECORDER(REC STOP,PLAY/PAUSE,PREV NEXT,SELECT,SETTING) VOICE EFFECT(SUSTAIN HARMONY/ECHO,MOMO,DSP INITIAL TOUCH DSP VARIATION) OTS LINK,AUTO FILL IN REGIST BANK(-,+), FREEZE, MEMORY PART ON/OFF(LEFT HOLD) TAP TEMPO,ENTER UP(1-8),DOWN(1-8) BALANCE,MIXING CONSOLE CHANNEL ON/OFF	7	
* 670	WF274200	Panel Button			7	
* 680	WF275200	Panel Button			2	
* 690	WF274500	Panel Button				
* 700	WF275000	Panel Button				
740	--	Vibration-proof Sheet	L R	(WE80340)		
750	--	Vibration-proof Sheet	U R	(WE80350)		
760	--	Vibration-proof Sheet	C	(WE80380)		
770	--	Vibration-proof Sheet	L	(WE80430)		
780	--	Vibration-proof Sheet	S	(WE81120)		
790	--	Vibration-proof Sheet	SS	(WE81130)		
800	--	Panel Holder		(WE80660)	6	
810	CB817510	Cord Binder	S-14B-E		13	03
830	--	Vibration-proof Form	25X15	(WA52230)		
840	--	Protect Sheet R	R	(WF53970)		
870	--	Wiring Assembly EPSS3		(WG26490)		
880	--	Wiring Assembly EPLS2		(WG26460)		
890	--	Wiring Assembly EPLS1		(WG26450)		
* 900	WG168900	FFC Cable	23P-140 (PNR-PNC)			
910	--	Damper Sheet BN Set		(WG29310)		
920	--	Nonwoven Fabric Cloth	40X9X0.35	(WG40900)	8	

* : New parts (新規部品)

RANK : Japan only

■ WHEEL ASSEMBLY

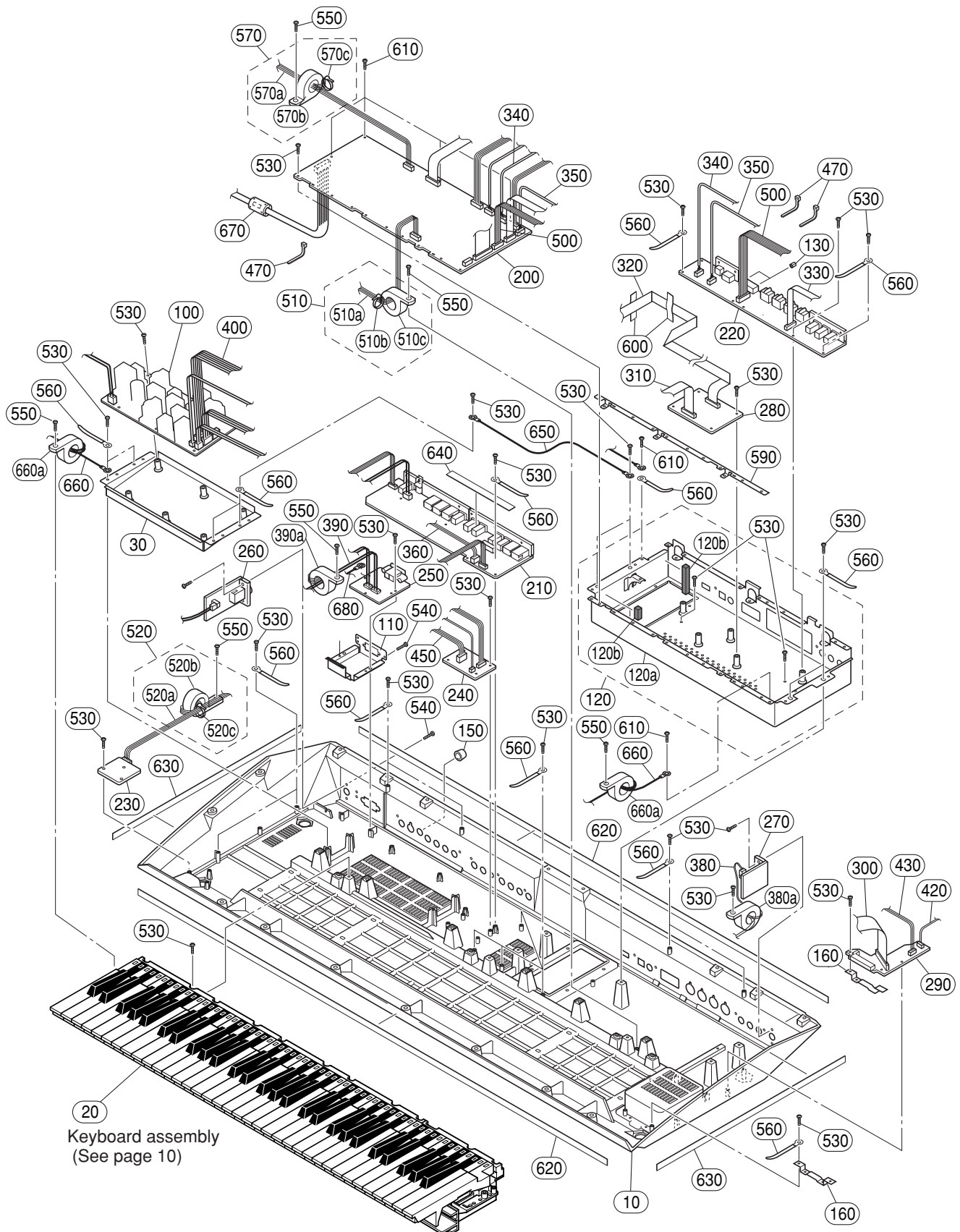


REF.NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
		WHEEL ASSEMBLY		TYROS2		
	--	Wheel Assembly		(WF33840)		
10	VF536800	Frame			2	02
20	V4579900	Wheel		PITCH BEND,MODULATION	2	04
30	VC792800	Spring				01
40	CB819020	Wheel Tube			2	04
50	EW600110	Stop Ring	12.0			01
60	VT695100	Rotary Variable Resistor	SP.10 RK1631110TJN	PITCH BEND,MODULATION	2	03
70	--	Connector Assembly	WHEEL 4P-170	(WE84700)		
80	CB069250	Cord Holder	BK-1		2	01

* : New part (新規部品)

RANK : Japan only

■ LOWER CASE ASSEMBLY

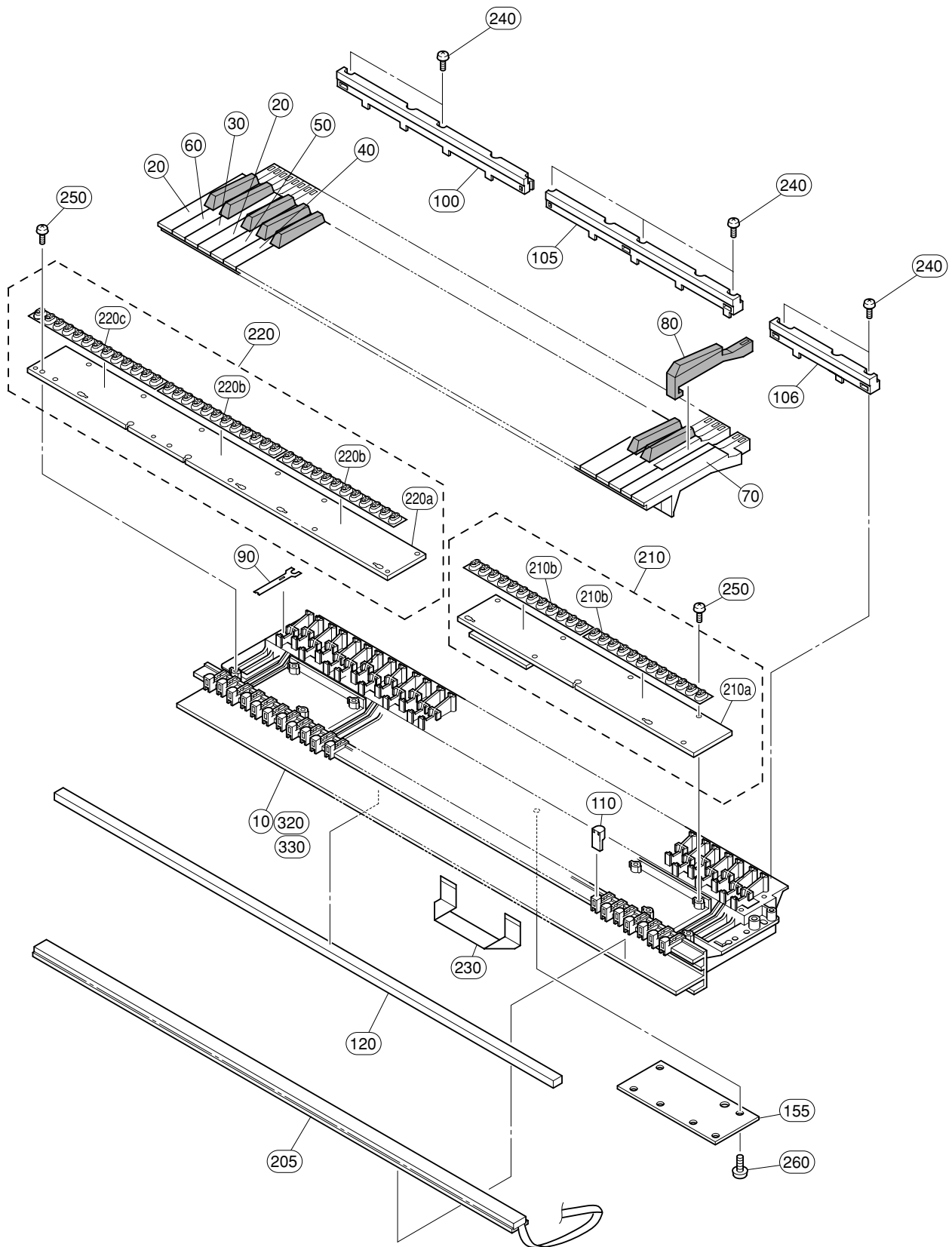


REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
		LOWER CASE ASSEMBLY	TYROS2		
	--	Lower Case Assembly	(WE47100)		
10	WE479300	Lower Case			
20	WD534900	Keyboard Assembly	FSX D C61 K6		
30	--	AC Lower Frame Assembly	(WE48160)		
100	WB501300	Power Supply Unit			22
110	--	Inlet Upper Box	(WF33010)		
120	--	Shield Lower Cover	(WE47960)		
120a	--	Shield Lower Cover	(WE48010)		
120b	--	Adhesive Tape	ECT #590S W=15 (ZL35000)		
130	V6706600	Hex. Locking Screw	HFS-4S-B1W		01
150	V2300100	Knob		LINE IN/MIC(TRIM)	04
160	--	HDD Stay	(WE80650)		2
200	WE843700	Circuit Board	DM	(X6533D0)	
210	WE815800	Circuit Board	AJK	(WF32870)(X6041C0)	
220	WE816100	Circuit Board	DJK	(WE81600)(X6042C0)	
230	WE816300	Circuit Board	HP	(WE81600)(X6042C0)	
240	WF468300	Circuit Board	CK	(WE81600)(X6042C0)	
250	WE816500	Circuit Board	INLET	(WE81600)(X6042C0)	
260	WE816600	Circuit Board	SPOL	(WE81600)(X6042C0)	
270	WE816700	Circuit Board	SPOR	(WE81600)(X6042C0)	
280	WE854300	Circuit Board	DAC2A	(WE85420)(X5175C0)	
290	WE817200	Circuit Board	HDSB	(WF46820)(X6800B0)	
300	WF761200	Connector Assembly	FFC1 40P-180		
310	WE844400	FFC Cable	26P-70 (DAC)		
320	WE844500	FFC Cable	24P-550 (AJK)		
330	WE844600	FFC Cable	17P-150 (DJK)		
340	--	USB Cable	5P-400 (R-TO DEVICE)	(WE84520)	
350	--	USB Cable	6P-350 (R-TO HOST)	(WE84530)	
360	--	Connector Assembly	AJK-PWR 3P-130	(WE84540)	
380	--	Connector Assembly	SPR 3P-1500	(WE84560)	
380a	V3122900	Data Line Filter	K1 NTF-13BK2		06
380a	VD947800	Data Line Filter	ESD-R-25D-B		05
390	--	Connector Assembly	INLET 4,2P-290	(WE84570)	
390a	V3122900	Data Line Filter	K1 NTF-13BK2		06
390a	VD947800	Data Line Filter	ESD-R-25D-B		05
400	WE845800	Connector Assembly	DM-PWR1 7P-370		
420	--	Connector Assembly	REG-PWR 2P-900	(WE84610)	
430	--	Connector Assembly	USB-PWR 4P-160	(WE84620)	
450	--	Connector Assembly	CK-PWR 5P-130	(WF50110)	
470	CB069250	Cord Holder	BK-1		01
500	--	Connector Assembly	VIDEO 12P-300	(WE84670)	
510	--	Connector Assembly	EBUSK-LF 7P-550	(WF51230)	
510a	VK112300	Connector Assembly	KRD-KRD 7P-550		03
510b	V3122900	Data Line Filter	K1 NTF-13BK2		06
510b	VD947800	Data Line Filter	ESD-R-25D-B		05
510c	CB069250	Cord Holder	BK-1		01
510c	VV558400	Cord Binder	AZ-100		01
520	--	Connector Assembly	HP-LF 6P-600	(WF51240)	
520a	VK115100	Connector Assembly	KRD-KRD 6P-600		05
520b	V3122900	Data Line Filter	K1 NTF-13BK2		06
520b	VD947800	Data Line Filter	ESD-R-25D-B		05
520c	CB069250	Cord Holder	BK-1		01
520c	VV558400	Cord Binder	AZ-100		01
530	WE774300	Bind Head Tapping Screw-B	3.0X8 MFZN2W3		53
540	WE774400	Bind Head Tapping Screw-B	3.0X8 MFZN2B3		23
550	WF002100	PW Head Tapping Screw-B	3.0X12 MFZN2W3		6
560	CB817510	Cord Binder	S-14B-E		25
570	--	Connector Assembly	JKDET-LF 5P-550	(WF51250)	
570a	VK113500	Connector Assembly	KRD-KRD 5P-550		03
570b	V3122900	Data Line Filter	K1 NTF-13BK2		06
570b	VD947800	Data Line Filter	ESD-R-25D-B		05
570c	CB069250	Cord Holder	BK-1		01
570c	VV558400	Cord Binder	AZ-100		01
590	--	GND Sheet	GND	(WF57530)	
600	VN195400	Filament Tape	12X70		03
610	WE983600	Bind Head Machine Screw	3.0X8 MFZN2B3		6
620	--	Cushion 1		(WG21760)	2
630	--	Cushion 2		(WG21770)	2
640	--	Damper Sheet JACK		(WG22740)	
650	--	Wiring Assembly EPSS2		(WG26480)	
660	--	Wiring Assembly EPPH1		(WG26500)	2
660a	V3122900	Data Line Filter	K1 NTF-13BK2		06
660a	VD947800	Data Line Filter	ESD-R-25D-B		05
670	VV910300	Ferrite Core	ZCAT2035-0930A		05
680	--	Wiring Assembly EPLS2		(WG26460)	

* : New part (新規部品)

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KEYBOARD ASSEMBLY

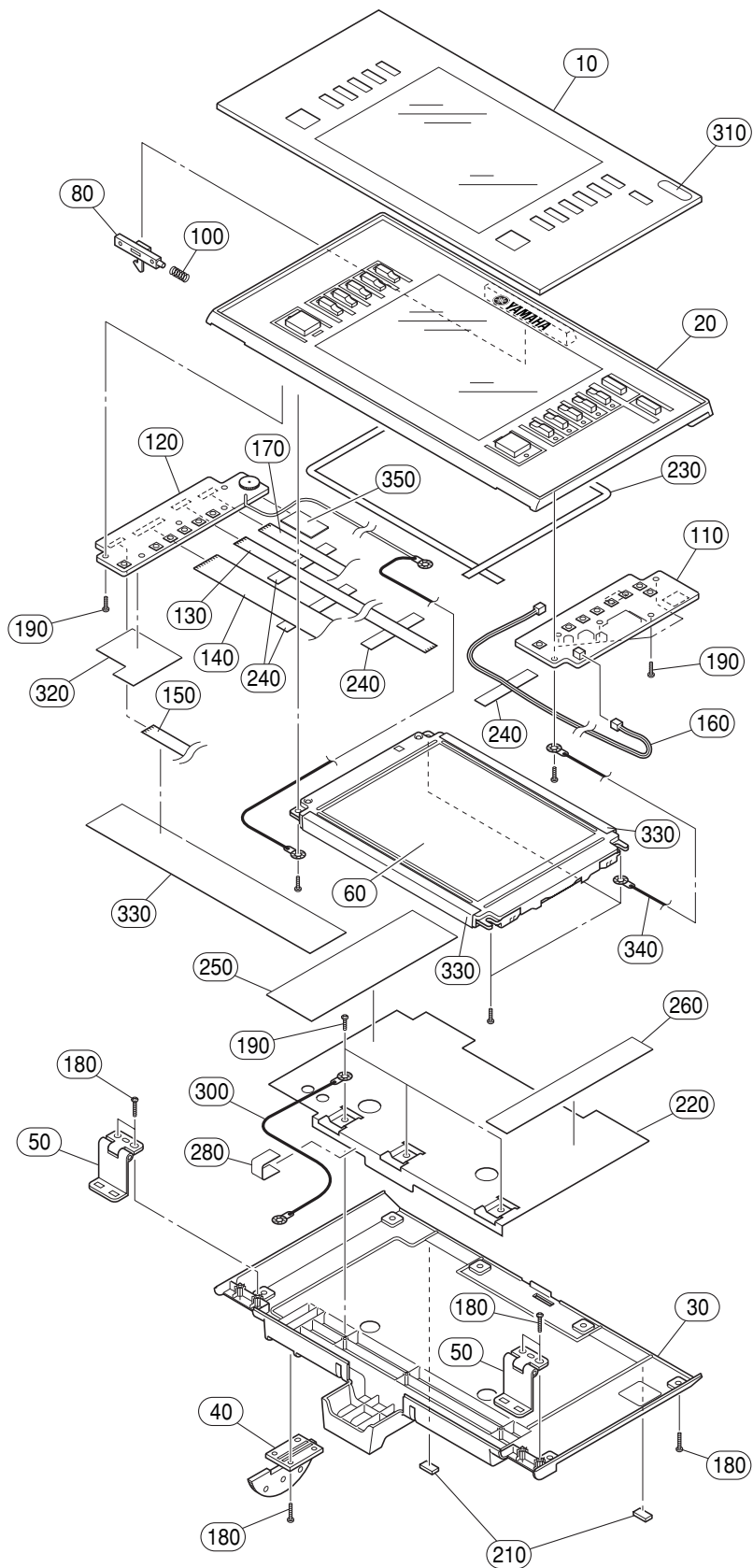


REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
*		KEYBOARD ASSEMBLY		TYROS2		
10	WD534900	Keyboard Assembly	FSX D C61 K6			
	--	MK Frame		(WD80950)		
20	WB166800	White Key Assembly	C,F		10	03
30	WB166900	White Key Assembly	B,E		10	03
40	WB167000	White Key Assembly	A		5	03
50	WB167100	White Key Assembly	G		5	03
60	WB167200	White Key Assembly	D		5	03
70	WB167300	White Key Assembly	C'	C6		03
80	WB167400	Black Key Assembly			25	03
90	WB167600	Key Spring			61	01
100	WC436600	Key Stopper L				03
105	WC436700	Key Stopper H				03
106	WD804200	Key Stopper	FSX 61			
110	WB171100	Key Guide Cap			61	01
120	WD804500	Stopper U	C61			
155	--	Frame Holder		(WB18860)		
205	V3438000	PC Sensor	YMHM-016			10
210	--	MKH-D Assembly		(WD80060)		
210a	WD801000	Circuit Board	MKH-D	(WD78570)(X6579B0)		
210b	WB168800	Rubber Contact	12KEY 2M	C4#-C5,C5#-C6	2	04
220	--	MK61K Assembly	FSV-X	(WD53540)		
220a	WD800100	Circuit Board	MK61L	(WD80020)(X6578C0)		
220b	WB168800	Rubber Contact	12KEY 2M	C2#-C3,C3#-C4	2	04
220c	WB168900	Rubber Contact	13KEY 2M	C1-C2		04
230	WF127500	Cable	RELAY 23P			
240	WE983200	Bind Head Tapping Screw-P	3.0X16 MFZN2B3		7	
250	WF266600	Bind Head Tapping Screw-P	3.0X8 MFZN2B3		26	01
260	WE974400	Bind Head Tapping Screw-P	4.0X12 MFZN2W3		7	
320	--	Grease	G-1030Y	(WC77150)		
330	--	Grease	HP-500	(WG23930)		

* : New part (新規部品)

RANK : Japan only

■ LCD PANEL ASSEMBLY



REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
*		LCD PANEL ASSEMBLY		TYROS2		
*	WE478900	LCD Panel Assembly				
10	WE479000	LCD Cover				
*	WE479100	LCD Upper Case				
20	WE479200	LCD Lower Case				
30	WE479200	LCD Lower Case				
40	V9135400	Gear				01
50	--	Hinge		(WF30620)	2	
*	WB911901	LCD	MC75T03B			
60	WB911901	LCD	MC75T03B			
80	--	LCD Hook Holder		(WF25560)		
100	V9288200	Return Spring				
*	WE817800	Circuit Board	LCR	(WE81760)(X6232C0)		
110	WE817800	Circuit Board	LCR	(WE81760)(X6232C0)		
120	WE817700	Circuit Board	LCL	(WE81760)(X6232C0)		
130	WE844800	FFC Cable	9P-260 (LCLR)			
*	WF761300	Wiring Assembly FFC2	30P-950 (LCD-B)			
140	WF761300	Wiring Assembly FFC2	30P-950 (LCD-B)			
*	WG168600	FFC Cable	20P-120(LCD)			
150	WG168600	FFC Cable	20P-120(LCD)			
160	--	Connector Assembly	LC-PWR 5P-2P,3P	(WE84640)		
*	WE844700	FFC Cable	8P-550 (PNL-LCL)			
170	WE844700	FFC Cable	8P-550 (PNL-LCL)			
180	WE998100	Bind Head Tapping Screw-B	3.0X12 MFZN2B3		16	
*	WE774300	Bind Head Tapping Screw-B	3.0X8 MFZN2W3		17	01
190	WE774300	Bind Head Tapping Screw-B	3.0X8 MFZN2W3			
210	V9348100	Foot	T2.0		2	01
220	--	LCD Support Stay		(WF30650)		
230	--	Dust Proof Cloth	LEX F-2	(V942430)		
240	--	Adhesive Tape	FILAMENT 12X70	(VN19540)	4	
250	--	Insulation Firm L	L	(V942440)		
260	--	Insulation Firm R	R	(V942450)		
280	VA126100	Adhesive Tape	12X50			03
300	--	Wiring Assembly EPC1		(WG26440)		
310	--	Label,LCD		(V218020)		
320	--	LCD Sheet Assembly		(WG25320)		
330	--	EL Adhesive Tape	25X20m	(V409520)		
340	--	Wiring Assembly EPSS1		(WG26470)		
350	--	Adhesive Tape	ECT W=15	(ZL35000)		

* : New part (新規部品)

RANK : Japan only

■ ELECTRICAL PARTS

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
		ELECTRICAL PARTS		TYROS2		
*	WE815800	Circuit Board	AJK	(WF32870)(X6041C0)		
*	WE854300	Circuit Board	DAC2A	(WE85420)(X5175C0)		
*	WE816100	Circuit Board	DJK	(WE81600)(X6042C0)		
*	WF468300	Circuit Board	CK	(WE81600)(X6042C0)		
*	WE816300	Circuit Board	HP	(WE81600)(X6042C0)		
*	WE816500	Circuit Board	INLET	(WE81600)(X6042C0)		
*	WE816800	Circuit Board	MICVR	(WE81600)(X6042C0)		
*	WE816600	Circuit Board	SPOL	(WE81600)(X6042C0)		
*	WE816700	Circuit Board	SPOR	(WE81600)(X6042C0)		
*	WE843700	Circuit Board	DM	(X6533D0)		
*	WE817200	Circuit Board	HDSB	(WF46820)(X6800B0)		
*	WE817700	Circuit Board	LCL	(WE81760)(X6232C0)		
*	WE817800	Circuit Board	LCR	(WE81760)(X6232C0)		
*	WD800100	Circuit Board	MK61L	(WD80020)(X6578C0)		
*	WD801000	Circuit Board	MKH-D	(WD78570)(X6579B0)		
	--	Circuit Board	EMKS-FD	(WE62270)(WE62310)		
				(X6577A0)		
*	AAX70980	Circuit Board	PNC,EN	(WF32840)(X6013C0)		
	--	Circuit Board	PNC	(WF32840)(WE81590)		
				(X6013C0)		
	--	Circuit Board	EN	(WF32840)(WE85370)		
				(X6013C0)		
*	WE816900	Circuit Board	PNL	(X6014D0)		
*	WE817400	Circuit Board	PNR	(WE81730)(X6015C0)		
*	WE817500	Circuit Board	USB	(WE81730)(X6015C0)		
*	WE815800	Circuit Board	AJK	(WF32870)(X6041C0)		
10	--	AML Jack Angle		(WE80690)		
20	--	AMR Jack Angle		(WE81090)		
C1	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C2	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C3	UR839330	Electrolytic Cap.	3300 16.0V RX TP			01
C4	UR838100	Electrolytic Cap.	100.00 16.0V RX TP			01
C10	US062220	Ceramic Capacitor-SL(chip)	220P 50V J RECT.			01
* C12	VB639800	Electric Capacitor	1.0 50.0V	}		
* C12	WA670400	Electrolytic Cap.	1.0 50V			
C17	US061560	Ceramic Capacitor-CH(chip)	56P 50V J RECT.			01
C18	VB639800	Electric Capacitor	1.0 50.0V			
C20	US062220	Ceramic Capacitor-SL(chip)	220P 50V J RECT.			01
* C22	VB639800	Electric Capacitor	1.0 50.0V	}		
* C22	WA670400	Electrolytic Cap.	1.0 50V			
C27	US061560	Ceramic Capacitor-CH(chip)	56P 50V J RECT.			01
* C28	VB639800	Electric Capacitor	1.0 50.0V	}		
* C30	VB639700	Electrolytic Cap.-BP	4.7 25.0V			
C31	US061270	Ceramic Capacitor-CH(chip)	27P 50V J RECT.			01
C32	VB639700	Electrolytic Cap.-BP	4.7 25.0V			
C33	VS490700	Electric Capacitor	47.0 16.0V TP			01
* C33	WA668400	Electrolytic Cap.	47.0 16V	}		
* C40	VB639700	Electrolytic Cap.-BP	4.7 25.0V			
C41	US061270	Ceramic Capacitor-CH(chip)	27P 50V J RECT.			01
* C42	VB639700	Electrolytic Cap.-BP	4.7 25.0V			
C49	US063220	Ceramic Capacitor-B (chip)	2200P 50V K RECT.			01
* C50	VB639700	Electrolytic Cap.-BP	4.7 25.0V			
C51	US061470	Ceramic Capacitor-CH(chip)	47P 50V J RECT.			01
* C52	VB639700	Electrolytic Cap.-BP	4.7 25.0V	}		
C53	US063100	Ceramic Capacitor-B (chip)	1000P 50V K RECT.			
* C54	VB640100	Electric Capacitor	22.0 16.0V	}		
* C54	WA668200	Electrolytic Cap.	22.0 16V			
C55	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
* C56	WA668500	Electrolytic Cap.	100.0 16V			
C59	US063220	Ceramic Capacitor-B (chip)	2200P 50V K RECT.			01
* C60	VB639700	Electrolytic Cap.-BP	4.7 25.0V			
C61	US061470	Ceramic Capacitor-CH(chip)	47P 50V J RECT.			01
* C62	VB639700	Electrolytic Cap.-BP	4.7 25.0V			
C63	US063100	Ceramic Capacitor-B (chip)	1000P 50V K RECT.			01
* C70	VB639700	Electrolytic Cap.-BP	4.7 25.0V			
C71	US062120	Ceramic Capacitor-SL(chip)	120P 50V J RECT.			01
C72	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C73	UN848100	Electrolytic Cap.-BP	100.00 25.0V RX TP			01

* : New parts (新規部品)

RANK : Japan only

REF.NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
* C80	VB639700	Electrolytic Cap.-BP	4.7 25.0V			
C81	US062120	Ceramic Capacitor-SL(chip)	120P 50V J RECT.			01
C82	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C83	UN848100	Electrolytic Cap.-BP	100.00 25.0V RX TP			01
C90	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C91	UR865330	Electrolytic Cap.	0.33 50.0V RX TP			
C92	UR848220	Electrolytic Cap.	220.00 25.0V RX TP			01
C93	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
* C110	VB639700	Electrolytic Cap.-BP	4.7 25.0V			
C111	US062100	Ceramic Capacitor-SL(chip)	100P 50V J RECT.			01
C112	VB639900	Electric Capacitor	4.7 50.0V			01
C113	US063100	Ceramic Capacitor-B (chip)	1000P 50V K RECT.			01
C114	US063100	Ceramic Capacitor-B (chip)	1000P 50V K RECT.			01
* C115	VB639700	Electrolytic Cap.-BP	4.7 25.0V			
* C120	VB639700	Electrolytic Cap.-BP	4.7 25.0V			
C121	US062100	Ceramic Capacitor-SL(chip)	100P 50V J RECT.			01
C122	VB639900	Electric Capacitor	4.7 50.0V			01
C123	US063100	Ceramic Capacitor-B (chip)	1000P 50V K RECT.			01
C124	US063100	Ceramic Capacitor-B (chip)	1000P 50V K RECT.			01
* C125	VB639700	Electrolytic Cap.-BP	4.7 25.0V			
* C130	VB639700	Electrolytic Cap.-BP	4.7 25.0V			
C131	US061560	Ceramic Capacitor-CH(chip)	56P 50V J RECT.			01
C132	VB639900	Electric Capacitor	4.7 50.0V			01
C133	US063100	Ceramic Capacitor-B (chip)	1000P 50V K RECT.			01
* C140	VB639700	Electrolytic Cap.-BP	4.7 25.0V			
C141	US061560	Ceramic Capacitor-CH(chip)	56P 50V J RECT.			01
C142	VB639900	Electric Capacitor	4.7 50.0V			01
C143	US063100	Ceramic Capacitor-B (chip)	1000P 50V K RECT.			01
C150	US063100	Ceramic Capacitor-B (chip)	1000P 50V K RECT.			01
C152	VB639900	Electric Capacitor	4.7 50.0V			01
C160	US063100	Ceramic Capacitor-B (chip)	1000P 50V K RECT.			01
C162	VB639900	Electric Capacitor	4.7 50.0V			01
C201	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C202	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C217	VS490700	Electric Capacitor	47.0 16.0V TP			01
* C217	WA668400	Electric Capacitor	47.0 16V			
C227	VS490700	Electric Capacitor	47.0 16.0V TP			01
* C227	WA668400	Electric Capacitor	47.0 16V			
C300	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
* C301	VB639800	Electric Capacitor	1.0 50.0V			
* C301	WA670400	Electrolytic Cap.	1.0 50V			
* C302	VB639800	Electric Capacitor	1.0 50.0V			
* C302	WA670400	Electrolytic Cap.	1.0 50V			
* C303	VB640100	Electric Capacitor	22.0 16.0V			
* C303	WA668200	Electrolytic Cap.	22.0 16V			
C304	UR865470	Electrolytic Cap.	0.47 50.0V RX TP			01
C305	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C401	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C402	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C501	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C502	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C601	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C602	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C701	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C702	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C801	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C802	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
CN1	VZ479500	Connector , FFC	52806 24P TE			01
CN2	LB932030	Base Post Connector	VH 3P TE			01
CN3	VB390700	Connector Base Post	PH 11P TE			01
CN5	LB932030	Base Post Connector	VH 3P TE			01
CN6	VB390200	Connector Base Post	PH 6P TE			01
CN7	VB390100	Connector Base Post	PH 5P TE			01
D1	VR496500	Diode	MA111 FLAT TP			
D1	VT332900	Diode	1SS355 TE-17 TP			01
D2	VR496500	Diode	MA111 FLAT TP			
D2	VT332900	Diode	1SS355 TE-17 TP			01
D3	VR496500	Diode	MA111 FLAT TP			
D3	VT332900	Diode	1SS355 TE-17 TP			01
D4	VR496500	Diode	MA111 FLAT TP			

* : New part (新規部品)

RANK : Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
D4	VT332900	Diode	1SS355 TE-17 TP			01
D5	VR496500	Diode	MA111 FLAT TP			
D5	VT332900	Diode	1SS355 TE-17 TP			01
D6	VR496500	Diode	MA111 FLAT TP			
D6	VT332900	Diode	1SS355 TE-17 TP			01
D7	VR496500	Diode	MA111 FLAT TP			
D7	VT332900	Diode	1SS355 TE-17 TP			01
D8	VR496500	Diode	MA111 FLAT TP			
D8	VT332900	Diode	1SS355 TE-17 TP			01
D9	VR496500	Diode	MA111 FLAT TP			
D9	VT332900	Diode	1SS355 TE-17 TP			01
D10	VR496500	Diode	MA111 FLAT TP			
D10	VT332900	Diode	1SS355 TE-17 TP			01
D11	VR496500	Diode	MA111 FLAT TP			
D11	VT332900	Diode	1SS355 TE-17 TP			01
D12	VR496500	Diode	MA111 FLAT TP			
D12	VT332900	Diode	1SS355 TE-17 TP			01
D21	VR496500	Diode	MA111 FLAT TP			
D21	VT332900	Diode	1SS355 TE-17 TP			01
D22	VR496500	Diode	MA111 FLAT TP			
D22	VT332900	Diode	1SS355 TE-17 TP			01
EM1	VI243100	LC Filter	DSS6NB32A271Q93A			01
-6	VI243100	LC Filter	DSS6NB32A271Q93A			01
FT3	IE102620	FET	2SK246 Y TP			01
FT4	IE102620	FET	2SK246 Y TP			01
IC2	X2331A00	IC	NJM4580E(TE2)OPAMP	OP AMP		01
IC3	XE470A00	IC	M51132L	VCA		04
IC4	XF291A00	IC	UPC4570G2-T1-A	OP AMP		03
IC5	XF291A00	IC	UPC4570G2-T1-A	OP AMP		03
IC6	XT131A00	IC	LA6517M	OP AMP		04
IC7	XF291A00	IC	UPC4570G2-T1-A	OP AMP		03
IC8	XF291A00	IC	UPC4570G2-T1-A	OP AMP		03
JK1	LB101870	Phone Jack	JACK YKB21-5006	LINE IN/MIC(L/L+R/MIC)		03
JK2	LB101870	Phone Jack	JACK YKB21-5006	LINE IN/MIC(R)		03
JK3	VB312600	Phone Jack	JACK YKB21-5012	TO SUB WOOFER(L)		02
JK5	VV881000	Mini Jack	CMS5008-0101	TO SUB WOOFER(R)		05
JK6	LB101870	Phone Jack	JACK YKB21-5006	AUX OUT/LOOP SEND(L/L+R)		03
JK7	VB312600	Phone Jack	JACK YKB21-5012	AUX OUT/LOOP SEND(R)		02
JK8	VB312600	Phone Jack	JACK YKB21-5012	AUX IN/LOOP RETURN(L/L+R)		02
JK9	LB101870	Phone Jack	JACK YKB21-5006	AUX IN/LOOP RETURN(R)		03
JK10	VC687500	Phone Jack	JACK YKB21-5014	LINE OUT MAIN(L/L+R)		01
JK11	VB312600	Phone Jack	JACK YKB21-5012	LINE OUT MAIN(R)		02
JK12	LB101870	Phone Jack	JACK YKB21-5006	LINE OUT SUB(1)		03
JK13	LB101870	Phone Jack	JACK YKB21-5006	LINE OUT SUB(2)		03
L3	VY657200	Chip Inductance	600 BK1608HM601			01
-8	VY657200	Chip Inductance	600 BK1608HM601			01
L10	VY657200	Chip Inductance	600 BK1608HM601			01
-14	VY657200	Chip Inductance	600 BK1608HM601			01
L15	GE300670	Ferrite Bead	BL02RN2-R62T4			02
L16	VY657200	Chip Inductance	600 BK1608HM601			01
-19	VY657200	Chip Inductance	600 BK1608HM601			01
L20	VF456600	Coil	SBT-0180W RX			03
L22	VF456600	Coil	SBT-0180W RX			03
L24	GE300670	Ferrite Bead	BL02RN2-R62T4			02
L25	GE300670	Ferrite Bead	BL02RN2-R62T4			02
L27	GE300670	Ferrite Bead	BL02RN2-R62T4			02
L28	VY657200	Chip Inductance	600 BK1608HM601			01
-30	VY657200	Chip Inductance	600 BK1608HM601			01
L31	GE300670	Ferrite Bead	BL02RN2-R62T4			02
L32	VY657200	Chip Inductance	600 BK1608HM601			01
L33	VY657200	Chip Inductance	600 BK1608HM601			01
L34	GE300670	Ferrite Bead	BL02RN2-R62T4			02
L35	VY657200	Chip Inductance	600 BK1608HM601			01
L36	--	Jumper Wire	0.55 TIN	(VA07890)		
L37	--	Jumper Wire	0.55 TIN	(VA07890)		
L40	VF456600	Coil	SBT-0180W RX			03
-47	VF456600	Coil	SBT-0180W RX			03
L49	GE300670	Ferrite Bead	BL02RN2-R62T4			02
-51	GE300670	Ferrite Bead	BL02RN2-R62T4			02
L54	--	Jumper Wire	0.55 TIN	(VA07890)		

* : New parts (新規部品)

RANK : Japan only

REF. NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
L55	--	Jumper Wire	0.55 TIN		
L57	VQ724900	Chip Inductance	BK2125HM601-T	(VA07890)	01
L58	GE300670	Ferrite Bead	BL02RN2-R62T4		02
L59	VQ724900	Chip Inductance	BK2125HM601-T		01
L60	VQ724900	Chip Inductance	BK2125HM601-T		01
L61	GE300670	Ferrite Bead	BL02RN2-R62T4		02
L62	VB835000	Coil	FL5R200QNT RX TP		01
-64	VB835000	Coil	FL5R200QNT RX TP		01
R10	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.		01
R11	RD357220	Carbon Resistor (chip)	22.0K 63M J RECT.		01
R12	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R13	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R17	RD355220	Carbon Resistor (chip)	220.0 63M J RECT.		01
R20	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.		01
R21	RD357220	Carbon Resistor (chip)	22.0K 63M J RECT.		01
R22	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R23	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R27	RD355220	Carbon Resistor (chip)	220.0 63M J RECT.		01
R30	RD357330	Carbon Resistor (chip)	33.0K 63M J RECT.		01
R31	RD357820	Carbon Resistor (chip)	82.0K 63M J RECT.		01
R32	RD358560	Carbon Resistor (chip)	560.0K 63M J RECT.		01
R33	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R34	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R35	RD357820	Carbon Resistor (chip)	82.0K 63M J RECT.		01
R36	RD355100	Carbon Resistor (chip)	100.0 63M J RECT.		01
R37	RD357270	Carbon Resistor (chip)	27.0K 63M J RECT.		01
R38	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.		01
R39	RD356470	Carbon Resistor (chip)	4.7K 63M J RECT.		01
R40	RD357330	Carbon Resistor (chip)	33.0K 63M J RECT.		01
R41	RD357820	Carbon Resistor (chip)	82.0K 63M J RECT.		01
R42	RD358560	Carbon Resistor (chip)	560.0K 63M J RECT.		01
R43	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R44	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R45	RD357820	Carbon Resistor (chip)	82.0K 63M J RECT.		01
R46	RD355100	Carbon Resistor (chip)	100.0 63M J RECT.		01
R47	RD358560	Carbon Resistor (chip)	560.0K 63M J RECT.		01
R50	RD357150	Carbon Resistor (chip)	15.0K 63M J RECT.		01
R51	RD357270	Carbon Resistor (chip)	27.0K 63M J RECT.		01
R52	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R53	RD355330	Carbon Resistor (chip)	330.0 63M J RECT.		01
R54	RD356220	Carbon Resistor (chip)	2.2K 63M J RECT.		01
R55	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R56	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R57	RD356470	Carbon Resistor (chip)	4.7K 63M J RECT.		01
R58	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R59	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R60	RD357150	Carbon Resistor (chip)	15.0K 63M J RECT.		01
R61	RD357270	Carbon Resistor (chip)	27.0K 63M J RECT.		01
R62	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R63	RD355330	Carbon Resistor (chip)	330.0 63M J RECT.		01
R64	RD356220	Carbon Resistor (chip)	2.2K 63M J RECT.		01
R65	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R66	RD355150	Carbon Resistor (chip)	150.0 63M J RECT.		01
R67	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R68	RD357120	Carbon Resistor (chip)	12.0K 63M J RECT.		01
R70	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R71	RD357180	Carbon Resistor (chip)	18.0K 63M J RECT.		01
R72	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
R73	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R74	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
-76	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R77	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R78	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R80	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R81	RD357180	Carbon Resistor (chip)	18.0K 63M J RECT.		01
R82	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
R83	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R84	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R85	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R86	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01

*: New part (新規部品)

RANK : Japan only

REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
R90	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R91	RD358100	Carbon Resistor (chip)	100.0K 63M J RECT.		01
R92	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R93	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R94	RD355100	Carbon Resistor (chip)	100.0 63M J RECT.		01
R95	RD355150	Carbon Resistor (chip)	150.0 63M J RECT.		01
R96	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R97	RD355470	Carbon Resistor (chip)	470.0 63M J RECT.		01
R98	RD355470	Carbon Resistor (chip)	470.0 63M J RECT.		01
R99	RD358100	Carbon Resistor (chip)	100.0K 63M J RECT.		01
R100	RD357120	Carbon Resistor (chip)	12.0K 63M J RECT.		01
R110	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R111	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.		01
R112	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R113	RD355680	Carbon Resistor (chip)	680.0 63M J RECT.		01
R114	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R115	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R120	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R121	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.		01
R122	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R123	RD355680	Carbon Resistor (chip)	680.0 63M J RECT.		01
R124	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R125	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R130	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R131	RD357180	Carbon Resistor (chip)	18.0K 63M J RECT.		01
R132	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R133	RD355680	Carbon Resistor (chip)	680.0 63M J RECT.		01
R134	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R135	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R140	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R141	RD357180	Carbon Resistor (chip)	18.0K 63M J RECT.		01
R142	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R143	RD355680	Carbon Resistor (chip)	680.0 63M J RECT.		01
R144	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R145	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R150	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R151	RD355680	Carbon Resistor (chip)	680.0 63M J RECT.		01
R152	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R153	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R160	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R161	RD355680	Carbon Resistor (chip)	680.0 63M J RECT.		01
R162	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R163	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R211	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R212	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R221	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R222	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R231	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R241	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R260	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R270	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R301	RD355100	Carbon Resistor (chip)	100.0 63M J RECT.		01
R302	RD355100	Carbon Resistor (chip)	100.0 63M J RECT.		01
R303	RD357330	Carbon Resistor (chip)	33.0K 63M J RECT.		01
R304	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R310	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R320	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R351	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R352	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R361	RD150000	Carbon Resistor (chip)	0.0 1/4 J TP		01
R362	RD150000	Carbon Resistor (chip)	0.0 1/4 J TP		01
R365	RD150000	Carbon Resistor (chip)	0.0 1/4 J TP		01
R366	RD150000	Carbon Resistor (chip)	0.0 1/4 J TP		01
RY1	V8245600	Relay	DC ATXD203		04
RY1	WB751900	Relay	DC EC2-12NU-F		03
TR1	VV556400	Transistor	2412K Q,R,S TP		01
TR1	WC529400	Transistor	KTC3875S-Y,GR-RTK/		
TR2	VV556400	Transistor	2412K Q,R,S TP		01
TR2	WC529400	Transistor	KTC3875S-Y,GR-RTK/		
TR3	VV556400	Transistor	2412K Q,R,S TP		01

* : New parts (新規部品)

RANK : Japan only

REF.NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
TR3	WC529400	Transistor	KTC3875S-Y,GR-RTK/		
TR4	VV556400	Transistor	2412K Q,R,S TP		01
TR4	WC529400	Transistor	KTC3875S-Y,GR-RTK/		
TR5	VD303700	Transistor	2SC2SC3326 -A,B(TE		01
TR6	VD303700	Transistor	2SC2SC3326 -A,B(TE		01
TR7	VV556400	Transistor	2412K Q,R,S TP		01
TR7	WC529400	Transistor	KTC3875S-Y,GR-RTK/		
TR8	VJ927200	Transistor	2SA1162-Y(TE85R,F)		01
TR8	WC529500	Transistor	KTA1504S-Y,GR-RTK/		
TR9	VV556400	Transistor	2SC2412K Q,R,S TP		01
TR10	VV556400	Transistor	2SC2412K Q,R,S TP		01
TR11	VD303700	Transistor	2SC2SC3326 -A,B(TE		01
-16	VD303700	Transistor	2SC2SC3326 -A,B(TE		01
TR17	VJ927200	Transistor	2SA1162 O,Y _		01
* VR1	WG139000	Rotary Variable Resistor	A 50.0K RK12L12A-F	LINE IN/MIC(TRIM)	
VR2	VV049200	Rotary Variable Resistor	B 10K RK09K12A	AUX IN/LOOP RETURN(TRIM)	03
W1	--	Connector Assembly	SPL 2P-250	(WE84550)	
W2	--	Wiring Assembly EPA2		(WG23510)	
W3	--	Wiring Assembly EP70		(WG23490)	
W4	--	Wiring Assembly EPA1		(WG23500)	
W6	--	Wiring Assembly EPA3		(WG23520)	
ZD1	VU172800	Zener Diode	UDZS12B TE-17 12V		01
* WE854300		Circuit Board	DAC2A	(WE85420)(X5175C0)	
C101	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.		01
C102	UF018100	Electrolytic Cap. (chip)	100 6.3V		01
C103	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.		01
C104	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C105	UF046470	Electrolytic Cap. (chip)	4.7 25V UWX1E4		01
C106	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.		01
C107	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2		01
C108	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2		01
C109	US062100	Ceramic Capacitor-SL(chip)	100P 50V J RECT.		01
C110	US062100	Ceramic Capacitor-SL(chip)	100P 50V J RECT.		01
C201	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
C202	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.		01
C203	UF037100	Electrolytic Cap. (chip)	10 16V		01
C204	UF037100	Electrolytic Cap. (chip)	10 16V		01
C205	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.		01
C206	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.		01
C207	UF037100	Electrolytic Cap. (chip)	10 16V		01
C208	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.		01
C209	UF037100	Electrolytic Cap. (chip)	10 16V		01
-213	UF037100	Electrolytic Cap. (chip)	10 16V		01
C214	US063100	Ceramic Capacitor-B (chip)	1000P 50V K RECT.		01
C215	US063100	Ceramic Capacitor-B (chip)	1000P 50V K RECT.		01
C216	US062180	Ceramic Capacitor-SL(chip)	180P 50V J RECT.		01
-219	US062180	Ceramic Capacitor-SL(chip)	180P 50V J RECT.		01
C224	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.		01
C225	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.		01
C301	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
C302	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.		01
C303	UF037100	Electrolytic Cap. (chip)	10 16V		01
C304	UF037100	Electrolytic Cap. (chip)	10 16V		01
C305	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.		01
C306	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.		01
C307	UF037100	Electrolytic Cap. (chip)	10 16V		01
C308	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.		01
C309	UF037100	Electrolytic Cap. (chip)	10 16V		01
-313	UF037100	Electrolytic Cap. (chip)	10 16V		01
C314	US063100	Ceramic Capacitor-B (chip)	1000P 50V K RECT.		01
C315	US063100	Ceramic Capacitor-B (chip)	1000P 50V K RECT.		01
C316	US062180	Ceramic Capacitor-SL(chip)	180P 50V J RECT.		01
-319	US062180	Ceramic Capacitor-SL(chip)	180P 50V J RECT.		01
C320	UF046470	Electrolytic Cap. (chip)	4.7 25V UWX1E4		01
C321	UF046470	Electrolytic Cap. (chip)	4.7 25V UWX1E4		01
C322	US063820	Ceramic Capacitor-B (chip)	8200P 50V K RECT.		01
C323	US063820	Ceramic Capacitor-B (chip)	8200P 50V K RECT.		01
C324	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.		01
C325	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.		01

* : New part (新規部品)

RANK : Japan only

REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
C401	UF066220	Electrolytic Cap. (chip)	2.2 50V UWX1H2		01
C402	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
C405	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.		01
C406	UF037100	Electrolytic Cap. (chip)	10 16V		01
C407	UF037100	Electrolytic Cap. (chip)	10 16V		01
C408	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.		01
C409	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
C410	UF266100	Electrolytic Cap.-BP (chip)	1.0 50V UWP		01
C411	UF266100	Electrolytic Cap.-BP (chip)	1.0 50V UWP		01
C412	UF037100	Electrolytic Cap. (chip)	10 16V		01
C413	US061560	Ceramic Capacitor-CH(chip)	56P 50V J RECT.		01
C414	US061560	Ceramic Capacitor-CH(chip)	56P 50V J RECT.		01
C415	US062330	Ceramic Capacitor-SL(chip)	330P 50V J RECT.		01
C416	US062330	Ceramic Capacitor-SL(chip)	330P 50V J RECT.		01
C417	US062220	Ceramic Capacitor-SL(chip)	220P 50V J RECT.		01
C418	US062220	Ceramic Capacitor-SL(chip)	220P 50V J RECT.		01
C419	US062100	Ceramic Capacitor-SL(chip)	100P 50V J RECT.		01
C420	US062100	Ceramic Capacitor-SL(chip)	100P 50V J RECT.		01
C421	UF046470	Electrolytic Cap. (chip)	4.7 25V UWX1E4		01
C422	UF046470	Electrolytic Cap. (chip)	4.7 25V UWX1E4		01
C423	US062100	Ceramic Capacitor-SL(chip)	100P 50V J RECT.		01
C424	US062100	Ceramic Capacitor-SL(chip)	100P 50V J RECT.		01
C425	US063100	Ceramic Capacitor-B (chip)	1000P 50V K RECT.		01
C426	US063100	Ceramic Capacitor-B (chip)	1000P 50V K RECT.		01
C427	UF266100	Electrolytic Cap.-BP (chip)	1.0 50V UWP		01
C428	UF266100	Electrolytic Cap.-BP (chip)	1.0 50V UWP		01
C429	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.		01
C430	UF037100	Electrolytic Cap. (chip)	10 16V		01
C431	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.		01
-433	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.		01
C434	UF037100	Electrolytic Cap. (chip)	10 16V		01
C801	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.		01
C802	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.		01
C803	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C804	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C805	US062100	Ceramic Capacitor-SL(chip)	100P 50V J RECT.		01
CN101	V6478900	Connector , FFC/FPC	52808 26P TE		01
CN801	V9028300	Connector , FFC/FPC	52808 24P TE		02
D101	VS201100	Diode	D1F60 1A 600V TP		01
D102	VS201100	Diode	D1F60 1A 600V TP		01
D401	VV925900	Diode	RLS-73 TE-11 TP		01
-404	VV925900	Diode	RLS-73 TE-11 TP		01
IC101	X5826A00	IC	UPC2905AT-E1-AZ	REGULATOR +5.0V	03
IC102	XZ642A00	IC	TAR5S33	REGULATOR +3.3V	
IC201	XW029A00	IC	AK4393VF-E2	D/A CONVERTER	07
IC202	XF291A00	IC	UPC4570G2-T1-A	OP AMP	03
IC301	XW029A00	IC	AK4393VF-E2	D/A CONVERTER	07
IC302	XF291A00	IC	UPC4570G2-T1-A	OP AMP	03
IC401	X5219A00	IC	AK5381VT-E2	A/D CONVERTER	05
IC402	XF291A00	IC	UPC4570G2-T1-A	OP AMP	03
-404	XF291A00	IC	UPC4570G2-T1-A	OP AMP	03
J102	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
-104	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
J106	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
J107	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
L801	V3063400	Chip Inductance	BLM18BD601SN1D		01
-813	V3063400	Chip Inductance	BLM18BD601SN1D		01
R103	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R104	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R106	RD356330	Carbon Resistor (chip)	3.3K 63M J RECT.		01
R107	RD357330	Carbon Resistor (chip)	33.0K 63M J RECT.		01
R108	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R109	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R110	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R111	WD075500	Carbon Resistor (chip)	6.8 1/8W J		
-114	WD075500	Carbon Resistor (chip)	6.8 1/8W J		
R115	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R201	RD356330	Carbon Resistor (chip)	3.3K 63M J RECT.		01
-204	RD356330	Carbon Resistor (chip)	3.3K 63M J RECT.		01
R205	RD357120	Carbon Resistor (chip)	12.0K 63M J RECT.		01

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REF. NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
-207	RD357120	Carbon Resistor (chip)	12.0K 63M J RECT.		01
R208	RD356470	Carbon Resistor (chip)	4.7K 63M J RECT.		01
R209	RD356470	Carbon Resistor (chip)	4.7K 63M J RECT.		01
R210	RD357120	Carbon Resistor (chip)	12.0K 63M J RECT.		01
R211	RD356470	Carbon Resistor (chip)	4.7K 63M J RECT.		01
R212	RD356470	Carbon Resistor (chip)	4.7K 63M J RECT.		01
R219	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R220	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R221	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R301	RD356330	Carbon Resistor (chip)	3.3K 63M J RECT.		01
-304	RD356330	Carbon Resistor (chip)	3.3K 63M J RECT.		01
R305	RD357120	Carbon Resistor (chip)	12.0K 63M J RECT.		01
-307	RD357120	Carbon Resistor (chip)	12.0K 63M J RECT.		01
R308	RD356470	Carbon Resistor (chip)	4.7K 63M J RECT.		01
R309	RD356470	Carbon Resistor (chip)	4.7K 63M J RECT.		01
R310	RD357120	Carbon Resistor (chip)	12.0K 63M J RECT.		01
R311	RD356470	Carbon Resistor (chip)	4.7K 63M J RECT.		01
R312	RD356470	Carbon Resistor (chip)	4.7K 63M J RECT.		01
R313	RD358100	Carbon Resistor (chip)	100.0K 63M J RECT.		01
R314	RD358100	Carbon Resistor (chip)	100.0K 63M J RECT.		01
R315	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R316	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R317	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R318	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R321	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R401	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R402	RD355220	Carbon Resistor (chip)	220.0 63M J RECT.		01
R403	RD355220	Carbon Resistor (chip)	220.0 63M J RECT.		01
R404	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
-409	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R410	RD357330	Carbon Resistor (chip)	33.0K 63M J RECT.		01
R411	RD357330	Carbon Resistor (chip)	33.0K 63M J RECT.		01
R412	RD357820	Carbon Resistor (chip)	82.0K 63M J RECT.		01
R413	RD357820	Carbon Resistor (chip)	82.0K 63M J RECT.		01
R414	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R415	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R416	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.		01
R417	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.		01
R418	RD355100	Carbon Resistor (chip)	100.0 63M J RECT.		01
R419	RD356330	Carbon Resistor (chip)	3.3K 63M J RECT.		01
R420	RD356330	Carbon Resistor (chip)	3.3K 63M J RECT.		01
R421	RD356470	Carbon Resistor (chip)	4.7K 63M J RECT.		01
R422	RD356470	Carbon Resistor (chip)	4.7K 63M J RECT.		01
R424	RD355100	Carbon Resistor (chip)	100.0 63M J RECT.		01
R426	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R427	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R428	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R801	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
-803	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R804	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R805	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
TR101	VV556400	Transistor	2412K Q,R,S TP		01
TR101	WC529400	Transistor	KTC3875S-Y,GR-RTK/		
TR801	VV556400	Transistor	2412K Q,R,S TP		01
TR801	WC529400	Transistor	KTC3875S-Y,GR-RTK/		
*	WE816100	Circuit Board	DJK	(WE81600)(X6042C0)	
*	WF468300	Circuit Board	CK	(WE81600)(X6042C0)	
*	WE816300	Circuit Board	HP	(WE81600)(X6042C0)	
*	WE816500	Circuit Board	INLET	(WE81600)(X6042C0)	
*	WE816800	Circuit Board	MICVR	(WE81600)(X6042C0)	
*	WE816600	Circuit Board	SPOL	(WE81600)(X6042C0)	
*	WE816700	Circuit Board	SPOR	(WE81600)(X6042C0)	
	--	Jumper Wire	0.55 TIN	(VA07890)	
10	--	Holder, SP Jack		(WE81080)	2
20	--	Holder, DML Jack		(WE81100)	
30	--	Holder, DMR Jack		(WE81110)	
40	WE774400	Bind Head Tapping Screw-B	3.0X8 MFZN2B3		01
C13	FG644100	Electrolytic Cap.	0.0100 50V Z RX TP		01
C14	US062220	Ceramic Capacitor-SL(chip)	220P 50V J RECT.		01

*: New part (新規部品)

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REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
C23	FG644100	Electrolytic Cap.	0.0100 50V Z RX TP		01
C24	US062220	Ceramic Capacitor-SL(chip)	220P 50V J RECT.		01
C33	FG644100	Electrolytic Cap.	0.0100 50V Z RX TP		01
C34	US062220	Ceramic Capacitor-SL(chip)	220P 50V J RECT.		01
C40	FG644100	Electrolytic Cap.	0.0100 50V Z RX TP		01
C43	FG644100	Electrolytic Cap.	0.0100 50V Z RX TP		01
C50	FG644100	Electrolytic Cap.	0.0100 50V Z RX TP		01
C53	FG644100	Electrolytic Cap.	0.0100 50V Z RX TP		01
C60	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C61	UR818100	Electrolytic Cap.	100.00 6.3V RX TP		01
C71	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C86	FG613100	Ceramic Capacitor-B	1000P 50V K RX TP		01
C87	UR838220	Electrolytic Cap.	220.00 16.0V RX TP		01
C91	WB476900	Electrolytic Capacitor-ZL	470.00 16.0V RX TP		01
C92	US065100	Ceramic Capacitor-F (chip)	0.100 50V Z RECT.		01
C95	WB476900	Electrolytic Capacitor-ZL	470.00 16.0V RX TP		01
C96	US065100	Ceramic Capacitor-F (chip)	0.100 50V Z RECT.		01
C98	US065100	Ceramic Capacitor-F (chip)	0.100 50V Z RECT.		01
C99	WB476900	Electrolytic Capacitor-ZL	470.00 16.0V RX TP		01
C102	FG644100	Electrolytic Cap.	0.0100 50V Z RX TP		01
C103	FG644100	Electrolytic Cap.	0.0100 50V Z RX TP		01
C104	US062220	Ceramic Capacitor-SL(chip)	220P 50V J RECT.		01
C105	US062220	Ceramic Capacitor-SL(chip)	220P 50V J RECT.		01
C200	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.		01
C201	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.		01
C300	VY675000	Capacitor	0.010 250V J.U.C.S		01
C901	US065100	Ceramic Capacitor-F (chip)	0.100 50V Z RECT.		01
CN10	V7687000	FFC Connector	52806 17P TE		01
CN60	VB390100	Connector Base Post	PH 5P TE		01
CN61	WA245700	USB Connector	YKF45 4P SE	USB(TO DEVICE)	02
CN70	VB390200	Connector Base Post	PH 6P TE		01
CN71	V6802600	Jack, USB	USB 4P SE	USB(TO HOST)	02
CN80	VB390800	Connector Base Post	PH 12P TE		01
CN81	V6706500	D-SUB Connector	KH 15P SE	RGB OUT	05
CN90	LB932050	Base Post Connector	VH 5P TE		01
CN91	LB918060	Base Post Connector	XH 6P TE		01
CN92	VB390100	Connector Base Post	PH 5P TE		01
CN100	VB858500	Connector Base Post	PH 6P SE		01
CN200	VB389600	Connector Base Post	PH 11P SE		01
CN300	VZ365900	Base Post Connector	VA 2P TE		01
CN301	VT807100	Base Post Connector	VH B2P4 2P TE		01
CN302	LB933030	Base Post Connector	VH 3P SE		01
CN303	LB933020	Base Post Connector	VH 2P SE		01
D4	VB941200	Diode	1SS133,1SS176 TE-		01
D5	VB941200	Diode	1SS133,1SS176 TE-		01
D10	VR496500	Diode	MA111 FLAT TP		01
D10	VT332900	Diode	1SS355 TE-17 TP		01
D12	VR496500	Diode	MA111 FLAT TP		01
D12	VT332900	Diode	1SS355 TE-17 TP		01
D14	VR496500	Diode	MA111 FLAT TP		01
D14	VT332900	Diode	1SS355 TE-17 TP		01
D16	VR496500	Diode	MA111 FLAT TP		01
D16	VT332900	Diode	1SS355 TE-17 TP		01
D17	VR496500	Diode	MA111 FLAT TP		01
D17	VT332900	Diode	1SS355 TE-17 TP		01
D18	VR496500	Diode	MA111 FLAT TP		01
D18	VT332900	Diode	1SS355 TE-17 TP		01
EM11	VI243100	LC Filter	DSS6NB32A271Q93A		01
EM12	VI243100	LC Filter	DSS6NB32A271Q93A		01
F300	VT942800	Fuse	TH 2.00A S		01
F300	WD018400	Fuse	TH 2.00A S		01
FZ300	WC050700	Fuse Clip	CLIP EYF52BCY		2
IC40	VD473200	Photo Coupler	6N137		05
IC50	VD473200	Photo Coupler	6N137		05
J300	--	Jumper Wire	0.55 TIN	(VA07890)	
-303	--	Jumper Wire	0.55 TIN	(VA07890)	
JK5	VJ885500	DIN Connector	JACK3P YKF51-5054N	MIDI A(IN,OUT)	04
JK10	VS115400	Phone Jack	LGR4609-7100F	ASSIGNABLE FOOT PEDAL(1)	01
JK20	VS115400	Phone Jack	LGR4609-7100F	ASSIGNABLE FOOT PEDAL(2)	01
JK30	VS115400	Phone Jack	LGR4609-7100F	ASSIGNABLE FOOT PEDAL(3)	01

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REF. NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
JK40	VJ885500	DIN Connector	JACK3P YKF51-5054N	MIDI B(IN,OUT)		04
JK82	VI311100	Pin Jack	YKC21-3017N	VIDEO OUT(NTSC/PAL)		01
JK101	LB101870	Phone Jack	JACK YKB21-5006	PHONES		03
JK300	VZ071000	Inlet	CCT2302-0382F	AC INLET		02
JK301	VB312600	Phone Jack	JACK YKB21-5012	TO LEFT SPEAKER		02
JK302	VB312600	Phone Jack	JACK YKB21-5012	TO RIGHT SPEAKER		02
L11	VB835000	Coil	FL5R200QNT RX TP			01
L12	VF456600	Coil	SBT-0180W RX			03
L13	VY657200	Chip Inductance	600 BK1608HM601			01
-20	VY657200	Chip Inductance	600 BK1608HM601			01
L21	VB835000	Coil	FL5R200QNT RX TP			01
L22	VF456600	Coil	SBT-0180W RX			03
L23	VY657200	Chip Inductance	600 BK1608HM601			01
-25	VY657200	Chip Inductance	600 BK1608HM601			01
L26	GE300670	Ferrite Bead	BL02RN2-R62T4			02
L31	VB835000	Coil	FL5R200QNT RX TP			01
L32	VF456600	Coil	SBT-0180W RX			03
L40	VB835000	Coil	FL5R200QNT RX TP			01
L41	VF456600	Coil	SBT-0180W RX			03
L42	VF456600	Coil	SBT-0180W RX			03
L50	VB835000	Coil	FL5R200QNT RX TP			01
L51	VF456600	Coil	SBT-0180W RX			03
L52	VF456600	Coil	SBT-0180W RX			03
L60	GE300670	Ferrite Bead	BL02RN2-R62T4			02
L70	GE300670	Ferrite Bead	BL02RN2-R62T4			02
L83	VF456600	Coil	SBT-0180W RX			03
L101	GE300670	Ferrite Bead	BL02RN2-R62T4			02
-105	GE300670	Ferrite Bead	BL02RN2-R62T4			02
R11	HF755100	Carbon Resistor	100.0 1/4 J AX TP			01
R12	HF755100	Carbon Resistor	100.0 1/4 J AX TP			01
R13	HF756100	Carbon Resistor	1.0K 1/4 J AX TP			01
R14	HF757100	Carbon Resistor	10.0K 1/4 J AX TP			01
R21	HF755100	Carbon Resistor	100.0 1/4 J AX TP			01
R22	HF755100	Carbon Resistor	100.0 1/4 J AX TP			01
R23	HF756100	Carbon Resistor	1.0K 1/4 J AX TP			01
R24	HF757100	Carbon Resistor	10.0K 1/4 J AX TP			01
R31	HF755100	Carbon Resistor	100.0 1/4 J AX TP			01
R32	HF755100	Carbon Resistor	100.0 1/4 J AX TP			01
R33	HF756100	Carbon Resistor	1.0K 1/4 J AX TP			01
R34	HF757100	Carbon Resistor	10.0K 1/4 J AX TP			01
R41	HF755220	Carbon Resistor	220.0 1/4 J AX TP			01
-43	HF755220	Carbon Resistor	220.0 1/4 J AX TP			01
R44	HF756150	Carbon Resistor	1.5K 1/4 J AX TP			01
R45	HF757220	Carbon Resistor	22.0K 1/4 J AX TP			01
R46	HF757220	Carbon Resistor	22.0K 1/4 J AX TP			01
R47	HF756100	Carbon Resistor	1.0K 1/4 J AX TP			01
R51	HF755220	Carbon Resistor	220.0 1/4 J AX TP			01
-53	HF755220	Carbon Resistor	220.0 1/4 J AX TP			01
R54	HF756150	Carbon Resistor	1.5K 1/4 J AX TP			01
R55	HF757220	Carbon Resistor	22.0K 1/4 J AX TP			01
R56	HF757220	Carbon Resistor	22.0K 1/4 J AX TP			01
R57	HF756100	Carbon Resistor	1.0K 1/4 J AX TP			01
R101	V9638900	Carbon Resistor	68.0 1/2 J			01
R102	V9638900	Carbon Resistor	68.0 1/2 J			01
R200	RD350000	Carbon Resistor (chip)	0 63M J RECT.			01
TR41	IC174020	Transistor	2SC1740S R,S TP			01
TR42	IC174020	Transistor	2SC1740S R,S TP			01
TR51	IC174020	Transistor	2SC1740S R,S TP			01
TR52	IC174020	Transistor	2SC1740S R,S TP			01
VR200	VJ789500	Rotary Variable Resistor	B 10.0K RK09K113	INPUT VOLUME		01
VR201	VT683100	Rotary Variable Resistor	A 10.0K RK14K12C	MASTER VOLUME		03
	WE843700	Circuit Board	DM	(X6533D0)		
C1	UF038100	Electrolytic Cap. (chip)	100 16V			01
C2	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
-4	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C5	US063100	Ceramic Capacitor-B (chip)	1000P 50V K RECT.			01
C6	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C7	V9452200	Electrolytic Cap. (chip)	150.00 4.0V REFLOW			03
C8	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01

* : New part (新規部品)

RANK : Japan only

REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
-17	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C19	UF037100	Electrolytic Cap. (chip)	10 16V		01
C20	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
-22	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
C23	UF038100	Electrolytic Cap. (chip)	100 16V		01
C24	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
C25	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
-28	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C29	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
C31	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C33	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C34	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
C35	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
C36	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
-42	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C45	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C46	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C48	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C49	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C52	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C53	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C54	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
-58	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C59	US060500	Ceramic Capacitor-CH(chip)	5P 50V C RECT.		01
C60	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C61	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C62	US060500	Ceramic Capacitor-CH(chip)	5P 50V C RECT.		01
C63	V9452200	Electrolytic Cap. (chip)	150.00 4.0V REFLOW		03
C64	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C65	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C68	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
-70	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C72	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
-74	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C75	UF037100	Electrolytic Cap. (chip)	10 16V		01
C76	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
-78	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C79	UF037100	Electrolytic Cap. (chip)	10 16V		01
C80	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
-83	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C86	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
-89	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C92	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
-96	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C107	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
-109	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
C110	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
-112	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C114	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C115	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
-124	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
C126	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
C127	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C128	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
-130	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
C131	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C132	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
C133	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C134	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C137	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
C139	US061150	Ceramic Capacitor-CH(chip)	15P 50V J RECT.		01
C140	US061120	Ceramic Capacitor-CH(chip)	12P 50V J RECT.		01
C141	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
-143	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
C147	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
C149	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C150	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
-154	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
C156	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C163	UF128470	Electrolytic Cap. (chip)	470 10V UUR1A4		02

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REF.NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
C164	UF128470	Electrolytic Cap. (chip)	470 10V UUR1A4			02
C168	UF128470	Electrolytic Cap. (chip)	470 10V UUR1A4			02
C169	UF128470	Electrolytic Cap. (chip)	470 10V UUR1A4			02
C184	US063100	Ceramic Capacitor-B (chip)	1000P 50V K RECT.			01
-189	US063100	Ceramic Capacitor-B (chip)	1000P 50V K RECT.			01
C194	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C198	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C199	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C200	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C202	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.			01
C203	UF017220	Electrolytic Cap. (chip)	22 6.3V			01
C204	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
-206	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C207	UF037100	Electrolytic Cap. (chip)	10 16V			01
C208	UF037100	Electrolytic Cap. (chip)	10 16V			01
C211	UF037100	Electrolytic Cap. (chip)	10 16V			01
C212	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C213	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C219	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
-221	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C222	US061100	Ceramic Capacitor-CH(chip)	10P 50V D RECT.			01
-229	US061100	Ceramic Capacitor-CH(chip)	10P 50V D RECT.			01
C231	US061100	Ceramic Capacitor-CH(chip)	10P 50V D RECT.			01
-233	US061100	Ceramic Capacitor-CH(chip)	10P 50V D RECT.			01
C235	UF037100	Electrolytic Cap. (chip)	10 16V			01
C236	UF037100	Electrolytic Cap. (chip)	10 16V			01
C263	UF037100	Electrolytic Cap. (chip)	10 16V			01
C273	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C274	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C279	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C280	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C292	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
-294	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C295	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C296	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C300	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
-302	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C303	US061150	Ceramic Capacitor-CH(chip)	15P 50V J RECT.			01
C304	US061150	Ceramic Capacitor-CH(chip)	15P 50V J RECT.			01
C305	US061120	Ceramic Capacitor-CH(chip)	12P 50V J RECT.			01
C306	US061120	Ceramic Capacitor-CH(chip)	12P 50V J RECT.			01
C307	UF037100	Electrolytic Cap. (chip)	10 16V			01
C308	UF037100	Electrolytic Cap. (chip)	10 16V			01
C309	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C310	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C311	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C312	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C313	US061680	Ceramic Capacitor-SL(chip)	68P 50V J RECT.			01
C314	US063150	Ceramic Capacitor-B (chip)	1500P 50V K RECT.			01
C315	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
-318	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C319	UF037100	Electrolytic Cap. (chip)	10 16V			01
C320	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
-322	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C323	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C324	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
-327	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C328	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C329	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C330	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C331	UF037100	Electrolytic Cap. (chip)	10 16V			01
C332	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
-336	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C337	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C338	US061470	Ceramic Capacitor-CH(chip)	47P 50V J RECT.			01
C339	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
-341	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.			01
C342	US060500	Ceramic Capacitor-CH(chip)	5P 50V C RECT.			01
C343	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C344	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01

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REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
C345	US061150	Ceramic Capacitor-CH(chip)	15P 50V J RECT.		01
C346	US063100	Ceramic Capacitor-B (chip)	1000P 50V K RECT.		01
C400	UF037100	Electrolytic Cap. (chip)	10 16V		01
C401	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
C403	UF017220	Electrolytic Cap. (chip)	22 6.3V		01
C404	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
C407	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C408	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
-427	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
C428	V9452100	Electrolytic Cap. (chip)	100.00 6.3V REFLOW		03
C429	UF037100	Electrolytic Cap. (chip)	10 16V		01
C430	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
C431	UF017220	Electrolytic Cap. (chip)	22 6.3V		01
C432	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
C433	V9452100	Electrolytic Cap. (chip)	100.00 6.3V REFLOW		03
C434	UF037100	Electrolytic Cap. (chip)	10 16V		01
C435	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
-438	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C439	UF037100	Electrolytic Cap. (chip)	10 16V		01
C440	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
C441	UF017220	Electrolytic Cap. (chip)	22 6.3V		01
C442	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C443	UF037100	Electrolytic Cap. (chip)	10 16V		01
C444	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C445	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C446	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
C447	V9454200	Electrolytic Cap. (chip)	220.00 6.3V REFLOW		03
C448	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C449	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C450	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C451	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C452	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C453	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C454	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C455	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C456	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C457	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C458	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C459	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C460	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C461	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C462	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C463	UF037100	Electrolytic Cap. (chip)	10 16V		01
C464	V9452100	Electrolytic Cap. (chip)	100.00 6.3V REFLOW		03
C465	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C466	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C467	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C468	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C469	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C470	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C471	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C472	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C473	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C474	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C475	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C476	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C477	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C478	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C479	UF037100	Electrolytic Cap. (chip)	10 16V		01
C480	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C481	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C482	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C483	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C484	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C485	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C486	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C487	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C488	UF037100	Electrolytic Cap. (chip)	10 16V		01
C489	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C490	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01

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REF.NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
C491	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C492	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
-494	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C495	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C496	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C497	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C498	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C499	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C500	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C501	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C502	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C503	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C504	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C505	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C506	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C507	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C508	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C509	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C510	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C512	UF037100	Electrolytic Cap. (chip)	10 16V		01
C513	US061180	Ceramic Capacitor-CH(chip)	18P 50V J RECT.		01
C514	US061220	Ceramic Capacitor-CH(chip)	22P 50V J RECT.		01
C515	V9452100	Electrolytic Cap. (chip)	100.00 6.3V REFLOW		03
C516	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C517	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C518	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C519	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C520	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C521	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C522	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C523	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C524	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C525	UF018100	Electrolytic Cap. (chip)	100 6.3V		01
C526	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C527	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C528	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C529	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C530	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C531	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C532	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C533	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C534	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C535	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C536	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C537	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C538	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C539	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C540	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C541	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C542	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C543	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C544	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C545	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C546	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C547	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C548	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C549	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C550	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C551	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C552	UF018100	Electrolytic Cap. (chip)	100 6.3V		01
C553	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
-565	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C566	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C567	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C568	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C569	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C570	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C571	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C572	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C573	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01

*: New part (新規部品)

RANK : Japan only

REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
C574	UF037100	Electrolytic Cap. (chip)	10 16V		01
C575	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C576	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C577	UF018100	Electrolytic Cap. (chip)	100 6.3V		01
C578	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C579	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C580	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C581	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C582	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C583	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C584	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C585	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C586	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C587	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C588	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C589	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C590	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C591	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C592	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C593	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C594	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C595	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C596	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C597	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C598	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C599	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C600	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C601	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C602	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C603	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C604	UF018100	Electrolytic Cap. (chip)	100 6.3V		01
C605	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C606	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C607	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C608	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C609	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C610	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C611	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C612	UF017220	Electrolytic Cap. (chip)	22 6.3V		01
-614	UF017220	Electrolytic Cap. (chip)	22 6.3V		01
C618	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C619	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C620	UF037100	Electrolytic Cap. (chip)	10 16V		01
C621	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
-626	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
C643	US063100	Ceramic Capacitor-B (chip)	1000P 50V K RECT.		01
-646	US063100	Ceramic Capacitor-B (chip)	1000P 50V K RECT.		01
C657	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
-665	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C666	UF017220	Electrolytic Cap. (chip)	22 6.3V		01
-668	UF017220	Electrolytic Cap. (chip)	22 6.3V		01
C669	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
-677	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C678	UF017220	Electrolytic Cap. (chip)	22 6.3V		01
-680	UF017220	Electrolytic Cap. (chip)	22 6.3V		01
C681	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
-685	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C686	UF017220	Electrolytic Cap. (chip)	22 6.3V		01
C687	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
-689	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C690	UF017220	Electrolytic Cap. (chip)	22 6.3V		01
C691	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C692	UF017220	Electrolytic Cap. (chip)	22 6.3V		01
C693	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
-700	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C701	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
-760	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
C761	UF037100	Electrolytic Cap. (chip)	10 16V		01
C762	UF037100	Electrolytic Cap. (chip)	10 16V		01
C763	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01

* : New parts (新規部品)

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REF.NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
-766	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
C767	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C801	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
-870	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
C872	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
-892	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.		01
C901	US061220	Ceramic Capacitor-CH(chip)	22P 50V J RECT.		01
C902	US061220	Ceramic Capacitor-CH(chip)	22P 50V J RECT.		01
C903	UF017470	Electrolytic Cap. (chip)	47 6.3V		01
C904	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.		01
C907	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.		01
C909	US126100	Ceramic Capacitor-F (chip)	1.0000 10V Z RECT.		01
C912	US126100	Ceramic Capacitor-F (chip)	1.0000 10V Z RECT.		01
* CN1	WC199200	Connector,FFC/FPC	52808 17P TE		
* CN2	WG139400	Connector,FFC/FPC	FLT 30P TE		
CN6	VT389300	Connector Base Post	PH 12P TE		02
CN8	VT388700	Connector Base Post	PH 6P TE		01
CN22	V8429600	Socket,DIMM	SX4EA-168S-1.27DSA		08
CN23	V8429600	Socket,DIMM	SX4EA-168S-1.27DSA		08
CN30	VT388800	Connector Base Post	PH 7P TE		
CN31	VT388800	Connector Base Post	PH 7P TE		
CN32	WC199000	Connector,FMN	FMN 40P TE		
CN35	VT388500	Connector Base Post	PH 4P TE		01
CN36	LB932070	Base Post Connector	VH 7P TE		01
CN38	VT388700	Connector Base Post	PH 6P TE		01
CN406	V6478900	Connector FFC/FPC	52808 26P TE		01
CN407	VT388600	Connector Base Post	PH 5P TE		01
CN901	VT388600	Connector Base Post	PH 5P TE		01
CN902	VT388600	Connector Base Post	PH 5P TE		01
D1	VS201100	Diode	D1F60 1A 600V TP		01
D201	VR496500	Diode	MA111 FLAT TP		
-204	VR496500	Diode	MA111 FLAT TP		
D400	VS201100	Diode	D1F60 1A 600V TP		01
-402	VS201100	Diode	D1F60 1A 600V TP		01
D403	VR496500	Diode	MA111 FLAT TP		
-408	VR496500	Diode	MA111 FLAT TP		
* DA901	WE297800	Zener Diode	HZM6.2Z4MFA TR-E		
* DA902	WF468100	Zener Diode	HZM6.2ZMWATR-E		
* EM1	WE945600	EMI Filter (chip)	NFM21CC223R1H3D		
EM2	VZ144900	EMI Filter (chip)	NFM21CC101U1H3D		01
* EM9	WE945600	EMI Filter (chip)	NFM21CC223R1H3D		
* EM10	WE945600	EMI Filter (chip)	NFM21CC223R1H3D		
* EM901	WE945600	EMI Filter (chip)	NFM21CC223R1H3D		
* EM902	WE945600	EMI Filter (chip)	NFM21CC223R1H3D		
IC1	IS003200	IC	HD74LV32AFPPEL-E	OR	01
IC2	X0609A00	IC	LMS8117AMP-ADJ/NOP	REGULATOR(VARIABLE)	03
IC3	X4160A00	IC	RN5VD29CA-TR-F	VOLTAGE DETECTOR	02
IC4	XV890B00	IC	TC74VHC14FT(EL,K)	INVERTER	01
IC5	XV890B00	IC	TC74VHC14FT(EL,K)	INVERTER	01
IC6	X2890B00	IC	HD6417727F160CV	CPU	15
IC9	X3123A00	IC	HD74LV126ATELL	TRANSCEIVER	01
IC10	XV890B00	IC	TC74VHC14FT(EL,K)	INVERTER	01
* IC11	X6581D00	IC	TC58FVM7B2ATG65	FLASH ROM 128M(MAIN PROG)	
IC12	X4696A00	IC	TC58FVM6B2ATG65	FLASH ROM 64M(USER DATA)	18
* IC13	X6583100	IC	MX23L12810TC-10G	MASK ROM 128M	
* IC14	X6582100	IC	MX23L12810TC-10G	MASK ROM 128M	
IC15	X4943A00	IC	W982516CH-75	} SDRAM 256M	10
* IC15	X5987A00	IC	NT5SV16M16BS-75B	} SDRAM 256M	
IC16	X4943A00	IC	W982516CH-75	} SDRAM 256M	10
* IC16	X5987A00	IC	NT5SV16M16BS-75B	} SDRAM 256M	
IC19	XW148A00	IC	HD74LVC245A	TRANSCEIVER	02
-22	XW148A00	IC	HD74LVC245A	TRANSCEIVER	02
IC23	IS002100	IC	HD74LV21AFPPEL-E	AND	01
IC25	X2688A00	IC	S1L52502F24J000	GATE ARRAY(DGA)	09
IC26	X2760B00	IC	K4S641632H-UC75000	DRAM 64M	
IC27	XT744B00	IC	TC74VHCT245AFT(E,K)	TRANSCEIVER	02
IC28	XW148A00	IC	HD74LVC245A	TRANSCEIVER	02
IC29	XW148A00	IC	HD74LVC245A	TRANSCEIVER	02
IC30	XS963A00	IC	HD74LVC138FPPEL-E	DEMULTIPLEXER	02
IC32	XS048A00	IC	HD74LVC139FPPEL	DECODER	03

* : New part (新規部品)

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REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
IC33	XU720A00	IC	HD74LVC08FPEL	AND	01
IC35	X6584100	IC	MX23L12810TC-10G	MASK ROM 128M	
IC37	IS027300	IC	HD74LV273AFPEL-E	D FLIP-FLOP	02
IC42	X6788A00	IC	DS90LV011ATMF/NOPB	LVDS DRIVER	
IC46	XW148A00	IC	HD74LVC245A	TRANSCEIVER	02
IC49	XV890B00	IC	TC74VHC14FT(EL,K)	INVERTER	01
IC51	XZ878100	IC	M38869M8A-112GPUO	CPU(EBUS HOST)	07
IC53	X6046B00	IC	LC4256V-75TN100 CP	CPLD(MEL)	
IC54	XU797A00	IC	TC74VHC245FT BUFF	BUFFER	03
IC55	XR680A00	IC	TC7SH08FU AND	AND	01
IC56	XW633A00	IC	TC7SH32FU OR	OR	01
IC300	XQ805A00	IC	TC7WU04FU	INVERTER	01
IC301	XQ805A00	IC	TC7WU04FU	INVERTER	01
IC302	X6356A00	IC	YGV628-VZ	RGB CONTROLLER(AVDP7)	
IC303	X6536A00	IC	TC74ACT74FT(EL)	D FLIP-FLOP	
IC304	X2360B00	IC	K4S161622H-UC60000	SDRAM 16M	
IC305	X6537A00	IC	TC74ACT244FT(EL)	BUFFER	
IC306	X2314A00	IC	MB3516APF-G-BND	COMPOSITE OUT	04
IC400	X0609A00	IC	LMS8117AMP-ADJ/NOP	REGULATOR(VARIABLE)	03
IC401	XS963A00	IC	HD74LVC138FPEL-E	DEMULTIPLEXER	02
IC402	X0609A00	IC	LMS8117AMP-ADJ/NOP	REGULATOR(VARIABLE)	03
IC403	X0609A00	IC	LMS8117AMP-ADJ/NOP	REGULATOR(VARIABLE)	03
IC404	--	IC	T8F02TB-0102	TONE GENERATOR M(X0060A0)	
IC405	--	IC	T8F02TB-0102	TONE GENERATOR S(X0060A0)	
IC406	X4195A00	IC	S1L50553F21Y000	C-BUS GATE ARRAY(MCI)	05
IC407	X2687B00	IC	WD6417709SHF200BV	SUB-CPU(SH3)	14
IC408	X0176B00	IC	W9864G2EH-7	SDRAM	08
IC409	X0176B00	IC	W9864G2EH-7	SDRAM	08
IC410	XV890B00	IC	TC74VHC14FT(EL,K)	INVERTER	01
IC411	X6693100	IC	MR27T25603L-D85TM	MASK ROM 256M	
IC412	X6694100	IC	MR27T25603L-D86TM	MASK ROM 256M	
IC413	X6695100	IC	MR27T25603L-D87TM	MASK ROM 256M	
IC414	X6696100	IC	MR27T25603L-D88TM	MASK ROM 256M	
IC415	X6697100	IC	MR27T25603L-D89TM	MASK ROM 256M	
IC416	X6698100	IC	MR27T25603L-D90TM	MASK ROM 256M	
IC417	X2360B00	IC	K4S161622H-UC60000	SDRAM	
IC418	X2360B00	IC	K4S161622H-UC60000	SDRAM	
IC419	IS002100	IC	HD74LV21AFPEL-E	AND	01
IC420	X0176B00	IC	W9864G2EH-7	SDRAM	08
IC421	XW148A00	IC	HD74LVC245A	TRANSCEIVER	02
-424	XW148A00	IC	HD74LVC245A	TRANSCEIVER	02
IC446	X6588100	IC	MR27V802F-0N1TPZ03	MASK ROM 8M	
IC901	X4704A00	IC	USB2046BVF	USB-HUB	06
IC904	X4722A00	IC	UPD16875G-E2-A	USB POWER SWITCH	05
IC906	X4722A00	IC	UPD16875G-E2-A	USB POWER SWITCH	05
L1	VR579900	Chip Inductance	BK2125HS601-T		01
L3	V5239100	Common Mode Coil	DLP31SN121SL2L		03
L5	VY657200	Chip Inductance	600 BK1608HM601		01
-10	VY657200	Chip Inductance	600 BK1608HM601		01
L13	VY657200	Chip Inductance	600 BK1608HM601		01
-23	VY657200	Chip Inductance	600 BK1608HM601		01
L44	V8901200	Chip Solid Inductance	BLM21PG221SN1D		01
L45	V8901200	Chip Solid Inductance	BLM21PG221SN1D		01
L51	VY657200	Chip Inductance	600 BK1608HM601		01
-58	VY657200	Chip Inductance	600 BK1608HM601		01
L60	VY657200	Chip Inductance	600 BK1608HM601		01
-62	VY657200	Chip Inductance	600 BK1608HM601		01
L306	VR579900	Chip Inductance	BK2125HS601-T		01
L307	VR579900	Chip Inductance	BK2125HS601-T		01
L401	VY657200	Chip Inductance	600 BK1608HM601		01
-403	VY657200	Chip Inductance	600 BK1608HM601		01
L405	VY657200	Chip Inductance	600 BK1608HM601		01
-414	VY657200	Chip Inductance	600 BK1608HM601		01
L416	VY657200	Chip Inductance	600 BK1608HM601		01
-421	VY657200	Chip Inductance	600 BK1608HM601		01
L468	V2747000	Chip Inductance	BLM18PG600SN1		
L469	VY657200	Chip Inductance	600 BK1608HM601		01
L905	V5239100	Common Mode Coil	DLP31SN121SL2L		03
L906	V5239100	Common Mode Coil	DLP31SN121SL2L		03
R1	RD356470	Carbon Resistor (chip)	4.7K 63M J RECT.		01

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REF. NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
R2	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.		01
R3	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.		01
R4	V1194300	Carbon Resistor (chip)	560.0 1/10 D RECT.		01
R5	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.		01
R6	V1192300	Carbon Resistor (chip)	82.0 1/10 D RECT.		01
R7	RD357220	Carbon Resistor (chip)	22.0K 63M J RECT.		01
R8	V1193300	Carbon Resistor (chip)	220.0 1/10 D RECT.		01
R9	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R11	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
-13	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R14	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R15	RD358100	Carbon Resistor (chip)	100.0K 63M J RECT.		01
R16	RD358100	Carbon Resistor (chip)	100.0K 63M J RECT.		01
R17	RD355220	Carbon Resistor (chip)	220.0 63M J RECT.		01
-20	RD355220	Carbon Resistor (chip)	220.0 63M J RECT.		01
R21	RD356470	Carbon Resistor (chip)	4.7K 63M J RECT.		01
R24	RD358470	Carbon Resistor (chip)	470.0K 63M J RECT.		01
R25	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R27	RD358470	Carbon Resistor (chip)	470.0K 63M J RECT.		01
R28	RD358470	Carbon Resistor (chip)	470.0K 63M J RECT.		01
R30	RD358470	Carbon Resistor (chip)	470.0K 63M J RECT.		01
R32	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R33	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R34	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
-36	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R38	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R39	RD355220	Carbon Resistor (chip)	220.0 63M J RECT.		01
R40	RD355220	Carbon Resistor (chip)	220.0 63M J RECT.		01
R41	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R42	RD356470	Carbon Resistor (chip)	4.7K 63M J RECT.		01
R43	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
R44	RD357220	Carbon Resistor (chip)	22.0K 63M J RECT.		01
R45	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
-47	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R49	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R52	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R53	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R55	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R56	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R58	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R59	RD357220	Carbon Resistor (chip)	22.0K 63M J RECT.		01
R61	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R62	RD357220	Carbon Resistor (chip)	22.0K 63M J RECT.		01
-64	RD357220	Carbon Resistor (chip)	22.0K 63M J RECT.		01
R65	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R68	RD357220	Carbon Resistor (chip)	22.0K 63M J RECT.		01
R69	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R70	RD154270	Carbon Resistor (chip)	27.0 1/4 J TP		01
R71	RD154270	Carbon Resistor (chip)	27.0 1/4 J TP		01
R72	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
-74	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R75	RD358100	Carbon Resistor (chip)	100.0K 63M J RECT.		01
R76	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R79	RD154270	Carbon Resistor (chip)	27.0 1/4 J TP		01
R80	RD154270	Carbon Resistor (chip)	27.0 1/4 J TP		01
R82	RD357150	Carbon Resistor (chip)	15.0K 63M J RECT.		01
R83	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R85	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R86	RD357150	Carbon Resistor (chip)	15.0K 63M J RECT.		01
R88	RD356150	Carbon Resistor (chip)	1.5K 63M J RECT.		01
R90	RD356150	Carbon Resistor (chip)	1.5K 63M J RECT.		01
R91	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R93	RD355220	Carbon Resistor (chip)	220.0 63M J RECT.		01
R94	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
-98	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R99	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
-101	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
R102	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R104	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R109	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01

*: New part (新規部品)

RANK : Japan only

REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
R110	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R112	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
-116	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R117	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
-119	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
R120	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
-124	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R125	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
R142	RD355100	Carbon Resistor (chip)	100.0 63M J RECT.		01
R146	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
-152	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R153	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
-155	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R156	RD355100	Carbon Resistor (chip)	100.0 63M J RECT.		01
R157	RD354100	Carbon Resistor (chip)	10.0 63M J RECT.		01
R158	RD354820	Carbon Resistor (chip)	82.0 63M J RECT.		01
R159	RD356470	Carbon Resistor (chip)	4.7K 63M J RECT.		01
R161	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
-165	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R166	RD355100	Carbon Resistor (chip)	100.0 63M J RECT.		01
R169	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
-172	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R173	RD359100	Carbon Resistor (chip)	1.0M 63M J RECT.		01
R174	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R175	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R185	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R186	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R191	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R198	RD355100	Carbon Resistor (chip)	100.0 63M J RECT.		01
R201	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R202	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R203	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R207	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R208	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R209	RD356470	Carbon Resistor (chip)	4.7K 63M J RECT.		01
R210	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R211	RD355100	Carbon Resistor (chip)	100.0 63M J RECT.		01
R212	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R213	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R214	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R215	RD356470	Carbon Resistor (chip)	4.7K 63M J RECT.		01
R216	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
-218	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R219	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R220	RD356560	Carbon Resistor (chip)	5.6K 63M J RECT.		01
R221	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R223	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R224	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
-226	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R227	RD355100	Carbon Resistor (chip)	100.0 63M J RECT.		01
R229	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R234	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R235	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
-237	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
R246	RD355100	Carbon Resistor (chip)	100.0 63M J RECT.		01
R247	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R248	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R249	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R250	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R254	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R255	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R257	RD359100	Carbon Resistor (chip)	1.0M 63M J RECT.		01
R259	RD356560	Carbon Resistor (chip)	5.6K 63M J RECT.		01
R262	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R263	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R264	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R265	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
-271	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R272	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
-274	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01

* : New parts (新規部品)

RANK : Japan only

REF. NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
R286	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R290	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R292	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R297	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R298	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
R299	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
R300	RD359100	Carbon Resistor (chip)	1.0M 63M J RECT.		01
R301	RD359100	Carbon Resistor (chip)	1.0M 63M J RECT.		01
R302	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R303	RD355330	Carbon Resistor (chip)	330.0 63M J RECT.		01
R304	RD355270	Carbon Resistor (chip)	270.0 63M J RECT.		01
R305	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R308	RF356680	Carbon Resistor (chip)	6.8K D 1608		01
R309	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.		01
-318	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.		01
R319	RF354820	Carbon Resistor (chip)	82.0 D 1608		01
R320	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.		01
-326	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.		01
R330	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.		01
-333	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.		01
R335	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.		01
-347	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.		01
R348	RF355100	Carbon Resistor (chip)	100.0 D 1608		01
R349	RF355100	Carbon Resistor (chip)	100.0 D 1608		01
R350	RD355100	Carbon Resistor (chip)	100.0 63M J RECT.		01
R351	RD355100	Carbon Resistor (chip)	100.0 63M J RECT.		01
R352	RF354820	Carbon Resistor (chip)	82.0 D 1608		01
R353	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.		01
R354	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.		01
R355	RD354750	Carbon Resistor (chip)	75.0 63M J RECT.		01
-358	RD354750	Carbon Resistor (chip)	75.0 63M J RECT.		01
R359	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
R360	RD354750	Carbon Resistor (chip)	75.0 63M J RECT.		01
-362	RD354750	Carbon Resistor (chip)	75.0 63M J RECT.		01
R363	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R372	RD356220	Carbon Resistor (chip)	2.2K 63M J RECT.		01
-374	RD356220	Carbon Resistor (chip)	2.2K 63M J RECT.		01
R376	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
-380	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
R381	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R382	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
-384	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R388	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R392	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
R393	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
R394	RD354100	Carbon Resistor (chip)	10.0 63M J RECT.		01
R395	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R396	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R397	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
R398	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
R400	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R401	RF355270	Carbon Resistor (chip)	270.0 D 1608		01
R402	RF354270	Carbon Resistor (chip)	27.0 D 1608		01
R403	RF355270	Carbon Resistor (chip)	270.0 D 1608		01
R404	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R405	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R406	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R409	RF355270	Carbon Resistor (chip)	270.0 D 1608		01
R410	RF354270	Carbon Resistor (chip)	27.0 D 1608		01
R411	RF355270	Carbon Resistor (chip)	270.0 D 1608		01
R412	RD354820	Carbon Resistor (chip)	82.0 63M J RECT.		01
R413	RD354820	Carbon Resistor (chip)	82.0 63M J RECT.		01
R414	RF355270	Carbon Resistor (chip)	270.0 D 1608		01
R416	RD354560	Carbon Resistor (chip)	56.0 63M J RECT.		01
R417	RD354560	Carbon Resistor (chip)	56.0 63M J RECT.		01
R418	RF354820	Carbon Resistor (chip)	82.0 D 1608		01
R419	RF355270	Carbon Resistor (chip)	270.0 D 1608		01
R420	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
-424	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R427	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01

*: New part (新規部品)

RANK : Japan only

REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
R428	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R430	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R431	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R432	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R433	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R435	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R436	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
-438	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R439	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R440	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R442	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R443	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R444	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
-446	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R447	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R448	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
-450	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R451	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R452	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R453	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R454	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R455	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R456	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R457	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R458	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R459	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R460	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R461	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R462	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R463	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R464	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R465	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R466	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R468	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R469	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R470	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R471	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R472	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R473	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R474	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R475	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R476	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
-478	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R479	RD355330	Carbon Resistor (chip)	330.0 63M J RECT.		01
R480	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R481	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R482	RD355220	Carbon Resistor (chip)	220.0 63M J RECT.		01
R483	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
-485	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R486	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
-489	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R490	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
-493	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R494	RD354390	Carbon Resistor (chip)	39.0 63M J RECT.		01
-496	RD354390	Carbon Resistor (chip)	39.0 63M J RECT.		01
R497	RD354180	Carbon Resistor (chip)	18.0 63M J RECT.		01
R498	RD354180	Carbon Resistor (chip)	18.0 63M J RECT.		01
R499	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
-501	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
R502	RD354390	Carbon Resistor (chip)	39.0 63M J RECT.		01
-504	RD354390	Carbon Resistor (chip)	39.0 63M J RECT.		01
R505	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
-509	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
R510	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R511	RD354270	Carbon Resistor (chip)	27.0 63M J RECT.		01
R512	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R513	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R515	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
-520	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R521	RD354390	Carbon Resistor (chip)	39.0 63M J RECT.		01

* : New parts (新規部品)

RANK : Japan only

REF. NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
-523	RD354390	Carbon Resistor (chip)	39.0 63M J RECT.		01
R524	RD354180	Carbon Resistor (chip)	18.0 63M J RECT.		01
R525	RD354180	Carbon Resistor (chip)	18.0 63M J RECT.		01
R526	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
-528	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
R529	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R530	RD354390	Carbon Resistor (chip)	39.0 63M J RECT.		01
-532	RD354390	Carbon Resistor (chip)	39.0 63M J RECT.		01
R533	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
R534	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
R535	RD354270	Carbon Resistor (chip)	27.0 63M J RECT.		01
R536	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
-538	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
R539	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
-544	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R545	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R546	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R547	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
-550	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
R551	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R552	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R553	RD355120	Carbon Resistor (chip)	120.0 63M J RECT.		01
R554	RD355220	Carbon Resistor (chip)	220.0 63M J RECT.		01
R556	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
-566	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R567	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R568	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R570	RD355100	Carbon Resistor (chip)	100.0 63M J RECT.		01
-575	RD355100	Carbon Resistor (chip)	100.0 63M J RECT.		01
R576	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
-581	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R600	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R601	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R602	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
-617	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
R700	RD357220	Carbon Resistor (chip)	22.0K 63M J RECT.		01
R900	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R901	RD356150	Carbon Resistor (chip)	1.5K 63M J RECT.		01
R902	RD356150	Carbon Resistor (chip)	1.5K 63M J RECT.		01
R903	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
-908	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R909	RD354270	Carbon Resistor (chip)	27.0 63M J RECT.		01
-912	RD354270	Carbon Resistor (chip)	27.0 63M J RECT.		01
R913	RD357150	Carbon Resistor (chip)	15.0K 63M J RECT.		01
-916	RD357150	Carbon Resistor (chip)	15.0K 63M J RECT.		01
R917	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
-920	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R921	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
-924	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
RA1	RE044100	Resistor Array	10X4		01
-8	RE044100	Resistor Array	10X4		01
RA9	RE044470	Resistor Array	47X4		01
-13	RE044470	Resistor Array	47X4		01
RA14	RE044680	Resistor Array	68X4		01
RA16	RE044680	Resistor Array	68X4		01
RA21	RE044680	Resistor Array	68X4		01
RA22	RE044330	Resistor Array	33X4		01
-32	RE044330	Resistor Array	33X4		01
RA36	RE047470	Resistor Array	47KX4		01
-41	RE047470	Resistor Array	47KX4		01
RA45	RE047470	Resistor Array	47KX4		01
-48	RE047470	Resistor Array	47KX4		01
RA49	RE044330	Resistor Array	33X4		01
-56	RE044330	Resistor Array	33X4		01
RA60	RE047470	Resistor Array	47KX4		01
-63	RE047470	Resistor Array	47KX4		01
RA64	RE046330	Resistor Array	3.3KX4		01
RA65	RE044220	Resistor Array	22X4		01
RA68	RE044470	Resistor Array	47X4		01
-72	RE044470	Resistor Array	47X4		01

*: New part (新規部品)

RANK : Japan only

Tyros2

REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
RA81	RE044680	Resistor Array	68X4		01
-88	RE044680	Resistor Array	68X4		01
RA91	RE045100	Resistor Array	100X4		01
RA92	RE045100	Resistor Array	100X4		01
RA93	RE047470	Resistor Array	47KX4		01
RA94	RE047470	Resistor Array	47KX4		01
RA98	RE044330	Resistor Array	33X4		01
-102	RE044330	Resistor Array	33X4		01
RA104	RE047100	Resistor Array	10KX4		01
RA111	RE044330	Resistor Array	33X4		01
RA114	RE044330	Resistor Array	33X4		01
RA117	RE044330	Resistor Array	33X4		01
-122	RE044330	Resistor Array	33X4		01
RA201	RE044330	Resistor Array	33X4		01
-211	RE044330	Resistor Array	33X4		01
RA408	RE047100	Resistor Array	10KX4		01
RA409	RE047100	Resistor Array	10KX4		01
RA410	RE048100	Resistor Array	100KX4		01
RA411	RE044680	Resistor Array	68X4		01
RA412	RE044680	Resistor Array	68X4		01
RA413	RE048100	Resistor Array	100KX4		01
RA414	RE044680	Resistor Array	68X4		01
RA415	RE044680	Resistor Array	68X4		01
RA416	RE048100	Resistor Array	100KX4		01
RA417	RE044680	Resistor Array	68X4		01
RA418	RE044680	Resistor Array	68X4		01
RA419	RE048100	Resistor Array	100KX4		01
RA420	RE044680	Resistor Array	68X4		01
RA421	RE044680	Resistor Array	68X4		01
RA422	RE048100	Resistor Array	100KX4		01
RA423	RE044680	Resistor Array	68X4		01
RA425	RE044680	Resistor Array	68X4		01
RA430	RE044470	Resistor Array	47X4		01
-433	RE044470	Resistor Array	47X4		01
RA434	RE046100	Resistor Array	1KX4		01
RA435	RE047100	Resistor Array	10KX4		01
RA436	RE047100	Resistor Array	10KX4		01
RA442	RE047100	Resistor Array	10KX4		01
RA443	RE044000	Resistor Array (chip)	0X4		01
-446	RE044000	Resistor Array (chip)	0X4		01
RA447	RE047100	Resistor Array	10KX4		01
RA448	RE047100	Resistor Array	10KX4		01
RA457	RE044000	Resistor Array (chip)	0X4		01
-460	RE044000	Resistor Array (chip)	0X4		01
RA461	RE044390	Resistor Array	39X4		01
-470	RE044390	Resistor Array	39X4		01
RA472	RE044330	Resistor Array	33X4		01
-475	RE044330	Resistor Array	33X4		01
RA476	RE044470	Resistor Array	47X4		01
RA477	RE044680	Resistor Array	68X4		01
RA478	RE044470	Resistor Array	47X4		01
RA479	RE044680	Resistor Array	68X4		01
RA480	RE044470	Resistor Array	47X4		01
RA481	RE044680	Resistor Array	68X4		01
RA482	RE044470	Resistor Array	47X4		01
RA483	RE044680	Resistor Array	68X4		01
RA488	RE044390	Resistor Array	39X4		01
-497	RE044390	Resistor Array	39X4		01
RA498	RE044470	Resistor Array	47X4		01
RA499	RE044470	Resistor Array	47X4		01
RA500	RE044470	Resistor Array	47X4		01
-529	RE044470	Resistor Array	47X4		01
RA530	RE044680	Resistor Array	68X4		01
-533	RE044680	Resistor Array	68X4		01
RA534	RE045100	Resistor Array	100X4		01
-537	RE045100	Resistor Array	100X4		01
RA538	RE044470	Resistor Array	47X4		01
-541	RE044470	Resistor Array	47X4		01
* TA300	V2731900	Pair Transistor	IMX9		01
X1	WA244900	Quartz Crystal Unit	48.000M DSO751SV		04

* : New parts (新規部品)

RANK : Japan only

REF.NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
X2	VP864900	Quartz Crystal Unit	16M SMD-49			04
X5	V3625600	Quartz Crystal Unit	22.5792M SMD-49 TP			03
X6	VY681200	Ceramic Resonator	CSTCC8M00G53-R0			01
* X300	WE945000	Quartz Crystal Unit	25.175MHZ DSO751SV			
X301	V6074900	Quartz Crystal Unit	17.734475MHZ30P			03
X302	V6074800	Quartz Crystal Unit	14.31818MHZ30PP			03
X400	WB551700	Quartz Crystal Unit	16.666M SMD-49 TE			03
X901	V4093500	Quartz Crystal Unit	6M SMD-49			03
*	WE817200	Circuit Board	HDSB	(WF46820)(X6800B0)		
	WA626700	Pin Protector				
C4	WA458100	Electrolytic Capacitor-PW	1000 25.0V TP			01
C5	VC694800	Ceramic Semicon.Cap.	0.1000 25V Z RX TP			01
C6	FG644100	Electrolytic Cap.	0.0100 50V Z RX TP			01
C7	VC694800	Ceramic Semicon.Cap.	0.100 25V Z RX TP			01
C8	WA458100	Electrolytic Capacitor-PW	1000 25.0V TP			01
C9	VC694800	Ceramic Semicon.Cap.	0.1000 25V Z RX TP			01
C10	WA458100	Electrolytic Capacitor-PW	1000 25.0V TP			01
CN1	LB918020	Base Post Connector	XH 2P TE			01
CN2	VB390000	Connector Base Post	PH 4P TE			01
* CN4	WE693800	Pin Header Side	SFB203-2202A01 SE			
CN5	WB497000	Connector , FFC	FMN 40P TE			
D95	V8107700	Diode	RK46			
EM1	VI243100	LC Filter	DSS6NB32A271Q93A			01
IC1	XT442A00	IC	SI-8050S	SWITCHING REGULATOR +5V		05
L1	VZ060700	Choke Coil	ELC15E221N			05
W1	--	Wiring Assembly EP50		(WG23480)		
W2	--	Wiring Assembly EP50		(WG23480)		
*	WE817700	Circuit Board	LCL	(WE81760)(X6232C0)		
*	WE817800	Circuit Board	LCR	(WE81760)(X6232C0)		
C2	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C3	UF038100	Electrolytic Cap. (chip)	100 16V			01
C4	US065100	Ceramic Capacitor-F (chip)	0.100 50V Z RECT.			
C5	US065100	Ceramic Capacitor-F (chip)	0.100 50V Z RECT.			
* C6	WB488900	Mylar Capacitor(chip)	0.18 250V K			
* C7	WF078600	Monolithic Ceramic Cap.	12P 3.15KV J KAKUT			
C8	UF118220	Electrolytic Cap. (chip)	220 6.3V UUR0J2			01
C9	US062100	Ceramic Capacitor-SL(chip)	100P 50V J RECT.			01
C10	US062100	Ceramic Capacitor-SL(chip)	100P 50V J RECT.			01
C11	US062100	Ceramic Capacitor-SL(chip)	100P 50V J RECT.			01
C12	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C13	UF037100	Electrolytic Cap. (chip)	10 16V			01
C14	US065100	Ceramic Capacitor-F (chip)	0.100 50V Z RECT.			
C15	US065100	Ceramic Capacitor-F (chip)	0.100 50V Z RECT.			
C16	US063100	Ceramic Capacitor-B (chip)	1000P 50V K RECT.			01
C17	US065100	Ceramic Capacitor-F (chip)	0.100 50V Z RECT.			
C18	US065100	Ceramic Capacitor-F (chip)	0.100 50V Z RECT.			
C19	US061470	Ceramic Capacitor-CH(chip)	47P 50V J RECT.			01
-26	US061470	Ceramic Capacitor-CH(chip)	47P 50V J RECT.			01
* C27	RD355150	Carbon Film Resistor(chip)	150.0 63M J RECT.			01
CN1	WG084400	Connector , FFC/FPC	6212 30P SE			
* CN2	WF454900	Connector , FFC/FPC	6210 20P SE			
CN3	V9006000	Connector , FFC	52207 9P SE			03
CN4	VZ249200	Connector	52207-0890 8PIN			02
CN5	V9006000	Connector , FFC	52207 9P SE			03
CN6	WE260900	Connector , BH	BH 2P SE			03
CN7	VT618800	Connector Base Post	PH 2P SE			01
* CN8	V2915700	Connector Base Post	S3B-PH-SM3-TB SE			
D1	VR496500	Diode	MA111 FLAT TP			
D1	VT332900	Diode	1SS355 TE-17 TP			01
D2	VR496500	Diode	MA111 FLAT TP			
D2	VT332900	Diode	1SS355 TE-17 TP			01
D3	VR496500	Diode	MA111 FLAT TP			
D3	VT332900	Diode	1SS355 TE-17 TP			01
D4	VR496500	Diode	MA111 FLAT TP			
D4	VT332900	Diode	1SS355 TE-17 TP			01
D5	VR496500	Diode	MA111 FLAT TP			
D5	VT332900	Diode	1SS355 TE-17 TP			01
D6	VR496500	Diode	MA111 FLAT TP			

*: New part (新規部品)

RANK : Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
D6	VT332900	Diode	1SS355 TE-17 TP			01
D7	VR496500	Diode	MA111 FLAT TP			
D7	VT332900	Diode	1SS355 TE-17 TP			
D8	VR496500	Diode	MA111 FLAT TP			
D8	VT332900	Diode	1SS355 TE-17 TP			
D9	VR496500	Diode	MA111 FLAT TP			
D9	VT332900	Diode	1SS355 TE-17 TP			
D10	VR496500	Diode	MA111 FLAT TP			
D10	VT332900	Diode	1SS355 TE-17 TP			
D11	VR496500	Diode	MA111 FLAT TP			
D11	VT332900	Diode	1SS355 TE-17 TP			
D12	VR496500	Diode	MA111 FLAT TP			
D12	VT332900	Diode	1SS355 TE-17 TP			
D13	VR496500	Diode	MA111 FLAT TP			
D13	VT332900	Diode	1SS355 TE-17 TP			
D14	VR496500	Diode	MA111 FLAT TP	OP AMP	01	
D14	VT332900	Diode	1SS355 TE-17 TP			
IC1	X5475A00	IC	NJM12904M(TE1)	LVDS RECEIVER	02	
IC2	X6789A00	IC	DS90LV012ATMF/NOPB			
L1	WB487300	Coil	CDRH125-221 SMD			
R1	RD356560	Carbon Resistor (chip)	5.6K 63M J RECT.			01
R2	VY657200	Chip Inductance	600 BK1608HM601			01
R3	RD356470	Carbon Resistor (chip)	4.7K 63M J RECT.			01
R4	RD156100	Carbon Resistor (chip)	1.0K 1/4 J TP			
R6	RD150000	Carbon Resistor (chip)	0.0 1/4 J TP			01
R9	RD356220	Carbon Resistor (chip)	2.2K 63M J RECT.			01
R10	RD355220	Carbon Resistor (chip)	220.0 63M J RECT.			01
R11	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.			01
R12	RD357270	Carbon Resistor (chip)	27.0K 63M J RECT.			01
R14	RD355100	Carbon Resistor (chip)	100.0 63M J RECT.			01
R15	RD350000	Carbon Resistor (chip)	0 63M J RECT.			01
SW1	V7446600	Tact Switch	EVQQWS03W	A		01
SW2	V7446600	Tact Switch	EVQQWS03W	B		01
SW3	V7446600	Tact Switch	EVQQWS03W	C		01
SW4	V7446600	Tact Switch	EVQQWS03W	D		01
SW5	V7446600	Tact Switch	EVQQWS03W	E		01
SW6	V7446600	Tact Switch	EVQQWS03W	DIRECT ACCESS		01
SW7	V7446600	Tact Switch	EVQQWS03W	TAB(<)		01
SW8	V7446600	Tact Switch	EVQQWS03W	TAB(>)		01
SW9	V7446600	Tact Switch	EVQQWS03W	F		01
SW10	V7446600	Tact Switch	EVQQWS03W	G		01
SW11	V7446600	Tact Switch	EVQQWS03W	H		01
SW12	V7446600	Tact Switch	EVQQWS03W	I		01
SW13	V7446600	Tact Switch	EVQQWS03W	J		01
SW14	V7446600	Tact Switch	EVQQWS03W	EXIT		01
T1	WB487000	Inverter Transformer	CEPH165			
TH1	WF078700	Thermistor (chip)	NCP18XW222J03RB 2.			
TR1	V9065800	Transistor	2SC4672 T100 P,Q			01
TR2	V9065800	Transistor	2SC4672 T100 P,Q			01
VR1	V8966200	Rotary Variable Resistor	B 10K RK14J11A0A0Z	LCD CONTRAST		03
W1	--	Wiring Assembly EPB1			(WG26430)	
	WD800100	Circuit Board	MK61L		(WD80020)(X6578C0)	
	--	Jumper Wire	0.55 TIN		(VA07890)	
CN001	VM689000	Connector , FFC	52045 23P TE			02
CN002	VB858200	Connector Base Post	PH 3P SE			01
D0001	VB941200	Diode	1SS133,1SS176 TE-			01
-0075	VB941200	Diode	1SS133,1SS176 TE-			01
	WD801000	Circuit Board	MKH-D		(WD78570)(X6579B0)	
	--	Circuit Board	EMKS-FD		(WE62270)(WE62310)	
					(X6577A0)	
CN002	VL018400	FFC Connector	FFC 3P SE			01
CN004	VM689000	Connector , FFC	52045 23P TE			02
CN005	VB858200	Connector Base Post	PH 3P SE			01
D0001	VB941200	Diode	1SS133,1SS176 TE-			01
-0048	VB941200	Diode	1SS133,1SS176 TE-			01
	--	Circuit Board	EMKS-FD		(WE62270)(WE62310)	
					(X6577A0)	

* : New parts (新規部品)

RANK : Japan only

REF. NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
	--	Support, PCB	JIS R33 T=5	(WB72300)		
C0005	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.			01
C0009	UF118470	Electrolytic Cap. (chip)	470 6.3V UUR0J4			01
C0011	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.			01
C0021	UF017470	Electrolytic Cap. (chip)	47 6.3V			01
C0022	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.			01
C0023	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.			01
C0027	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.			01
C0028	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.			01
C0029	UF017470	Electrolytic Cap. (chip)	47 6.3V			01
C0030	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.			01
C0031	UF018100	Electrolytic Cap. (chip)	100 6.3V			01
C0032	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.			01
C0033	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C0034	US135100	Ceramic Capacitor-F (chip)	0.1000 16V Z RECT.			01
C0035	US062100	Ceramic Capacitor-SL(chip)	100P 50V J RECT.			01
-0045	US062100	Ceramic Capacitor-SL(chip)	100P 50V J RECT.			01
C0046	US061330	Ceramic Capacitor-CH(chip)	33P 50V J RECT.			01
C0047	US061330	Ceramic Capacitor-CH(chip)	33P 50V J RECT.			01
CN004	VT388800	Connector Base Post	PH 7P TE			
CN005	WB249800	Terminal	20P PFA105-080A04			04
* CN006	WE621400	Terminal	10P PFA105-1002A04			
D0001	VV925900	Diode	RLS-73 TE-11 TP			01
-0006	VV925900	Diode	RLS-73 TE-11 TP			01
D0008	VV925900	Diode	RLS-73 TE-11 TP			01
IC002	X2538A00	IC	NJM2100V(TE2)	OP AMP		02
* IC005	X4801200	IC	HD6433693B14HV	CPU		
L0002	V5848100	Chip Inductance	ELJFC560JF			01
L0003	VR579900	Chip Inductance	BK2125HS601-T			01
L0004	VR579900	Chip Inductance	BK2125HS601-T			01
R0009	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.			01
R0010	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.			01
R0011	RD355150	Carbon Resistor (chip)	150.0 63M J RECT.			01
R0012	RD356680	Carbon Resistor (chip)	6.8K 63M J RECT.			01
R0013	RD355150	Carbon Resistor (chip)	150.0 63M J RECT.			01
R0014	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.			01
R0015	RD355150	Carbon Resistor (chip)	150.0 63M J RECT.			01
R0016	RD357220	Carbon Resistor (chip)	22.0K 63M J RECT.			01
R0017	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.			01
R0018	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.			01
R0019	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.			01
R0020	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.			01
R0021	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.			01
R0022	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.			01
R0025	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.			01
R0030	RD357330	Carbon Resistor (chip)	33.0K 63M J RECT.			01
-0041	RD357330	Carbon Resistor (chip)	33.0K 63M J RECT.			01
R0043	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.			01
R0046	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.			01
R0047	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.			01
VR001	VA788700	Trimmer Potentiometer	B 470.0K TE 3P RHE			01
VR002	VA788600	Trimmer Potentiometer	B 330.0K TE 3P RHE			01
X0001	V4584600	Ceramic Resonator	20.00M CSTCV20.00			01
* --	AAX70980	Circuit Board	PNC,EN	(WF32840)(X6013C0)		
--	--	Circuit Board	PNC	(WF32840)(WE81590)		
--	--	Circuit Board	EN	(X6013C0) (WF32840)(WE85370)		
10	--	Cable	4P- (PNC)	(X6013C0) (WE84310)		
C1	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C2	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C3	UF118220	Electrolytic Cap. (chip)	220 6.3V UUR0J2			01
C4	US061330	Ceramic Capacitor-CH(chip)	33P 50V J RECT.			01
C5	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C6	US065100	Ceramic Capacitor-F (chip)	0.100 50V Z RECT.			
C7	UF118220	Electrolytic Cap. (chip)	220 6.3V UUR0J2			01
C8	US065100	Ceramic Capacitor-F (chip)	0.100 50V Z RECT.			
C9	US065100	Ceramic Capacitor-F (chip)	0.100 50V Z RECT.			
CN1	VQ045300	Connector , FFCr	52044 23P SE			01

*: New part (新規部品)

RANK : Japan only

REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
CN2	VI878200	Cable Holder	51048 4P TE		01
CN3	VI878200	Cable Holder	51048 4P TE		01
D1	VR496500	Diode	MA111 FLAT TP		01
D1	VT332900	Diode	1SS355 TE-17 TP		
D2	VR496500	Diode	MA111 FLAT TP		01
D2	VT332900	Diode	1SS355 TE-17 TP		
D3	VR496500	Diode	MA111 FLAT TP		01
D3	VT332900	Diode	1SS355 TE-17 TP		
D4	VR496500	Diode	MA111 FLAT TP		01
D4	VT332900	Diode	1SS355 TE-17 TP		
D5	VR496500	Diode	MA111 FLAT TP		01
D5	VT332900	Diode	1SS355 TE-17 TP		
D6	VR496500	Diode	MA111 FLAT TP		01
D6	VT332900	Diode	1SS355 TE-17 TP		
D7	VR496500	Diode	MA111 FLAT TP		01
D7	VT332900	Diode	1SS355 TE-17 TP		
D8	VR496500	Diode	MA111 FLAT TP		01
D8	VT332900	Diode	1SS355 TE-17 TP		
D9	VR496500	Diode	MA111 FLAT TP		01
D9	VT332900	Diode	1SS355 TE-17 TP		
D10	VR496500	Diode	MA111 FLAT TP		01
D10	VT332900	Diode	1SS355 TE-17 TP		
D11	VR496500	Diode	MA111 FLAT TP		01
D11	VT332900	Diode	1SS355 TE-17 TP		
D12	VR496500	Diode	MA111 FLAT TP		01
D12	VT332900	Diode	1SS355 TE-17 TP		
D13	VR496500	Diode	MA111 FLAT TP		01
D13	VT332900	Diode	1SS355 TE-17 TP		
D14	VR496500	Diode	MA111 FLAT TP		01
D14	VT332900	Diode	1SS355 TE-17 TP		
D15	VR496500	Diode	MA111 FLAT TP		01
D15	VT332900	Diode	1SS355 TE-17 TP		
D16	VR496500	Diode	MA111 FLAT TP		01
D16	VT332900	Diode	1SS355 TE-17 TP		
D17	VR496500	Diode	MA111 FLAT TP		01
D17	VT332900	Diode	1SS355 TE-17 TP		
D18	VR496500	Diode	MA111 FLAT TP		01
D18	VT332900	Diode	1SS355 TE-17 TP		
D19	VR496500	Diode	MA111 FLAT TP		01
D19	VT332900	Diode	1SS355 TE-17 TP		
D20	VR496500	Diode	MA111 FLAT TP		01
D20	VT332900	Diode	1SS355 TE-17 TP		
D21	VR496500	Diode	MA111 FLAT TP		01
D21	VT332900	Diode	1SS355 TE-17 TP		
D22	VR496500	Diode	MA111 FLAT TP		01
D22	VT332900	Diode	1SS355 TE-17 TP		
D23	VR496500	Diode	MA111 FLAT TP		01
D23	VT332900	Diode	1SS355 TE-17 TP		
D24	VR496500	Diode	MA111 FLAT TP		01
D24	VT332900	Diode	1SS355 TE-17 TP		
D25	VR496500	Diode	MA111 FLAT TP		01
D25	VT332900	Diode	1SS355 TE-17 TP		
D26	VR496500	Diode	MA111 FLAT TP		01
D26	VT332900	Diode	1SS355 TE-17 TP		
D27	VR496500	Diode	MA111 FLAT TP		01
D27	VT332900	Diode	1SS355 TE-17 TP		
D28	VR496500	Diode	MA111 FLAT TP		01
D28	VT332900	Diode	1SS355 TE-17 TP		
D29	VR496500	Diode	MA111 FLAT TP		01
D29	VT332900	Diode	1SS355 TE-17 TP		
D30	VR496500	Diode	MA111 FLAT TP		01
D30	VT332900	Diode	1SS355 TE-17 TP		
D31	VR496500	Diode	MA111 FLAT TP		01
D31	VT332900	Diode	1SS355 TE-17 TP		
D32	VR496500	Diode	MA111 FLAT TP		01
D32	VT332900	Diode	1SS355 TE-17 TP		
D33	VR496500	Diode	MA111 FLAT TP		01
D33	VT332900	Diode	1SS355 TE-17 TP		
D34	VR496500	Diode	MA111 FLAT TP		01
D34	VT332900	Diode	1SS355 TE-17 TP		

* : New parts (新規部品)

RANK : Japan only

REF. NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
EC1	VU481300	Encoder	REB161 PVB 15F		03
IC1	X5646200	IC	M34519M6-521FP W4		
LD1	WF301000	LED (chip)	SML-012PT GREEN		
LD2	WF300900	LED (chip)	SML-512DW ORANGE		
LD3	WF301000	LED (chip)	SML-012PT GREEN		
LD4	WF300900	LED (chip)	SML-512DW ORANGE		
LD5	WF301000	LED (chip)	SML-012PT GREEN		
LD6	WF300900	LED (chip)	SML-512DW ORANGE		
LD7	WF301000	LED (chip)	SML-012PT GREEN		
LD8	WF300900	LED (chip)	SML-512DW ORANGE		
LD9	WF301000	LED (chip)	SML-012PT GREEN		
LD10	WF300900	LED (chip)	SML-512DW ORANGE		
LD11	VD180000	LED	SLZ-190B-03 RED		01
LD12	WF301000	LED (chip)	SML-012PT GREEN		
LD13	WF300900	LED (chip)	SML-512DW ORANGE		
LD14	WF301000	LED (chip)	SML-012PT GREEN		
LD15	WF300900	LED (chip)	SML-512DW ORANGE		
LD16	WF301000	LED (chip)	SML-012PT GREEN		
LD17	WF300900	LED (chip)	SML-512DW ORANGE		
R1	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
-R8	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R9	RD355560	Carbon Resistor (chip)	560.0 63M J RECT.		01
R10	RD355560	Carbon Resistor (chip)	560.0 63M J RECT.		01
-16	RD355560	Carbon Resistor (chip)	560.0 63M J RECT.		01
R17	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
-19	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R21	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
-24	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R33	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R34	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R35	RD356560	Carbon Resistor (chip)	5.6K 63M J RECT.		01
R39	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
-41	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R45	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
-48	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R49	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
-52	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R57	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
-76	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
SW1	V8889300	Push Switch	EVQ 11Y 07K	} BALANCE	01
SW1	VV439800	Tact Switch	SKQNAJ		01
SW2	V8889300	Push Switch	EVQ 11Y 07K	} UP(2)	01
SW2	VV439800	Tact Switch	SKQNAJ		01
SW3	V8889300	Push Switch	EVQ 11Y 07K	} UP(8)	01
SW3	VV439800	Tact Switch	SKQNAJ		01
SW4	V8889300	Push Switch	EVQ 11Y 07K	} DOWN(6)	01
SW4	VV439800	Tact Switch	SKQNAJ		01
SW5	V8889300	Push Switch	EVQ 11Y 07K	} REGISTRATION MEMORY(4)	01
SW5	VV439800	Tact Switch	SKQNAJ		01
SW6	V8889300	Push Switch	EVQ 11Y 07K	} MIXING CONSOLE	01
SW6	VV439800	Tact Switch	SKQNAJ		01
SW7	V8889300	Push Switch	EVQ 11Y 07K	} UP(3)	01
SW7	VV439800	Tact Switch	SKQNAJ		01
SW8	V8889300	Push Switch	EVQ 11Y 07K	} DOWN(1)	01
SW8	VV439800	Tact Switch	SKQNAJ		01
SW9	V8889300	Push Switch	EVQ 11Y 07K	} DOWN(7)	01
SW9	VV439800	Tact Switch	SKQNAJ		01
SW10	V8889300	Push Switch	EVQ 11Y 07K	} REGISTRATION MEMORY(5)	01
SW10	VV439800	Tact Switch	SKQNAJ		01
SW11	V8889300	Push Switch	EVQ 11Y 07K	} CHANNEL ON/OFF	01
SW11	VV439800	Tact Switch	SKQNAJ		01
SW12	V8889300	Push Switch	EVQ 11Y 07K	} UP(4)	01
SW12	VV439800	Tact Switch	SKQNAJ		01
SW13	V8889300	Push Switch	EVQ 11Y 07K	} DOWN(2)	01
SW13	VV439800	Tact Switch	SKQNAJ		01
SW14	V8889300	Push Switch	EVQ 11Y 07K	} DOWN(8)	01
SW14	VV439800	Tact Switch	SKQNAJ		01
SW15	V8889300	Push Switch	EVQ 11Y 07K	} REGISTRATION MEMORY(6)	01
SW15	VV439800	Tact Switch	SKQNAJ		01
SW16	V8889300	Push Switch	EVQ 11Y 07K	} REGIST BANK(-)	01

*: New part (新規部品)

RANK : Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
SW16	VV439800	Tact Switch	SKQNAJ	UP(5)		01
SW17	V8889300	Push Switch	EVQ 11Y 07K			
SW17	VV439800	Tact Switch	SKQNAJ	DOWN(3)		01
SW18	V8889300	Push Switch	EVQ 11Y 07K			
SW18	VV439800	Tact Switch	SKQNAJ	REGISTRATION MEMORY(1)		01
SW19	V8889300	Push Switch	EVQ 11Y 07K			
SW19	VV439800	Tact Switch	SKQNAJ	REGISTRATION MEMORY(7)		01
SW20	V8889300	Push Switch	EVQ 11Y 07K			
SW20	VV439800	Tact Switch	SKQNAJ	FREEZE		01
SW21	V8889300	Push Switch	EVQ 11Y 07K			
SW21	VV439800	Tact Switch	SKQNAJ	UP(6)		01
SW22	V8889300	Push Switch	EVQ 11Y 07K			
SW22	VV439800	Tact Switch	SKQNAJ	DOWN(4)		01
SW23	V8889300	Push Switch	EVQ 11Y 07K			
SW23	VV439800	Tact Switch	SKQNAJ	REGISTRATION MEMORY(2)		01
SW24	V8889300	Push Switch	EVQ 11Y 07K			
SW24	VV439800	Tact Switch	SKQNAJ	REGISTRATION MEMORY(8)		01
SW25	V8889300	Push Switch	EVQ 11Y 07K			
SW25	VV439800	Tact Switch	SKQNAJ	UP(1)		01
SW26	V8889300	Push Switch	EVQ 11Y 07K			
SW26	VV439800	Tact Switch	SKQNAJ	UP(7)		01
SW27	V8889300	Push Switch	EVQ 11Y 07K			
SW27	VV439800	Tact Switch	SKQNAJ	DOWN(5)		01
SW28	V8889300	Push Switch	EVQ 11Y 07K			
SW28	VV439800	Tact Switch	SKQNAJ	REGISTRATION MEMORY(3)		01
SW29	V8889300	Push Switch	EVQ 11Y 07K			
SW29	VV439800	Tact Switch	SKQNAJ	MEMORY		01
SW30	V8889300	Push Switch	EVQ 11Y 07K			
SW30	VV439800	Tact Switch	SKQNAJ	REGIST BANK(+)		01
SW31	V8889300	Push Switch	EVQ 11Y 07K			
SW31	VV439800	Tact Switch	SKQNAJ	ENTER		01
SW32	V8889300	Push Switch	EVQ 11Y 07K			
SW32	VV439800	Tact Switch	SKQNAJ			01
TA1	WC710000	Transistor Array	M54562FP			
TR1	V5005800	Digital Transistor	FMG11A			01
TR2	V5005800	Digital Transistor	FMG11A			01
	WE816900	Circuit Board	PNL	(X6014D0)	5	
	V9642100	LED Spacer	LH-5-9.5			01
C1	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C2	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C3	US065100	Ceramic Capacitor-F (chip)	0.100 50V Z RECT.			
C4	US065100	Ceramic Capacitor-F (chip)	0.100 50V Z RECT.			
C5	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C6	UF118220	Electrolytic Cap. (chip)	220 6.3V UUR0J2			01
C7	US065100	Ceramic Capacitor-F (chip)	0.100 50V Z RECT.			
-11	US065100	Ceramic Capacitor-F (chip)	0.100 50V Z RECT.			
C12	US061680	Ceramic Capacitor-SL(chip)	68P 50V J RECT.			01
C14	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C15	UF118220	Electrolytic Cap. (chip)	220 6.3V UUR0J2			01
C16	US061220	Ceramic Capacitor-CH(chip)	22P 50V J RECT.			01
-18	US061220	Ceramic Capacitor-CH(chip)	22P 50V J RECT.			01
C19	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
-21	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C22	UF118220	Electrolytic Cap. (chip)	220 6.3V UUR0J2			01
C23	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C24	US061220	Ceramic Capacitor-CH(chip)	22P 50V J RECT.			01
C25	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C26	UF118220	Electrolytic Cap. (chip)	220 6.3V UUR0J2			01
C27	US061220	Ceramic Capacitor-CH(chip)	22P 50V J RECT.			01
C28	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C29	US061220	Ceramic Capacitor-CH(chip)	22P 50V J RECT.			01
C30	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C31	US061220	Ceramic Capacitor-CH(chip)	22P 50V J RECT.			01
C32	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
-34	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C35	UF118220	Electrolytic Cap. (chip)	220 6.3V UUR0J2			01
C36	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C37	UF118220	Electrolytic Cap. (chip)	220 6.3V UUR0J2			01
C38	US061220	Ceramic Capacitor-CH(chip)	22P 50V J RECT.			01

* : New parts (新規部品)

RANK : Japan only

REF.NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
C39	US061220	Ceramic Capacitor-CH(chip)	22P 50V J RECT.		01
C40	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
-49	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C50	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C51	UF118220	Electrolytic Cap. (chip)	220 6.3V UUR0J2		01
C52	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C53	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C54	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C55	UF037100	Electrolytic Cap. (chip)	10 16V		01
C56	UF037100	Electrolytic Cap. (chip)	10 16V		01
C57	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C58	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C59	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.		01
C60	US065100	Ceramic Capacitor-F (chip)	0.100 50V Z RECT.		01
C61	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C62	UF037100	Electrolytic Cap. (chip)	10 16V		01
C63	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C64	US065100	Ceramic Capacitor-F (chip)	0.100 50V Z RECT.		01
C65	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.		01
C66	UF118220	Electrolytic Cap. (chip)	220 6.3V UUR0J2		01
CN1	WF450400	FFC Connector	52807 8P SE		01
CN2	VB858300	Connector Base Post	PH 4P SE		01
CN3	LB919060	Base Post Connector	XH-L TYPE 6P SE		01
CN5	VB389600	Connector Base Post	PH 11P SE		01
D1	VR496500	Diode	MA111 FLAT TP		01
D1	VT332900	Diode	1SS355 TE-17 TP		01
D2	VR496500	Diode	MA111 FLAT TP		01
D2	VT332900	Diode	1SS355 TE-17 TP		01
D3	VR496500	Diode	MA111 FLAT TP		01
D3	VT332900	Diode	1SS355 TE-17 TP		01
D4	VR496500	Diode	MA111 FLAT TP		01
D4	VT332900	Diode	1SS355 TE-17 TP		01
D5	VR496500	Diode	MA111 FLAT TP		01
D5	VT332900	Diode	1SS355 TE-17 TP		01
D6	VR496500	Diode	MA111 FLAT TP		01
D6	VT332900	Diode	1SS355 TE-17 TP		01
D7	VR496500	Diode	MA111 FLAT TP		01
D7	VT332900	Diode	1SS355 TE-17 TP		01
D8	VR496500	Diode	MA111 FLAT TP		01
D8	VT332900	Diode	1SS355 TE-17 TP		01
D9	VR496500	Diode	MA111 FLAT TP		01
D9	VT332900	Diode	1SS355 TE-17 TP		01
D10	VR496500	Diode	MA111 FLAT TP		01
D10	VT332900	Diode	1SS355 TE-17 TP		01
D11	VR496500	Diode	MA111 FLAT TP		01
D11	VT332900	Diode	1SS355 TE-17 TP		01
D12	VR496500	Diode	MA111 FLAT TP		01
D12	VT332900	Diode	1SS355 TE-17 TP		01
D13	VR496500	Diode	MA111 FLAT TP		01
D13	VT332900	Diode	1SS355 TE-17 TP		01
D14	VR496500	Diode	MA111 FLAT TP		01
D14	VT332900	Diode	1SS355 TE-17 TP		01
D15	VR496500	Diode	MA111 FLAT TP		01
D15	VT332900	Diode	1SS355 TE-17 TP		01
D16	VR496500	Diode	MA111 FLAT TP		01
D16	VT332900	Diode	1SS355 TE-17 TP		01
D17	VR496500	Diode	MA111 FLAT TP		01
D17	VT332900	Diode	1SS355 TE-17 TP		01
D18	VR496500	Diode	MA111 FLAT TP		01
D18	VT332900	Diode	1SS355 TE-17 TP		01
D19	VR496500	Diode	MA111 FLAT TP		01
D19	VT332900	Diode	1SS355 TE-17 TP		01
D20	VR496500	Diode	MA111 FLAT TP		01
D20	VT332900	Diode	1SS355 TE-17 TP		01
D21	VR496500	Diode	MA111 FLAT TP		01
D21	VT332900	Diode	1SS355 TE-17 TP		01
D22	VR496500	Diode	MA111 FLAT TP		01
D22	VT332900	Diode	1SS355 TE-17 TP		01
D23	VR496500	Diode	MA111 FLAT TP		01
D23	VT332900	Diode	1SS355 TE-17 TP		01

* : New part (新規部品)

RANK : Japan only

REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
D24	VR496500	Diode	MA111 FLAT TP		
D24	VT332900	Diode	1SS355 TE-17 TP		01
D25	VR496500	Diode	MA111 FLAT TP		
D25	VT332900	Diode	1SS355 TE-17 TP		01
D26	VR496500	Diode	MA111 FLAT TP		
D26	VT332900	Diode	1SS355 TE-17 TP		01
D27	VR496500	Diode	MA111 FLAT TP		
D27	VT332900	Diode	1SS355 TE-17 TP		01
D28	VR496500	Diode	MA111 FLAT TP		
D28	VT332900	Diode	1SS355 TE-17 TP		01
D29	VR496500	Diode	MA111 FLAT TP		
D29	VT332900	Diode	1SS355 TE-17 TP		01
D30	VR496500	Diode	MA111 FLAT TP		
D30	VT332900	Diode	1SS355 TE-17 TP		01
D31	VR496500	Diode	MA111 FLAT TP		
D31	VT332900	Diode	1SS355 TE-17 TP		01
D32	VR496500	Diode	MA111 FLAT TP		
D32	VT332900	Diode	1SS355 TE-17 TP		01
D33	VR496500	Diode	MA111 FLAT TP		
D33	VT332900	Diode	1SS355 TE-17 TP		01
D34	VR496500	Diode	MA111 FLAT TP		
D34	VT332900	Diode	1SS355 TE-17 TP		01
D35	VR496500	Diode	MA111 FLAT TP		
D35	VT332900	Diode	1SS355 TE-17 TP		01
D36	VR496500	Diode	MA111 FLAT TP		
D36	VT332900	Diode	1SS355 TE-17 TP		01
D37	VR496500	Diode	MA111 FLAT TP		
D37	VT332900	Diode	1SS355 TE-17 TP		01
D38	VR496500	Diode	MA111 FLAT TP		
D38	VT332900	Diode	1SS355 TE-17 TP		01
D39	VR496500	Diode	MA111 FLAT TP		
D39	VT332900	Diode	1SS355 TE-17 TP		01
D40	VR496500	Diode	MA111 FLAT TP		
D40	VT332900	Diode	1SS355 TE-17 TP		01
D41	VR496500	Diode	MA111 FLAT TP		
D41	VT332900	Diode	1SS355 TE-17 TP		01
D42	VR496500	Diode	MA111 FLAT TP		
D42	VT332900	Diode	1SS355 TE-17 TP		01
D43	VR496500	Diode	MA111 FLAT TP		
D43	VT332900	Diode	1SS355 TE-17 TP		01
D44	VR496500	Diode	MA111 FLAT TP		
D44	VT332900	Diode	1SS355 TE-17 TP		01
D45	VR496500	Diode	MA111 FLAT TP		
D45	VT332900	Diode	1SS355 TE-17 TP		01
D46	VR496500	Diode	MA111 FLAT TP		
D46	VT332900	Diode	1SS355 TE-17 TP		01
D47	VR496500	Diode	MA111 FLAT TP		
D47	VT332900	Diode	1SS355 TE-17 TP		01
D48	VR496500	Diode	MA111 FLAT TP		
D48	VT332900	Diode	1SS355 TE-17 TP		01
D49	VR496500	Diode	MA111 FLAT TP		
D49	VT332900	Diode	1SS355 TE-17 TP		01
D50	VR496500	Diode	MA111 FLAT TP		
D50	VT332900	Diode	1SS355 TE-17 TP		01
D51	VR496500	Diode	MA111 FLAT TP		
D51	VT332900	Diode	1SS355 TE-17 TP		01
D52	VR496500	Diode	MA111 FLAT TP		
D52	VT332900	Diode	1SS355 TE-17 TP		01
D53	VR496500	Diode	MA111 FLAT TP		
D53	VT332900	Diode	1SS355 TE-17 TP		01
D55	VR496500	Diode	MA111 FLAT TP		
D55	VT332900	Diode	1SS355 TE-17 TP		01
D56	VR496500	Diode	MA111 FLAT TP		
D56	VT332900	Diode	1SS355 TE-17 TP		01
D57	VR496500	Diode	MA111 FLAT TP		
D57	VT332900	Diode	1SS355 TE-17 TP		01
D58	VR496500	Diode	MA111 FLAT TP		
D58	VT332900	Diode	1SS355 TE-17 TP		01
D59	VR496500	Diode	MA111 FLAT TP		
D59	VT332900	Diode	1SS355 TE-17 TP		01

* : New parts (新規部品)

RANK : Japan only

REF.NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
D60	VR496500	Diode	MA111 FLAT TP		
D60	VT332900	Diode	1SS355 TE-17 TP		01
D61	VR496500	Diode	MA111 FLAT TP		
D61	VT332900	Diode	1SS355 TE-17 TP		01
D62	VR496500	Diode	MA111 FLAT TP		
D62	VT332900	Diode	1SS355 TE-17 TP		01
D63	VR496500	Diode	MA111 FLAT TP		
D63	VT332900	Diode	1SS355 TE-17 TP		01
D64	VR496500	Diode	MA111 FLAT TP		
D64	VT332900	Diode	1SS355 TE-17 TP		01
D65	VR496500	Diode	MA111 FLAT TP		
D65	VT332900	Diode	1SS355 TE-17 TP		01
D66	VR496500	Diode	MA111 FLAT TP		
D66	VT332900	Diode	1SS355 TE-17 TP		01
D67	VR496500	Diode	MA111 FLAT TP		
D67	VT332900	Diode	1SS355 TE-17 TP		01
D68	VR496500	Diode	MA111 FLAT TP		
D68	VT332900	Diode	1SS355 TE-17 TP		01
D69	VR496500	Diode	MA111 FLAT TP		
D69	VT332900	Diode	1SS355 TE-17 TP		01
D70	VR496500	Diode	MA111 FLAT TP		
D70	VT332900	Diode	1SS355 TE-17 TP		01
D71	VR496500	Diode	MA111 FLAT TP		
D71	VT332900	Diode	1SS355 TE-17 TP		01
D72	VR496500	Diode	MA111 FLAT TP		
D72	VT332900	Diode	1SS355 TE-17 TP		01
D73	VR496500	Diode	MA111 FLAT TP		
D73	VT332900	Diode	1SS355 TE-17 TP		01
D74	VR496500	Diode	MA111 FLAT TP		
D74	VT332900	Diode	1SS355 TE-17 TP		01
D75	VR496500	Diode	MA111 FLAT TP		
D75	VT332900	Diode	1SS355 TE-17 TP		01
D76	VR496500	Diode	MA111 FLAT TP		
D76	VT332900	Diode	1SS355 TE-17 TP		01
IC1	X2987A00	IC	M4A3-64/64-10VNC	CPLD	08
IC2	XZ916200	IC	UPD780031AYGK-N05	CPU	
L1	V5848100	Chip Inductance	ELJFC560JF		01
-4	V5848100	Chip Inductance	ELJFC560JF		01
LD1	VT361700	LED	SLZ274B03T1 2X4 TP	SIGNAL	01
LD2	VT659100	LED	SLZ-174B-03-T1 RED	OVER	01
LD3	VT425300	LED	SLZ290B17T1 2H TP	FADE IN/OUT	01
* LD4	WF300900	LED (chip)	SML-512DW ORANGE	ACMP	
LD5	VG778600	LED	SLZ-290B-03-T2 TP	VOCAL HARMONY	01
LD6	VG197600	LED	GL3ED8	SP1	01
LD7	VT425100	LED	90B-17-T1 RED	REC	01
LD8	VT425100	LED	90B-17-T1 RED	OTS LINK	01
* LD9	WF301000	LED (chip)	SML-012PT GREEN	INTRO(I)	
* LD10	WF300900	LED (chip)	SML-512DW ORANGE	INTRO(I)	
* LD11	WF301000	LED (chip)	SML-012PT GREEN	INTRO(II)	
* LD12	WF300900	LED (chip)	SML-512DW ORANGE	INTRO(II)	
LD13	VG778600	LED	SLZ-290B-03-T2 TP	TALK	01
LD14	VG197600	LED	GL3ED8	SP2	01
LD15	VT425100	LED	90B-17-T1 RED	AUTO FILL IN	01
* LD16	WF301000	LED (chip)	SML-012PT GREEN	INTRO(III)	
* LD17	WF300900	LED (chip)	SML-512DW ORANGE	INTRO(III)	
LD18	VG778600	LED	SLZ-290B-03-T2 TP	EFFECT	01
LD19	VG197600	LED	GL3ED8	PLAY/PAUSE	01
LD20	VT425100	LED	90B-17-T1 RED	METRONOME ON/OFF	01
LD21	VG197600	LED	GL3ED8	SP3	01
* LD22	WF301000	LED (chip)	SML-012PT GREEN	MAIN VARIATION(A)	
* LD23	WF300900	LED (chip)	SML-512DW ORANGE	MAIN VARIATION(A)	
LD24	VT425100	LED	90B-17-T1 RED	GUIDE	01
LD25	VG197600	LED	GL3ED8	SP4	01
* LD26	WF301000	LED (chip)	SML-012PT GREEN	MAIN VARIATION(B)	
* LD27	WF300900	LED (chip)	SML-512DW ORANGE	MAIN VARIATION(B)	
LD28	VT425100	LED	90B-17-T1 RED	P.A.T.	01
LD29	VT425300	LED	SLZ290B17T1 2H TP	LOOP	01
* LD30	WF301000	LED (chip)	SML-012PT GREEN	MAIN VARIATION(C)	
* LD31	WF300900	LED (chip)	SML-512DW ORANGE	MAIN VARIATION(C)	
* LD32	WF301000	LED (chip)	SML-012PT GREEN	MAIN VARIATION(D)	

* : New part (新規部品)

RANK : Japan only

REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
* LD33	WF300900	LED (chip)	SML-512DW ORANGE	MAIN VARIATION(D)	
LD34	VT425300	LED	SLZ290B17T1 2H TP	SONG(I)	01
LD35	VT425300	LED	SLZ290B17T1 2H TP	SONG(II)	01
LD36	VT425300	LED	SLZ290B17T1 2H TP	SONG(III)	01
LD37	WF301000	LED (chip)	SML-012PT GREEN	BREAK	
* LD38	WF300900	LED (chip)	SML-512DW ORANGE	BREAK	
LD39	VT425300	LED	SLZ290B17T1 2H TP	SONG(IV)	01
LD40	VT425300	LED	SLZ290B17T1 2H TP	SONG(V)	01
LD41	VT425300	LED	SLZ290B17T1 2H TP	SONG(VI)	01
LD42	WF301000	LED (chip)	SML-012PT GREEN	ENDING/rit(I)	
* LD43	WF300900	LED (chip)	SML-512DW ORANGE	ENDING/rit(I)	
LD44	VT425300	LED	SLZ290B17T1 2H TP	POP & ROCK	01
LD45	VT425300	LED	SLZ290B17T1 2H TP	BALLAD	01
LD46	VT425300	LED	SLZ290B17T1 2H TP	DANCE	01
LD47	WF301000	LED (chip)	SML-012PT GREEN	MULTI PAD CONTROL(1)	
* LD48	WF300900	LED (chip)	SML-512DW ORANGE	MULTI PAD CONTROL(1)	
* LD49	WF301000	LED (chip)	SML-012PT GREEN	ENDING/rit(II)	
* LD50	WF300900	LED (chip)	SML-512DW ORANGE	ENDING/rit(II)	
* LD51	WF301000	LED (chip)	SML-012PT GREEN	MULTI PAD CONTROL(2)	
* LD52	WF300900	LED (chip)	SML-512DW ORANGE	MULTI PAD CONTROL(2)	
* LD53	WF301000	LED (chip)	SML-012PT GREEN	ENDING/rit(III)	
* LD54	WF300900	LED (chip)	SML-512DW ORANGE	ENDING/rit(III)	
LD55	VT425300	LED	SLZ290B17T1 2H TP	SWING & JAZZ	01
LD56	VT425300	LED	SLZ290B17T1 2H TP	R & B	01
LD57	VT425300	LED	SLZ290B17T1 2H TP	COUNTRY	01
LD58	WF301000	LED (chip)	SML-012PT GREEN	MULTI PAD CONTROL(3)	
* LD59	WF300900	LED (chip)	SML-512DW ORANGE	MULTI PAD CONTROL(3)	
* LD60	WF300900	LED (chip)	SML-512DW ORANGE	SYNC STOP	
LD61	VT425300	LED	SLZ290B17T1 2H TP	LATIN	01
LD62	VT425300	LED	SLZ290B17T1 2H TP	BALLROOM	01
LD63	VT425300	LED	SLZ290B17T1 2H TP	MOVIE & SHOW	01
* LD64	WF301000	LED (chip)	SML-012PT GREEN	MULTI PAD CONTROL(4)	
* LD65	WF300900	LED (chip)	SML-512DW ORANGE	MULTI PAD CONTROL(4)	
* LD66	WF300900	LED (chip)	SML-512DW ORANGE	SYNC START	
LD67	VT425300	LED	SLZ290B17T1 2H TP	ENTERTAINER	01
LD68	VT425300	LED	SLZ290B17T1 2H TP	WORLD	01
LD69	VT425300	LED	SLZ290B17T1 2H TP	FILE ACCESS	01
* LD70	WF301000	LED (chip)	SML-012PT GREEN	START/STOP	
* LD71	WF300900	LED (chip)	SML-512DW ORANGE	START/STOP	
R1	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R2	RD355560	Carbon Resistor (chip)	560.0 63M J RECT.		01
R3	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
-6	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R7	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
-10	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
R11	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R13	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R18	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
-20	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R21	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R22	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
-25	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R26	RD355390	Carbon Resistor (chip)	390.0 63M J RECT.		01
-29	RD355390	Carbon Resistor (chip)	390.0 63M J RECT.		01
R30	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R31	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
-33	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R34	RD355390	Carbon Resistor (chip)	390.0 63M J RECT.		01
-36	RD355390	Carbon Resistor (chip)	390.0 63M J RECT.		01
R37	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R38	RD355390	Carbon Resistor (chip)	390.0 63M J RECT.		01
R39	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
-42	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R43	RD355390	Carbon Resistor (chip)	390.0 63M J RECT.		01
-46	RD355390	Carbon Resistor (chip)	390.0 63M J RECT.		01
R47	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
-58	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R59	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
-61	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R62	RD355390	Carbon Resistor (chip)	390.0 63M J RECT.		01

* : New parts (新規部品)

RANK : Japan only

REF. NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
-64	RD355390	Carbon Resistor (chip)	390.0 63M J RECT.		01
R65	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R66	RD355390	Carbon Resistor (chip)	390.0 63M J RECT.		01
R67	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
-74	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R75	RD355560	Carbon Resistor (chip)	560.0 63M J RECT.		01
R76	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R77	RD355560	Carbon Resistor (chip)	560.0 63M J RECT.		01
R78	RD354220	Carbon Resistor (chip)	22.0 63M J RECT.		01
-81	RD354220	Carbon Resistor (chip)	22.0 63M J RECT.		01
R82	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R83	RD354220	Carbon Resistor (chip)	22.0 63M J RECT.		01
R84	RD354220	Carbon Resistor (chip)	22.0 63M J RECT.		01
R85	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
-91	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R92	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
-94	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R95	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
-126	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
SW1	V8889300	Push Switch	EVQ 11Y 07K	} FADE IN/OUT	01
SW1	VV439800	Tact Switch	SKQNAJ		01
SW2	V8889300	Push Switch	EVQ 11Y 07K	} ACMP	01
SW2	VV439800	Tact Switch	SKQNAJ		01
SW3	V8889300	Push Switch	EVQ 11Y 07K	} DEMO	01
SW3	VV439800	Tact Switch	SKQNAJ		01
SW4	V8889300	Push Switch	EVQ 11Y 07K	} VOCAL HARMONY	01
SW4	VV439800	Tact Switch	SKQNAJ		01
SW5	V8889300	Push Switch	EVQ 11Y 07K	} SP1	01
SW5	VV439800	Tact Switch	SKQNAJ		01
SW6	V8889300	Push Switch	EVQ 11Y 07K	} REC	01
SW6	VV439800	Tact Switch	SKQNAJ		01
SW7	V8889300	Push Switch	EVQ 11Y 07K	} OTS LINK	01
SW7	VV439800	Tact Switch	SKQNAJ		01
SW8	V8889300	Push Switch	EVQ 11Y 07K	} INTRO(I)	01
SW8	VV439800	Tact Switch	SKQNAJ		01
SW9	V8889300	Push Switch	EVQ 11Y 07K	} INTRO(II)	01
SW9	VV439800	Tact Switch	SKQNAJ		01
SW10	V8889300	Push Switch	EVQ 11Y 07K	} TALK	01
SW10	VV439800	Tact Switch	SKQNAJ		01
SW11	V8889300	Push Switch	EVQ 11Y 07K	} LYRICS/TEXT	01
SW11	VV439800	Tact Switch	SKQNAJ		01
SW12	V8889300	Push Switch	EVQ 11Y 07K	} STOP	01
SW12	VV439800	Tact Switch	SKQNAJ		01
SW13	V8889300	Push Switch	EVQ 11Y 07K	} SP2	01
SW13	VV439800	Tact Switch	SKQNAJ		01
SW14	V8889300	Push Switch	EVQ 11Y 07K	} AUTO FILL IN	01
SW14	VV439800	Tact Switch	SKQNAJ		01
SW15	V8889300	Push Switch	EVQ 11Y 07K	} INTRO(III)	01
SW15	VV439800	Tact Switch	SKQNAJ		01
SW16	V8889300	Push Switch	EVQ 11Y 07K	} EFFECT	01
SW16	VV439800	Tact Switch	SKQNAJ		01
SW17	V8889300	Push Switch	EVQ 11Y 07K	} SCORE	01
SW17	VV439800	Tact Switch	SKQNAJ		01
SW18	V8889300	Push Switch	EVQ 11Y 07K	} PLAY/PAUSE	01
SW18	VV439800	Tact Switch	SKQNAJ		01
SW19	V8889300	Push Switch	EVQ 11Y 07K	} METRONOME ON/OFF	01
SW19	VV439800	Tact Switch	SKQNAJ		01
SW20	V8889300	Push Switch	EVQ 11Y 07K	} SP3	01
SW20	VV439800	Tact Switch	SKQNAJ		01
SW21	V8889300	Push Switch	EVQ 11Y 07K	} MAIN VARIATION(A)	01
SW21	VV439800	Tact Switch	SKQNAJ		01
SW22	V8889300	Push Switch	EVQ 11Y 07K	} TAP TEMPO	01
SW22	VV439800	Tact Switch	SKQNAJ		01
SW23	V8889300	Push Switch	EVQ 11Y 07K	} VH TYPE SELECT	01
SW23	VV439800	Tact Switch	SKQNAJ		01
SW24	V8889300	Push Switch	EVQ 11Y 07K	} GUIDE	01
SW24	VV439800	Tact Switch	SKQNAJ		01
SW25	V8889300	Push Switch	EVQ 11Y 07K	} REW	01
SW25	VV439800	Tact Switch	SKQNAJ		01
SW26	V8889300	Push Switch	EVQ 11Y 07K	} SP4	01

*: New part (新規部品)

RANK : Japan only

REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
SW26	VV439800	Tact Switch	SKQNAJ		01
SW27	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW27	VV439800	Tact Switch	SKQNAJ		MAIN VARIATION(B)
SW28	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW28	VV439800	Tact Switch	SKQNAJ		TEMPO(-)
SW29	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW29	VV439800	Tact Switch	SKQNAJ		MIC SETTING
SW30	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW30	VV439800	Tact Switch	SKQNAJ		P.A.T.
SW31	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW31	VV439800	Tact Switch	SKQNAJ		LOOP
SW32	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW32	VV439800	Tact Switch	SKQNAJ		FF
SW33	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW33	VV439800	Tact Switch	SKQNAJ		MAIN VARIATION(C)
SW34	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW34	VV439800	Tact Switch	SKQNAJ		TEMPO(+)
SW35	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW35	VV439800	Tact Switch	SKQNAJ		MAIN VARIATION(D)
SW36	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW36	VV439800	Tact Switch	SKQNAJ		TRANSCOPE(-)
SW37	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW37	VV439800	Tact Switch	SKQNAJ		SONG(I)
SW38	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW38	VV439800	Tact Switch	SKQNAJ		SONG(II)
SW39	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW39	VV439800	Tact Switch	SKQNAJ		SONG(III)
SW40	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW40	VV439800	Tact Switch	SKQNAJ		BREAK
SW41	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW41	VV439800	Tact Switch	SKQNAJ		TRANSCOPE(+)
SW42	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW42	VV439800	Tact Switch	SKQNAJ		SONG(IV)
SW43	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW43	VV439800	Tact Switch	SKQNAJ		SONG(V)
SW44	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW44	VV439800	Tact Switch	SKQNAJ		SONG(VI)
SW45	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW45	VV439800	Tact Switch	SKQNAJ		ENDING/rit(I)
SW46	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW46	VV439800	Tact Switch	SKQNAJ		SELECT
SW47	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW47	VV439800	Tact Switch	SKQNAJ		POP & ROCK
SW48	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW48	VV439800	Tact Switch	SKQNAJ		BALLAD
SW49	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW49	VV439800	Tact Switch	SKQNAJ		DANCE
SW50	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW50	VV439800	Tact Switch	SKQNAJ		ENDING/rit(II)
SW51	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW51	VV439800	Tact Switch	SKQNAJ		MULTI PAD CONTROL(1)
SW52	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW52	VV439800	Tact Switch	SKQNAJ		ENDING/rit(III)
SW53	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW53	VV439800	Tact Switch	SKQNAJ		MULTI PAD CONTROL(2)
SW54	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW54	VV439800	Tact Switch	SKQNAJ		SWING & JAZZ
SW55	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW55	VV439800	Tact Switch	SKQNAJ		R & D
SW56	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW56	VV439800	Tact Switch	SKQNAJ		COUNTRY
SW57	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW57	VV439800	Tact Switch	SKQNAJ		MULTI PAD CONTROL(3)
SW58	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW58	VV439800	Tact Switch	SKQNAJ		SYNC STOP
SW59	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW59	VV439800	Tact Switch	SKQNAJ		LATIN
SW60	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW60	VV439800	Tact Switch	SKQNAJ		BALLROOM
SW61	V8889300	Push Switch	EVQ 11Y 07K	}	01
SW61	VV439800	Tact Switch	SKQNAJ		MOVIE & SHOW

* : New parts (新規部品)

RANK : Japan only

REF. NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
SW61	VV439800	Tact Switch	SKQNAJ	MULTI PAD CONTROL(4)		01
SW62	V8889300	Push Switch	EVQ 11Y 07K			
SW62	VV439800	Tact Switch	SKQNAJ	SYNC START		01
SW63	V8889300	Push Switch	EVQ 11Y 07K			
SW63	VV439800	Tact Switch	SKQNAJ	ENTERTAINER		01
SW64	V8889300	Push Switch	EVQ 11Y 07K			
SW64	VV439800	Tact Switch	SKQNAJ	WORLD		01
SW65	V8889300	Push Switch	EVQ 11Y 07K			
SW65	VV439800	Tact Switch	SKQNAJ	FILE ACCESS		01
SW66	V8889300	Push Switch	EVQ 11Y 07K			
SW66	VV439800	Tact Switch	SKQNAJ	START/STOP		01
SW67	V8889300	Push Switch	EVQ 11Y 07K			
SW67	VV439800	Tact Switch	SKQNAJ	STOP		01
SW68	V8889300	Push Switch	EVQ 11Y 07K			
SW68	VV439800	Tact Switch	SKQNAJ			01
TA1	WC710000	Transistor Array	M54562FP	X6014C0 ONLY		
-4	WC710000	Transistor Array	M54562FP			
TA4	V3117600	Transistor Array	M54564FP-DB1J			
TA5	V8566600	Transistor Array	TD62785F-EL			
TR1	WA013100	Digital Transistor	DTDG23YP T100			
-3	WA013100	Digital Transistor	DTDG23YP T100			01
TR4	V5005800	Digital Transistor	FMG11A			01
TR5	WA013100	Digital Transistor	DTDG23YP T100			01
TR6	WA013100	Digital Transistor	DTDG23YP T100			01
TR7	VY677600	Digital Transistor	DTC123JKA TP			01
TR8	WA013100	Digital Transistor	DTDG23YP T100			01
TR9	WA013100	Digital Transistor	DTDG23YP T100			01
X1	V6150500	Ceramic Resonator	8.38M EFOS8384E5			01
	WE817400	Circuit Board	PNR	(WE81730)(X6015C0)		
	WE817500	Circuit Board	USB	(WE81730)(X6015C0)		
C1	US065100	Ceramic Capacitor-F (chip)	0.100 50V Z RECT.			
-3	US065100	Ceramic Capacitor-F (chip)	0.100 50V Z RECT.			
C5	US065100	Ceramic Capacitor-F (chip)	0.100 50V Z RECT.			
C6	US061680	Ceramic Capacitor-SL(chip)	68P 50V J RECT.			01
C7	US061680	Ceramic Capacitor-SL(chip)	68P 50V J RECT.			01
C8	UF118220	Electrolytic Cap. (chip)	220 6.3V UUR0J2			01
C9	US065100	Ceramic Capacitor-F (chip)	0.100 50V Z RECT.			
C10	US065100	Ceramic Capacitor-F (chip)	0.100 50V Z RECT.			
C11	US061680	Ceramic Capacitor-SL(chip)	68P 50V J RECT.			01
C12	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C13	US061330	Ceramic Capacitor-CH(chip)	33P 50V J RECT.			01
C14	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C15	US065100	Ceramic Capacitor-F (chip)	0.100 50V Z RECT.			
C16	UF118220	Electrolytic Cap. (chip)	220 6.3V UUR0J2			01
C17	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.			01
C18	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C19	UF118220	Electrolytic Cap. (chip)	220 6.3V UUR0J2			01
C20	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.			01
-30	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.			01
C31	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C32	UF037100	Electrolytic Cap. (chip)	10 16V			01
C33	UF037100	Electrolytic Cap. (chip)	10 16V			01
C34	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C35	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.			01
-37	US062470	Ceramic Capacitor-SL(chip)	470P 50V J RECT.			01
C38	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C39	UF118220	Electrolytic Cap. (chip)	220 6.3V UUR0J2			01
C40	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C41	UF037100	Electrolytic Cap. (chip)	10 16V			01
C42	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C43	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.			01
C44	UF118220	Electrolytic Cap. (chip)	220 6.3V UUR0J2			01
C53	US065100	Ceramic Capacitor-F (chip)	0.100 50V Z RECT.			
C69	US065100	Ceramic Capacitor-F (chip)	0.100 50V Z RECT.			
C70	UF018100	Electrolytic Cap. (chip)	100 6.3V			01
C72	US061680	Ceramic Capacitor-SL(chip)	68P 50V J RECT.			01
-74	US061680	Ceramic Capacitor-SL(chip)	68P 50V J RECT.			01
C75	US065100	Ceramic Capacitor-F (chip)	0.100 50V Z RECT.			
CN1	VB389600	Connector Base Post	PH 11P SE			01

* : New part (新規部品)

RANK : Japan only

REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
CN2	VB858600	Connector Base Post	PH 7P SE		01
CN3	VM689000	Connector , FFC	52045 23P TE		02
CN4	VB858400	Connector Base Post	PH 5P SE		01
CN5	WA245700	USB Connector	YKF45 4P SE		02
D1	VR496500	Diode	MA111 FLAT TP		
D1	VT332900	Diode	1SS355 TE-17 TP		01
D2	VR496500	Diode	MA111 FLAT TP		
D2	VT332900	Diode	1SS355 TE-17 TP		01
D3	VR496500	Diode	MA111 FLAT TP		
D3	VT332900	Diode	1SS355 TE-17 TP		01
D4	VR496500	Diode	MA111 FLAT TP		
D4	VT332900	Diode	1SS355 TE-17 TP		01
D5	VR496500	Diode	MA111 FLAT TP		
D5	VT332900	Diode	1SS355 TE-17 TP		01
D6	VR496500	Diode	MA111 FLAT TP		
D6	VT332900	Diode	1SS355 TE-17 TP		01
D7	VR496500	Diode	MA111 FLAT TP		
D7	VT332900	Diode	1SS355 TE-17 TP		01
D9	VR496500	Diode	MA111 FLAT TP		
D9	VT332900	Diode	1SS355 TE-17 TP		01
D10	VR496500	Diode	MA111 FLAT TP		
D10	VT332900	Diode	1SS355 TE-17 TP		01
D11	VR496500	Diode	MA111 FLAT TP		
D11	VT332900	Diode	1SS355 TE-17 TP		01
D12	VR496500	Diode	MA111 FLAT TP		
D12	VT332900	Diode	1SS355 TE-17 TP		01
D13	VR496500	Diode	MA111 FLAT TP		
D13	VT332900	Diode	1SS355 TE-17 TP		01
D14	VR496500	Diode	MA111 FLAT TP		
D14	VT332900	Diode	1SS355 TE-17 TP		01
D15	VR496500	Diode	MA111 FLAT TP		
D15	VT332900	Diode	1SS355 TE-17 TP		01
D16	VR496500	Diode	MA111 FLAT TP		
D16	VT332900	Diode	1SS355 TE-17 TP		01
D17	VR496500	Diode	MA111 FLAT TP		
D17	VT332900	Diode	1SS355 TE-17 TP		01
D18	VR496500	Diode	MA111 FLAT TP		
D18	VT332900	Diode	1SS355 TE-17 TP		01
D19	VR496500	Diode	MA111 FLAT TP		
D19	VT332900	Diode	1SS355 TE-17 TP		01
D20	VR496500	Diode	MA111 FLAT TP		
D20	VT332900	Diode	1SS355 TE-17 TP		01
D21	VR496500	Diode	MA111 FLAT TP		
D21	VT332900	Diode	1SS355 TE-17 TP		01
D22	VR496500	Diode	MA111 FLAT TP		
D22	VT332900	Diode	1SS355 TE-17 TP		01
D23	VR496500	Diode	MA111 FLAT TP		
D23	VT332900	Diode	1SS355 TE-17 TP		01
D24	VR496500	Diode	MA111 FLAT TP		
D24	VT332900	Diode	1SS355 TE-17 TP		01
D25	VR496500	Diode	MA111 FLAT TP		
D25	VT332900	Diode	1SS355 TE-17 TP		01
D26	VR496500	Diode	MA111 FLAT TP		
D26	VT332900	Diode	1SS355 TE-17 TP		01
D27	VR496500	Diode	MA111 FLAT TP		
D27	VT332900	Diode	1SS355 TE-17 TP		01
D28	VR496500	Diode	MA111 FLAT TP		
D28	VT332900	Diode	1SS355 TE-17 TP		01
D29	VR496500	Diode	MA111 FLAT TP		
D29	VT332900	Diode	1SS355 TE-17 TP		01
D30	VR496500	Diode	MA111 FLAT TP		
D30	VT332900	Diode	1SS355 TE-17 TP		01
D31	VR496500	Diode	MA111 FLAT TP		
D31	VT332900	Diode	1SS355 TE-17 TP		01
D32	VR496500	Diode	MA111 FLAT TP		
D32	VT332900	Diode	1SS355 TE-17 TP		01
D33	VR496500	Diode	MA111 FLAT TP		
D33	VT332900	Diode	1SS355 TE-17 TP		01
D34	VR496500	Diode	MA111 FLAT TP		
D34	VT332900	Diode	1SS355 TE-17 TP		01

* : New parts (新規部品)

RANK : Japan only

REF.NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
D35	VR496500	Diode	MA111 FLAT TP		
D35	VT332900	Diode	1SS355 TE-17 TP		01
D36	VR496500	Diode	MA111 FLAT TP		
D36	VT332900	Diode	1SS355 TE-17 TP		01
D37	VR496500	Diode	MA111 FLAT TP		
D37	VT332900	Diode	1SS355 TE-17 TP		01
D38	VR496500	Diode	MA111 FLAT TP		
D38	VT332900	Diode	1SS355 TE-17 TP		01
D39	VR496500	Diode	MA111 FLAT TP		
D39	VT332900	Diode	1SS355 TE-17 TP		01
D40	VR496500	Diode	MA111 FLAT TP		
D40	VT332900	Diode	1SS355 TE-17 TP		01
D41	VR496500	Diode	MA111 FLAT TP		
D41	VT332900	Diode	1SS355 TE-17 TP		01
D42	VR496500	Diode	MA111 FLAT TP		
D42	VT332900	Diode	1SS355 TE-17 TP		01
D43	VR496500	Diode	MA111 FLAT TP		
D43	VT332900	Diode	1SS355 TE-17 TP		01
D44	VR496500	Diode	MA111 FLAT TP		
D44	VT332900	Diode	1SS355 TE-17 TP		01
D45	VR496500	Diode	MA111 FLAT TP		
D45	VT332900	Diode	1SS355 TE-17 TP		01
D46	VR496500	Diode	MA111 FLAT TP		
D46	VT332900	Diode	1SS355 TE-17 TP		01
D47	VR496500	Diode	MA111 FLAT TP		
D47	VT332900	Diode	1SS355 TE-17 TP		01
D48	VR496500	Diode	MA111 FLAT TP		
D48	VT332900	Diode	1SS355 TE-17 TP		01
D49	VR496500	Diode	MA111 FLAT TP		
D49	VT332900	Diode	1SS355 TE-17 TP		01
D50	VR496500	Diode	MA111 FLAT TP		
D50	VT332900	Diode	1SS355 TE-17 TP		01
D51	VR496500	Diode	MA111 FLAT TP		
D51	VT332900	Diode	1SS355 TE-17 TP		01
D52	VR496500	Diode	MA111 FLAT TP		
D52	VT332900	Diode	1SS355 TE-17 TP		01
D53	VR496500	Diode	MA111 FLAT TP		
D53	VT332900	Diode	1SS355 TE-17 TP		01
D54	VR496500	Diode	MA111 FLAT TP		
D54	VT332900	Diode	1SS355 TE-17 TP		01
D55	VR496500	Diode	MA111 FLAT TP		
D55	VT332900	Diode	1SS355 TE-17 TP		01
D56	VR496500	Diode	MA111 FLAT TP		
D56	VT332900	Diode	1SS355 TE-17 TP		01
D57	VR496500	Diode	MA111 FLAT TP		
D57	VT332900	Diode	1SS355 TE-17 TP		01
D58	VR496500	Diode	MA111 FLAT TP		
D58	VT332900	Diode	1SS355 TE-17 TP		01
D59	VR496500	Diode	MA111 FLAT TP		
D59	VT332900	Diode	1SS355 TE-17 TP		01
D60	VR496500	Diode	MA111 FLAT TP		
D60	VT332900	Diode	1SS355 TE-17 TP		01
D61	VR496500	Diode	MA111 FLAT TP		
D61	VT332900	Diode	1SS355 TE-17 TP		01
D62	VR496500	Diode	MA111 FLAT TP		
D62	VT332900	Diode	1SS355 TE-17 TP		01
D63	VR496500	Diode	MA111 FLAT TP		
D63	VT332900	Diode	1SS355 TE-17 TP		01
D64	VR496500	Diode	MA111 FLAT TP		
D64	VT332900	Diode	1SS355 TE-17 TP		01
D65	VR496500	Diode	MA111 FLAT TP		
D65	VT332900	Diode	1SS355 TE-17 TP		01
EM1	WE056200	EMI Filter (chip)	NFM21PC105B1A3D		01
IC1	X5646200	IC	M34519M6-521FP W4	LSC	
IC2	XZ916200	IC	UPD780031AYGK-N05	CPU	
L3	VY657200	Chip Inductance	600 BK1608HM601		01
L5	V5239100	Common Mode Coil	DLP31SN121SL2L		03
LD1	WF301100	LED (chip)	WHITE	MUSIC FINDER	
LD2	VT425100	LED	90B-17-T1 RED	REC(HARD DISK RECORDER)	01
LD3	VG778600	LED	SLZ-290B-03-T2 TP	LEFT HOLD(PART ON/OFF)	01

* : New part (新規部品)

RANK : Japan only

REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
* LD4	WF301000	LED (chip)	SML-012PT GREEN		
LD5	WF300900	LED (chip)	SML-512DW ORANGE		
* LD6	WF301200	LED	ORANGE MARU 2		
* LD7	WF301000	LED (chip)	SML-012PT GREEN		
* LD8	WF300900	LED (chip)	SML-512DW ORANGE		
* LD9	WF301000	LED (chip)	SML-012PT GREEN		
LD10	WF300900	LED (chip)	SML-512DW ORANGE		
* LD11	WF301000	LED (chip)	SML-012PT GREEN		
* LD12	WF300900	LED (chip)	SML-512DW ORANGE		
LD13	VT425300	LED	SLZ290B17T1 2H TP		01
LD14	VT425300	LED	SLZ290B17T1 2H TP		01
LD15	VT425300	LED	SLZ290B17T1 2H TP		01
LD16	VT425300	LED	SLZ290B17T1 2H TP		01
LD17	VT425300	LED	SLZ290B17T1 2H TP		01
LD18	VT425300	LED	SLZ290B17T1 2H TP		01
LD19	VT425300	LED	SLZ290B17T1 2H TP		01
LD20	VT425300	LED	SLZ290B17T1 2H TP		01
LD21	VT425300	LED	SLZ290B17T1 2H TP		01
LD22	VT425300	LED	SLZ290B17T1 2H TP		01
LD23	VT425300	LED	SLZ290B17T1 2H TP		01
LD24	VT425300	LED	SLZ290B17T1 2H TP		01
* LD25	WF301000	LED (chip)	SML-012PT GREEN		
* LD26	WF300900	LED (chip)	SML-512DW ORANGE		
LD27	VT425300	LED	SLZ290B17T1 2H TP		01
LD28	VT425300	LED	SLZ290B17T1 2H TP		01
LD29	VT425300	LED	SLZ290B17T1 2H TP		01
LD30	VT425300	LED	SLZ290B17T1 2H TP		01
* LD31	WF301000	LED (chip)	SML-012PT GREEN		
* LD32	WF300900	LED (chip)	SML-512DW ORANGE		
LD33	VT425300	LED	SLZ290B17T1 2H TP		01
LD34	VT425300	LED	SLZ290B17T1 2H TP		01
LD35	VT425300	LED	SLZ290B17T1 2H TP		01
LD36	VT425300	LED	SLZ290B17T1 2H TP		01
* LD37	WF301000	LED (chip)	SML-012PT GREEN		
* LD38	WF300900	LED (chip)	SML-512DW ORANGE		
LD39	VT425300	LED	SLZ290B17T1 2H TP		01
LD40	VT425300	LED	SLZ290B17T1 2H TP		01
LD41	VT425300	LED	SLZ290B17T1 2H TP		01
LD42	VT425300	LED	SLZ290B17T1 2H TP		01
* LD43	WF301000	LED (chip)	SML-012PT GREEN		
* LD44	WF300900	LED (chip)	SML-512DW ORANGE		
LD45	VT361700	LED	SLZ274B03T1 2X4 TP		01
R1	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R5	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
-10	RD354330	Carbon Resistor (chip)	33.0 63M J RECT.		01
R11	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
-13	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.		01
R14	RD355470	Carbon Resistor (chip)	470.0 63M J RECT.		01
-28	RD350000	Carbon Resistor (chip)	0 63M J RECT.		01
R29	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
-38	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R39	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.		01
R40	RD356560	Carbon Resistor (chip)	5.6K 63M J RECT.		01
R41	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
-43	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R47	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
-53	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R57	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
-60	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R61	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
-74	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R75	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
-78	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R79	RD355390	Carbon Resistor (chip)	390.0 63M J RECT.		01
-82	RD355390	Carbon Resistor (chip)	390.0 63M J RECT.		01
R83	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
-93	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.		01
R94	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
-97	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.		01
R98	RD355390	Carbon Resistor (chip)	390.0 63M J RECT.		01

* : New parts (新規部品)

RANK : Japan only

REF. NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
-101	RD355390	Carbon Resistor (chip)	390.0 63M J RECT.			01
R102	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.			01
R103	RD354220	Carbon Resistor (chip)	22.0 63M J RECT.			01
-108	RD354220	Carbon Resistor (chip)	22.0 63M J RECT.			01
R109	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.			01
-114	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.			01
R116	RD350000	Carbon Resistor (chip)	0 63M J RECT.			01
R117	RD350000	Carbon Resistor (chip)	0 63M J RECT.			01
SW1	V8889300	Push Switch	EVQ 11Y 07K	} MUSIC FINDER		01
SW1	VV439800	Tact Switch	SKQNAJ			01
SW3	V8889300	Push Switch	EVQ 11Y 07K	} REC(HARD DISK REC.)		01
SW3	VV439800	Tact Switch	SKQNAJ			01
SW4	V8889300	Push Switch	EVQ 11Y 07K	} LEFT HOLD(PART ON/OFF)		01
SW4	VV439800	Tact Switch	SKQNAJ			01
SW5	V8889300	Push Switch	EVQ 11Y 07K	} FUNCTION		01
SW5	VV439800	Tact Switch	SKQNAJ			01
SW6	V8889300	Push Switch	EVQ 11Y 07K	} STOP(HARD DISK REC.)		01
SW6	VV439800	Tact Switch	SKQNAJ			01
SW7	V8889300	Push Switch	EVQ 11Y 07K	} LEFT(PART SELECT)		01
SW7	VV439800	Tact Switch	SKQNAJ			01
SW8	V8889300	Push Switch	EVQ 11Y 07K	} LEFT(PART ON/OFF)		01
SW8	VV439800	Tact Switch	SKQNAJ			01
SW9	V8889300	Push Switch	EVQ 11Y 07K	} VOICE CREATOR		01
SW9	VV439800	Tact Switch	SKQNAJ			01
SW10	V8889300	Push Switch	EVQ 11Y 07K	} SELECT(HARD DISK REC.)		01
SW10	VV439800	Tact Switch	SKQNAJ			01
SW11	V8889300	Push Switch	EVQ 11Y 07K	} PLAY/PAUSE(HARD DISK REC)		01
SW11	VV439800	Tact Switch	SKQNAJ			01
SW12	V8889300	Push Switch	EVQ 11Y 07K	} RIGHT1(PART SELECT)		01
SW12	VV439800	Tact Switch	SKQNAJ			01
SW13	V8889300	Push Switch	EVQ 11Y 07K	} RIGHT1(PART ON/OFF)		01
SW13	VV439800	Tact Switch	SKQNAJ			01
SW14	V8889300	Push Switch	EVQ 11Y 07K	} DIGITAL RECORDING		01
SW14	VV439800	Tact Switch	SKQNAJ			01
SW15	V8889300	Push Switch	EVQ 11Y 07K	} SETTING(HARD DISK REC.)		01
SW15	VV439800	Tact Switch	SKQNAJ			01
SW16	V8889300	Push Switch	EVQ 11Y 07K	} PREV(HARD DISK REC.)		01
SW16	VV439800	Tact Switch	SKQNAJ			01
SW17	V8889300	Push Switch	EVQ 11Y 07K	} RIGHT2(PART SELECT)		01
SW17	VV439800	Tact Switch	SKQNAJ			01
SW18	V8889300	Push Switch	EVQ 11Y 07K	} RIGHT2(PART ON/OFF)		01
SW18	VV439800	Tact Switch	SKQNAJ			01
SW19	V8889300	Push Switch	EVQ 11Y 07K	} NEXT(HARD DISK REC.)		01
SW19	VV439800	Tact Switch	SKQNAJ			01
SW20	V8889300	Push Switch	EVQ 11Y 07K	} RIGHT3(PART SELECT)		01
SW20	VV439800	Tact Switch	SKQNAJ			01
SW21	V8889300	Push Switch	EVQ 11Y 07K	} RIGHT3(PART ON/OFF)		01
SW21	VV439800	Tact Switch	SKQNAJ			01
SW22	V8889300	Push Switch	EVQ 11Y 07K	} PIANO		01
SW22	VV439800	Tact Switch	SKQNAJ			01
SW23	V8889300	Push Switch	EVQ 11Y 07K	} E.PIANO		01
SW23	VV439800	Tact Switch	SKQNAJ			01
SW24	V8889300	Push Switch	EVQ 11Y 07K	} ORGAN		01
SW24	VV439800	Tact Switch	SKQNAJ			01
SW25	V8889300	Push Switch	EVQ 11Y 07K	} HARMONY/ECHO		01
SW25	VV439800	Tact Switch	SKQNAJ			01
SW26	V8889300	Push Switch	EVQ 11Y 07K	} UPPER OCTAVE-		01
SW26	VV439800	Tact Switch	SKQNAJ			01
SW27	V8889300	Push Switch	EVQ 11Y 07K	} STRINGS		01
SW27	VV439800	Tact Switch	SKQNAJ			01
SW28	V8889300	Push Switch	EVQ 11Y 07K	} CHOIR		01
SW28	VV439800	Tact Switch	SKQNAJ			01
SW29	V8889300	Push Switch	EVQ 11Y 07K	} BRASS		01
SW29	VV439800	Tact Switch	SKQNAJ			01
SW30	V8889300	Push Switch	EVQ 11Y 07K	} INITIAL TOUCH		01
SW30	VV439800	Tact Switch	SKQNAJ			01
SW31	V8889300	Push Switch	EVQ 11Y 07K	} UPPER OCTAVE+		01
SW31	VV439800	Tact Switch	SKQNAJ			01
SW32	V8889300	Push Switch	EVQ 11Y 07K	} TRUMPET		01
SW32	VV439800	Tact Switch	SKQNAJ			01

* : New part (新規部品)

RANK : Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
SW33	V8889300	Push Switch	EVQ 11Y 07K	SAXOPHONE		01
SW33	VV439800	Tact Switch	SKQNAJ			01
SW34	V8889300	Push Switch	EVQ 11Y 07K	FLUTE/CLARINET		01
SW34	VV439800	Tact Switch	SKQNAJ			01
SW35	V8889300	Push Switch	EVQ 11Y 07K	SUSTAIN		01
SW35	VV439800	Tact Switch	SKQNAJ			01
SW36	V8889300	Push Switch	EVQ 11Y 07K	ONE TOUCH SETTING 1		01
SW36	VV439800	Tact Switch	SKQNAJ			01
SW37	V8889300	Push Switch	EVQ 11Y 07K	GUITAR		01
SW37	VV439800	Tact Switch	SKQNAJ			01
SW38	V8889300	Push Switch	EVQ 11Y 07K	BASS		01
SW38	VV439800	Tact Switch	SKQNAJ			01
SW39	V8889300	Push Switch	EVQ 11Y 07K	PERC./DRUM KIT		01
SW39	VV439800	Tact Switch	SKQNAJ			01
SW40	V8889300	Push Switch	EVQ 11Y 07K	MONO		01
SW40	VV439800	Tact Switch	SKQNAJ			01
SW41	V8889300	Push Switch	EVQ 11Y 07K	ONE TOUCH SETTING 2		01
SW41	VV439800	Tact Switch	SKQNAJ			01
SW42	V8889300	Push Switch	EVQ 11Y 07K	ACCORDION		01
SW42	VV439800	Tact Switch	SKQNAJ			01
SW43	V8889300	Push Switch	EVQ 11Y 07K	PAD		01
SW43	VV439800	Tact Switch	SKQNAJ			01
SW44	V8889300	Push Switch	EVQ 11Y 07K	SYNTH		01
SW44	VV439800	Tact Switch	SKQNAJ			01
SW45	V8889300	Push Switch	EVQ 11Y 07K	DSP		01
SW45	VV439800	Tact Switch	SKQNAJ			01
SW46	V8889300	Push Switch	EVQ 11Y 07K	ONE TOUCH SETTING 3		01
SW46	VV439800	Tact Switch	SKQNAJ			01
SW47	V8889300	Push Switch	EVQ 11Y 07K	ORGAN FLUTES		01
SW47	VV439800	Tact Switch	SKQNAJ			01
SW48	V8889300	Push Switch	EVQ 11Y 07K	CUSTOM VOICE		01
SW48	VV439800	Tact Switch	SKQNAJ			01
SW49	V8889300	Push Switch	EVQ 11Y 07K	USER DRIVE		01
SW49	VV439800	Tact Switch	SKQNAJ			01
SW50	V8889300	Push Switch	EVQ 11Y 07K	DSP VARIATION		01
SW50	VV439800	Tact Switch	SKQNAJ			01
SW51	V8889300	Push Switch	EVQ 11Y 07K	ONE TOUCH SETTING 4		01
SW51	VV439800	Tact Switch	SKQNAJ			01
TA1	WC710000	Transistor Array	M54562FP			
TA2	WC710000	Transistor Array	M54562FP			
TA3	V8566600	Transistor Array	TD62785F-EL			05
TR1	WA013100	Digital Transistor	DTDG23YP T100			01
-6	WA013100	Digital Transistor	DTDG23YP T100			01
TR7	VY677600	Digital Transistor	DTC123JKA TP			01
X1	V6150500	Ceramic Resonator	8.38M EFOS8384E5			01
	V2917100	AC Cord Set	E 2P 2.5m 2.5A	E		05
	V2917000	AC Cord Set	U 2P 2.44m 7A	U		06
	VT016000	AC Cord Set	B 2P 2.5m	B		08
	VC843500	Push Switch	SDDL1 J.U.C.S.VD	POWER ON/OFF		03
	WB501300	Power Supply Unit				22
	V3438000	PC Sensor	YMHM-016			10
	WB168800	Rubber Contact	12KEY 2M	C2#-C3,C3#-C4,C4#-C5		04
	WB168900	Rubber Contact	13KEY 2M	C5#-C6 C1-C2		04
	WB911901	LCD	MC75T03B			
	VT695100	Rotary Variable Resistor	SP.10 RK1631110TJN	PITCH BEND,MODULATION		03

* : New parts (新規部品)

RANK : Japan only

MONITOR SPEAKER

TRS-MS02

PARTS LIST

■ CONTENTS

OVERALL ASSEMBLY 2

Note) DESTINATION ABBREVIATIONS

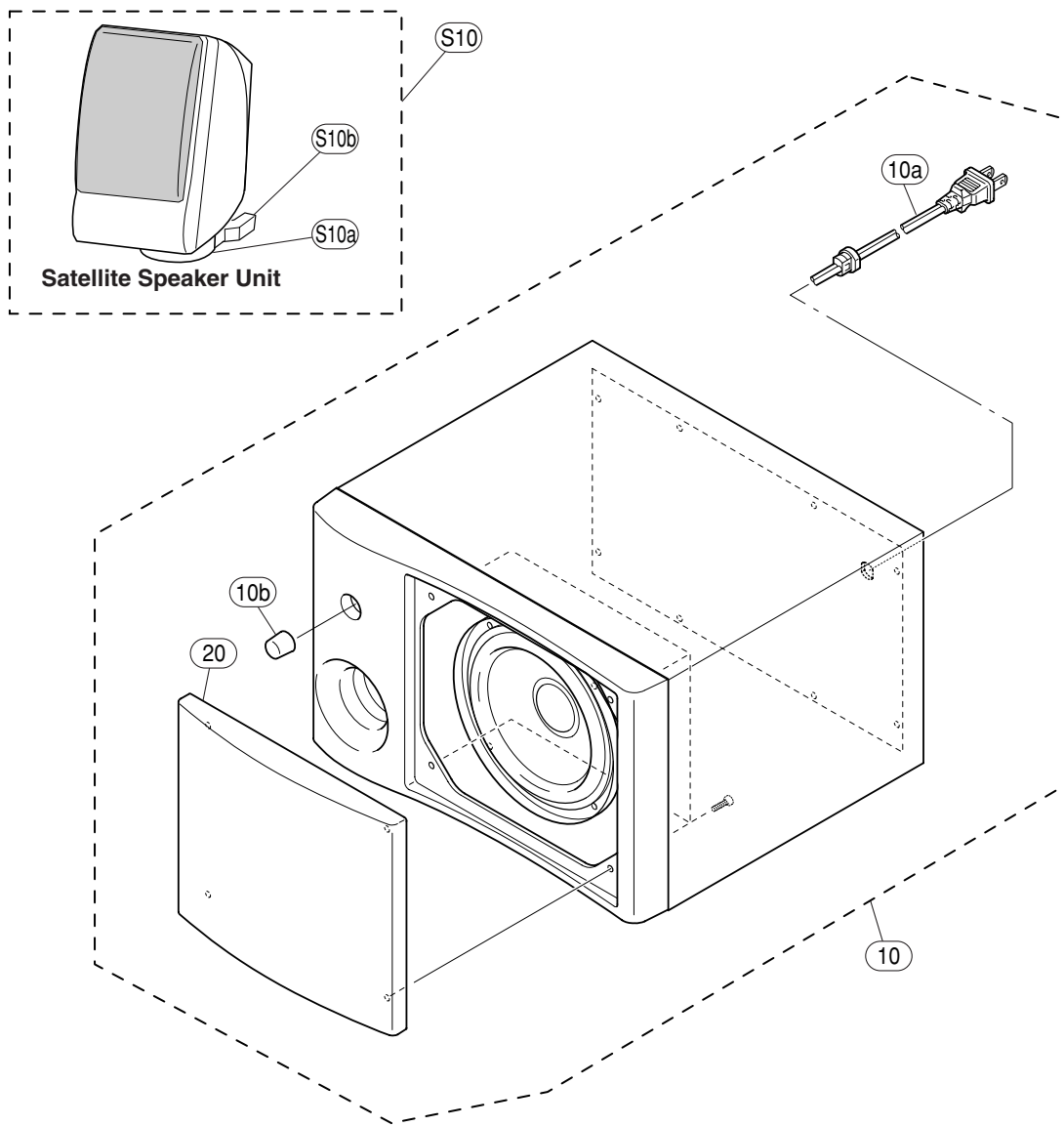
A: Australian model	O: Chinese model
B: British model	Q: South-east Asia model
C: Canadian model	T: Taiwan model
D: German model	U: U.S.A. model
E: European model	V: General export model (110V)
F: French model	W: General export model (220V)
H: North European model	N,X: General export model
I: Indonesian model	Y: Export model
J: Japanese model	K: Korean model
M: South African model	

■ WARNING

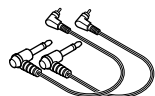
Components having special characteristics are marked \triangle and must be replaced with parts having specifications equal to those originally installed.

- The numbers in "QTY" shows quantities for each unit.
- The parts with "--" in "Part No." are not available as spare parts.
- The second letter of the shaded () part number is I, not one.
- The second letter of the shaded () part number is O, not zero.

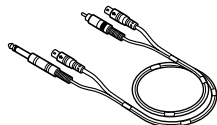
OVERALL ASSEMBLY



ACCESSORIES



Speaker Cable
(RCA pin cables)



Woofer Cable
(RCA pin/8-pin
combination cable)

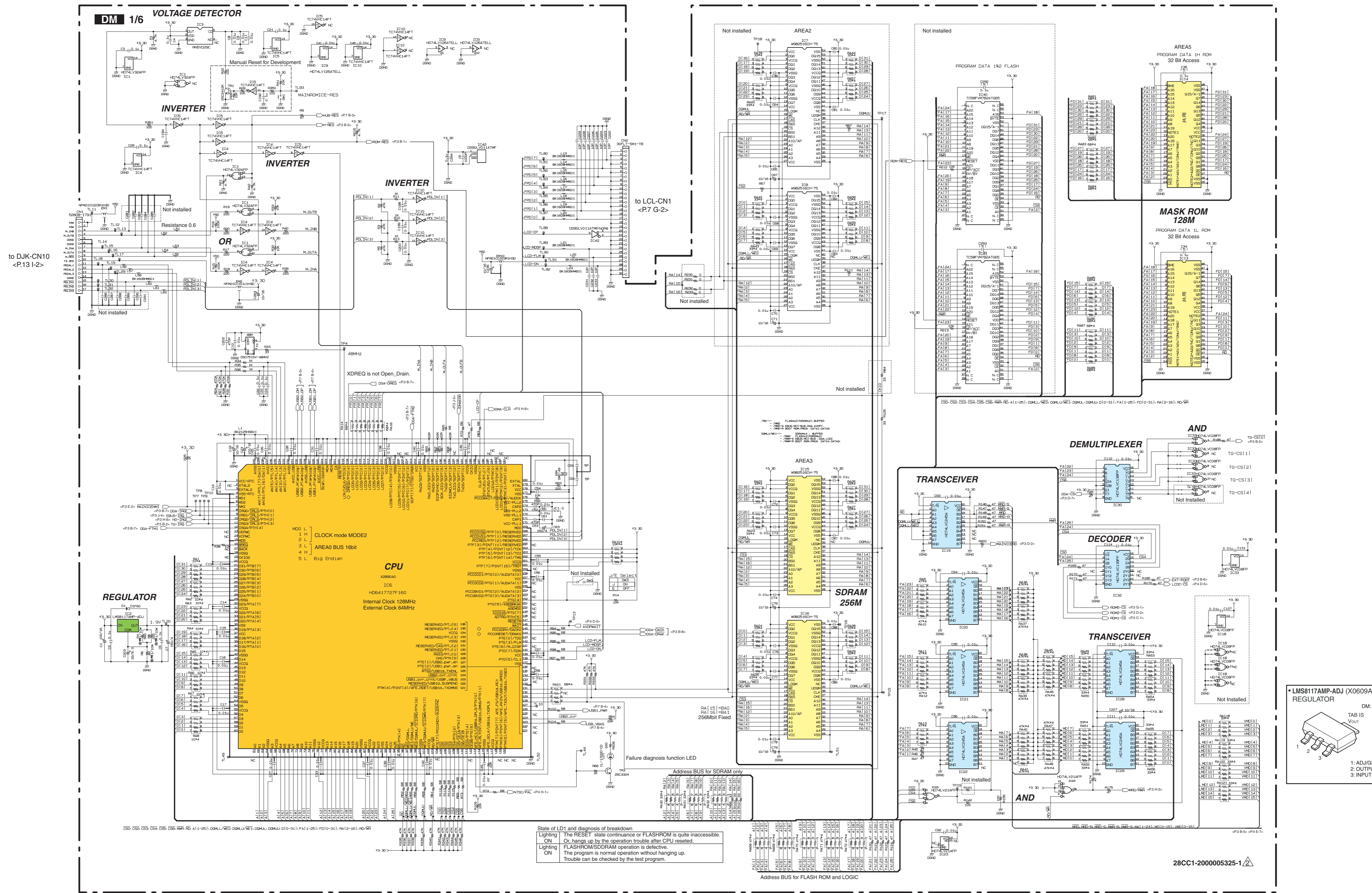


Speaker Stand Assembly
(Speaker brackets)

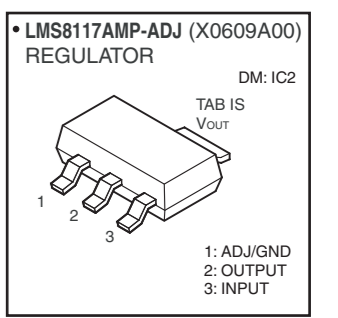
REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
* 10	WF886600	WOOFER SPEAKER SYSTEM Woofers Unit E	TRS-MS02		
* 10	WF886700	Woofers Unit U	E		
* 10	WF886800	Woofers Unit B	U		
* 10	WF886900	Woofers Unit A	B		
△ 10a	V8366400	Power Cord	A		
△ 10a	V8366300	Power Cord	E		04
△ 10a	WF886300	Power Cord	U		04
△ 10a	WF886400	Power Cord	B		
* 10b	WF887500	Knob VR	A		
* 20	WG033100	Grille Assembly	BASS		
* S10	WF887000	Satellite SP		2	
* S10a	WF887300	Table		2	
* S10b	WF887400	Lever		2	
		ACCESSORIES	TRS-MS02		
*	WF887200	Woofers Cable			
*	WF887100	Speakers Cable		2	
*	WF237400	Speakers Stand Ass'y		2	

* : New part (新規部品)

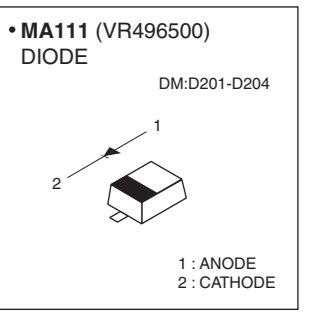
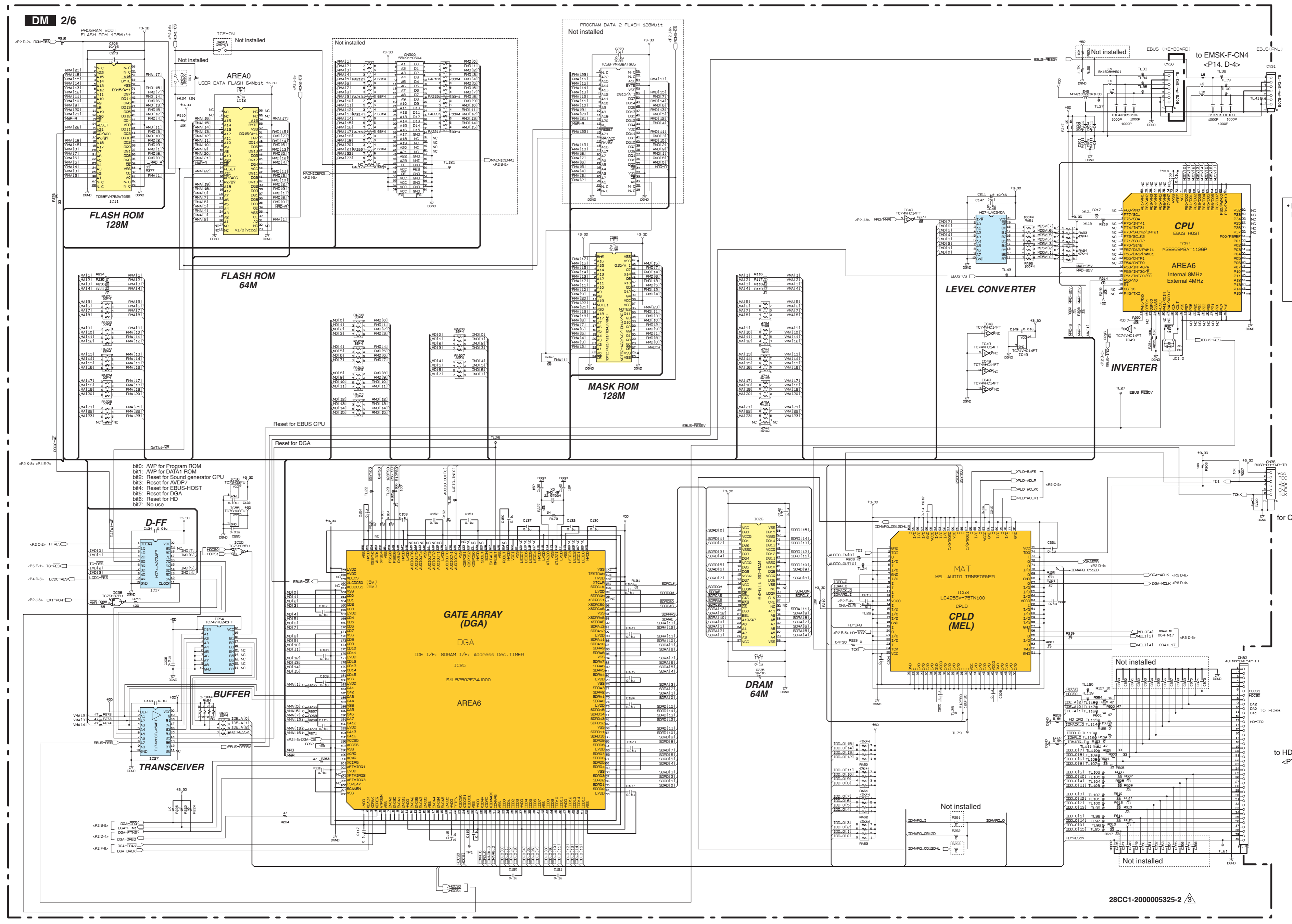
RANK : Japan only



State of LD1 and diagnosis of breakdown
 Lighting ON The RESET state continuance or FLASHROM is quite inaccessible.
 Lighting ON FLASHROM/SDRAM operation is defective.
 Lighting ON The program is normal operation without hanging up.
 Lighting ON Trouble can be checked by the test program.



(金被) : Metal Film Resistor
 (セ) : Ceramic Capacitor
 Note: See parts list for details of circuit board component parts.

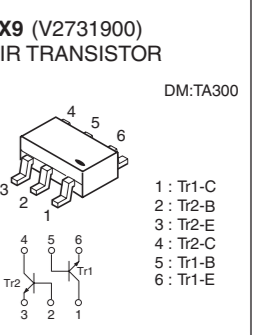
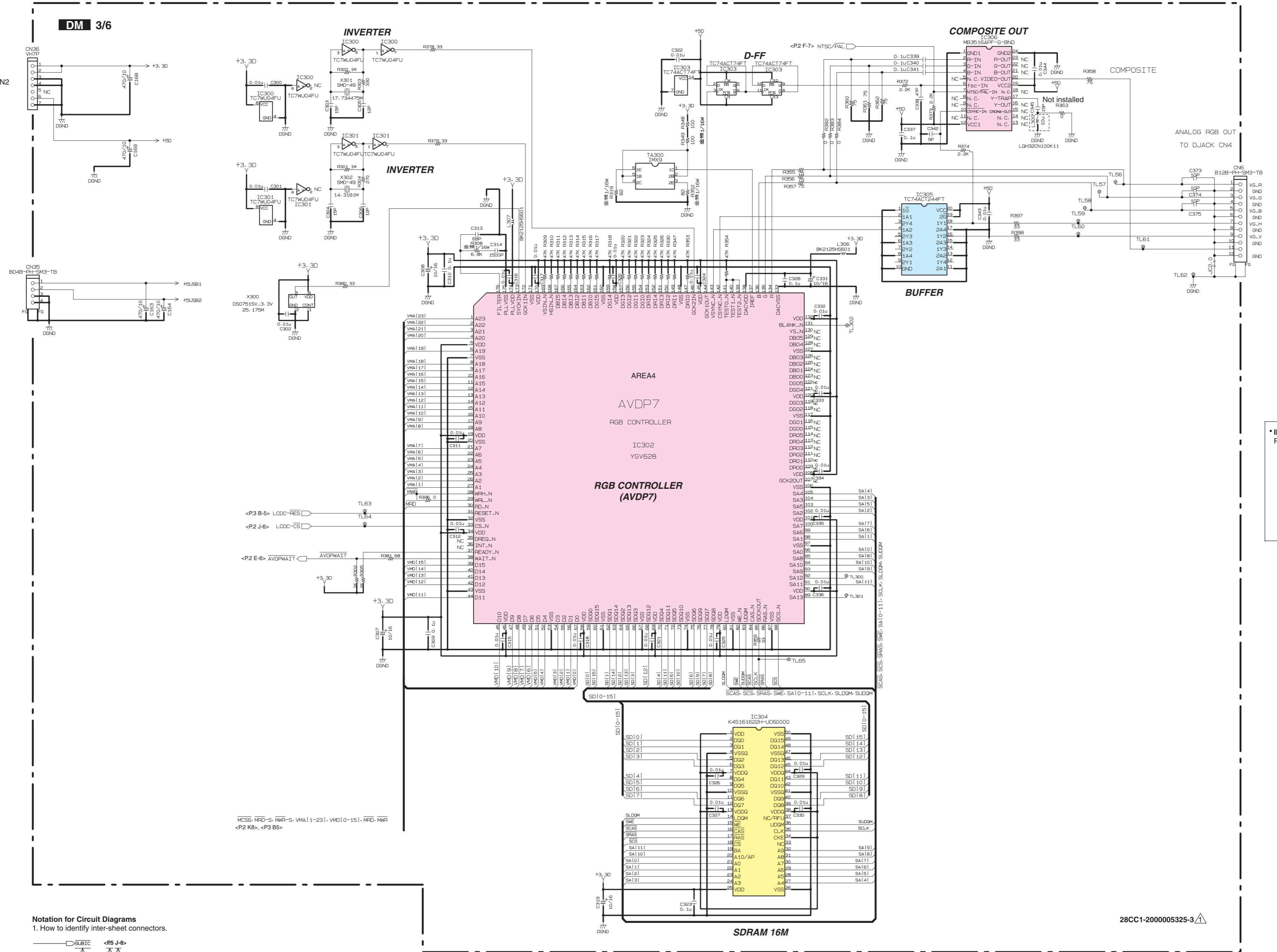


(C) : Ceramic Capacitor
Note: See parts list for details of circuit board component parts.

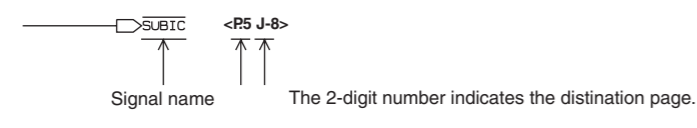
Tyros2 OVERALL CIRCUIT DIAGRAM 3/13 (DM 3/6)

Tyros2

DM 3/6



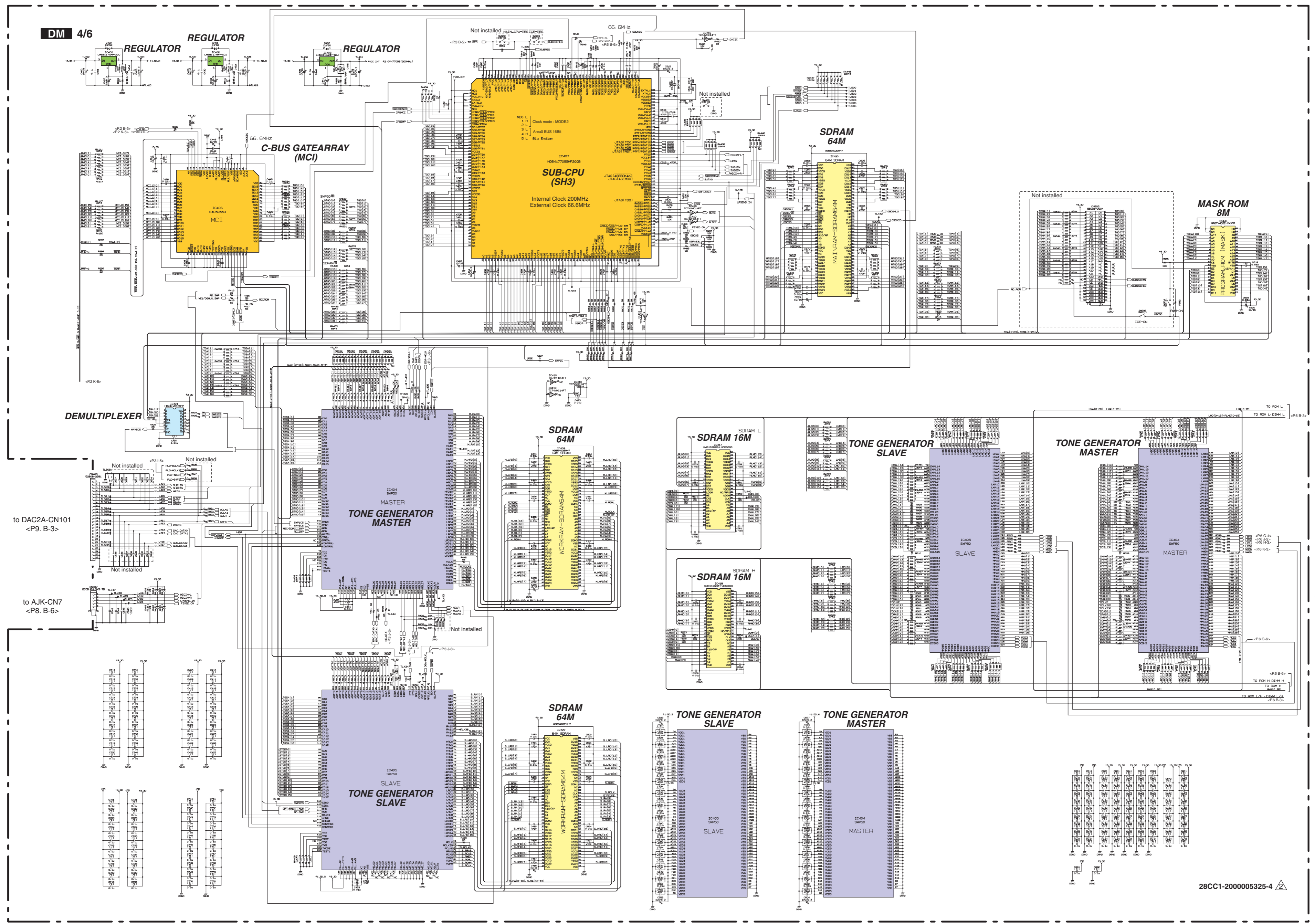
Notation for Circuit Diagrams
1. How to identify inter-sheet connectors.



(金被) : Metal Film Resistor
 (セ) : Ceramic Capacitor
 Note: See parts list for details of circuit board component parts.

Tyros2

Tyros2



• **LMS8117AMP-ADJ (X0609A00)**
REGULATOR
DM: IC400, IC402, IC403

1: ADJ/GND
2: OUTPUT
3: INPUT

• **D1F60 (VS201100)**
DIODE
DM: D1, D400-D402

1: ANODE
2: CATHODE

• **MA111 (VR496500)**
DIODE
DM: D403-D408

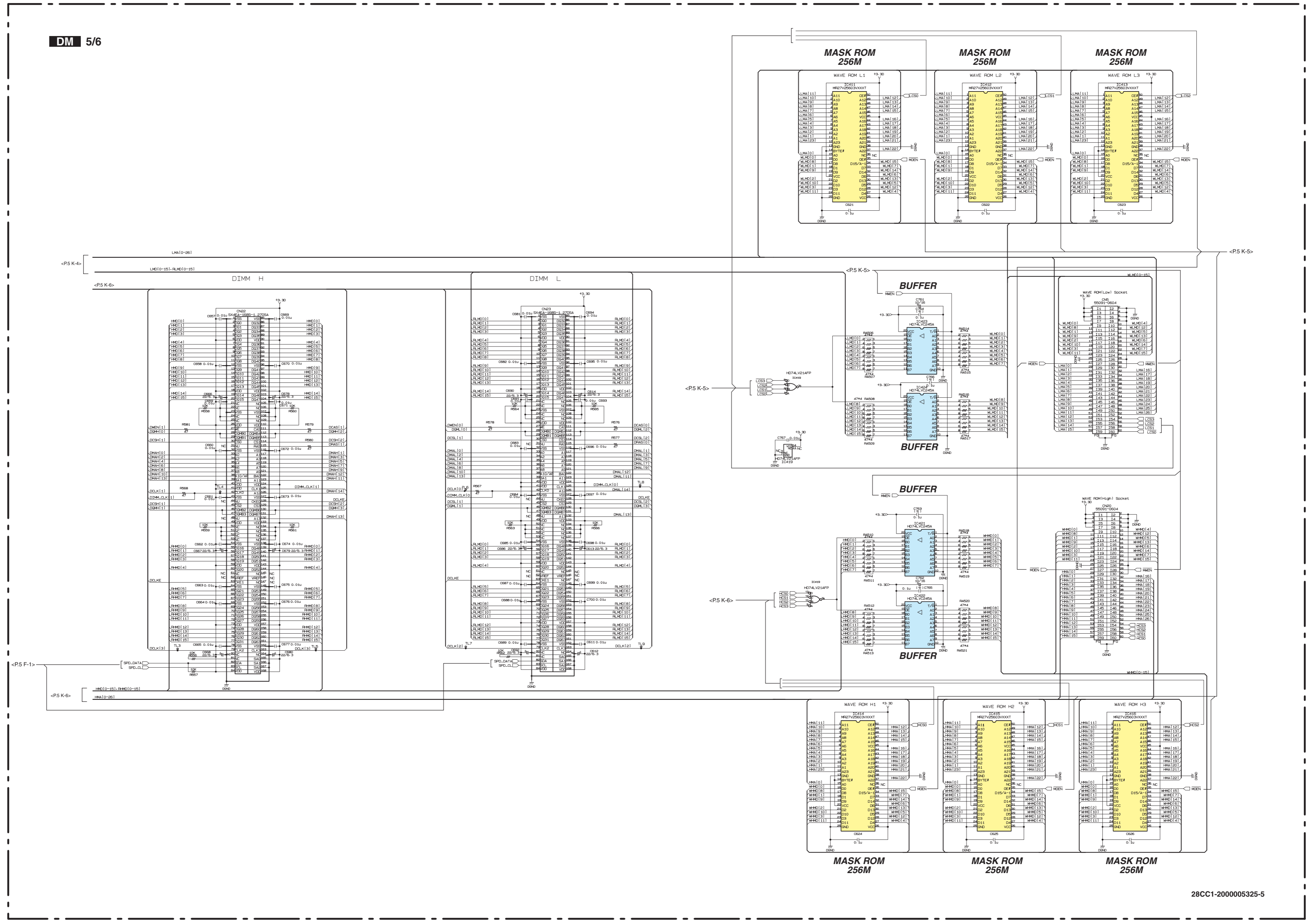
1: ANODE
2: CATHODE

28CC1-2000005325-4

(金被) : Metal Film Resistor
 (t) : Ceramic Capacitor
 Note: See parts list for details of circuit board component parts.

Tyros2 OVERALL CIRCUIT DIAGRAM 5/13 (DM 5/6)

DM 5/6

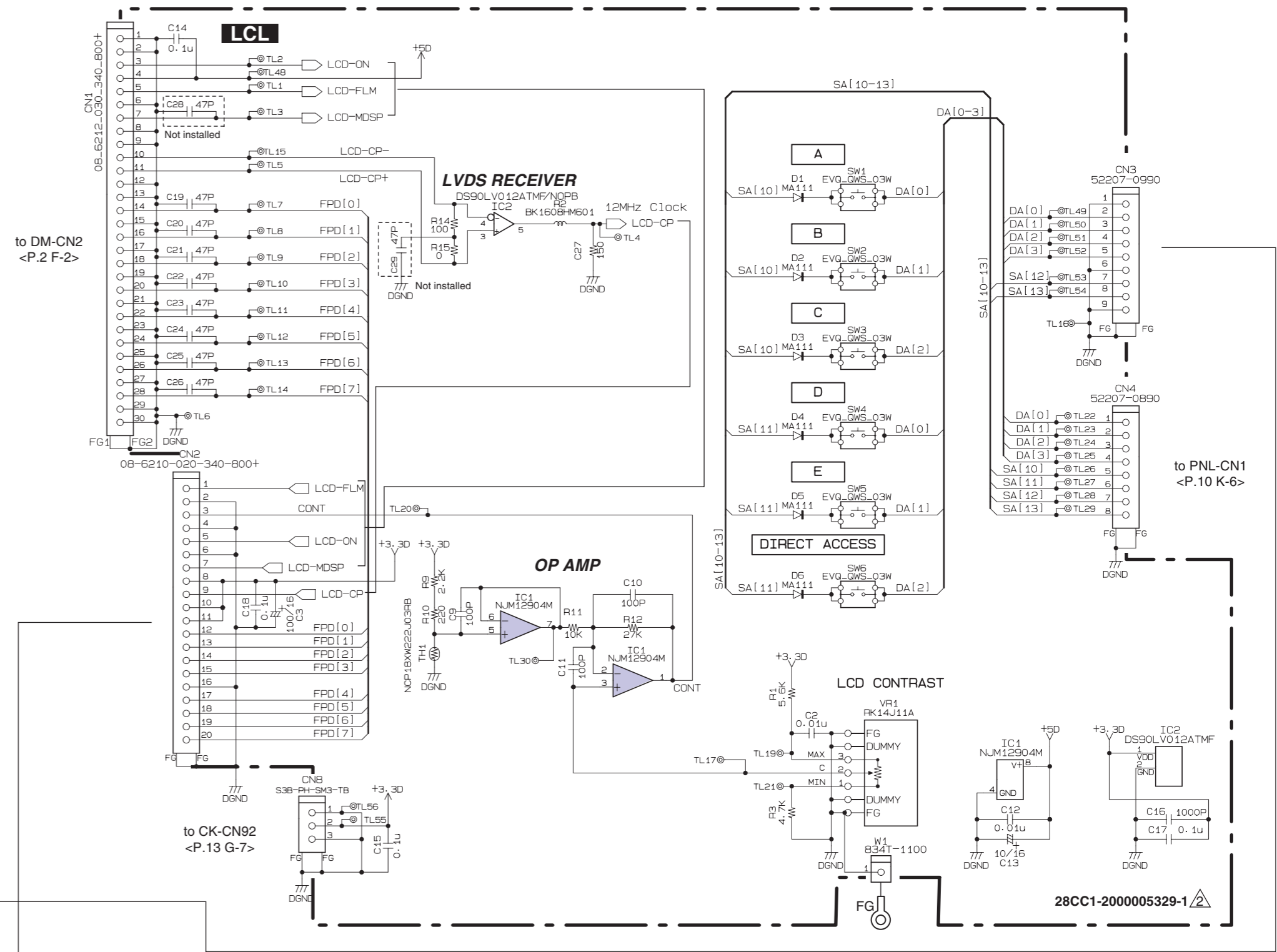
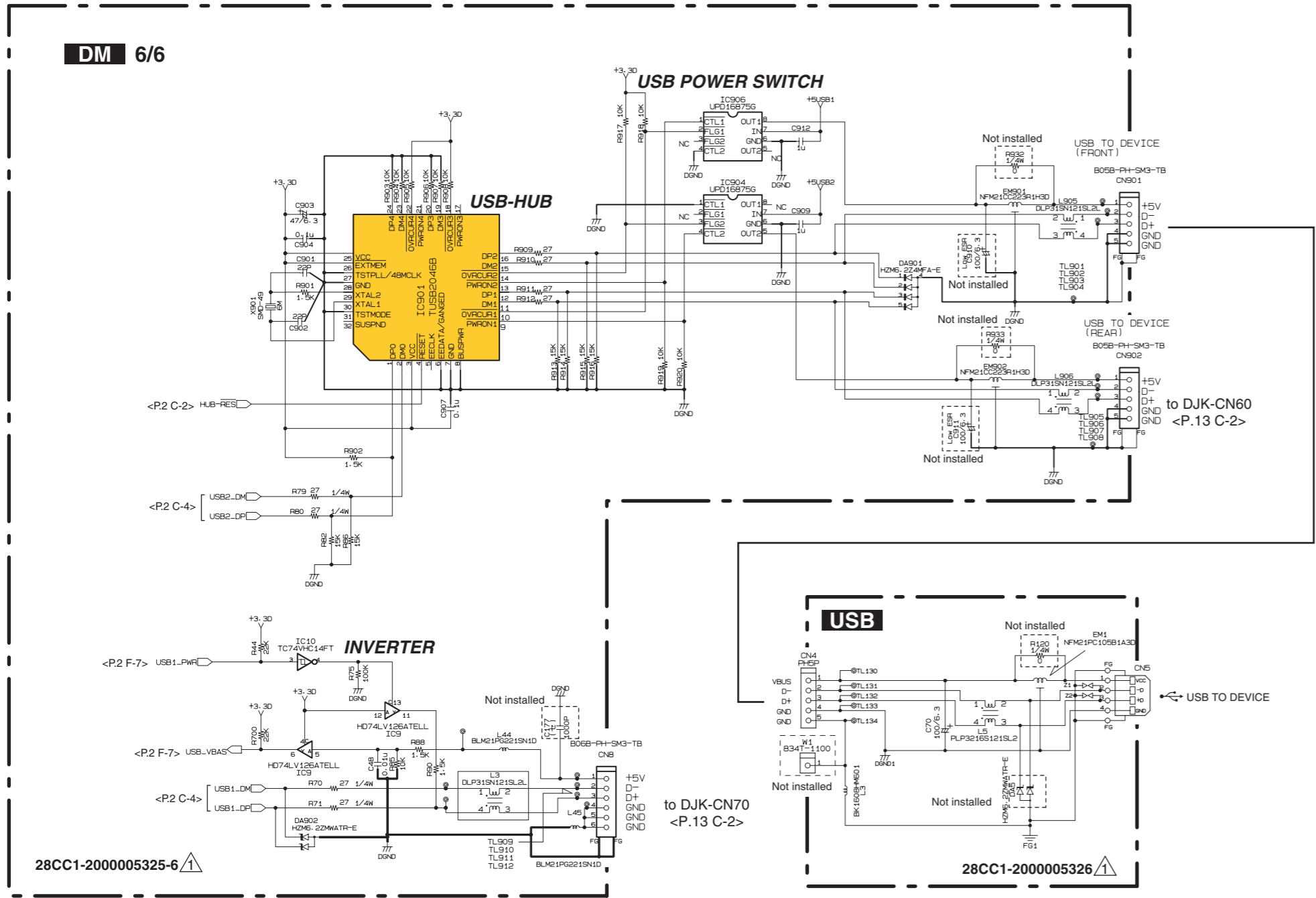


28CC1-2000005325-5

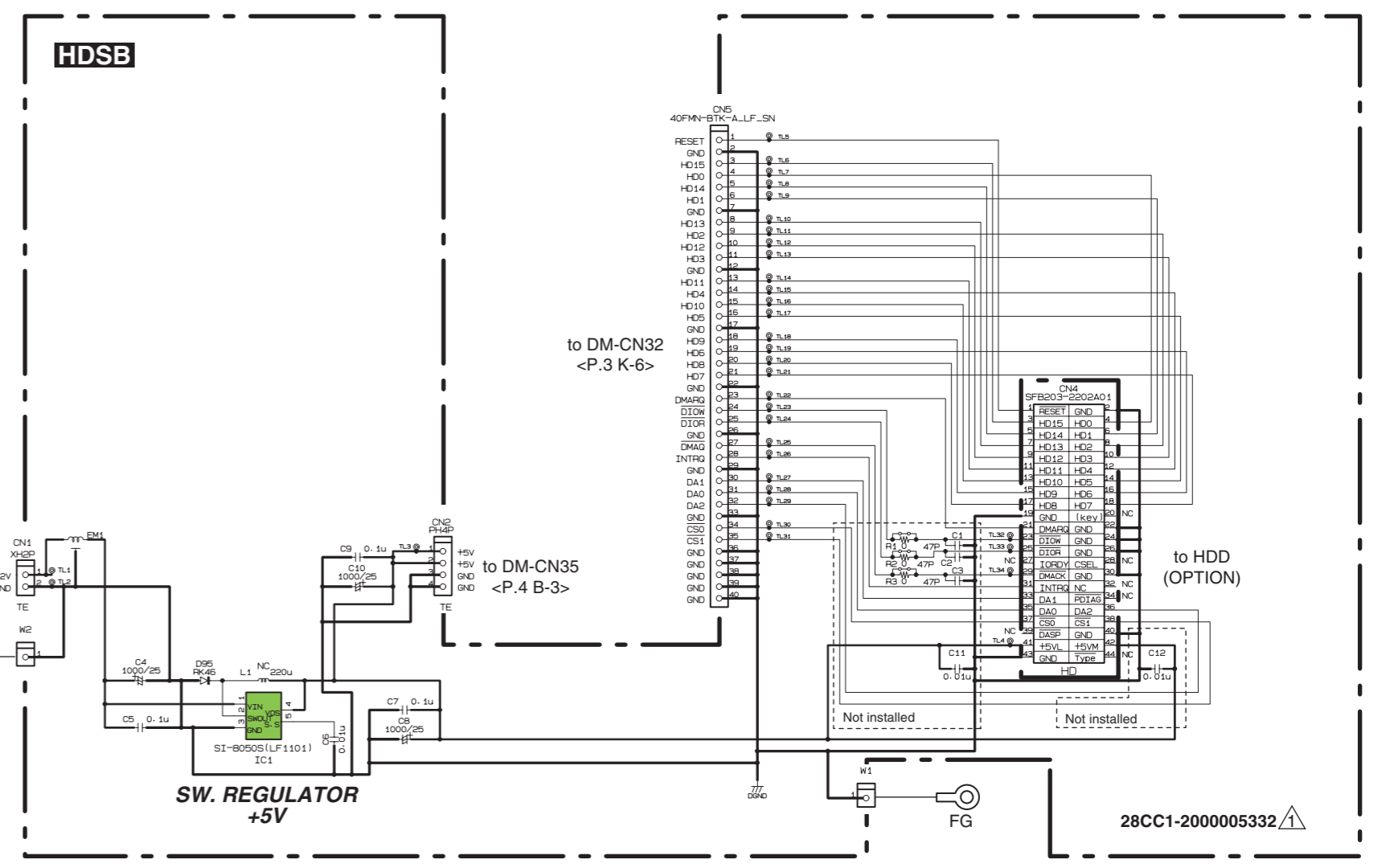
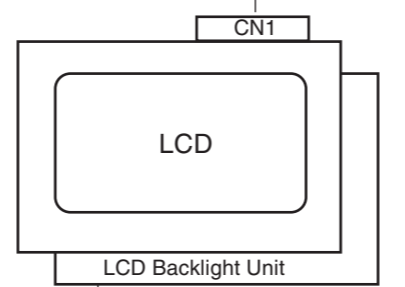
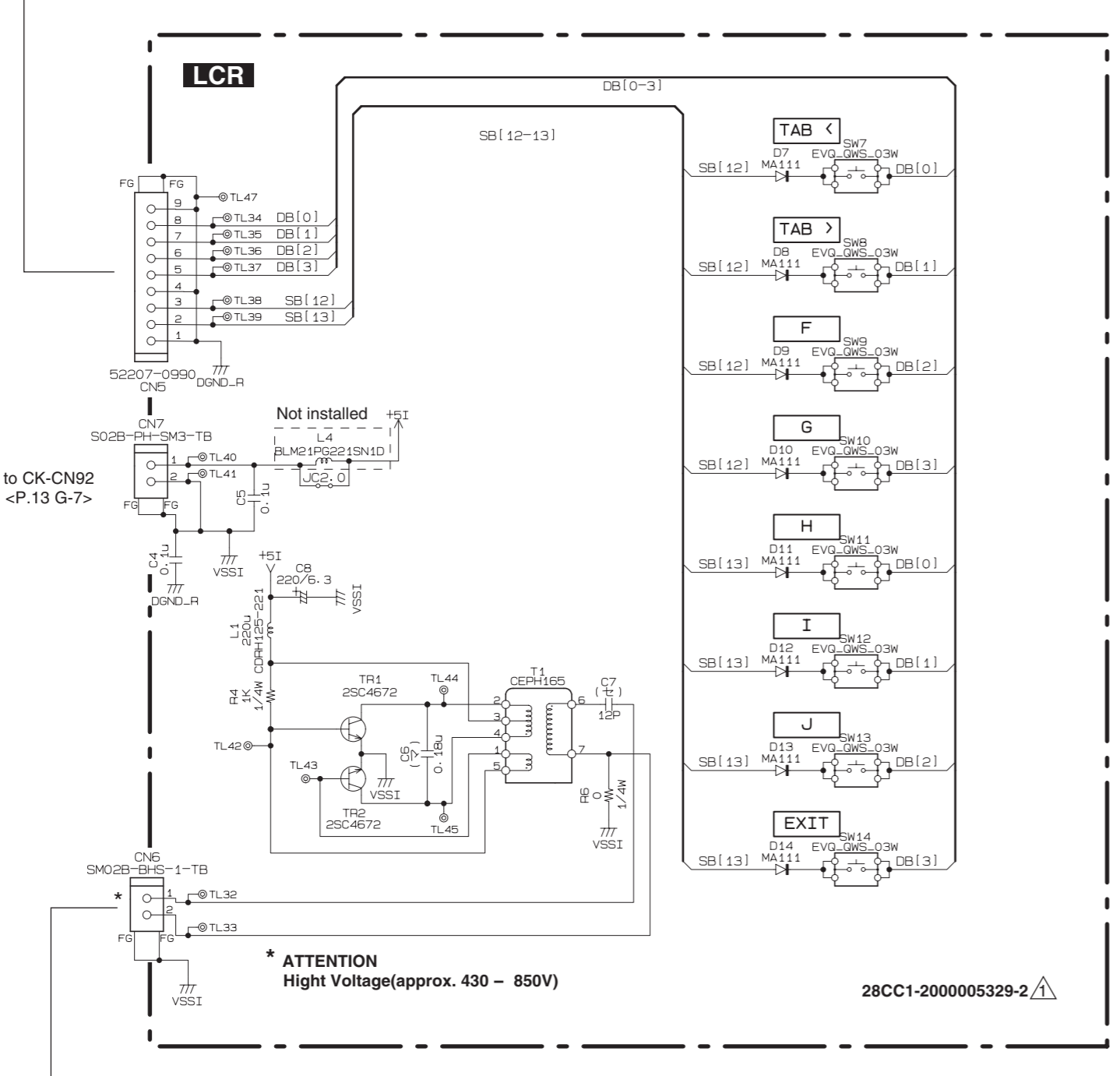
(τ) : Ceramic Capacitor
Note: See parts list for details of circuit board component parts.

Tyros2 OVERALL CIRCUIT DIAGRAM 6/13 (DM 6/6,LCL,LCR,HDSB,USB)

Tyros2



- SI-8050S (XT442A00) REGULATOR +5V
- HZM6.2MWATR-E (WF468100) ZENER DIODE ARRAY DM:DA902
- HZM6.2Z4MFA (WE297800) ZENER DIODE ARRAY DM:DA901
- 1SS355 TE-17 (VT332900) MA111 (VR496500) DIODE LCL,LCR,D1-D14



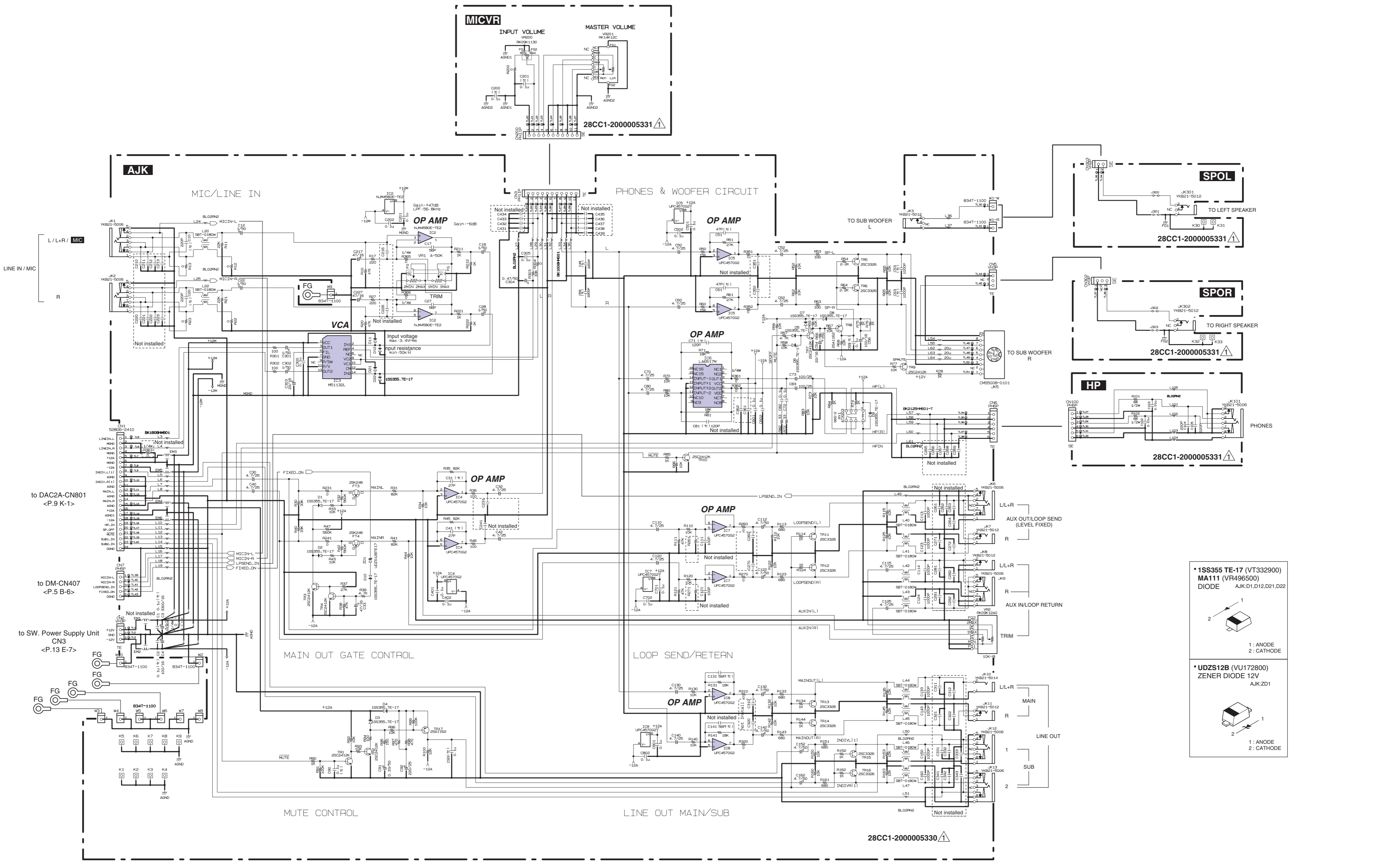
(マ) : Mylar Capacitor
(ㇿ) : Ceramic Capacitor

Note: See parts list for details of circuit board component parts.

Tyros2

Tyros2

Tyros2 OVERALL CIRCUIT DIAGRAM 7/13 (AJK,HP,MICVR,SPOL,SPOR)



•1SS355 TE-17 (VT332900)
 MA111 (VR496500)
 DIODE AJK.D1,D2,D21,D22

1: ANODE
 2: CATHODE

•UDZS12B (VU172800)
 ZENER DIODE 12V
 AJK.ZD1

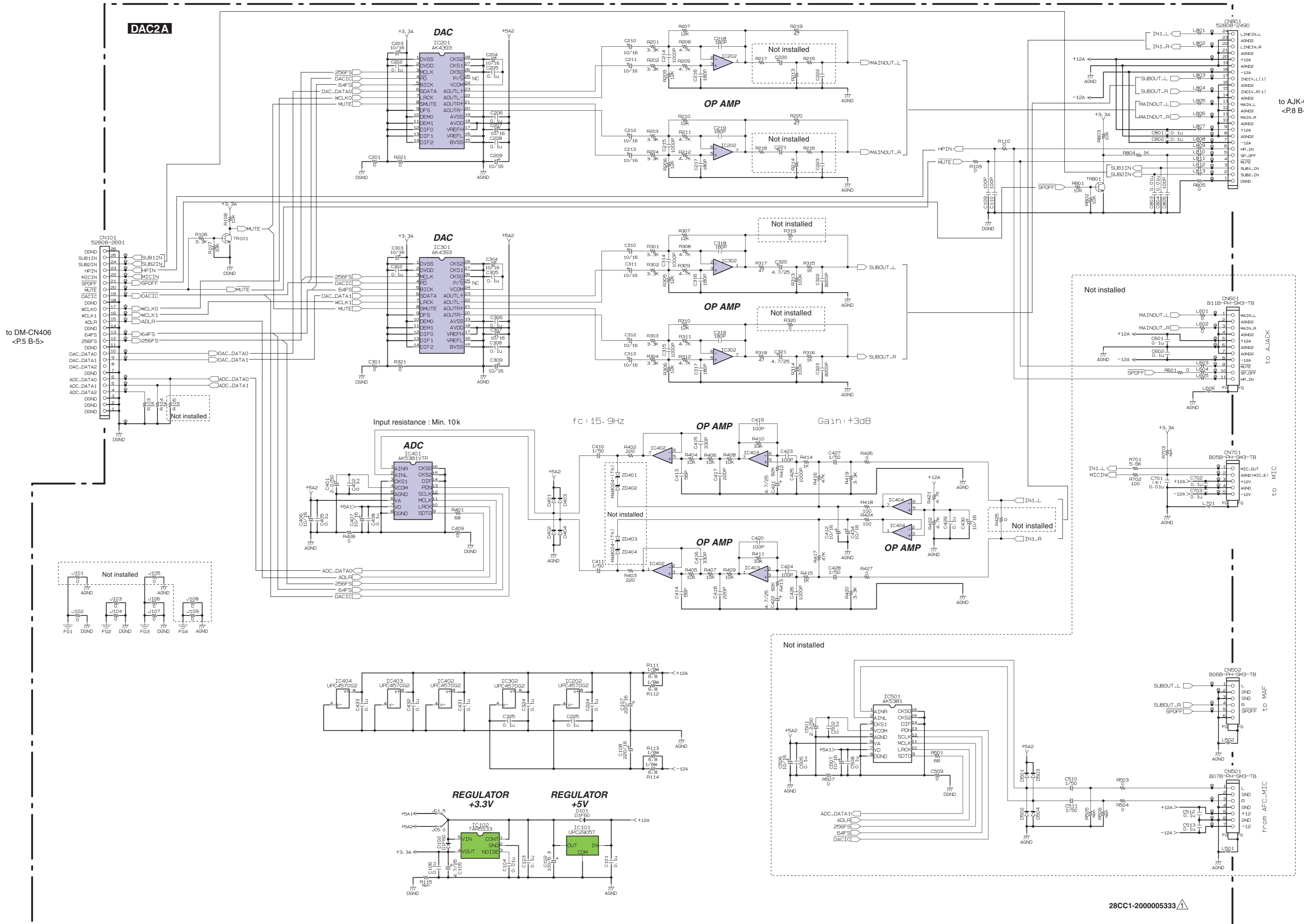
1: ANODE
 2: CATHODE

(ϵ) : Ceramic Capacitor
 Note: See parts list for details of circuit board component parts.

Tyros2 OVERALL CIRCUIT DIAGRAM 8/13 (DAC2A)

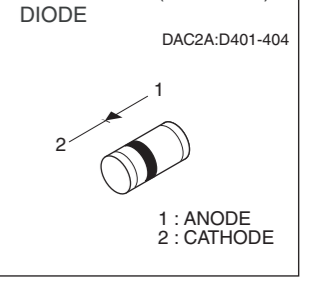
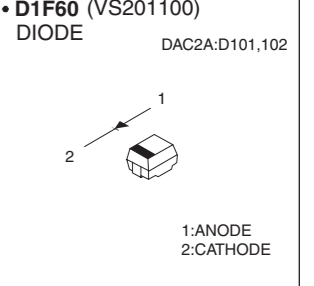
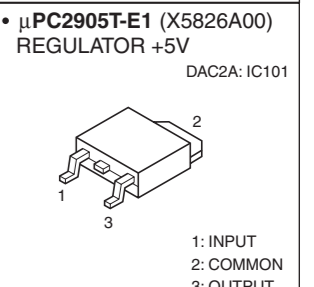
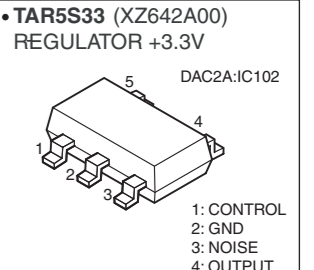
Tyros2

DAC2A



to AJK-CN1
<P.8 B-5>

to DM-CN406
<P.5 B-5>



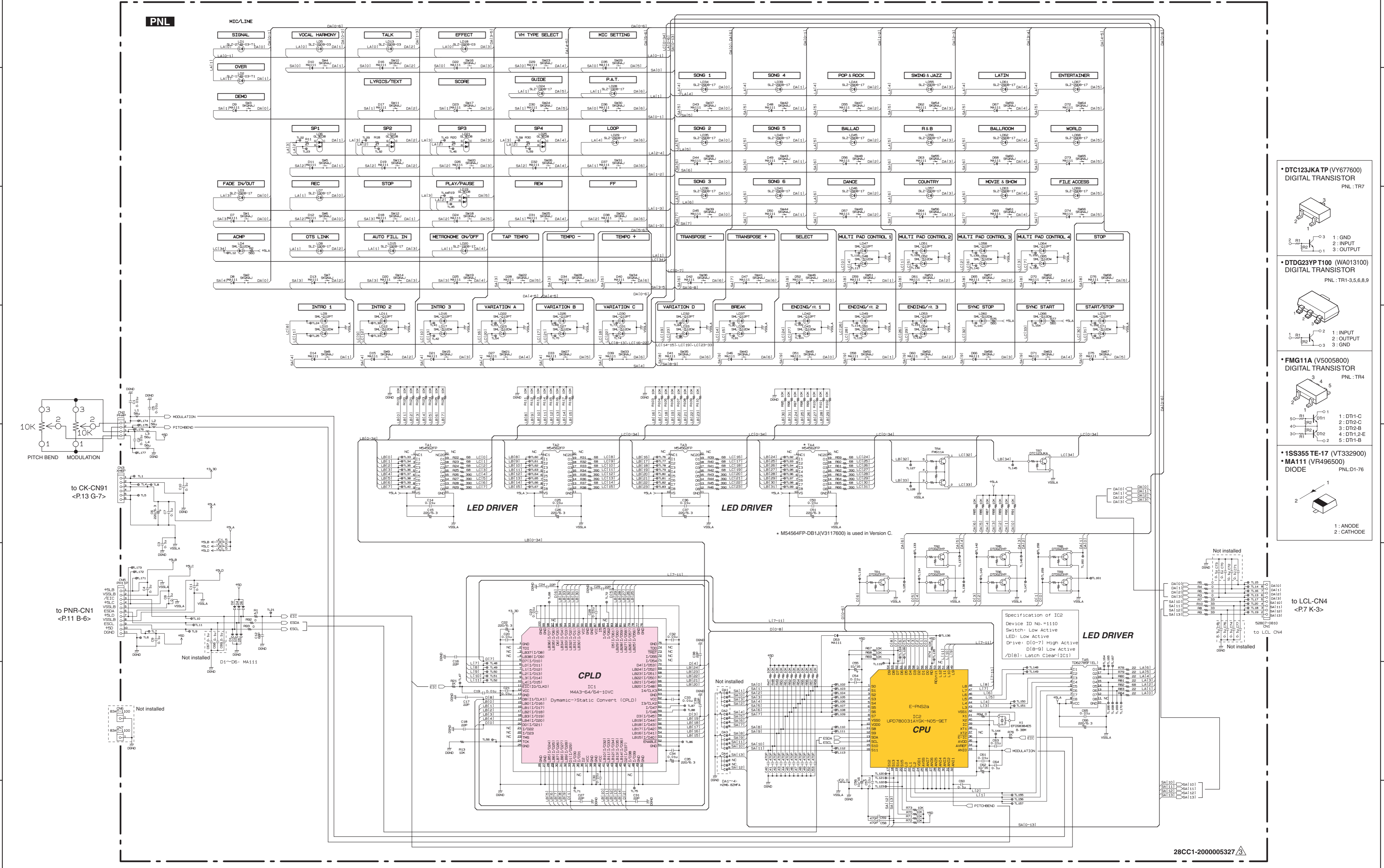
28CC1-200005333

(τ) : Ceramic Capacitor
Note: See parts list for details of circuit board component parts.

Tyros2

Tyros2

Tyros2 OVERALL CIRCUIT DIAGRAM 9/13 (PNL)



• DTC123JKA TP (VY677600) DIGITAL TRANSISTOR
PNL : TR7

• DTDG23YP T100 (WA013100) DIGITAL TRANSISTOR
PNL : TR1-3,5,6,8,9

• FMG11A (V5005800) DIGITAL TRANSISTOR
PNL : TR4

• 1SS355 TE-17 (VT332900) • MA111 (VR496500) DIODE
PNL-D1-76

Specification of IC2
Device ID No.:1110
Switch: Low Active
LED: Low Active
Drive: [D]0-7] High Active
[D]8-9] Low Active
[D]10: Latch Clean[IC]

28CC1-200005327

Note: See parts list for details of circuit board component parts.

Tyros2 OVERALL CIRCUIT DIAGRAM 10/13 (PNR)

1

2

3

4

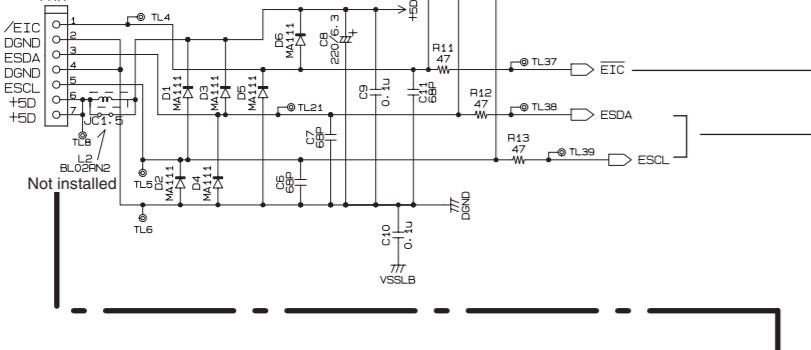
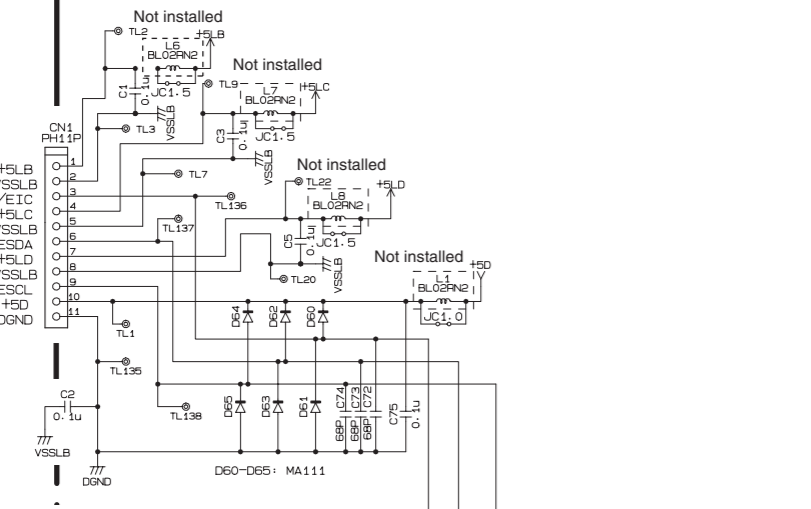
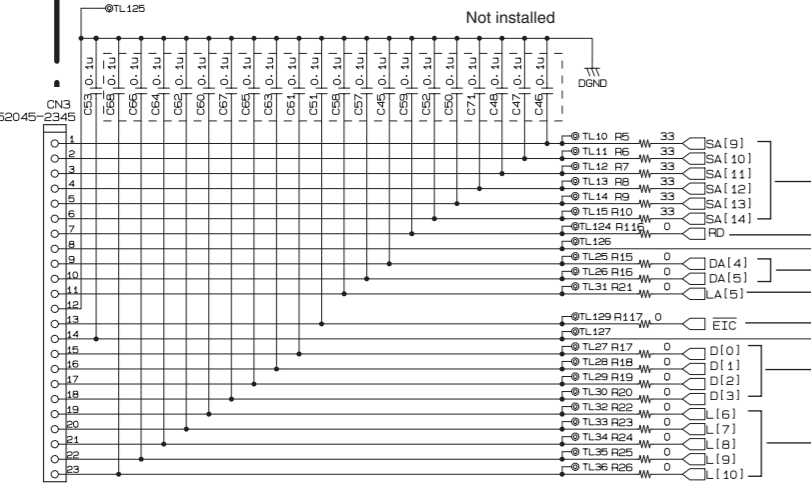
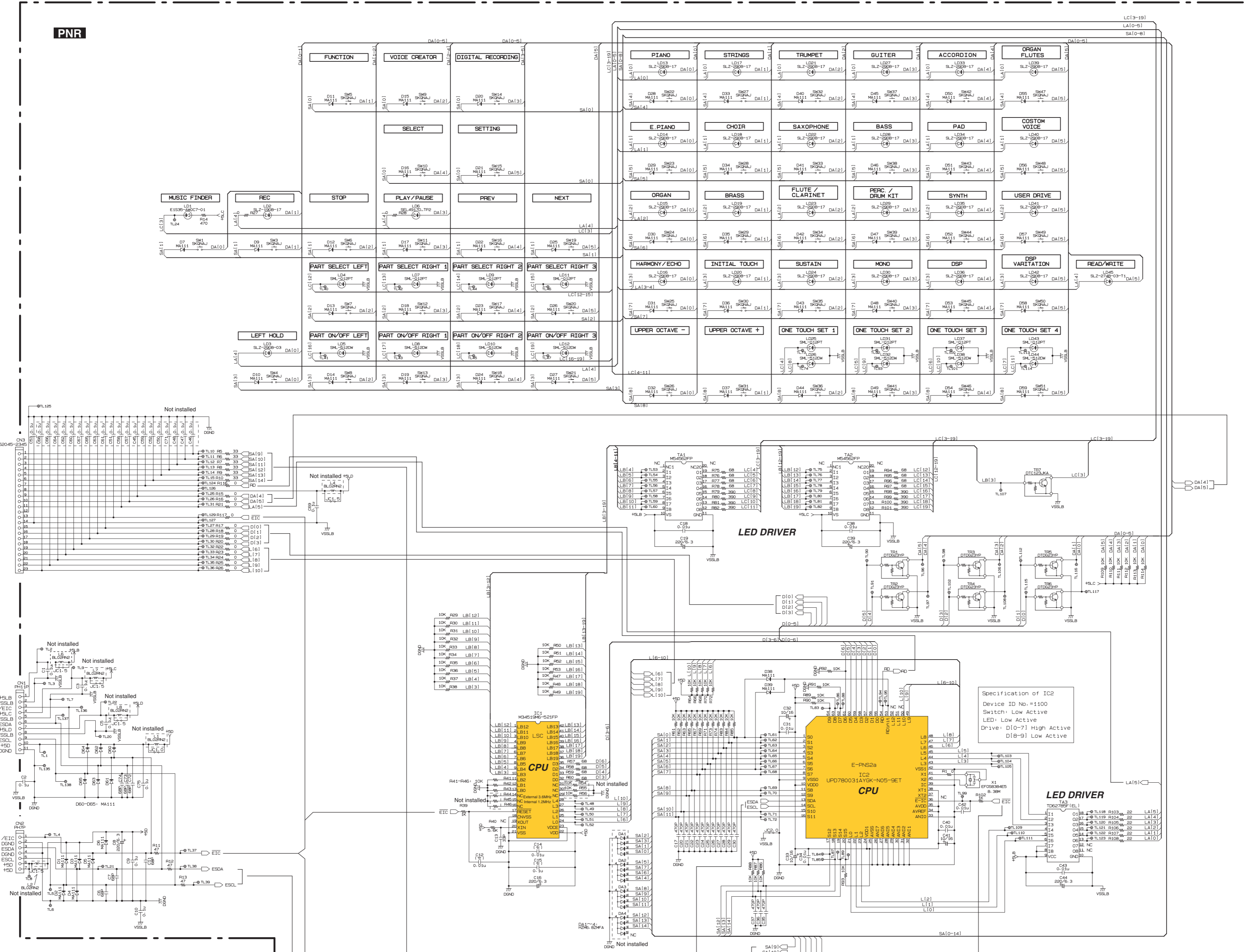
5

6

7

8

PNR



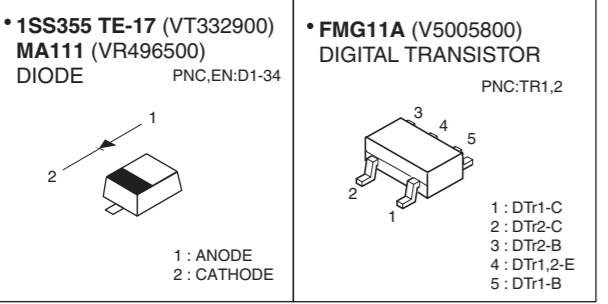
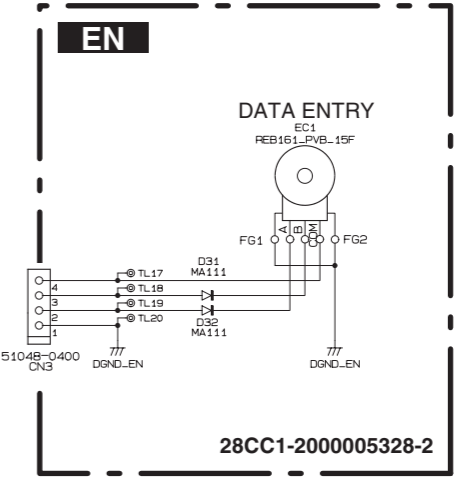
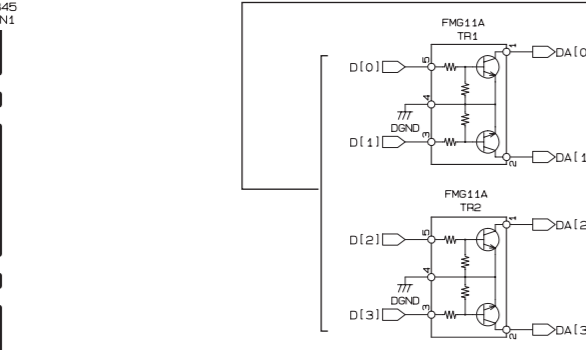
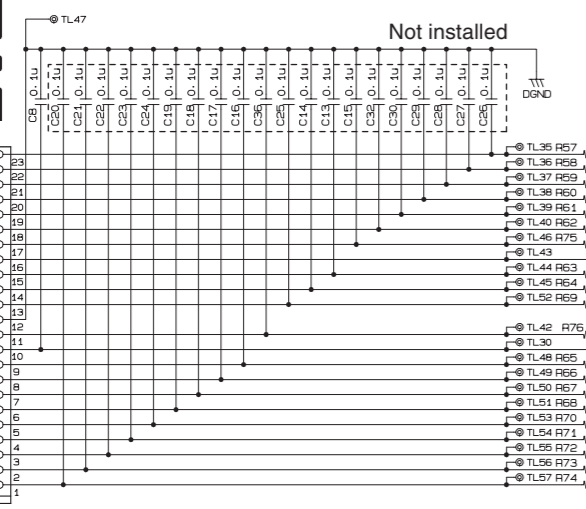
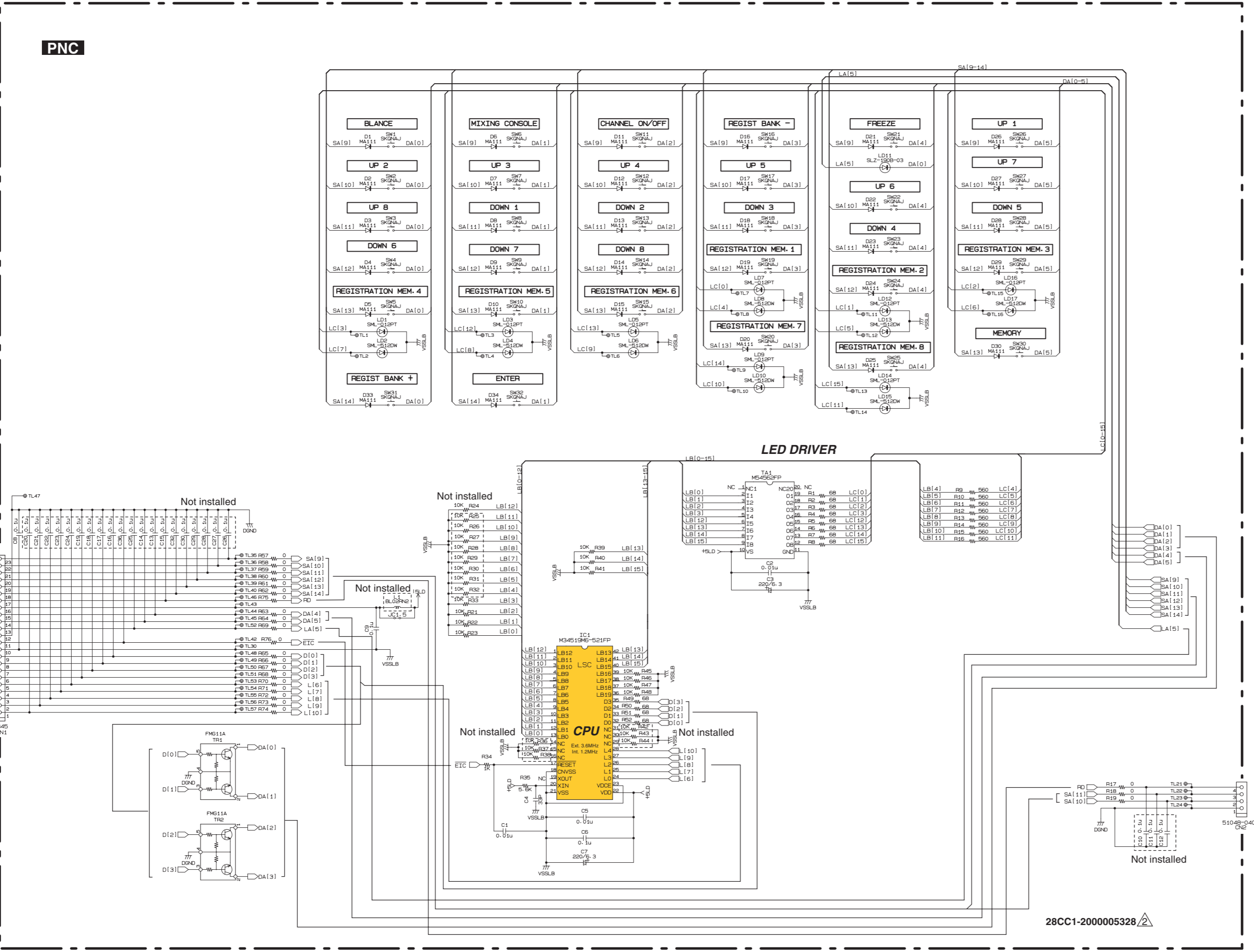
(ζ) : Ceramic Capacitor

Note: See parts list for details of circuit board component parts.

- DTC123JKA TP (VY677600)
DIGITAL TRANSISTOR
PNR:TR7
- DTDG23VP T100 (WA013100)
DIGITAL TRANSISTOR
PNR:TR1-6
- 1SS355 TE-17 (VT332900)
DIODE
PNR:D1-65

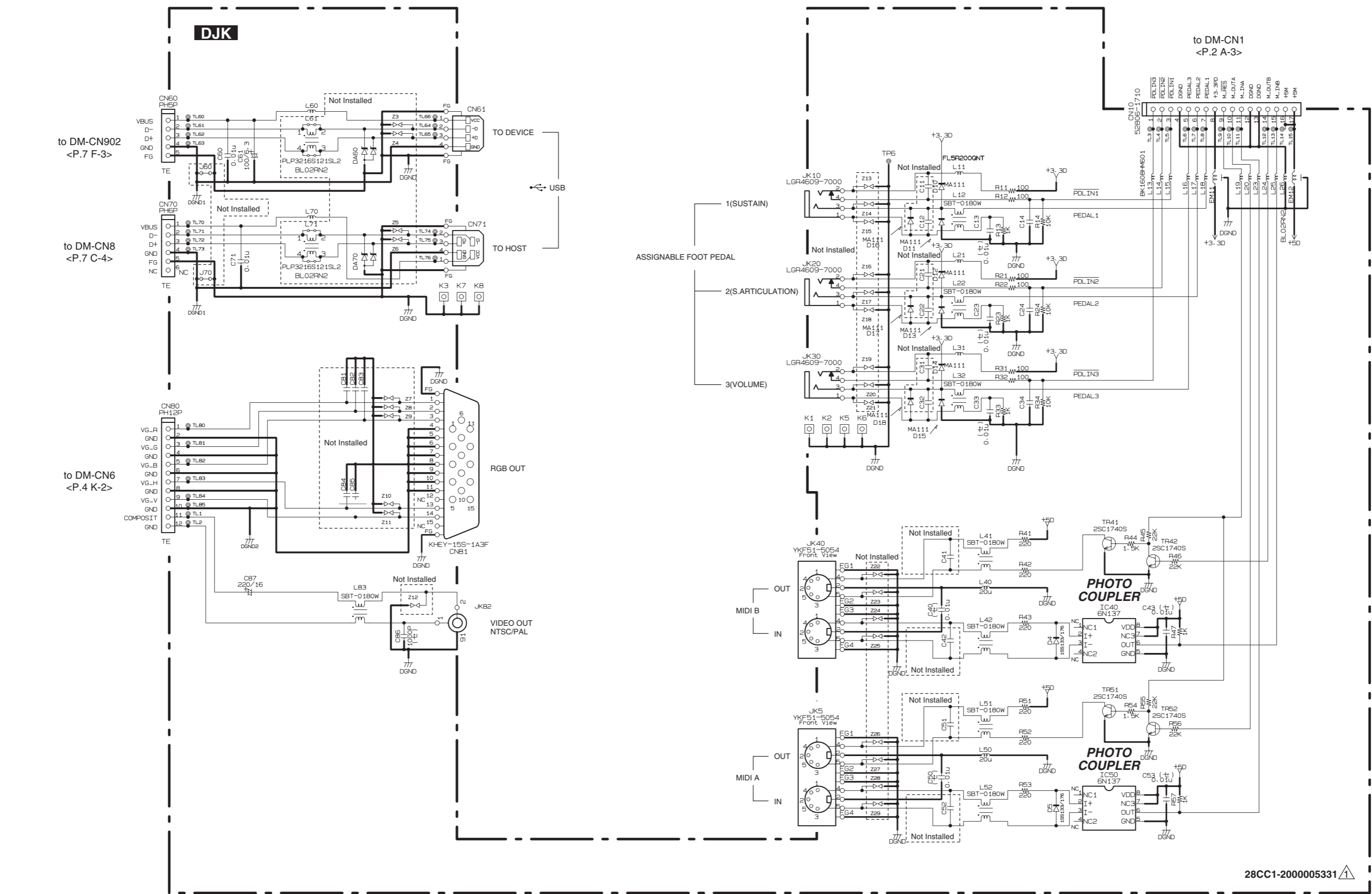
28CC1-200005326

Tyros2 OVERALL CIRCUIT DIAGRAM 11/13 (PNC,EN)



Note: See parts list for details of circuit board component parts.

Tyros2 OVERALL CIRCUIT DIAGRAM 12/13 (DJK,CK,INLET)



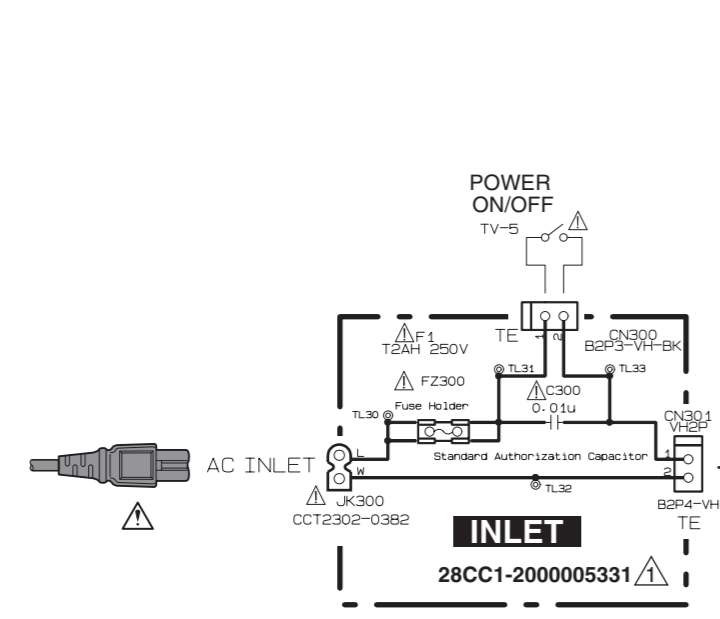
28CC1-2000005331

•1SS133,1SS176 (VB941200)
DIODE DJK:D4,D5

1: ANODE
2: CATHODE

•1SS355 TE-17 (VT332900)
MA111 (VR496500)
DIODE DJK: D10,D12,D14
D16-D18

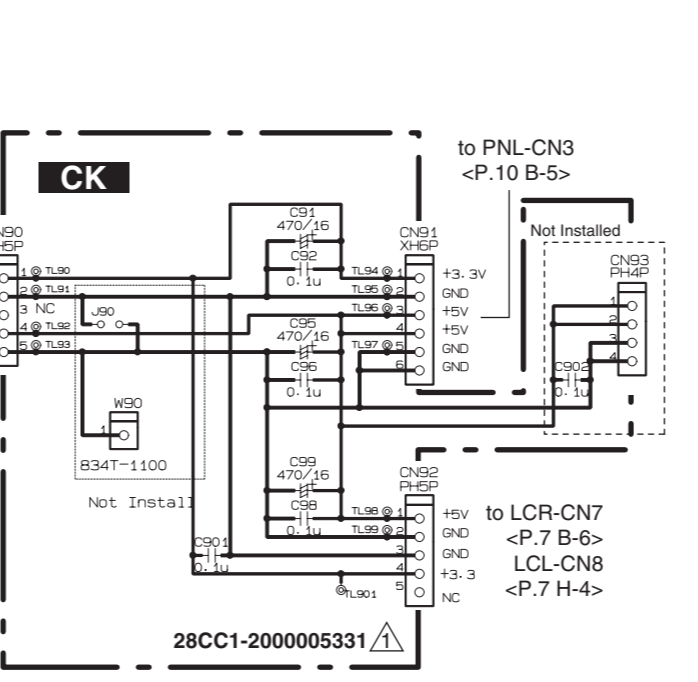
1: ANODE
2: CATHODE



SW. Power Supply Unit

Connector Table (Power Supply Unit)

Connector No.	Pin No.	Signal Name	Connector No.	Pin No.	Signal Name
CN1	1	AC NEUTRAL	CN5	1	+3.3V
	2	AC LIVE		2	GND
CN2	1	+3.3V	3	NC	
	2		4	+5V	
	3	GND	5	GND	
CN3	4		CN6	1	+12V
	5	NC		2	GND
	6	+5V			
	7	GND			



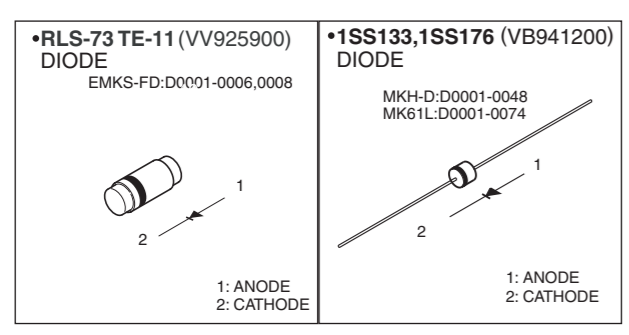
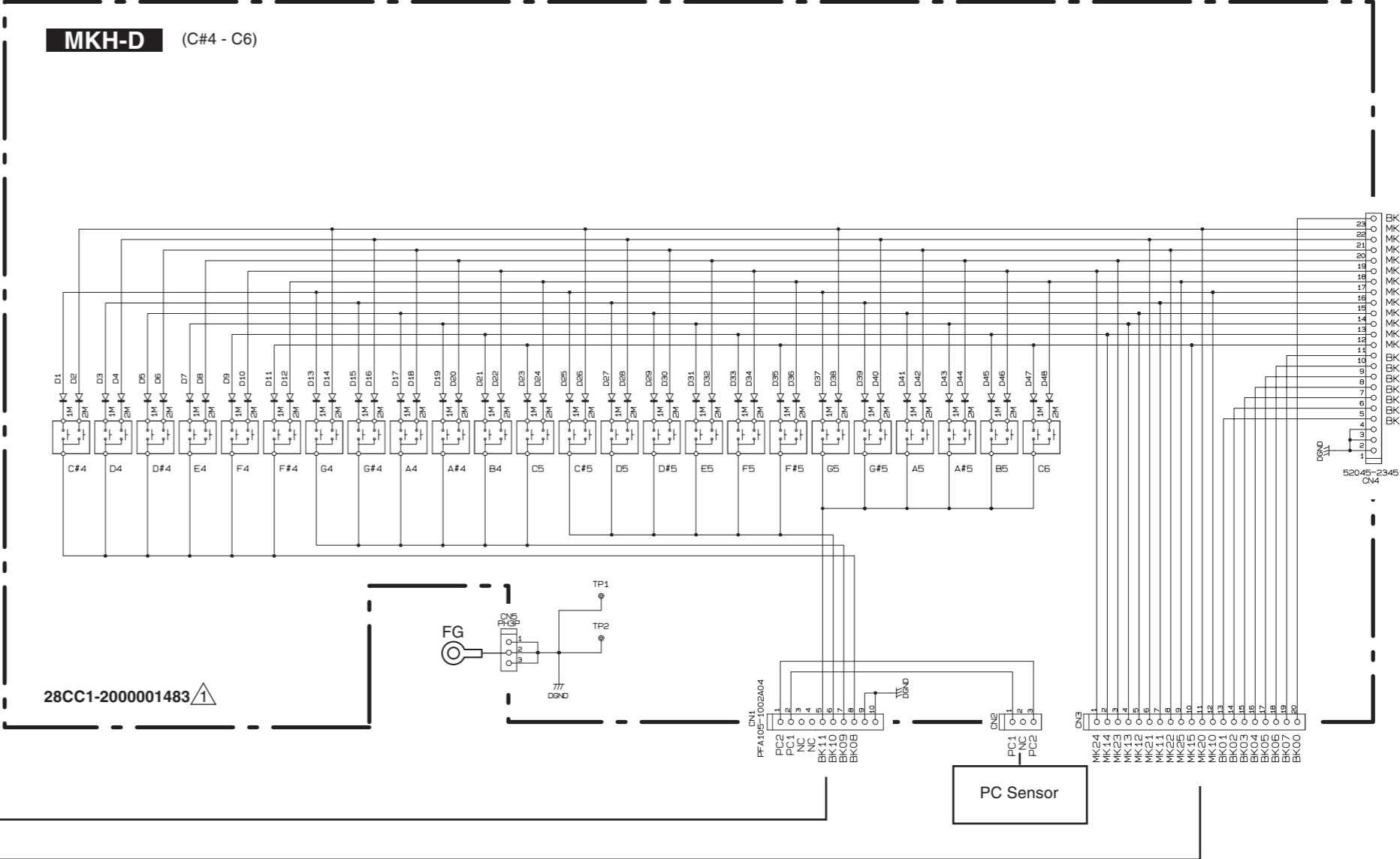
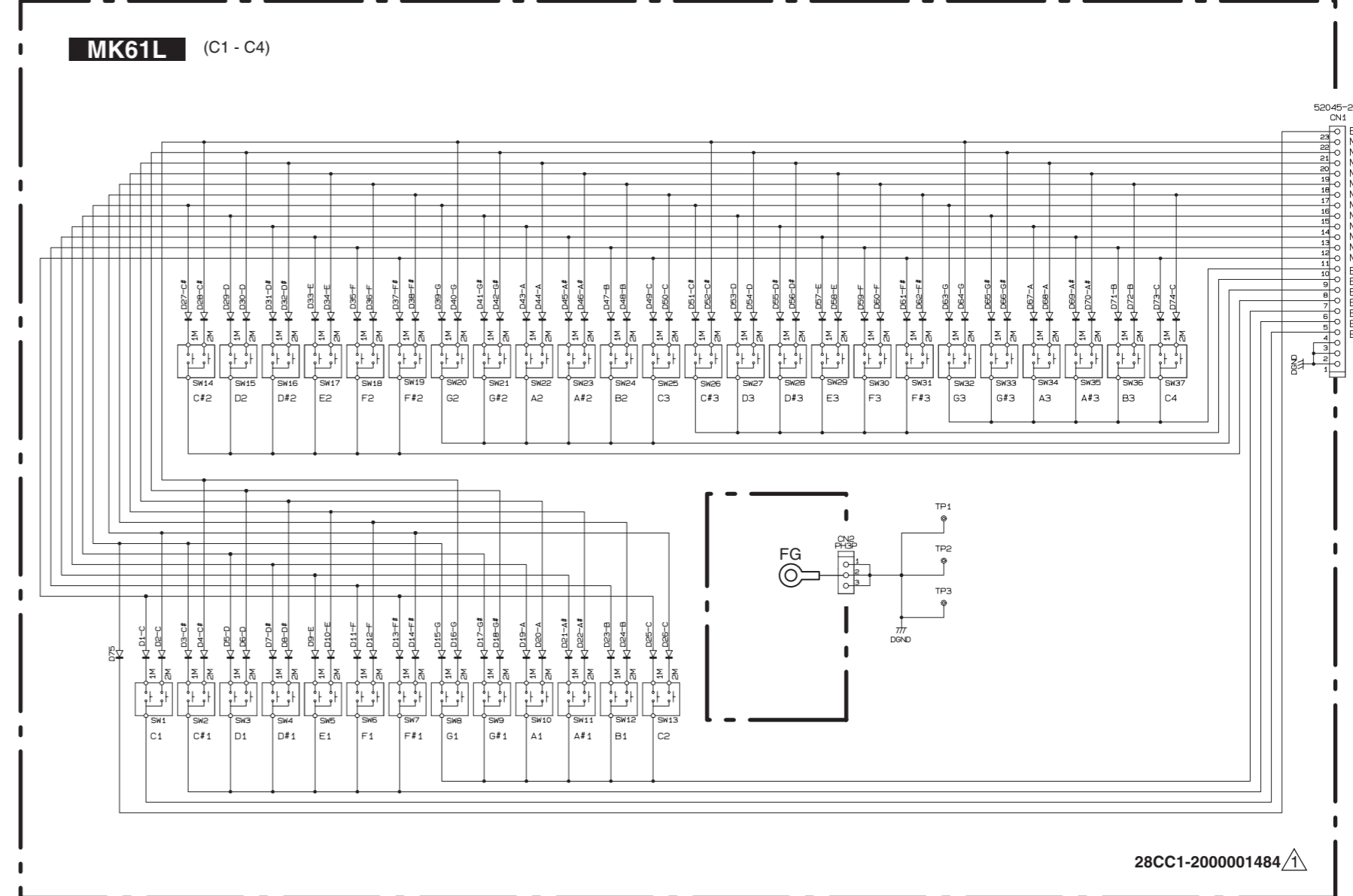
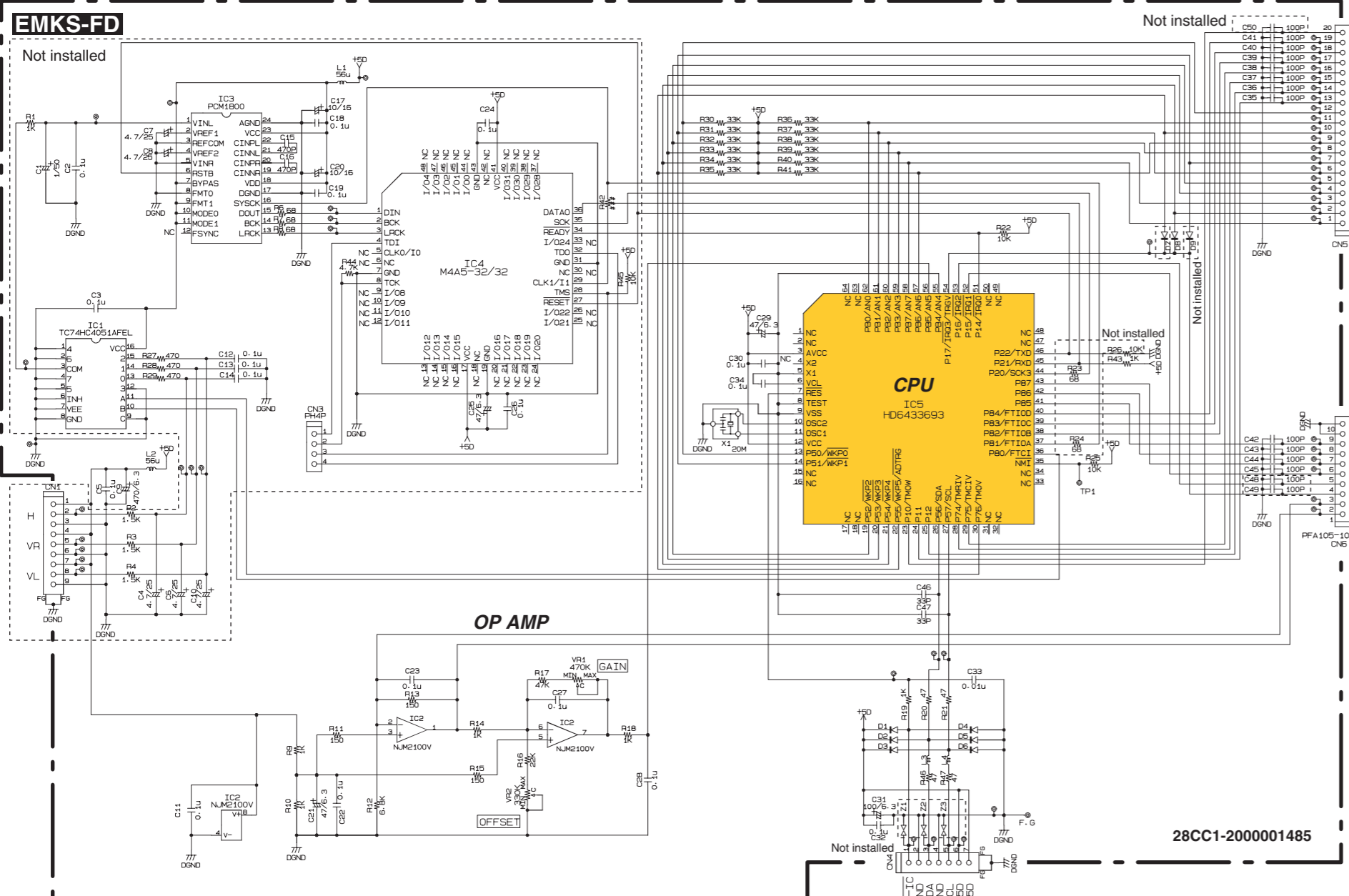
28CC1-2000005331

Note: See parts list for details of circuit board component parts.

WARNING
Components having special characteristics are marked with a triangle symbol and must be replaced with parts having specification equal to those originally installed.

(t) : Ceramic Capacitor

Tyros2 OVERALL CIRCUIT DIAGRAM 13/13 (EMKS-FD,MK61L,MKH-D)



Note: See parts list for details of circuit board component parts.