PORTATONE
PSR-175
SERVICE MANUAL



The PSR-175 service manual provides only the differences as compared with the PSR-170. You must have a PSR-170 service manual (**PK** **001652**) before servicing this unit.

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PK **001715**

YAMAHA
HAMAMATSU, JAPAN

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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 authoriza-tion, 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, therefor, 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 bus in the unit (heavy gauge black wires connect to this bus).

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.

■ WARNING

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

■ SPECIFICATIONS

Keyboard
61 standard-size keys (C1 - C6)

Display
Large multi-function LCD display

Setup
STANDBY/ON
MASTER VOLUME : MINI-MAX

Panel controls
Overall, SONG, VOICE, STYLE, DEMO, POTABLE GRAND, DJ, METRONOME, Dict., L, R, TEMPO/TAP numeric keypad (0 - 9, +,-)

Voices
100 panel voices (max. polyphony : 16)

Effects
Dual (Included in Voice),
Harmony/Echo (Included in Voice),
Split (Included in Voice),
Sustain

Auto Accompaniment
100 styles
Fingering: Multi Fingering
Sections: Intro, Main A, B, Ending, Fill

Overall controls
Multi Pad, Grade, Talking, Transpose, Tuning, Accompaniment Volume, Song Volume, Metronome Volume

Style controls
Acmp On/Off, Sync-Start, Start, Stop, Intro/Ending/rit., Main A, B (Auto Fill)

Song controls
Start, Stop, Pause, A-B Repeat, Fast Forward, Rewind, Melody Voice Change

One Touch Setting
1/style, 1/song

Multi Pads
4 pads x 10 banks

Yamaha Education Suite
Dictionary, Lesson 1-4

Preset songs
100 songs

Amplifier
2.0W + 2.0W

MIDI
IN/OUT

Auxiliary jacks
PHONES/OUTPUT, DC IN 12V, MIDI IN/OUT, SUSTAIN

Speakers
12cm x 2

Power consumption
VL/CSA 6.8W, CE7.5W (when using PA-3B power adaptor)

Power supply
Adaptor: Yamaha PA-3C or PA-3B AC power adaptor
Batteries: Six “D” size, R20P(LR20) or equivalent batteries

Dimensions
931 x 348.8 x 127.9 mm (36-2/3" x 13-3/4" x 5-1/16")

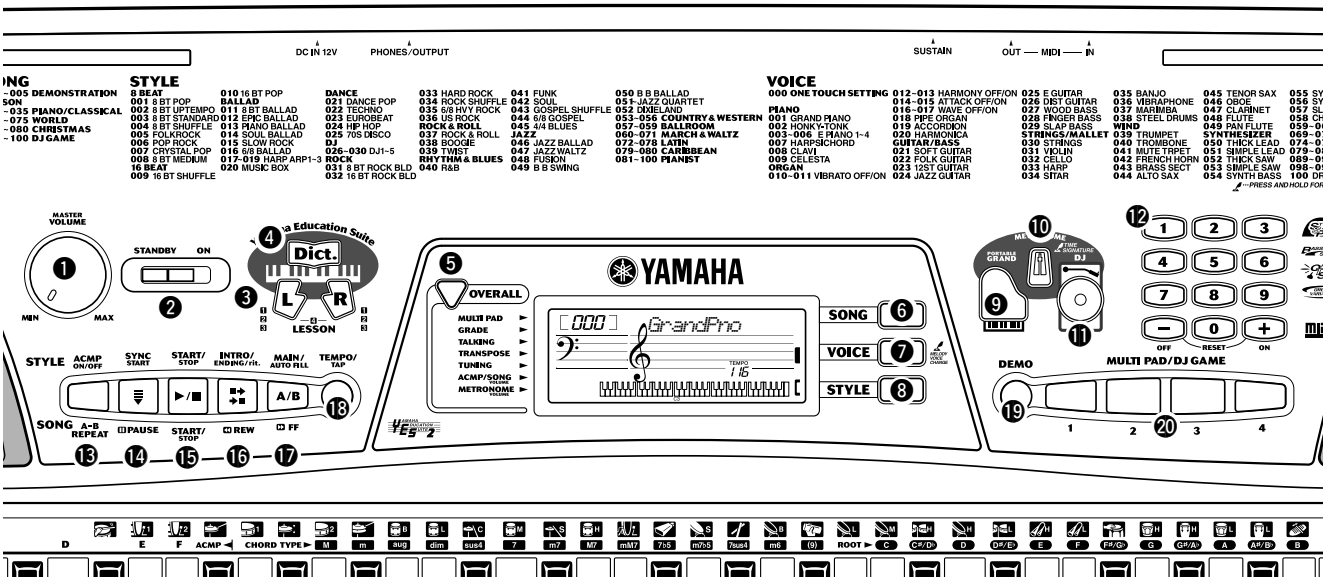
Weight
4.4kg (9 lbs., 11 oz.)

Supplied accessories
Music Rest, Owner’s Manual, Song Book

Optional accessories
Headphones: HPE-150
AC power adaptor: PA-3C or PA-3B
Keyboard stand: L-2L, L-2C

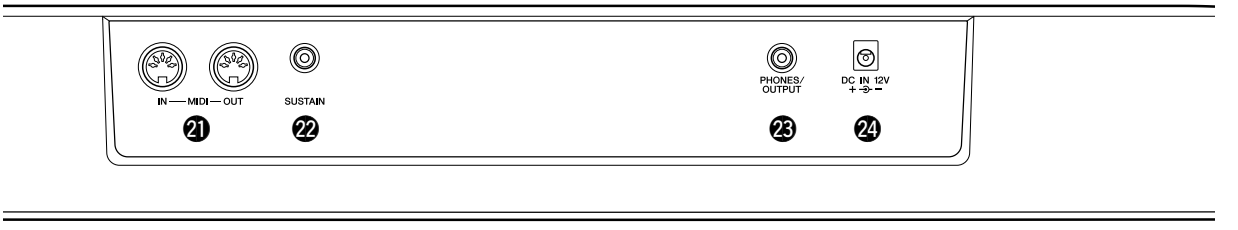
■ PANEL LAYOUT

● Top Panel



❶ [MASTER VOLUME] dial
❷ Power switch ([STANDBY/ON])
❸ LESSON [L] (Left) and [R] (Right) buttons
❹ [Dict.] (DICTIONARY) button
❺ [OVERALL] button
❻ [SONG] button
❼ [VOICE] button
❽ [STYLE] button
❾ [PORTABLE GRAND] button
❿ [METRONOME] button
⓫ [DJ] button
⓬ Numeric keypad, [+/ON] and [-/OFF] buttons
⓭ [ACCOMPANIMENT ON/OFF] ([A-B REPEAT]) button
⓮ [SYNC START] ([❚❚ PAUSE]) button
⓯ [START/STOP] button
⓰ [INTRO/ENDING/rit.] ([◀◀ REW]) button
⓱ [MAIN/AUTO FILL] ([▶▶ FF]) button
⓲ [TEMPO/TAP] button
⓳ [DEMO] button
⓴ [MULTI PAD/DJ GAME] buttons

● Rear Panel



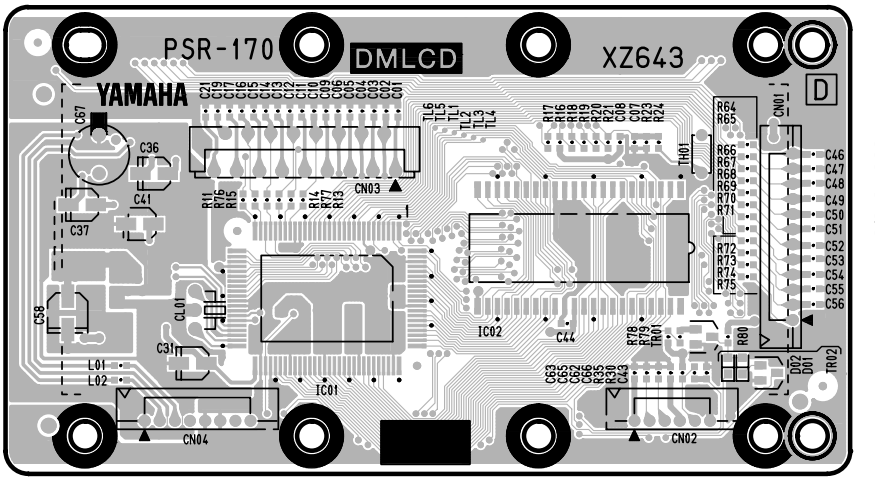
㉑ [MIDI IN], [MIDI OUT] terminals
㉒ [SUSTAIN] jack
㉓ [PHONES/OUTPUT] jack
㉔ [DC IN 12V] jack

■ CIRCUIT BOARDS

DM-LCD (XZ643D0) 5
PN-AM 1/2 (XZ644C0) 6
PN-AM 2/2 (XZ644C0) 7
VR (XZ644C0) 7

● DM-LCD Circuit Board

to MK-L

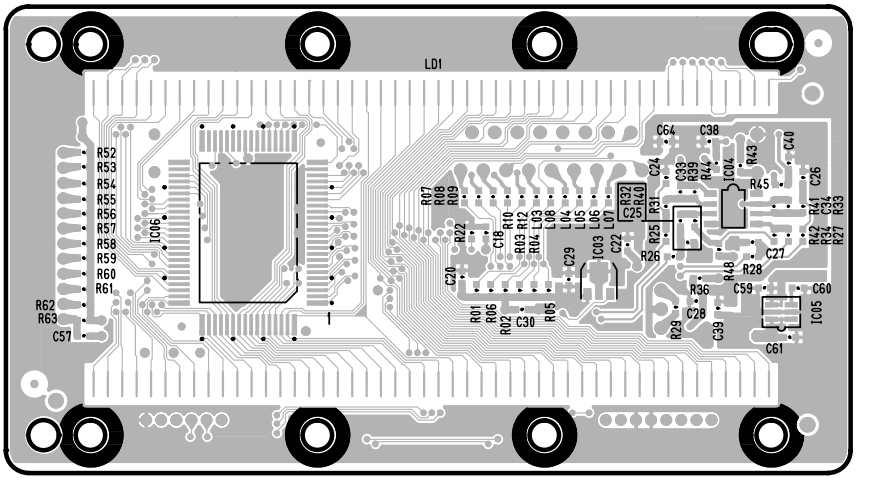


to PN-AM 2/2-CN203

to PN-AM 1/2-CN102

to PN-AM 2/2-CN201

Component side

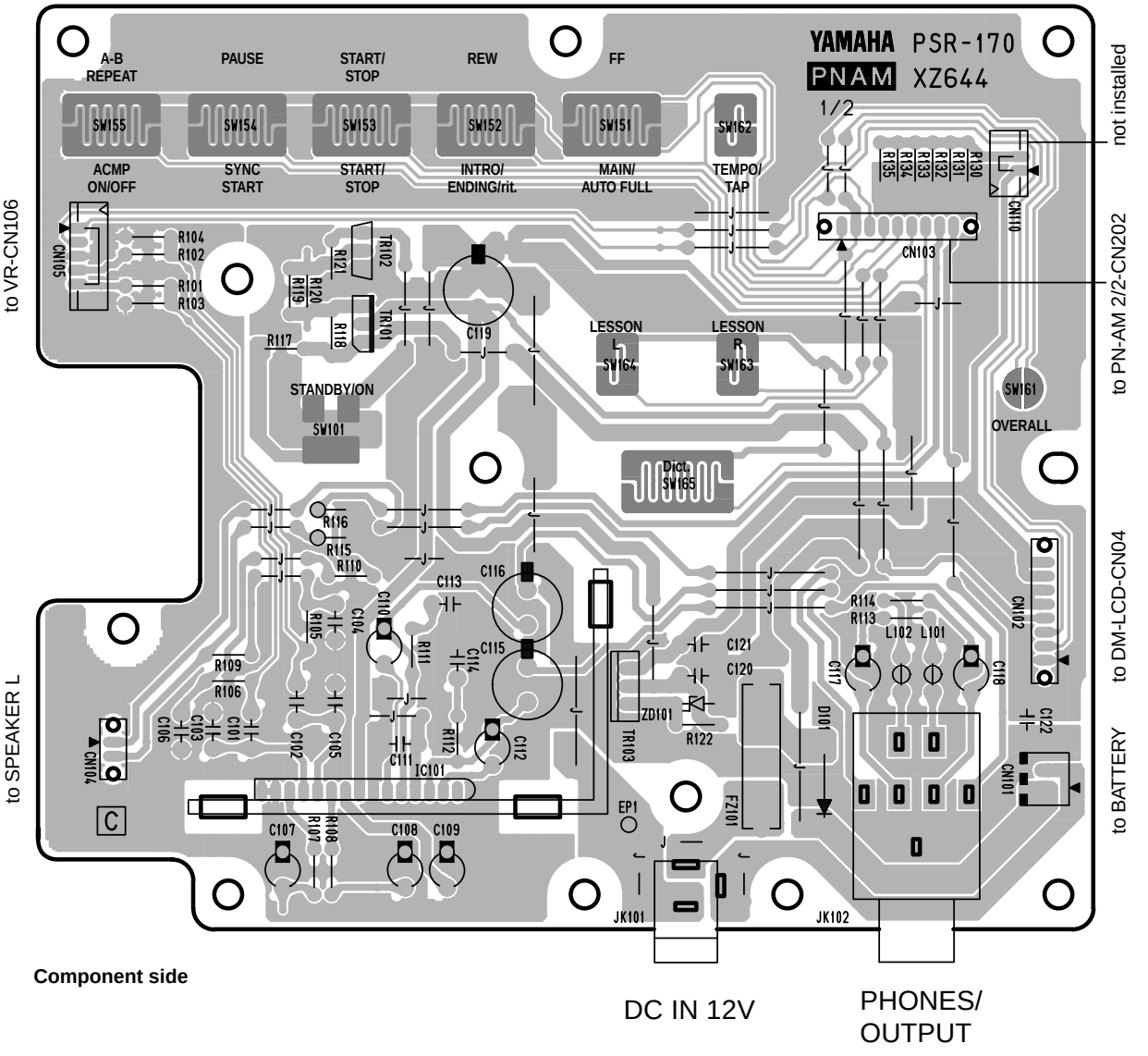


Pattern side

2NA-V692510 ⚠2

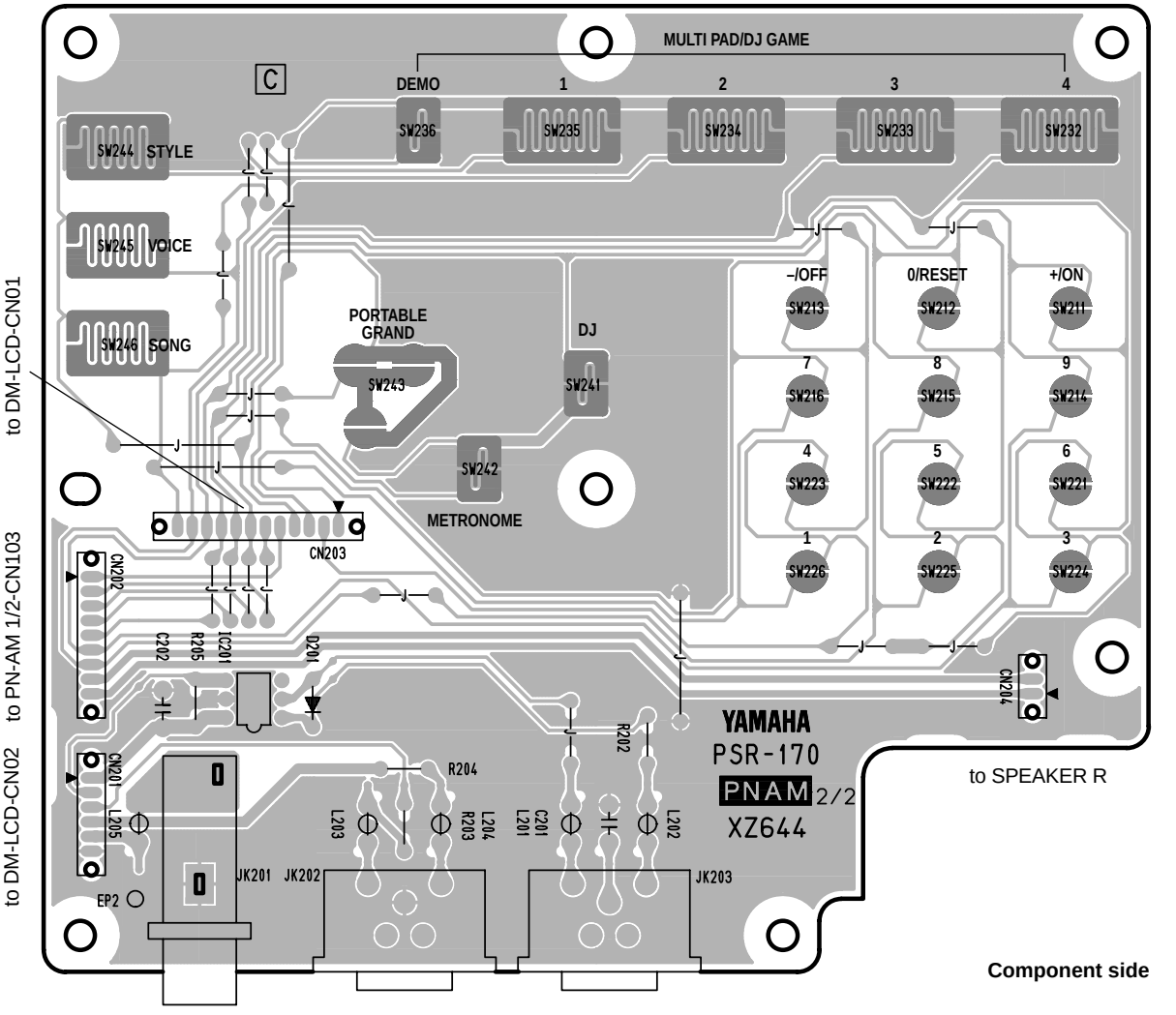
Note : See parts list for details of circuit board conponent parts.

● PN-AM 1/2 Circuit Board

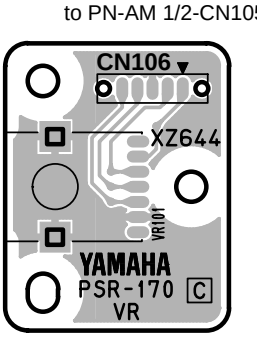


Component side

● PN-AM 2/2 Circuit Board



● VR Circuit Board

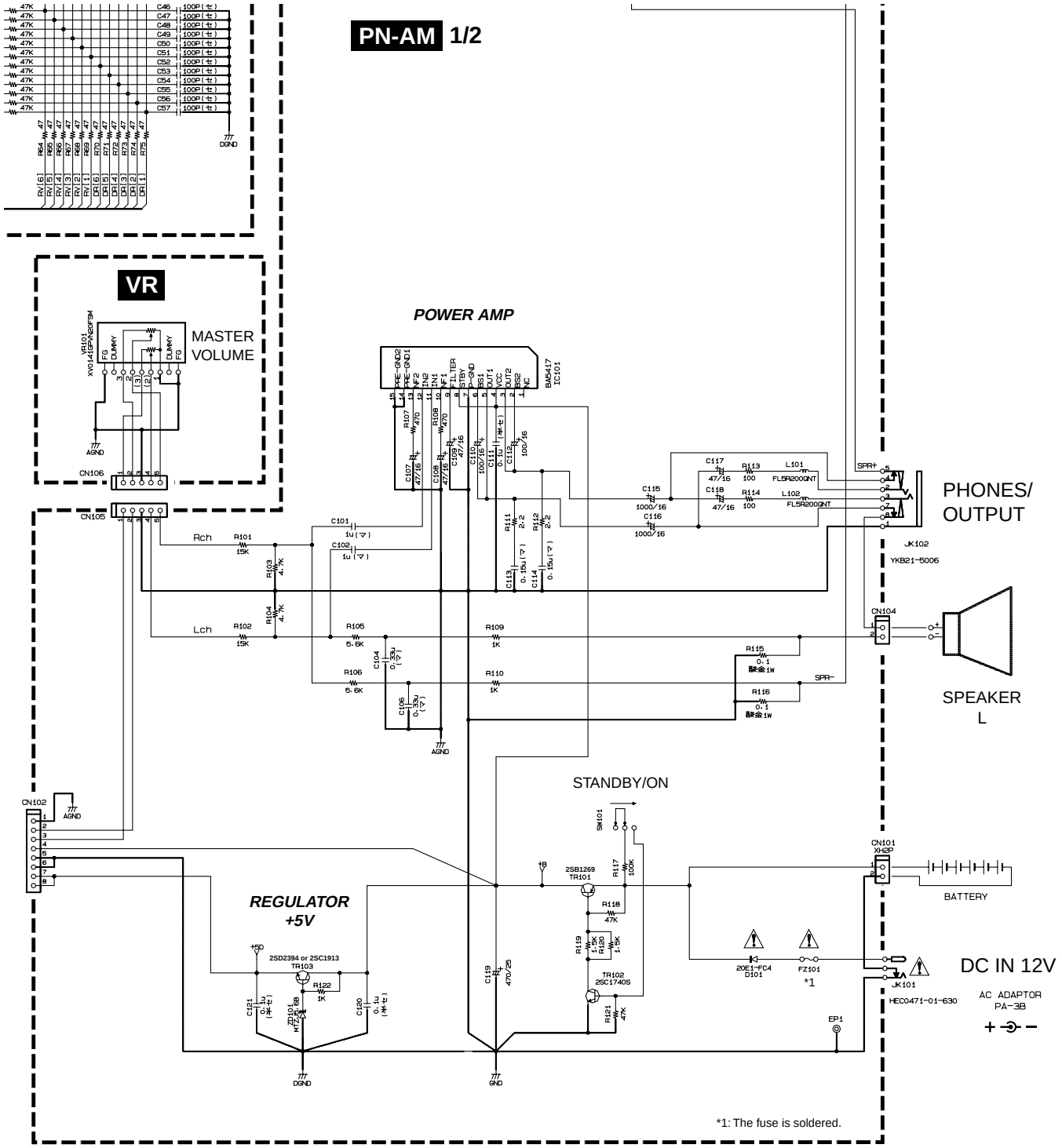


PN-AM 2/2, VR : 2NA-V708340 △7

PSR-175

■ OVERALL CIRCUIT DIAGRAM (Modifying part)

TR101, R119, R120 and IC002 (DM-LCD) have been modified.



DM-LCD, PN-AM, VR : 28CC1-8819402 ⚠7

MK-L, MK-H : 28CC1-8819596

(マ): Mylar Capacitor

(セ): Ceramic Capacitor

(半セ): Semiconductive Ceramic Capacitor

酸金: Metal Oxide Film Resistor

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

WARNING

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

■ MIDI IMPLEMENTATION CHART

YAMAHA [PSR-175/172] Date:18-NOV-2003
Model PSR-175/172 MIDI Implementation Chart Version : 1.0

Function...	Transmitted	Recognized	Remarks
Basic Default	1 - 7,10	1 - 7,10	
Channel Changed	x	x	
Default	3	3	
Mode Messages	x	x	
Altered	**********	x	
Note	0 - 127	0 - 127	
Number : True voice	**********	0 - 127	
Velocity Note ON	o 9nH,v=1-127 *1	o 9nH,v=1-127	
Note OFF	x 9nH,v=0	x 9nH,v=0 or 8nH	
After Key's	x	x	
Touch Ch's	x	x	
Pitch Bend	x	x	
0,32	o *2	o *2	Bank Select LSB,MSB
7	o	o	Volume
10	o	o	Pan
6,38	x	x	Data Entry
Control 64	o	o	Sustain
71-74	x	x	
Change 84	o	o	Portamento Cntrl
91,93,94	x	x	
96-97	x	x	RPN Inc,Dec
98,99	x	x	NRPN LSB,MSB
100-101	x	x	RPN LSB,MSB
Prog	o 0 - 127 *3	o 0 - 127 *3	
Change : True #	**********	*3	
System Exclusive	o *4	o *4	
: Song Pos.	x	x	
Common : Song Sel.	x	x	
: Tune	x	x	
System :Clock	x	x	
Real Time:Commands	x	x	
Aux :All Sound OFF	x	x	
:Reset All Cntrls	x	x	
:Local ON/OFF	x	x	
:All Notes OFF	x	x	
Mes- :Active Sense	o	o	
sages:Reset	x	x	

Mode 1 : OMNI ON , POLY Mode 2 : OMNI ON ,MONO o : Yes
Mode 3 : OMNI OFF, POLY Mode 4 : OMNI OFF,MONO x : No

NOTE:

**1 Playing the keyboard does not produce any changes in velocity data; the transmitted velocity value is fixed. The velocity value generated by playing the key is predetermined for each voice and may differ depending on the selected voice.*

**2 MSB can be used to change the voice for the Melody or Rhythm.*

MSB=00H :Melody Voice
MSB=7FH : Rhythm Voice
LSB: Refer to Voice list.

**3 For program change values, refer to the voice list.*
Program change and other like channel messages received will not affect the PSR-160 panel settings or what is being played on the keyboard.

**4 < GM System on > F0H,7EH,7FH, 09H, 01H, F7H*
All data is restored to the default values.

**5 MIDI does not function (transmit/receive) in the Song mode.*

PORTATONE

PSR-175

PARTS LIST

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KEYBOARD ASSEMBLY **4**
ELECTRICAL PARTS ..... **5 – 8**

Notes : DESTINATION ABBREVIATIONS

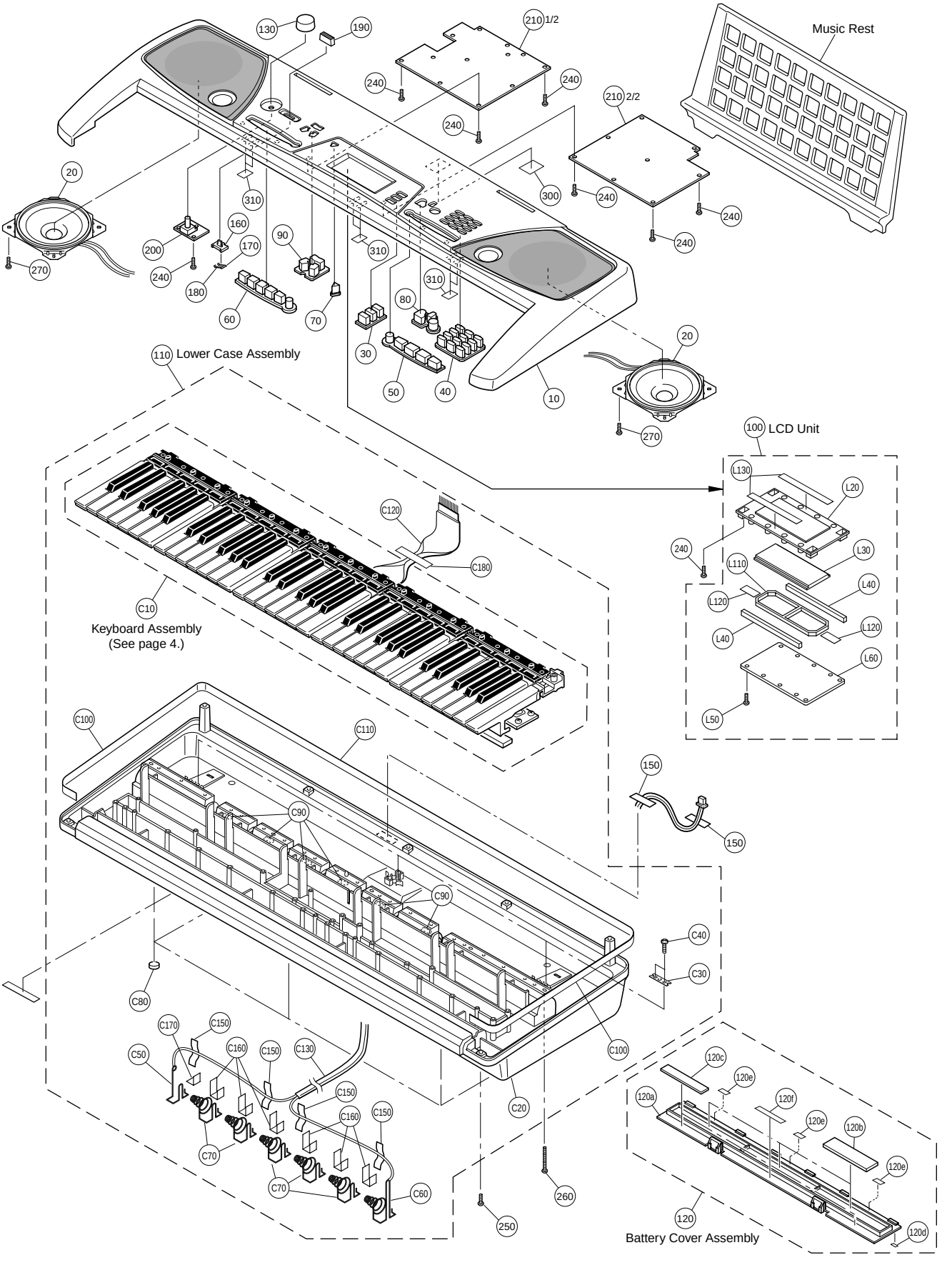
A :	Australian model	M :	South African model
B :	British model	O :	Chinese model
C :	Canadian model	Q :	South-east Asia model
D :	German model	T :	Taiwan model
E :	European model	U :	U.S.A. model
F :	French model	V :	General export model (110V)
H :	North European model	W:	General export model (220)
I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

■ WARNING

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

- The numbers “QTY” show quantities for each unit.
- The parts with “--” in “**PART NO.**” are not available as spare parts.
- This mark “ } ” in the REMARKS column means these parts are interchangeable.
- The second letter of the shaded ( ) part number is O, not zero.
- The second letter of the shaded ( ) part number is I, not one.

■ OVERALL ASSEMBLY

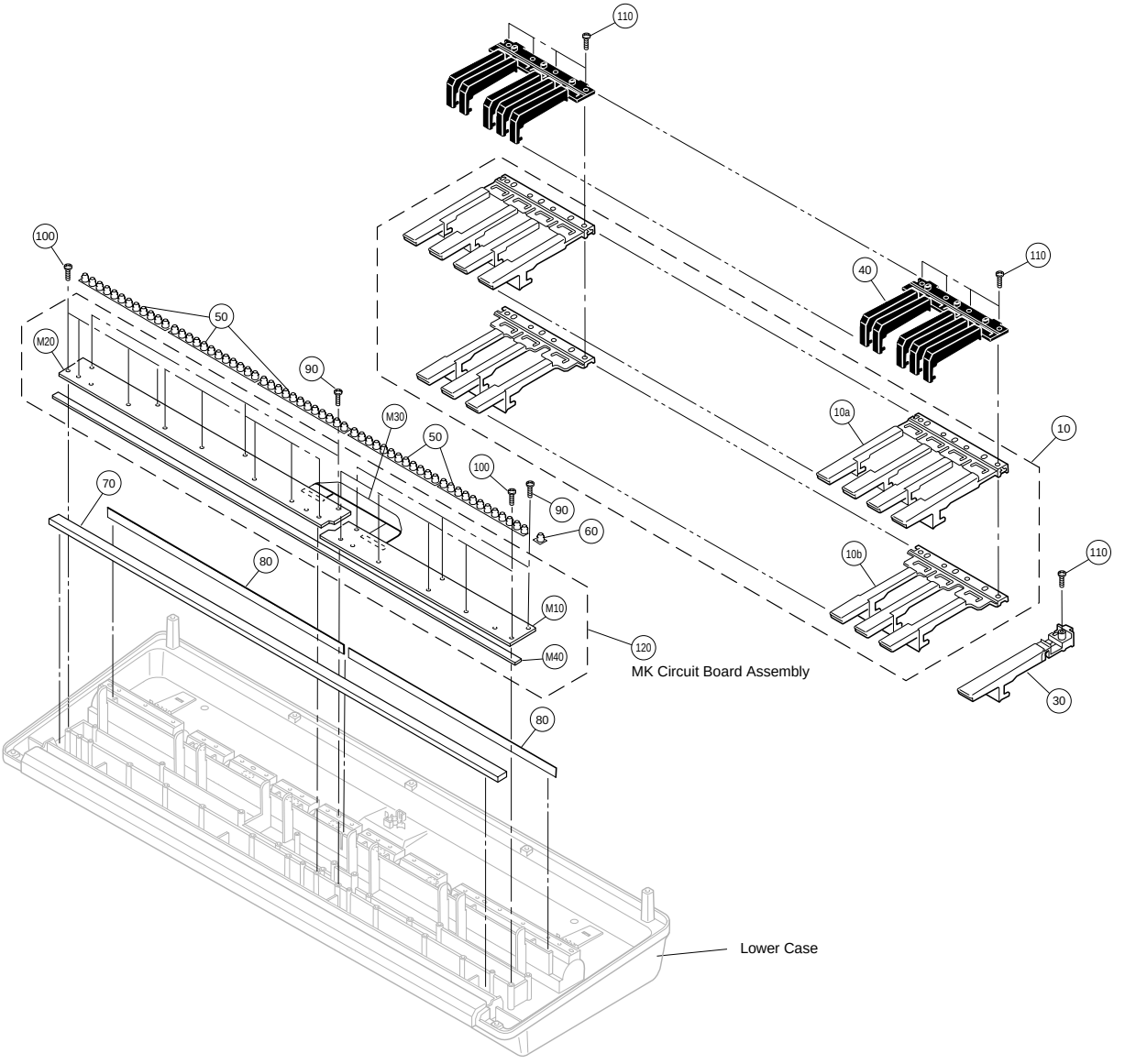


	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
		--	OVERALL ASSEMBLY			PSR-175 (WC05520)		
*	10	WC059300	Upper Case					
	20	X3804A00	Speaker	12.0cm 4 ohm 3W			2	04
	30	WA333800	Panel Switch	3 DOME		SONG,VOICE,STYLE		01
*	40	WC201400	Panel Switch	12 DOME		0-9,OFF/-,ON/+		
*	50	WC201600	Panel Switch	5 DOME		DEMO,MULTI PAD 1-4		
*	60	WC201700	Panel Switch	6 DOME		ACMP ON/OFF,SYNC START, START/STOP,INTRO/ENDING, MAIN/AUTO FILL,TEMPO/TAP		
	70	WA328000	Panel Switch	1 DOME		OVERALL		01
*	80	WC201800	Panel Switch	3 DOME		METRONOME,PORTABLE GRAND, DJ		
*	90	WC201900	Panel Switch	3 DOME		Dict,LESSON L,LESSON R		
	100	--	LCD Unit	M		(V709880)		
	110	--	Lower Case Assembly			(V702430)		
	120	V9259700	Battery Cover Assembly	PT				03
	120a	--	Battery Cover			(V704220)		
	120b	--	Battery Cushion White			(V710060)	3	
	120c	--	Cushion	PE		(V796870)	2	
	120d	--	Nonwoven Fabric Cloth	15X3X0.5		(V925980)	6	
	120e	--	Cushion	PE 55X8X1		(WA10190)	3	
	120f	--	Cushion	PE 100X12X2		(WA21920)		
	130	VU432400	Knob Black			MASTER VOLUME		01
	150	VA126100	Adhesive Tape	12X50			2	03
	160	VF073800	Slider	LC				01
	170	BB005650	Brush	YCUT-MEH				02
	180	--	Grease	G-902 1kg		(VA01020)		
	190	VV490600	Slide Knob Black			STANDBY/ON		03
	200	V7083700	Circuit Board	VR				04
	210	V7083600	Circuit Board	PN-AM				12
	240	EP600250	Bind Head Tapping Screw-B	3.0X8 MFZN2Y			27	01
	250	VE683000	Bind Head Tapping Screw-B	3.0X12 MFZN2Y			7	01
	260	V7213700	Bind Head Tapping Screw-B	3.0X30 MFZN2Y			5	01
	270	EP640410	Bind Head Tapping Screw-B	4.0X8 MFZN2Y			8	01
	300	--	Adhesive Tape	12X90		(V591240)		
	310	--	Nonwoven Fabric Cloth	14X6X0.5		(V789860)	6	
		--	LCD Unit	M		(V709880)		
	L20	V5339000	LCD Panel	TYPE-A				01
	L30	V6968000	LCD	TTR5297 TYPE-M				07
	L40	V3755900	Rubber Connector	SS-105L			2	01
	L40	V5415400	Rubber Connector	SS-105L			2	
	L50	EP600280	Bind Head Tapping Screw-P	3.0X8 MFZN2Y			8	01
	L60	V6925200	Circuit Board	DM-LCD				19
	L110	V7172200	LCD Holder	A				01
	L120	VA119300	Adhesive Tape	12X25			2	01
	L130	--	Nonwoven Fabric Cloth	0.5X95X8		(V706870)	2	
		--	Lower Case Assembly			(V702430)		
	C10	--	Keyboard Assembly	16N C61 P1M		(V709960)		
	C20	V6997500	Lower Case					06
	C30	VI104400	Holder	CH t=1.2			3	
	C40	EP600250	Bind Head Tapping Screw-B	3.0X8 MFZN2Y			6	01
	C50	V7060500	Spring Terminal	(+)				01
	C60	V7060700	Spring Terminal	(-)				01
	C70	V7060200	Spring Terminal	(+/-)			5	01
	C80	CB043750	Foot Black	t1.6			5	01
	C100	--	Cushion	360X15X1.0 PE		(V642100)	2	
	C110	--	Cushion	885X15X1.0 PE		(V642110)		
	C120	--	Connector Assembly	MK 17P		(V718700)		
	C130	--	Connector Assembly	BATTERY XH 2P		(V718670)		
	C150	VA126100	Adhesive Tape	12X50			4	03
	C160	--	Nonwoven Fabric Cloth	40X13X0.5		(V771130)	6	
	C170	--	Nonwoven Fabric Cloth	13X13X0.5		(V771140)		
	C180	--	Adhesive Tape	12X90		(V591240)		
			ACCESSORIES					
		V2115000	Music Rest					06
		VY944300	AC Adaptor	PA-32 CH		O		10
*		WC060600	Chinese Guide Sheet			O		
		--	Label	CHN		O (WA19930)		

*: New Parts

RANK: Japan only

■ KEYBOARD ASSEMBLY



REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	--	KEYBOARD ASSEMBLY	16N C61 P1M		PSR-175 (V709960)		
10	**V34107A0**	White Keys	16N CEGBDFA			5	04
10a	--	White Key	16N CEGB		(V341260)	5	
10a	--	White Key	16N CEGB		(WB12520)	5	
10b	--	White Key	16N DFA		(V341270)	5	
10b	--	White Key	16N DFA		(WB12530)	5	
30	**V4760300**	White Key	16N C'				02
40	**VZ271700**	Black Key	16N			5	06
50	**VZ271800**	Rubber Contact	16N-1M OCT 1M			5	05
60	**VZ271900**	Rubber Contact	16N-1M C'1M				04
70	**VZ303000**	Felt L	16N				02
80	**V7100100**	Rubber Support	16N				03
90	**EP600250**	Bind Head Tapping Screw-B	3.0X8 MFZN2Y			7	01
100	**VZ313100**	Bind Head Tapping Screw-P	SP 3.0X12 MFZNBL			13	01
110	**EP600680**	Bind Head Tapping Screw-P	3.0X20 MFZN2Y			21	01
110	**VT069800**	Bind Head Tapping Screw-P	3.0X20 MFZN2			21	01
120	--	MK Circuit Board Assembly	16N1M C61 P1		(V718920)		
	--	MK Circuit Board Assembly	16N1M C61 P1		(V718920)		
M10	**VZ272400**	Circuit Board	MK-H 16N-1M				09
M20	**V7189900**	Circuit Board	MK-L 16N-1M C61 P1				14
M30	--	Connector Assembly	16N-1M-C61		(V719030)		
M40	**VZ302900**	Felt U	16N				02

✻: New Parts

RANK: Japan only

■ ELECTRICAL PARTS

REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
		ELECTRICAL PARTS			PSR-175		
	V6925200	Circuit Board	DM-LCD		(V692510)(XZ643D0)		19
	VZ272400	Circuit Board	MK-H 16N-1M		(VZ27220)(XT701A0)		09
	V7189900	Circuit Board	MK-L 16N-1M C61 P1		(V719100)(XZ850A0)		14
	V7083600	Circuit Board	PN-AM		(V708340)(XZ644C0)		12
	V7083700	Circuit Board	VR		(V708340)(XZ644C0)		04
	V6925200	Circuit Board	DM-LCD		(V692510)(XZ643D0)		19
C0001	**US062470**	Ceramic Capacitor-SL(chip)	470P 50V J				01
-0006	**US062470**	Ceramic Capacitor-SL(chip)	470P 50V J				01
C0007	**US135100**	Ceramic Capacitor-F (chip)	0.1000 16V Z				01
C0007	**V7182500**	Ceramic Capacitor-F (chip)	0.1000 50V Z				01
C0008	**US135100**	Ceramic Capacitor-F (chip)	0.1000 16V Z				01
C0008	**V7182500**	Ceramic Capacitor-F (chip)	0.1000 50V Z				01
C0009	**US062470**	Ceramic Capacitor-SL(chip)	470P 50V J				01
-0017	**US062470**	Ceramic Capacitor-SL(chip)	470P 50V J				01
C0018	**US135100**	Ceramic Capacitor-F (chip)	0.1000 16V Z				01
C0018	**V7182500**	Ceramic Capacitor-F (chip)	0.1000 50V Z				01
C0019	**US062470**	Ceramic Capacitor-SL(chip)	470P 50V J				01
C0020	**US135100**	Ceramic Capacitor-F (chip)	0.1000 16V Z				01
C0020	**V7182500**	Ceramic Capacitor-F (chip)	0.1000 50V Z				01
C0021	**US062470**	Ceramic Capacitor-SL(chip)	470P 50V J				01
C0022	**US135100**	Ceramic Capacitor-F (chip)	0.1000 16V Z				01
C0022	**V7182500**	Ceramic Capacitor-F (chip)	0.1000 50V Z				01
C0024	**US063150**	Ceramic Capacitor-B (chip)	1500P 50V K				01
-0027	**US063150**	Ceramic Capacitor-B (chip)	1500P 50V K				01
C0028	**US135100**	Ceramic Capacitor-F (chip)	0.1000 16V Z				01
-0030	**US135100**	Ceramic Capacitor-F (chip)	0.1000 16V Z				01
C0028	**V7182500**	Ceramic Capacitor-F (chip)	0.1000 50V Z				01
-0030	**V7182500**	Ceramic Capacitor-F (chip)	0.1000 50V Z				01
C0031	**UF017220**	Electrolytic Cap. (chip)	22 6.3V				01
C0033	**US063100**	Ceramic Capacitor-B (chip)	1000P 50V K				01
C0034	**US063100**	Ceramic Capacitor-B (chip)	1000P 50V K				01
C0036	**UF046470**	Electrolytic Cap. (chip)	4.7 25V				01
C0037	**UF046470**	Electrolytic Cap. (chip)	4.7 25V				01
C0038	**US064100**	Ceramic Capacitor-B (chip)	0.0100 50V K				01
C0039	**US135100**	Ceramic Capacitor-F (chip)	0.1000 16V Z				01
C0039	**V7182500**	Ceramic Capacitor-F (chip)	0.1000 50V Z				01
C0040	**US064100**	Ceramic Capacitor-B (chip)	0.0100 50V K				01
C0041	**UF017220**	Electrolytic Cap. (chip)	22 6.3V				01
C0043	**US135100**	Ceramic Capacitor-F (chip)	0.1000 16V Z				01
C0043	**V7182500**	Ceramic Capacitor-F (chip)	0.1000 50V Z				01
C0044	**US135100**	Ceramic Capacitor-F (chip)	0.1000 16V Z				01
C0044	**V7182500**	Ceramic Capacitor-F (chip)	0.1000 50V Z				01
C0046	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J				01
-0057	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J				01
C0058	**UF017470**	Electrolytic Cap. (chip)	47 6.3V				01
C0059	**US135100**	Ceramic Capacitor-F (chip)	0.1000 16V Z				01
-0061	**US135100**	Ceramic Capacitor-F (chip)	0.1000 16V Z				01
C0059	**V7182500**	Ceramic Capacitor-F (chip)	0.1000 50V Z				01
-0061	**V7182500**	Ceramic Capacitor-F (chip)	0.1000 50V Z				01
C0062	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J				01
C0063	**US135100**	Ceramic Capacitor-F (chip)	0.1000 16V Z				01
C0063	**V7182500**	Ceramic Capacitor-F (chip)	0.1000 50V Z				01
C0064	**US135100**	Ceramic Capacitor-F (chip)	0.1000 16V Z				01
C0064	**V7182500**	Ceramic Capacitor-F (chip)	0.1000 50V Z				01
C0065	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J				01
C0066	**US135100**	Ceramic Capacitor-F (chip)	0.1000 16V Z				01
C0066	**V7182500**	Ceramic Capacitor-F (chip)	0.1000 50V Z				01
C0067	**UR838470**	Electrolytic Cap.	470.00 16.0V				01
CL001	**V2905100**	Ceramic Resonator	14M CSTLA14M0X35-B				01
CL001	**V3522500**	Ceramic Resonator	14M EFOEX1405E38				01
CN001	**VK025600**	Wire Trap	52147 12P TE				01
CN002	**VF728300**	Wire Trap	52147 6P TE				01
CN003	**VG924500**	Wire Trap	52328 17P TE				02
CN004	**VK025200**	Wire Trap	52147 8P TE				01
D0001	**VT332900**	Diode	1SS355 TE-17				01
D0002	**VT332900**	Diode	1SS355 TE-17				01
IC001	**XU355A00**	IC	YMW728-F		GEW12		10
IC002	**XZ870200**	IC	MX23L1610MC-10		MASK ROM 16M PROGRAM		06

❇: New Parts

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REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
IC003	**XZ625A00**	IC	M62722ML		SYSTEM RESET		01
IC004	**XF291A00**	IC	UPC4570G2		OP AMP		03
IC005	**XZ624A00**	IC	MM1385ENRE		REGULATOR +3.3V		02
IC005	**XZ642A00**	IC	TAR5S33				
IC006	**XV226A00**	IC	S6A0069X10-Q0RJ		LCD DRIVER		05
IC006	**XZ987A00**	IC	ML9040A-B01GA				05
IC006	**X3148A00**	IC	NT3881DF-01				05
L0001	**VY657200**	Chip Inductance	600 BK1608HM601				01
L0001	**V3063400**	Chip Inductance	BLM18BD601SN1D				01
L0002	**VY657200**	Chip Inductance	600 BK1608HM601				01
L0002	**V3063400**	Chip Inductance	BLM18BD601SN1D				01
L0003	**RD355100**	Carbon Resistor (chip)	100.0 63M J				01
-0008	**RD355100**	Carbon Resistor (chip)	100.0 63M J				01
R0001	**RD357470**	Carbon Resistor (chip)	47.0K 63M J				01
-0006	**RD357470**	Carbon Resistor (chip)	47.0K 63M J				01
R0007	**VY657200**	Chip Inductance	600 BK1608HM601				01
-0015	**VY657200**	Chip Inductance	600 BK1608HM601				01
R0007	**V3063400**	Chip Inductance	BLM18BD601SN1D				01
-0015	**V3063400**	Chip Inductance	BLM18BD601SN1D				01
R0016	**RD356220**	Carbon Resistor (chip)	2.2K 63M J				01
R0017	**RD357910**	Carbon Resistor (chip)	91.0K 63M J				01
R0018	**RD356220**	Carbon Resistor (chip)	2.2K 63M J				01
-0021	**RD356220**	Carbon Resistor (chip)	2.2K 63M J				01
R0022	**RD357470**	Carbon Resistor (chip)	47.0K 63M J				01
R0023	**RD354680**	Carbon Resistor (chip)	68.0 63M J				01
R0024	**RD355220**	Carbon Resistor (chip)	220.0 63M J				01
R0025	**RD357150**	Carbon Resistor (chip)	15.0K 63M J				01
-0028	**RD357150**	Carbon Resistor (chip)	15.0K 63M J				01
R0029	**RD359100**	Carbon Resistor (chip)	1.0M 63M J				01
R0030	**RD357100**	Carbon Resistor (chip)	10.0K 63M J				01
R0031	**RD357220**	Carbon Resistor (chip)	22.0K 63M J				01
R0032	**RD357100**	Carbon Resistor (chip)	10.0K 63M J				01
R0033	**RD357220**	Carbon Resistor (chip)	22.0K 63M J				01
R0034	**RD357100**	Carbon Resistor (chip)	10.0K 63M J				01
R0035	**RD357470**	Carbon Resistor (chip)	47.0K 63M J				01
R0036	**RD354470**	Carbon Resistor (chip)	47.0 63M J				01
R0039	**RD357220**	Carbon Resistor (chip)	22.0K 63M J				01
R0040	**RD357100**	Carbon Resistor (chip)	10.0K 63M J				01
R0041	**RD357220**	Carbon Resistor (chip)	22.0K 63M J				01
R0042	**RD357100**	Carbon Resistor (chip)	10.0K 63M J				01
R0043	**RD355680**	Carbon Resistor (chip)	680.0 63M J				01
R0044	**RD355150**	Carbon Resistor (chip)	150.0 63M J				01
R0045	**RD355150**	Carbon Resistor (chip)	150.0 63M J				01
R0048	**RD356220**	Carbon Resistor (chip)	2.2K 63M J				01
R0052	**RD357470**	Carbon Resistor (chip)	47.0K 63M J				01
-0063	**RD357470**	Carbon Resistor (chip)	47.0K 63M J				01
R0064	**RD354470**	Carbon Resistor (chip)	47.0 63M J				01
-0075	**RD354470**	Carbon Resistor (chip)	47.0 63M J				01
R0076	**VY657200**	Chip Inductance	600 BK1608HM601				01
R0076	**V3063400**	Chip Inductance	BLM18BD601SN1D				01
R0077	**VY657200**	Chip Inductance	600 BK1608HM601				01
R0077	**V3063400**	Chip Inductance	BLM18BD601SN1D				01
R0078	**RD357100**	Carbon Resistor (chip)	10.0K 63M J				01
R0079	**RD357220**	Carbon Resistor (chip)	22.0K 63M J				01
R0080	**RD357220**	Carbon Resistor (chip)	22.0K 63M J				01
TH001	**VR346900**	Thermistor	ERTD2FGJ801S 800				03
TR001	**VV556400**	Transistor	2SC2412K Q,R,S				01
TR002	**VV556400**	Transistor	2SC2412K Q,R,S				01
	VZ272400	Circuit Board	MK-H 16N-1M		(VZ27220)(XT701A0)		09
2	**VB941200**	Diode	1SS133,1SS176		C3-C5		01
3	**VK025500**	Wire Trap	52147 11P TE				01
	V7189900	Circuit Board	MK-L 16N-1M C61 P1		(V719100)(XZ850A0)		14
2	**VB941200**	Diode	1SS133,1SS176		C0-B2		01
2	**VV437800**	Diode	1N4148(DO-34)				01
3	**VK025500**	Wire Trap	52147 11P TE				01
4	**VG924500**	Wire Trap	52328 17P TE				02
	V7083600	Circuit Board	PN-AM		(V708340)(XZ644C0)		12

✻: New Parts

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	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
		V7083700	Circuit Board	VR		(V708340)(XZ644C0)		04
		EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL				01
		--	Silicon Grease	G-746		(0412125)		
		--	Jumper Wire	0.55		(VA07890)		
	C0101	VE327200	Monolithic Mylar Capacitor	1.0 50V J				02
	C0101	VU838100	Monolithic Mylar Capacitor	1.0000 50V J				
	C0102	VE327200	Monolithic Mylar Capacitor	1.0 50V J				02
	C0102	VU838100	Monolithic Mylar Capacitor	1.0000 50V J				
	C0104	VE326600	Monolithic Mylar Capacitor	0.33 50V J				01
	C0104	VR169000	Monolithic Mylar Capacitor	ECQ-V1H334JL3				01
	C0106	VE326600	Monolithic Mylar Capacitor	0.33 50V J				01
	C0106	VR169000	Monolithic Mylar Capacitor	ECQ-V1H334JL3				01
	C0107	UR837470	Electrolytic Cap.	47.00 16.0V				01
	-0109	UR837470	Electrolytic Cap.	47.00 16.0V				01
	C0110	UR838100	Electrolytic Cap.	100.00 16.0V				01
	C0111	VC694800	Semiconductive Cera. Cap.	0.1000 25V Z				01
	C0112	UR838100	Electrolytic Cap.	100.00 16.0V				01
	C0113	VE326200	Monolithic Mylar Capacitor	0.15 50V J				
	C0113	VR168500	Monolithic Mylar Capacitor	ECQ-V1H154JL3				01
	C0114	VE326200	Monolithic Mylar Capacitor	0.15 50V J				
	C0114	VR168500	Monolithic Mylar Capacitor	ECQ-V1H154JL3				01
	C0115	UR839100	Electrolytic Cap.	1000 16.0V				01
	C0116	UR839100	Electrolytic Cap.	1000 16.0V				01
	C0117	UR837470	Electrolytic Cap.	47.00 16.0V				01
	C0118	UR837470	Electrolytic Cap.	47.00 16.0V				01
	C0119	UR848470	Electrolytic Cap.	470.00 25.0V				01
	C0120	VC694800	Semiconductive Cera. Cap.	0.1000 25V Z				01
	C0121	VC694800	Semiconductive Cera. Cap.	0.1000 25V Z				01
	C0201	FG644100	Ceramic Capacitor-F	0.0100 50V Z				01
	C0202	VC694800	Semiconductive Cera. Cap.	0.1000 25V Z				01
	CN101	LB918020	Base Post Connector	XH 2P TE				01
	CN102	VI878600	Cable Holder	51048 8P TE				01
	CN103	VI878700	Cable Holder	51048 9P TE				01
	CN104	VI878000	Cable Holder	51048 2P TE				01
	CN105	VK024900	Wire Trap	52147 5P TE				01
	CN106	VI878300	Cable Holder	51048 5P TE				01
	CN201	VI878400	Cable Holder	51048 6P TE				01
	CN202	VI878700	Cable Holder	51048 9P TE				01
	CN203	VI879000	Cable Holder	51048 12P TE				01
	CN204	VI878000	Cable Holder	51048 2P TE				01
⚠	D0101	VL723600	Diode	20E1-FC4				01
⚠	D0101	VV731400	Diode	2A02M				01
⚠	D0101	VY717100	Diode	LT2A02-E				01
⚠	D0101	V8603100	Diode	2A02GM				
	D0201	VB941200	Diode	1SS133,1SS176				01
⚠	FZ101	V6979300	Fuse	3.00A J				01
	HS101	--	Heat Sink			(V561400)		
	IC101	XV771A00	IC	BA5417		POWER AMP. 5.0W 2CH		03
	IC201	VG181900	Photo Coupler	PC-900V				03
	IC201	WA645200	Photo Coupler	PC-900V0NSZX				04
⚠	JK101	LB302260	Connector	HEC0470-01-630		DC IN 12V		02
⚠	JK101	V6557600	Connector	HTJ-020-05AZ				04
	JK102	LB101870	Phone Jack	YKB21-5006		PHONES		03
	JK201	VC687500	Phone Jack Black	YKB21-5014		SUSTAIN		01
	JK202	VJ107200	DIN Connector	5P YKF51-5050		MIDI OUT		01
	JK203	VJ107200	DIN Connector	5P YKF51-5050		MIDI IN		01
	L0101	VB835000	Coil	FL5R200QNT 20uH				01
	L0102	VB835000	Coil	FL5R200QNT 20uH				01
	L0201	VB835000	Coil	FL5R200QNT 20uH				01
	-0205	VB835000	Coil	FL5R200QNT 20uH				01
	R0101	HF757150	Carbon Resistor	15.0K 1/4 J				01
	R0102	HF757150	Carbon Resistor	15.0K 1/4 J				01
	R0103	HF756470	Carbon Resistor	4.7K 1/4 J				01
	R0104	HF756470	Carbon Resistor	4.7K 1/4 J				01
	R0105	HF756560	Carbon Resistor	5.6K 1/4 J				01
	R0106	HF756560	Carbon Resistor	5.6K 1/4 J				01
	R0107	HF755470	Carbon Resistor	470.0 1/4 J				01
	R0108	HF755470	Carbon Resistor	470.0 1/4 J				01
	R0109	HF756100	Carbon Resistor	1.0K 1/4 J				01
	R0110	HF756100	Carbon Resistor	1.0K 1/4 J				01

✻: New Parts

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REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
R0111	**HF753220**	Carbon Resistor	2.2 1/4 J				01
R0112	**HF753220**	Carbon Resistor	2.2 1/4 J				01
R0113	**HF755100**	Carbon Resistor	100.0 1/4 J				01
R0114	**HF755100**	Carbon Resistor	100.0 1/4 J				01
R0115	**VU317000**	Metal Oxide Film Resistor	0.1 1W J				01
R0116	**VU317000**	Metal Oxide Film Resistor	0.1 1W J				01
R0117	**HF758100**	Carbon Resistor	100.0K 1/4 J				01
R0118	**HF757470**	Carbon Resistor	47.0K 1/4 J				01
R0119	**HF756150**	Carbon Resistor	1.5K 1/4 J				01
R0120	**HF756150**	Carbon Resistor	1.5K 1/4 J				01
R0121	**HF757470**	Carbon Resistor	47.0K 1/4 J				01
R0122	**HF756100**	Carbon Resistor	1.0K 1/4 J				01
R0202	**HF755220**	Carbon Resistor	220.0 1/4 J				01
-0204	**HF755220**	Carbon Resistor	220.0 1/4 J				01
R0205	**HF756100**	Carbon Resistor	1.0K 1/4 J				01
TR101	**WA968100**	Transistor	2SB1269 R,S				03
TR102	**IC174070**	Transistor	2SC1740S R,S				01
TR103	**VS883400**	Transistor	2SD2394 E,F				02
TR103	**VC407900**	Transistor	2SC1913 R,S				01
VR101	**VZ048400**	Rotary Variable Resistor	A10K XV0141GPVN20F		MASTER VOLUME		02
VR101	**WA994700**	Rotary Variable Resistor	A10K XV014111YGPV				02
WH102	**--**	Connector Assembly	AM 8P		(V719700)		
WH103	**--**	Connector Assembly	PN2 9P		(V719710)		
WH104	**--**	Connector Assembly	SP 2P		(V719660)		
WH105	**--**	Connector Assembly	VR 5P		(V719680)		
WH201	**--**	Connector Assembly	MIDI 6P		(V719690)		
WH203	**--**	Connector Assembly	PN1 12P		(V719720)		
WH204	**--**	Connector Assembly	SP 2P		(V719660)		
ZD101	**VG437700**	Zener Diode	MTZ J 5.6B 5.6V				01
	X3804A00	Speaker	12.0cm 4 ohm 3W			2	04
	V6968000	LCD	TTR5297 TYPE-M				07

✻: New Parts

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