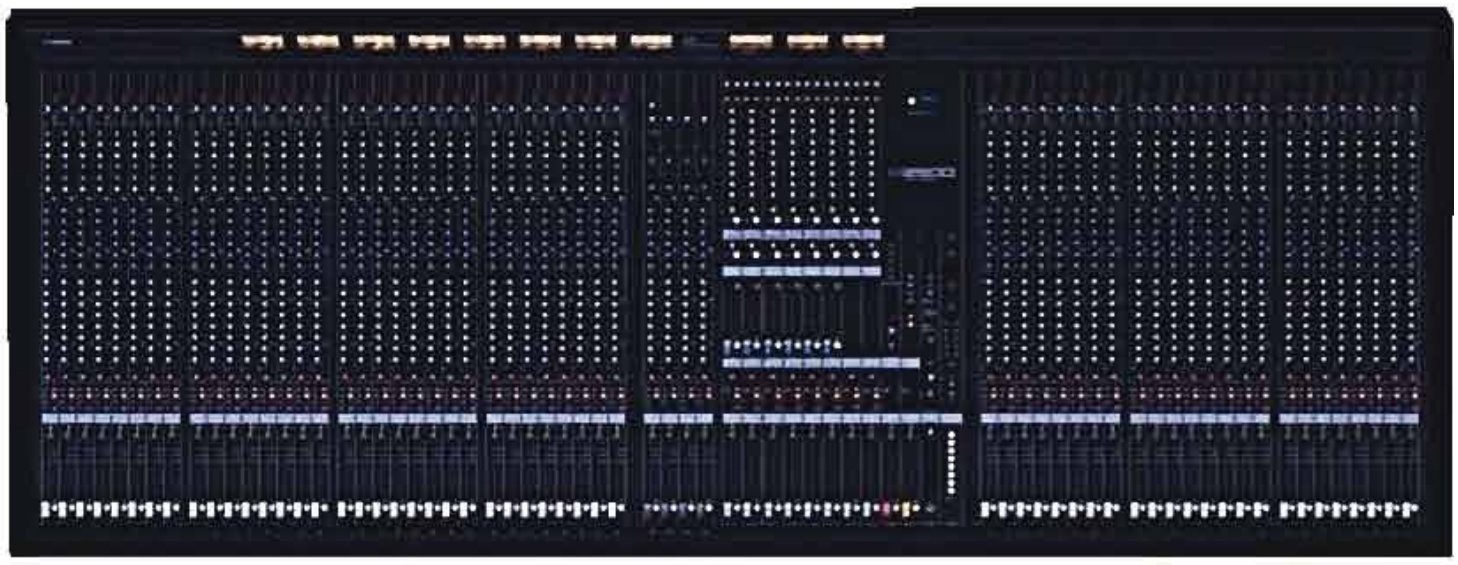
MIXING CONSOLE

M2500-24/32/40C/48C/56C

SERVICE MANUAL



M2500-56C

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PA 011484 1/2

M2500-24 20000220-850000
M2500-32 20000220-1000000
M2500-40C 20000220-1150000
M2500-48C 20000220-1300000
M2500-56C 20000220-1450000
PW3000MA 20000220-100000

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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 belived 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 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.

LITHIUM BATTERY HANDLING

This product uses a lithium battery for memory back-up.

WARNING : Lithium batteries are dangerous because they can be exploded by improper handling. Observe the following precautions when handling or replacing lithium batteries.

- Leave lithium battery replacement to qualified service personnel.
- Always replace with batteries of the same type.
- When installing on the PC board by soldering, solder using the connection terminals provided on the battery cells.
- Never solder directly to the cells. Perform the soldering as quickly as possible.
- Never reverse the battery polarities when installing.
- Do not short the batteries.
- Do not attempt to recharge these batteries.
- Do not disasemble the batteries.
- Never heat batteries or throw them into fire.

ADVARSEL!
Lithiumbatteri-Eksplosionsfare ved fejlagtig handtering. Udskiftning ma kun ske med batteri af samme fabrikat og type. lever det brugte batteri tilbage til leverandren.

VARNING
Explosionsfara vid felaktigt batteribyte.
Anvand samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
Kassera anvant batteri enligt fabrikantens instruktion.

VAROITUS
Paristo voi rajahtaa, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin.
Havita kaytetty paristo valmistajan ohjeiden mukaisesti.
The following information complies with Dutch official Gazette 1995. 45; ESSENTIALS OF ORDER ON THE COLLECTION OF BATTERIES.

- Please refer to the diassembly procedure for the removal of Back-up Battery.
- Leest u voor het verwijderen van de backup batterij deze beschrijving.

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

General specifications

0 dB is referenced to 0.775 Vrms.

Total Harmonic Distortion (Master output)	Less than 0.1% (THD+N) 20 Hz–20 kHz @ +14 dB 600 Ω
Frequency Response (Master Output)	0+1, –3 dB 20 Hz–20 kHz @ +4 dB 600 Ω Gain control at minimum level
Hum & Noise (20 Hz–20 kHz)*1 Rs= 150 Ω	–128 dB Equivalent Input Noise. –99 dB Residual Output Noise. (STEREO OUT, MONO/C OUT, GROUP/AUX OUT, AUX OUT, AUX/GROUP OUT)
Input Gain= Max. Input Pad= OFF ‖ Input sensitivity= –60 dB	
	–64 dB(68 dB S/N) STEREO OUT Master Level control and one Ch fader at nominal level.
	–80 dB(84 dB S/N) STEREO OUT, MONO/C OUT Master fader at nominal level and all Ch assign SW's off and all GROUP to ST SW's off.
	–81 dB(85 dB S/N) GROUP1/AUX7–GROUP8/AUX14 OUT Master Level control at nominal level and all Ch assign SW's off. GROUP/AUX FLIP SW off.
	–75 dB(79 dB S/N) AUX1–6, AUX7/GROUP1–AUX14/GROUP8 OUT Master Level control at nominal level and all Ch send controls at minimum. GROUP/AUX FLIP SW off.
	–90 dB(94 dB S/N) MATRIX OUT Master level control at nominal level and all Matrix Mix controls at minimum level.

Crosstalk	–70 dB @	1 kHz	adjacent inputs.
	–70 dB @	1 kH	input to output. (CH INPUT)
	–50 dB @	1 kHz	input to output. (ST CH INPUT)

Maximum Voltage Gain GROUP/AUX FLIP SW= off		
	60 dB	CH INPUT to CH INSERT OUT
	84 dB	CH INPUT to GROUP1/AUX7–GROUP8/ AUX14 OUT
	80 dB	CH INPUT to AUX1, 2 OUT(Pre Fader)
	90 dB	CH INPUT to AUX3–6, AUX7/GROUP1–AUX14/GROUP8 OUT(Post Fader)
	84 dB	CH INPUT to STEREO OUT(CH to ST)
	70 dB	CH INPUT to MONITOR OUT(PFL)

CH INPUT PAD SW	26 dB	
CH INPUT GAIN control	44 dB	variable
ST CH 1A, 2–4 INPUT GAIN control	40 dB	variable
ST CH 1B INPUT GAIN control	30 dB	variable
CH INPUT High Pass Filter	18 dB/octave roll-off below 80 Hz at –3 dB point.	

CH INPUT Equalization +15, –15 dB maximum		
HIGH	10 kHz (shelving)	
HIGH-MID	400– 9 kHz (peaking)	
LOW-MID	80–1.6 kHz (peaking)	
LOW	100 Hz (shelving)	

ST CH INPUT Equalization +15, –15 dB maximum		
HIGH	10 kHz (shelving)	
LOW	100 Hz (shelving)	

Phantom Power	+48 VDC is applied to balanced inputs (via 6.8 kΩ current-limiting/isolation resistors) for powering condenser microphones; may be turned ON or OFF via rear-panel phantom Master switch. When Master is ON, individual channels may be turned ON or OFF via +48V switches (with red LED) on each input channel.

CH LED Indicators		
	PEAK	LED(red) built into each CH INPUT turns on when pre-Fader level reaches +17 dB.
	NOM	LED(yellow) built into each CH INPUT turns on when pre-Fader level reaches 0 dB.
	SIGNAL	LED(green) built into each CH INPUT turns on when pre-Fader level reaches –13 dB.

ST CH LED Indicators		
	PEAK	LED(red) built into each ST CH INPUT turns on when pre-Fader [L+R] level reaches +17 dB.
	NOM	LED(yellow) built into each ST CH INPUT turns on when pre-Fader [L+R] level reaches 0 dB.
	SIGNAL	LED(green) built into each ST CH INPUT turns on when pre-Fader [L+R] level reaches –13 dB.

Oscillator/Noise	Switchable sine wave @ 100 Hz, 1 kHz or 10 kHz, or pink noise.
Scene Memory	Direct Scene Memory recall switches (1–8) Switchable Scene Memory recall (1–128)
VU Meters	11 illuminated meters (0VU= +4 dB output @ 600Ω load) #1 ; GROUP1/AUX7·AUX1·AUX7/GROUP1·MATRIX1 #2 ; GROUP2/AUX8·AUX2·AUX8/GROUP2·MATRIX2 #3 ; GROUP3/AUX9·AUX3·AUX9/GROUP3·MATRIX3 #4 ; GROUP4/AUX10·AUX4·AUX10/GROUP4·MATRIX4 #5 ; GROUP5/AUX11·AUX5·AUX11/GROUP5·MATRIX5 #6 ; GROUP6/AUX12·AUX6·AUX12/GROUP6·MATRIX6 #7 ; GROUP7/AUX13·NONE·AUX13/GROUP7·MATRIX7 #8 ; GROUP8/AUX14·NONE·AUX14/GROUP8·MATRIX8 #9 ; STEREO L·PFL/AFL L #10 ; MONO/C #11 ; STEREO R·PFL/AFL R
VU Meter Peak Indicators	LED(red) built into each VU meter turns on when output signal is above the level 3 dB lower than clipping level.

Dimension	Heigt	265 mm
	Depth	875 mm (except rear connectors)
	Width	2385 mm(56C), 2142 mm(48C), 1899 mm(40C), 1642 mm(32), 1400 mm(24)
Weight		102kg(56C), 93kg(48C), 84kg(40C), 71kg(32), 62kg(24)

*1 Hum & Noise are measured with a 6 dB/octave filter @ 12.7 kHz; equivalent to a 20 kHz filter with infinite dB/octave attenuation.

For European Model
Purchaser/User information specified in EN55103-1 and EN55103-2.
Conformed Enviroment: E1, E2, E3 and E4.

Input/output characteristics

Input specifications

Connection	PAD	Gain Trim	Actual Load Impedance	For Use With Nominal	Input Level *1			Connector In Mixer
					Sensitivity *9	Nominal	Max before Clip	
CH INPUT (1–n) *8	0	–60	3 kΩ	50–600 Ω Mics & 600 Ω Lines	–80 dB(0.078 mV)	–60 dB(0.775 mV)	–40 dB(7.75 mV)	XLR-3-31 type *2
	26				–54 dB(1.55 mV)	–34 dB(15.5 mV)	–14 dB(155 mV)	
	0	–16			–36 dB(12.3 mV)	–16 dB(123 mV)	+4 dB(1.23 V)	
	26				–10 dB(245 mV)	+10 dB(2.45 V)	+30 dB(24.5 V)	
ST CH 1A INPUT [L, R]		–30	5 kΩ	600 Ω Lines	–50 dB(2.45 mV)	–30 dB(24.5 mV)	–10 dB(245 mV)	
		+10			–10 dB(245 mV)	+10 dB(2.45 V)	+30 dB(24.5 V)	
ST CH 1B INPUT [L, R]		–20	10 kΩ	600 Ω Lines	–40 dB(7.75 mV)	–20 dB(77.5 mV)	0 dB(0.775 V)	Phono Jack *3
		+10			–10 dB(245 mV)	+10 dB(2.45 V)	+30 dB(24.5 V)	
ST CH INPUT [L, R] (2–4)		–30	5 kΩ	600 Ω Lines	–50 dB(2.45 mV)	–30 dB(24.5 mV)	–10 dB(245 mV)	Phone Jack(TRS) *4
		+10			–10 dB(245 mV)	+10 dB(2.45 V)	+30 dB(24.5 V)	
TALKBACK IN			10 kΩ	50–600 Ω Mics	–66 dB(0.388 mV)	–50 dB(2.45 mV)	–20 dB(77.5 mV)	XLR-3-31 type *5
MATRIX SUB IN [L, R]			10 kΩ	600 Ω Lines	–2 dB(0.616 V)	+4 dB(1.23 V)	+24 dB(12.3 V)	Phone Jack(TRS) *6
STEREO [L, R] MONO/C SUB IN					–6 dB(388 mV)			
CH INSERT IN (1–n) *8			10 kΩ	600 Ω Lines	–26 dB(38.8 mV)	0 dB(0.775 V)	+20 dB(7.75 V)	Phone Jack(TRS) *7
STEREO [L, R] MONO/C INSERT IN GRP/AUX INSERT IN (1/7–8/14) AUX INSERT IN (1–6)					–10 dB(245 mV)			

*1 0 dB=0.775 Vrms.
*2 Balanced.
*3 Unbalanced.
*4 Balanced (T=HOT, R=COLD, S=GND).
*5 Unbalanced.
*6 Unbalanced (T=SIGNAL, R=GND, S=GND).
*7 Unbalanced (T=OUTPUT, R=INPUT, S=GND).
*8 n=56, 48, 40, 32 or 24
*9 Sensitivity is the lowest level that will produce an output of +4 dB(1.23 V), or the nominal output level when the unit is set to maximum level.

Output specifications

Connection	Actual Source Impedance	For Use With Nominal	Output Level *1		Connector In Mixer
			Nominal	Max before Clip	
STEREO OUT [L, R] MONO/C OUT GRP/AUX OUT (1/7–8/14) AUX/GRP OUT (7/1–14/8) AUX OUT (1–6) MONITOR OUT [L, R, MONO/C] MATRIX OUT (1–8)	150 Ω	600 Ω Lines	+4 dB(1.23 V)	+24 dB(12.3 V)	XLR-3-32 type *2
CH INSERT OUT (1–n) *5 STEREO INSERT OUT [L, R] MONO/C INSERT OUT GRP/AUX INSERT OUT (1/7–8/14) AUX INSERT IN (1–6)	600 Ω	10 kΩ Lines	0 dB(0.775 V)	+20 dB(7.75 V)	Phone Jack(TRS) *3
PHONES OUT [L, R]	100 Ω	8 Ω Phones	10 mW	20 mW	Stereo Phone Jack *4
		40 Ω Phones	30 mW	75 mW	

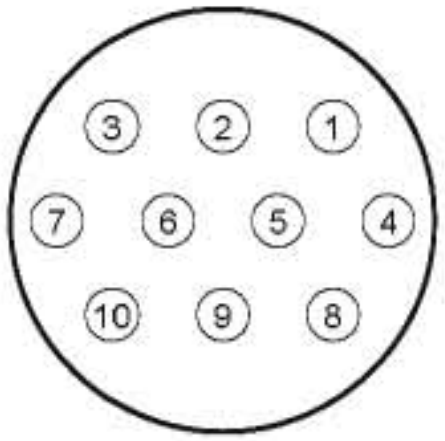
*1 0 dB=0.775 Vrms.
*2 Balanced.
*3 Unbalanced (T=OUTPUT, R=INPUT, S=GND).
*4 Unbalanced.
*5 n=56, 48, 40, 32 or 24

M2500

Other

Connector wiring

Pin No.	Signal name
1	Power supply remote
2	+15 V
3	±15 V GND
4	+48 V GND
5	−15 V
6	+12 V
7	+12 V GND / power supply remote
8	Power supply remote
9	+48 V
10	FRAME GND

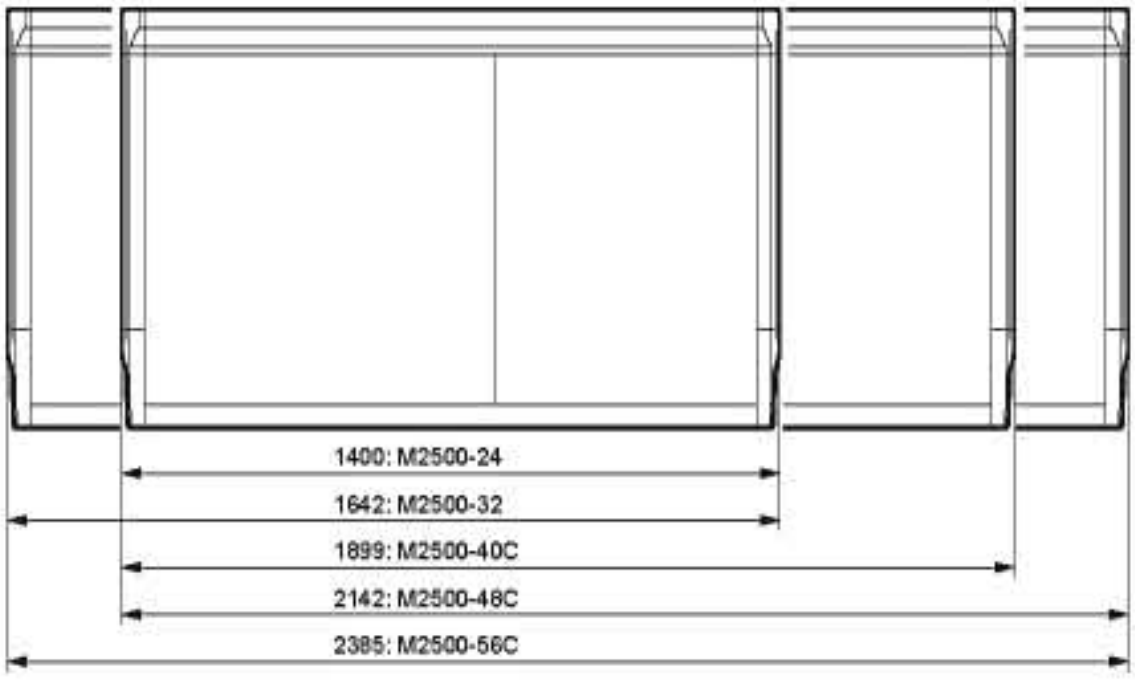


Included items

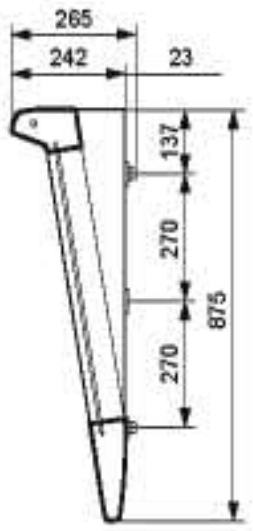
Power supply connection cable (3 m, 10 pin)

■ DIMENSIONS

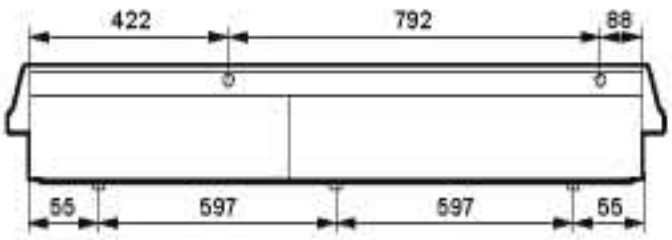
• Front



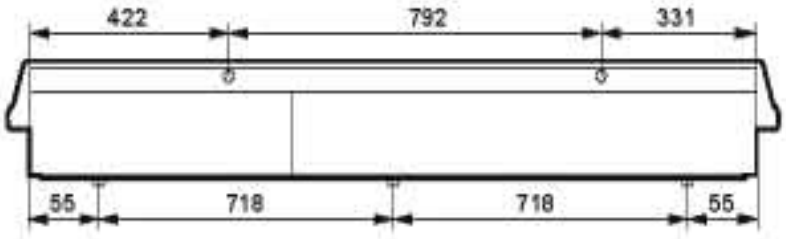
• Side



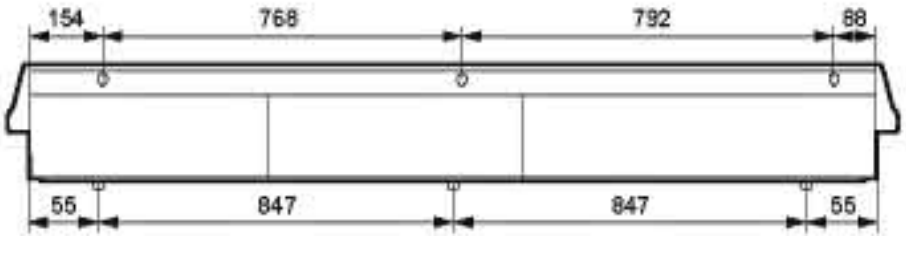
• Rear



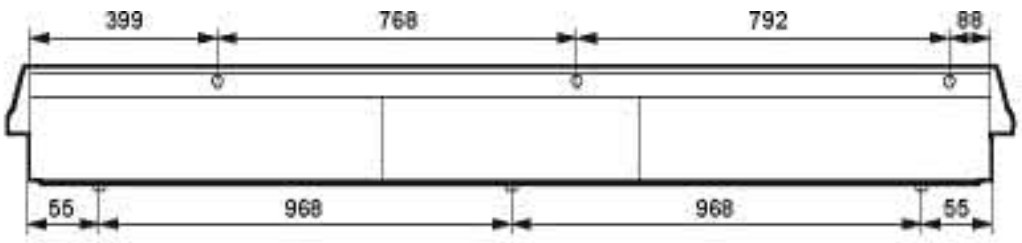
M2500-24



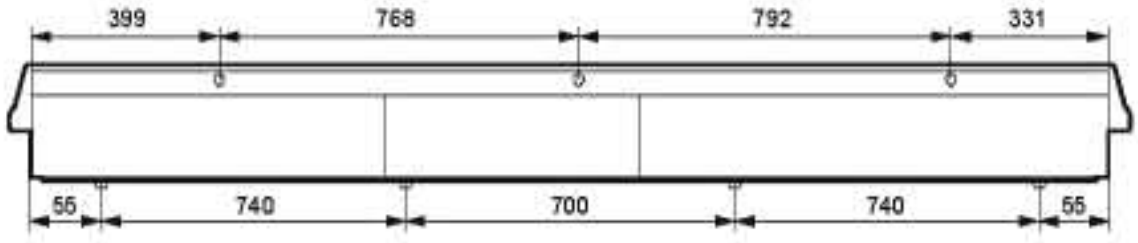
M2500-32



M2500-40C



M2500-48C



M2500-56C

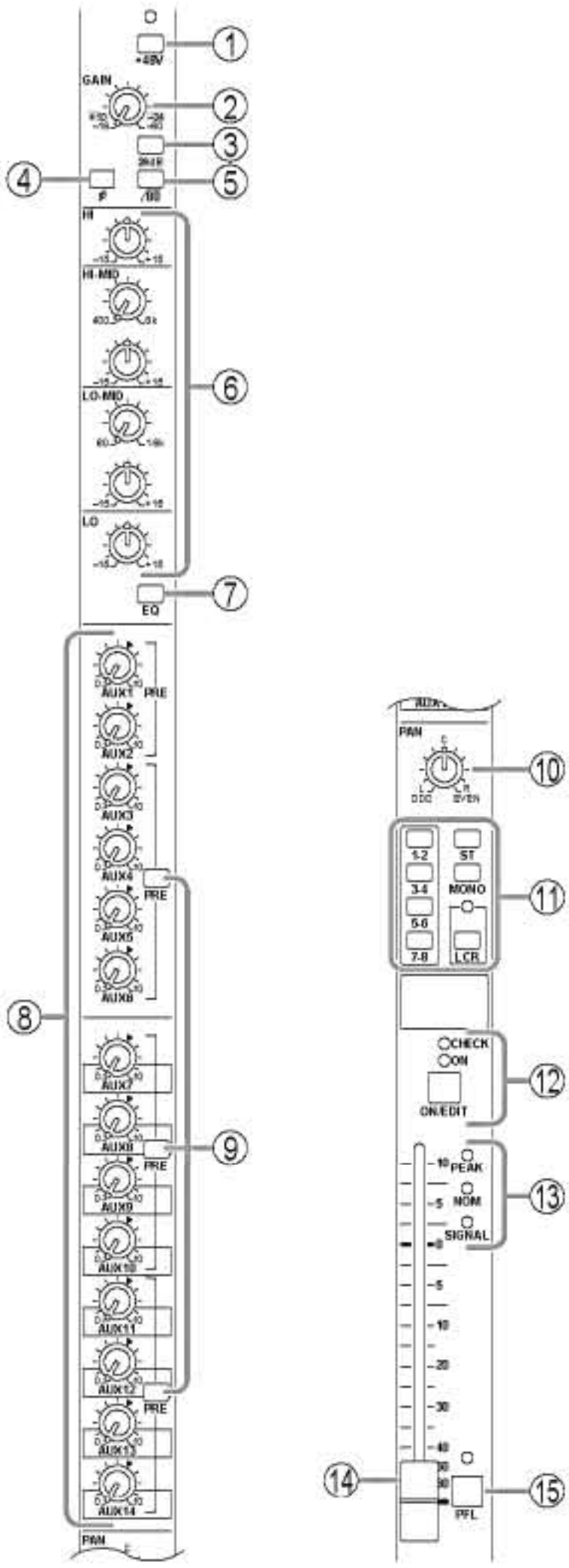
Units :mm

■ PANEL LAYOUT

• Control panel

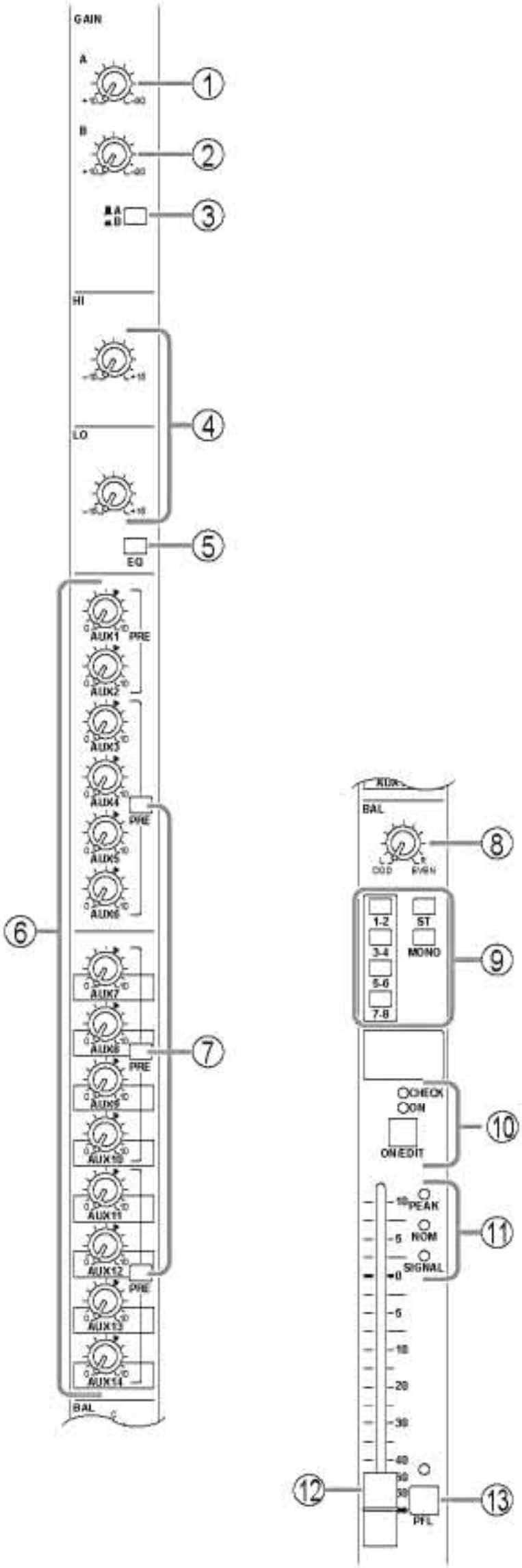
Input channel section

Monaural input channels



① +48 V (phantom power) switch
② GAIN control
③ 26 dB pad switch
④ ϕ (phase) switch
⑤ /80 (high pass filter) switch
⑥ EQ controls
⑦ EQ switch
⑧ AUX 1–AUX 14 controls
⑨ PRE switches
⑩ PAN control
⑪ Channel assign switches
⑫ ON/EDIT switch / ON, CHECK indicators
⑬ PEAK/NOM/SIGNAL indicators
⑭ Channel fader
⑮ PFL (pre-fader listen) switch

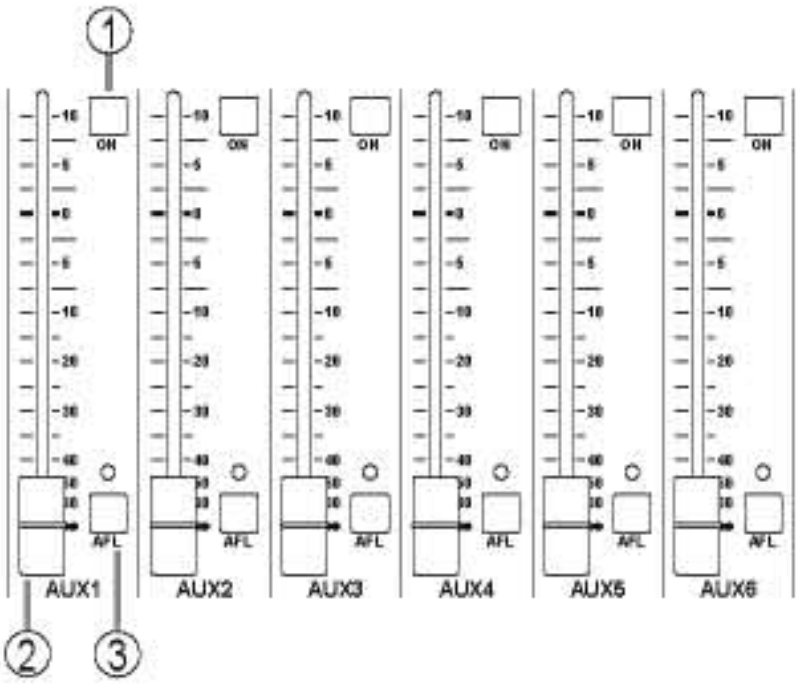
Stereo input channels



① GAIN A control
② GAIN B control
③ A/B switch
④ EQ controls
⑤ EQ switch
⑥ AUX 1–AUX 14 controls
⑦ PRE switches
⑧ BAL control
⑨ Channel assign switches
⑩ ON/EDIT switch / ON, CHECK indicators
⑪ PEAK/NOM/SIGNAL indicators
⑫ Channel fader
⑬ PFL (pre-fader listen) switch

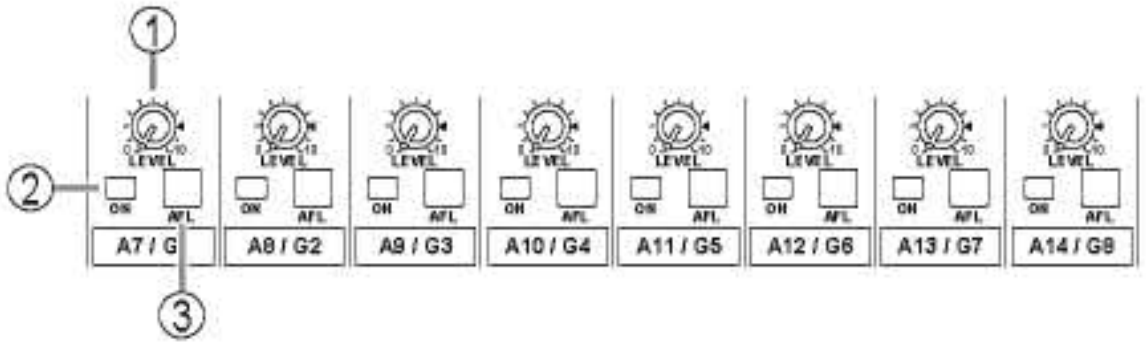
GROUP/AUX master section

AUX 1-6 section



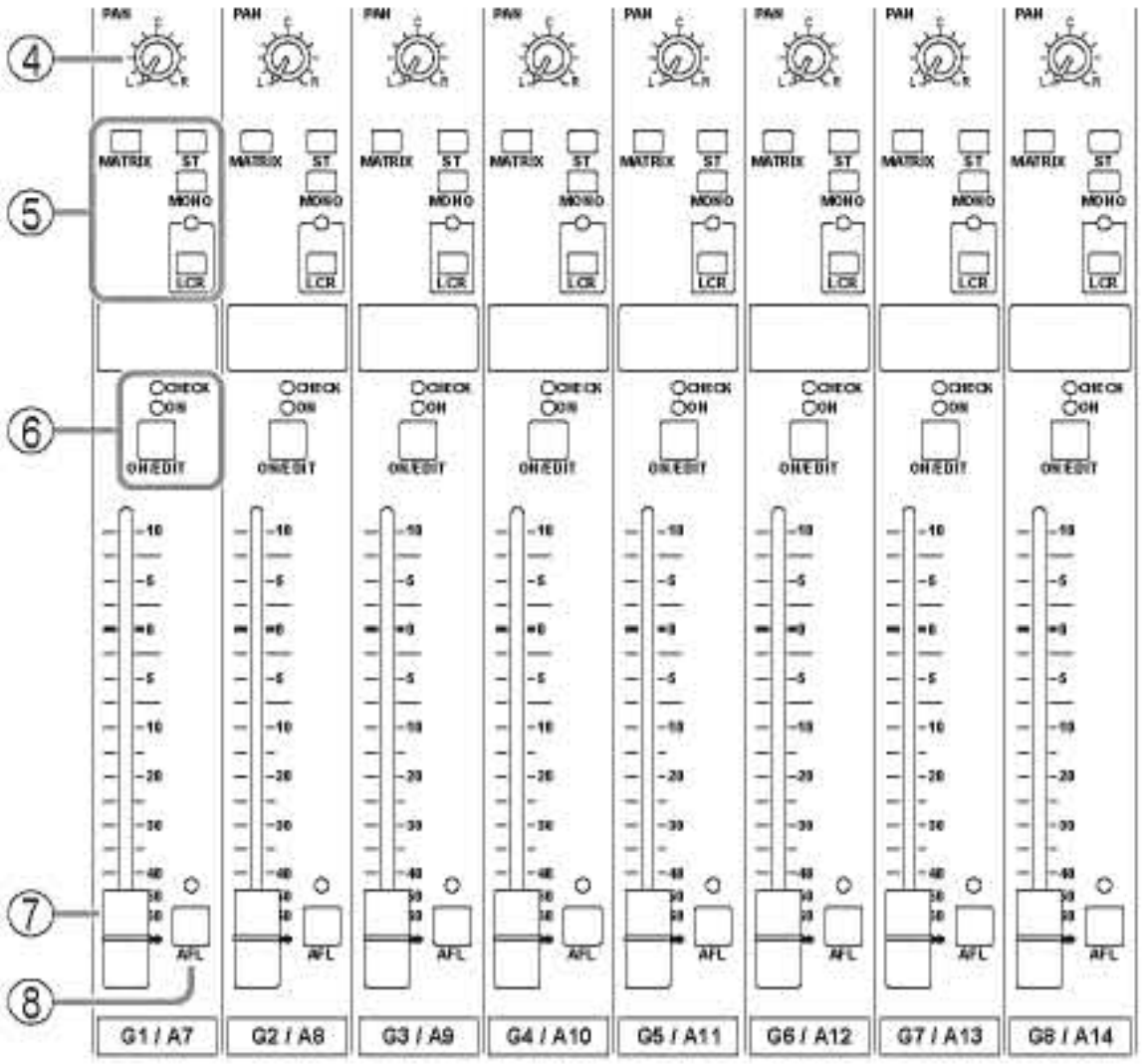
① ON switches
② AUX 1–6 master faders
③ AFL (after fader listen) switches

A7/G1-A14/G8 section



① LEVEL control
② ON switch
③ AFL switch

G1/A7-G8/A14 section



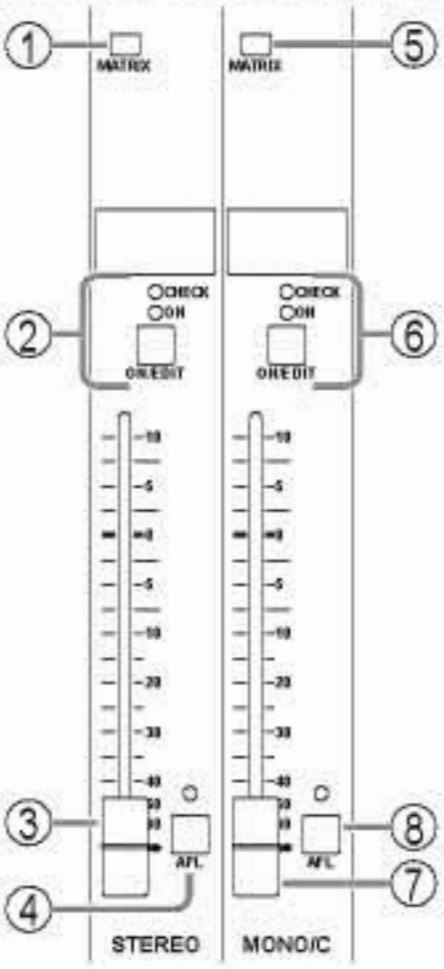
④ PAN control
⑤ Channel assign switches
⑥ ON/EDIT switch / ON, CHECK indicators
⑦ Fader
⑧ AFL (after fader listen) switch

GROUP/AUX FLIP switch

- When GROUP (■) is selected
- When AUX (▬) is selected

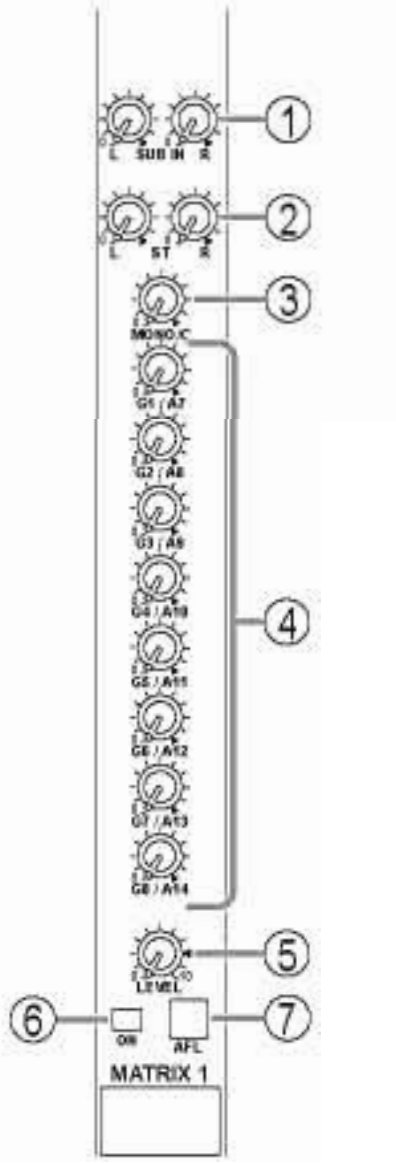
Stereo/monaural master section

STEREO section MONO/C section



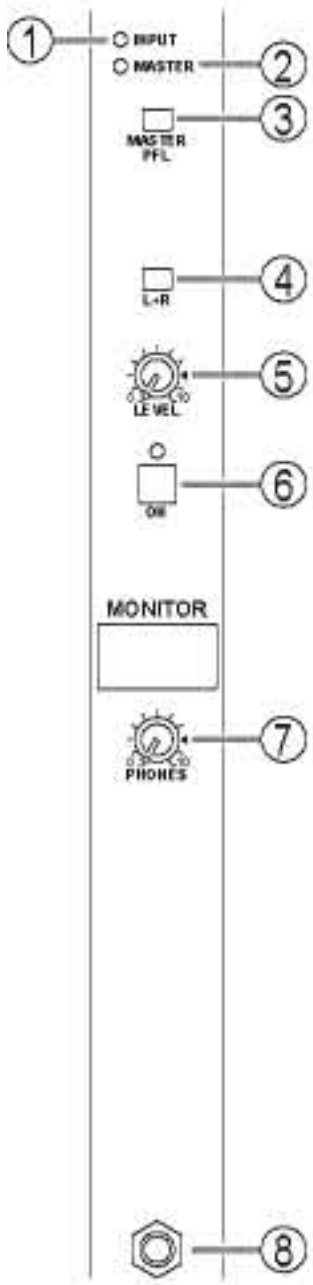
① MATRIX switch
② ON/EDIT switch / ON, CHECK indicators
③ Fader
④ AFL switch
⑤ MATRIX switch
⑥ ON/EDIT switch / ON, CHECK indicators
⑦ Fader
⑧ AFL switch

Matrix section



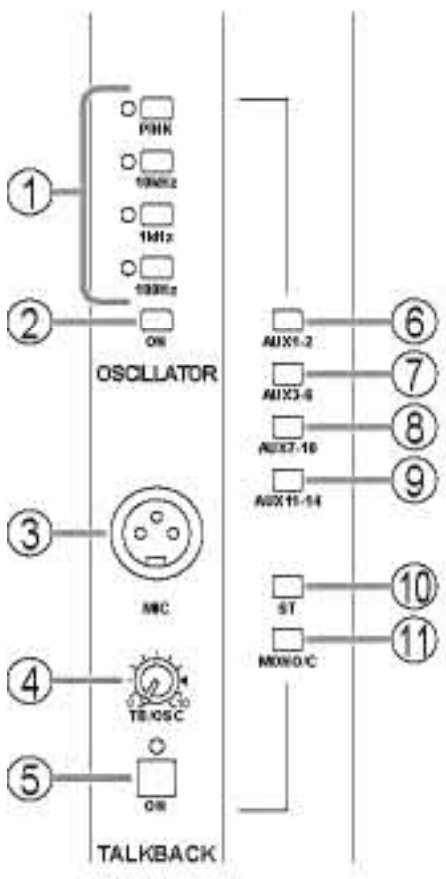
① SUB IN L/R control
② ST L/R controls
③ MONO/C control
④ G1/A7–G8/A14 controls
⑤ LEVEL control
⑥ ON switch
⑦ AFL switch

Monitor section



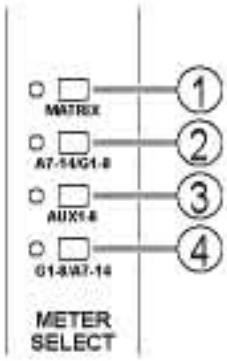
① INPUT indicator
② MASTER indicator
③ MASTER PFL switch
④ L+R switch
⑤ LEVEL control
⑥ ON switch
⑦ PHONES (headphone) control
⑧ PHONES jack

Talkback/oscillator section



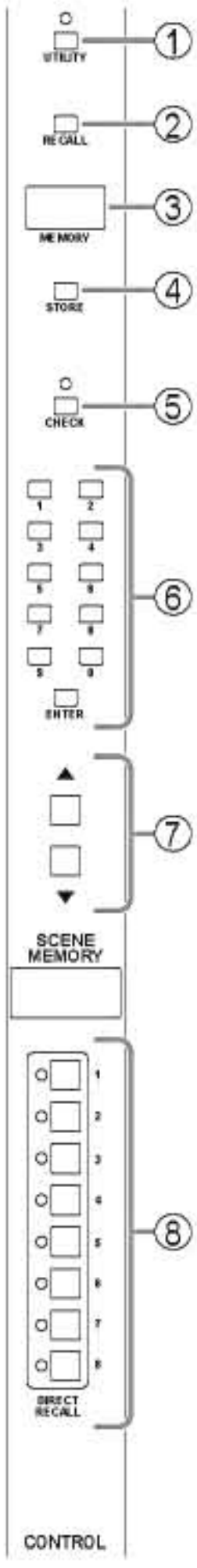
① OSCILLATOR select switches
② OSCILLATOR ON switch
③ MIC jack
④ TB/OSC control
⑤ ON switch
⑥ AUX 1-2 switch
⑦ AUX 3-6 switch
⑧ AUX 7-10 switch
⑨ AUX 11-14 switch
⑩ ST switch
⑪ MONO/C switch

Meter select section



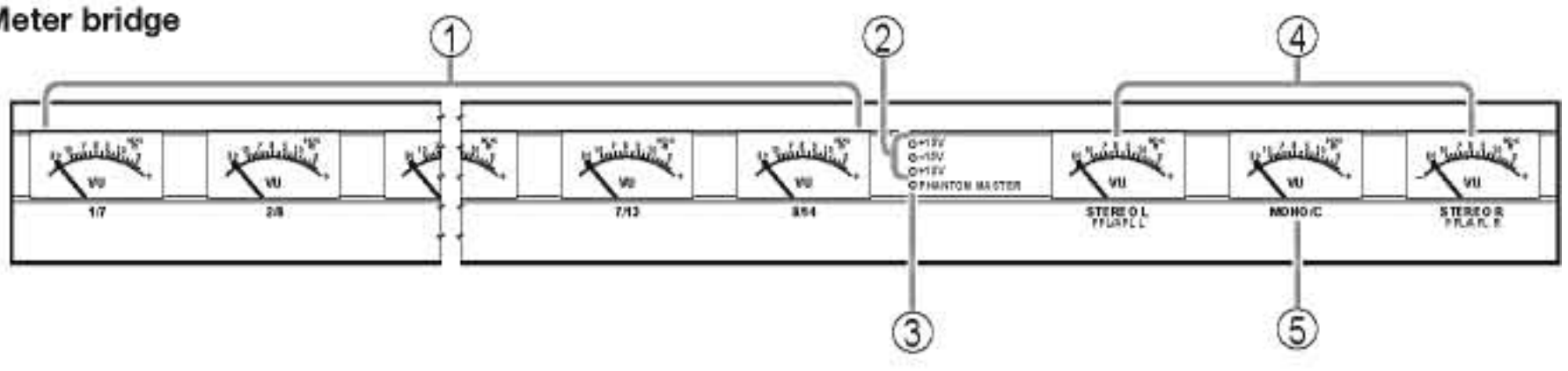
① MATRIX switch
② A7-14/G1-8 switch
③ AUX 1-6 switch
④ G1-8/A7-14 switch

Control section



① UTILITY switch
② RECALL switch
③ MEMORY display
④ STORE switch
⑤ CHECK switch
⑥ 0–9/ENTER switches
⑦ ▲/▼ switches
⑧ DIRECT RECALL 1–8 switches

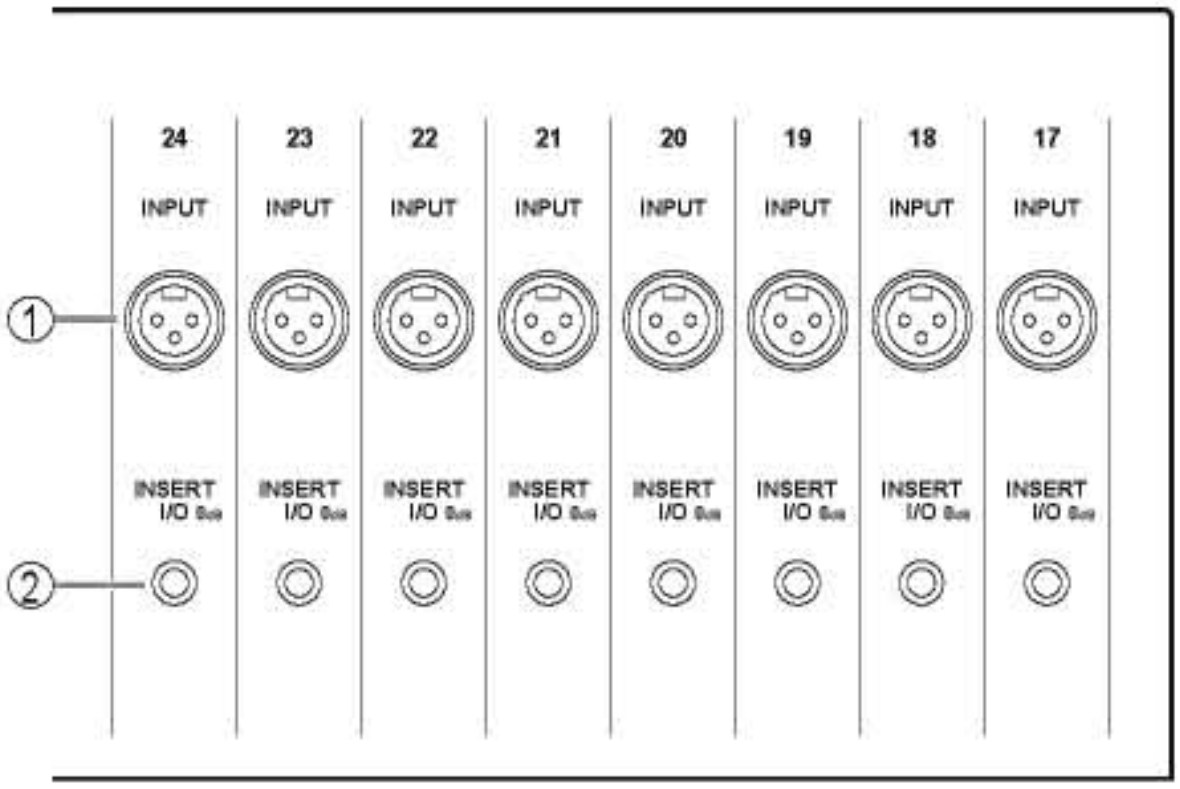
Meter bridge



① 1/7–8/14 level meters
② +15V/–15V/+12V indicators
③ PHANTOM MASTER indicator
④ STEREO, PFL/AFL level meters
⑤ MONO/C level meter

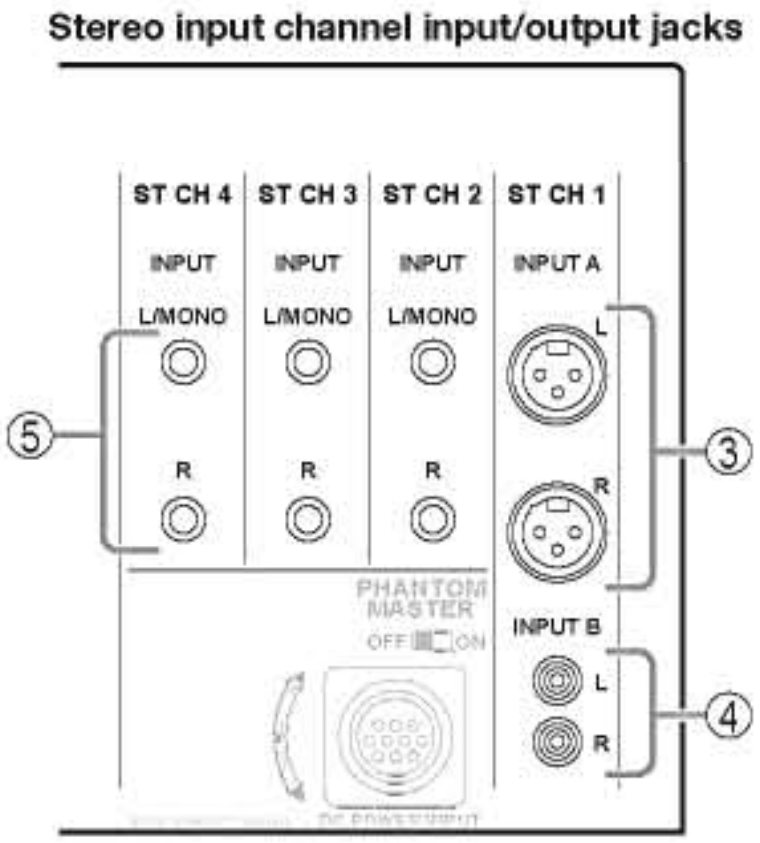
- Rear panel

Monaural input channel input/output jacks



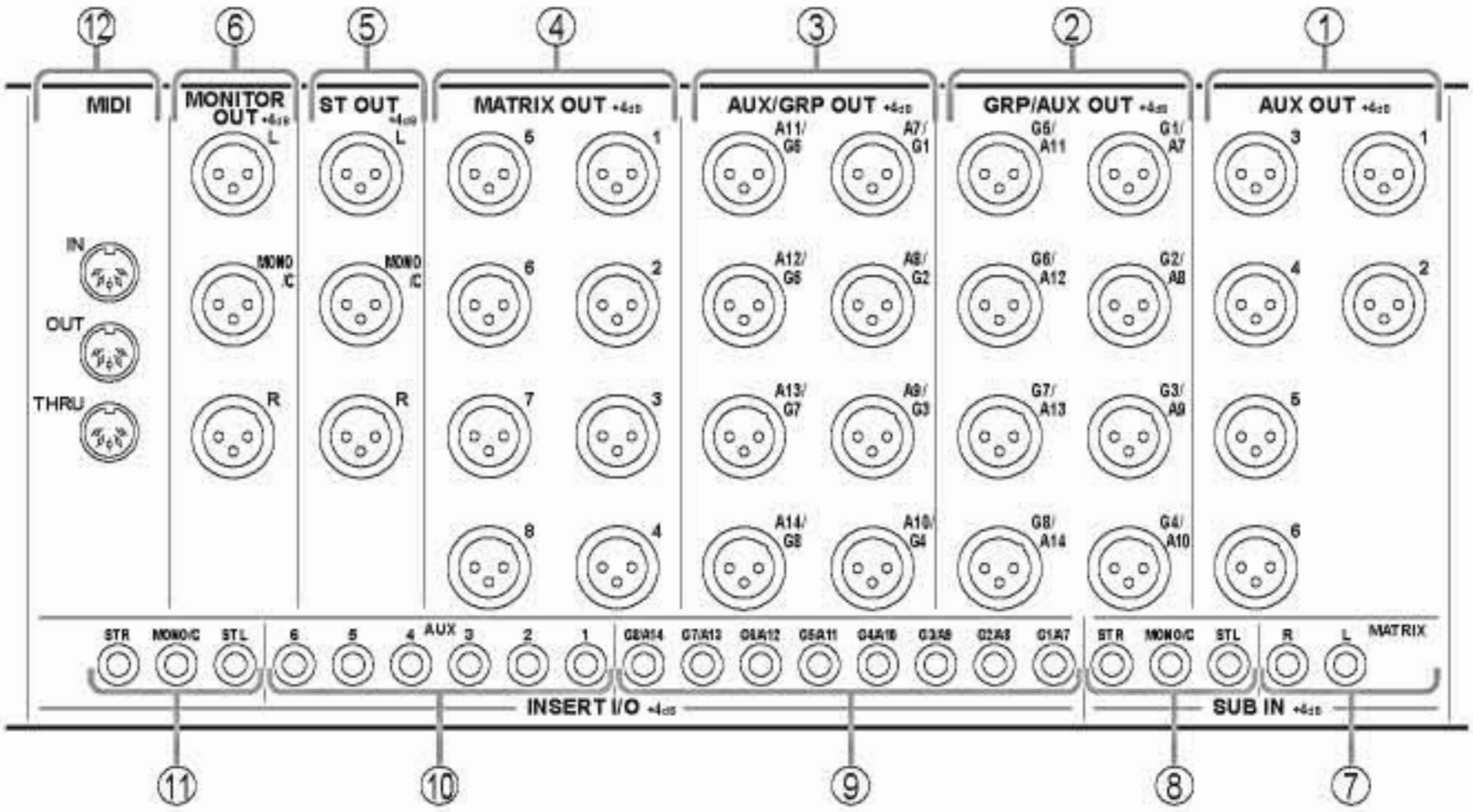
① INPUT jacks
② INSERT I/O jacks

Stereo input channel input/output jacks

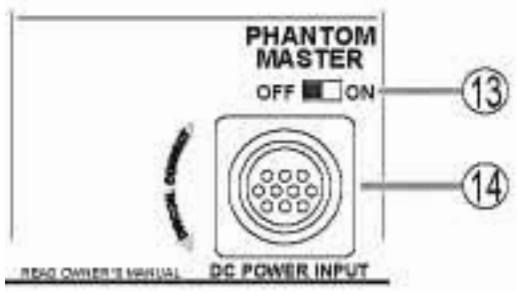


③ INPUT A jacks
④ INPUT B jacks
⑤ INPUT jacks

Master section input/output jacks

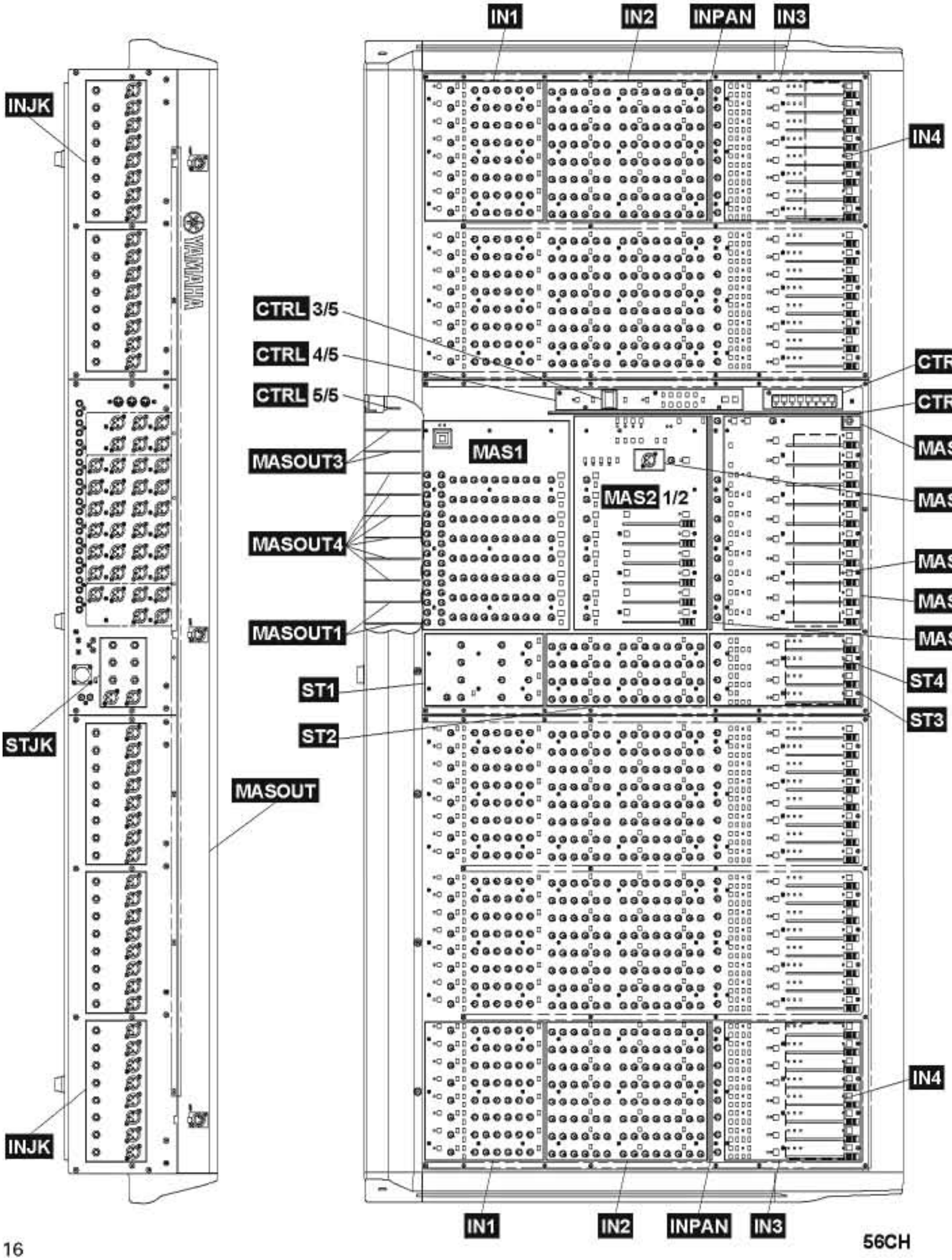


① AUX OUT jacks
② GRP/AUX OUT jacks
③ AUX/GRP OUT jacks
④ MATRIX OUT jacks
⑤ ST OUT, MONO/C OUT jacks
⑥ MONITOR OUT jacks
⑦ SUB IN MATRIX jacks
⑧ SUB IN ST L/R, MONO/C jack
⑨ INSERT I/O G1/A7–G8/A14 jacks
⑩ INSERT I/O AUX jacks
⑪ INSERT I/O ST L/R, MONO jacks
⑫ MIDI connectors

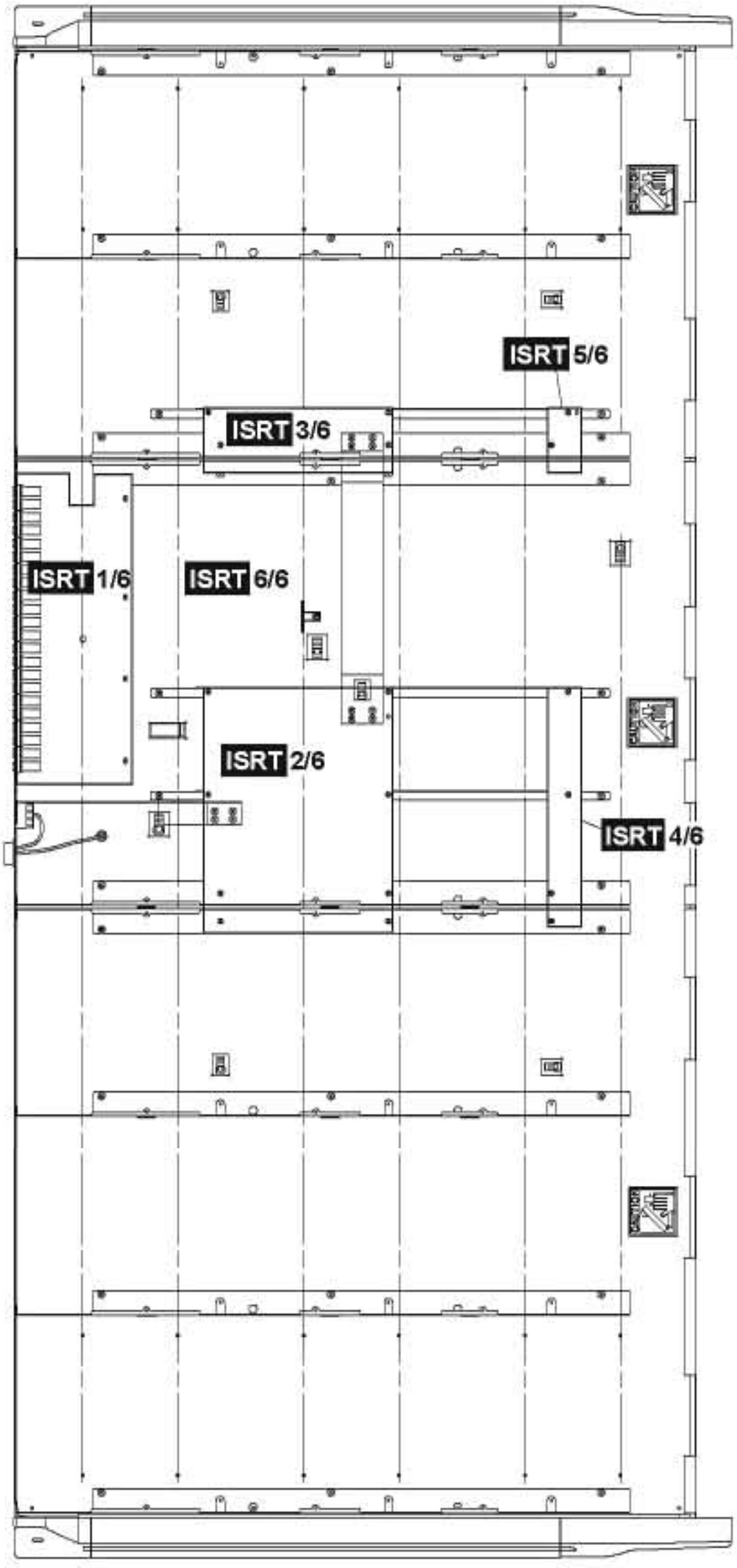


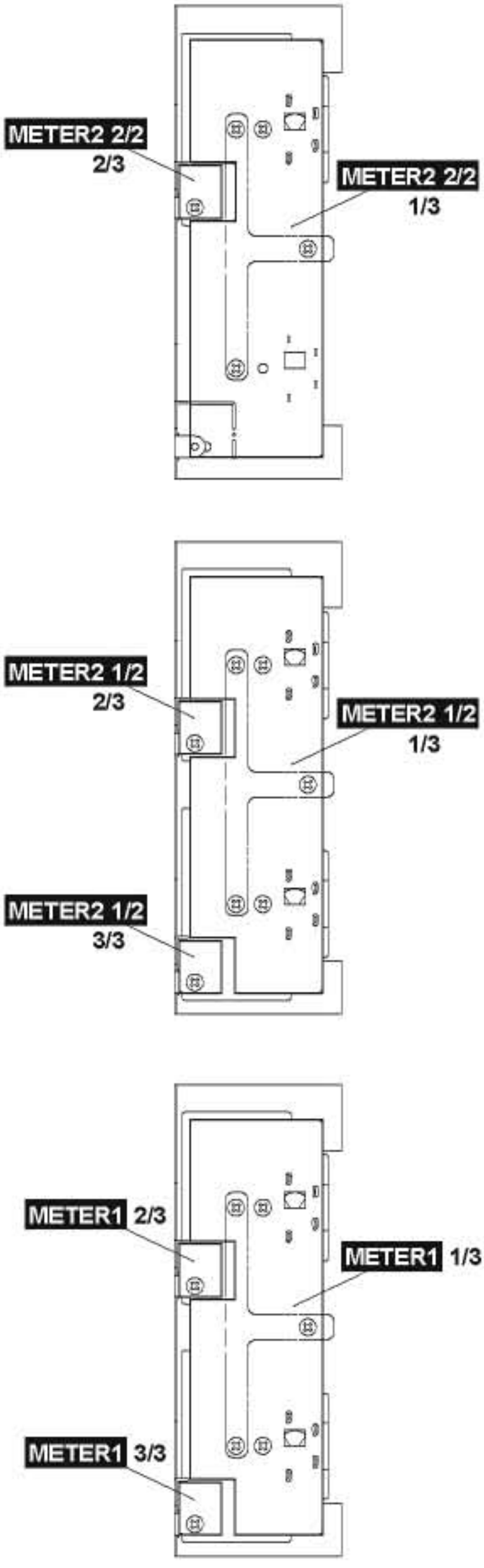
⑬ PHANTOM MASTER switch
⑭ DC POWER INPUT connector

■ CIRCUIT BOARD LAYOUT



• M2500-56C


ISRT 5/6
ISRT 3/6
ISRT 1/6
ISRT 6/6
ISRT 2/6
ISRT 4/6


METER2 2/2
2/3
METER2 2/2
1/3
METER2 1/2
2/3
METER2 1/2
1/3
METER2 1/2
3/3
METER1 2/3
METER1 1/3
METER1 3/3

■ DISASSEMBLY PROCEDURE

A Assembly

1 Meter Panel

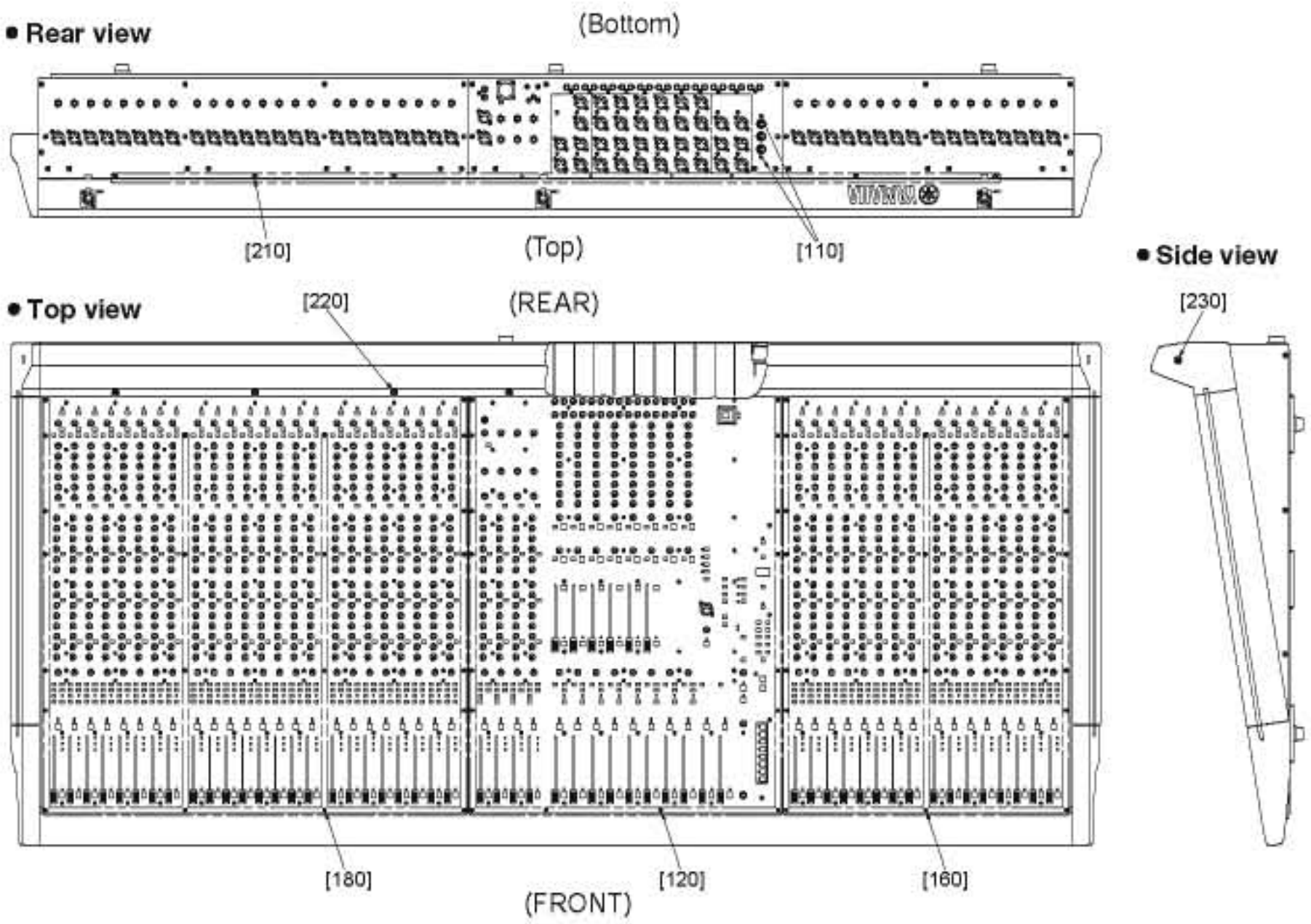
1-1 Remove the screws marked [210], [220] and [230].
The Meter Panel can then be removed. (Fig. 1)
The type and quantity of the screws marked [210] and [220] are:

[210]: 24CH:10, 32CH:11, 40CH:13, 48CH:14, 56CH:15
[220]: 24CH:7, 32CH:8, 40CH:9, 48CH:10, 56CH:11

2 MONO Assembly

2-1 Remove the meter panel (See Procedure 1.)
2-2 Remove the screws marked [160] and [180]. (Fig. 1)
Lift the fader side of the control panel and then remove the MONO Assembly by pulling it forward.

[160]: 40CH:21, 56CH:31
[180]: 24CH:26, 32CH:31, 40CH:26, 48CH:52, 56CH:26



[120]: Bind Head Tapping Screw-B 3.0X8 FMZN2BL (EP600190)
[160]: Bind Head Tapping Screw-B 3.0X8 FMZN2BL (EP600190)
[180]: Bind Head Tapping Screw-B 3.0X8 FMZN2BL (EP600190)
[210]: Bind Head Tapping Screw-B 4.0X8 FMZN2BL (EG340190)
[220]: Bind Head Screw 4.0X8 FMZN2BL (EG340360)
[230]: Bind Head Screw 4.0X25 MFZN2BL

Fig.1

3 MASTER Assembly

3-1 Remove the meter panel. (See Procedure 1.)

3-2 Remove the twenty [20] screws marked [120]. Lift the fader side of the control panel, remove the connectors and then remove the MASTER Assembly by pulling it forward. (Fig. 1)

B Circuit Board

1 MONO Assembly

1-1 Remove the meter panel. (See Procedure A1.)

1-2 Remove the MONO assembly. (See Procedure A2.)

1-3 Remove the following circuit boards by removing the screws indicated for each of them. (Fig. 2)

Circuit Board & Unit	Ref No.	PARTS NAME	PARTS No.	Q'ty
IN1	40	Hexagon Socket Tapping Screw-P 3X25 MFZNBL	V3289800	11
IN2	70	Hexagon Socket Tapping Screw-P 3X25 MFZNBL	V3289800	9
IN3	130	Bind Head Tapping Screw-B 3.0X8 MFZN2BL	EP600190	8
IN4	150	PCB Support CS-0305 KSS	EP600230	4

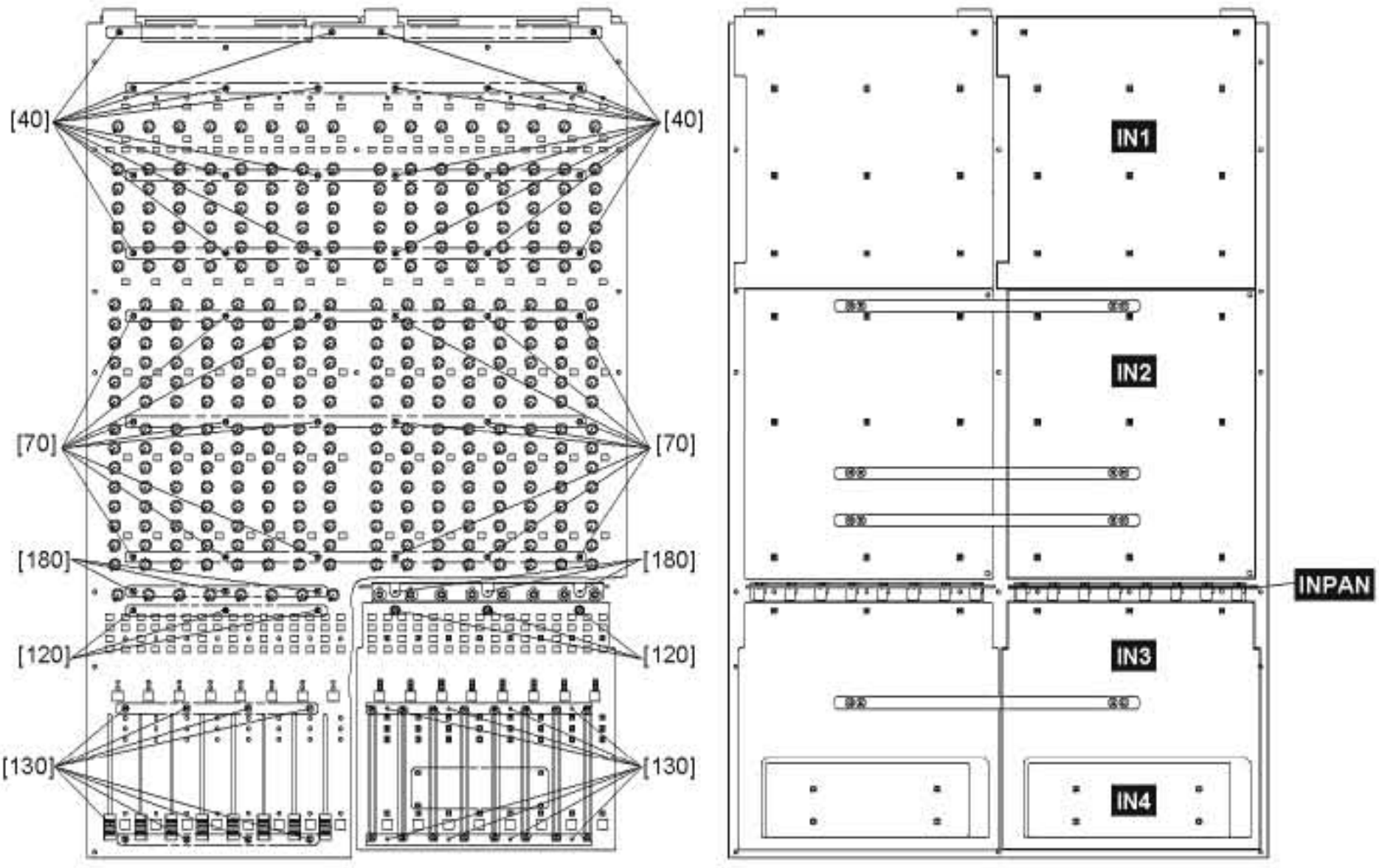


Fig.2

2 MASTER Assembly

2-1 Remove the meter panel. (See Procedure A1.)
2-2 Remove the MASTER assembly. (See Procedure A3.)
2-3 Remove the following circuit boards according to the listed order by removing the screws indicated for each of them. (Fig3)

Circuit Board & Unit	Ref No.	PARTS NAME	PARTS No.	Q'ty
ST1	60	Hexagon Socket Tapping Screw-P 3X25 MFZNBL	V3289800	8
ST2	90	Hexagon Socket Tapping Screw-P 3X25 MFZNBL	V3289800	6
ST3	150	Hexagon Socket Tapping Screw-P 3X25 MFZNBL	V3289800	2
	140	Bind Head Tapping Screw-B 3.0X8 MFZN2BL	EP600190	4
ST4	170	PCB Support CBS-6K		4

Circuit Board & Unit	Ref No.	PARTS NAME	PARTS No.	Q'ty
MAS1	220	Hexagon Socket Tapping Screw-P 3X25 MFZNBL	V3289800	12
MAS2 1/2	280	Hexagon Socket Tapping Screw-P 3X25 MFZNBL	V3289800	8
	270	Bind Head Tapping Screw-B 3.0X8 MFZN2BL	EP600190	6
MAS2 2/2	290	Bonding Tapping Screw-B 3.0X8 MFZN2BL	VN413300	2
MAS3 1/2	350	Hexagon Socket Tapping Screw-P 3X25 MFZNBL	V3289800	5
	340	Bind Head Tapping Screw-B 3.0X8 MFZN2BL	EP600190	10
MAS3 2/2		Nut		
MASPAN 1/2	400	Bind Head Tapping Screw-B 3.0X8 MFZN2BL	EP600190	2
MASPAN 2/2	400	Bind Head Tapping Screw-B 3.0X8 MFZN2BL	EP600190	2

Circuit Board & Unit	Ref No.	PARTS NAME	PARTS No.	Q'ty
CTRL 1/5--4/5	470	Bind Head Tapping Screw-B 3.0X8 MFZN2BL	EP600190	12
CTRL 5/5	110*1	Bonding Tapping Screw-B 3.0X8 MFZN2BL	VN413300	2

*1 OVERALL ASSEMBLY

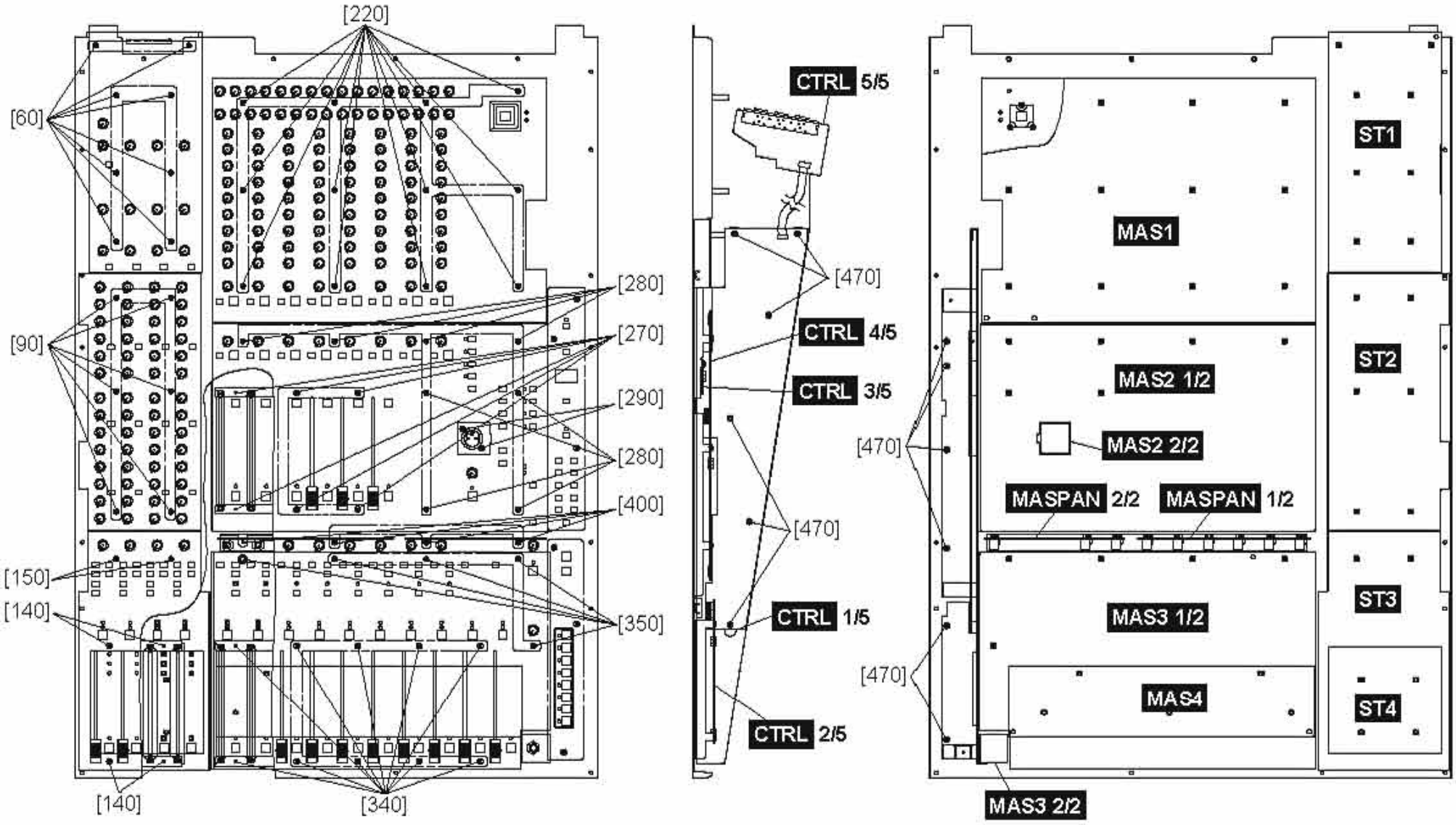
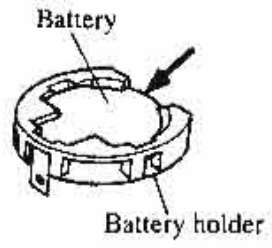


Fig.3

Battery VN103500

VN103600(Battery holder for VN103500)

- Notice for back-up battery removal
  Push the battery as shows in figure, then the battery will pop up.
- Druk de batterij naar beneden zoals aangeven in de tekening, de batterij springt dan naar voren.



*** Note that the battery is installed on the CTRL circuit board but it is not a component part.**

3 MASOUT 1, 2, 3

3-1 Remove the meter panel. (See Procedure A1.)

3-2 Remove the MASTER assembly. (See Procedure A3.)

3-3 Remove the twelve (12) screws marked [30] from the rear panel. The MASOUT 1 circuit board can then be removed. (Fig. 4)

3-4 Remove the forty-eight (48) screws marked [50] from the rear panel. The MASOUT 2 circuit board can then be removed. (Fig. 4)

3-5 Remove the twelve (12) screws marked [70] from the rear panel. The MASOUT 3 circuit board can then be removed. (Fig. 4)

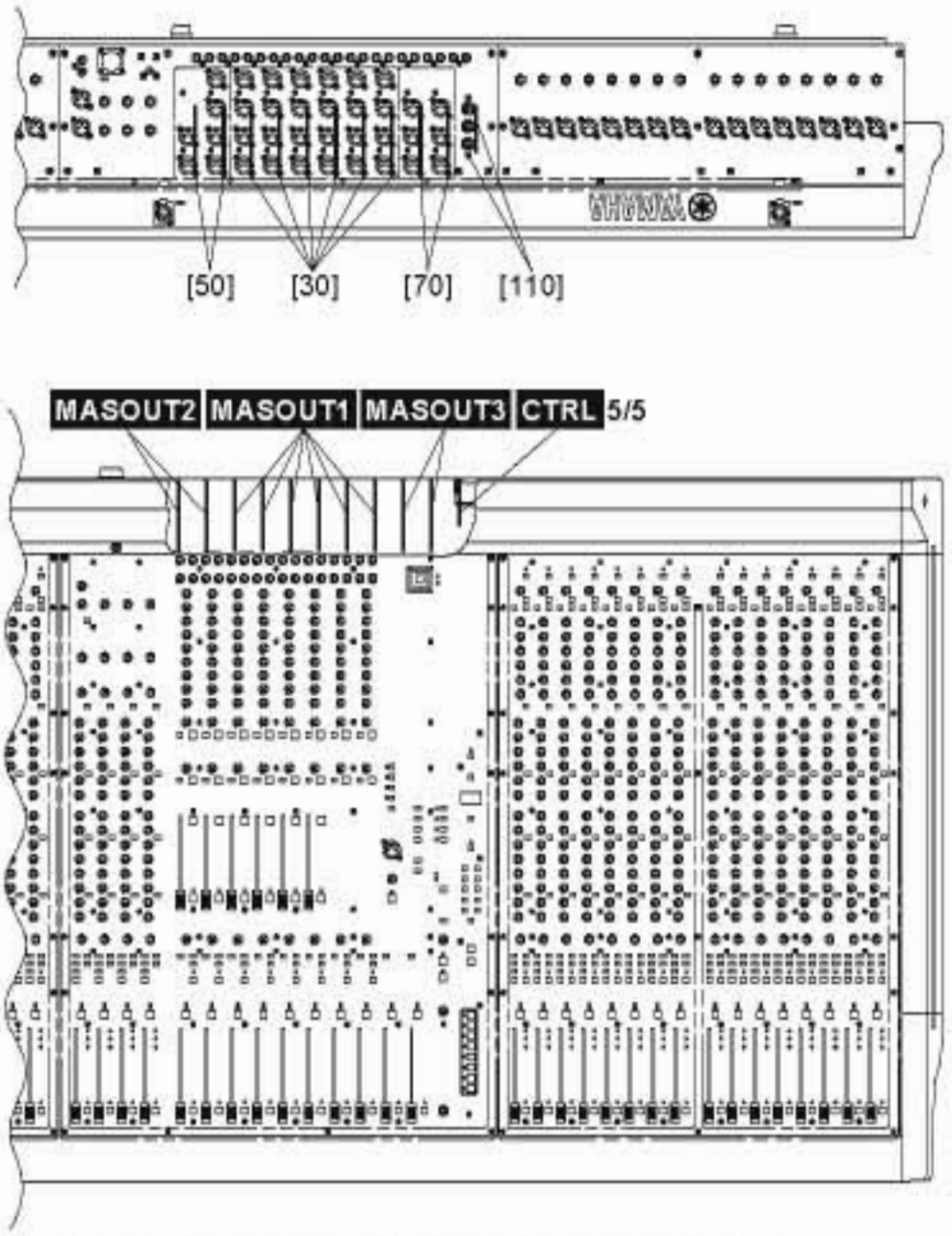
4 ISRT 1/6 ~ 6/6

4-1 Remove the meter panel. (See Procedure A1.)

4-2 Remove the MASTER assembly. (See Procedure A3.)

4-3 Remove the MONO assembly. (See Procedure A2.)
Remove the following circuit boards according to the listed order by removing the screws indicated for each of them.

Circuit Board & Unit	Ref No.	PARTS NAME	PARTS No.	Q'ty
ISRT 1/6	380	PCB Support CBS-6K GIN LIAN	VZ336600	4
ISRT 2/6	420	Bind Head Screw 4.0X8 MFZN2BL	EG340360	4
	440	Bind Head Screw 4.0X8 MFZN2BL	EG340360	4
	390	Bind Head Tapping Screw-B 3.0X8 MFZN2BL	EP600190	8
ISRT 3/6	440	Bind Head Screw 4.0X8 MFZN2BL	EG340360	4
	390	Bind Head Screw 4.0X8 MFZN2BL	EG340360	4
ISRT 4/6	390	Bind Head Screw 4.0X8 MFZN2BL	EG340360	4
ISRT 5/6	390	Bind Head Screw 4.0X8 MFZN2BL	EG340360	4
ISRT 6/6	390	Bind Head Screw 4.0X8 MFZN2BL	EG340360	1



[30]: Bonding Tapping Screw-B 3.0X8 MFZN2BL (VN413300)
[50]: Bonding Tapping Screw-B 3.0X8 MFZN2BL (VN413300)
[70]: Bonding Tapping Screw-B 3.0X8 MFZN2BL (VN413300)

Fig.4

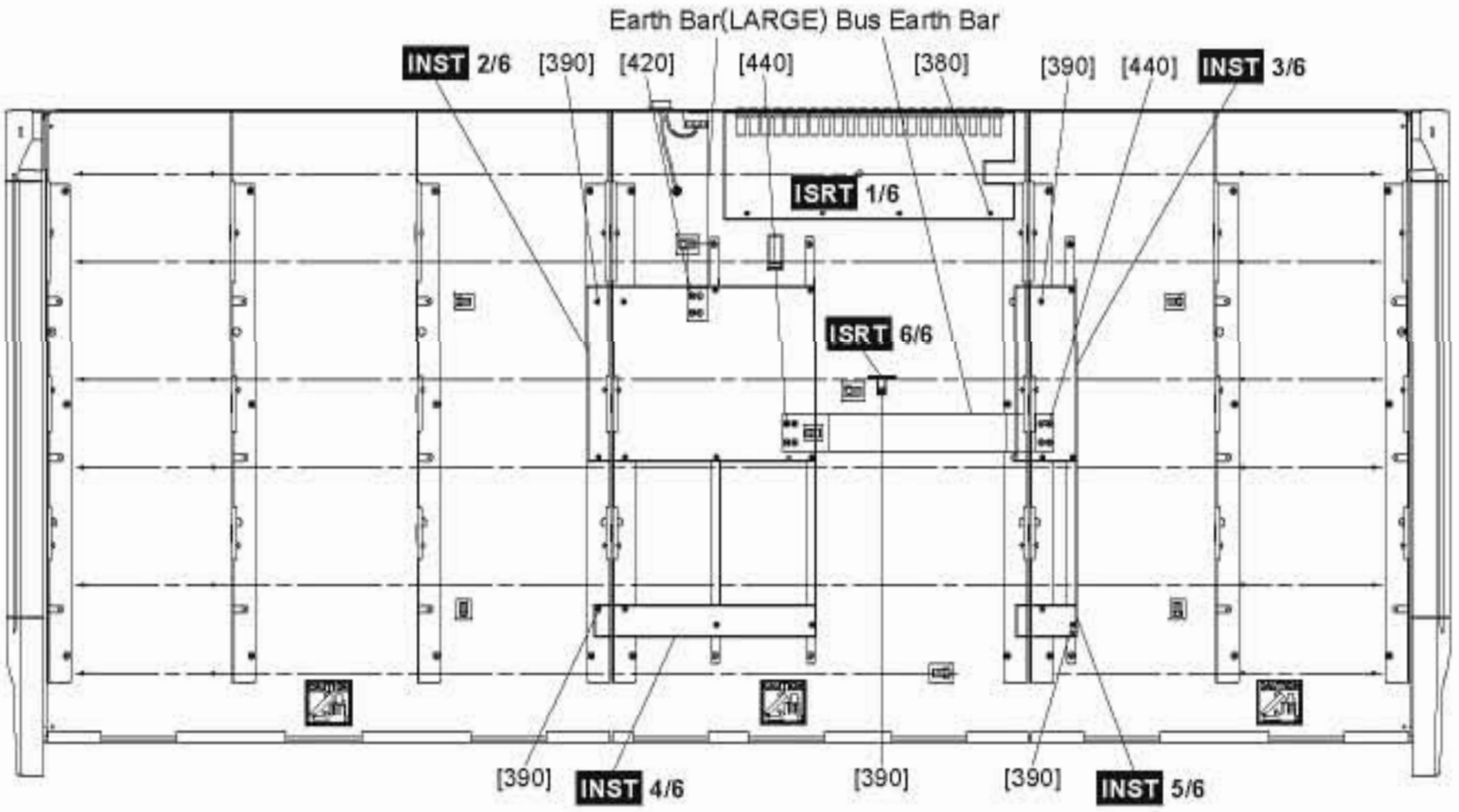


Fig.5

5 INJK

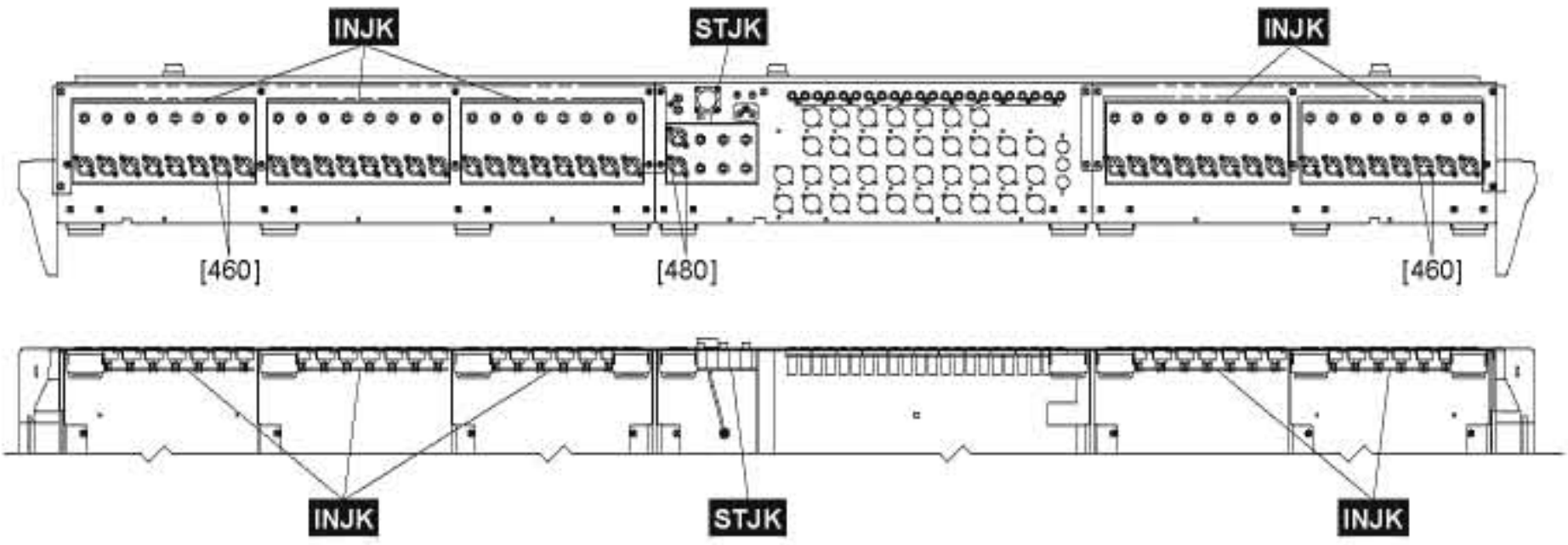
5-1 Remove the meter panel. (See Procedure A1.)
5-2 Remove the MONO assembly. (See Procedure A2.)
5-3 Remove the screws marked [460] and the hexagonalnuts marked [A] from the rear panel. The INJK can then be removed. (Fig. 6)

6 STJK

6-1 Remove the meter panel. (See Procedure A1.)
6-2 Remove the MASTER assembly. (See Procedure A3.)
6-3 Remove the two (2) screws marked [480] and the six (6) hexagonal nuts marked [B] from the rear panel. The STJK can then be removed. (Fig. 6)

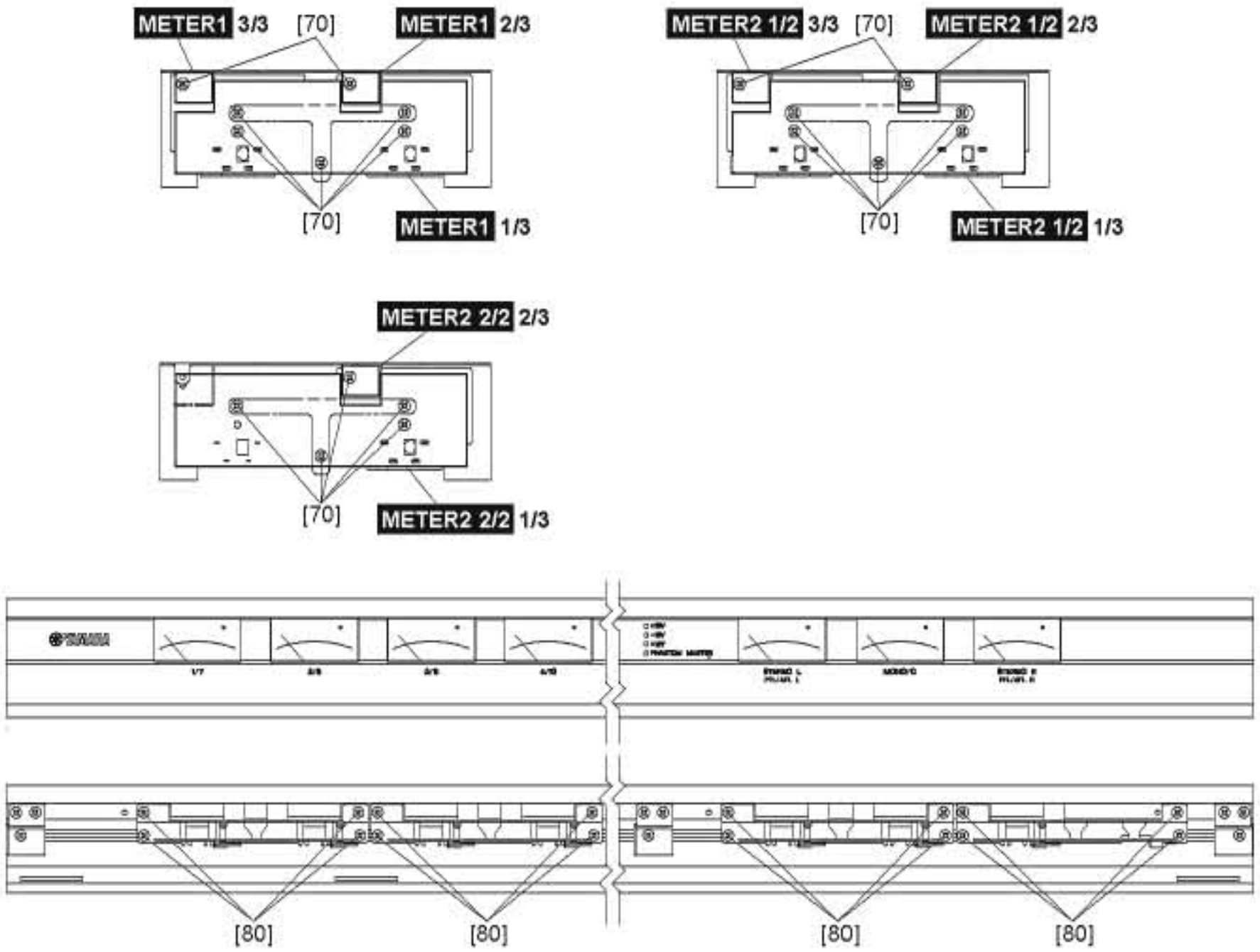
7 Meter 1 and Meter 2

7-1 Remove the meter panel. (See Procedure A1.)
7-2 Remove the four (4) screws marked [80]. The Meters can then be removed. (Fig. 7)
7-3 Remove the Meter 1 1/3 to 3/3 circuit boards by removing the seven (7) screws marked [70]. (Fig. 7)
7-4 Remove the Meter 2 1/2 circuit board by removing the seven (7) screws marked [70]. (Fig. 7)
7-5 Remove the Meter 2 2/2 circuit board by removing the five (5) screws marked [70]. (Fig. 7)



[460]: Bonding Tapping Screw-B 3.0X8 MFZN2BL (VN413300)
[480]: Bonding Tapping Screw-B 3.0X8 MFZN2BL (VN413300)

Fig.6



[70]: Bind Head Tapping Screw-B 3.0X8 MFZN2BL (EP600190)

Fig.7

■ LSI PIN DESCRIPTION

● HD6435208A00P (XK278A00) CPU <H8/520>

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	EXT	I	Clock	33	A7	O	
2	EXTAL	I		34	A8	O	
3	/WAIT	I	Bus cycle wait	35	A9	O	
4	/IRQ0	O	Interrupt request	36	A10	O	
5	A18	O		37	A11	O	Address bus
6	A17	O	Address bus	38	A12	O	
7	A16	O		39	A13	O	
8	/AS	O	Address strobe	40	A14	O	
9	/RD	O	Read strobe	41	A15	O	
10	/WR	O	Write strobe	42	AVCC		Analog power supply
11	VCC		Power supply	43	P50	O	
12	MD0	I		44	P51	O	
13	MD1	I	Mode select	45	P52	O	
14	MD2	I		46	P53	O	Port 5
15	/RES	I	Reset	47	P54	O	
16	NMI	I	Non-maskable interrupt request	48	P55	O	
17	VSS		Ground	49	P56	O	
18	D0	I/O		50	P57	O	
19	D1	I/O		51	VSS		Ground
20	D2	I/O		52	AVSS		Analog ground
21	D3	I/O	Data bus	53	AN0	I	
22	D4	I/O		54	AN1	I	Analog data input
23	D5	I/O		55	AN2	I	
24	D6	I/O		56	AN3	I	
25	D7	I/O		57	AVCC		Analog power supply
26	A0	O		58	TXD2	O	Transmit data
27	A1	O		59	RXD2	I	Receive data
28	A2	O		60	A19	O	Address bus
29	A3	O	Address bus	61	TXD1	O	Transmit data
30	A4	O		62	RXD1	I	Receive data
31	A5	O		63	SCLK	I	Clock for serial operation
32	A6	O		64	VSS		Ground

● AK4320-VM-E1 (XR361A00) DAC

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	CKS	I	Clock select	13	DEM1	I	De-emphasis mode
2	DVDD		Digital VDD	14	DIF0	I	Input format
3	DVSS		Digital GND	15	DIF1	I	
4	XTO	O	Xtal out	16	VCNT	I	Mute Control
5	XTI	I	Xtal in	17	AOUTR	O	Analog output R
6	/PD	I	Power down	18	AOUTL	O	Analog output L
7	BICK	I	Serial bit clock	19	VCOM	O	Common
8	SDATA	I	Serial data input	20	AVDD		Analog VDD
9	LRCK	I	L/R clock	21	AVSS		Analog VSS
10	SMUTE	I	Soft mute	22	VREF	I	V reference
11	HOLD	I	Soft mute hold	23	DZF	O	Zero input
12	DEM0	I	De-emphasis mode	24	ZMUTE	I	Zero mute

● **LZ95300** (XP451A00) Gate Array

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	INC	O	INPUT CUE ON/OFF	15	/CSW	I	CUE switch input
2	CPR	O	VCA CUE PRE PAN ON/OFF	16	VCA8	I	
3	CPST	O	VCA CUE POST PAN ON/OFF	17	VCA7	I	
4	COFF	O	All CUE OFF	18	VCA6	I	
5	CPU	I	H: CPU mode, L: Local mode	19	VCA5	I	VCA GROUP switch input
6	C0	I		20	VCA4	I	
7	C1	I	CPU address bus	21	VCA3	I	
8	C2	I		22	VCA2	I	
9	C3	I		23	VCA1	I	
10	/RES	I	Reset	24	/SLSF	I	SOLO SAFE switch input
11	DATA	I/O	Data input/output	25	/CHK	I	CHECK LED ON/OFF
12	IRQ	O	When /ONSW and /CSW change; H. When CPU reads data; L.	26	/ONSW	I	ON switch input
13	/CS	I	Chip select	27	/ONRY	O	ON relay & LED ON/OFF
14	GND		Digital ground	28	VDD		Digital power supply

● Function of DATA

C3	C2	C1	C0	R/W	MODE	FUNCTION	DATA 0	DATA 1
0	0	0	0	W	ON RELAY SET	Sets /ONRY	OFF	ON
0	0	0	1	R	ON SW READ	Reads /ONSW	OFF	ON
0	0	1	0	W	CUE RELAY SET	Sets INC ON	OFF	ON
0	0	1	1	R	CUE SW READ	Reads /CSW	OFF	ON
0	1	0	0	W	CHECK LED SET	Sets /CHK	OFF	ON
0	1	0	1	W	VCA PRE/POST SET	Sets CVCA CUE PRE/POST PAN	POST	PRE
0	1	1	0	W	SOLO SET	Sets SOLO When SOLO is set, CUE or SOLO SAFE is not ON, /ONRY is set to OFF.	OFF	SOLO
0	1	1	1	W	VCA1 CUE SET	Sets VCA1 CUE	OFF	ON
1	0	0	0	W	VCA1 CUE SET	Sets VCA1 CUE	OFF	ON
1	0	0	1	W	VCA2 CUE SET	Sets VCA2 CUE	OFF	ON
:	:	:	:	:	:	:	:	:
1	1	1	1	W	VCA8 CUE SET	Sets VCA8 CUE	OFF	ON

● YSP99 LZ95XD59 (XM047A00) Gate Array

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	NC			41	A9	I	CPU address bus
2	MCLK	O	Master clock	42	A8	I	
3	DESYN	O	Sync for DEQIC	43	CD2	I	CARD page select
4	CD04	I	Control data input	44	CD1	I	
5	CD03	I		45	CDROM	I	CARD/ROM select
6	CD02	I		46	ROM4	I	ROM page control
7	CD01	I		47	ROM3	I	
8	CDI4	O	Control data output (DSP2)	48	ROM2	I	
9	CDI3	O	Control data output (MOD)	49	ROM1	I	
10	CDI2	O	Control data output (DEQ IC17)	50	YY2	I	Dividing select
11	CDI1	O	Control data output (DEQ IC19)	51	YY1	I	
12	+Vdd			52	GND		
13	GND			53	+Vdd		
14	L4	O	LED scan pulse	54	SEL2	I	Control data select
15	L3	O		55	SEL1	I	
16	L2	O		56	XX2	I	LED scan data
17	L1	O		57	XX1	I	
18	LCD	O	LCD enable	58	MDCK	O	MIDI clock
19	KEYN	O	KEY enable	59	TRG0	O	Trigger out
20	LED	O	LED enable	60	E	I	
21	CDA14	O	CARD address	61	RWN	I	Read write pulse
22	CDA13	O		62	ICN	I	Initial clear
23	CARDN	O	CARD enable	63	ACIA	O	ACIA enable
24	GND			64	GND		
25	RAWN	O	RAM write enable	65	TXD	I	DSP control data input
26	RAON	O	RAM read enable	66	RXD	O	DSP control data output
27	RMA16	O	ROM address back select	67	XCLK	O	Transfer clock
28	RMA15	O		68	WCLK	O	Word clock
29	RMA14	O		69	SCLK	O	Serial data transfer clock 64fs
30	RMA13	O		70	FSYNC	O	NC
31	+Vdd			71	ADLR	O	NC
32	GND			72	GND		
33	ROMN	O	ROM read enable	73	+Vdd		
34	A15	I	CPU address bus	74	SCLKN	O	Serial data sift clock
35	A14	I		75	DCLK	O	256fs clock
36	A13	I		76	XI	I	Clock input/(Xtal)
37	A12	I		77	XO	O	output/(Xtal)
38	A11	I		78	GND		
39	A10	I		79	TRIG	I	Trigger input
40	NC			80	SYNCN	O	Sync clock

● YSS228E-F (XQ962D00) DSP3 (Digital Signal Processor)

DM : IC2, 3

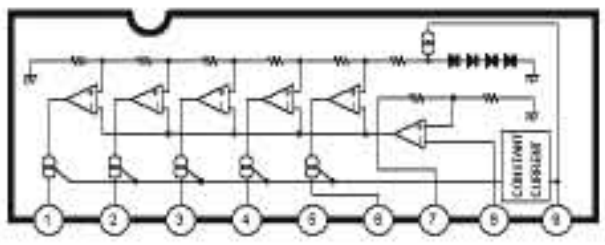
PIN NO.	NAME	I/O	FUNCTION
1	VSS		Ground
2	XI	I	System master clock input (60 M or30 MHz)
3	XO		System master clock input (60 M or30 MHz)
4	VDD		Power supply
5	/SYNCI	I	System synch. input
6	/SYNCO	O	System synch. output
7	CKI	I	System clock input (30 MHz)
8	CKO	O	System clock output (30 MHz)
9	CKSL	I	System master clock select (0:60 M,1:30 MHz)
10	VSS		Ground
11	MCKS	I	Master clock for serial I/O(128 xFs)
12	/SSYNC	I	Synch. signal for serial I/O
13	/IC	I	Initial clear
14	/TEST	I	Test mode setting
15	BTYP	I	CPU data bus 8/16 bit select(0:8,1:16)
16	/IRQ	O	Interrupt request
17	TRIG	I/O	Trigger signal
18	VDD		Power supply
19	VSS		Ground
20	/CS	I	Chip select
21	/DS	I	Data strobe
22	R/W	I	Read/Write select
23	CA7	I	CPU address bus
24	CA6	I	
25	CA5	I	
26	CA4	I	
27	CA3	I	
28	CA2	I	
29	CA1	I	
30	CA0/CD15	I/O	CPU address/data bus
31	CD14	I/O	CPU data bus
32	CD13	I/O	
33	CD12	I/O	
34	CD11	I/O	
35	CD10	I/O	
36	CD09	I/O	
37	CD08	I/O	
38	CD07	I/O	
39	CD06	I/O	
40	VSS		Ground
41	VDD		Power supply
42	CD05	I/O	CPU data bus
43	CD04	I/O	
44	CD03	I/O	
45	CD02	I/O	
46	CD01	I/O	
47	CD00	I/O	
48	/DTACK	O	DTACK signal output
49	SI0	I	Serial data input
50	SI1	I	
51	SI2	I	
52	SI3	I	
53	SI4	I	
54	SI5	I	
55	SI6	I	
56	SI7	I	
57	VSS		Ground
58	VDD		Power supply
59	SO0	O	Serial data output
60	SO1	O	
61	SO2	O	
62	SO3	O	
63	SO4	O	
64	SO5	O	
65	SO6	O	
66	SO7	O	
67	DB00	I/O	Parallel data bus
68	DB01	I/O	
69	DB02	I/O	
70	DB03	I/O	
71	DB04	I/O	
72	DB05	I/O	
73	DB06	I/O	
74	DB07	I/O	
75	DB08	I/O	
76	DB09	I/O	
77	DB10	I/O	
78	DB11	I/O	
79	DB12	I/O	
80	VDD		Power supply

PIN NO.	NAME	I/O	FUNCTION
81	VSS	I/O	Ground
82	DB13	I/O	Parallel data bus
83	DB14	I/O	
84	DB15	I/O	
85	DB16	I/O	
86	DB17	I/O	
87	DB18	I/O	
88	DB19	I/O	
89	DB20	I/O	
90	DB21	I/O	
91	DB22	I/O	
92	DB23	I/O	
93	DB24	I/O	
94	DB25	I/O	
95	DB26	I/O	
96	DB27	I/O	
97	DB28	I/O	
98	DB29	I/O	
99	DB30	I/O	
100	DB31	I/O	
101	TIMODBOE	I/O	Timing signal/Parallel data bus control
102	VSS		Ground
103	VDD		Power supply
104	DA00	I/O	External memory data bus
105	DA01	I/O	
106	DA02	I/O	
107	DA03	I/O	
108	DA04	I/O	
109	DA05	I/O	
110	DA06	I/O	
111	DA07	I/O	
112	DA08	I/O	
113	DA09	I/O	
114	DA10	I/O	
115	DA11	I/O	
116	DA12	I/O	
117	DA13	I/O	
118	DA14	I/O	
119	DA15	I/O	
120	VSS		Ground
121	VDD		Power supply
122	DA16	I/O	External memory data bus
123	DA17	I/O	
124	DA18	I/O	
125	DA19	I/O	
126	DA20	I/O	
127	DA21	I/O	
128	DA22	I/O	
129	DA23	I/O	
130	DA24	I/O	
131	DA25	I/O	
132	DA26	I/O	
133	DA27	I/O	
134	DA28	I/O	
135	DA29	I/O	
136	DA30	I/O	
137	DA31	I/O	
138	VDD		Power supply
139	VSS		Ground
140	A00	O	External memory address bus
141	A01	O	
142	A02	O	
143	A03	O	
144	A04	O	
145	A05	O	
146	A06	O	
147	A07	O	
148	A08	O	
149	A09	O	
150	A10	O	
151	A11	O	
152	A12	O	
153	A13	O	
154	A14	O	
155	A15/RAS	O	External memory address bus/Row address strobe
156	A16/CAS	O	External memory address bus/Column address strobe
157	A17/CE	O	External memory address bus/Chip enable
158	/WE	O	External memory write enable
159	/OE	O	External memory output enable
160	VDD		Power supply

■ IC BLOCK DIAGRAM

● **BA6144** (XA552A00)
ST4: IC121,IC221,IC321,IC421
IN3: IC103,IC203,IC303,IC403,
IC503,IC603,IC703,IC803

METER DRIVER

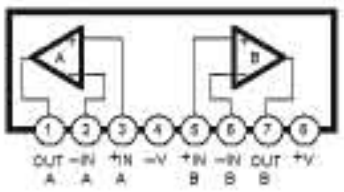


● **NJM2068-D**(XM356A00)
ST1: IC101~106,IC201~204,
IC301~305,IC401~404
MAS3: IC952,IC953
MAS2: IC101,IC151,IC301,IC351,IC501,
IC551,IC751,IC901~903
MAS1: IC101~103,IC301~303,IC501~503,
IC701~703
ISRT: IC101~104,IC111~115,IC121~124,
IC201~217
IN1: IC103~107,IC303~307,IC503~507,
IC703~707

● **NJM2082M(T1)**(XN797A00)
CTRL: IC108

● **NJM4558L-D**(XQ212A00)
METER1: IC102
METER2: IC102

OP AMP

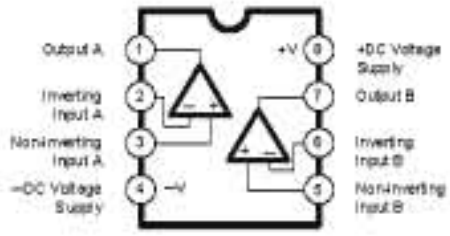


● **NJM4556AL**(XP844A00)
MAS: IC951

● **NJM4580L**(XF195A00)
ST2: IC101~103,IC301~303
ST3: IC101,IC201,IC301,IC401
MASOUT3: IC101,IC201,IC301
MSOUT1,2: IC301,IC201,IC301,IC401
MAS3: IC101,IC301,IC501,IC701,
IC901,IC902
MAS1: IC901
IN3: IC101,IC102,IC301,IC501,IC502,
IC701,IC702
IN1: IC101,IC102,IC301,IC501,IC502,
IC701,IC702

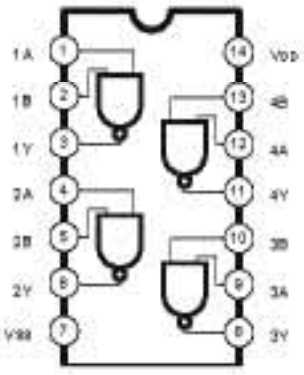
● **M5238AP**(XM085A00)
DC: IC101,IC201,IC202

OP AMP



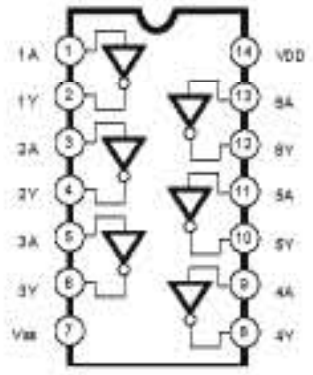
● **SN74HC00NSR** (XE165A00)
CTRL: IC113

NAND



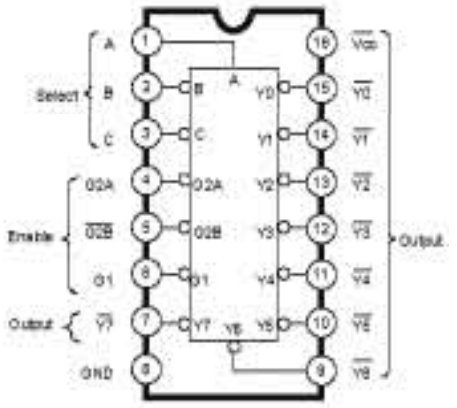
● **SN74HC04NSR** (XD830A00)
CTRL: IC109

INVERTER



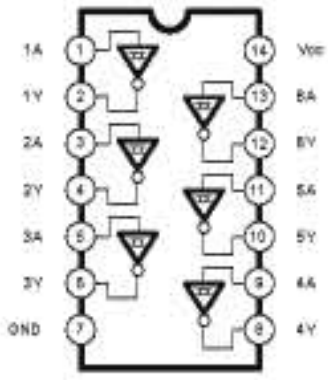
● **SN74HC138NSR** (XD835A00)
CTRL: IC124

DECODER



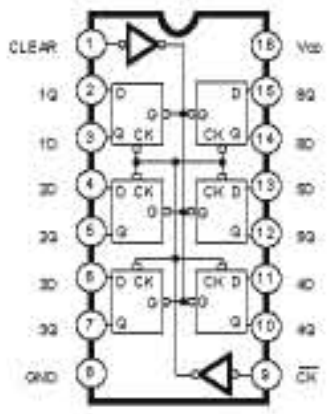
● **SN74HC14NSR** (XC725A00)
CTRL: IC110,IC302

INVERTER



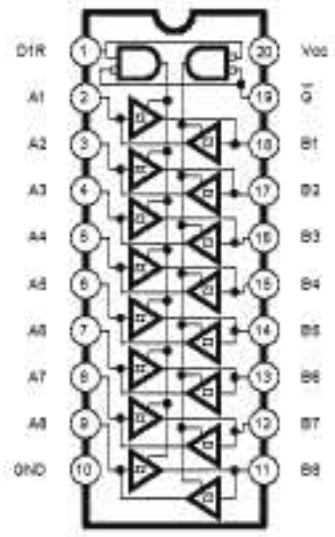
● **SN74HC174NSR** (XD836A00)
CTRL: IC123

D-FF



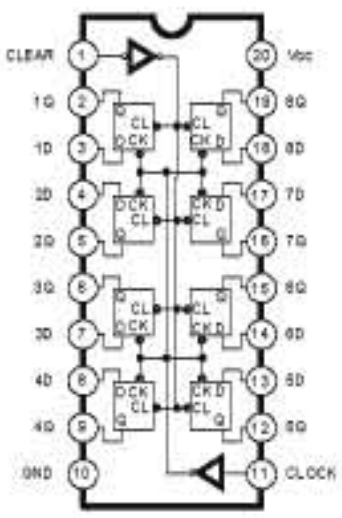
● **SN74HC245NSR** (XD838A00)
CTRL: IC121,IC125,IC131

BUFFER



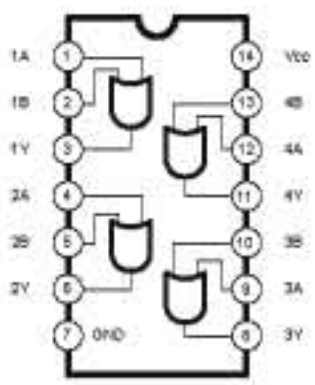
● **SN74HC273NSR** (XH223A00)
CTRL: IC132

D-FF



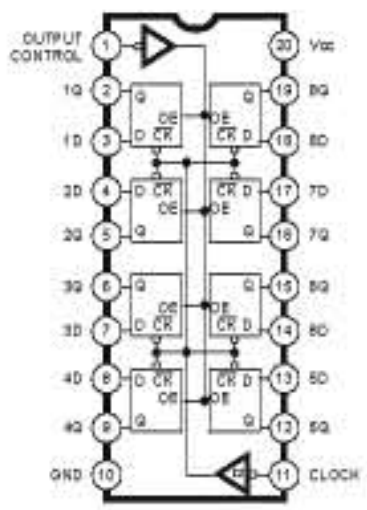
● **SN74HC32NSR** (XD833A00)
CTRL: IC112

OR



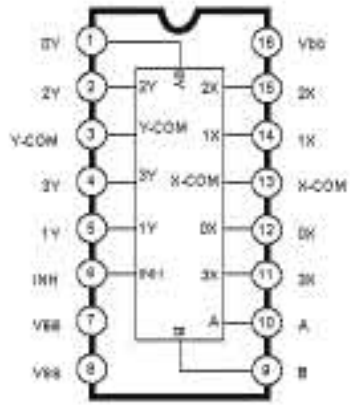
● **SN74HC374ANSR** (XQ042A00)
CTRL: IC122

D-FF



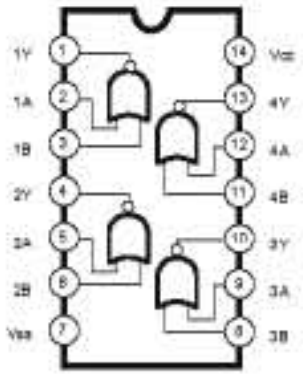
● **TC4052BP** (XA053A00)
METER1: IC101
METER2: IC101

MULTIPLEXER



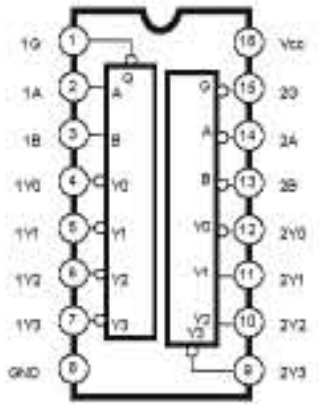
● **SN74HC02AP** (IR000200)
ST4: IC102 MAS4: IC102,502,902
IN4: IC102,IC302

NOR



● **SN74HC139AP** (IR013900)
MAS2: IC910

DECODER



■ CIRCUIT BOARDS

■ **CONTENTS**

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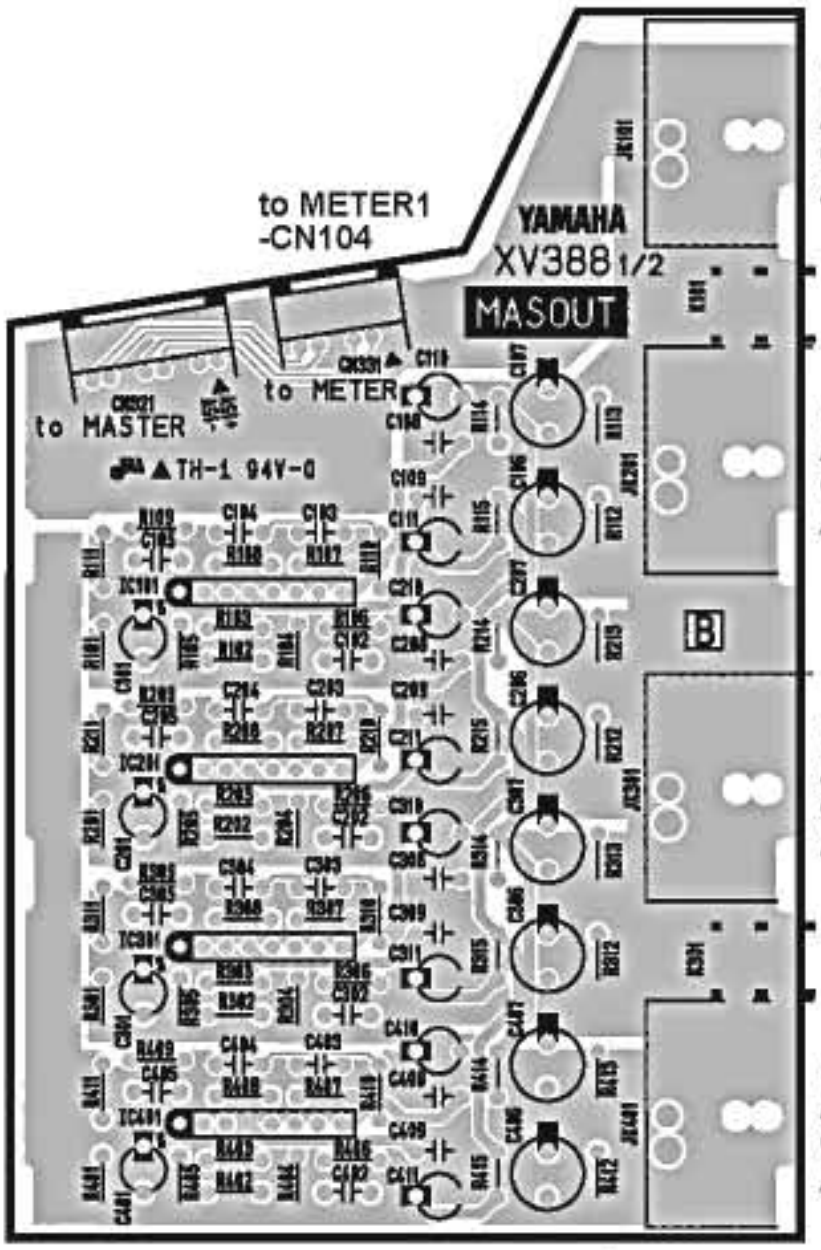
Note : See parts list for details of circuit board component parts.

• **MASOUT1 Circuit Board**

CN321: (AUX OUT 326)
MAS2-CN205
(AUX/GRP OUT A7/G1~A10/G4)
MAS2-CN206
(AUX/GRP OUT A11/G5~A14/G8)
MAS2-CN207
(GRP/AUX OUT G1/A7~G4/A10)
MAS3-CN308
(GRP/AUX OUT G5/A11~G8/A14)
MAS3-CN309
(MATRIX OUT 1~4)
MAS1-CN101
(MATRIX OUT 5~8)
MAS1-CN102



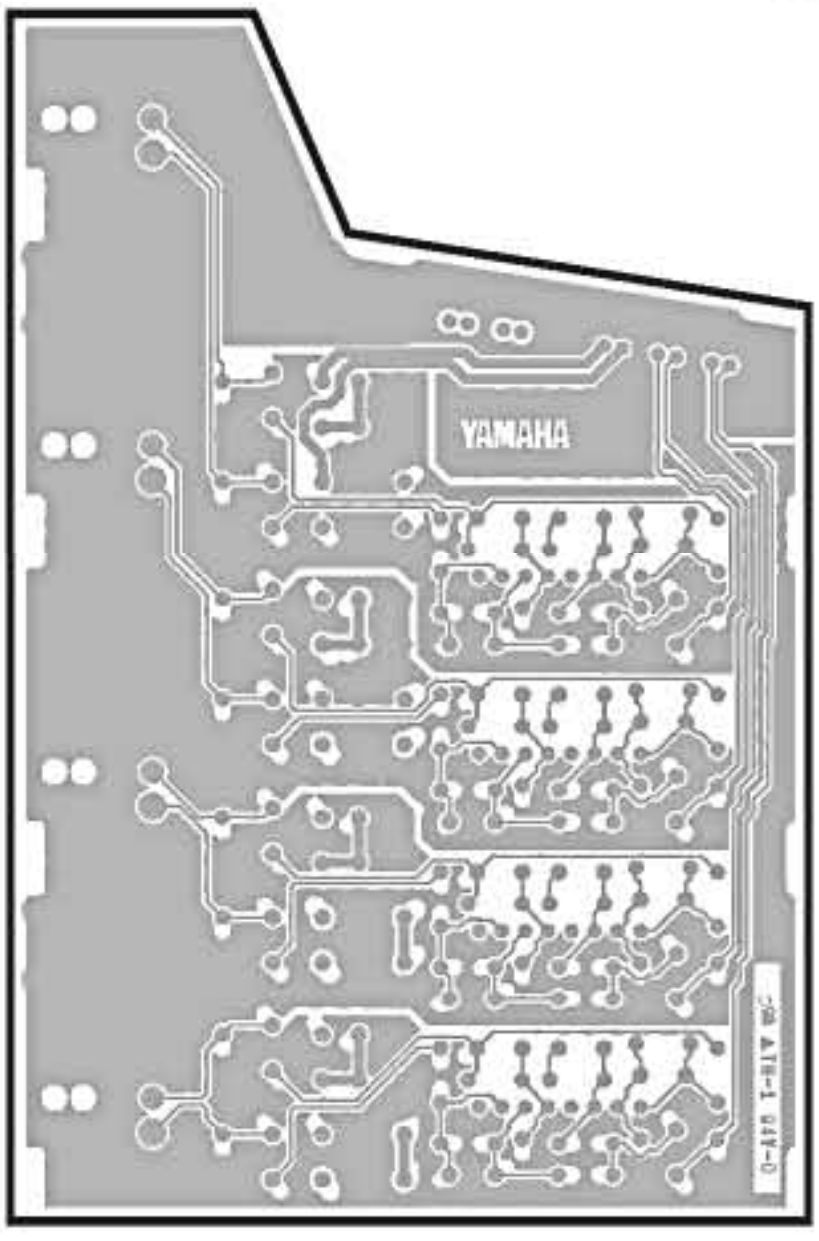
MATRIX OUT (5, 1)
AUX/GRP OUT (A11/G6, A7/G1)
GRP/AUX OUT (G5/A11, G1/A7)
AUX OUT (3)

MATRIX OUT (6, 2)
AUX/GRP OUT (A12/G6, A8/G2)
GRP/AUX OUT (G6/A12, G2/A8)
AUX OUT (4)

MATRIX OUT (7, 3)
AUX/GRP OUT (A13/G7, A9/G3)
GRP/AUX OUT (G7/A13, G3/A9)
AUX OUT (5)

MATRIX OUT (8, 4)
AUX/GRP OUT (A14/G8, A10/G4)
GRP/AUX OUT (G8/A14, G4/A10)
AUX OUT (6)

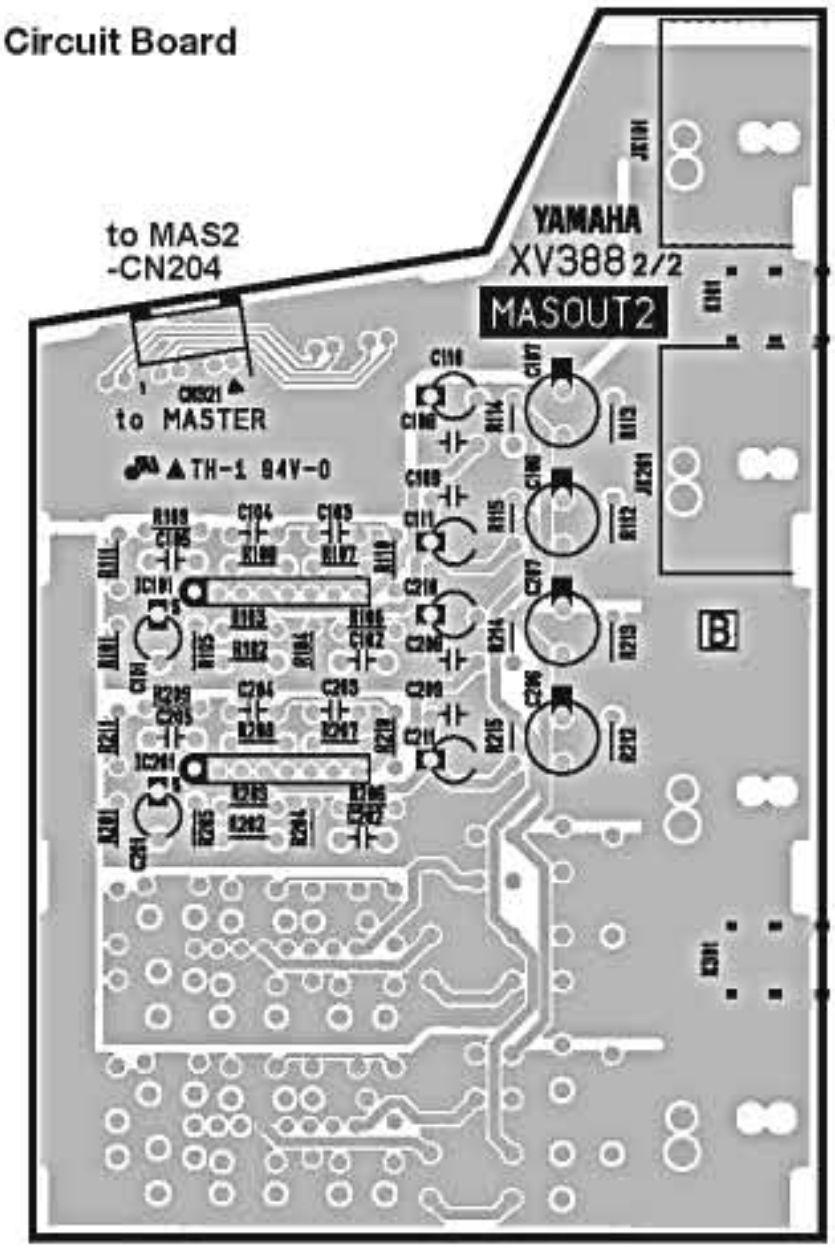
Component side



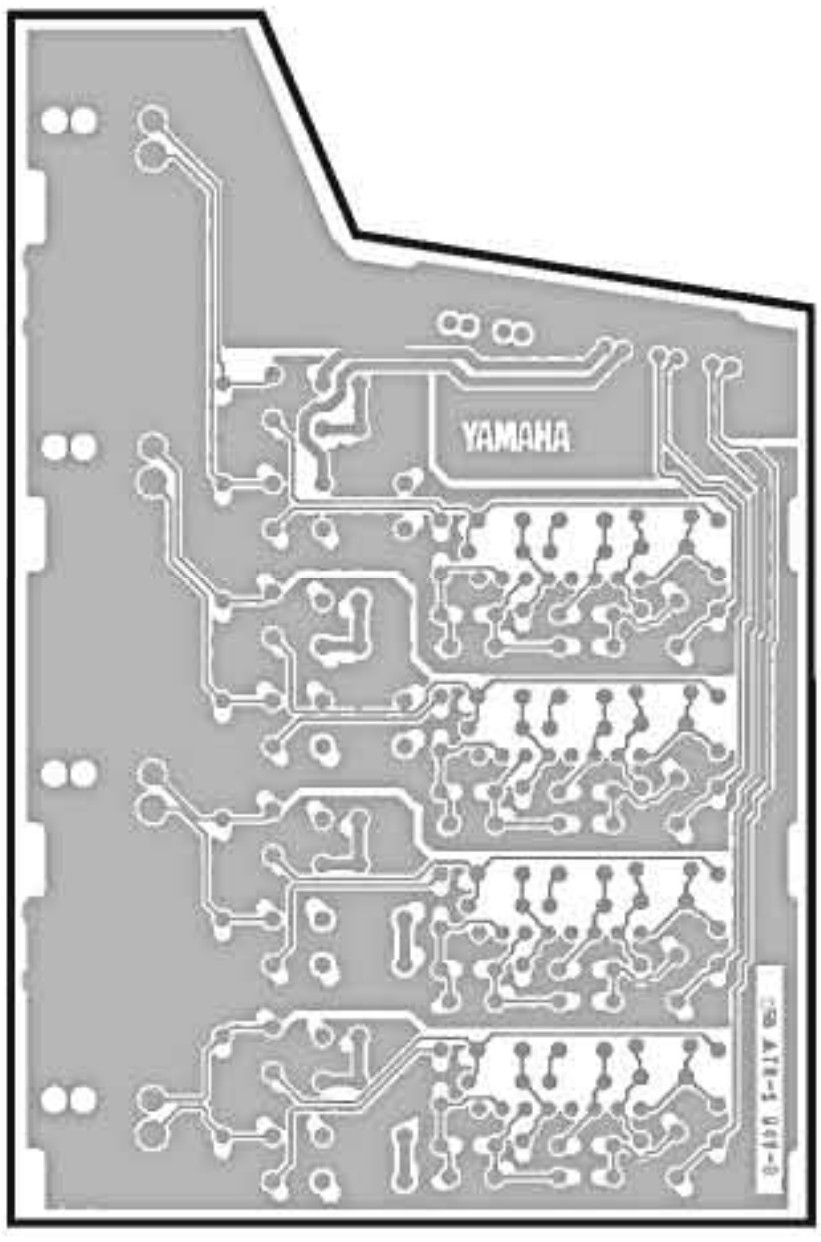
Pattern side

MASOUT1 : 3NA-V230710 ⚠

• MASOUT2 Circuit Board



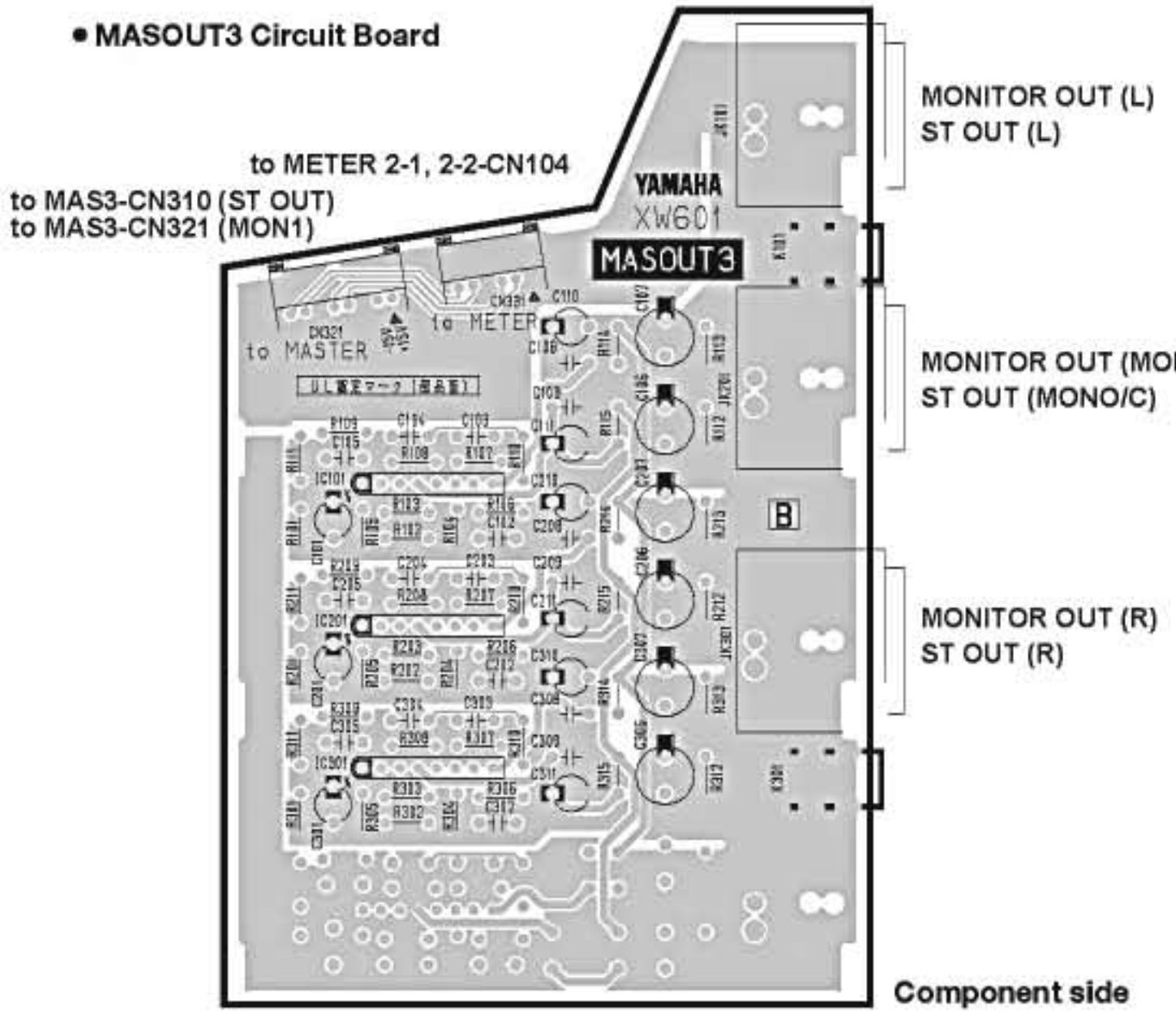
Component side



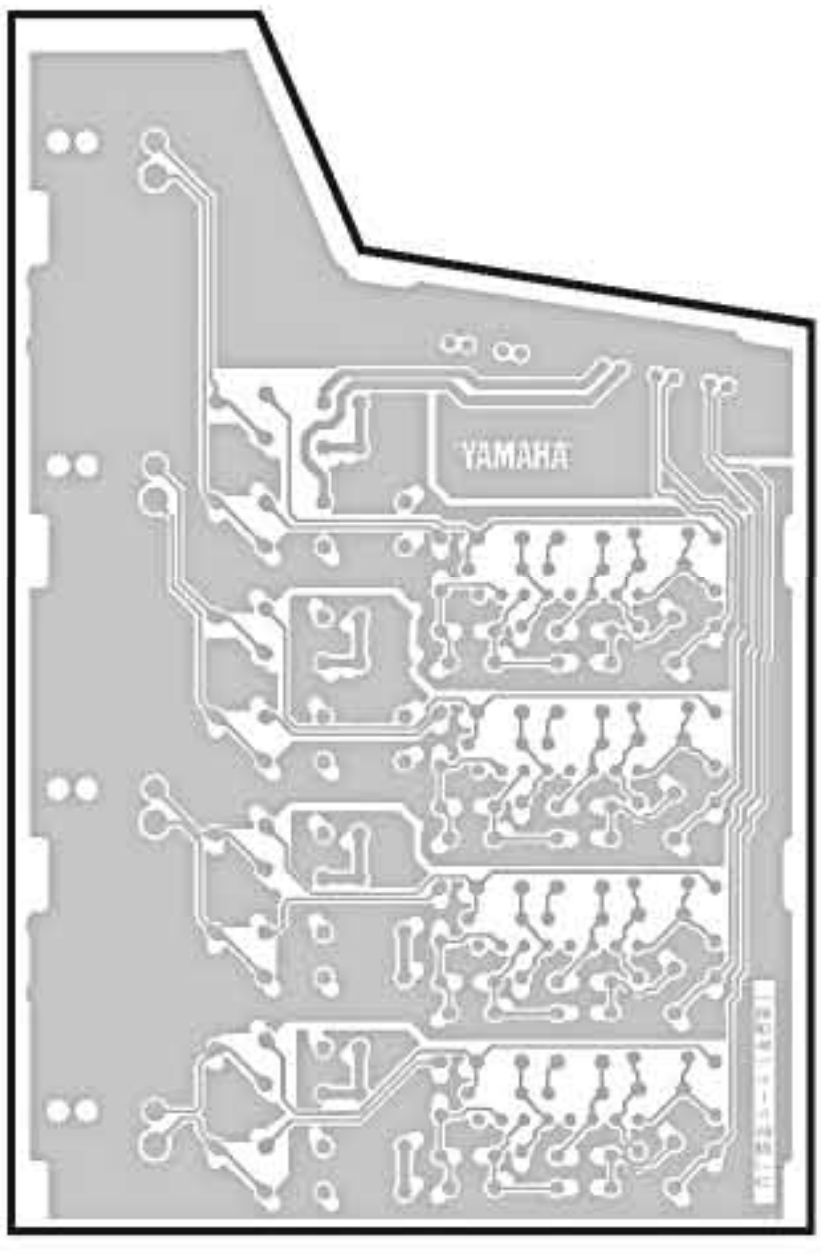
Pattern side

MASOUT2 : 3NA-V230710 ⚠1

• MASOUT3 Circuit Board



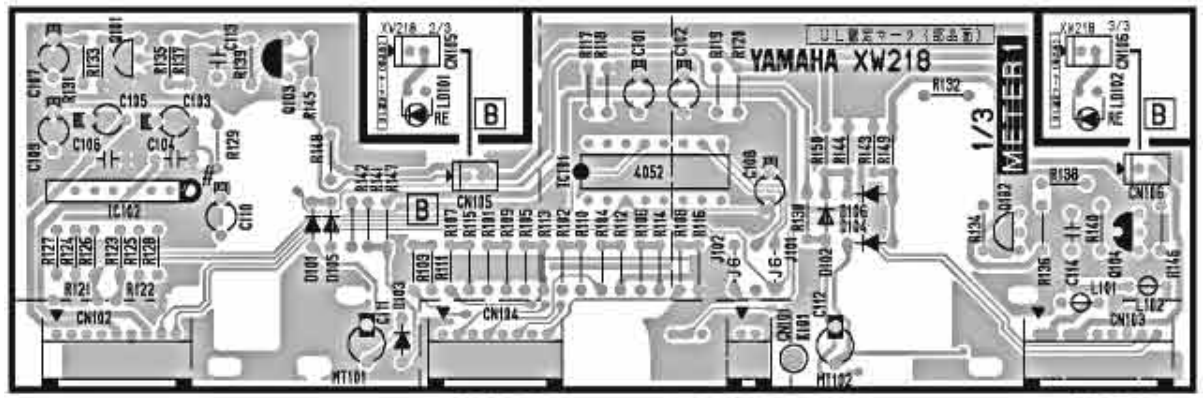
Component side



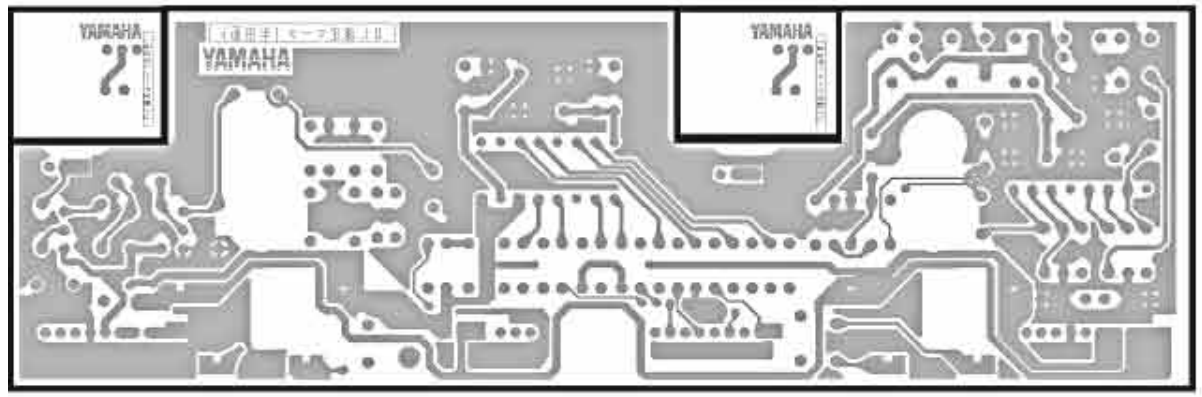
Pattern side

MASOUT3 : 3NA-V431500

• METER1 Circuit Board

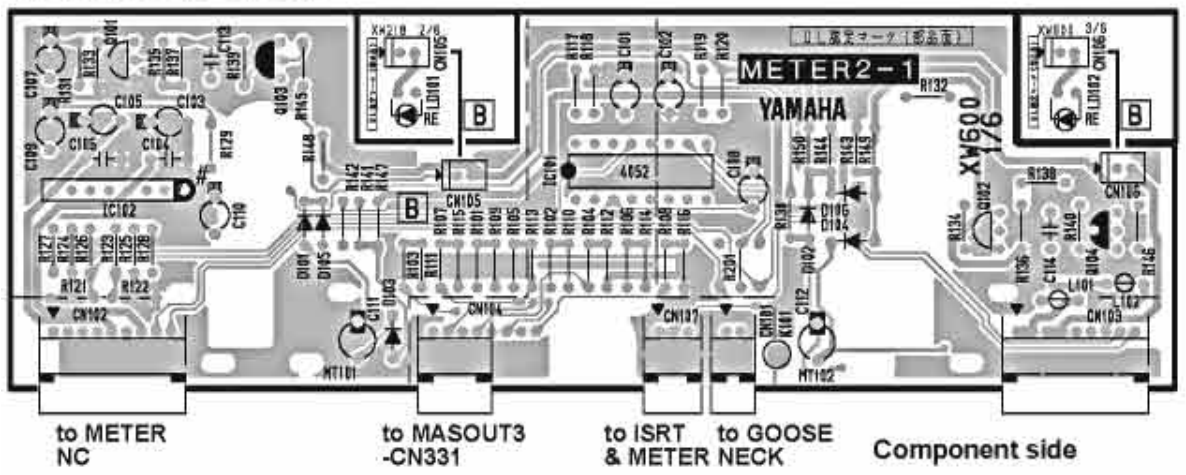


Component side

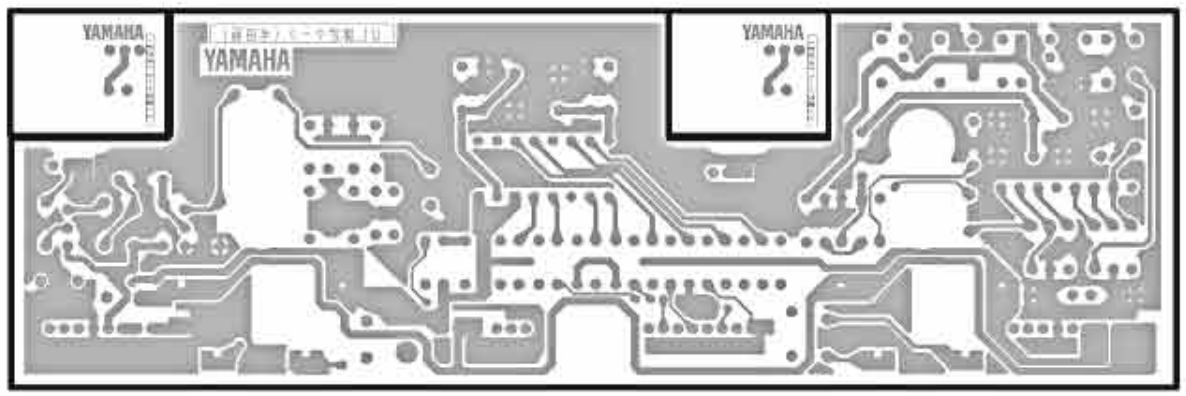


Pattern side

• METER2-1 Circuit Board

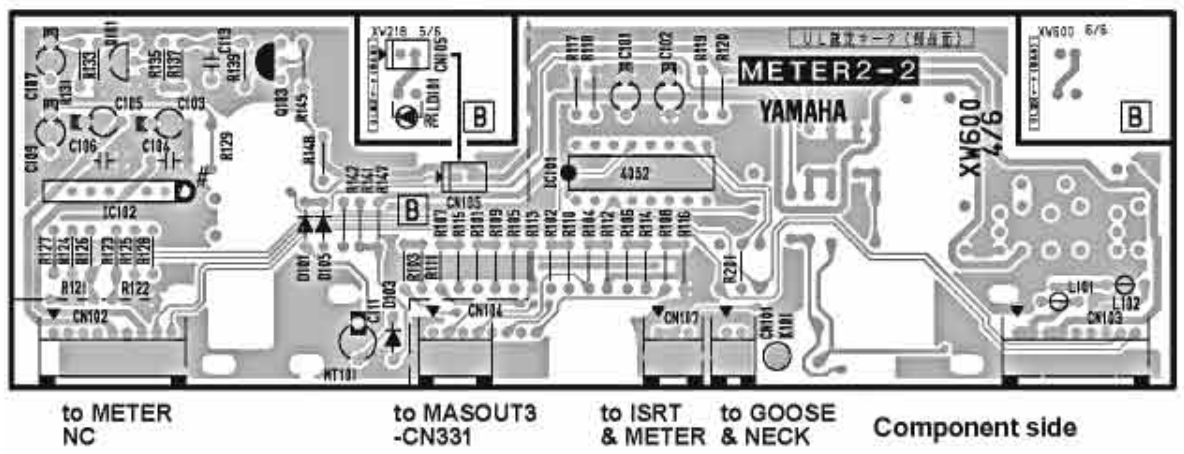


Component side

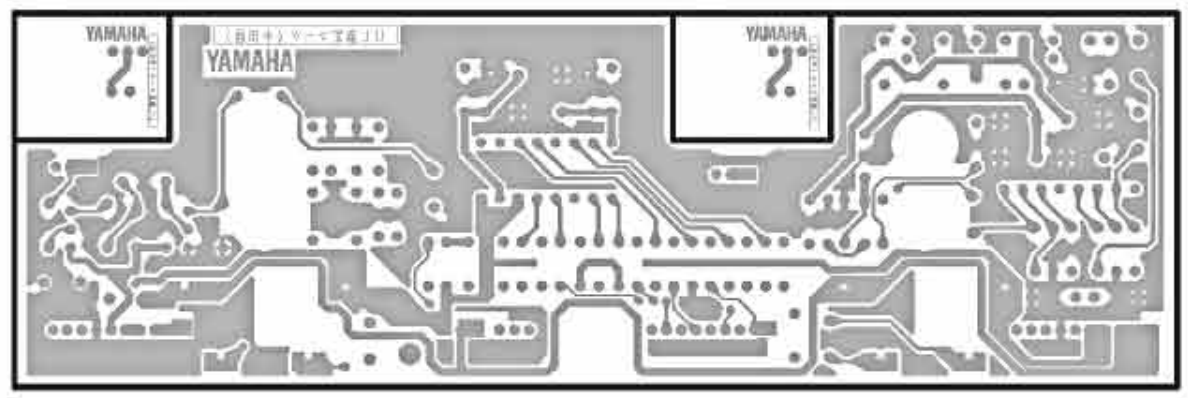


Pattern side

• METER2-2 Circuit Board



Component side



Pattern side

METER1: 3NA-V431480 ⚠2
METER2-1: 3NA-V431490 ⚠1
METER2-2: 3NA-V431490 ⚠1

• CTRL Circuit Board 1/5

to CTRL5/5 -CN108

to MAS 2 -CN209

to MAS 2 -CN210

to ISRT -CN409

to ISRT -CN405

to ISRT -CN406

N.C.

to ISRT -CN404

N.C.

to CTRL4/5 -CN106

to CTRL4/5 -CN107

Component side

• CTRL Circuit Board 2/5

Component side

• CTRL Circuit Board 3/5

Component side

• CTRL Circuit Board 4/5

to CTRL1/5 -CN006

to CTRL1/5 -CN007

Component side

• CTRL Circuit Board 5/5

MIDI IN OUT THRU

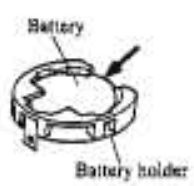
to CTRL1/5 -CN108

Component side

Battery VN103500

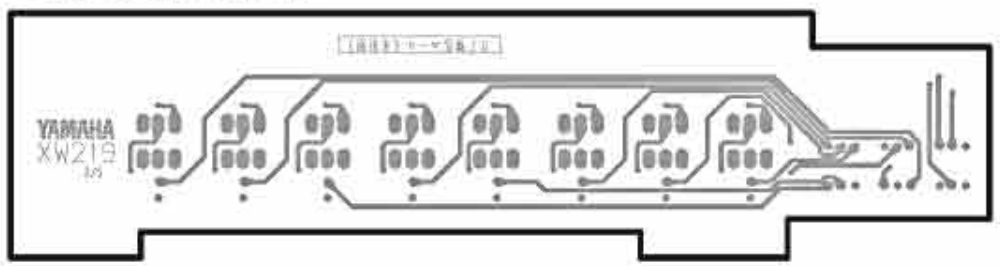
VN108600(Battery holder for VN108500)

- Notice for back-up battery removal
  Push the battery as shows in figure, then the battery will pop up.
- Druk de batterij naar beneden zoals aangeven in de tekening, de batterij springt dan naar voren.



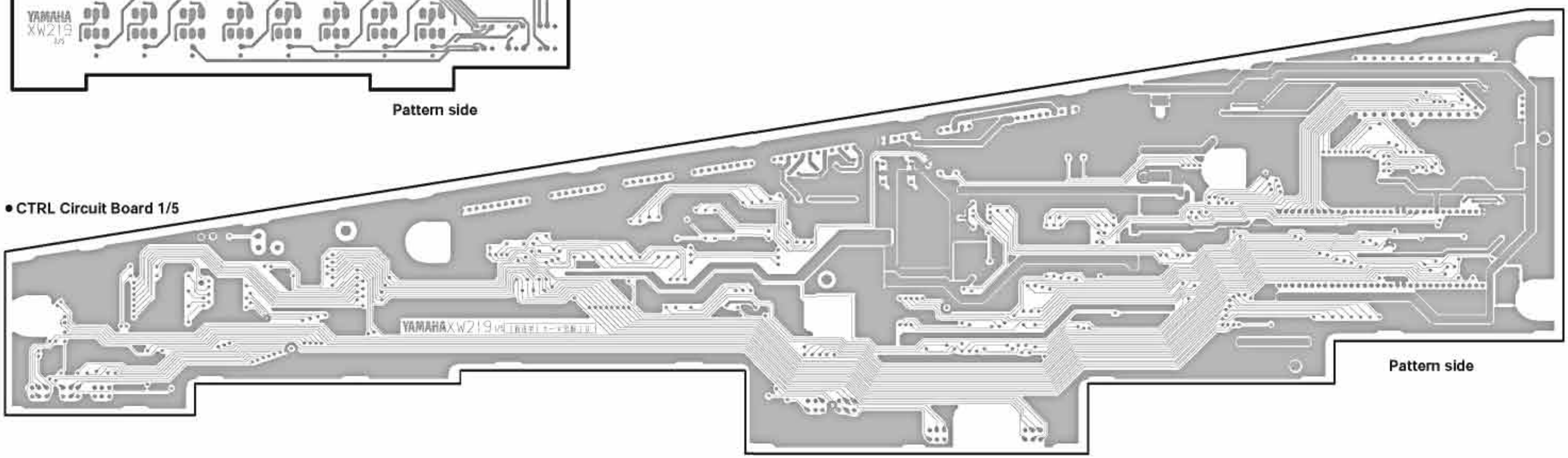
CTRL: 3NA-V431460 ⚠

• CTRL Circuit Board 2/5



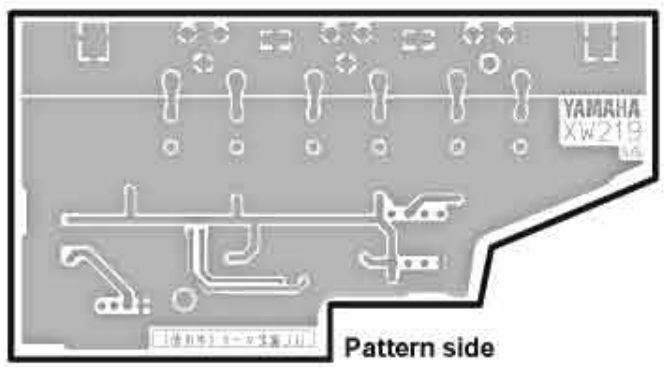
Pattern side

• CTRL Circuit Board 1/5



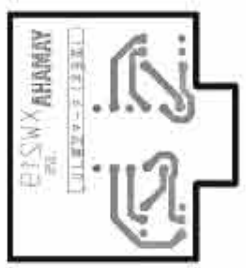
Pattern side

• CTRL Circuit Board 5/5



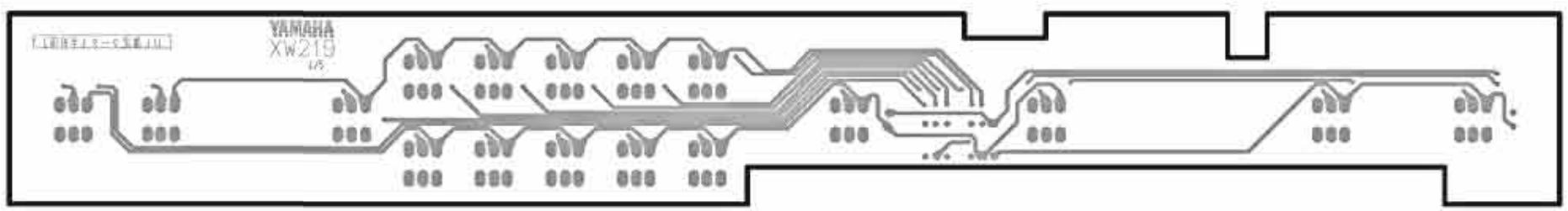
Pattern side

• CTRL Circuit Board 3/5



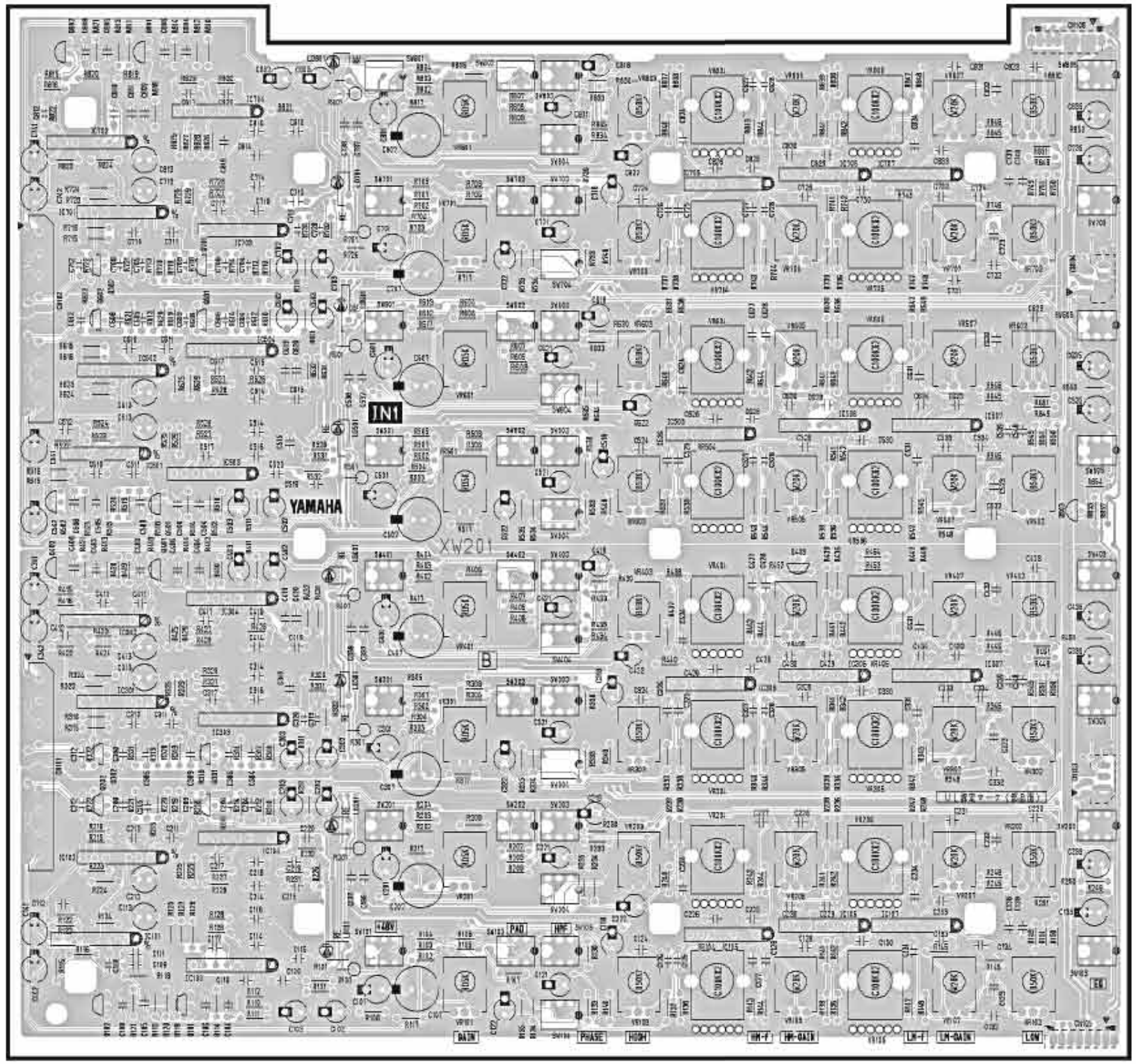
Pattern side

• CTRL Circuit Board 4/5

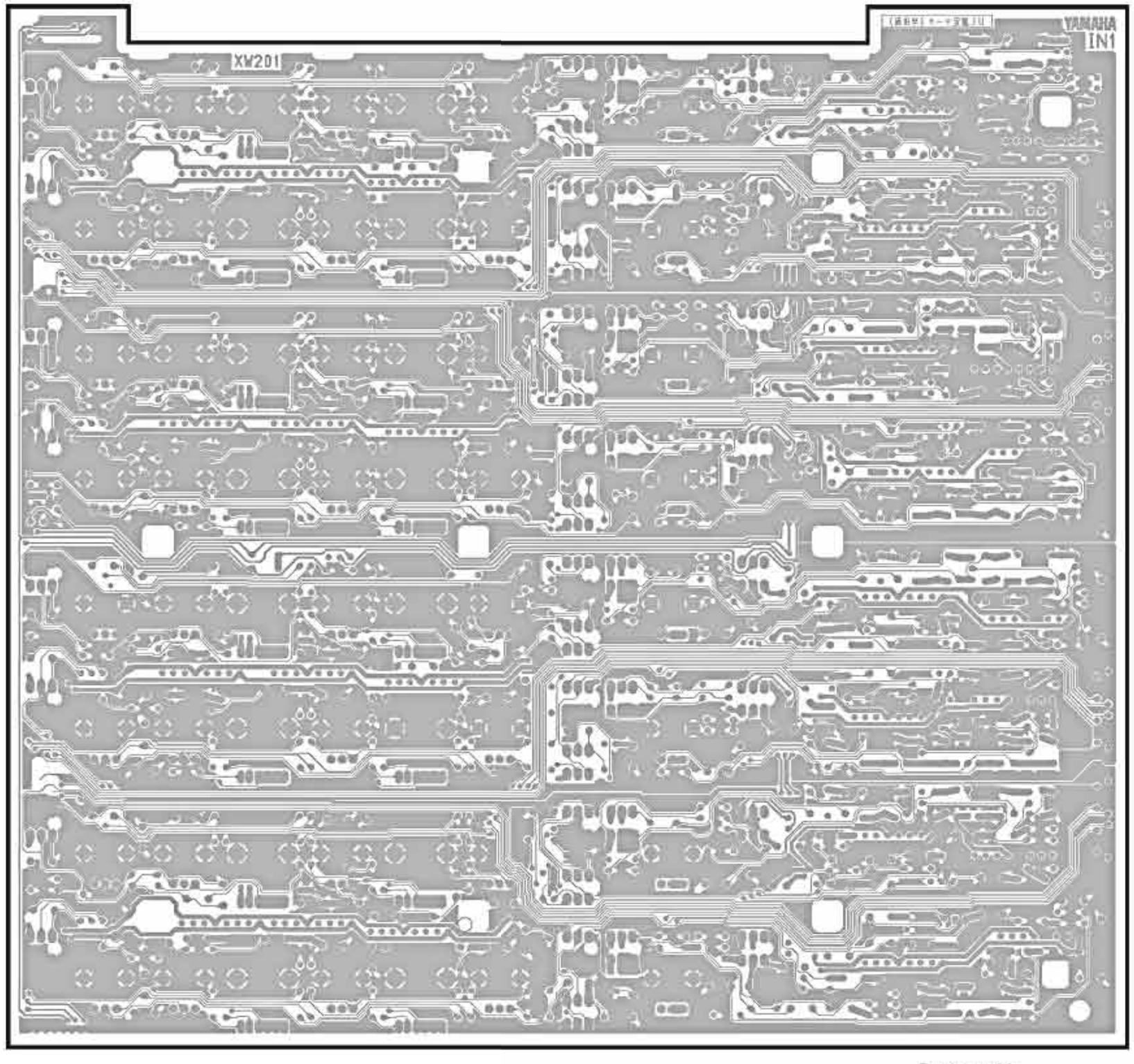


Pattern side

• IN1 Circuit Board

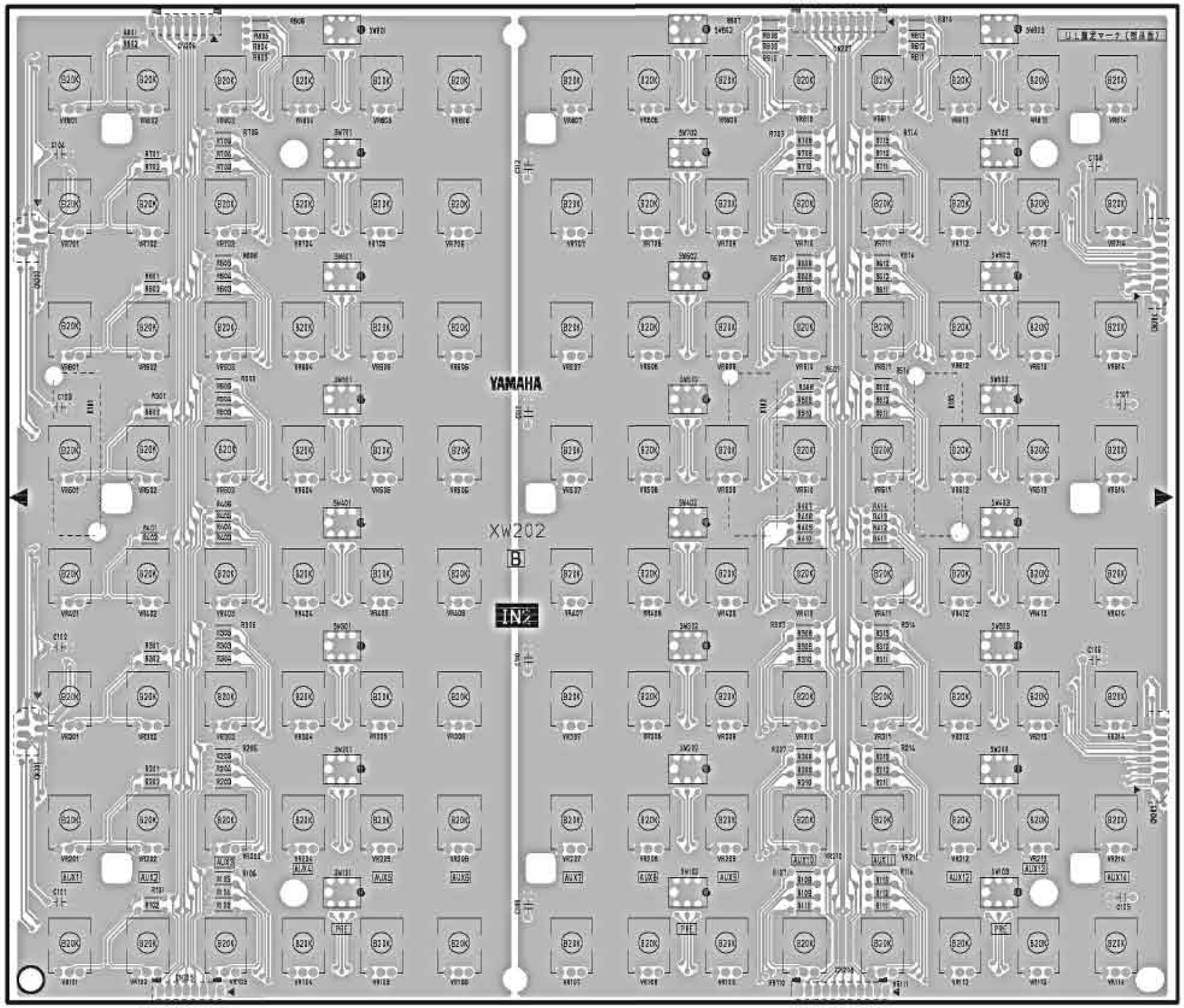


Component side

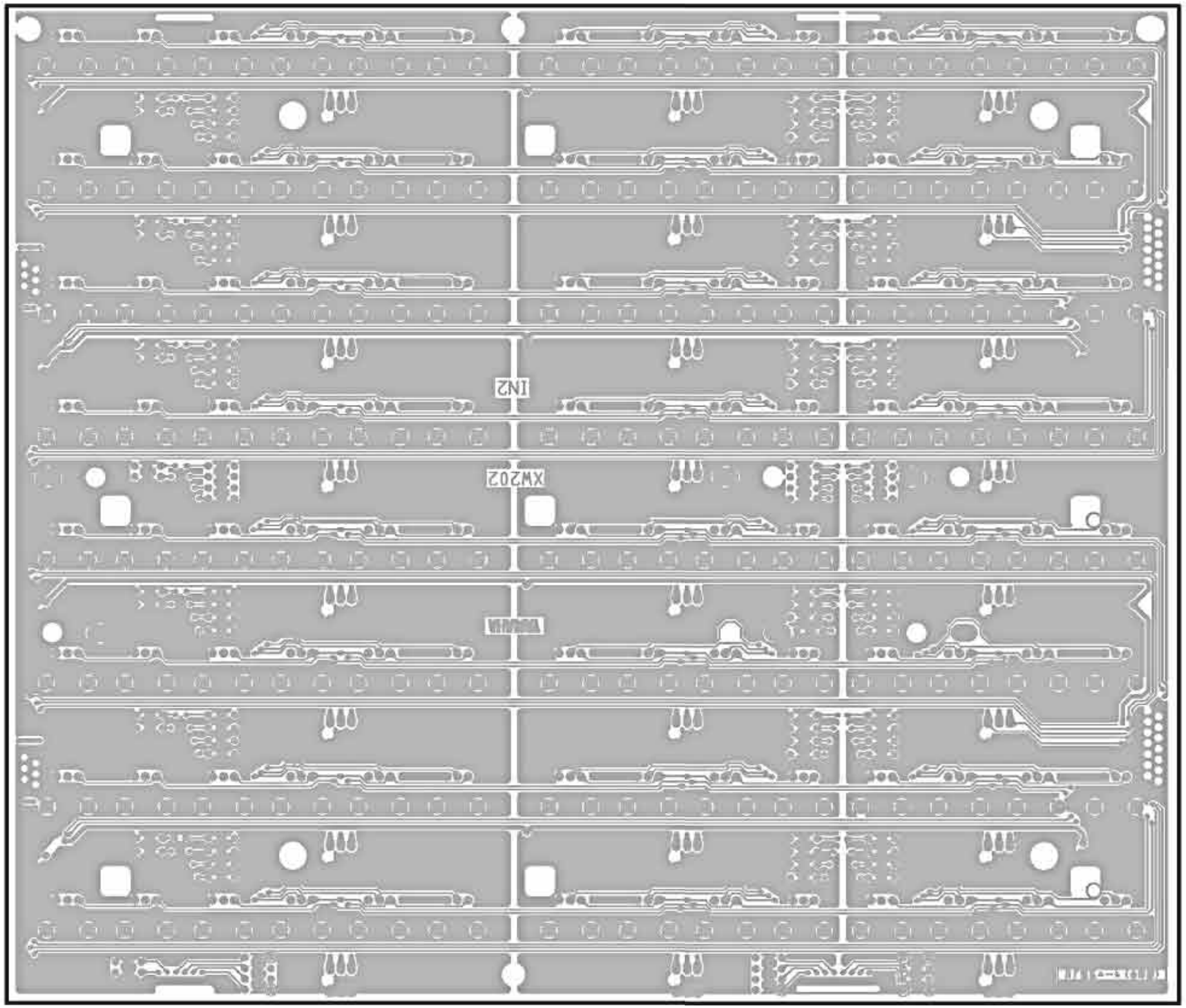


Pattern side

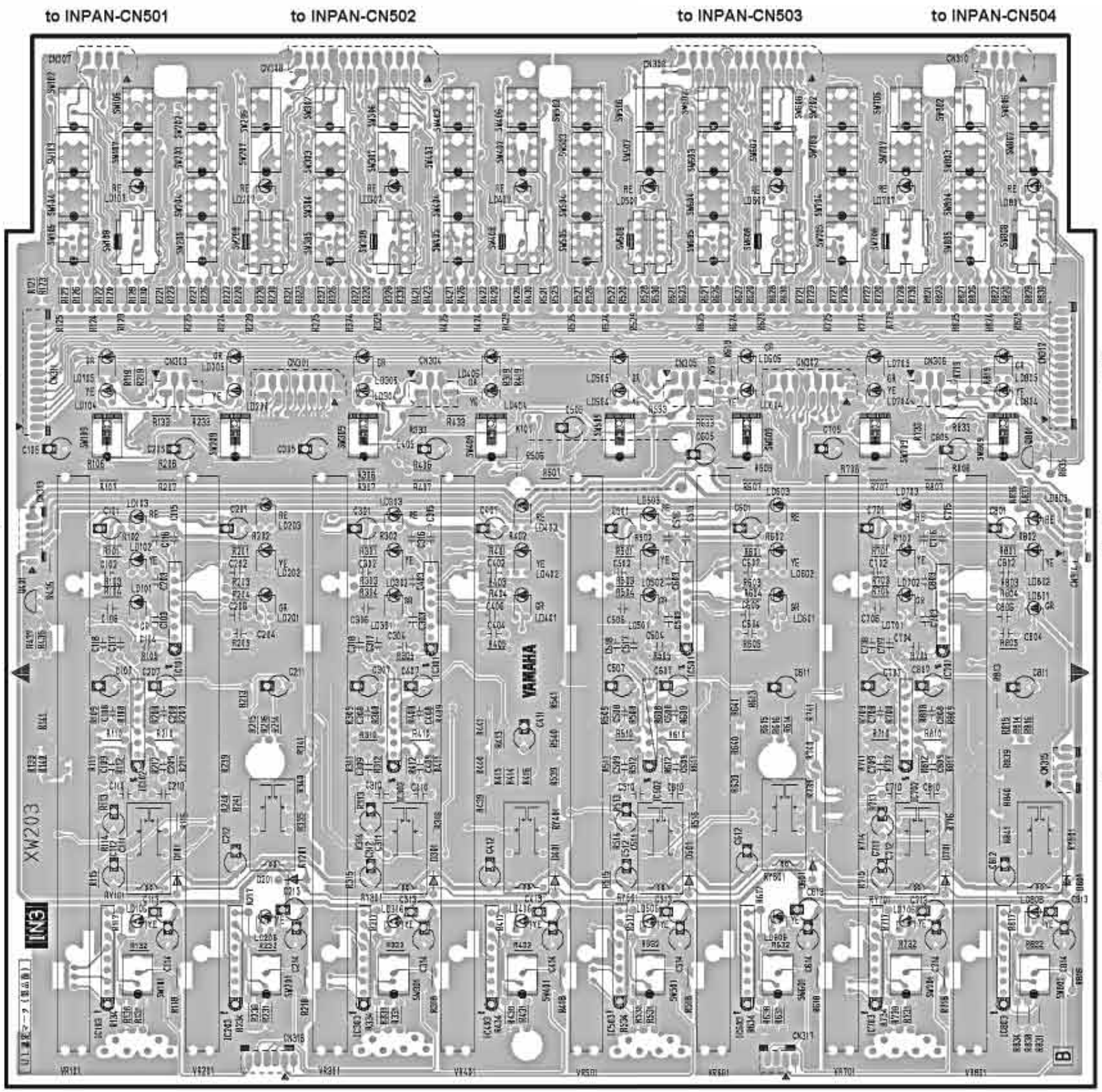
● IN2 Circuit Board



Pattern side

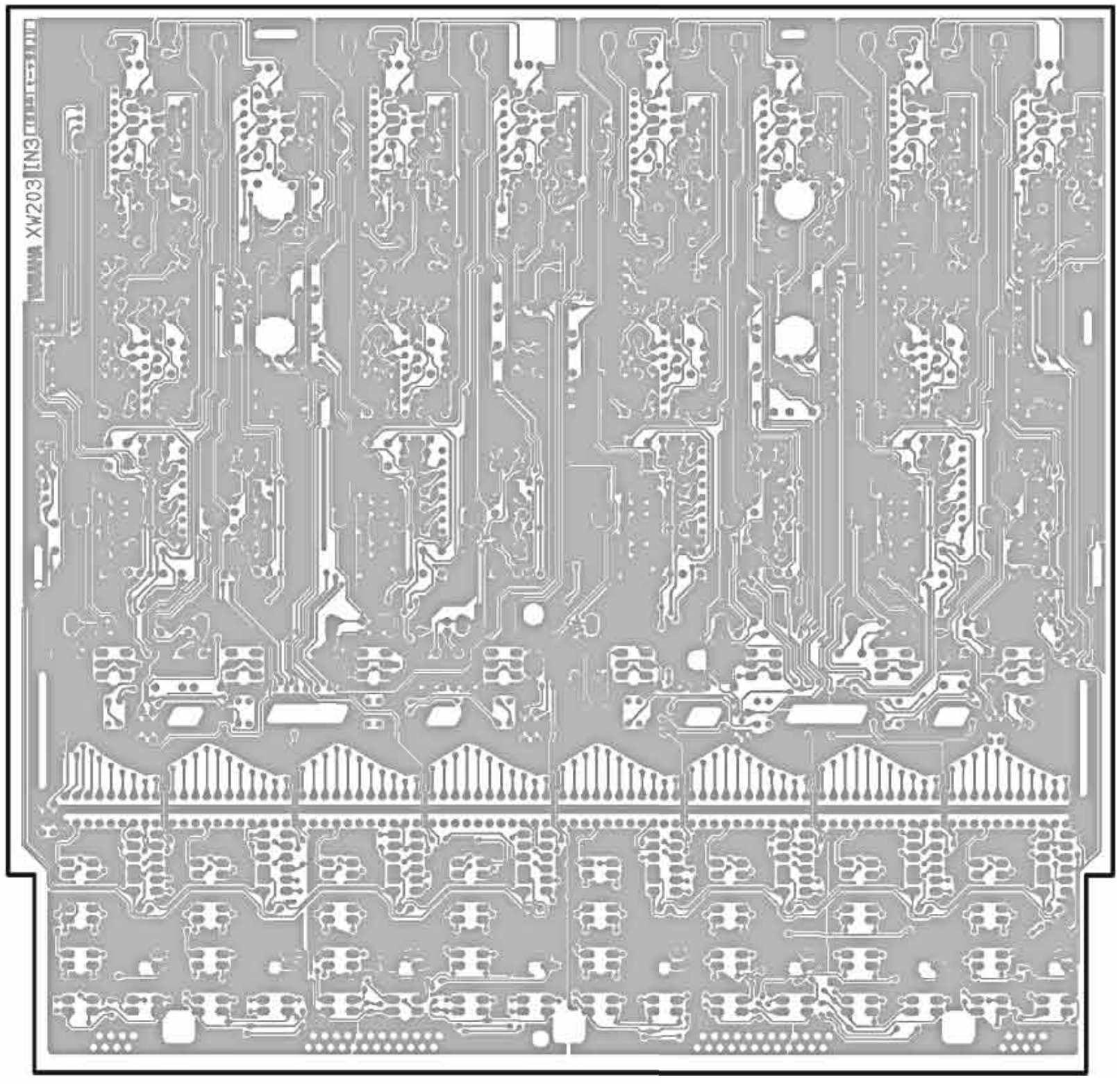


• IN3 Circuit Board

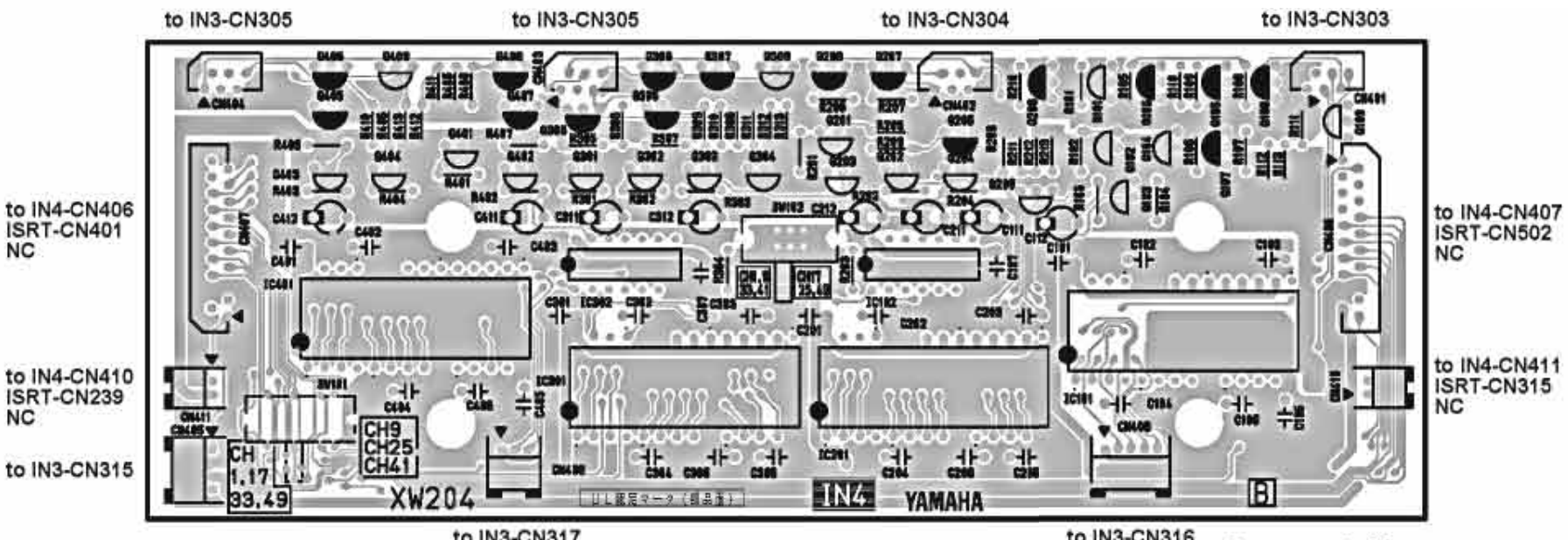


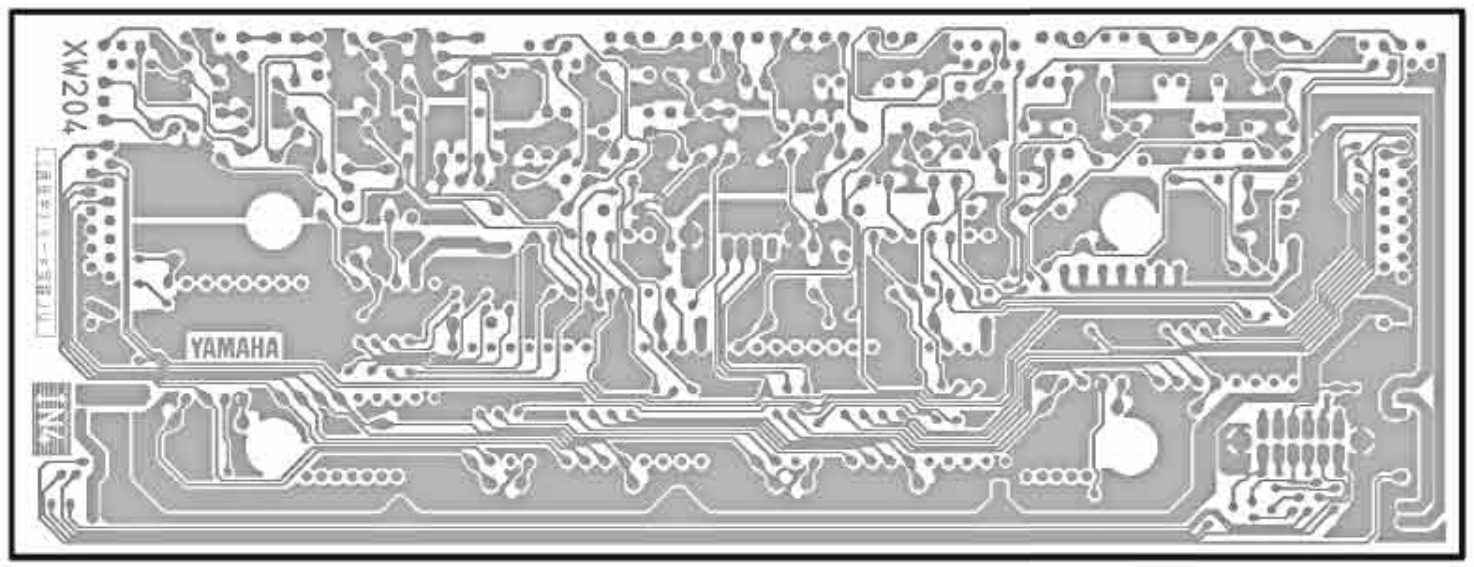
3NA-V431350 ⚠

Pattern side



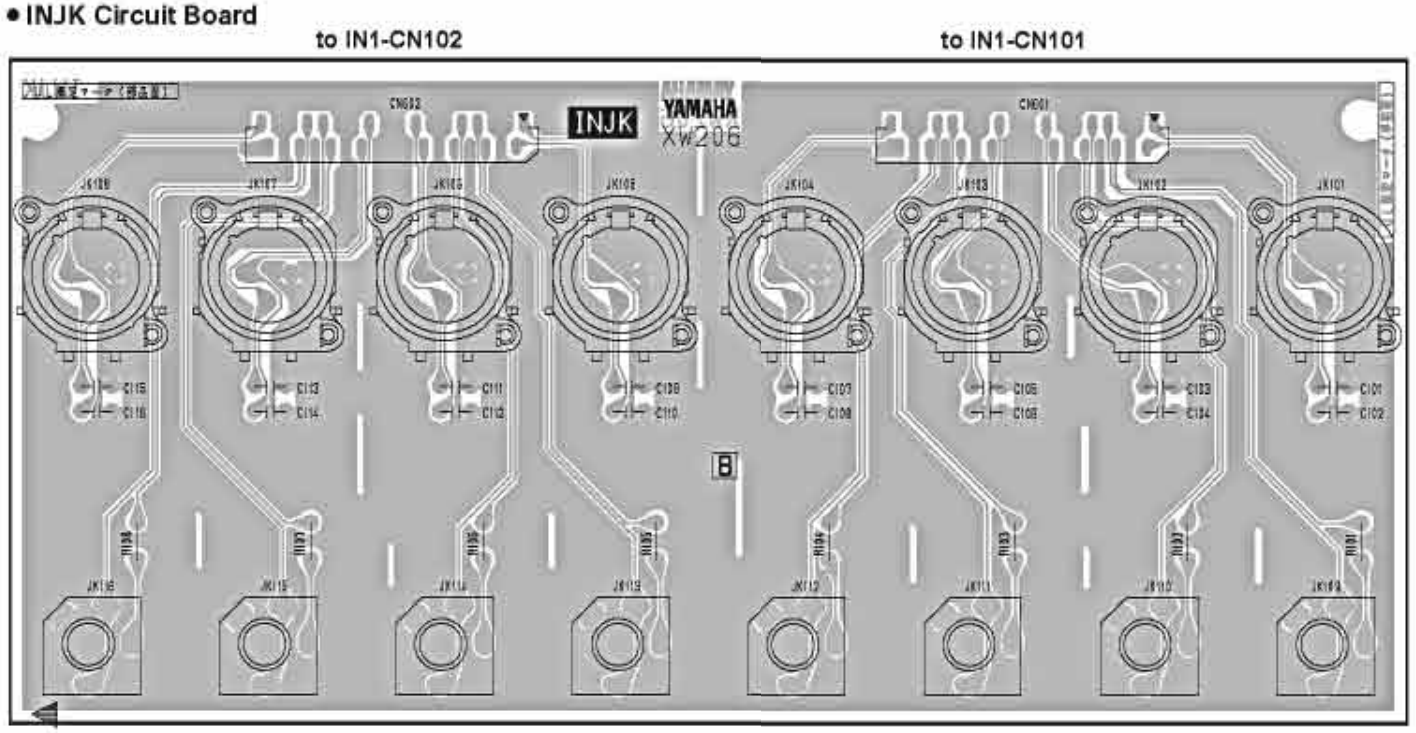
• IN4 Circuit Board



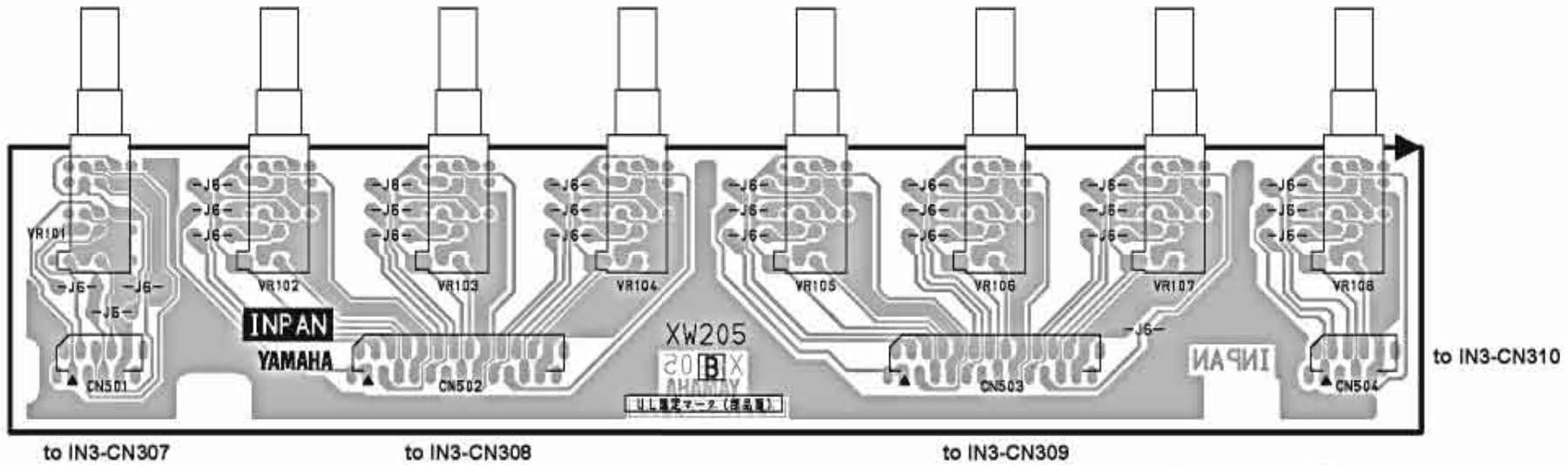


Pattern side

• **INJK Circuit Board**

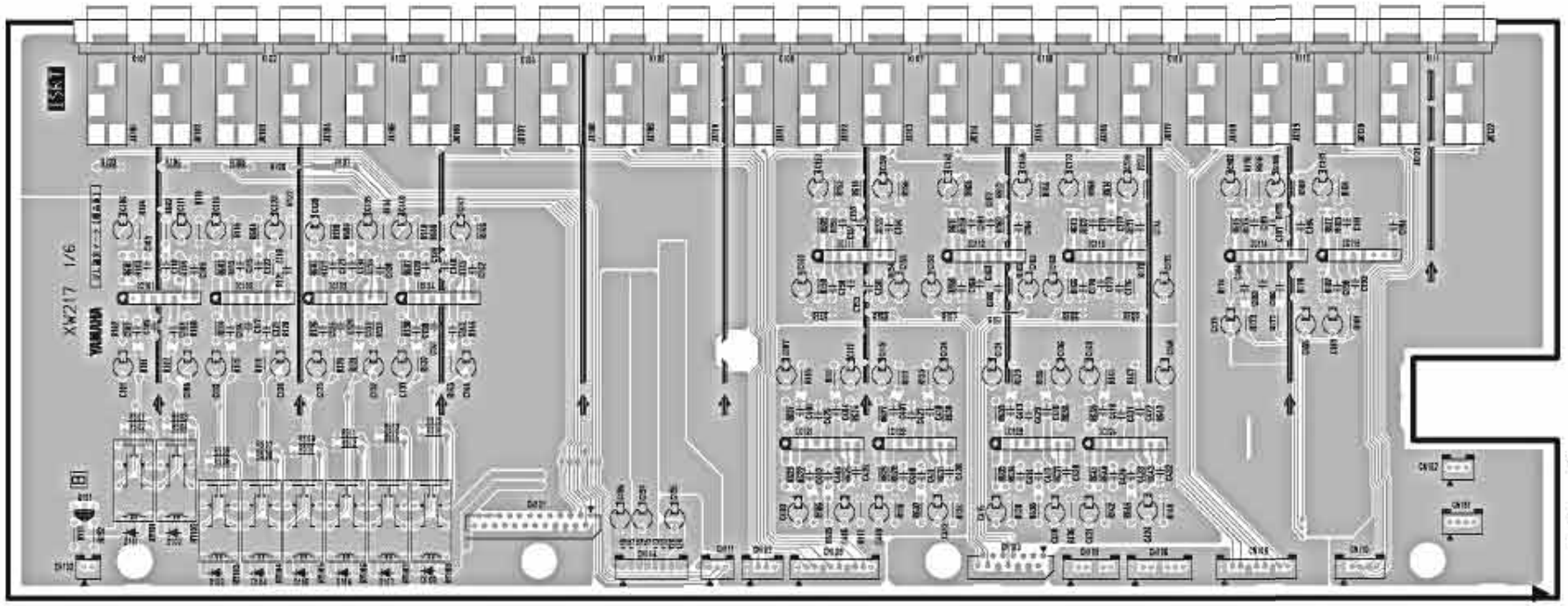


• **INPAN Circuit Board**



INJK: 3NA-V431270 ⚠1
INPAN: 3NA-V431340 ⚠2

• ISRT 1/6 Circuit Board



to METER

to MAS2 -CN213

to MAS1 -CN104

to ISRT 2/6 -CN234

to ISRT 2/6 -CN236

to MAS1 -CN103

to MAS3 -CN306

to MAS3-CN305

to ISRT 2/6 -CN235

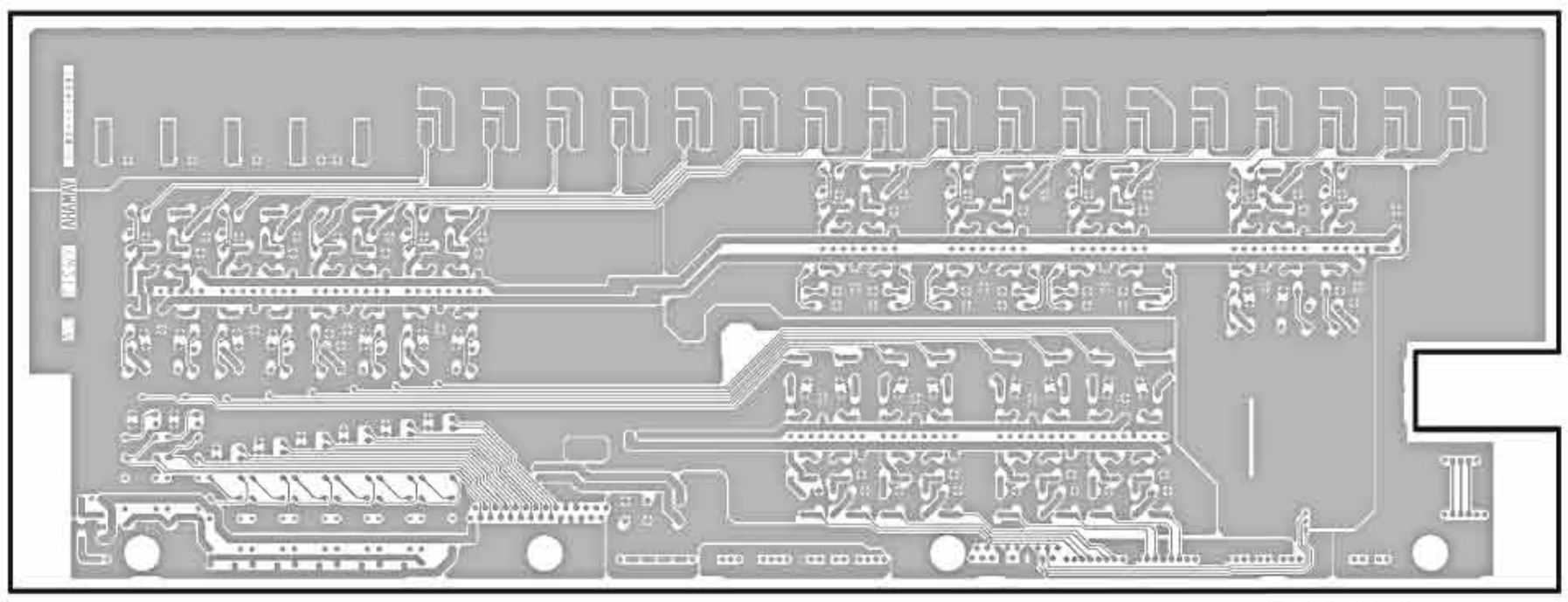
to MAS2 -CN202

to MAS2 -CN203

to MAS2 -CN208

to MAS3 -CN307

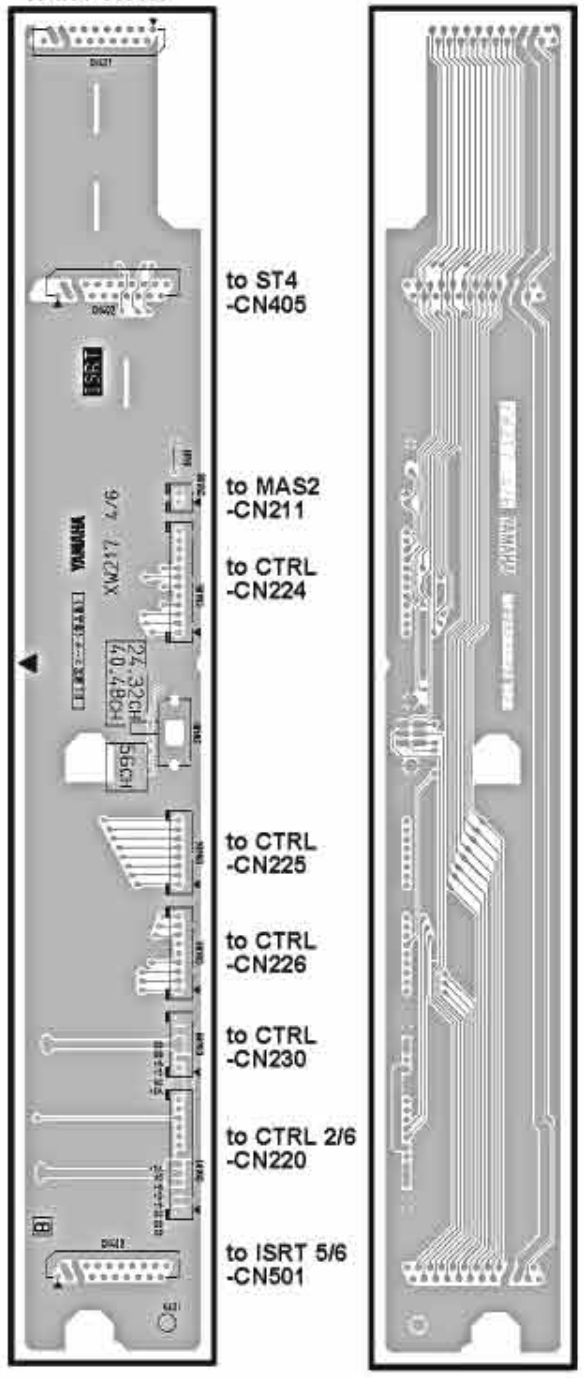
Component side



Pattern side

• ISRT 4/6 Circuit Board

to IN4-CN407



to ST4 -CN405

to MAS2 -CN211

to CTRL -CN224

to CTRL -CN225

to CTRL -CN226

to CTRL -CN230

to CTRL 2/6 -CN220

to ISRT 5/6 -CN501

Component side

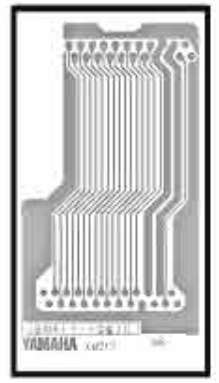
Pattern side

• ISRT 5/6 Circuit Board

to ISRT 4/6 -CN403

to IN4 -CN406

Component side



Pattern side

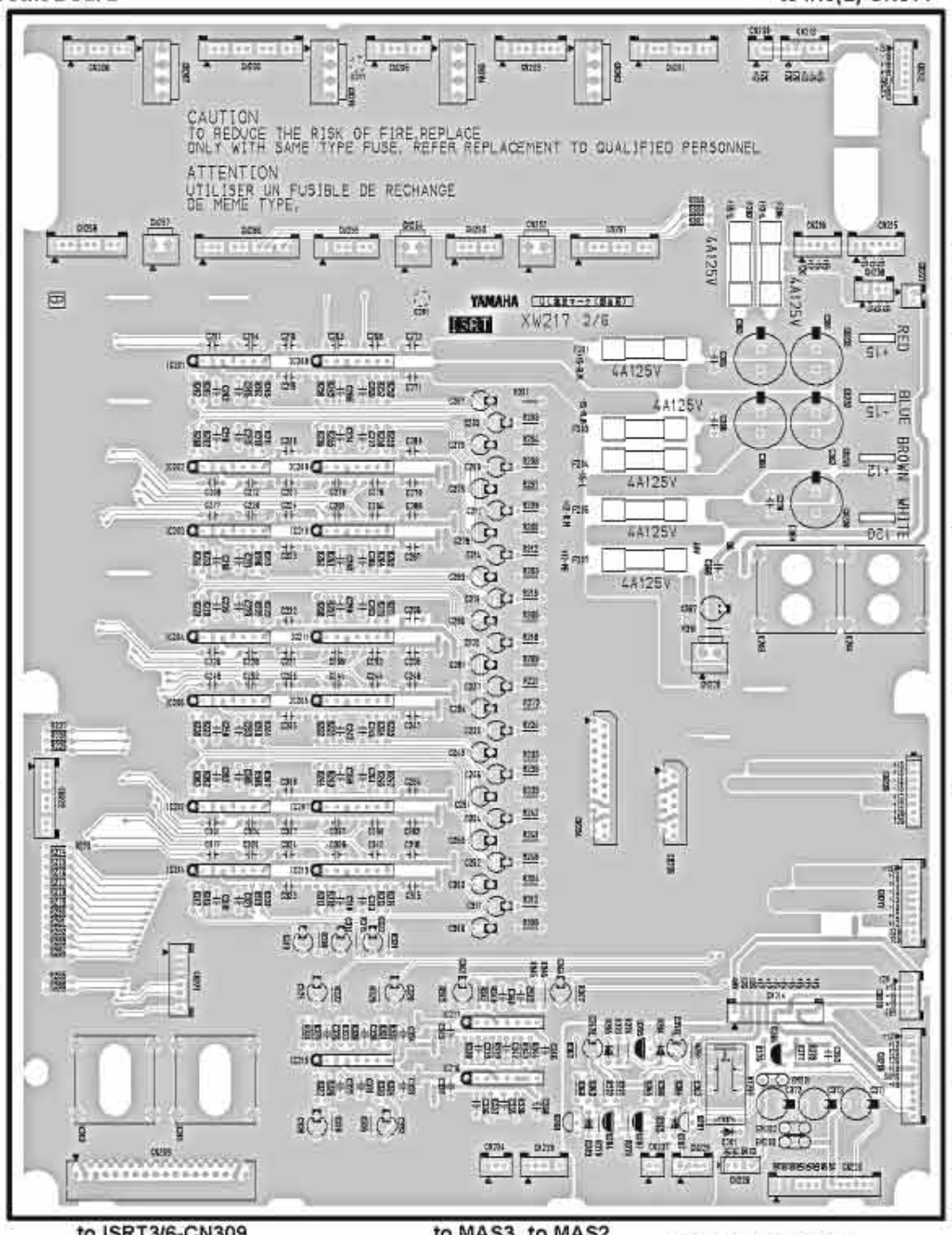
• ISRT 6/6 Circuit Board

Component side

Pattern side

ISRT: 3NA-V431470 ⚠

• ISRT 2/6 Circuit Board



CN208: to IN3(L)-CN312
CN207: to IN3(*L)-GND
CN206: to IN3(L)-CN312
CN210: to IN2(L)-GND
CN203: to IN2(L)-CN208
CN202: to IN2(L)-GND
CN201: to IN2(L)-CN206

to IN4(L)-CN411
to IN3(L)-CN314

to IN1(L)-CN106

CN216: to ST3-CN7
CN215: to ST1-CN104
CN238: to ST2-CN210
CN227: to STJK2/2-CN102

DCIN

CN229: DCIN(1P)
CN234: to ISRT 1/6-CN101
CN235: to ISRT 1/6-CN103

to MAS2-CN218

to ISRT 1/6 -CN104

to MAS1 -CN105

to MAS3-CN314

to MAS1-CN109
CN214: to ISRT3/6-CN312
to METER
CN220: to ISRT4/6-CN407
CN228: to ISRT6/6-CN601
CN225: to MAS2-CN212
CN237: to MAS2-CN222

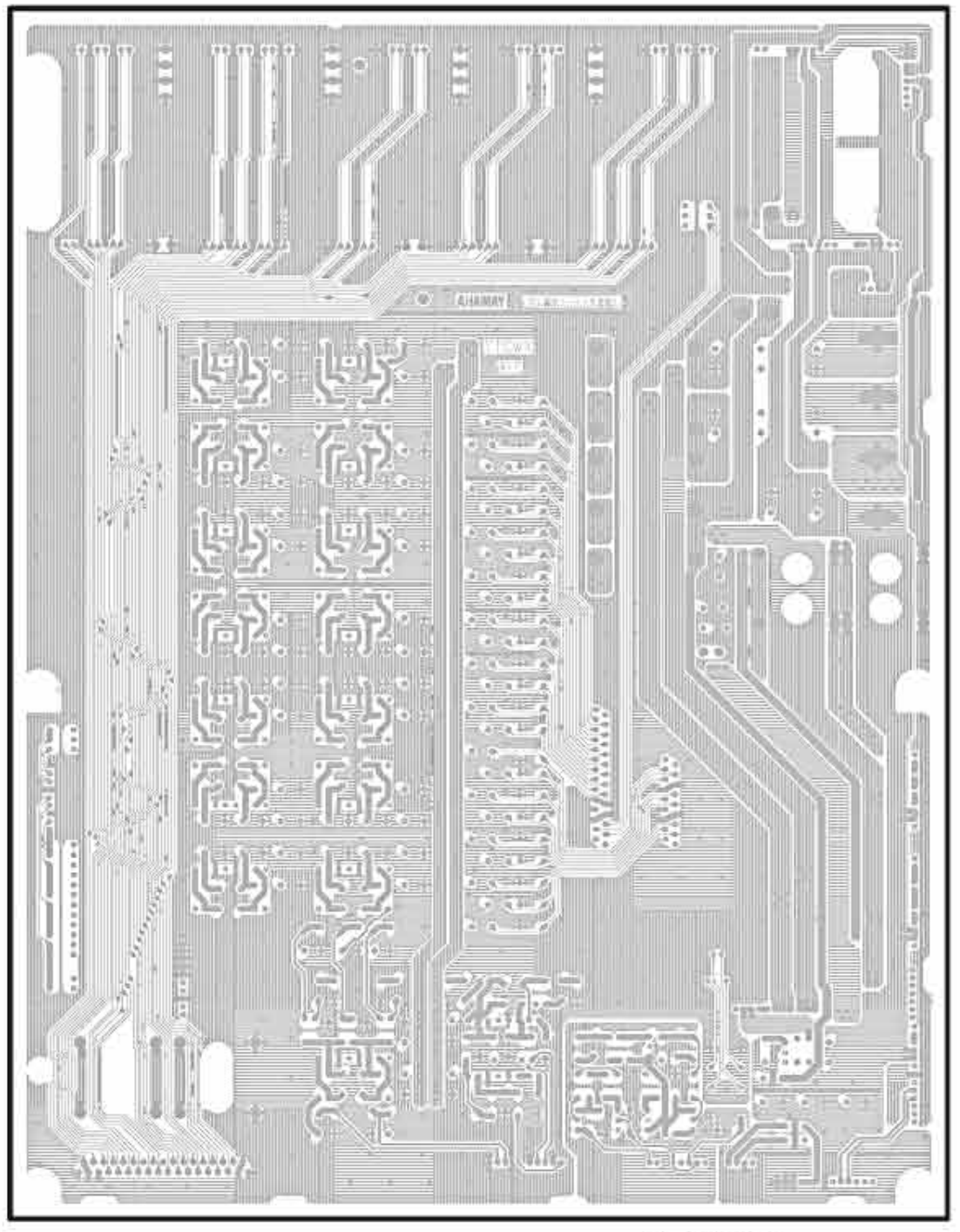
CN251: to ST2-CN206
CN252: to ST2-CN207
CN253: to ST2-CN208
CN254: to ST2-CN209
CN255: to ST2-CN208
CN256: to ST3-CN308
CN257: to ST3-CN310
CN258: to ST3-CN308

to ISRT3/6-CN309

to MAS3 -CN319

to MAS2 -CN221

Component side

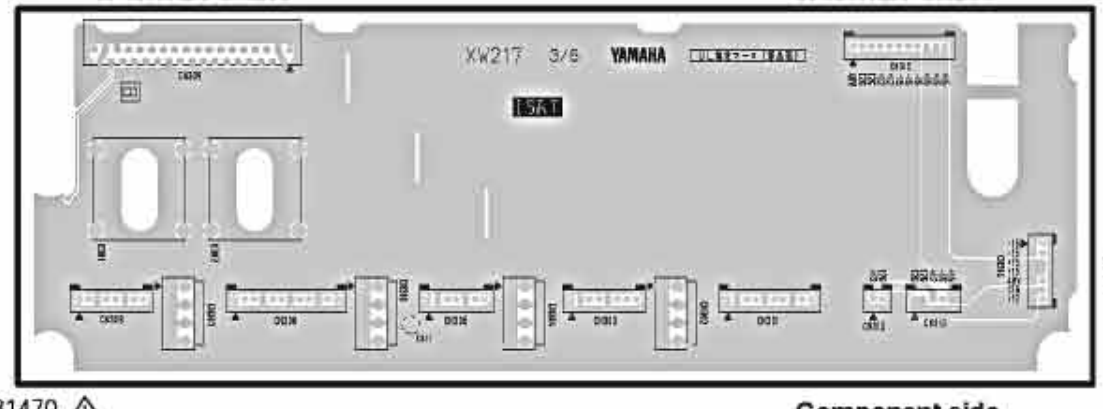


Pattern side

• ISRT 3/6 Circuit Board

to ISRT2/6-CN209

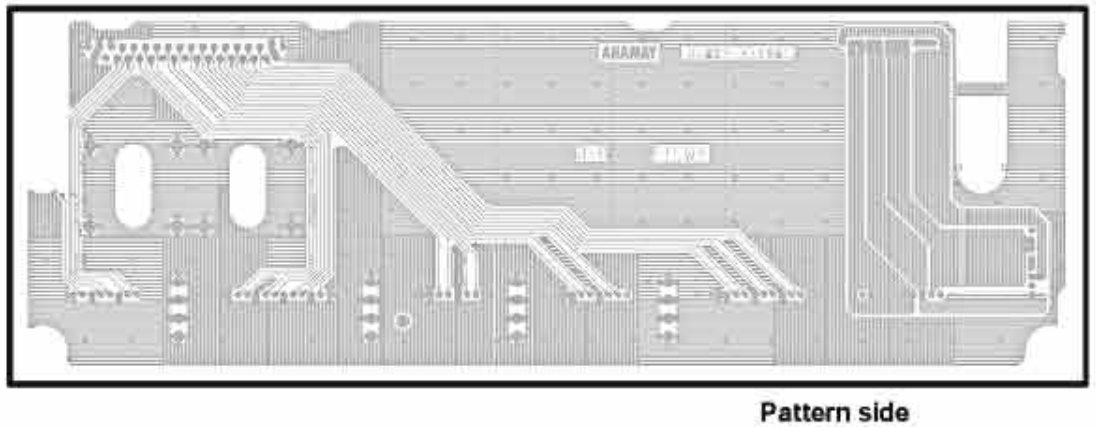
to ISRT2/6-CN214



to IN1(R) -CN105

CN313: to IN3(R)-CN313
CN315: to IN4(R)-CN410
CN301: to IN2(R)-CN205
CN302: to IN2(R)-GND
CN303: to IN2(R)-CN207
CN304: to IN2(R)-GND
CN305: to IN2(R)-CN207
CN310: to IN2(R)-GND
CN306: to IN3(R)-CN311
CN307: to IN3(R)-GND
CN308: to IN3(R)-CN311

Component side



Pattern side

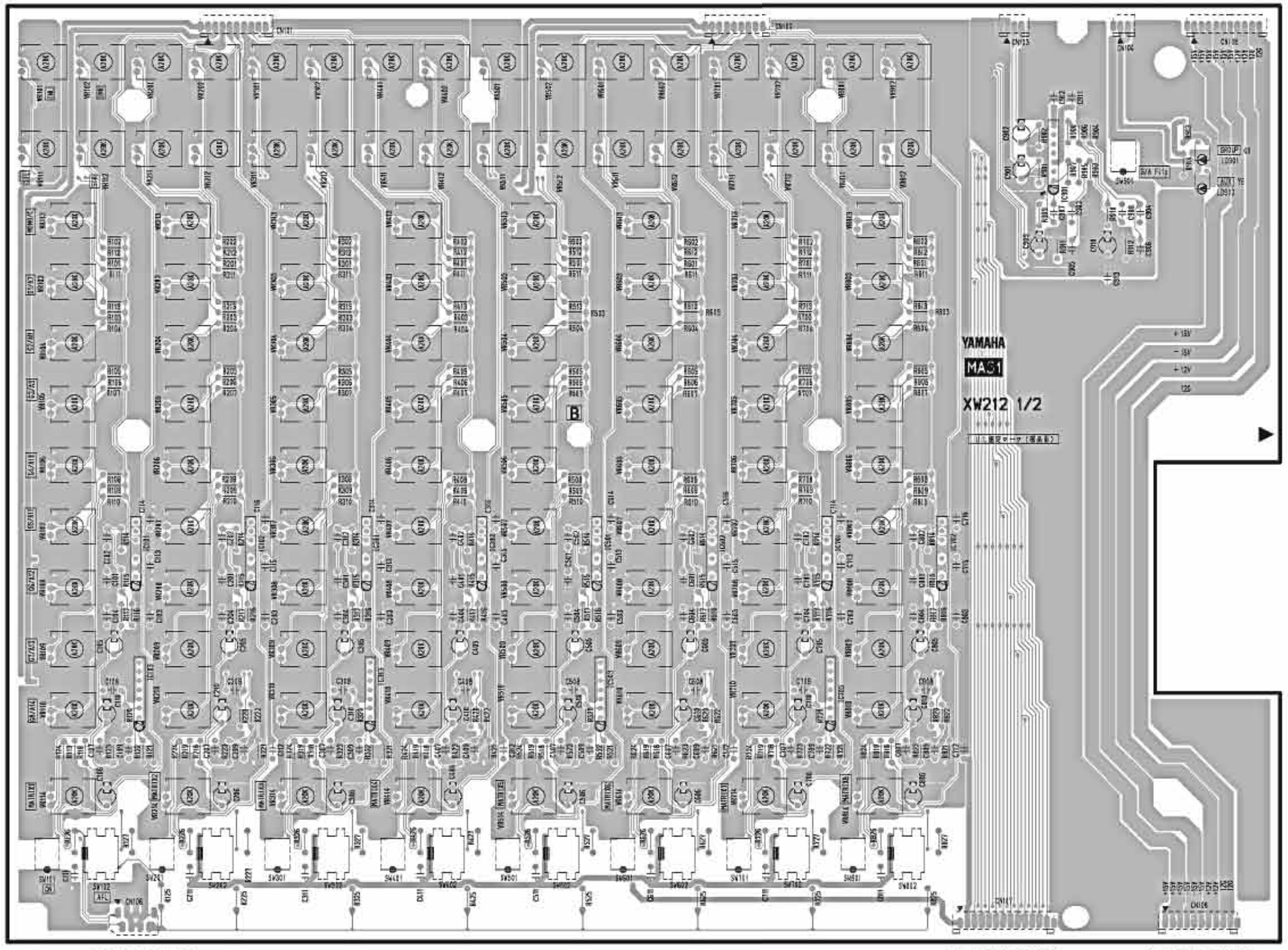
ISRT: 3NA-V431470 ⚠

• MAS1 1/2 Circuit Board

to MASOUT-CN321

to MASOUT-CN321

to ISRT-CN111 to ISRT-CN102 to ISRT-CN217



to MAS2-CN201

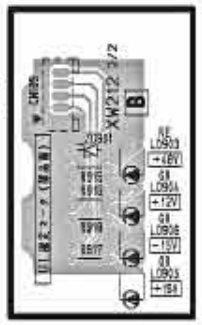
to MAS3-CN311

to MAS2-CN215

Component side

• MAS1 2/2 Circuit Board

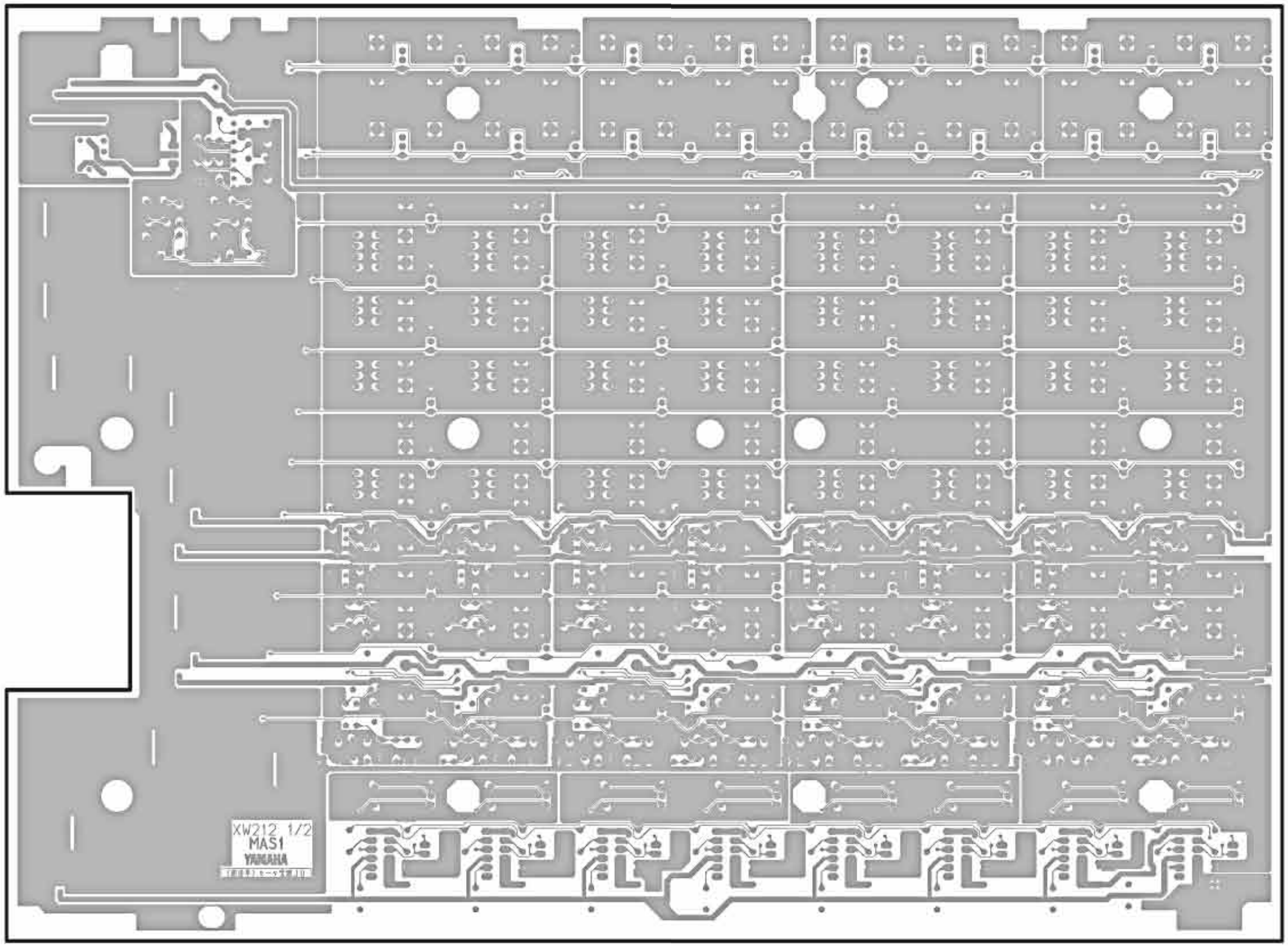
to ISRT -CN219



Component side

3NA-V431410 ⚠

• MAS1 1/2 Circuit Board

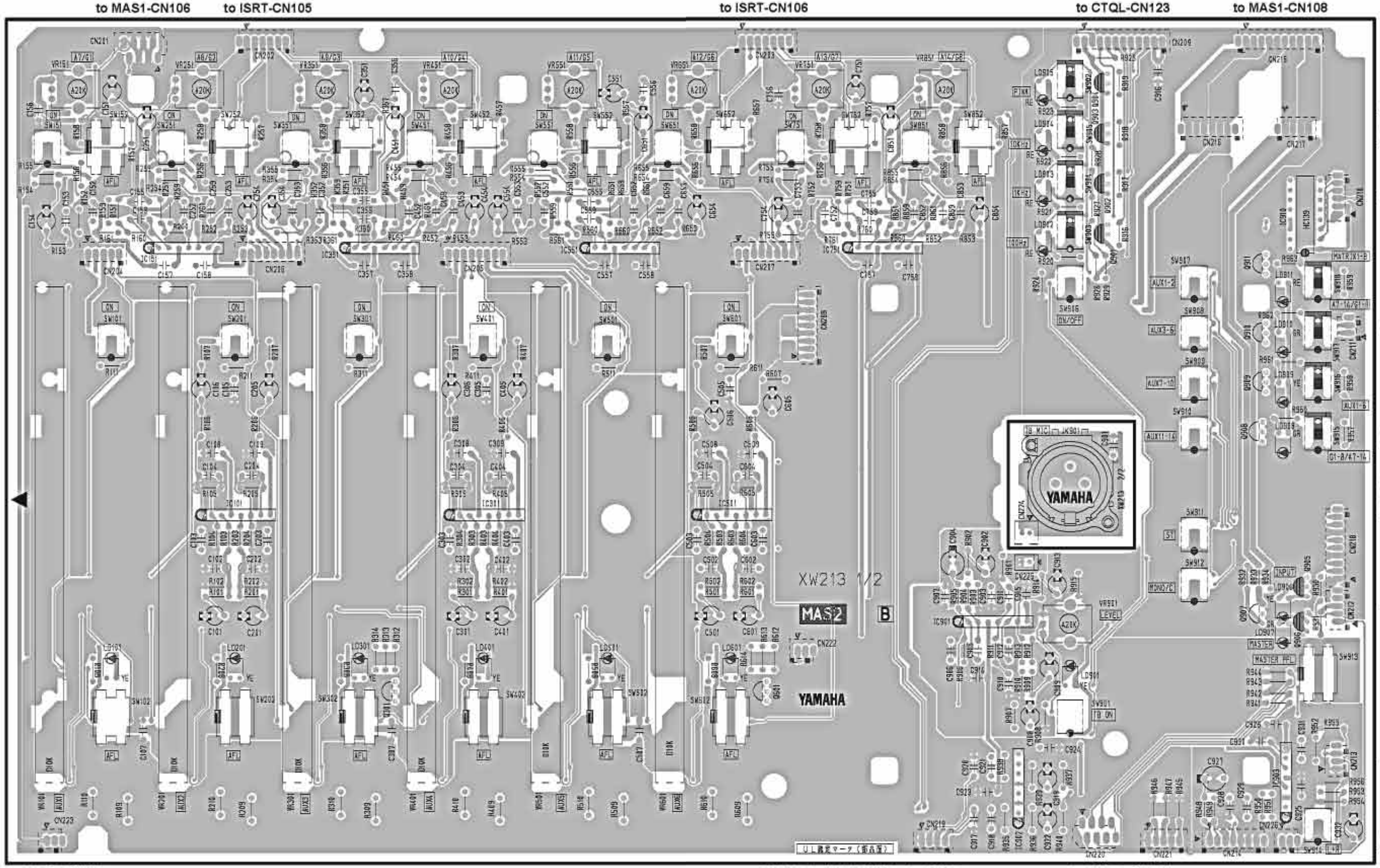


Pattern side

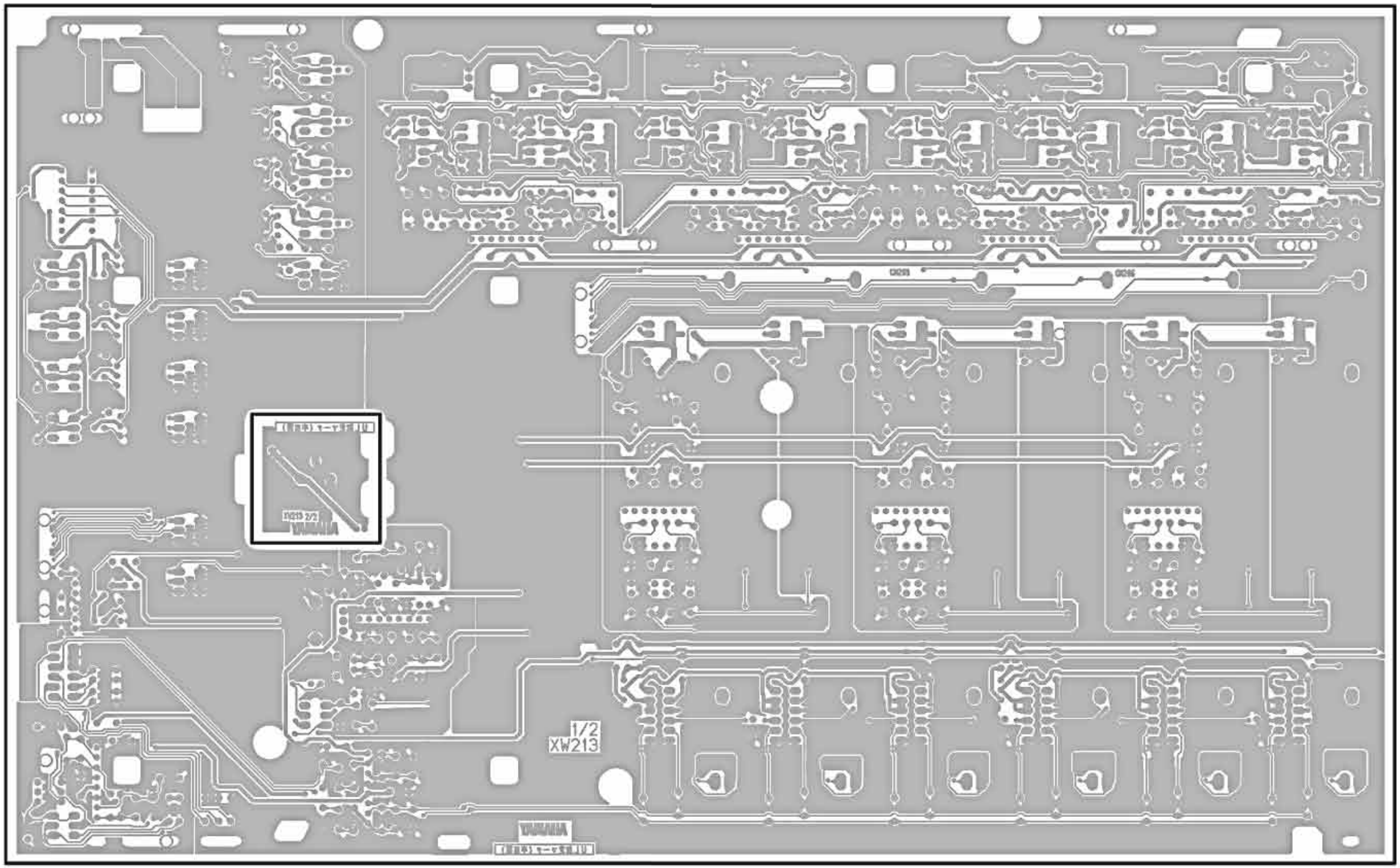
• MAS1 2/2 Circuit Board

Pattern side

• MAS2 1/2, 2/2 Circuit Board



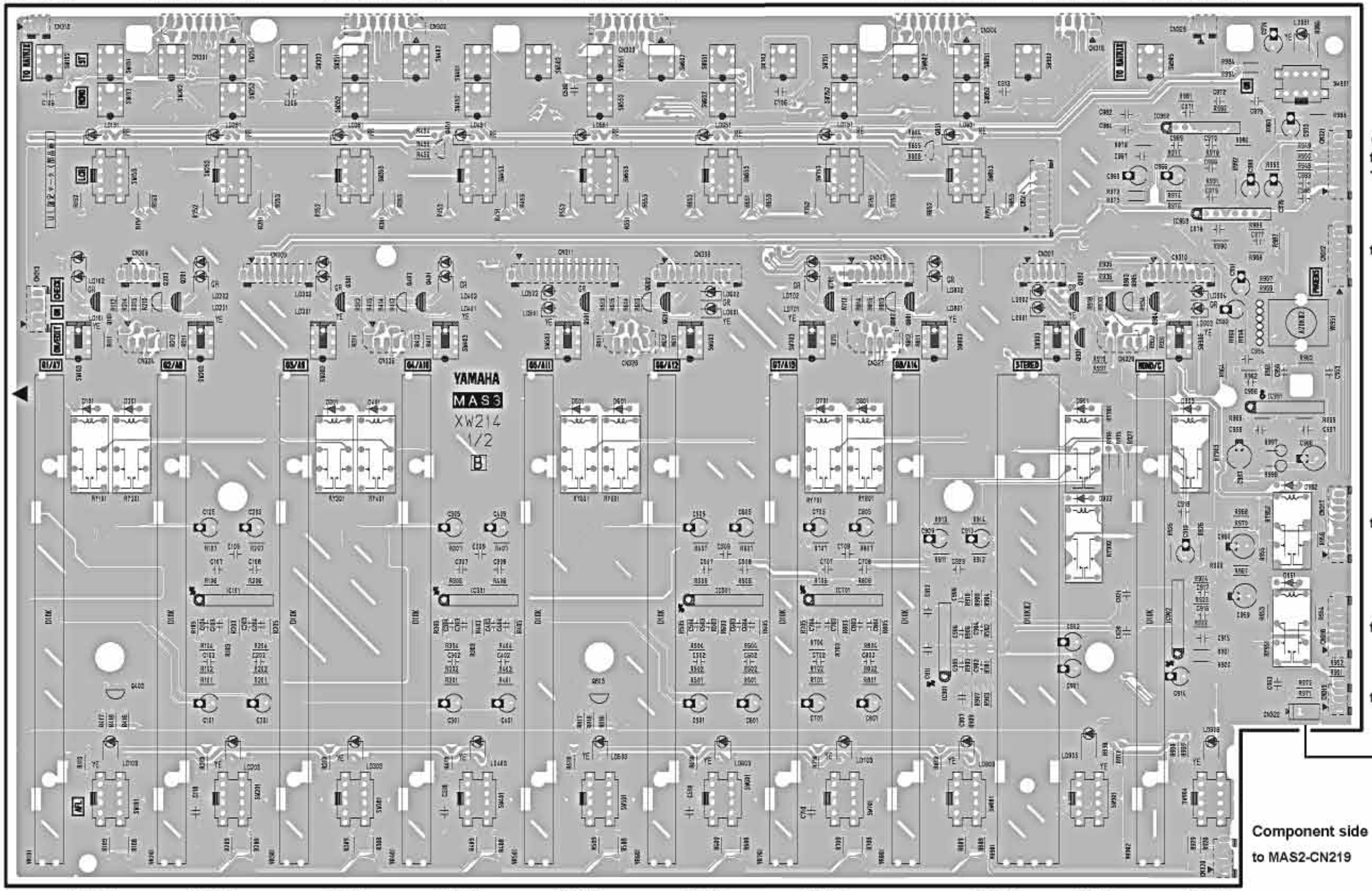
3NA-V431420 ⚠



Pattern side

• MAS3 1/2 Circuit Board

to ISRT-CN107
to MASPAN-CN101
to MASPAN-CN102
to MASPAN-CN103
to MASPAN-CN104
to MAS2-CN219
to MAS2-CN226



to MAS2
-CN217

Component side
to MASOUT
-CN321

to MAS2-CN216

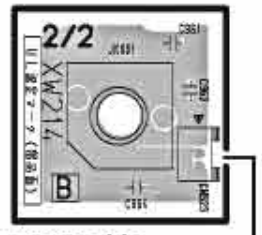
to MASPAN-CN105

to MAS2-CN214

to ISRT-CN224

Component side
to MAS2-CN219

• MAS3 2/2 Circuit Board



CN305:
CN324:
to MAS4-CN401

CN308:
to MASOUT-CN321

CN325:
to MAS4-CN402

CN311:
to MAS1-CN107

CN326:
to MAS4-CN403

CN306:
to ISRT-CN108

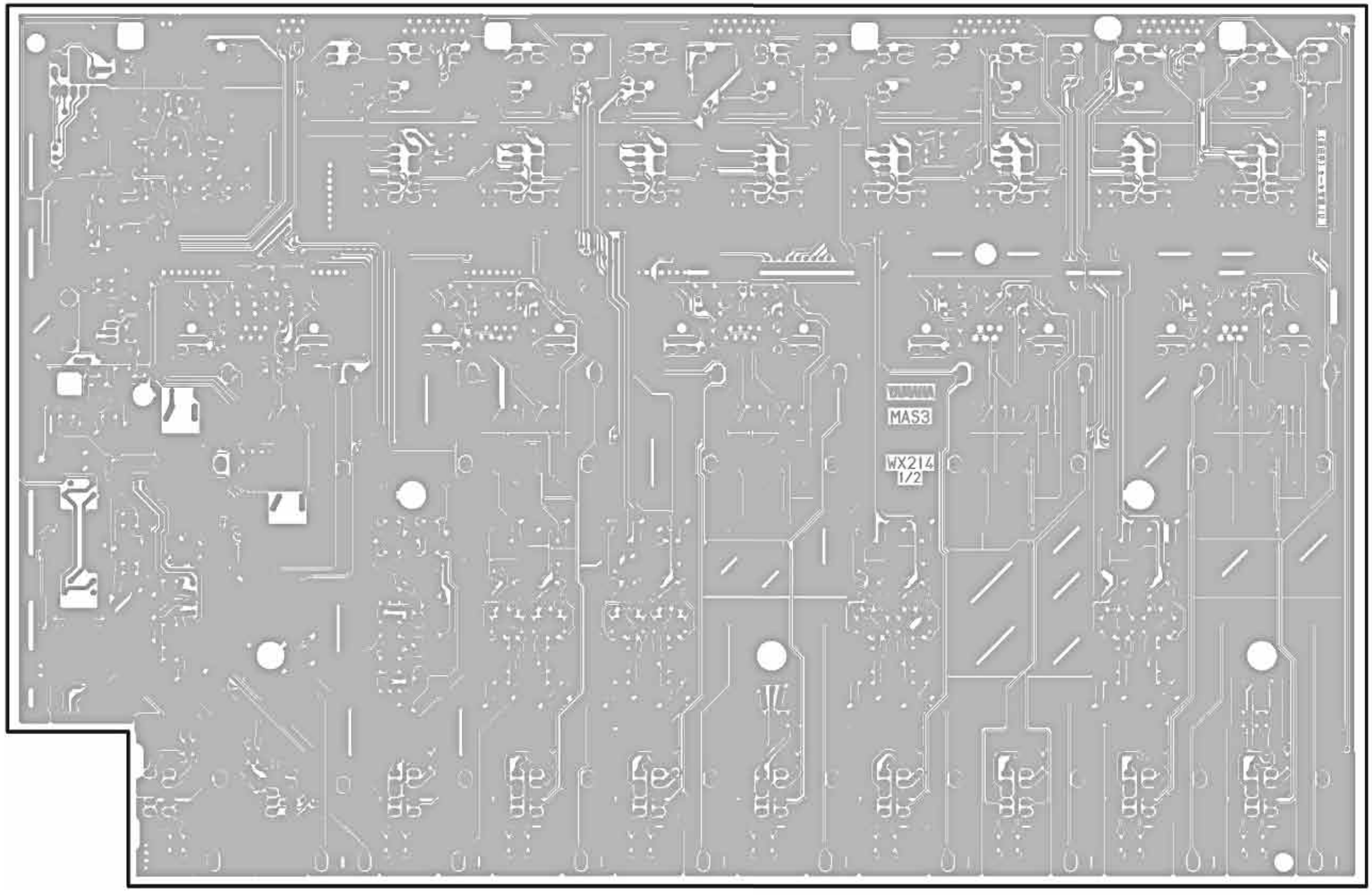
CN309:
to MASOUT-CN321
CN327:
to MAS4-CN404

CN314:
to ISRT-CN221
CN307:
to ISRT-CN110

CN328:
to MAS4-CN405

CN310:
to MASOUT-CN321

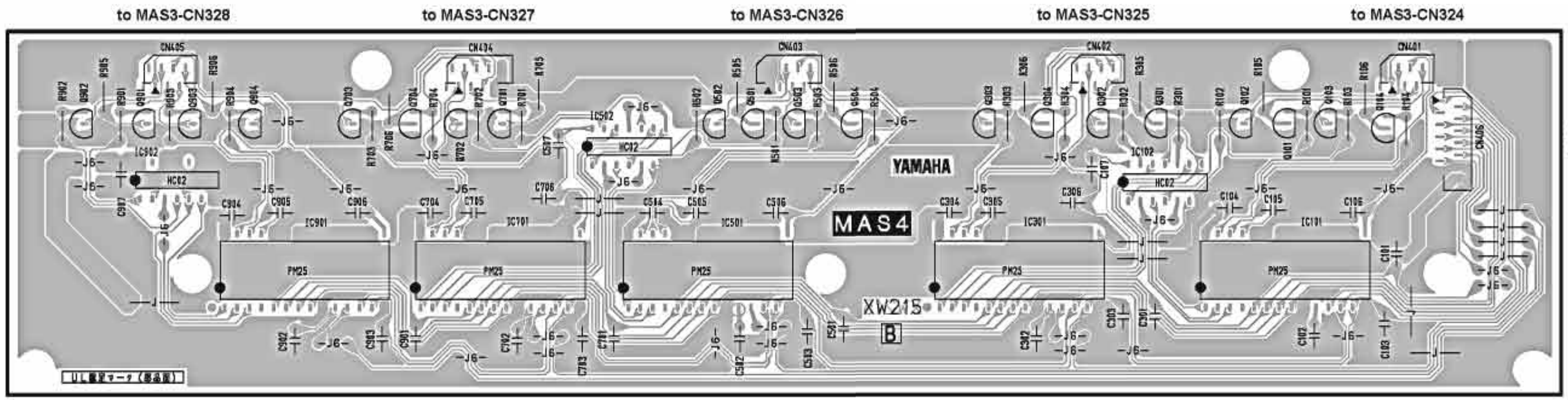
3NA-V431440 ⚠



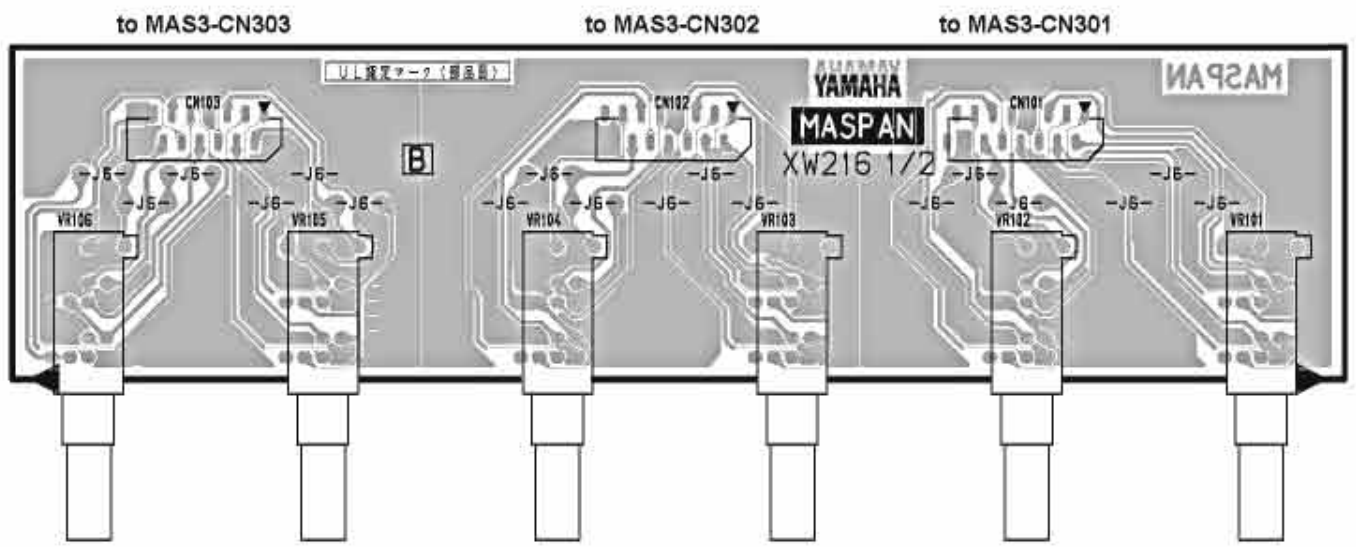
Pattern side

Pattern side

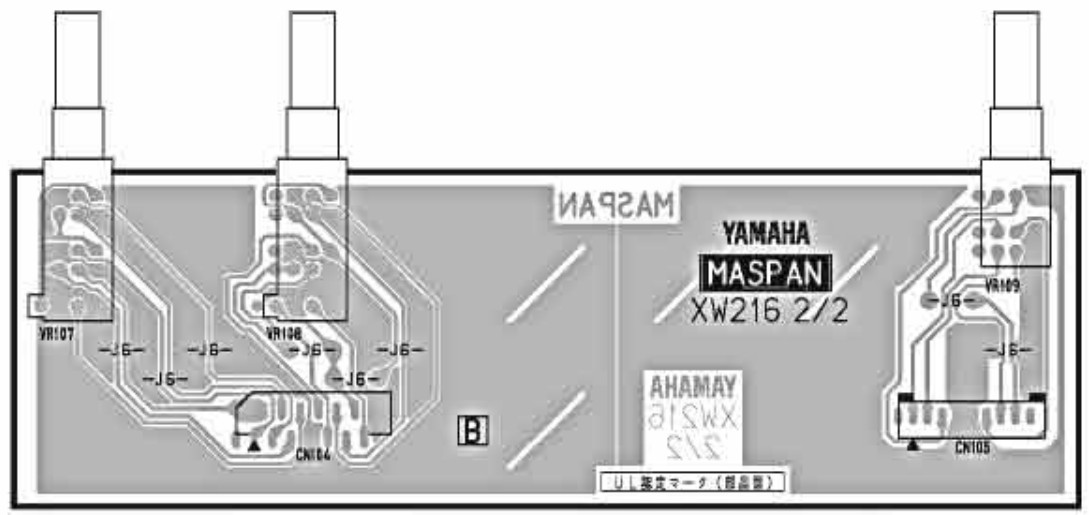
• MAS4 Circuit Board



• MASPAN 1/2 Circuit Board

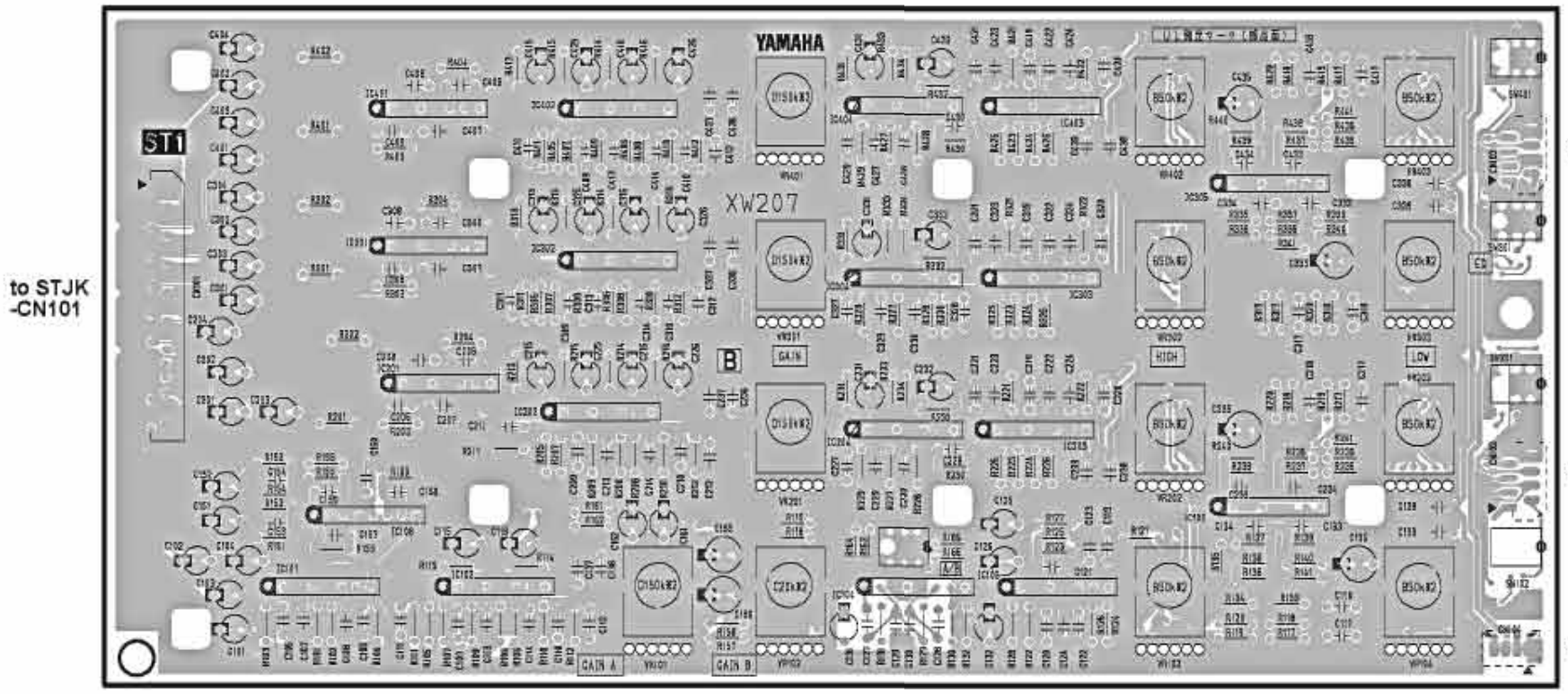


• MASPAN 2/2 Circuit Board

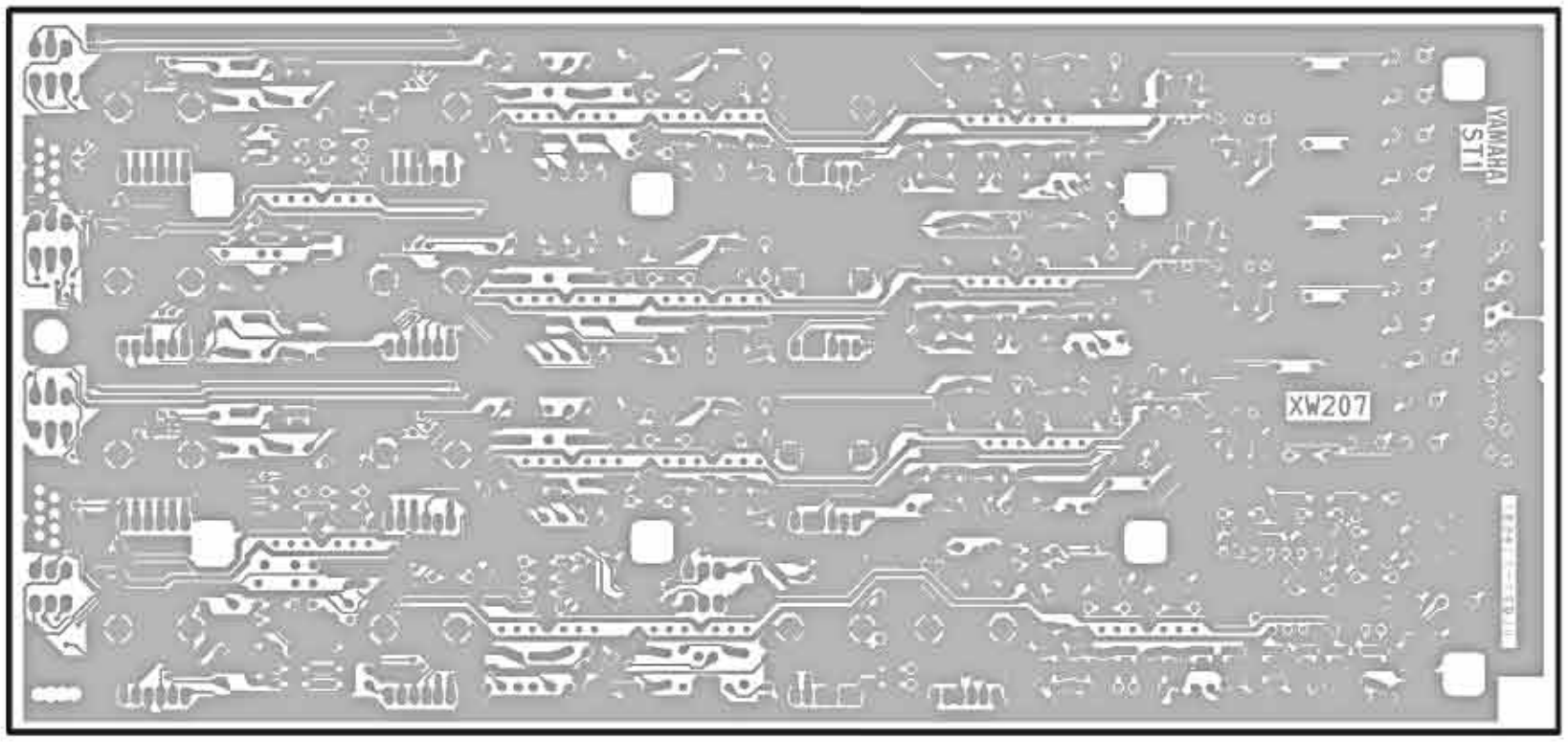


MAS4: 3NA-V431450 ⚠
MASPAN: 3NA-V431430 ⚠

• ST1 Circuit Board



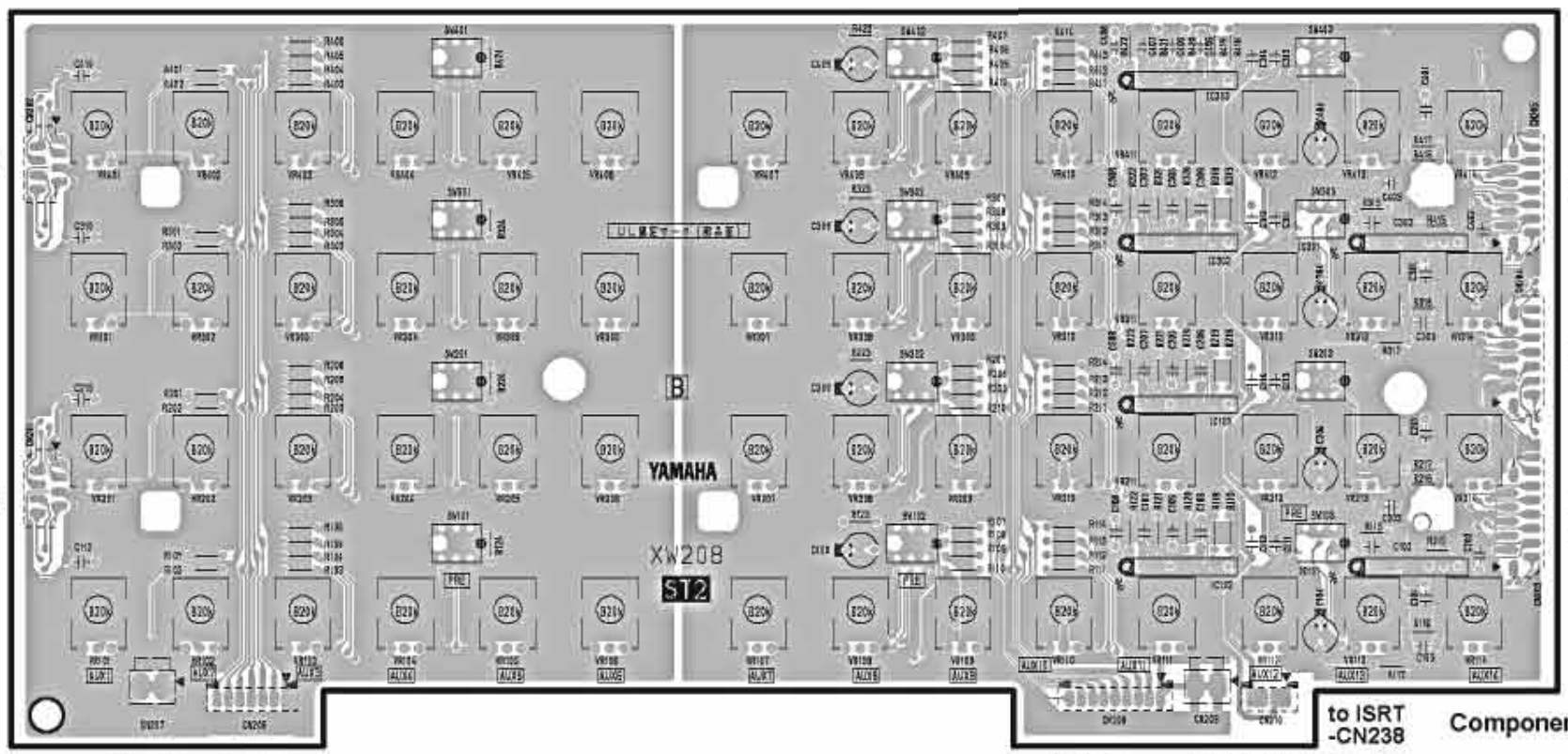
Component side

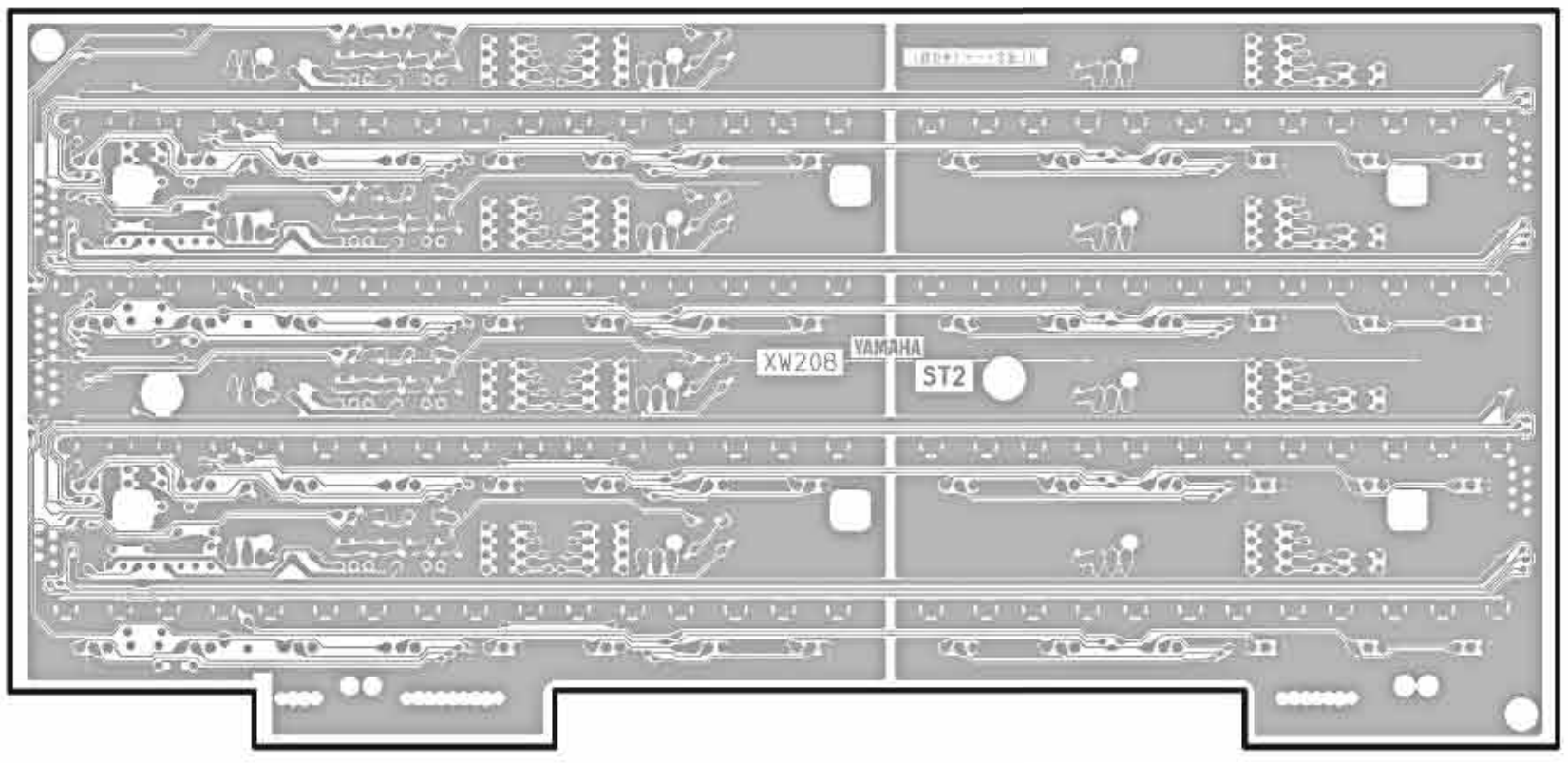


Pattern side

3NA-V431370 ⚠

● ST2 Circuit Board





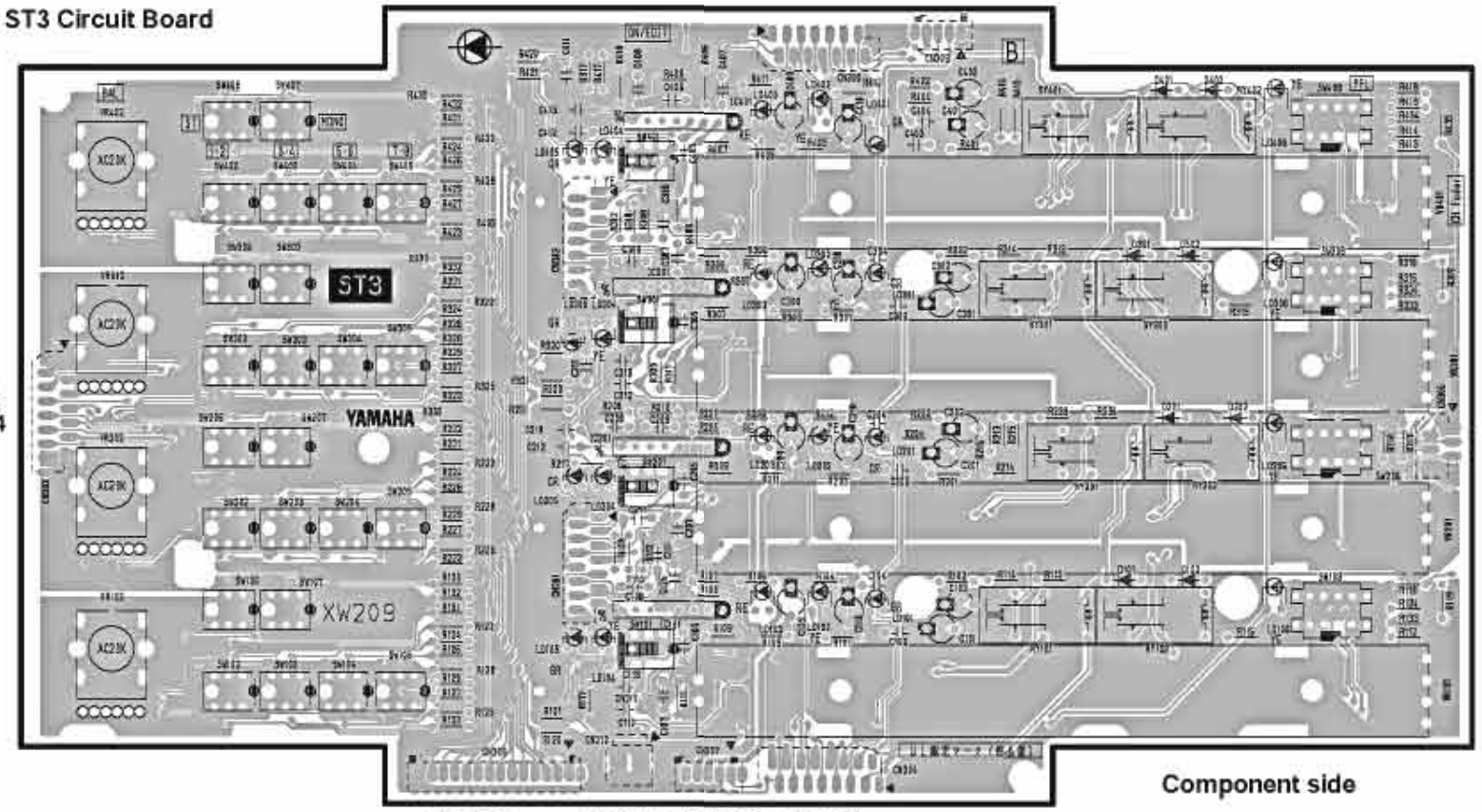
Pattern side

3NA-V431380 ⚠

• ST3 Circuit Board

CN301: to ST2-CN203
CN302: to ST2-CN205

to ST4-CN402 to ST4-CN404



to ST2 -CN204

to ST4 -CN403

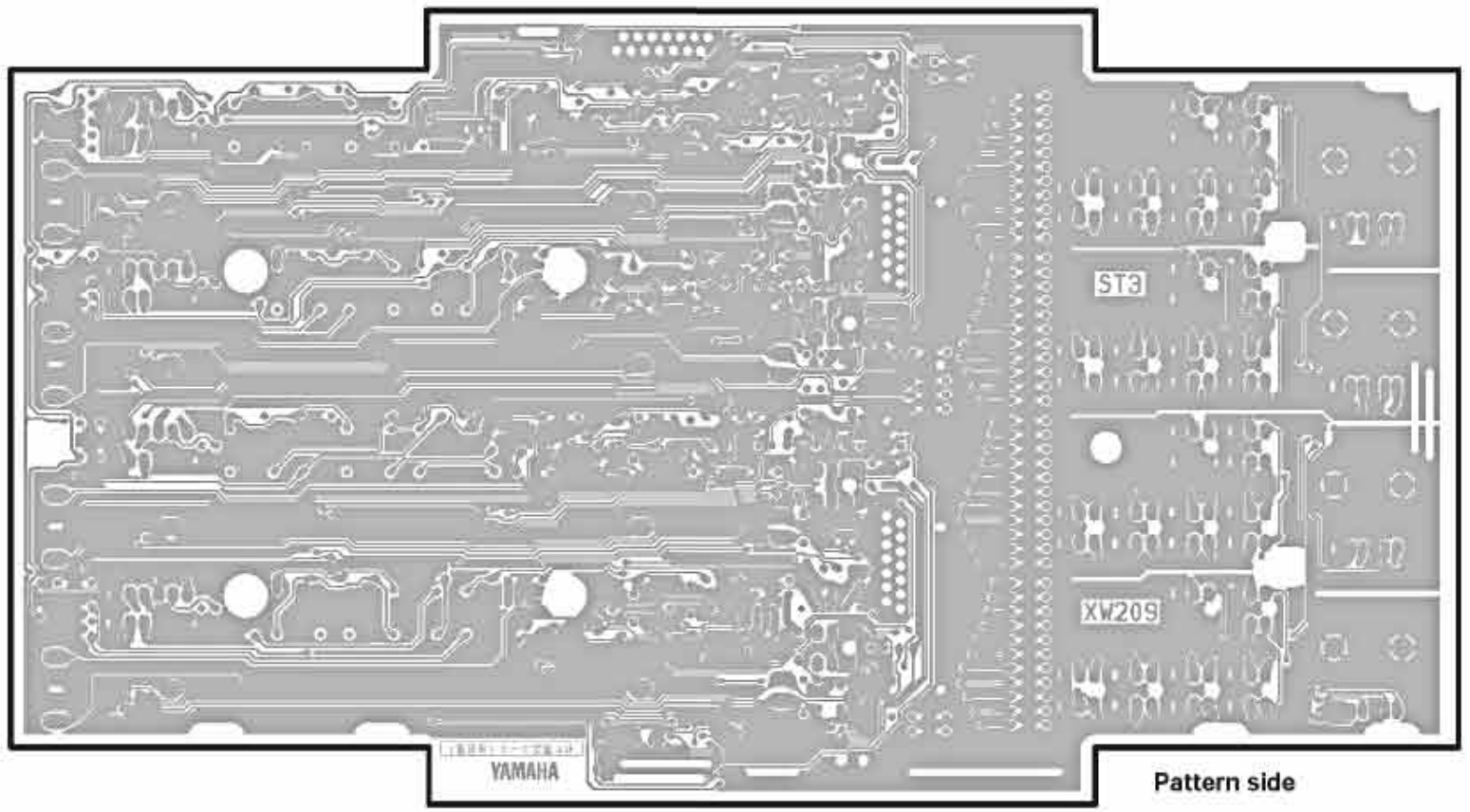
Component side

to ISRT -CN256, 258

to ISRT -CN257

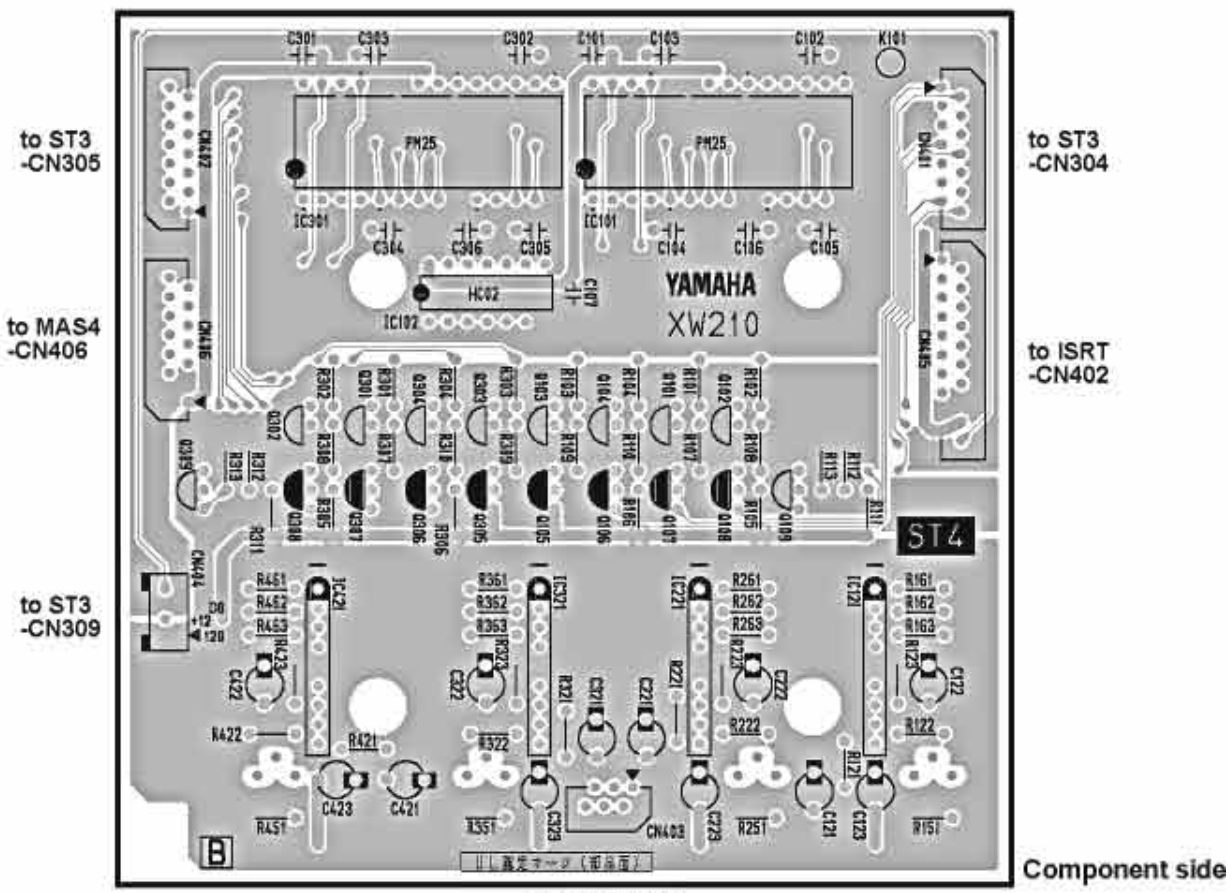
to ISRT -CN216

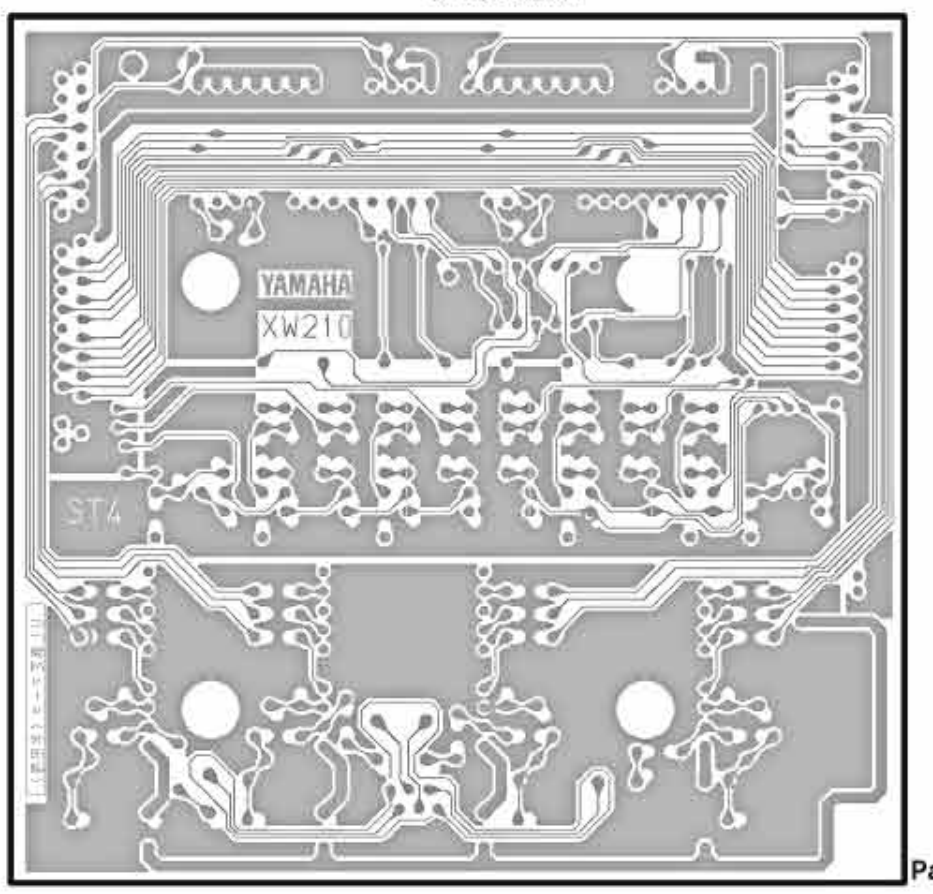
to ST4 -CN401



Pattern side

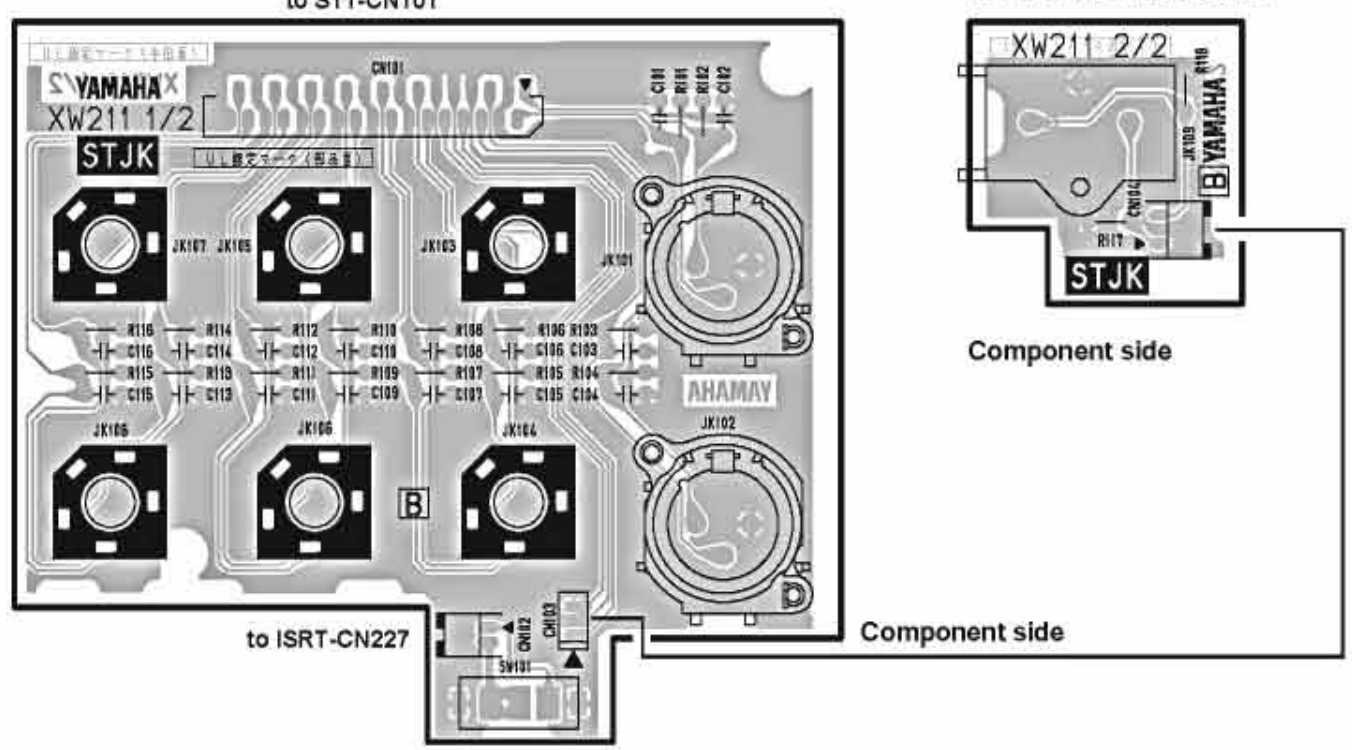
• ST4 Circuit Board





Pattern side

• STJK 1/2 Circuit Board



• STJK 2/2 Circuit Board

Component side

ST4: 3NA-V431400 ⚠
STJK: 3NA-V431300 ⚠

■ INSPECTIONS

1. PREPARATIONS

- Connect the main unit and the power source (PW3000A) via the supplied DC power supply cable.
- Activate the test program and execute the channel version settings. (Refer to the TEST PROGRAM SECTION of this service manual.)
- Unless otherwise specified, the applied signal should be 1kHz, -70 dBs sine wave and the impedance of the signal source should be 150 ohms.
- The load resistance of each output terminal should be as follows.

PHONES (L, R) OUT	40 ohm (3W or less)
INSERT OUT	10k ohm
Other output	600 ohm

- The signal level referred to in these specifications is 0 dBs = 0.775 V.
- Unless otherwise specified, set the controls and switches as described under 1-1 to 1-16.

1-1 (CH 1~N) INPUT (N:24, 32, 40, 48, 56)

+48V switch	OFF
GAIN Trim	MAX (-60 dB)
26dB switch	OFF (0 dB)
ϕ switch	OFF (NORMAL)
/80(HPF ON) switch	OFF
HI, HI-MID, LO-MID, LO EQ Gain controls	CENTER
HI-MID, LO-MID EQ Freq. controls	MINI
EQ ON switch	OFF
AUX1-14 Level controls	MAX
AUX3-6, AUX7-10, AUX11-14 PRE switches	OFF (POST)
PAN control	L (maximum counterclockwise)
1-2, 3-4, 5-6, 7-8, ST.MONO Assign switches	ON: during measurement only, OFF: at all other times
LCR ON switch	OFF
ON/EDIT switch	Only measuring CH ON, all others OFF
PFL switch	ON: during measurement only, OFF: at all other times
Fade	MAX

1-2 ST INPUT 1

GAIN A Trim	MAX (-30dB)
GAIN B Trim	MAX (-20dB)
A/B	switch OFF (A)

1-3 ST INPUT 2~4

GAIN Trim	MAX

1-4 ST INPUT 1~4

HI, LO EQ Gain controls	CENTER
EQ ON switch	OFF
AUX1-14 Level controls	MAX
AUX3-6, AUX7-AUX10, AUX11-AUX14 PRE switches	OFF (POST)
BAL control	L (maximum counterclockwise)
1-2, 3-4, 5-6, 7-8, ST. MONO Assign switches	ON: during measurement only, OFF: at all other times
ON/EDIT switch	Only measuring CH ON, all others OFF
PFL switch	ON: during measurement only, OFF: at all other times
Fader MAX	

1-5 GROUP/AUX FLIP

GROUP/AUX FLIP switch	OFF (GROUP)

1-6 AUX1~6 OUT

ON switch	ON: during measurement only, OFF: at all other times
AFL switch	ON: during measurement only, OFF: at all other times
Fader MAX	

1-7 AUX7/GROUP1~AUX4/GROUP8 OUT

ON switch	ON: during measurement only, OFF: at all other times
AFL switch	ON: during measurement only, OFF: at all other times
Fader	MAX

1-8 GROUP1/AUX7~GROUP8/AUX14 OUT

TO MATRIX switch	ON: during measurement only, OFF: at all other times
TO STEREO, MONO switches	ON: during measurement only, OFF: at all other times
TO LCRswitch	OFF
PAN control	L (maximum counterclockwise)
ON/EDIT switch	ON: during measurement only, OFF: at all other times
AFL switch	ON: during measurement only, OFF: at all other times
Fader	MAX

1-9 STEREO (L, R), MONO/C OUT

TO MATRIX switch	ON: during measurement only, OFF: at all other times
ON/EDIT switch	ON: during measurement only, OFF: at all other times
AFL switch	ON: during measurement only, OFF: at all other times
Fader	MAX

1-10 MATRIX (1~8) OUT

SUB IN L, SUB IN R Mix level controls	MAX: during measurement only, MIN: at all other times
STEREO L, STEREO R, MONO/C Mix level controls	MAX: during measurement only, MIN: at all other times
GROUP1/AUX7-GROUP8/AUX14 Mix level controls	MAX: during measurement only, MIN: at all other times
ON switch	ON: during measurement only, OFF: at all other times
AFL switch	ON: during measurement only, OFF: at all other times
LEVEL control	MAX

1-11 TALKBACK/ OSCILLATOR

PINK/10kHz/1kHz/100Hz Select and ON switches	ON: during measurement only, OFF: at all other times
AUX1-2, ····, ST and MONO assign switches	ON: during measurement only, OFF: at all other times
OSC/TB level control	MAX
ON (TB) switch	TB ON: during measurement only, OFF: at all other times

1-12 MONITOR (L, R, MONO/C) OUT

MASTER PFL switch	OFF (AFL)
L+R switch	OFF (stereo)
ON switch	ON: during measurement only, OFF: at all other times
LEVEL control	MAX

1-13 PHONES (L, R) OUT

LEVEL control	MAX: during measurement only, MIN: at all other times

1-14 METER SELECT

MATRIX·A7-14/G1-8·A1-6·G1-8/A7-14 Select switches	G1-8/A7-14

1-15 SCENE MEMORY

UTILITY switch	OFF (should be reset to the initial state.)
RECALL switch	OFF (should be reset to the initial state.)
STORE switch	OFF (should be reset to the initial state.)
CHECK switch	OFF (should be reset to the initial state.)
0~9 and ENTER, △ (+1), ▽ (-1) switches	OFF (should be reset to the initial state.)
DIRECT RECALL (1 to 8) switches	N/A (not particularly specified.)

1-16 Others

PHANTOM MASTER switch	OFF

1-17 Measuring equipment

- The oscillator to be connected to the balanced input terminal should be a balanced output type with 150-ohm output impedance.
- The output impedance of the oscillator to be connected to the unbalanced input terminal should be less than 10 ohms.
- The input impedance of the oscilloscope and the level meter should be 100 k ohms or more.
- The noise level should be measured by using a 12.7 kHz, -6 dB/Oct. low-pass filter.
- The measuring instruments are required to be the balanced input type. If only an unbalanced input type measuring instrument is available, a drop in the maximum output level of the balance output terminal should be taken into consideration.

2. GAIN

In the state as described in 1., check that the output level measured at each output terminal is within the range given in Tables 2-1 to 2-10.

Table 2-1 Input Terminal CH INPUT (1 to 24, 32, 40, 48, 56) Unit: [dBs]

Input Level	GAIN	26dB	AUX PRE	LCR	LCR PAN	GROUP /AUX FLIP	G1/A7~ G8/A14 OUT	STEREO (L<R) OUT *1	MONO/C OUT	AUX1, 2 OUT	AUX3~6 OUT	A7/G1~ A14/G8 OUT	MONITOR (L, R) OUT *2
-70	MAX	OFF	OFF	OFF	-	OFF	+14 ± 2 *1	+14 ± 2	+14 ± 2	+10 ± 2	+20 ± 2	+16 ± 2	0 ± 2
						ON *3	+20 ± 2	---	---	---	---	+10 ± 2 *1	---
			ON	OFF	-	OFF	---	---	---	---	+10 ± 2 *4	+6 ± 2 *5	---
-44	MAX	ON	OFF	OFF	-	OFF	---	+14 ± 2 *6	---	---	---	---	---
-26	MIN	OFF	OFF	OFF	-	OFF	---	+14 ± 2 *6	---	---	---	---	---
					L	OFF	---	+14 ± 2 *6	---	---	---	---	---
				ON *8	Center	OFF	---	---	+14 ± 2	---	---	---	---
					R	OFF	---	+14 ± 2 *7	---	---	---	---	---

*1 In the case of "L" and odd number "OUT", turn the PAN control to the "L" position and in the case of "R" and even number "OUT", turn it clockwise to lthe maximum position.
*2 When the PFL switch is turned on, the INPUT (CUE) LEDs in the CH PFL and MASTER sections will light up.
*3 When the GROUP/AUX FLIP switch is turned off, the GROUP LED will light up and when it is turned on the AUZ LED will light up.
*4 Measure the AUX3 OUT only.
*5 Measure the A7/G1 and A11/G5 OUT only.
*6 Measure the STEREO L OUT only.
*7 Measure the STEREO R OUT only.
*8 When the LCR switch is turned on, the LCR LED will light up.

- The level difference between the following CH INPUTs of each output should be 2 dB or less; between G1/A7 ~ G8/A14, STEREO L and R, AUX 1 and 2, AUX 3 ~ 6, A7/G1 ~ A14/G8, and MONITOR (L and R).

Table 2-2 Input Terminal CH INPUT/CH INSERT IN (1 to 24, 32, 40, 48, 50) Unit: [dBs]

Input Terminal	Input Level	GAIN	26dB	CHINSERT OUT	STEREO A(L)OUT
CH INPUT	-16	MIN	OFF	0.0+/-2.0	---
CH INSERT IN	-10	---	---	---	+14.0+/-2.0

- The level difference between the CH (1 to 24, 32, 40, 48, 56) of each output should be 2 dB or less.

Table 2-3 Input Terminal ST CH INPUT (1 to 4) Unit: [dBs]

Input Terminal	Input Level	GAIN	A/B	AUX PRE	BAL	G1/A7, G3/A9, G5/A11, G7/A13 OUT	G2/A8, G4/A10, G6/A12, G8/A14 OUT	STEREO L OUT	STEREO R OUT	MONO/C OUT	AUX1, 2 OUT	AUX3~6 OUT	A7/G1~ A14/G8	MONITOR L OUT *1 OUT	MONITOR R OUT *1
1A L	40	MAX	OFF(A)	OFF	L	+14 ± 2		+14 ± 2	---	10.5 ± 2	+6.5 ± 2	+16.5 ± 2	+12.5 ± 2	0 ± 2 *5	---
				ON		---	---	---	---	---	---	+6.5 ± 2 *3	+2.5 ± 2 *4	---	---
1A R				OFF	R	---	+14 ± 2	---	+14 ± 2	+10 ± 2	+6.5 ± 2	+16.5 ± 2 *3	---	---	0 ± 2
1A L	0	MIN		OFF	L	---	---	+14 ± 2	---	---	---	---	---	---	---
1A R					R	---	---	---	+14 ± 2	---	---	---	---	---	---
1B L	-30	MAX	ON(B)	OFF	L	---	---	+14 ± 2	---	---	---	---	---	---	---
1B R					R	---	---	---	+14 ± 2	---	---	---	---	---	---
1B L 1B R	0	MIN			L	---	---	+14 ± 2	---	---	---	---	---	---	---
					R	---	---	---	+14 ± 2	---	---	---	---	---	---
2~4 L	-40	MAX	---	OFF	L	+14 ± 2	---	+14 ± 2	---	+16.5 ± 2	+12.5 ± 2.5	+22.5 ± 2.5	+18.5 ± 2.5	0 ± 2 *5	0 ± 2
				ON		---	---	---	---	---	---	+12.5 ± 2.5 *3	+8.5 ± 2.5 *4	---	---
				OFF	R	---	+14 ± 2	---	+14 ± 2	---	---	---	---	---	---
2~4 R				OFF	R	---	---	---	+14 ± 2	---	---	---	---	---	---
2~4 L	0	MIN		OFF	L	---	---	+14 ± 2	---	---	---	---	---	---	---
					R			---	+14 ± 2	---	---	---	---	---	---

*1 Turn on the PFL switch.
*2 Measure the AUX1 only.
*3 Measure the AUX3 only.
*4 Measure the A7/G1 and A11/G5 only.
*5 The PFL LED and the INPUT (CUE) LED in the MASTER section will light up.

- The level difference between ST CH INPUT (1 to 4) of each output should be 2 dB or less.
- The level difference between STEREO L and R, AUX 1 and 2, AUX3 ~ 6, A7/G1 ~ A14/G8 and MONITOR L and R should be 2 dB or less.

Table 2-4 Input Terminal SUB IN (STEREO L, R, MONO/C) Unit: [dBs]

Input Terminal	Input Level	L+R	STEREO L OUT	STEREO R OUT	MONO/C OUT	PHONES	
						L	R
SUB IN STEREO L	+4	OFF	+13.5+/-2	+13.5+/-2	+13.5+/-2	---	---
SUB IN STEREO L	-16	OFF	---	---	---	-2.5+/-2	
		ON	---	---	---	-6+/-2	-6+/-2
SUB IN STEREO R		OFF	---	---	---		-2.5+/-2
		ON	---	---	---	-6+/-2	-6+/-2

- The level difference between STEREO L and R should be 2 dB or less.

Table 2-5 Input Terminal MASTER INSERT IN (AUX1 ~ AUX6, G1/A7 ~ G8/A14, STEREO L and R, MONO/C) Unit: [dBs]

Input Terminal	Input Level	AUX1~AUX6, G1/A7~G8/A14, STEREO L, R, MONO/C OUT
AUX1~AUX6, G1/A7~G8/A14, STEREO L, R, MONO/C INSERT IN	0	+14+/-2

- The level difference between AUX1 ~ AUX6, G1/A7 ~ G8/A14, STEREO L and R should be 2 dB or less.

Table 2-6 Input Terminal TALKBACK IN Unit: [dBs]

Input Level	AUX1~AUX6~ASTEREO L, R~A MONO/C OUT	A7/G1~A14/G8 OUT
-60	-10+/-2	+6+/-2

- The level difference between AUX1 ~ AUX6, STEREO L and R, A7/G1 ~ A14/G8 should be 2 dB or less.

Table 2-7 Input Terminal INSERT IN (STEREO L and R, MONO/C) Unit: [dBs]

Input Terminal	Input Level	AFL	MASTER PFL	MATRIX	MONITOR(L, R)OUT			MATRIX(1~8) OUT *2
					L	R	C	
INSERT IN STEREO L	-10	OFF	OFF	OFF	+10+/-2			
		ON *1	OFF		+10+/-2			
			ON		0+/-2			
		OFF	OFF	ON				+10+/-2
INSERT IN STEREO R		OFF	OFF	OFF		+10+/-2		
		ON *1	OFF			+10+/-2		
			ON			0+/-2		
		OFF	OFF	ON				+10+/-2
INSERT IN MONO/C		OFF	OFF				+10+/-2	
		ON *1	OFF	OFF	+4+/-2	+4+/-2		
			ON		-6+/-2	-6+/-2		
		OFF	OFF	ON				+10+/-2

*1 The AFL LED and the MASTER (CUE) LED in the MASTER section will light up.
*2 Turn all the STEREO L and R, MONO/C Mix level controls of MATRIX (1 – 8) to the MAX position.

- The level difference between MONITOR L and R, MATRIX (1 – 8) should be 2 dB or less.

Table 2-8 Input Terminal INSERT IN (G1/A7 ~ G8/A14) Unit: [dBs]

Input Terminal	Input Level	G1/A7 – G8/A14 MASTER section (MONITOR MASTER section for MASTER PFL)							MONITOR L OUT	MONITOR R OUT	STEREO L OUT	DTEREO R OUT	MONO/C OUT	MATRIX(1~8) OUT *4
		AFL	MONITOR PFL	ST	PAN control	MONO/C	LCR	MTRX						
INSERT IN G1/A7~ G8/A14	-10	ON *1	OFF	OFF	---	OFF	OFF	OFF	+10+/-2	+10+/-2 *2	---	---	---	---
			ON						0+/-2	---	---	---	---	---
		OFF	OFF	ON	L				---	---	+14+/-2	---	---	---
					R				---	---	---	+14+/-2	---	---
				OFF	---	ON			---	---	---	---	+14+/-2	---
					L	OFF	ON *3		---	---	+14+/-2	---	---	---
					Center				---	---	---	+14+/-2	---	---
					R				---	---	---	---	+14+/-2	---
					---		OFF	ON	---	---	---	---	---	+10+/-2

*1 The AFL LED and the MASTER (CUE) LED in the MASTER section will light up.
*2 Measure the G1/A7 input only.
*3 The LCR LED will light up.
*4 Turn all the G1/A7 ~ G8/A14 Mix level controls of MATRIX (1 ~ 8) to the MAX position.

- The level difference between STEREO L, R, MONITOR L, R, MATRIX (1 ~ 8) should be 2 dB or less.

Table 2-9 Input Terminal INSERT IN (AUX1 ~ 6), TALKBACK IN, MATRIX SUB IN (L, R) Unit: [dBs]

Input terminal	Input level	Equivalent to AFL	MASTER PFL	TALKBACK assign	MONITOR L OUT	MONITOR R OUT	MATRIX (1~8) OUT *3
INSERT IN (AUX1~6)	-10	AUX1~6	OFF	OFF	+10+/-2	+10+/-2 *2	---
		ON *1	ON		0+/-2	---	---
TALKBACK IN	-60	AUX7~14	OFF	A7-A10,	+12+/-2	---	---
		ON *1 *4	ON	A11-A14 ON	+6+/-2	---	---
MATRIX SUB IN L	-6	OFF	OFF	---	---	0+/-2	
		MTRX1~8			-6+/-2	---	---
		ON *1	ON	OFF	0+/-2	---	---
MATRIX SUB IN R		OFF	OFF		---	---	0+/-2

*1 The AFL LED and the MASTER (CUE) LED in the MASTER section will light up.
*2 Measure the AUX1 input only.
*3 Turn all the SUB IN L, R Mix level controls of MATRIX (1 to~ 8) to the MAX position.
*4 Turn on AUX7 ~ AUX14 one by one.

- The level difference between MONITOR L, R, MATRIX (1 ~ 8) should be 2 dB or less.

3. FREQUENCY RESPONSE

- In the state as described in 2., apply the signals of 20 Hz and 20kHz frequency, and check that the output level of each output terminal is within the range of +0.5 dB -2.5 dB with 1 kHz used as a reference.

- Measure STEREO L, R OUT only in Table 2-3 ST CH INPUT.
- Measure INSERT IN G1/A7 input only in Table 2-8 INSERT IN ~ MATRIX (1 ~ 8) OUT.
- Measure the value via A7 only in Table 2-9 TALKBACK IN ~ MONITOR L OUT.

4. EQ CHANGE CHARACTERISTICS

- In the state as described in 1, turn on the EQ switch, move each EQ control and check that the output level of the frequency obtained at STEREO L OUT falls within the range given in Tables 4-1 and 4-2 with the output level obtained when the EQ GAIN control is set at the center click position used as a reference.
- If the output level of the specified frequency is out of the specified range, vary the frequency of the applying signal within ± 20% of the specified frequency and check that the output level is as specified in Tables 4-1 and 4-2.

Table 4-1 CH INPUT (1 to 24, 32, 40, 48, 56) EQ Unit: [dB]

Input	GAIN	EQ	EQ GAIN	f-VR	Applied signal frequency	Variation width
-40dBs	MIN	HI	MAX	---	10kHz	+12+/-2
			MIN			-12+/-2
		HI-MID	MAX	MIN	400Hz	+15+/-2.5
			MIN			-15+/-2.5
			MAX	MAX	8kHz	+15+/-2.5
			MIN			-15+/-2.5
		LO-MID	MAX	MIN	80Hz	+15+/-2.5
			MIN			-15+/-2.5
			MAX	MAX	1.6kHz	+15+/-2.5
			MIN			-15+/-2.5
		LO	MAX	---	100Hz	+12+/-2
			MIN			-12+/-2

Table 4-2 INPUT (1 to 4) EQ Unit: [dB]

INPUT	GAIN	EQ	EQ GAIN	Applied signal frequency	Variation width
-10dBs	MIN	HI	MAX	10kHz	+12+/-2
			MIN		-12+/-2
		LO	MAX	100Hz	+12+/-2
			MIN		-12+/-2

5. HPF CHANGE CHARACTERISTICS

- In the state as described in 1, set the input level to -40 dBs, Gain to the MIN. position and the input frequency to 80 Hz. Then turn on the CH INPUT /80 switch and check that the output level of STEREO L OUT is within the range of -3 ± 2 dB with the level provided when the switch is turned off used as a reference.

6. SEPARATION

- In the state as described in 1, turn on the CH INPUT ST switch and set the STEREO L OUT output level to +20 dBs and check that the leakage level to the STEREO R OUT is -50 dBs or less.
- Also, Turn the PAN control clockwise to the maximum position and set the output level of the STEREO R OUT to +20dBs and check that the leakage level to the STEREO L OUT is -50 dBs or less.

7. LED (SIGNAL, NOM, PEAK) LIGHT-UP LEVEL

- In the state as described in 1, apply a signal to the input terminal of ST CH INPUT and check that input level at which each LED lights up is within the range specified in Table 7.

Table 7 LED Unit: [dBs]

Input terminal	GAIN control	LED		
		SIGNAL	NOM	PERK
CH INPUT	MIN	-29+/-3.5	-16+/-2.5	+1+/-3
ST CH INPUT 1A L	MAX	-40 +4.5 -3.5	-27+/-2.5	-10+/-3
ST CH INPUT 1A R	MIN			
ST CH INPUT(2~4) L *1	MAX	-46 +4.5 -3.5	-33+/-2.5	-16+/-3

*1 Nothing should be inserted in ST CH INPUT (2 ~ 4).

8. DISTORTION FACTOR

- In the state as described in 1, set each VR of INPUT and MASTER and FADER to the Nominal position and the INPUT GAIN Trim to the MIN position even if it is instructed to set the GAIN Trim to the MAX position and apply a signal from CH INPUT•ST CH INPUT A.
- Check that the distortion factor when a +14 dBs output is obtained at each output terminal is 0.03% or less.
- Check that the distortion factor when a +3 dBs output is obtained at PHONES (L, R) OUT is 0.1% or less.
- Measure STEREO L, R OUT only in Table 2-3 ST CH INPUT.
- Measure INSERT IN G1/A7 input only in Table 2-8 INSERT IN ~ MATRIX (1 ~ 8).
- Measure the value via A7 only in Table 2-9 TALKBACK IN – MONITOR L OUT. Check that the distortion rte is 0.05% or less.

9. MAXIMUM OUTPUT

- In the state as described in 1, check that a +24 dBs output with 1% or less distortion factor is obtained at each output terminal of STEREO (L, R) OUT, MONO/C OUT, GROUP/AUX7 – GROUP8/AUX14 OUT, AUX1 ~ AXU6 OUT, AUX7/GROUP8 OUT, MATRIX (1 ~ 8) OUT and MONITOR (L, C, R) OUT.
- Check that a +7.5 dBs output with 1% or less distortion factor is obtained at PHONES (L, R) OUT.

10. VU METER

- Check that when the output level of GROUP1/AUX7 ~ GROUP8/AUX14 OUT, STEREO L, R OUT and MONO/C OUT is +4 dBs, the indication on the corresponding VU meter is 0 ± 1 VU.
- Check also that the difference in the values indicated on each meter R is 1 VU or less between GROUP1/AUX7 ~ GROUP8/AUX14 and between STEREO L.
- Next, set the METER SELECT switch to AUX1 - 8, AUX7 - 14/GROUP 1 - 8 and MATRIX positions respectively and check that the indication on the corresponding VU meter is 0 ±1VU.

- Input a signal from CH1, turn on the PFL switch of CH1 and check that the indication on the VU meter of PFL/AFL L, R is 0 ± 1VU when the output of the MONITOR L, R is +10 dBs.
- Return the METER SELECT switch to the G1/A7 – G8/A14 position and check that the output of GROUP1/AUX7 – GROUP8/AUX14 OUT, STEREO L, R OUT, MONO/C OUT is within the range of +21 ±2 dBs and the PEAK LED built in the corresponding VU meter lights up.
- Also, check that the light in the VU meter remains on when the power switch is on.

11. RESIDUAL NOISE

- In the state as described in 1, set all FADER and level controls to the MIN position and turn off the switch.
- Set each of the MASTER Fader and MASTER LEVEL controls to the MAX or MIN position and check that the noise level is at the level indicated in Table 11 or less.

Table 11 Residual Noise

Unit: [dBs]

MASTER Fader & MASTER LEVEL	STEREO L, R, MONO/C OUT	G1/A7–G8/A14 OUT	AUX1–6 OUT	A7/G1–A14/G8 OUT	MATRIX 1–8 OUT	MONITOR L, C, R OUT *1
MAX	-70.0	-71.0	-65.0	-69.0	-84.0	-91.0
MIN	-98.5	-98.5	-98.5	-100.0	-100.0	-100.0

*1 When measuring LEVEL control MAX of the MONITOR L, C, R OUT set the STEREO, MONO/C MASTER Fader to the MIN position.

12. NOISE LEVEL

- In the state as described in 1, short-circuit the input terminal of CH INPUT with 150 ohm, check that the noise level at the STEREO L OUT is -42.5 dBs or less.

* If the noise level is more than -42.5 dBs, find the noise level by using an input conversion and check that it is -126.5 dBs or less.

13. PHASE

- Check that the phase of the signal applied to each input terminal and that of the signal obtained at each output terminal are the same.

  Pin arrangement for balanced type input/output terminal
  PIN1--------- GND
  PIN2--------- + (HOT)
  PIN3--------- - (COLD)

- Check that the phase is reversed when the PHASE switch of the CH INPU it turned on and that the level difference resulting from turning off and on of the PHASE switch is within ±1.0 dB.

14. OSCILLATOR

- In the state as described in 1, set the TB/OSC LEVEL control of the TALKBACK to the MAX position and turn on the ST assign switch.
- Turn on each of 100 Hz, 1 kHz, 10 kHz and PINK switches of the OSCILLATOR and check that the output level of the signal obtained at the STEREO L OUT is +16 ± 2, 5 dBs.
- Also, check that the signal obtained when each of 100 Hz, 1 kHz and 10 kHz switches is turned on has a frequency within ± 10% and a distortion factor of 1% or less.

15. PHANTOM

- Connect a 10k ohms (1W or more) load resistance between pins 1 and 2 of the input terminal of each CH INPUT and short-circuit between pins 2 and 3.
- Turn on the PHANTOM MASTER switch and then the +48 V (PHANTOM) switch of the channel being measured and check that a +35 ± 3 V voltage is obtained at both ends of the load resistance.
- Check that the +48V LED lights up when the +48 V (PHANTOM) switch is turned on.

16. ON LED

- Check that when the TALKBACK and MONITOR switches are turned on, the corresponding LED lights up.

17. VOLTAGE MONITOR LED

- Check that +15, -15 and +12 LEDs are on.
- Check that the PHANTOM MASTER LED lights up when the PHANTOM MASTER switch is turned on and it goes off when the switch is turned off.

18 POWER SUPPLY FOR LIGHTING

- Check that the voltage at the pin 3 (+) to pin 4 (-) of the power supply connector (XLR-4P) for lighting on the meter panel is 12 V ± 3 V.

19. Maximum attenuation of FADER

- With each fader set at the MAX position, have +20 dB signals output at each output terminal. Then lower fully each fader in CH INPUT, ST CH INPUT and MASTER sections fully and check attenuation. It should be -70 dB or less.
- As ST INPUT and ST MASTER are two consecutive faders, be sure to perform the same check for both L and R. (It is also possible to take measurements by using the DIN AUDIO filter and cutting off the noise.)

20 STABILITY

- Check that varying the power supply voltage by ± 10% of the specified value does not cause any problem in operation.

21 OSCILLATION

- Check that no problem such as oscillation occurs even when a capacitor of 10 pF to 0.1 uF is connected in parallel with the load resistance at each output terminal.
- Also, check that no problem such as oscillation occurs even when the fader, level controls and EQ control except the Mix level control of MATRIX are all set to the MAX position. For this check, short-circuit the input terminal with 150 ohms.

M2500

■ TEST PROGRAM

A. TEST PROGRAM

(1) CTRL SECTION LED TEST ..... Test number 1
(2) CTRL SECTION SWITCH TEST ..... Test number 2
(3) CHANNEL VERSION SETTING TEST ..... Test number 24 (24 CH)
Test number 32 (32 CH)
Test number 40 (40 CH)
Test number 48 (48 CH)
Test number 56 (56 CH)
(4) LOCAL MODE SWITCH, LED TEST ..... Test number 3
(5) EXIT ..... Test number 9
(6) FACTORY SETTING ..... Test number 4
(7) VERSION DISPLAY ..... Test number 5

- The battery check is automatically performed when the test program is initiated and the measured voltage is displayed on the 7-SEG LED.
  The new battery voltage is from 3.0 V to 3.5 V.

B. HOW TO ENTER THE TEST PROGRAM

Turn on the power while pressing the DIRECT RECALL 6, 7 and 8 keys, and the test program will be initiated.

C. HOW TO SELECT THE TEST PROGRAM

By using the △ (UP) and ▽ (DOWN) keys of the CTRL section, have "di"(d**)" and the desired sequence number displayed on the 7-SEG LED and confirm it by pressing the RECALL key.
Note: ** represents the sequence number.

D. OPERATION AND CONFIRMATION OF THE TEST PROGRAM

1. CTRL SECTION LED TEST

- Using the △ (UP) and the ▽ (DOWN) keys, have "dil" displayed on the 7-SEG LED.
- Press the RECALL key.
- " 8.", " 8. ", "8. ", "000", "111", "222", "333", "444", "555", "666", "777", "8.8.8.", UTILITY, CHECK, DIRECT RECALL 1 to 8 are indicated on the LED one after another.
- Check that all LEDs light up properly.
- After that, all LEDs go out for about 3 seconds and "di1" appears again.

2. CTRL SECTION SWITCH TEST

- Using the △ (UP) and the ▽ (DOWN) keys, have "di2" displayed on the 7-SEG LED.
- Press the RECALL key.
- Press the switches according to the indication on the 7-SEG LED.
  The order is: UTILITY: "ut", RECALL: "rC", STORE: "St", CHECK: "CH", 1: "1", 2: "2", 3: "3", 4: "4", 5: "5", 6: "6", 7: "7", 8: "8", 9: "9", 0: "0", DIRECT RECALL1: "d1", DIRECT RECALL2: "d2", DIRECT RECALL3: "d3", DIRECT RECALL4: "d4", DIRECT RECALL5: "d5".
- When all the switches have been pressed and the test results are OK, "di2" appears on the 7-SEG LED.
  To cancel the test while it is being executed, press the DIRECT RECALL8 key. When "nG2" appears on the 7-SEGLED, the test is finished.

3. SWITCH AND LED CHANNEL VERSION TESTS

- Using the △ (UP) and the ▽ (DOWN) keys, have "d24" displayed on the 7-SEG LED when using the 24 CH, "d32" for 32 CH, "d40" for 40 CH, "d48" for 48 CH and "d56" for 56 CH.
- Have the same one as the channel version displayed and press the RECALL key.
- The CH1 CHECK LED lights up.
- Press the CH1 ON/EDIT switch, and the CHECK LED will go out and the ON LED will light up. Also, when the switch is released, the CHECK LED of the next item to be checked will light up.

- Press the switches that have CHECK LEDs in the following order starting from CH1.
  Order: CH1 to 24, 32, 40, 48, 56, ST CH1 to 4, G1/A7 to G8/A14, MONO/C, STEREO
- Check that lights of LEDs turn on and off properly.
- When the test has been successfully completed, the test can proceed to the next mode.
  To cancel the test while it is being executed, press the ST A ON/EDIT switch. When "n24", "n32", "n40", "n48" or "n56" appears on the 7-SEG LED, the test is finished.

4. SWITCH AND LED LOCAL MODE TESTS

- Using the △ (UP) and ▽ (DOWN) keys, have "di3" displayed on the 7-SEG LED.
- Press the RECALL key.
- By pressing each ON/EDIT switch, check that the ON LED lights up and goes off properly.
- When all ON/EDIT switch tests have been completed, press the RECALL switch and the test will be finished.

5. EXIT

- Using the △ (UP) and ▽ (DOWN) keys, have "di9" displayed on the 7-SEG LED.
- Press the RECALL key.
- If the test has not been finished, "nG9" appears on the 7-SEG LED.

6. FACTORY SETTINGS

- Using the △ (UP) and ▽ (DOWN) keys, have "di4" displayed on the 7-SEG LED.
- Press the RECALL key.
- "SEt" appears on the 7-SEG LED.
- Press the STORE key and the display on the 7-SEG LED changes to "---" and the data below will be initialized to factory settings.

1. MEMORY PROTECT	[OFF]	8. MIDI ECHO BACK	[OFF]
2. OPERATION MODE	[DIRECT RECALL]	9. MIDI BULKDUMP REQUEST	[ALL]
3. MEMORY INITIALIZE	[ALL]	10. SCENE MEMORY(1, 3, 5, 7)	[ALL ON]
4. MIDI CH	[1]	11. SCENE MEMORY(2, 4, 6, 8)	[ALL OFF]
5. MIDI PROGRAM	[ON]	12. SCENE MEMORY(9–128)	[NO DATA]
6. MIDI CONTROL CHANGE	[ON]	13. ON/EDIT SW	[ALL ON]
7. PROGRAM CHANGE Rx OMNI	[OFF]	14. 7-SEG LED NUMBER	[1]

7. VERSION DISPLAY

Using the △ (UP) and ▽ (DOWN) keys, have "di5" displayed on the 7-SEG LED.
Press the RECALL key and the version will be indicated on the 7-SEG LED.

M2500

■ ERROR MESSAGES

While the M2500 is being operated or when the power is turned on, the MEMORY display may show one of the following error messages. If this occurs, refer to the corresponding explanation and take appropriate action.

rEr	An error occurred while receiving MIDI data. If an error occurs while receiving MIDI data, this error message will be displayed for several seconds.
bFL	The memory buffer became full while transmitting/receiving MIDI data. If the memory buffer becomes full while transmitting/receiving MIDI data, this error message will be displayed for several seconds. If this message appeared while transmitting MIDI data, turn the Utility item Eb (MIDI echo back) "oFF."
Pro	A scene memory store operation was executed or bulk dump data was received when memory protect was on. If you attempt to store a scene memory or if bulk dump data is received when memory protect was on, this error message will be displayed for several seconds.
CHE	A check sum error occurred while receiving bulk dump data. If a check sum error occurs while MIDI data is being received as a bulk dump, this error message will be displayed for several seconds. Check that the MIDI cable connections and the state of the transmitting device are appropriate.

Lo	The voltage of the internal battery has fallen below the nominal level (2.5 V), or has become abnormal. If the voltage of the internal battery falls below the nominal value of 2.5 V or if the battery malfunctions, this error message will be displayed when the power is turned on. (When this message is displayed, you can press any switch to return to the normal state.) If this message appears, the battery replaced. The voltage of the internal battery can also be checked using the Utility mode "bt" item.
nod	You attempted to recall a scene memory in which no scene had been stored. If you attempt to recall a scene memory in which no scene has been stored, this error message will be displayed for several seconds.
non	All scene memories contain no data. This error message will be displayed for several seconds if, after all scene memories have been erased in Utility mode, you attempt to store without specifying a scene memory number.
E*	A system error has occurred. (* is the error number) If this error message appears, the M2500 will not operate correctly.

YAMAHA [MIXING CONSOLE] Date:July/20, 1999
Model : M2500 MIDI Implementation Chart Version : 1.0

Function...		Transmitted	Recognized	Remarks
Basic Channel	Default	1 - 16	1 - 16	Memorized
	Changed	1 - 16	1 - 16	
Mode	Default	x	OMNI off/OMNI on	Memorized
	Messages	x	x	
	Altered	**********	x	
Note Number :		x	x	
	True voice	**********	x	
Velocity	Note ON	x	x	
	Note OFF	x	x	
After Touch	Key's	x	x	
	Ch's	x	x	
Pitch Bend		x	x	
Control Change	1-70, 105-112	o o o o	o o o o	*1
Prog Change :	True #	o 0 - 127 **********	o 0 - 127 1 - 128	
System Exclusive		o	o	*2
System : Common :	Song Pos	x	x	
	Song Sel	x	x	
	Tune	x	x	
System : Real Time	Clock	x	x	
	Commands	x	x	
:	Local ON/OFF	x	x	
Aux :	All Notes OFF	x	x	
Messages:	Active Sense	x	o	
:	Reset	x	x	
Notes		*1 : See Control Change chart. *2 : Bulk Dump/Request		

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

MIXING CONSOLE
M2500-24/32/40C/48C/56C

PARTS LIST

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ELECTRICAL PARTS 14

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.

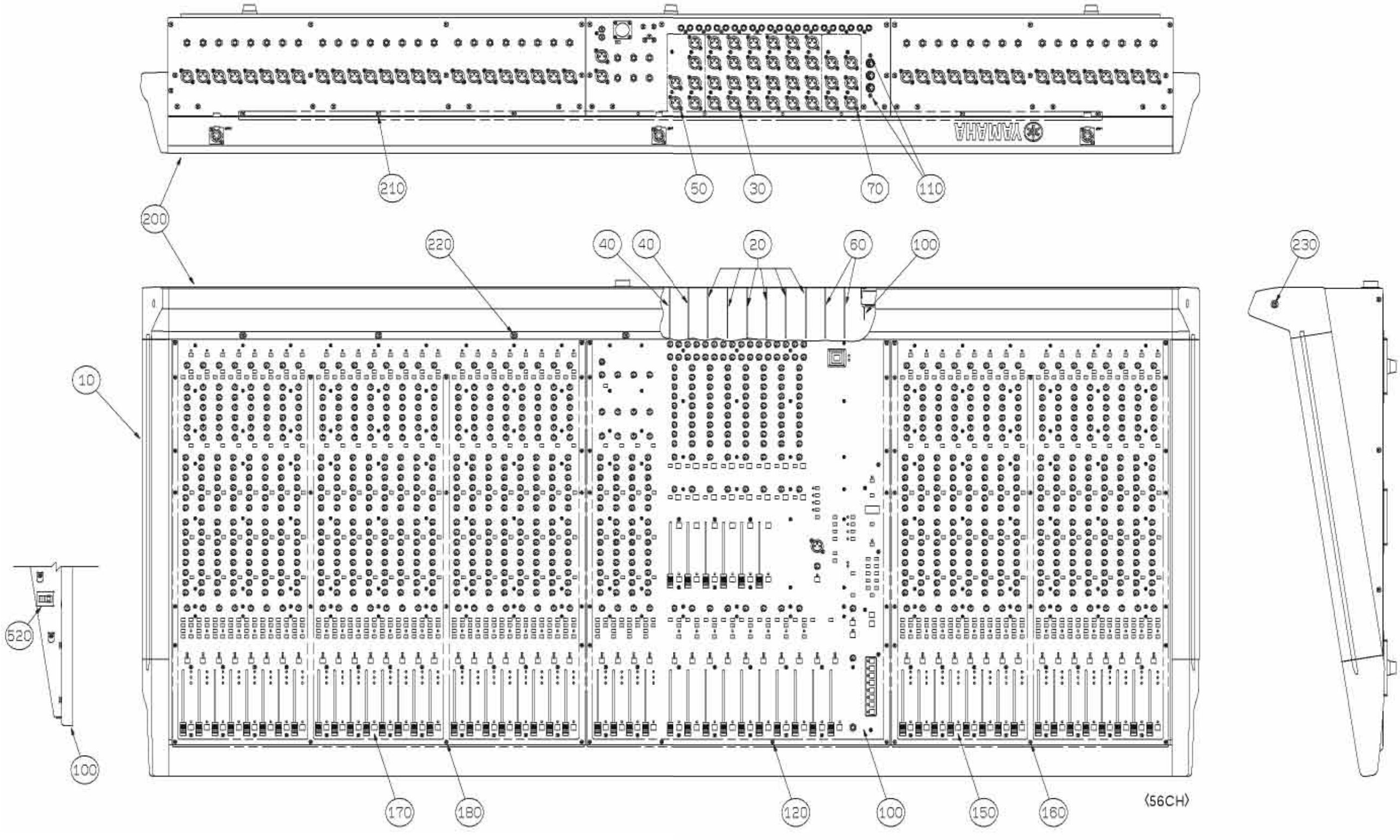
- The numbers "QTY" show quantities for each unit.
- The parts with "--" in "PART NO." are not available as spare parts.
- This mark " } " in the REMARKS column means these parts are interchangeable.
- The second letter of the shaded ( ) part number is O, not zero.
- The second letter of the shaded (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

OVERALL ASSEMBLY

	REF NO.	PART NO.	DESCRIPTION			REMARKS		QTY	RANK
			OVERALL ASSEMBLY			M2500-24/32/40/48/56			
		--	Overall Assembly			24CH	(V442400)		
		--	Overall Assembly			32CH	(V442410)		
		--	Overall Assembly			40CH	(V442430)		
		--	Overall Assembly			48CH	(V442450)		
		--	Overall Assembly			56CH	(V442470)		
	10	--	Shassis Assembly			24CH	(V442480)		
	10	--	Shassis Assembly			32CH	(V442490)		
	10	--	Shassis Assembly			40CH	(V442500)		
	10	--	Shassis Assembly			48CH	(V442510)		
	10	--	Shassis Assembly			56CH	(V442520)		
	20	**NX819680**	Circuit Board	MSOUT1				3	15
	30	**VN413300**	Bonding Tapping Screw-B	3.0X8 MFZN2BL				60	01
	40	**NX819720**	Circuit Board	MSOUT2					13
	50	**VN413300**	Bonding Tapping Screw-B	3.0X8 MFZN2BL				16	01
*	60	**AAX09050**	Circuit Board	MASOUT3					
	70	**VN413300**	Bonding Tapping Screw-B	3.0X8 MFZN2BL				16	01
	100	--	MASTER Assembly				(V442530)		
	110	**VN413300**	Bonding Tapping Screw-B	3.0X8 MFZN2BL				2	01
	120	**EP600190**	Bind Head Tapping Screw-B	3.0X8 MFZN2BL				17	01
	150	--	Mono 16 Assembly			40CH	(V442540)		
	150	--	MONO 32 Assembly			56CH	(V442560)		
	160	**EP600190**	Bind Head Tapping Screw-B	3.0X8 MFZN2BL		40/56CH 21/31			01
	170	--	MONO 24 Assembly			24,40,56CH	(V442550)		
	170	--	MONO 32 Assembly			32CH	(V442560)		
	170	--	MONO 24 Assembly			48CH	(V442550)	2	
	180	**EP600190**	Bind Head Tapping Screw-B	3.0X8 MFZN2BL		26/31/26/52/26			01
	200	--	Meter Panel Assembly			24CH	(V442570)		
	200	--	Meter Panel Assembly			32CH	(V442580)		
	200	--	Meter Panel Assembly			40CH	(V442590)		
	200	--	Meter Panel Assembly			48CH	(V442600)		
	200	--	Meter Panel Assembly			56CH	(V442610)		
	210	**EG340190**	Bind Head Tapping Screw-B	4.0X8 MFZN2BL		10/11/13/14/15			01
	220	**EG340360**	Bind Head Screw	4.0X8 MFZN2BL		7/8/9/10/11			01
	230	**VB923200**	Bind Head Screw	4.0X25 MFZN2BL				2	01
	300	--	Connector Assembly	METER ASSY			(V431280)		
	310	--	Connector Assembly	OUT ASSY			(V431260)		
	320	--	Connector Assembly	INBUS ASSY		1/1/2/2/2	(V431290)		
	321	--	Connector Assembly	2426&2426 2P 900L			(V541440)		
	322	--	Connector Assembly	2426&2426 5P 900L			(V541490)		
	330	--	Connector Assembly	STBUS ASSY			(V431310)		
	340	--	Connector Assembly	INSERT ASSY			(V431250)		
	500	--	Cord Binder	KWS-2 KSS		17/17/19/19/19	(V295160)		
	510	**VV104600**	Cord Holder	CV-100		6/6/9/9/9			01
	520	--	Cord Binder	TS-1214 KSS			(V487090)		
			ACCESSORIES						
	1	**V2301600**	DC Power Supply Cable						22
*	1a	**V3228500**	Connector	10 PLS-2410-PMA					
*	1b	**V3228400**	Connector	10 PLS-2410-PFA					

✱: New Parts

RANK: Japan only


YAMAHA
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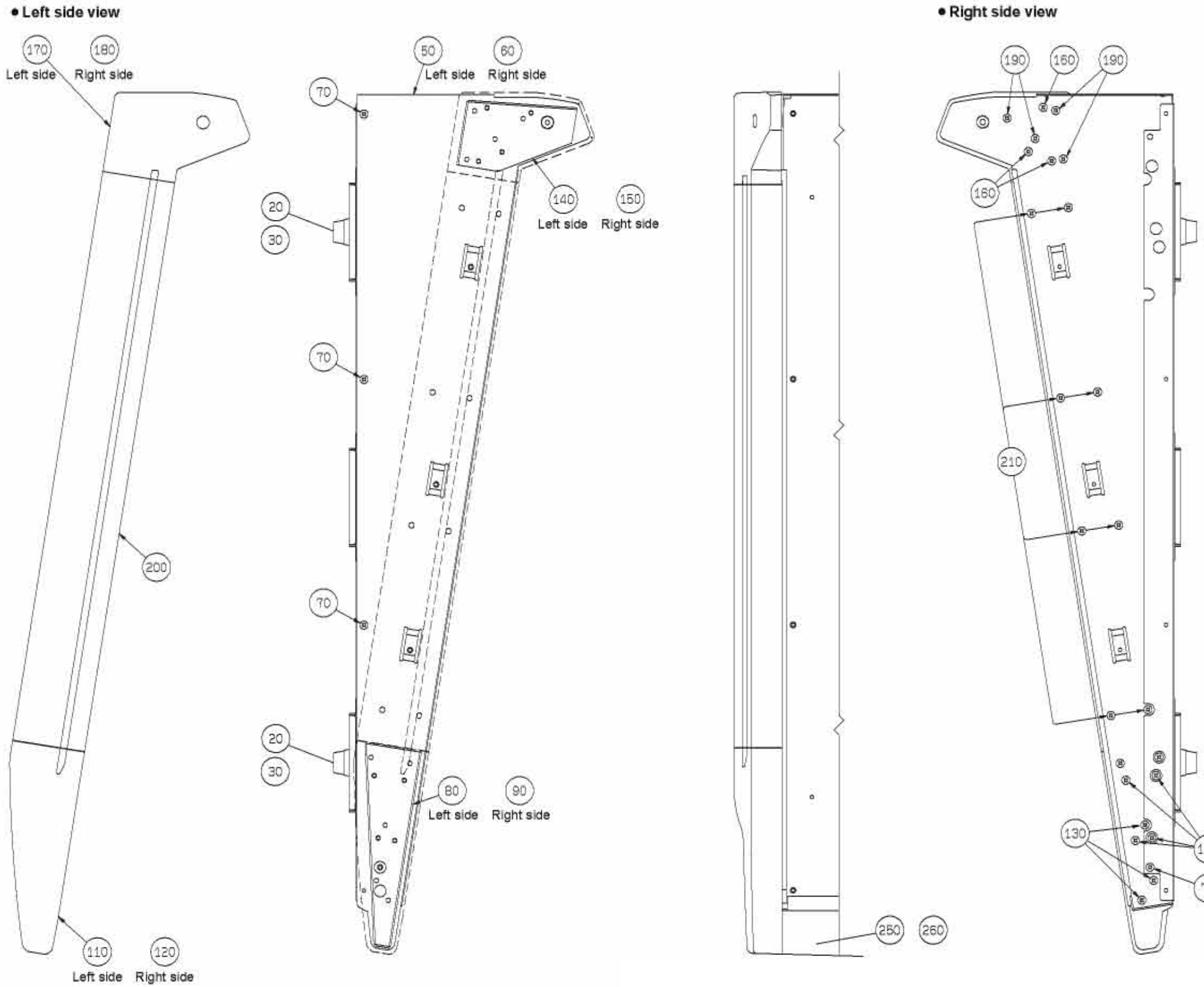
〈56CH〉

■ CHASSIS ASSEMBLY



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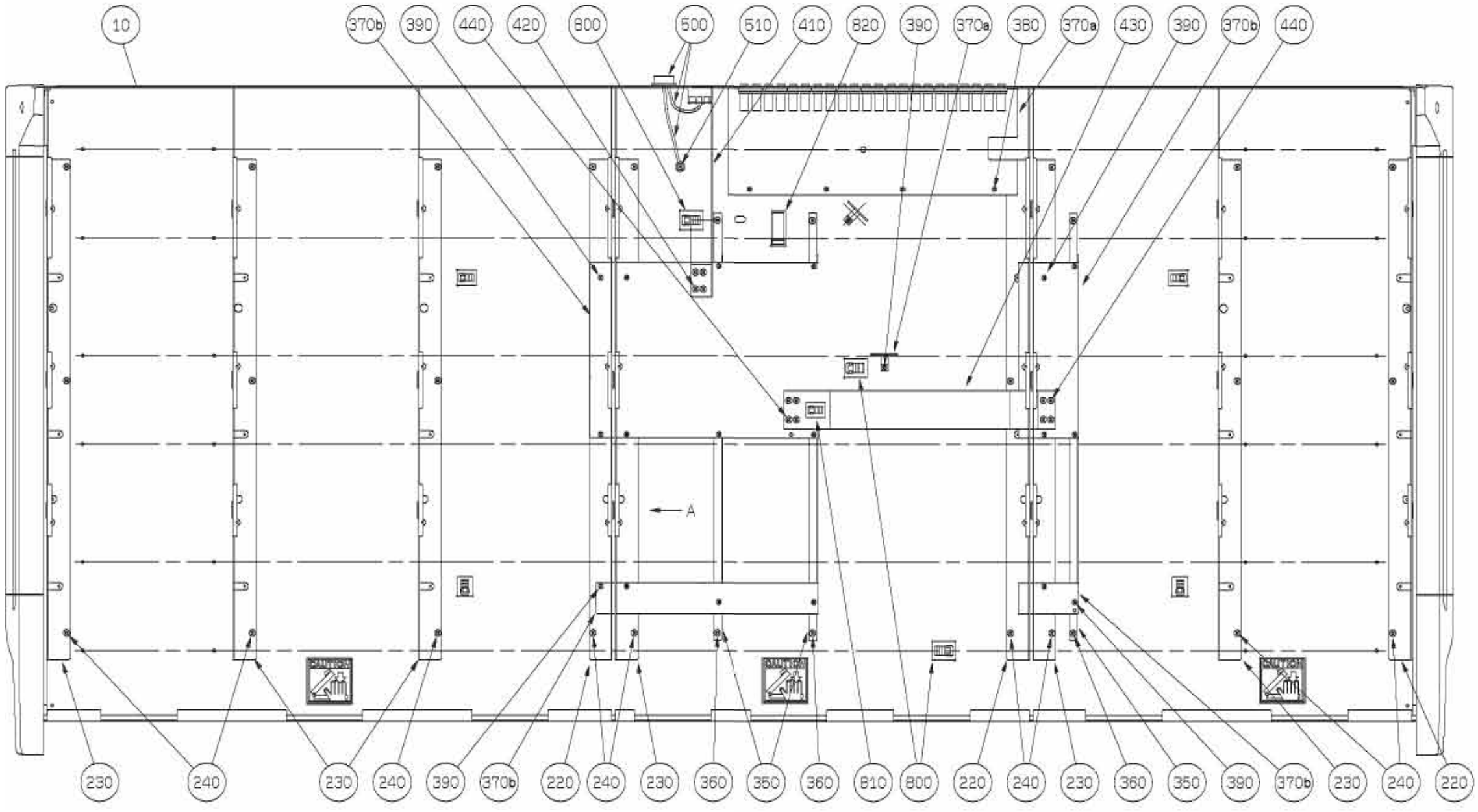

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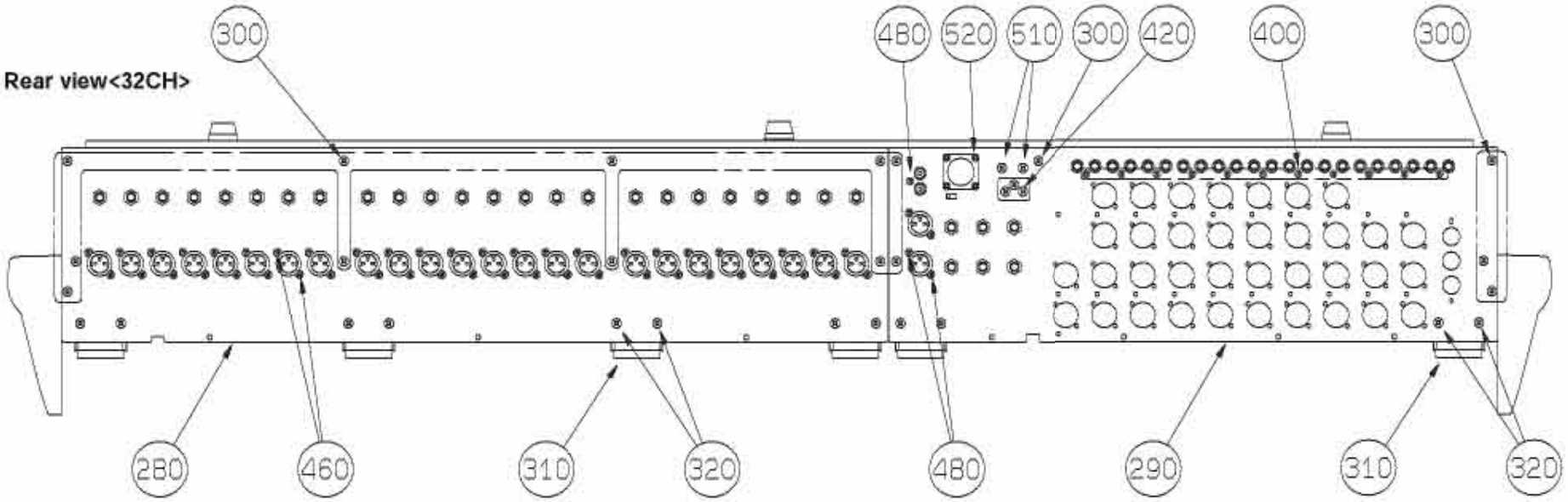

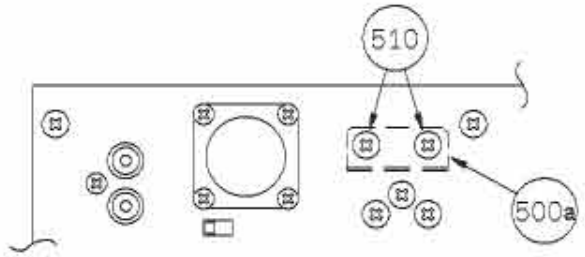

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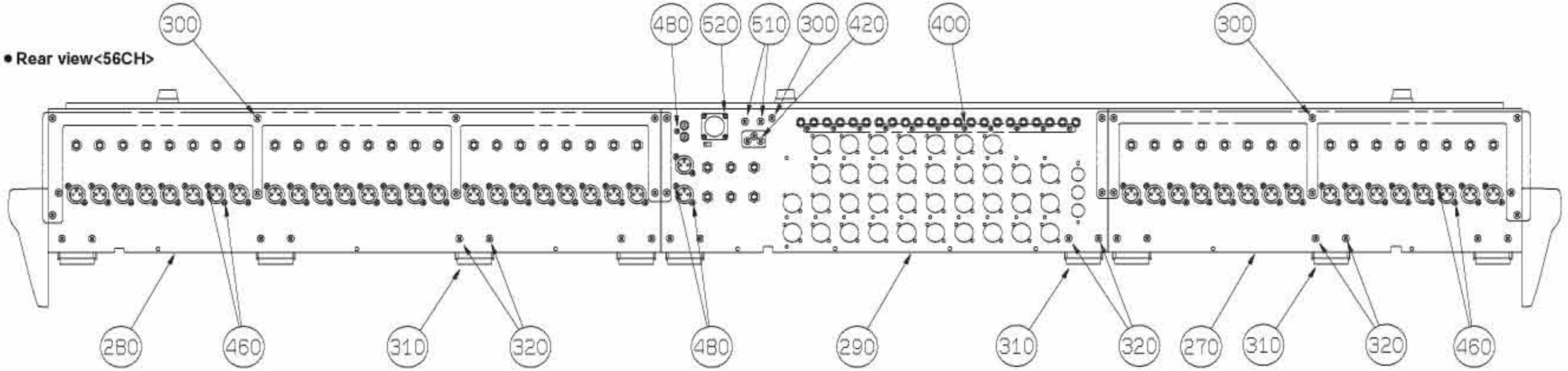

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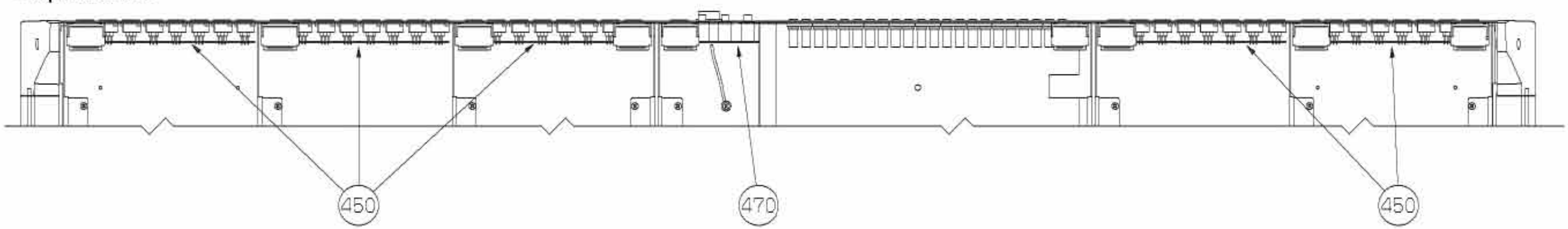


REF NO.	PART NO.	DESCRIPTION			REMARKS		QTY	RANK
		SHASSIS ASSEMBLY			M2500-24/32/40/48/56			
	--	Shassis Assembly			24CH	(V442480)		
	--	SHassis Assembly			32CH	(V442490)		
	--	Shassis Assembly			40CH	(V442500)		
	--	Shassis Assembly			48CH	(V442510)		
	--	Shassis Assembly			56CH	(V442520)		
10	--	Bottom Shassis			24CH	(V426250)		
10	--	Bottom Shassis			32CH	(V426260)		
10	--	Bottom Shassis			40CH	(V426270)		
10	--	Bottom Shassis			48CH	(V426280)		
10	--	Bottom Shassis			56CH	(V426290)		
20	**VV085600**	Foot			6/6/6/6/8			01
30	**VR138400**	Bind Head Tapping Screw-B	4.0X12 MFZN2BL		6/6/6/6/8			01
50	--	Side Frame	LEFT			(V426300)		
60	--	Side Frame	RIGHT			(V426310)		
70	**EG340190**	Bind Head Tapping Screw-B	4.0X8 MFZN2BL				8	01
80	**V2428500**	Corner Pad Angle Bracket	FRONT LEFT					05
90	**V2428600**	Corner Pad Angle Bracket	FRONT RIGHT					05
100	**EG340190**	Bind Head Tapping Screw-B	4.0X8 MFZN2BL				8	01
110	**V2311400**	Corner Pad	FRONT LEFT					06
120	**V2311500**	Corner Pad	FRONT RIGHT					06
130	**VS205900**	Bind Head Tapping Screw-B	4.0X20 MFZN2BL				10	01
140	**V2428700**	Corner Pad Angle Bracket	REAR LEFT					05
150	**V2428800**	Corner Pad Angle Bracket	REAR RIGHT					05
160	**EG340190**	Bind Head Tapping Screw-B	4.0X8 MFZN2BL				6	01
170	**V2311600**	Corner Pad	REAR LEFT					05
180	**V2311700**	Corner Pad	REAR RIGHT					05
190	**VS205900**	Bind Head Tapping Screw-B	4.0X20 MFZN2BL				8	01
200	**V2311200**	Side Pad					2	16
210	**EG340190**	Bind Head Tapping Screw-B	4.0X8 MFZN2BL				16	01
220	--	Center Frame	LEFT			(V426320)	3	
230	--	Center Frame	RIGHT		6/6/6/6/8	(V426330)		
240	**EG340190**	Bind Head Tapping Screw-B	4.0X8 MFZN2BL		27/30/39/42/45			01
* 250	**V4265000**	Front Pad	24CH					
250	**V4265100**	Front Pad	32CH					
250	**V4265200**	Front Pad	40CH					
250	**V4265300**	Front Pad	48CH					
250	**V4265400**	Front Pad	56CH					
260	**EG340190**	Bind Head Tapping Screw-B	4.0X8 MFZN2BL		9/10/11/12/13			01
270	--	Rear Panel	16		40CH	(V426350)		
270	--	Rear Panel	24L		48CH	(V426360)		
270	--	Rear Panel	32		56CH	(V426380)		
280	--	Rear Panel	24L		24CH, 40CH	(V426360)		
280	--	Rear Panel	32		32CH	(V426380)		
280	--	Rear Panel	24R1		48CH	(V426370)		
280	--	Rear Panel	24R2		56CH	(V431180)		
290	--	Rear Panel	CR			(V426400)		
300	**EG340190**	Bind Head Tapping Screw-B	4.0X8 MFZN2BL		15/17/21/23/25			01
310	--	Rear Stay			6/6/9/10/11	(V446330)		
320	**EG340190**	Bind Head Tapping Screw-B	4.0X8 MFZN2BL		12/14/18/20/22			01
350	--	PCB Support			2/2/3/3/3	(V446370)		
360	**EG340190**	Bind Head Tapping Screw-B	4.0X8 MFZN2BL		6/6/9/9/9			01
* 370a	**AAX09080**	Circuit Board	ISRT 1,6/6					
* 370b	**AAX09090**	Circuit Board	ISRT 2,3,4,5/6					
380	**VZ336600**	PCB Support	CBS-6K, GIN LIAN				4	01
390	**EP600190**	Bind Head Tapping Screw-B	3.0X8 MFZN2BL		9/9/15/15/15			01
400	**VN413300**	Bonding Tapping Screw-B	3.0X8 MFZN2BL				11	01
410	**V2425100**	Earth Bar	LARGE					05
420	**EG340360**	Bind Head Screw	4.0X8 MFZN2BL				7	01
430	--	Bus Earth Bar			40,48,56CH	(V426600)		
440	**EG340360**	Bind Head Screw	4.0X8 MFZN2BL		40,48,56CH		8	01
* 450	**AAX08980**	Circuit Board	INJK		3/4/5/6/7			
460	**VN413300**	Bonding Tapping Screw-B	3.0X8 MFZN2BL		48/64/80/96/112			01
* 470	**AAX08990**	Circuit Board	STJK					
480	**VN413300**	Bonding Tapping Screw-B	3.0X8 MFZN2BL				5	01
* 500	**V4290700**	Connector Assembly	DC IN ASSY					
500a	**V2558000**	Connector, DC	10 PLS-2410-RF					11
510	**EG340360**	Bind Head Screw	4.0X8 MFZN2BL				3	01
520	**EP600190**	Bind Head Tapping Screw-B	3.0X8 MFZN2BL				4	01
590	--	FFC Cable	BNCDP=1.25K-35-80		2/2/6/8/10	(V468110)		

✱ : New Parts

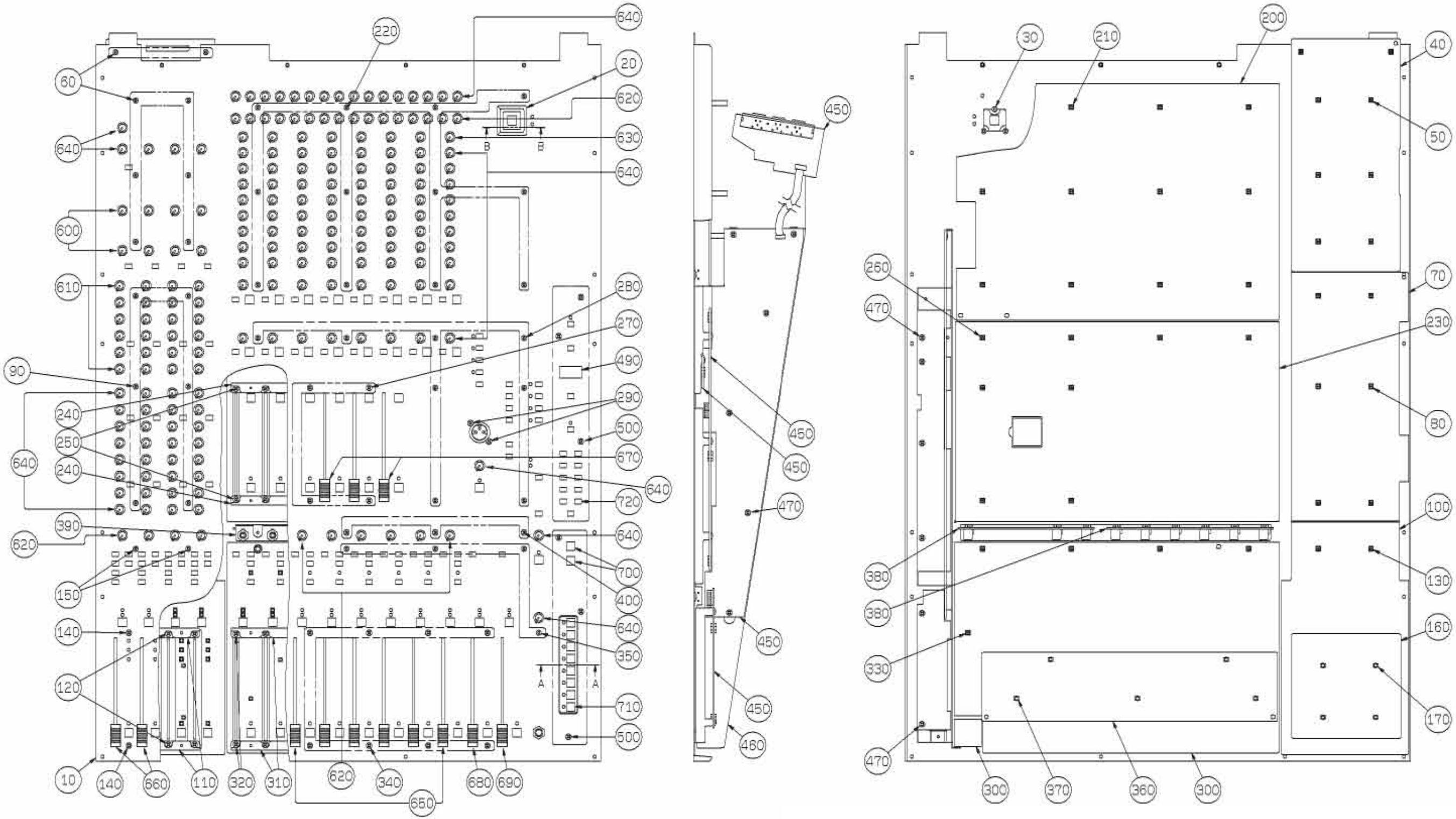
RANK : Japan only

REF NO.	PART NO.	DESCRIPTION			REMARKS		QTY	RANK
595	--	FFC Cable	SBNCDP1.25-K-35-80			(V468090)	5	
600	--	FFC Cable	BNCDP=1.25K-14-400			(V436040)		
610	--	FFC Cable	BNCDP=1.25K-20-300		40,48,56CH	(V436070)		
620	--	FFC Cable	BNCDP=1.25K-20-600		2/2/3/3/3	(V436090)		
630	--	FFC Cable	BNCDP=1.25K-24-300			(V436120)		
640	--	FFC Cable	BNCDP=1.25K-35-300		40,48,56CH	(V436150)		
650	--	Connector Assembly	KR-KR 2P 300L			(V468170)		
* 660	--	Connector Assembly	KR-KR 6P 750L			(V541910)		
670	--	Connector Assembly	KR-KR 8P 700L			(V468250)		
680	--	Connector Assembly	KR-KR 9P 700L			(V468290)		
690	--	Connector Assembly	KR-KR 12P 850L			(V468320)		
700	--	Connector Assembly	2426&2426 11P 350L		48CH	(V444570)		
710	--	Connector Assembly	KR-KR 13P 500L			(V468340)		
800	--	Cord Binder	TS-1214 KSS			(V487090)	3	
810	**VZ765100**	Cord Binder	TS-0708 KSS		2/2/3/3/3			02
820	--	Cable Clamp	FCW-30			(V487100)		

✱ : New Parts

RANK : Japan only

■ MASTER ASSEMBLY

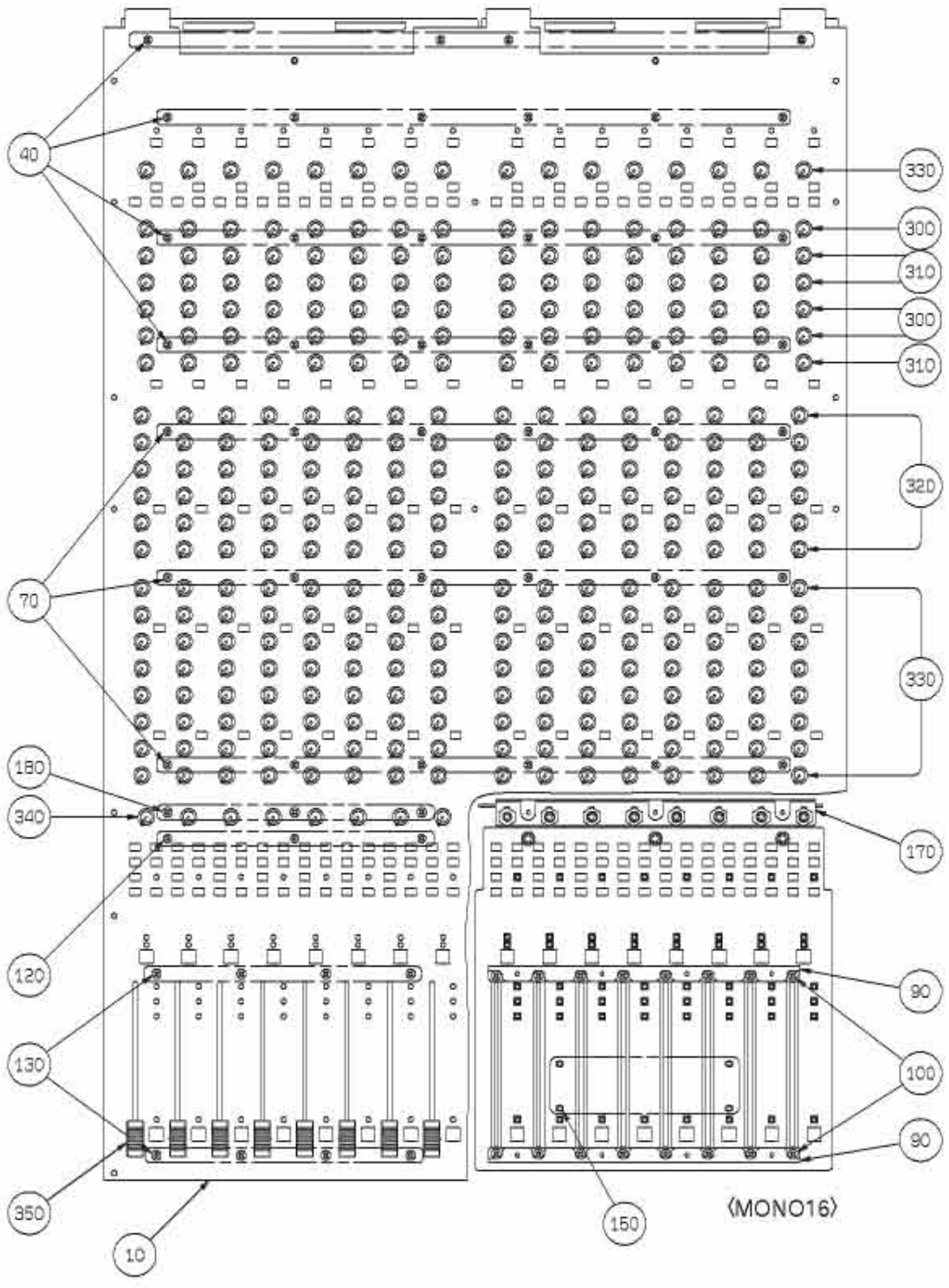


	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
			MASTER ASSEMBLY			M2500-24/32/40/48/56		
		--	MASTER Assembly			(V442530)		
*	10	V4262400	Control Panel	MASTER				
*	20	V4266400	Escutcheon					
	30	V2256500	Stop Ring	2.4			3	01
*	40	V4313700	Circuit Board	ST1				
	50	V3291600	PCB Support	BL			8	01
	60	V3289800	Hexagon Socket Tapping Scr	3X25 MFZNBL			8	01
*	70	V4313800	Circuit Board	ST2				
	80	V3291600	PCB Support	BL			6	01
	90	V3289800	Hexagon Socket Tapping Scr	3X25 MFZNBL			6	01
*	100	V4313900	Circuit Board	ST3				
	110	--	Fader Fittings ST			(V426440)	2	
	120	VR139400	Bind Head Screw	3.0X4 MFZN2BL			8	01
	130	V3291600	PCB Support	BL			2	01
	140	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL			4	01
	150	V3289800	Hexagon Socket Tapping Scr	3X25 MFZNBL			2	01
*	160	AAX09020	Circuit Board	ST4				
	170	VZ336600	PCB Support	CBS-6K			4	01
*	200	V4314100	Circuit Board	MAS1				
	210	V3291600	PCB Support	BL			12	01
	220	V3289800	Hexagon Socket Tapping Scr	3X25 MFZNBL			12	01
*	230	V4314200	Circuit Board	MAS2				
	240	--	Fader Fittings AUX			(V426450)	2	
	250	VR139400	Bind Head Screw	3.0X4 MFZN2BL			12	01
	260	V3291600	PCB Support	BL			8	01
	270	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL			6	01
	280	V3289800	Hexagon Socket Tapping Scr	3X25 MFZNBL			8	01
	290	VN413300	Bonding Tapping Screw-B	3.0X8 MFZN2BL			2	01
*	300	V4314400	Circuit Board	MAS3				
	310	--	Fader Fittings GRP			(V426460)	2	
	320	VR139400	Bind Head Screw	3.0X4 MFZN2BL			20	01
	330	V3291600	PCB Support	BL NIFCO			5	01
	340	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL			10	01
	350	V3289800	Hexagon Socket Tapping Scr	3X25 MFZNBL			5	01
*	360	AAX09040	Circuit Board	MAS4				
	370	VZ336600	PCB Support	CBS-6K GIN LIAN			7	01
*	380	AAX09030	Circuit Board	MASPAN				
	390	--	VR Fitting MA			(V426420)		
	400	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL			4	01
	450a	VN103500	Lithium Battery	CR2032				03
*	450b	V4314600	Circuit Board	CTRL				
	460	--	Shield Plate CTL			(V426340)		
	470	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL			12	01
	480	--	Window			(V231180)		
	490	--	Guide			(V231190)		
	500	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL			6	01
	600	VU860200	Knob (small)	MX-GREEN/D-GRAY		STEREO1-4(HI1-4,LO1-4)	8	01
	610	VU860300	Knob (small)	MX-BLUE/D-GRAY		STEREO1-4(AUX1-6)	24	01
	620	VU860400	Knob (small)	RED/D-GRAY		STEREO1-4(BAL1-4), GLP/AUX1-8(PAN1-8), MATRIX1-8(ST-L,R)	28	01
*	630	V4470000	Knob (small)	YELLOW/D-GRAY		MATRIX1-8(MONO/C)	8	
	640	VU859700	Knob (small)	N-GRAY/D-GRAY		STEREO1-8(GAIN A,GAIN B, GAIN,AUC7-14), MATRIX1-8(SUS L,SUS R, G1/A7-G8/A14), A7/G1-A14/G8(LEVEL), TB/OSC,MONOTOR LEVEL, PHONES	136	01
	650	V2947000	Fader Knob	BLACK/N-GRAY		G1-G7	8	01
	660	VV135600	Fader Knob	RED/CD-GRAY		1CH-4CH	4	01
	670	V2946900	Fader Knob	BLACK/MX-BLUE		AUX1-6	6	01
	680	VU860600	Fader Knob	CL-GRAY/RED		STEREO		01
*	690	V4468900	Fader Knob	BLACK/YELLOW		MONO/C		
	700	VZ968600	Button L	NO.947 CD-GRAY		SCENE MEMORY, ▲▼	2	01
	710	VZ968700	Button L	NO.946 CL-GRAY		DΔRECT RECALL(1-8)	8	01
	720	VZ968500	Button S	NO.947 CD-GRAY		1-9,0,NTER	15	01
	800	--	FFC Cable	BNCDP=1.25K-6-50		(V435960)		
	810	--	FFC Cable	BNCDP=1.25K-6-70		(V435970)	3	
	820	--	FFC Cable	BNCDP=1.25K-8-60		(V435990)	5	
	830	--	FFC Cable	BNCDP=1.25K-6-100		(V468130)		
	840	--	FFC Cable	BNCDP=1.25K-14-60		(V436010)	8	
	850	--	FFC Cable	BNCDP=1.25K-14-150		(V436030)	2	
	870	--	Connector Assembly	KR-KR 2P 80L		(V468160)	2	
	880	--	Connector Assembly	KR-KR 4P 60L		(V468190)		
	890	--	Connector Assembly	KR-KR 5P 250L		(V468220)		
	900	--	Connector Assembly	KR-KR 9P 180L		(V487950)		
	910	--	Connector Assembly	KR-KR 11P 250L		(V468310)		
	920	--	Connector Assembly	2426&2426 10P 60L		(V444560)		

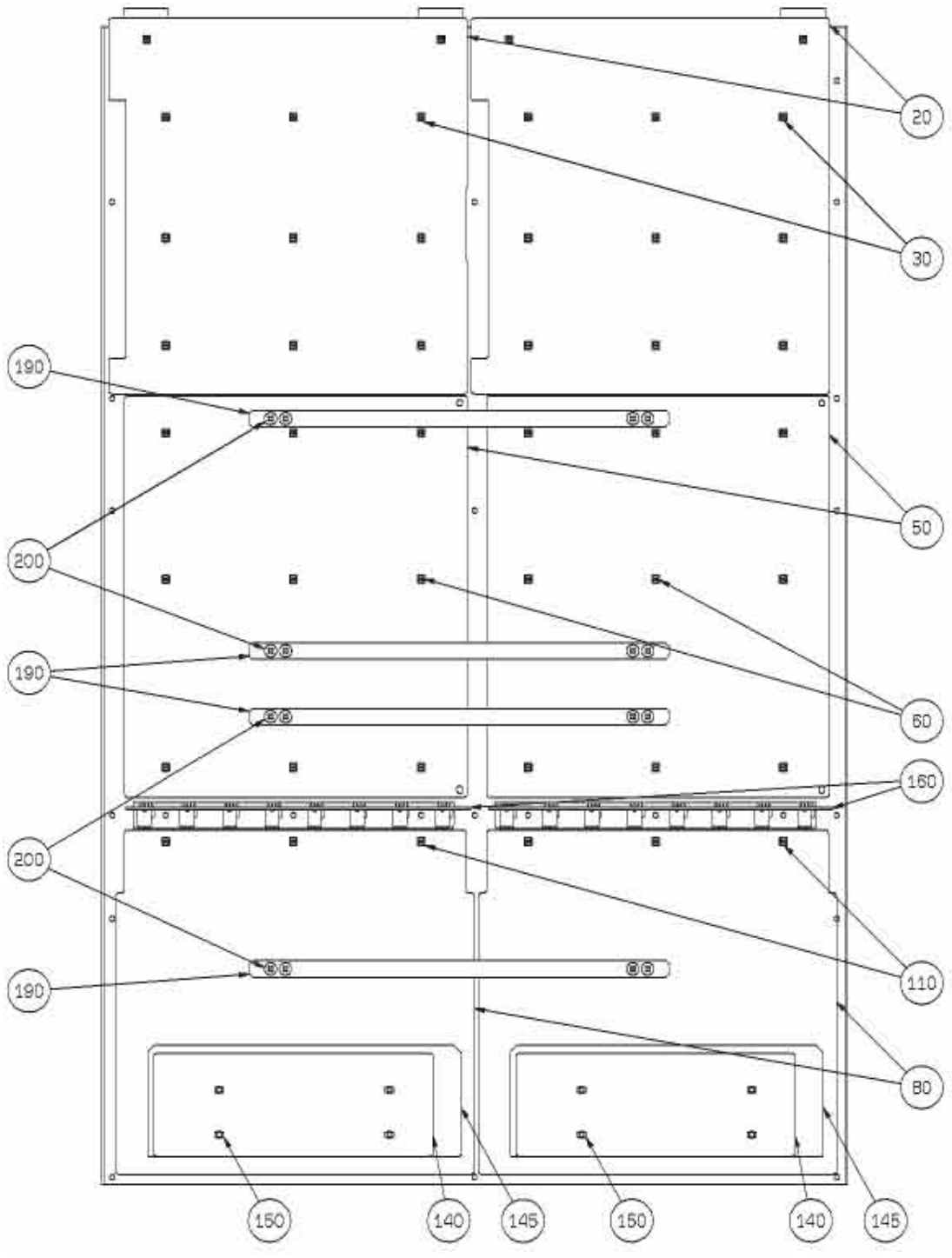
* : New Parts

RANK : Japan only

■ MONO IN ASSEMBLY (MONO16, MONO24 & MONO32)



〈MONO16〉



	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
			MONO 16 ASSEMBLY			M2500-40		
		--	MONO 16 Assembly			(V442540)		
*	10	V4261700	Control Panel	16CH				
*	20	V4313200	Circuit Board	IN1			2	
	30	V3291600	PCB Support	BL			22	01
	40	V3289800	Hexagon Socket Tapping Scr	3X25 MFZNBL			22	01
*	50	V4313300	Circuit Board	IN2			2	
	60	V3291600	PCB Support	BL			18	01
	70	V3289800	Hexagon Socket Tapping Scr	3X25 MFZNBL			18	01
*	80	V4313500	Circuit Board	IN3			2	
	90	--	Fader Fittings MO			(V426430)	4	
	100	VR139400	Bind Head Screw	3.0X4 MFZN2BL			32	01
	110	V3291600	PCB Support	BL			6	01
	120	V3289800	Hexagon Socket Tapping Scr	3X25 MFZNBL			6	01
	130	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL			16	01
*	140	AAX09010	Circuit Board	IN4				
	145	--	Shield Plate S			(V473810)	2	
	150	--	PCB Support	CS-0305 KSS		(V487810)	16	
*	160	AAX09000	Circuit Board	INPAN				
	170	--	VR Fittings MO			(V426410)	2	
	180	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL			6	01
	190	--	Earth Bar 16			(V426610)	4	
	200	EG340360	Bind Head Screw	4.0X8 MFZN2BL			16	01
	300	VU860200	Knob (small)	MX-GREEN/D-GRAY		EQ(HI,LO-MID)	48	01
	310	VZ968800	Knob (small)	556C-LGREEN/D-GRAY		EQ(HI-MID,LO)	48	01
	320	VU860300	Knob (small)	MX-BLUE/D-GRAY		PRE(AUX1-6)	96	01
	330	VU859700	Knob (small)	N-GRAY/D-GRAY		GAIN	144	01
	340	VU860400	Knob (small)	RED/D-GRAY		PAN	16	01
	350	VU860500	Fader Knob	BLACK/CL-GRAY		FADER	16	01
	400	--	FFC Cable	BNCDP=1.25K-6-50		(V435960)	4	
	410	--	FFC Cable	BNCDP=1.25K-8-60		(V435990)	4	
	420	--	FFC Cable	BNCDP=1.25K-14-150		(V436030)	4	
	430	--	FFC Cable	BNCDP=1.25K-24-50		(V436100)	4	
	450	--	FFC Cable	BNCDP=1.25K-20-90		(V436060)		
	460	--	Connector Assembly	KR-KR 3P 40L		(V468180)	2	
	470	--	Connector Assembly	KR-KR 5P 40L		(V468200)	3	
	490	--	Connector Assembly	KR-KR 7P 40L		(V362110)	2	
	500	--	Connector Assembly	KR-KR 10P 40L		(V468300)		
	510	--	Connector Assembly	KR-KR 13P 40L		(V468330)		
	520	--	Connector Assembly	KR-KR 4P 120L		(V487960)	2	
	530	--	FFC Cable	BNCDP=1.25K-6-100		(V468130)	8	
	540	--	Connector Assembly	2426&2426 2P 80L				
			MONO 24 ASSEMBLY			M2500-24/40/48/56		
		--	MONO 24 Assembly			(V442550)		
*	10	V4262200	Control Panel	24CH				
*	20	V4313200	Circuit Board	IN1			3	
	30	V3291600	PCB Support	BL			33	01
	40	V3289800	Hexagon Socket Tapping Scr	3X25 MFZNBL			33	01
*	50	V4313300	Circuit Board	IN2			3	
	60	V3291600	PCB Support	BL			27	01
	70	V3289800	Hexagon Socket Tapping Scr	3X25 MFZNBL			27	01
*	80	V4313500	Circuit board	IN3			3	
	90	--	Fader Fittings MO			(V426430)	6	
	100	VR139400	Bind Head Screw	3.0X4 MFZN2BL			48	01
	110	V3291600	PCB Support	BL			9	01
	120	V3289800	Hexagon Socket Tapping Scr	3X25 MFZNBL			9	01
	130	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL			24	01
*	140	AAX09010	Circuit Board	IN4			3	
	145	--	Shield Plate S			(V473810)	3	
	150	--	PCB Support	CS-0305 KSS		(V487810)	24	
*	160	AAX09000	Circuit Board	INPAN			3	
	170	--	VR Fittings MO			(V426410)	3	
	180	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL			9	01
	190	--	Earth Bar 24			(V426620)	4	
	200	EG340360	Bind Head Screw	4.0X8 MFZN2BL			24	01
	300	VU860200	Knob (small)	MX-GREEN/D-GRAY		EQ(HI,LO-MID)	72	01
	310	VZ968800	Knob (small)	556C-LGREEN/D-GRAY		EQ(HI-MID,LO)	72	01
	320	VU860300	Knob (small)	MX-BLUE/D-GRAY		PRE(AUX1-6)	144	01
	330	VU859700	Knob (small)	N-GRAY/D-GRAY		GAIN	216	01

✱ : New Parts

RANK : Japan only

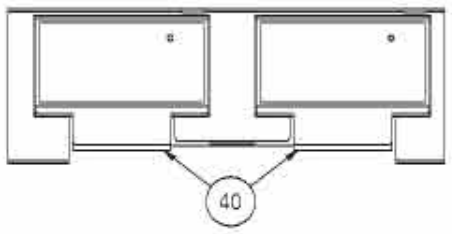
	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	340	VU860400	Knob (small)	RED/D-GRAY		PAN	24	01
	350	VU860500	Fader Knob	BLACK/CL-GRAY		FADER	24	01
	400	--	FFC Cable	BNCDP=1.25K-6-50		(V435960)	6	
	410	--	FFC Cable	BNCDP=1.25K-8-60		(V435990)	6	
	420	--	FFC Cable	BNCDP=1.25K-14-150		(V436030)	6	
	430	--	FFC Cable	BNCDP=1.25K-24-50		(V436100)	6	
	450	--	FFC Cable	BNCDP=1.25K-20-90		(V436060)	2	
	460	--	Connector Assembly	KR-KR 3P 40L		(V468180)	3	
	470	--	Connector Assembly	KR-KR 5P 40L		(V468200)	5	
	490	--	Connector Assembly	KR-KR 7P 40L		(V362110)	4	
	500	--	Connector Assembly	KR-KR 10P 40L		(V468300)	2	
	510	--	Connector Assembly	KR-KR 13P 40L		(V468330)	2	
	520	--	Connector Assembly	KR-KR 4P 120L		(V487960)	3	
	530	--	FFC Cable	BNCDP=1.25K-6-100		(V468130)	12	
	540	--	Connector Assembly	2426&2426 2P 80L			2	
			MONO 32 ASSEMBLY			M2500-32/56		
		--	MONO 32 Assembly			(V442560)		
*	10	V4262300	Control Assembly	32CH				
*	20	V4313200	Circuit Board	IN1			4	
	30	V3291600	PCB Support	BL			44	01
	40	V3289800	Hexagon Socket Tapping Scr	3X25 MFZNBL			44	01
*	50	V4313300	Circuit Board	IN2			4	
	60	V3291600	PCB Support	BL			36	01
	70	V3289800	Hexagon Socket Tapping Scr	3X25 MFZNBL			36	01
*	80	V4313500	Circuit Board	IN3			4	
	90	--	Fader Fittings MO			(V426430)	8	
	100	VR139400	Bind Head Screw	3.0X4 MFZN2BL			64	01
	110	V3291600	PCB Support	BL			12	01
	120	V3289800	Hexagon Socket Tapping Scr	3X25 MFZNBL			12	01
	130	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL			32	01
*	140	AAX09010	Circuit Board	IN4			2	
	145	--	Shield Plate S			(V473810)	4	
	150	--	PCB Support	CS-0305 KSS		(V487810)	32	
*	160	AAX09000	Circuit Board	INPAN			2	
	170	--	VR Fittings MO			(V426410)	4	
	180	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL			12	01
	190	--	Earth Bar 32			(V426630)	4	
	200	EG340360	Bind Head Screw	4.0X8 MFZN2BL			32	01
	300	VU860200	Knob (small)	MX-GREEN/D-GRAY		EQ(HI,LO-MID)	96	01
	310	VZ968800	Knob (small)	556C-LGREEN/D-GRAY		EQ(HI-MID,LO)	96	01
	320	VU860300	Knob (small)	MX-BLUE/D-GRAY		PRE(AUX1-6)	192	01
	330	VU859700	Knob (small)	N-GRAY/D-GRAY		GAIN	288	01
	340	VU860400	Knob (small)	RED/D-GRAY		PAN	32	01
	350	VU860500	Fader Knob	BLACK/CL-GRAY		FADER	32	01
	400	--	FFC Cable	BNCDP=1.25K-6-50		(V435960)	8	
	410	--	FFC Cable	BNCDP=1.25K-8-60		(V435990)	8	
	420	--	FFC Cable	BNCDP=1.25K-14-150		(V436030)	8	
	430	--	FFC Cable	BNCDP=1.25K-24-50		(V436100)	8	
	450	--	FFC Cable	BNCDP=1.25K-20-90		(V436060)	3	
	460	--	Connector Assembly	KR-KR 3P 40L		(V468180)	4	
	470	--	Connector Assembly	KR-KR 5P 40L		(V468200)	7	
	490	--	Connector Assembly	KR-KR 7P 40L		(V362110)	6	
	500	--	Connector Assembly	KR-KR 10P 40L		(V468300)	3	
	510	--	Connector Assembly	KR-KR 13P 40L		(V468330)	3	
	520	--	Connector Assembly	KR-KR 4P 120L		(V487960)	4	
	530	--	FFC Cable	BNCDP=1.25K-6-100		(V468130)	16	

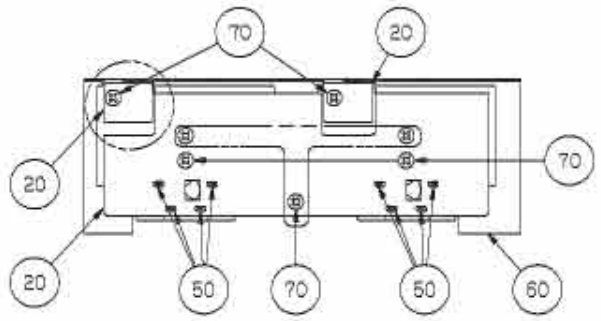
✱ : New Parts

RANK : Japan only

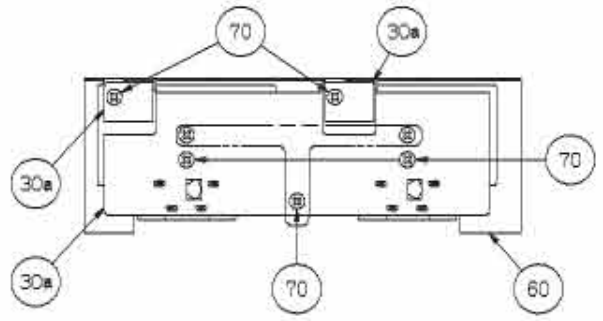
■ METER PANEL ASSEMBLY

• Front view



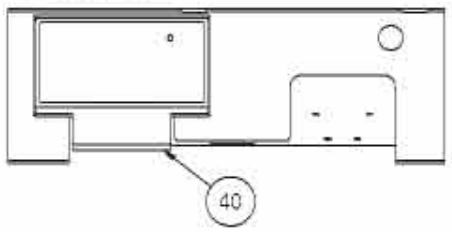


1/7–8/14 (4 pcs.)

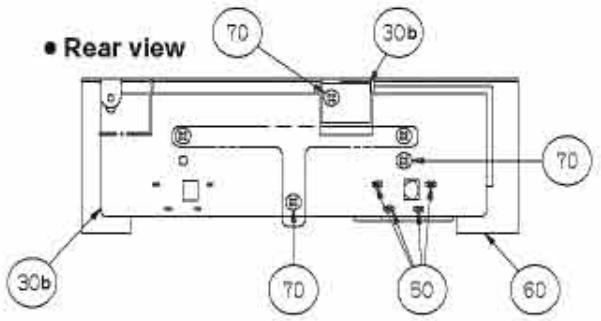


STEREO L&MONO (1 pcs.)

• Front view

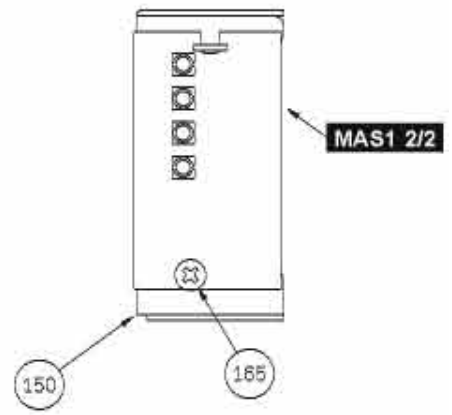


• Rear view



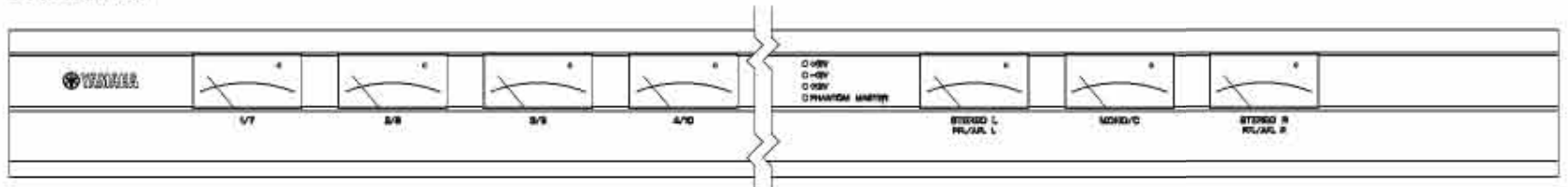
STEREO R (1 pcs.)

• Right side view

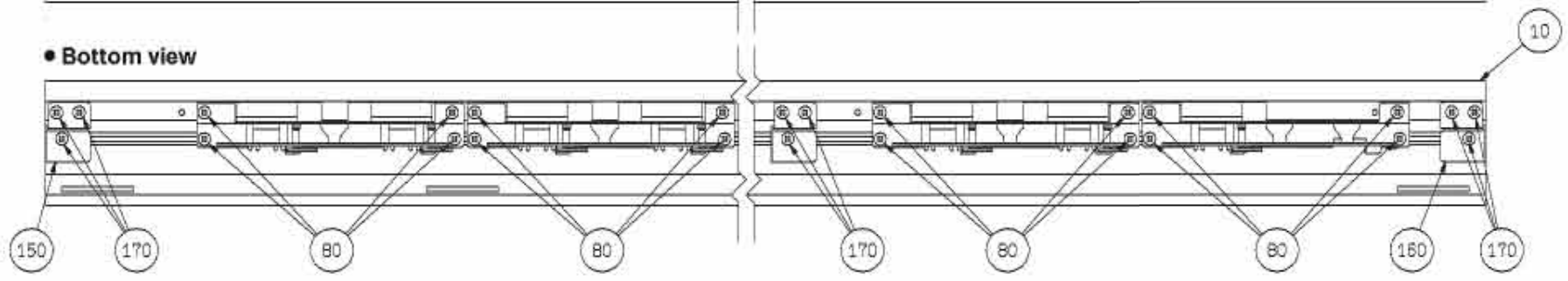


Power supply LED

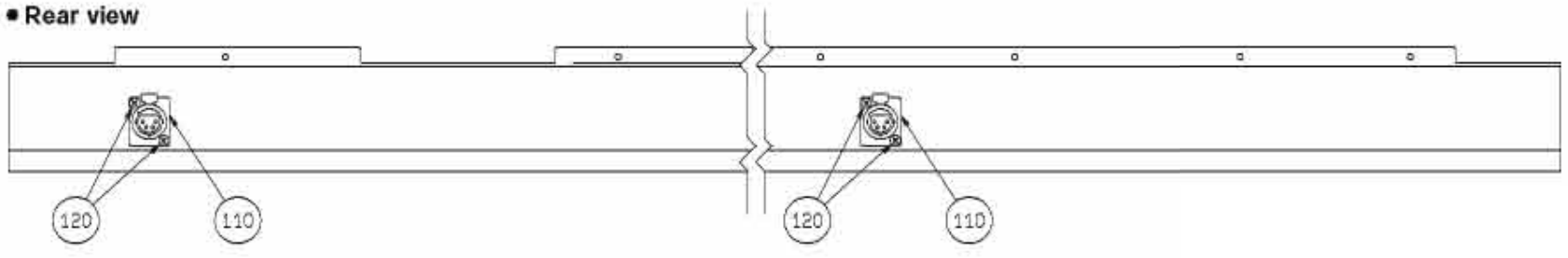
• Front view

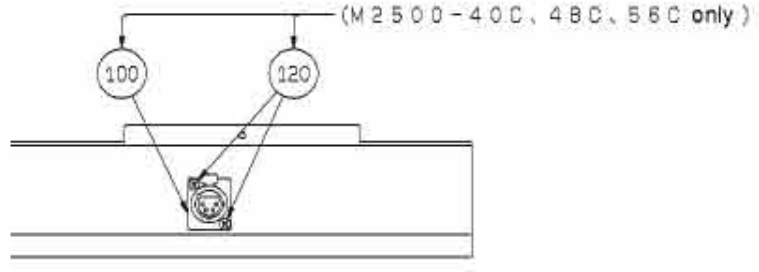


• Bottom view



• Rear view





	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
			METER PANEL ASSEMBLY					
		--	Meter Panel Assembly			24CH (V442570)		
		--	Meter Panel Assembly			32CH (V442580)		
		--	Meter Panel Assembly			40CH (V442590)		
		--	Meter Panel Assembly			48CH (V442600)		
		--	Meter Panel Assembly			56CH (V442610)		
*	10	**V4265500**	Meter Panel			24CH		
*	10	**V4265600**	Meter Panel			32CH		
*	10	**V4265700**	Meter Panel			40CH		
*	10	**V4265800**	Meter Panel			48CH		
*	10	**V4265900**	Meter Panel			56CH		
*	20	**AAX09060**	Circuit Board	METER1			2	
*	30a	**AAX09100**	Circuit Board	METER2 1/2 1,2,3/3				
*	30b	**AAX09070**	Circuit Board	METER2 2/2 1,2/3				
*	40	**V3855100**	Analog Meter	VU TN-72			11	
	60	--	Meter Bracket			(V426470)	6	
	70	**EP600190**	Bind Head Tapping Screw-B	3.0X8 MFZN2BL			29	01
	75	**EP600190**	Bind Head Tapping Screw-P	3.0X8 MFZN2BL			11	01
	80	**EG340190**	Bind Head Tapping Screw-B	4.0X8 MFZN2BL			26	01
	100	**V2426000**	Connector Assembly	LAMP L ASSY				09
	100a	**FG644100**	Ceramic Capacitor-F	0.01 50V Z				01
	100b	**VS647300**	XLM Connector	HA16PRK-4S				07
	110	**V2426100**	Connector Assembly	LAMP S ASSY			2	09
	110a	**FG644100**	Ceramic Capacitor-F	0.01 50V Z				01
	110b	**VS647300**	XLM Connector	HA16PRK-4S				07
	120	**EE620190**	Pan Head Screw	2.6X8 MFNI33		4/4/6/6/6	4	01
	150	--	Meter Panel Fittings L			(V426480)	2	
	160	--	Meter Panel Fittings R			(V426490)		
	165	**EP600190**	Bind Head Tapping Screw-B	3.0X8 MFZN2BL				01
	170	**EG340190**	Bind Head Tapping Screw-B	4.0X8 MFZN2BL			9	01
	200	--	Connector Assembly	KR-KR 9P 60L		(V468260)	4	
	210	--	Connector Assembly	KR-KR 9P 140L		(V468280)		

*: New Parts

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■ ELECTRICAL PARTS

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
			ELECTRICAL PARTS			M2500-24/32/40/48/56		
*		V4314600	Circuit board	CTRL		(XW219B0)		
*		V4313200	Circuit Board	IN1		(XW201B0)		
*		V4313300	Circuit Board	IN2		(XW202B0)		
*		V4313500	Circuit Board	IN3		(XW203B0)		
*		AAX09010	Circuit Board	IN4		(XW204B0)		
*		AAX08980	Circuit Board	INJK		(XW206B0)		
*		AAX09000	Circuit Board	INPAN		(XW205B0)		
*		AAX09080	Circuit Board	ISRT 1,6/6		(XW217B0)		
*		AAX09090	Circuit Board	ISRT 2,3,4,5/6		(XW217B0)		
*		V4314100	Circuit Board	MAS1		(XW212B0)		
*		V4314200	Circuit Board	MAS2		(XW213B0)		
*		V4314400	Circuit Board	MAS3		(XW21BA0)		
*		AAX09040	Circuit Board	MAS4		(XW215B0)		
*		AAX09030	Circuit Board	MASPAN		(XW216B0)		
*		AAX09060	Circuit Board	METER1		(XW218B0)		
*		AAX09070	Circuit Board	METER2 2/2 1,2/3		(XW600B0)		
*		AAX09100	Circuit Board	METER2 1/2 1,2,3/3		(XW600B0)		
		NX819680	Circuit Board	MSOUT1		(XV388D0)		
		NX819720	Circuit Board	MSOUT2		(XV388D0)		
*		AAX09050	Circuit Board	MASOUT3		(XW601B0)		
*		V4313700	Circuit Board	ST1		(XW207B0)		
*		V4313800	Circuit Board	ST2		(XW208B0)		
*		V4313900	Circuit Board	ST3		(XW209B0)		
*		AAX09020	Circuit Board	ST4		(XW210B0)		
*		AAX08990	Circuit Board	STJK		(XW211B0)		
*		V4314600	Circuit board	CTRL		(XW219B0)		
		CB056250	LED Spacer					01
		VL184700	IC Socket	DICF-28CS-E				02
	BT101	VN103600	Battery Holder	CR2032				03
	CN001	VN304300	Connector	5532-NA 6P TE				01
	-007	VN304300	Connector	5532-NA 6P TE				01
	CN008	VB390000	Connector Base Post	PH- 4P TE				01
	CN101	VN304000	Connector	5533-NAPB 6P SE				01
	-107	VN304000	Connector	5533-NAPB 6P SE				01
	CN108	V2504100	Connector Assembly	SAN&PH 4P 350L				05
	CN121	VB390300	Connector Base Post	PH- 7P TE				01
	CN122	VB390600	Connector Base Post	PH-10P TE				01
	CN123	VB390700	Connector Base Post	PH-11P TE				01
	CN124	VB390100	Connector Base Post	PH- 5P TE				01
	CN224	VB390800	Connector Base Post	PH-12P TE				01
	CN225	VB390400	Connector Base Post	PH- 8P TE				01
	CN226	VB390500	Connector Base Post	PH- 9P TE				03
	CN230	VB390200	Connector Base Post	PH- 6P TE				01
	D101	VT332900	Diode	1SS355 TE-17				01
	D201	VT332900	Diode	1SS355 TE-17				01
	-225	VT332900	Diode	1SS355 TE-17				01
	D301	VT332900	Diode	1SS355 TE-17				01
	EM101	FZ006970	LC Filter	LS MT Y223NB				02
	EM102	FZ006970	LC Filter	LS MT Y223NB				02
*	IC101	XW642C00	IC			EPROM 512K		
	IC102	XV411A00	IC	W24258S-70LE-EL10		SRAM 256K		07
	IC102	XW433A00	IC	CY62256LL-70SNCT		SRAM 256K		
	IC103	XK278A00	IC	HD6435208A00P		CPU (MAIN)		09
	IC104	XM047A00	IC	YSP99 LZ95D59		GATE ARRAY		07
	IC105	XQ962D00	IC	YSS228E-F		DSP3		20
	IC106	XR361A00	IC	AK4320-VM-E1		DAC		07
	IC107	XI686A00	IC	M62021FP		SYSTEM RESET		04
	IC108	XN797A00	IC	NJM2082M(T1)		OP AMP		02
	IC109	XD830A00	IC	SN74HC04NSR		INVERTER		01
	IC110	XC725A00	IC	SN74HC14NSR		INVERTER		03
	IC111	XE165A00	IC	SN74HC00NSR		NAND		01
	IC112	XD833A00	IC	SN74HC32NSR		OR		01
	IC121	XD838A00	IC	SN74HC245NSR		BUFFER		04
	IC122	XQ042A00	IC	SN74HC374ANSR		D-FF		03
	IC123	XD836A00	IC	SN74HC174NSR		D FF		02
	IC124	XD835A00	IC	SN74HC138NSR		DECODER		02
	IC125	XD838A00	IC	SN74HC245NSR		BUFFER		04
	IC131	XD838A00	IC	SN74HC245NSR		BUFFER		04

*: New Parts

RANK: Japan only

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	IC132	**XH223A00**	IC	SN74HC273NSR		D-FF		01
	IC133	**XJ467A00**	IC	TD62503F		DRIVER		03
	IC134	**XJ467A00**	IC	TD62503F		DRIVER		03
	IC301	**VD473200**	Photo Coupler	6N137				05
	IC302	**XC725A00**	IC	SN74HC14NSR		INVERTER		03
	JK301	**VI466400**	DIN Connector	3DINYKF51-5046				04
	K101	**VB966900**	Style Pin	IMSA-6024				01
	-105	**VB966900**	Style Pin	IMSA-6024				01
	L101	**VS740100**	Chip Inductance	BLM21B751S 2125				03
	-144	**VS740100**	Chip Inductance	BLM21B751S 2125				03
	L151	**VS740100**	Chip Inductance	BLM21B751S 2125				03
	-169	**VS740100**	Chip Inductance	BLM21B751S 2125				03
	L307	**VS740100**	Chip Inductance	BLM21B751S 2125				03
	-309	**VS740100**	Chip Inductance	BLM21B751S 2125				03
	L311	**VS740100**	Chip Inductance	BLM21B751S 2125				03
	-315	**VS740100**	Chip Inductance	BLM21B751S 2125				03
	L316	**VS740100**	Chip Inductance	BLM21B751S 2125				03
	LD201	**V2693000**	LED	SLR-342YY3F YE		DIRECT RECALL		01
	-208	**V2693000**	LED	SLR-342YY3F YE				01
	LD209	**VR080300**	LED	SLR-342MG3F GR		CHECK		01
	LD210	**V2693000**	LED	SLR-342YY3F YE		UTILITY		01
	LD211	**VN135500**	LED Display	LB-303VA				06
	Q101	**VQ736500**	Digital Transistor	DTB123EK				01
	-104	**VQ736500**	Digital Transistor	DTB123EK				01
*	SW201	**V3835200**	Push Switch	2C-2S Non-Lock		DIRECT RECALL1-8,		
*	-225	**V3835200**	Push Switch	2C-2S Non-Lock		SCENE MEMORY Number0-9, ENTER,CHECK,STORE,MEMORY, RECALL,UTILITY		
*	X101	**V4584600**	Ceramic Resonator	20.00M CSTCV20.00				
*	X102	**V4440400**	Ceramic Resonator	11.2M CSTCV11.2				
*	X103	**V3743900**	Ceramic Resonator	30.00M CSTCV30MX				
		UB044100	Monolithic Ceramic Cap.	F 0.01 50V Z		C:141		01
		UB245100	Monolithic Ceramic Cap.	F 0.1 25V Z		C:102,104,109-111,113, 116-118,121-136,138, 139,142,143,145-149, 151-153,155,301,302, 304		01
		UF037100	Electrolytic Cap. (chip)	10 16V		C:112,144		01
		UG038100	Electrolytic Cap. (chip)	100 16V		C:101,103,105-108,114, 115,137,140,154,303		01
		RD154820	Carbon Resistor (chip)	82.0 1/4 J		R:142		01
		RD155150	Carbon Resistor (chip)	150.0 1/4 J		R:178-186		
		RD254330	Carbon Resistor (chip)	33.0 0.1 J		R:106-113,143		01
		RD255220	Carbon Resistor (chip)	220.0 0.1 J		R:139,164,165,301-305		01
		RD256100	Carbon Resistor (chip)	1.0K 0.1 J		R:156-163,169,306		01
		RD256220	Carbon Resistor (chip)	2.2K 0.1 J		R:144,148-155		01
		RD257220	Carbon Resistor (chip)	22.0K 0.1 J		R:101-105,114-130,132, 133,145-147,166-168, 170-177		01
		RD259470	Carbon Resistor (chip)	4.7M 0.1 J		R:131,140,141		01
		HV753100	Flame Proof C. Resistor	1.0 1/4 J		R:187		01
		VC744700	Metal Oxide Film Resistor	75.0 1W J		R:188,189		01
*		**V4313200**	Circuit Board	IN1		(XW201B0)		
*		**V4467500**	Push Button S	CD-GRAY/WHITE		SW101-104,201-204,301-304, 401-404,501-504,601-604, 701-704,801-804(+48V, 20dB,ϕ)	32	
*		**V4467700**	Push Button S	MX-GREEN/WHITE		SW105,205,305,405,505, 605,705,805(EQ)	8	
		VV307300	LED Spacer					01
	CN101	--	Connector, FFC	52045 35P TE		(VQ04840)		
	CN102	--	Connector, FFC	52045 35P TE		(VQ04840)		
	CN103	--	Connector, FFC	52045 6P TE		(VQ04700)		
	CN104	--	Connector, FFC	52045 6P TE		(VQ04700)		
	CN105	**VV066700**	Connector Base Post	M2426XX 7P TE				01
	CN106	**VV066700**	Connector Base Post	M2426XX 7P TE				01
	IC101	**XF195A00**	IC	NJM4580L		OP AMP		04
	IC102	**XF195A00**	IC	NJM4580L		OP AMP		04
	IC103	**XM356A00**	IC	NJM2068L-D		OP AMP		02

*: New Parts

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REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
-107	XM356A00	IC	NJM2068L-D		OP AMP		02
IC301	XF195A00	IC	NJM4580L		OP AMP		04
IC302	XF195A00	IC	NJM4580L		OP AMP		04
IC303	XM356A00	IC	NJM2068L-D		OP AMP		02
-307	XM356A00	IC	NJM2068L-D		OP AMP		02
IC501	XF195A00	IC	NJM4580L		OP AMP		04
IC502	XF195A00	IC	NJM4580L		OP AMP		04
IC503	XM356A00	IC	NJM2068L-D		OP AMP		02
-507	XM356A00	IC	NJM2068L-D		OP AMP		02
IC701	XF195A00	IC	NJM4580L		OP AMP		04
IC702	XF195A00	IC	NJM4580L		OP AMP		04
IC703	XM356A00	IC	NJM2068L-D		OP AMP		02
-707	XM356A00	IC	NJM2068L-D		OP AMP		02
LD101	VV620800	LED	LT311G-41-C13 RE		+48V		01
LD201	VV620800	LED	LT311G-41-C13 RE		+48V		01
LD301	VV620800	LED	LT311G-41-C13 RE		+48V		01
LD401	VV620800	LED	LT311G-41-C13 RE		+48V		01
LD501	VV620800	LED	LT311G-41-C13 RE		+48V		01
LD601	VV620800	LED	LT311G-41-C13 RE		+48V		01
LD701	VV620800	LED	LT311G-41-C13 RE		+48V		01
LD801	VV620800	LED	LT311G-41-C13 RE		+48V		01
Q101	IC224030	Transistor	2SC2240 GR,BL				01
Q102	IC224030	Transistor	2SC2240 GR,BL				01
Q201	IC224030	Transistor	2SC2240 GR,BL				01
Q202	IC224030	Transistor	2SC2240 GR,BL				01
Q301	IC224030	Transistor	2SC2240 GR,BL				01
Q302	IC224030	Transistor	2SC2240 GR,BL				01
Q401	IC224030	Transistor	2SC2240 GR,BL				01
Q402	IC224030	Transistor	2SC2240 GR,BL				01
Q403	IC1815M0	Transistor	2SC1815 Y,GR				01
Q501	IC224030	Transistor	2SC2240 GR,BL				01
Q502	IC224030	Transistor	2SC2240 GR,BL				01
Q601	IC224030	Transistor	2SC2240 GR,BL				01
Q602	IC224030	Transistor	2SC2240 GR,BL				01
Q701	IC224030	Transistor	2SC2240 GR,BL				01
Q702	IC224030	Transistor	2SC2240 GR,BL				01
Q801	IC224030	Transistor	2SC2240 GR,BL				01
Q802	IC224030	Transistor	2SC2240 GR,BL				01
Q803	IC1815M0	Transistor	2SC1815 Y,GR				01
SW101	VZ587700	Push Switch	2C-2S Lock		+48V,20dB,ϕ,/80,EQ		01
-105	VZ587700	Push Switch	2C-2S Lock				01
SW201	VZ587700	Push Switch	2C-2S Lock		+48V,20dB,ϕ,/80,EQ		01
-205	VZ587700	Push Switch	2C-2S Lock				01
SW301	VZ587700	Push Switch	2C-2S Lock		+48V,20dB,ϕ,/80,EQ		01
-305	VZ587700	Push Switch	2C-2S Lock				01
SW401	VZ587700	Push Switch	2C-2S Lock		+48V,20dB,ϕ,/80,EQ		01
-405	VZ587700	Push Switch	2C-2S Lock				01
SW501	VZ587700	Push Switch	2C-2S Lock		+48V,20dB,ϕ,/80,EQ		01
-505	VZ587700	Push Switch	2C-2S Lock				01
SW601	VZ587700	Push Switch	2C-2S Lock		+48V,20dB,ϕ,/80,EQ		01
-605	VZ587700	Push Switch	2C-2S Lock				01
SW701	VZ587700	Push Switch	2C-2S Lock		+48V,20dB,ϕ,/80,EQ		01
-705	VZ587700	Push Switch	2C-2S Lock				01
SW801	VZ587700	Push Switch	2C-2S Lock		+48V,20dB,ϕ,/80,EQ		01
-805	VZ587700	Push Switch	2C-2S Lock				01
VR101	VU804500	Rotary Variable Resistor	RD 5.0K RK09K113		GAIN		04
VR102	V3161000	Rotary Variable Resistor	B 50.0K RK09D113		EQ(LO)		04
VR103	V3161000	Rotary Variable Resistor	B 50.0K RK09D113		EQ(HI)		04
VR104	VZ611200	Rotary Variable Resistor	C 100K RK12L123		EQ(HI-MID)		05
VR105	V3161100	Rotary Variable Resistor	W 20.0K RK09D113		EQ(HI-MID)		04
VR106	VZ611200	Rotary Variable Resistor	C 100K RK12L123		EQ(LO-MID)		05
VR107	V3161100	Rotary Variable Resistor	W 20.0K RK09D113		EQ(LO-MID)		04
VR201	VU804500	Rotary Variable Resistor	RD 5.0K RK09K113		GAIN		04
VR202	V3161000	Rotary Variable Resistor	B 50.0K RK09D113		EQ(LO)		04
VR203	V3161000	Rotary Variable Resistor	B 50.0K RK09D113		EQ(HI)		04
VR204	VZ611200	Rotary Variable Resistor	C 100K RK12L123		EQ(HI-MID)		05
VR205	V3161100	Rotary Variable Resistor	W 20.0K RK09D113		EQ(HI-MID)		04
VR206	VZ611200	Rotary Variable Resistor	C 100K RK12L123		EQ(LO-MID)		05
VR207	V3161100	Rotary Variable Resistor	W 20.0K RK09D113		EQ(LO-MID)		04
VR301	VU804500	Rotary Variable Resistor	RD 5.0K RK09K113		GAIN		04

✱: New Parts

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REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
VR302	**V3161000**	Rotary Variable Resistor	B 50.0K RK09D113		EQ(LO)		04
VR303	**V3161000**	Rotary Variable Resistor	B 50.0K RK09D113		EQ(HI)		04
VR304	**VZ611200**	Rotary Variable Resistor	C 100K RK12L123		EQ(HI-MID)		05
VR305	**V3161100**	Rotary Variable Resistor	W 20.0K RK09D113		EQ(HI-MID)		04
VR306	**VZ611200**	Rotary Variable Resistor	C 100K RK12L123		EQ(LO-MID)		05
VR307	**V3161100**	Rotary Variable Resistor	W 20.0K RK09D113		EQ(LO-MID)		04
VR401	**VU804500**	Rotary Variable Resistor	RD 5.0K RK09K113		GAIN		04
VR402	**V3161000**	Rotary Variable Resistor	B 50.0K RK09D113		EQ(LO)		04
VR403	**V3161000**	Rotary Variable Resistor	B 50.0K RK09D113		EQ(HI)		04
VR404	**VZ611200**	Rotary Variable Resistor	C 100K RK12L123		EQ(HI-MID)		05
VR405	**V3161100**	Rotary Variable Resistor	W 20.0K RK09D113		EQ(HI-MID)		04
VR406	**VZ611200**	Rotary Variable Resistor	C 100K RK12L123		EQ(LO-MID)		05
VR407	**V3161100**	Rotary Variable Resistor	W 20.0K RK09D113		EQ(LO-MID)		04
VR501	**VU804500**	Rotary Variable Resistor	RD 5.0K RK09K113		GAIN		04
VR502	**V3161000**	Rotary Variable Resistor	B 50.0K RK09D113		EQ(LO)		04
VR503	**V3161000**	Rotary Variable Resistor	B 50.0K RK09D113		EQ(HI)		04
VR504	**VZ611200**	Rotary Variable Resistor	C 100K RK12L123		EQ(HI-MID)		05
VR505	**V3161100**	Rotary Variable Resistor	W 20.0K RK09D113		EQ(HI-MID)		04
VR506	**VZ611200**	Rotary Variable Resistor	C 100K RK12L123		EQ(LO-MID)		05
VR507	**V3161100**	Rotary Variable Resistor	W 20.0K RK09D113		EQ(LO-MID)		04
VR601	**VU804500**	Rotary Variable Resistor	RD 5.0K RK09K113		GAIN		04
VR602	**V3161000**	Rotary Variable Resistor	B 50.0K RK09D113		EQ(LO)		04
VR603	**V3161000**	Rotary Variable Resistor	B 50.0K RK09D113		EQ(HI)		04
VR604	**VZ611200**	Rotary Variable Resistor	C 100K RK12L123		EQ(HI-MID)		05
VR605	**V3161100**	Rotary Variable Resistor	W 20.0K RK09D113		EQ(HI-MID)		04
VR606	**VZ611200**	Rotary Variable Resistor	C 100K RK12L123		EQ(LO-MID)		05
VR607	**V3161100**	Rotary Variable Resistor	W 20.0K RK09D113		EQ(LO-MID)		04
VR701	**VU804500**	Rotary Variable Resistor	RD 5.0K RK09K113		GAIN		04
VR702	**V3161000**	Rotary Variable Resistor	B 50.0K RK09D113		EQ(LO)		04
VR703	**V3161000**	Rotary Variable Resistor	B 50.0K RK09D113		EQ(HI)		04
VR704	**VZ611200**	Rotary Variable Resistor	C 100K RK12L123		EQ(HI-MID)		05
VR705	**V3161100**	Rotary Variable Resistor	W 20.0K RK09D113		EQ(HI-MID)		04
VR706	**VZ611200**	Rotary Variable Resistor	C 100K RK12L123		EQ(LO-MID)		05
VR707	**V3161100**	Rotary Variable Resistor	W 20.0K RK09D113		EQ(LO-MID)		04
VR801	**VU804500**	Rotary Variable Resistor	RD 5.0K RK09K113		GAIN		04
VR802	**V3161000**	Rotary Variable Resistor	B 50.0K RK09D113		EQ(LO)		04
VR803	**V3161000**	Rotary Variable Resistor	B 50.0K RK09D113		EQ(HI)		04
VR804	**VZ611200**	Rotary Variable Resistor	C 100K RK12L123		EQ(HI-MID)		05
VR805	**V3161100**	Rotary Variable Resistor	W 20.0K RK09D113		EQ(HI-MID)		04
VR806	**VZ611200**	Rotary Variable Resistor	C 100K RK12L123		EQ(LO-MID)		05
VR807	**V3161100**	Rotary Variable Resistor	W 20.0K RK09D113		EQ(LO-MID)		04
	VV061500	Mylar Capacitor	0.012 50V J		C:131,231,331,431,531, 631,731,831		01
	VV062300	Mylar Capacitor	0.039 50V J		C:123,223,323,423,523, 523,623,723,823		01
	VV062700	Mylar Capacitor	0.082 50V J		C:115,116,215,216,315, 316,415,416,515,516, 615,616,715,716,815, 816		01
	VV190000	Mylar Capacitor	820P 50V J		C:124,224,324,424,524, 624,724,824		01
	VZ597000	Mylar Capacitor	2400P 50V J		C:127,227,327,427,527, 627,727,827		01
	VZ597100	Mylar Capacitor	6200P 50V J		C:128,228,328,428,528, 628,728,828		01
	VZ597200	Mylar Capacitor	0.03 50V J		C:132,232,332,432,532, 632,732,832		01
	VV064400	Monolithic Mylar Capacitor	0.82 50V J		C:114,214,314,414,514, 614,714,814		03
	VZ352700	Ceramic Capacitor-SL	10P 50V J		C:109,112,209,212,309, 312,409,412,509,512, 609,612,709,712,809, 812		01
	VZ352800	Ceramic Capacitor-SL	22P 50V J		C:130,134,230,234,330, 334,430,434,530,534, 630,634,730,734,830, 834		01
	VZ353000	Ceramic Capacitor-SL	33P 50V J		C:111,211,311,411,511, 611,711,811		01
	VZ353200	Ceramic Capacitor-SL	47P 50V J		C:120,125,220,225,320,		01

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REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
					325,420,425,520,525, 620,625,720,725,820, 825		
	VZ353500	Ceramic Capacitor-SL	100P 50V J		C:117,119,126,129,133, 217,219,226,229,233, 317,319,326,329,333, 417,419,426,429,433, 517,519,526,529,533, 617,619,626,629,633, 717,719,726,729,733, 817,819,826,829,833		01
	VZ353600	Ceramic Cap.-B	220P 50V K		C:110,210,310,410,510, 610,710,810		01
	VZ353700	Ceramic Cap.-B	330P 50V K		C:104,105,204,205,304, 305,404,405,504,505, 604,605,704,705,804, 805		
	VZ353800	Ceramic Cap.-B	470P 50V K		C:106,108,206,208,306, 308,406,408,506,508, 606,608,706,708,806, 808		01
	VZ354000	Ceramic Capacitor-F	0.01 50V Z		C:136-139,337-340, 537-540,737-740		01
	UJ847100	Electrolytic Cap.	10.00 25.0V		C:118,122,218,222,318, 322,418,422,518,522, 618,622,718,722,818, 822		01
	UJ847470	Electrolytic Cap.	47.00 25.0V		C:135,235,335,435,535, 635,735,835		01
	UJ867470	Electrolytic Cap.	47.00 50.0V		C:101,201,301,401,501, 601,701,801		01
	UR858100	Electrolytic Cap.	100 35V		C:141,142,341,342,541, 542,741,742		
*	**V4270900**	Electrolytic Cap.	10.00 25.0V		C:121,221,321,421,521, 621,721,821		
	VV330700	Electrolytic Cap.	470 10.0V		C:107,207,307,407,507, 607,707,807		
	VV488800	Electrolytic Cap.-LLM	10.00 50.0V		C:102,103,202,203,302, 303,402,403,502,503, 602,603,702,703,802, 803		01
*	**V4587500**	Electrolytic Cap.-NP	10.00 25.0V		C:113,213,313,413,513, 613,713,813		
	HF454100	Carbon Resistor	10.0 1/4 J		R:110,111,114,121,129, 133,149,210,211,214, 221,229,233,249,310, 311,314,321,329,333, 349,410,411,414,421, 429,433,449,510,511, 514,521,529,533,549, 610,611,614,621,629, 633,649,710,711,714, 721,729,733,749,810, 811,814,821,829,833, 849		01
	HF455100	Carbon Resistor	100.0 1/4 J		R:452,852		01
	HF456150	Carbon Resistor	1.5K 1/4 J		R:453,853		01
	HF456270	Carbon Resistor	2.7K 1/4 J		R:126,226,326,426,526, 626,726,826		01
	HF456470	Carbon Resistor	4.7K 1/4 J		R:137,237,337,437,537, 637,737,837		01
	HF456510	Carbon Resistor	5.1K 1/4 J		R:143,144,147,148,243, 244,247,248,343,344, 347,348,443,444,447, 448,543,544,547,548, 643,644,647,648,743, 744,747,748,843,844, 847,848		01
	HF456560	Carbon Resistor	5.6K 1/4 J		R:140,240,340,440,540, 640,740,840		01

*: New Parts

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REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	HF456820	Carbon Resistor	8.2K 1/4 J		R:141,142,145,146,241, 242,245,246,341,342, 345,346,441,442,445, 446,541,542,545,546, 641,642,645,646,741, 742,745,746,841,842, 845,846		01
	HF457100	Carbon Resistor	10.0K 1/4 J		R:131,132,136,139,231, 232,236,239,331,332, 336,339,431,432,436, 439,531,532,536,539, 631,632,636,639,731, 732,736,739,831,832, 836,839		01
	HF457120	Carbon Resistor	12.0K 1/4 J		R:127,227,327,427,454, 527,627,727,827,854		01
	HF457330	Carbon Resistor	33.0K 1/4 J		R:138,238,338,438,538, 638,738,838		01
	HF457470	Carbon Resistor	47.0K 1/4 J		R:150,250,350,450,550, 650,750,850		01
	HF457510	Carbon Resistor	51.0K 1/4 J		R:128,228,328,428,528, 628,728,828		01
	HF458100	Carbon Resistor	100.0K 1/4 J		R:102,202,302,402,502, 602,702,802		01
	HF458220	Carbon Resistor	220.0K 1/4 J		R:125,130,134,135,151, 225,230,234,235,251, 325,330,334,335,351, 425,430,434,435,451, 525,530,534,535,551, 625,630,634,635,651, 725,730,734,735,751, 825,830,834,835,851		01
	VV058400	Flame Proof C. Resistor	390.0 1/4 J		R:101,201,301,401,501, 601,701,801		01
	VV064900	Metal Film Resistor	20.0 1/4 F		R:117,217,317,417,517, 617,717,817		01
	VV065100	Metal Film Resistor	2.2K 1/4 F		R:115,116,215,216,315, 316,415,416,515,516, 615,616,715,716,815, 816		01
	VV065200	Metal Film Resistor	4.7K 1/4 F		R:105,107,123,124,205, 207,223,224,305,307, 323,324,405,407,423, 424,505,507,523,524, 605,607,623,624,705, 707,723,724,805,807, 823,824		05
	VV065300	Metal Film Resistor	6.8K 1/4 F		R:103,104,203,204,303, 304,403,404,503,504, 603,604,703,704,803, 804		01
	VV065400	Metal Film Resistor	8.2K 1/4 F		R:119,120,219,220,319, 320,419,420,519,520, 619,620,719,720,819, 820		01
	VV065500	Metal Film Resistor	10K 1/4 F		R:108,208,308,408,508, 608,708,808		01
	VV065900	Metal Film Resistor	24K 1/4 F		R:118,122,218,222,318, 322,418,422,518,522, 618,622,718,722,818, 822		01
	VV066100	Metal Film Resistor	47K 1/4 F		R:112,113,212,213,312, 313,412,413,512,513, 612,613,712,713,812, 813		01
	VZ598300	Metal Film Resistor	510.0 1/4 F		R:106,206,306,406,506, 606,706,806		01
•	**V4313300**	Circuit Board	IN2		(XV202B0)		03
	V3297600	Earth Terminal					

✱: New Parts

RANK: Japan only

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
*		**V4467500**	Push Button S	CD-GRAY/WHITE		SW102,103,202,203,302, 303,402,403,502,503,602, 603,702,703,802,803(PRE (AUX7-10,AUX11-14))	16	
*		**V4467800**	Push Button S	MX-BLUE/WHITE		SW101,201,301,401,501, 601,701,801(PRE(AUX3-6))	8	
	CN201	--	Connector, FFC	52045 6P TE		(VQ04700)		
	CN202	--	Connector, FFC	52045 6P TE		(VQ04700)		
	CN203	**VN394900**	Connector, FFC	52045 14P TE				01
	CN204	**VN394900**	Connector, FFC	52045 14P TE				01
	CN205	**VV066700**	Connector Base Post	M2426XX 7P TE				01
	CN206	**VV066700**	Connector Base Post	M2426XX 7P TE				01
	CN207	**VV067000**	Connector Base Post	M2426XX 10P TE				01
	CN208	**VV067000**	Connector Base Post	M2426XX 10P TE				01
	SW101	**VZ587700**	Push Switch	2C-2S Lock		PRE(AUX3-6,AUX7-10,		01
	-103	**VZ587700**	Push Switch	2C-2S Lock		AUX11-14)		01
	SW201	**VZ587700**	Push Switch	2C-2S Lock		PRE(AUX3-6,AUX7-10,		01
	-203	**VZ587700**	Push Switch	2C-2S Lock		AUX11-14)		01
	SW301	**VZ587700**	Push Switch	2C-2S Lock		PRE(AUX3-6,AUX7-10,		01
	-303	**VZ587700**	Push Switch	2C-2S Lock		AUX11-14)		01
	SW401	**VZ587700**	Push Switch	2C-2S Lock		PRE(AUX3-6,AUX7-10,		01
	-403	**VZ587700**	Push Switch	2C-2S Lock		AUX11-14)		01
	SW501	**VZ587700**	Push Switch	2C-2S Lock		PRE(AUX3-6,AUX7-10,		01
	-503	**VZ587700**	Push Switch	2C-2S Lock		AUX11-14)		01
	SW601	**VZ587700**	Push Switch	2C-2S Lock		PRE(AUX3-6,AUX7-10,		01
	-603	**VZ587700**	Push Switch	2C-2S Lock		AUX11-14)		01
	SW701	**VZ587700**	Push Switch	2C-2S Lock		PRE(AUX3-6,AUX7-10,		01
	-703	**VZ587700**	Push Switch	2C-2S Lock		AUX11-14)		01
	SW801	**VZ587700**	Push Switch	2C-2S Lock		PRE(AUX3-6,AUX7-10,		01
	-803	**VZ587700**	Push Switch	2C-2S Lock		AUX11-14)		01
	VR101	**VZ660000**	Rotary Variable Resistor	B 20K RK09D113		AUX1-14		01
	-114	**VZ660000**	Rotary Variable Resistor	B 20K RK09D113				01
	VR201	**VZ660000**	Rotary Variable Resistor	B 20K RK09D113		AUX1-14		01
	-214	**VZ660000**	Rotary Variable Resistor	B 20K RK09D113				01
	VR301	**VZ660000**	Rotary Variable Resistor	B 20K RK09D113		AUX1-14		01
	-314	**VZ660000**	Rotary Variable Resistor	B 20K RK09D113				01
	VR401	**VZ660000**	Rotary Variable Resistor	B 20K RK09D113		AUX1-14		01
	-414	**VZ660000**	Rotary Variable Resistor	B 20K RK09D113				01
	VR501	**VZ660000**	Rotary Variable Resistor	B 20K RK09D113		AUX1-14		01
	-514	**VZ660000**	Rotary Variable Resistor	B 20K RK09D113				01
	VR601	**VZ660000**	Rotary Variable Resistor	B 20K RK09D113		AUX1-14		01
	-614	**VZ660000**	Rotary Variable Resistor	B 20K RK09D113				01
	VR701	**VZ660000**	Rotary Variable Resistor	B 20K RK09D113		AUX1-14		01
	-714	**VZ660000**	Rotary Variable Resistor	B 20K RK09D113				01
	VR801	**VZ660000**	Rotary Variable Resistor	B 20K RK09D113		AUX1-14		01
	-814	**VZ660000**	Rotary Variable Resistor	B 20K RK09D113				01
		VZ353900	Ceramic Cap.-B	1000P 50V K		C:101-112		01
		HF457180	Carbon Resistor	18.0K 1/4 J		R:101-114,201-214, 301-314,401-414, 501-514,601-614, 701-714,801,814		01
*		**V4313500**	Circuit Board	IN3		(XW203B0)		
		V3297600	Earth Terminal					03
*		**V4467500**	Push Button S	CD-GRAY/WHITE		SW102-105,202-205,302-305, 402-405,502-505,602-605, 702-705,802-805(1-2,3-4, 5-6,7-8)	32	
*		**V4468000**	Push Button S	RED/WHITE		SW106,108,206,208,306, 308,406,408,506,508,606, 608,706,708,806,808 (ST,LCR)	16	
*		**V4468200**	Push Button S	YELLOW/WHITE		SW107,207,307,407,507, 607,707,807(MONO)	8	
*		**V4469400**	Push Button L	CL-GRAY/RED		SW101,201,301,401,501, 601,701,801(PFL)	8	
		VV307300	LED Spacer					01
		VZ968600	Button	NO.947 CD-GRAY		SW109,209,309,409,509, 609,709,809(ON/EDIT)	8	01
	CN301	**VN394900**	Connector, FFC	52045 14P TE				01

*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
CN302	**VN394900**	Connector, FFC	52045 14P TE				01
CN303	--	Connector, FFC	52045 6P TE		(VQ04700)		
-306	--	Connector, FFC	52045 6P TE		(VQ04700)		
CN307	**VP682200**	Connector, FFC	52045 8P TE				01
CN308	**VP127700**	Connector, FFC	52045 24P TE				01
CN309	**VP127700**	Connector, FFC	52045 24P TE				01
CN310	**VP682200**	Connector, FFC	52045 8P TE				01
CN311	--	Connector Base Post	M2426XX 13P TE		(VV06730)		
CN312	--	Connector Base Post	M2426XX 13P TE		(VV06730)		
CN313	**VV066500**	Connector Base Post	M2426XX 5P TE				01
CN314	**VV066500**	Connector Base Post	M2426XX 5P TE				01
CN315	**VV066400**	Connector Base Post	M2426XX 4P TE				01
CN316	**VV066500**	Connector Base Post	M2426XX 5P TE				01
CN317	**VV066300**	Connector Base Post	M2426XX 3P TE				01
D101	**VD631600**	Diode	1SS133,176,HSS104				01
D201	**VD631600**	Diode	1SS133,176,HSS104				01
D301	**VD631600**	Diode	1SS133,176,HSS104				01
D401	**VD631600**	Diode	1SS133,176,HSS104				01
D501	**VD631600**	Diode	1SS133,176,HSS104				01
D601	**VD631600**	Diode	1SS133,176,HSS104				01
D701	**VD631600**	Diode	1SS133,176,HSS104				01
D801	**VD631600**	Diode	1SS133,176,HSS104				01
IC101	**XF195A00**	IC	NJM4580L		OP AMP		04
IC102	**XF195A00**	IC	NJM4580L		OP AMP		04
IC103	**XA552A00**	IC	BA6144		METER RIVER		03
IC203	**XA552A00**	IC	BA6144		METER RIVER		03
IC301	**XF195A00**	IC	NJM4580L		OP AMP		04
IC302	**XF195A00**	IC	NJM4580L		OP AMP		04
IC303	**XA552A00**	IC	BA6144		METER RIVER		03
IC403	**XA552A00**	IC	BA6144		METER RIVER		03
IC501	**XF195A00**	IC	NJM4580L		OP AMP		04
IC502	**XF195A00**	IC	NJM4580L		OP AMP		04
IC503	**XA552A00**	IC	BA6144		METER RIVER		03
IC603	**XA552A00**	IC	BA6144		METER RIVER		03
IC701	**XF195A00**	IC	NJM4580L		OP AMP		04
IC702	**XF195A00**	IC	NJM4580L		OP AMP		04
IC703	**XA552A00**	IC	BA6144		METER RIVER		03
IC803	**XA552A00**	IC	BA6144		METER RIVER		03
LD101	**VV621000**	LED	LT321-41-C13 GR		SIGNAL		01
LD102	**VV938100**	LED	LT331-41-C13YE		NOM		01
LD103	**VV620800**	LED	LT311G-41-C13 RE		PEAK		01
LD104	**VV938100**	LED	LT331-41-C13YE		ON/EDIT(ON)		01
LD105	**VV621000**	LED	LT321-41-C13 GR		ON/EDIT(CHECK)		01
LD106	**VV938100**	LED	LT331-41-C13YE		PFL		01
LD107	**VV620800**	LED	LT311G-41-C13 RE		LCR		01
LD201	**VV621000**	LED	LT321-41-C13 GR		SIGNAL		01
LD202	**VV938100**	LED	LT331-41-C13YE		NOM		01
LD203	**VV620800**	LED	LT311G-41-C13 RE		PEAK		01
LD204	**VV938100**	LED	LT331-41-C13YE		ON/EDIT(ON)		01
LD205	**VV621000**	LED	LT321-41-C13 GR		ON/EDIT(CHECK)		01
LD206	**VV938100**	LED	LT331-41-C13YE		PFL		01
LD207	**VV620800**	LED	LT311G-41-C13 RE		LCR		01
LD301	**VV621000**	LED	LT321-41-C13 GR		SIGNAL		01
LD302	**VV938100**	LED	LT331-41-C13YE		NOM		01
LD303	**VV620800**	LED	LT311G-41-C13 RE		PEAK		01
LD304	**VV938100**	LED	LT331-41-C13YE		ON/EDIT(ON)		01
LD305	**VV621000**	LED	LT321-41-C13 GR		ON/EDIT(CHECK)		01
LD306	**VV938100**	LED	LT331-41-C13YE		PFL		01
LD307	**VV620800**	LED	LT311G-41-C13 RE		LCR		01
LD401	**VV621000**	LED	LT321-41-C13 GR		SIGNAL		01
LD402	**VV938100**	LED	LT331-41-C13YE		NOM		01
LD403	**VV620800**	LED	LT311G-41-C13 RE		PEAK		01
LD404	**VV938100**	LED	LT331-41-C13YE		ON/EDIT(ON)		01
LD405	**VV621000**	LED	LT321-41-C13 GR		ON/EDIT(CHECK)		01
LD406	**VV938100**	LED	LT331-41-C13YE		PFL		01
LD407	**VV620800**	LED	LT311G-41-C13 RE		LCR		01
LD501	**VV621000**	LED	LT321-41-C13 GR		SIGNAL		01
LD502	**VV938100**	LED	LT331-41-C13YE		NOM		01
LD503	**VV620800**	LED	LT311G-41-C13 RE		PEAK		01
LD504	**VV938100**	LED	LT331-41-C13YE		ON/EDIT(ON)		01

✱: New Parts

RANK: Japan only

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	LD505	VV621000	LED	LT321-41-C13 GR		ON/EDIT(CHECK)		01
	LD506	VV938100	LED	LT331-41-C13 YE		PFL		01
	LD507	VV620800	LED	LT311G-41-C13 RE		LCR		01
	LD601	VV621000	LED	LT321-41-C13 GR		SIGNAL		01
	LD602	VV938100	LED	LT331-41-C13 YE		NOM		01
	LD603	VV620800	LED	LT311G-41-C13 RE		PEAK		01
	LD604	VV938100	LED	LT331-41-C13 YE		ON/EDIT(ON)		01
	LD605	VV621000	LED	LT321-41-C13 GR		ON/EDIT(CHECK)		01
	LD606	VV938100	LED	LT331-41-C13 YE		PFL		01
	LD607	VV620800	LED	LT311G-41-C13 RE		LCR		01
	LD701	VV621000	LED	LT321-41-C13 GR		SIGNAL		01
	LD702	VV938100	LED	LT331-41-C13 YE		NOM		01
	LD703	VV620800	LED	LT311G-41-C13 RE		PEAK		01
	LD704	VV938100	LED	LT331-41-C13 YE		ON/EDIT(ON)		01
	LD705	VV621000	LED	LT321-41-C13 GR		ON/EDIT(CHECK)		01
	LD706	VV938100	LED	LT331-41-C13 YE		PFL		01
	LD707	VV620800	LED	LT311G-41-C13 RE		LCR		01
	LD801	VV621000	LED	LT321-41-C13 GR		SIGNAL		01
	LD802	VV938100	LED	LT331-41-C13 YE		NOM		01
	LD803	VV620800	LED	LT311G-41-C13 RE		PEAK		01
	LD804	VV938100	LED	LT331-41-C13 YE		ON/EDIT(ON)		01
	LD805	VV621000	LED	LT321-41-C13 GR		ON/EDIT(CHECK)		01
	LD806	VV938100	LED	LT331-41-C13 YE		PFL		01
	LD807	VV620800	LED	LT311G-41-C13 RE		LCR		01
	Q401	IC1815M0	Transistor	2SC1815 Y,GR				01
	Q801	IC1815M0	Transistor	2SC1815 Y,GR				01
	RY101	VM640200	Relay	DC RY 12W-OH-K				05
	RY201	VM640200	Relay	DC RY 12W-OH-K				05
	RY301	VM640200	Relay	DC RY 12W-OH-K				05
	RY401	VM640200	Relay	DC RY 12W-OH-K				05
	RY501	VM640200	Relay	DC RY 12W-OH-K				05
	RY601	VM640200	Relay	DC RY 12W-OH-K				05
	RY701	VM640200	Relay	DC RY 12W-OH-K				05
	RY801	VM640200	Relay	DC RY 12W-OH-K				05
	SW101	VZ587700	Push Switch	2C-2S Lock		PFL,1-2,3-4,5-6,7-8,ST,		01
	-107	VZ587700	Push Switch	2C-2S Lock		MONO		01
	SW108	VZ251800	Push Switch	ESB68149		LCR		03
*	SW109	V3835200	Push Switch	2C-2S Non-Lock		ON/EDIT		
	SW201	VZ587700	Push Switch	2C-2S Lock		PFL,1-2,3-4,5-6,7-8,ST,		01
	-207	VZ587700	Push Switch	2C-2S Lock		MONO		01
	SW208	VZ251800	Push Switch	ESB68149		LCR		03
*	SW209	V3835200	Push Switch	2C-2S Non-Lock		ON/EDIT		
	SW301	VZ587700	Push Switch	2C-2S Lock		PFL,1-2,3-4,5-6,7-8,ST,		01
	-307	VZ587700	Push Switch	2C-2S Lock		MONO		01
	SW308	VZ251800	Push Switch	ESB68149		LCR		03
*	SW309	V3835200	Push Switch	2C-2S Non-Lock		ON/EDIT		
	SW401	VZ587700	Push Switch	2C-2S Lock		PFL,1-2,3-4,5-6,7-8,ST,		01
	-407	VZ587700	Push Switch	2C-2S Lock		MONO		01
	SW408	VZ251800	Push Switch	ESB68149		LCR		03
*	SW409	V3835200	Push Switch	2C-2S Non-Lock		ON/EDIT		
	SW501	VZ587700	Push Switch	2C-2S Lock		PFL,1-2,3-4,5-6,7-8,ST,		01
	-507	VZ587700	Push Switch	2C-2S Lock		MONO		01
	SW508	VZ251800	Push Switch	ESB68149		LCR		03
*	SW509	V3835200	Push Switch	2C-2S Non-Lock		ON/EDIT		
	SW601	VZ587700	Push Switch	2C-2S Lock		PFL,1-2,3-4,5-6,7-8,ST,		01
	-607	VZ587700	Push Switch	2C-2S Lock		MONO		01
	SW608	VZ251800	Push Switch	ESB68149		LCR		03
*	SW609	V3835200	Push Switch	2C-2S Non-Lock		ON/EDIT		
	SW701	VZ587700	Push Switch	2C-2S Lock		PFL,1-2,3-4,5-6,7-8,ST,		01
	-707	VZ587700	Push Switch	2C-2S Lock		MONO		01
	SW708	VZ251800	Push Switch	ESB68149		LCR		03
*	SW709	V3835200	Push Switch	2C-2S Non-Lock		ON/EDIT		
	SW801	VZ587700	Push Switch	2C-2S Lock		PFL,1-2,3-4,5-6,7-8,ST,		01
	-807	VZ587700	Push Switch	2C-2S Lock		MONO		01
	SW808	VZ251800	Push Switch	ESB68149		LCR		03
*	SW809	V3835200	Push Switch	2C-2S Non-Lock		ON/EDIT		
*	VR101	V5114600	Slide Variable Resistor	D 10.0K RSA0N11S		FADER		05
*	VR201	V5114600	Slide Variable Resistor	D 10.0K RSA0N11S		FADER		05
*	VR301	V5114600	Slide Variable Resistor	D 10.0K RSA0N11S		FADER		05
*	VR401	V5114600	Slide Variable Resistor	D 10.0K RSA0N11S		FADER		05

*: New Parts

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	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
*	VR501	**V5114600**	Slide Variable Resistor	D 10.0K RSA0N11S		FADER		05
*	VR601	**V5114600**	Slide Variable Resistor	D 10.0K RSA0N11S		FADER		05
*	VR701	**V5114600**	Slide Variable Resistor	D 10.0K RSA0N11S		FADER		05
*	VR801	**V5114600**	Slide Variable Resistor	D 10.0K RSA0N11S		FADER		05
		VZ353200	Ceramic Capacitor-SL	47P 50V J		C:104,204,304,404,504, 604,704,804		01
		VZ353400	Ceramic Capacitor-SL	68P 50V J		C:110,210,310,410,510, 610,710,810		01
		VZ353500	Ceramic Capacitor-SL	100P 50V J		C:102,103,108,109,202, 203,208,209,302,303, 308,309,402,403,408, 409,502,503,508,509, 602,603,608,609,702, 703,708,709,802,803, 808,809		01
		VZ353900	Ceramic Cap.-B	1000P 50V K		C:106,206,306,406,506, 606,706,806		01
		VZ354000	Ceramic Capacitor-F	0.01 50V Z		C:115-118,315-318, 515-518,715-718		01
		UJ847100	Electrolytic Cap.	10.00 25.0V		C:101,107,112-114,201, 207,212-214,301,307, 312-314,401,407, 412-414,501,507, 512-514,601,607, 612-614,701,707, 712-714,801,807,812-814		01
		UJ847470	Electrolytic Cap.	47.00 25.0V		C:105,111,205,211,305, 311,405,411,505,511, 605,611,705,711,805, 811		01
		HF454100	Carbon Resistor	10.0 1/4 J		R:113,213,313,413,513, 513,613,713,813		01
		HF454220	Carbon Resistor	22.0 1/4 J		R:103,106,203,206,303, 306,403,406,503,506, 603,606,703,706,803, 806		01
		HF455100	Carbon Resistor	100.0 1/4 J		R:118,218,318,418,437, 518,618,718,818,837		01
		HF455220	Carbon Resistor	220.0 1/4 J		R:108,110,208,210,308, 310,408,410,508,510, 608,610,708,710,808, 810		01
		HF456120	Carbon Resistor	1.2K 1/4 J		R:139-141,239-241, 339-341,439-441, 539-541,639-641, 739-741,839-841		01
		HF456150	Carbon Resistor	1.5K 1/4 J		R:436,836		01
		HF456180	Carbon Resistor	1.8K 1/4 J		R:117,134,138,217,234, 238,317,334,338,417, 434,438,517,534,538, 617,634,638,717,734, 738,817,834,838		01
		HF456470	Carbon Resistor	4.7K 1/4 J		R:111,133,211,233,311, 333,411,433,511,533, 611,633,711,733,811, 833		01
		HF456510	Carbon Resistor	5.1K 1/4 J		R:101,102,104,105,201, 202,204,205,301,302, 304,305,401,402,404, 405,501,502,504,505, 601,602,604,605,701, 702,704,705,801,802, 804,805		01
		HF457100	Carbon Resistor	10.0K 1/4 J		R:112,212,312,412,512, 612,712,812		01
		HF457120	Carbon Resistor	12.0K 1/4 J		R:435,835		01
		HF457180	Carbon Resistor	18.0K 1/4 J		R:119-130,219-230, 319-330,419-430, 519-530,619-630, 719-730,819-830		01

*: New Parts

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	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
		HF457220	Carbon Resistor	22.0K 1/4 J		R:131,231,331,431,531, 631,731,831		01
		HF457470	Carbon Resistor	47.0K 1/4 J		R:109,209,309,409,509, 609,709,809		01
		HF457560	Carbon Resistor	56.0K 1/4 J		R:132,232,332,432,532, 632,732,832		01
		HF458100	Carbon Resistor	100.0K 1/4 J		R:107,114-116,207, 214-216,307,314-316, 407,414-416,507, 514-516,607,614-616, 707,714-716,807,814-816		01
*		**AAX09010**	Circuit Board	IN4		(XW204B0)		
	CN401	--	Connector, FFC	52045 6P TE		(VQ04700)		
	-404	--	Connector, FFC	52045 6P TE		(VQ04700)		
	CN405	**VV067800**	Connector Base Post	M2426XXR 4P SE				01
	CN406	**VQ047500**	Connector, FFC	52045 20P TE				01
	CN407	**VQ047500**	Connector, FFC	52045 20P TE				01
	CN408	**VV067900**	Connector Base Post	M2426XXR 5P SE				01
*	CN409	**VV067700**	Connector Base Post	M2426XXR 3P SE				01
*	CN410	**VV067600**	Connector Base Post	M2426XXR 2P SE				
*	CN411	**VV067600**	Connector Base Post	M2426XXR 2P SE				
	IC101	**XP451A00**	IC	PM25 LZ95300		INTERFACE		04
	IC102	**IR000200**	IC	TC74HC02AP		NOR		03
	IC201	**XP451A00**	IC	PM25 LZ95300		INTERFACE		04
	IC301	**XP451A00**	IC	PM25 LZ95300		INTERFACE		04
	IC302	**IR000200**	IC	TC74HC02AP		NOR		03
	IC401	**XP451A00**	IC	PM25 LZ95300		INTERFACE		04
	Q101	**IC1815M0**	Transistor	2SC1815 Y,GR				01
	-104	**IC1815M0**	Transistor	2SC1815 Y,GR				01
	Q105	**IA101590**	Transistor	2SA1015 O,Y				01
	-108	**IA101590**	Transistor	2SA1015 O,Y				01
	Q109	**IC1815M0**	Transistor	2SC1815 Y,GR				01
	Q201	**IC1815M0**	Transistor	2SC1815 Y,GR				01
	-204	**IC1815M0**	Transistor	2SC1815 Y,GR				01
	Q205	**IA101590**	Transistor	2SA1015 O,Y				01
	-208	**IA101590**	Transistor	2SA1015 O,Y				01
	Q209	**IC1815M0**	Transistor	2SC1815 Y,GR				01
	Q301	**IC1815M0**	Transistor	2SC1815 Y,GR				01
	-304	**IC1815M0**	Transistor	2SC1815 Y,GR				01
	Q305	**IA101590**	Transistor	2SA1015 O,Y				01
	-308	**IA101590**	Transistor	2SA1015 O,Y				01
	Q309	**IC1815M0**	Transistor	2SC1815 Y,GR				01
	Q401	**IC1815M0**	Transistor	2SC1815 Y,GR				01
	-404	**IC1815M0**	Transistor	2SC1815 Y,GR				01
	Q405	**IA101590**	Transistor	2SA1015 O,Y				01
	-408	**IA101590**	Transistor	2SA1015 O,Y				01
	Q409	**IC1815M0**	Transistor	2SC1815 Y,GR				01
*	SW101	**V4584500**	Slide Switch	SSSF142NA1				02
*	SW102	**V4584400**	Slide Switch	SSSF122NA1				02
*		**V5398100**	Electrolytic Cap.	4.7 50.0V		C:111,112,211,212,311, 312,411,412		
		VZ353500	Ceramic Capacitor-SL	100P 50V J		C:104,105,204,205,304, 305,404,405		01
		VZ354000	Ceramic Capacitor-F	0.01 50V Z		C:107,307		01
		VZ354600	Monolithic Ceramic Cap.	0.1 50V Z		C:101-103,106,201-,203, 206,301-303,306, 401-403,406		01
		HF455100	Carbon Resistor	100.0 1/4 J		R:113,213,313,413		01
		HF456150	Carbon Resistor	1.5K 1/4 J		R:112,212,312,412		01
		HF457100	Carbon Resistor	10.0K 1/4 J		R:101-104,201-204, 301-304,401-404		01
		HF457120	Carbon Resistor	12.0K 1/4 J		R:111,211,311,411		01
		HF457470	Carbon Resistor	47.0K 1/4 J		R:107-110,207-210, 307-310,407-410		01
		HF458100	Carbon Resistor	100.0K 1/4 J		R:105,106,205,206,305, 306,405,406		01
*		**AAX08980**	Circuit Board	INJK		(XW206B0)		
	CN601	--	Connector, FFC	52045 35P TE		(VQ04840)		

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	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	CN602	--	Connector, FFC	52045 35P TE		(VQ04840)		
	JK101	**VU805200**	XLM Connector	XLR NC3FAV1-0		INPUT		04
	-108	**VU805200**	XLM Connector	XLR NC3FAV1-0				04
	JK109	**V2954500**	Phone Jack	LJ-0695-4R-A		INSERT I/O 0dB		02
	-116	**V2954500**	Phone Jack	LJ-0695-4R-A				02
		VZ353500	Ceramic Capacitor-SL	100P 50V J		C:101-116		01
		HF455330	Carbon Resistor	330.0 1/4 J		R:101-108		01
*		**AAX09000**	Circuit Board	INPAN		(XW205B0)		
		VV291400	Jumper Wire	0.6				01
	CN501	**VP682200**	Connector, FFC	52045 8P TE				01
	CN502	**VP127700**	Connector, FFC	52045 24P TE				01
	CN503	**VP127700**	Connector, FFC	52045 24P TE				01
	CN504	**VP682200**	Connector, FFC	52045 8P TE				01
*	VR101	**V3820800**	Rotary Variable Resistor	AC20K&TAC20K&T40K		PAN		
*	-108	**V3820800**	Rotary Variable Resistor	AC20K&TAC20K&T40K				
*		**AAX09080**	Circuit Board	ISRT 1,6/6		(XW217B0)		
*		**AAX09090**	Circuit Board	ISRT 2,3,4,5/6		(XW217B0)		
	CN101	**VP127700**	Connector, FFC	52045 24P TE				01
	CN102	**VV066200**	Connector Base Post	M2426XX 2P TE				01
	CN103	**VN394900**	Connector, FFC	52045 14P TE				01
	CN104	**VV066800**	Connector Base Post	M2426XX 8P TE				01
	CN105	**VV066600**	Connector Base Post	M2426XX 6P TE				01
	CN106	**VV066700**	Connector Base Post	M2426XX 7P TE				01
	CN107	**VV066400**	Connector Base Post	M2426XX 4P TE				01
	CN108	**VV067000**	Connector Base Post	M2426XX 10P TE				01
	CN109	**VV066900**	Connector Base Post	M2426XX 9P TE				01
	CN110	**VV066500**	Connector Base Post	M2426XX 5P TE				01
	CN111	**VV066300**	Connector Base Post	M2426XX 3P TE				01
	CN151	**VV066400**	Connector Base Post	M2426XX 4P TE				01
	CN152	**VV066300**	Connector Base Post	M2426XX 3P TE				01
	CN201	**VV067000**	Connector Base Post	M2426XX 10P TE				01
	CN202	**LB932040**	Base Post Connector	VH- 4P TE				01
	CN203	**VV066800**	Connector Base Post	M2426XX 8P TE				01
	CN204	**LB932040**	Base Post Connector	VH- 4P TE				01
	CN205	**VV066700**	Connector Base Post	M2426XX 7P TE				01
	CN206	**VV067200**	Connector Base Post	M2426XX 12P TE				01
	CN207	**LB932040**	Base Post Connector	VH- 4P TE				01
	CN208	**VV066800**	Connector Base Post	M2426XX 8P TE				01
	CN209	**VQ046400**	Connector, FFC	52044 35P SE				01
	CN210	**LB932040**	Base Post Connector	VH- 4P TE				01
	CN212	**VV066700**	Connector Base Post	M2426XX 7P TE				01
	CN213	**VV066500**	Connector Base Post	M2426XX 5P TE				01
	CN214	**VV067100**	Connector Base Post	M2426XX 11P TE				01
	CN215	**VV066600**	Connector Base Post	M2426XX 6P TE				01
	CN216	**VV066500**	Connector Base Post	M2426XX 5P TE				01
	CN217	**VV067000**	Connector Base Post	M2426XX 10P TE				01
	CN218	**VV067100**	Connector Base Post	M2426XX 11P TE				01
	CN219	**VV066500**	Connector Base Post	M2426XX 5P TE				01
	CN220	--	Connector Base Post	M2426XX 13P TE		(VV06730)		
	CN221	**VV066800**	Connector Base Post	M2426XX 8P TE				01
	CN222	**VV066900**	Connector Base Post	M2426XX 9P TE				01
	CN223	**VV066500**	Connector Base Post	M2426XX 5P TE				01
	CN224	**VV066300**	Connector Base Post	M2426XX 3P TE				01
	CN225	**VV066400**	Connector Base Post	M2426XX 4P TE				01
	CN227	**VV066200**	Connector Base Post	M2426XX 2P TE				01
	CN228	--	Connector Assembly	1018&1018 4P 160L		(V527060)		
	CN229	**LB932020**	Base Post Connector	VH- 2P TE				01
	CN230	**VZ005700**	Fasten Terminal	TP82223-22				01
	-233	**VZ005700**	Fasten Terminal	TP82223-22				01
	CN234	**VP127700**	Connector, FFC	52045 24P TE				01
	CN235	**VN394900**	Connector, FFC	52045 14P TE				01
	CN236	--	Connector Assembly	2426&1018 8P 250L		(V440690)		
	CN237	**VV066200**	Connector Base Post	M2426XX 2P TE				01
	CN238	**VV066400**	Connector Base Post	M2426XX 4P TE				01
	CN239	**VV066200**	Connector Base Post	M2426XX 2P TE				
	CN251	**VV067000**	Connector Base Post	M2426XX 10P TE				01
	CN252	**LB932020**	Base Post Connector	VH- 2P TE				01
	CN253	**VV066600**	Connector Base Post	M2426XX 6P TE				01

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REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
CN254	**LB932020**	Base Post Connector	VH- 2P TE				01
CN255	**VV066700**	Connector Base Post	M2426XX 7P TE				01
CN256	**VV067200**	Connector Base Post	M2426XX 12P TE				01
CN257	**LB932020**	Base Post Connector	VH- 2P TE				01
CN258	**VV066900**	Connector Base Post	M2426XX 9P TE				01
CN301	**VV067000**	Connector Base Post	M2426XX 10P TE				01
CN302	**LB932040**	Base Post Connector	VH- 4P TE				01
CN303	**VV066800**	Connector Base Post	M2426XX 8P TE				01
CN304	**LB932040**	Base Post Connector	VH- 4P TE				01
CN305	**VV066700**	Connector Base Post	M2426XX 7P TE				01
CN306	**VV067200**	Connector Base Post	M2426XX 12P TE				01
CN307	**LB932040**	Base Post Connector	VH- 4P TE				01
CN308	**VV066800**	Connector Base Post	M2426XX 8P TE				01
CN309	**VQ046400**	Connector, FFC	52044 35P SE				01
CN310	**LB932040**	Base Post Connector	VH- 4P TE				01
CN312	**VV067100**	Connector Base Post	M2426XX 11P TE				01
CN313	**VV066500**	Connector Base Post	M2426XX 5P TE				01
CN314	**VV066700**	Connector Base Post	M2426XX 7P TE				01
CN315	**VV066200**	Connector Base Post	M2426XX 2P TE				
CN401	**VQ047500**	Connector, FFC	52045 20P TE				01
-403	**VQ047500**	Connector, FFC	52045 20P TE				01
CN404	**VV066800**	Connector Base Post	M2426XX 8P TE				01
CN405	**VV067200**	Connector Base Post	M2426XX 12P TE				01
CN406	**VV066900**	Connector Base Post	M2426XX 9P TE				01
CN407	--	Connector Base Post	M2426XX 13P TE		(VV06730)		
CN408	**VV066200**	Connector Base Post	M2426XX 2P TE				01
CN409	**VV066600**	Connector Base Post	M2426XX 6P TE				01
CN501	**VQ045000**	Connector, FFC	52044 20P SE				01
CN502	**VQ047500**	Connector, FFC	52045 20P TE				01
D101	**VD631600**	Diode	1SS133,176,HSS104				01
-108	**VD631600**	Diode	1SS133,176,HSS104				01
D201	**VD631600**	Diode	1SS133,176,HSS104				01
-05	**VD631600**	Diode	1SS133,176,HSS104				01
EM201	**VV056900**	Noice Filter	ZJSR5101-223TA				01
-203	**VV056900**	Noice Filter	ZJSR5101-223TA				01
F201	**V2696300**	Fuse	SIP 4A 125V J/U/C				01
-207	**V2696300**	Fuse	SIP 4A 125V J/U/C				01
IC101	**XM356A00**	IC	NJM2068L-D		OP AMP		02
-104	**XM356A00**	IC	NJM2068L-D		OP AMP		02
IC111	**XM356A00**	IC	NJM2068L-D		OP AMP		02
-115	**XM356A00**	IC	NJM2068L-D		OP AMP		02
IC121	**XM356A00**	IC	NJM2068L-D		OP AMP		02
-124	**XM356A00**	IC	NJM2068L-D		OP AMP		02
IC201	**XM356A00**	IC	NJM2068L-D		OP AMP		02
-217	**XM356A00**	IC	NJM2068L-D		OP AMP		02
IC601	**XJ607A00**	IC	NJM7805FA		REGULATOR +5V		02
JK101	**VZ661000**	Phone Jack	JY-6313		INSERT I/O 0dB		02
-122	**VZ661000**	Phone Jack	JY-6313		SUB IN +4dB		02
K101	--	Phone Jack Holder			(VZ70940)		
-111	--	Phone Jack Holder			(VZ70940)		
K201	**V2402600**	Terminal Angle Bracket					01
-204	**V2402600**	Terminal Angle Bracket					01
K301	**V2402600**	Terminal Angle Bracket					01
K302	**V2402600**	Terminal Angle Bracket					01
K401	**VB966900**	Style Pin	IMSA-6024				01
Q101	**IA101590**	Transistor	2SA1015 O,Y				01
Q201	**IC1815M0**	Transistor	2SC1815 Y,GR				01
Q202	**IA101590**	Transistor	2SA1015 O,Y				01
Q203	**IC1815M0**	Transistor	2SC1815 Y,GR				01
Q204	**IA101590**	Transistor	2SA1015 O,Y				01
-206	**IA101590**	Transistor	2SA1015 O,Y				01
RY101	**VM640200**	Relay	DC RY 12W-OH-K				05
-108	**VM640200**	Relay	DC RY 12W-OH-K				05
RY201	**VM640200**	Relay	DC RY 12W-OH-K				05
* SW401	**V4584400**	Slide Switch	SSSF122NA1				
	VV062800	Mylar Capacitor	0.1 50V J		C:365,366,368,370,601,602		01
	VZ352800	Ceramic Capacitor-SL	22P 50V J		C:242,245,250,253,258, 261,266,269,274,277, 282,285,290,293		01
	VZ353200	Ceramic Capacitor-SL	47P 50V J		C:103,110,115,122,127,		01

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REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
					127,134,139,146,151, 157,161,167,171,177, 181,187,191,202,205, 210,213,218,221,226, 229,302,305,310,313,		
	VZ353500	Ceramic Capacitor-SL	100P 50V J		318,321,327,331,336, 340,343,402,405,408, 411,414,417,420,423 C:102,109,114,121,126, 133,138,145,150,156,		01
	VZ353600	Ceramic Cap.-B	220P 50V K		160,166,170,176,180, 186,190,401,404,407, 410,413,416,419,422 C:201,204,209,212,217, 220,225,228,241,244,		01
					249,252,257,260,265, 268,273,276,281,284, 289,292,301,304,309, 312,317,320,326,330, 335,339,342		
	VZ354000	Ceramic Capacitor-F	0.01 50V Z		C:105,106,117,118,129, 130,141,142,153,154, 163,164,173,174,183, 184,193,194,207,208, 215,216,223,224,231,		01
					232,247,248,255,256, 263,264,271,272,279, 280,287,288,295,296, 307,308,315,316,323, 324,333,334,337,338,		
					345,346,353,425-432		
	UJ639220	Electrolytic Cap.	2200 16.0V		C:369		02
	UJ659100	Electrolytic Cap.	1000 35.0V		C:361-364		02
	UJ838220	Electrolytic Cap.	220.00 16.0V		C:371-373		01
	UJ847100	Electrolytic Cap.	10.00 25.0V		C:351,352		01
	UJ847470	Electrolytic Cap.	47.00 25.0V		C:101,104,107,108, 111-113,116,119,120, 123-125,128,131,132, 135-137,140,143,144, 147-149,152,155,158,		01
					159,162,165,168,169, 172,175,178,179,182, 185,188,189,192, 195-197,203,206,211, 214,219,222,227,230,		
					243,246,251,254,259, 262,267,270,275,278, 283,286,291,294,303, 306,311,314,319,322, 325,328,329,332,341,		
					344,403,406,409,412, 415,418,421,424		
	UJ867470	Electrolytic Cap.	47.00 50.0V		C:367		01
	HF454100	Carbon Resistor	10.0 1/4 J		R:202,205,208,211,214, 217,220,223,232,235,		01
					238,241,244,247,250, 253,256,259,262,265, 268,271,303,307,311, 314,317,320,327,334, 341,346,601-617,623,		
					626,629,632,635,638, 641,644		
	HF456220	Carbon Resistor	2.2K 1/4 J		R:401		01
	HF456470	Carbon Resistor	4.7K 1/4 J		R:362,364-366,368,370-374		01
	HF457100	Carbon Resistor	10.0K 1/4 J		R:102,103,108,109,114, 115,120,121,126,127, 132,133,138,139,144, 145,150,151,154,155, 158,159,162,163,166, 167,170,171,174,175,		01

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REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
					178,179,182,183,191, 192,361,367,377,378, 621,622,624,625,627, 628,630,631,633,634, 636,637,639,640,642, 643		
	HF457180	Carbon Resistor	18.0K 1/4 J		R:201,204,207,210,213, 216,219,222,225-227, 302,306,310,313,316, 319,323-326,330-333, 336-340,343-345		01
	HF457220	Carbon Resistor	22.0K 1/4 J		R:375		01
	HF457300	Carbon Resistor	30.0K 1/4 J		R:301,305,309		01
	HF457360	Carbon Resistor	36.0K 1/4 J		R:231,234,237,240,243, 246,249,252,255,258, 261,264,267,270,273-286		01
	HF457470	Carbon Resistor	47.0K 1/4 J		R:363,369,376,391		01
	HF458100	Carbon Resistor	100.0K 1/4 J		R:104,106,110,112,116, 118,122,124,128,130, 134,136,140,142,146, 148,152,156,160,164, 168,172,176,180,184, 195-197,315,318,321		01
	HF458220	Carbon Resistor	220.0K 1/4 J		R:101,105,107,111,113, 117,119,123,125,129, 131,135,137,141,143, 147,149,153,157,161, 165,169,173,177,181, 233,236,239,242,245, 248,304,308,312,322, 328,329,335,342,347		01
	HF458470	Carbon Resistor	470.0K 1/4 J		R:193,194,203,206,209, 212,215,218,221,224, 251,254,257,260,263, 266,269,272,501-516		01
*		**V4314100**	Circuit Board	MAS1	(XW212B0)		
*		**V4467500**	Push Button S	CD-GRAY/WHITE (A7/G1-A14/G8(ON))	SW101,201,301,401,501, 601,701,801	8	
*		**V4469400**	Push Button L	CL-GRAY/RED 102,202,302,402,502, 602,702,802 (A7/G1-A14/G8(AFL))	SW901(GROUP/AUX FLIP).	9	
		VV307300	LED Spacer				01
	CN101	**VV066900**	Connector Base Post	M2426XX 9P TE			01
	CN102	**VV066800**	Connector Base Post	M2426XX 8P TE			01
	CN103	**VV066300**	Connector Base Post	M2426XX 3P TE			01
	CN104	**VV066200**	Connector Base Post	M2426XX 2P TE			01
	CN105	**VV067000**	Connector Base Post	M2426XX 10P TE			01
	CN106	**VP682200**	Connector, FFC	52045 8P TE			01
	CN107	--	Connector Base Post	M2426XX 13P TE	(VV06730)		
	CN108	**VV067000**	Connector Base Post	M2426XX 10P TE			01
	CN109	**VV066500**	Connector Base Post	M2426XX 5P TE			01
	IC101	**XM356A00**	IC	NJM2068L-D	OP AMP		02
	-103	**XM356A00**	IC	NJM2068L-D	OP AMP		02
	IC301	**XM356A00**	IC	NJM2068L-D	OP AMP		02
	-303	**XM356A00**	IC	NJM2068L-D	OP AMP		02
	IC501	**XM356A00**	IC	NJM2068L-D	OP AMP		02
	-503	**XM356A00**	IC	NJM2068L-D	OP AMP		02
	IC701	**XM356A00**	IC	NJM2068L-D	OP AMP		02
	-703	**XM356A00**	IC	NJM2068L-D	OP AMP		02
	IC901	**XF195A00**	IC	NJM4580L	OP AMP		04
	LD901	**VV621000**	LED	LT321-41-C13 GR	GROUP		01
	LD902	**VV938100**	LED	LT331-41-C13 YE	AUX		01
	LD903	**VV620800**	LED	LT311G-41-C13 RE	-48V		01
	LD904	**VV621000**	LED	LT321-41-C13 GR	-12V,+15V,-15V		01
	-906	**VV621000**	LED	LT321-41-C13 GR			01
	SW101	**VZ587700**	Push Switch	2C-2S Lock	A7/G1(ON)		01
	SW102	**VZ251800**	Push Switch	ESB68149	A7/G1(AFL)		03

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REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
SW201	**VZ587700**	Push Switch	2C-2S Lock		A8/G2(ON)		01
SW202	**VZ251800**	Push Switch	ESB68149		A8/G2(AFL)		03
SW301	**VZ587700**	Push Switch	2C-2S Lock		A9/G3(ON)		01
SW302	**VZ251800**	Push Switch	ESB68149		A9/G3(AFL)		03
SW401	**VZ587700**	Push Switch	2C-2S Lock		A10/G4(ON)		01
SW402	**VZ251800**	Push Switch	ESB68149		A10/G4(AFL)		03
SW501	**VZ587700**	Push Switch	2C-2S Lock		A11/G5(ON)		01
SW502	**VZ251800**	Push Switch	ESB68149		A11/G5(AFL)		03
SW601	**VZ587700**	Push Switch	2C-2S Lock		A12/G6(ON)		01
SW602	**VZ251800**	Push Switch	ESB68149		A12/G6(AFL)		03
SW701	**VZ587700**	Push Switch	2C-2S Lock		A13/G7(ON)		01
SW702	**VZ251800**	Push Switch	ESB68149		A13/G7(AFL)		03
SW801	**VZ587700**	Push Switch	2C-2S Lock		A14/G8(ON)		01
SW802	**VZ251800**	Push Switch	ESB68149		A14/G8(AFL)		03
SW901	**VZ587700**	Push Switch	2C-2S Lock		GROUP/AUX FLIP		01
VR101	**VU804600**	Rotary Variable Resistor	A 20.0K RK09K113		SUBIN(L,R),G1/A7-G8/A14,		04
-114	**VU804600**	Rotary Variable Resistor	A 20.0K RK09K113		ST(L,R),MONO/C,LEVEL		04
VR201	**VU804600**	Rotary Variable Resistor	A 20.0K RK09K113		SUBIN(L,R),G1/A7-G8/A14,		04
-214	**VU804600**	Rotary Variable Resistor	A 20.0K RK09K113		ST(L,R),MONO/C,LEVEL		04
VR301	**VU804600**	Rotary Variable Resistor	A 20.0K RK09K113		SUBIN(L,R),G1/A7-G8/A14,		04
-314	**VU804600**	Rotary Variable Resistor	A 20.0K RK09K113		ST(L,R),MONO/C,LEVEL		04
VR401	**VU804600**	Rotary Variable Resistor	A 20.0K RK09K113		SUBIN(L,R),G1/A7-G8/A14,		04
-414	**VU804600**	Rotary Variable Resistor	A 20.0K RK09K113		ST(L,R),MONO/C,LEVEL		04
VR501	**VU804600**	Rotary Variable Resistor	A 20.0K RK09K113		SUBIN(L,R),G1/A7-G8/A14,		04
-514	**VU804600**	Rotary Variable Resistor	A 20.0K RK09K113		ST(L,R),MONO/C,LEVEL		04
VR601	**VU804600**	Rotary Variable Resistor	A 20.0K RK09K113		SUBIN(L,R),G1/A7-G8/A14,		04
-614	**VU804600**	Rotary Variable Resistor	A 20.0K RK09K113		ST(L,R),MONO/C,LEVEL		04
VR701	**VU804600**	Rotary Variable Resistor	A 20.0K RK09K113		SUBIN(L,R),G1/A7-G8/A14,		04
-714	**VU804600**	Rotary Variable Resistor	A 20.0K RK09K113		ST(L,R),MONO/C,LEVEL		04
VR801	**VU804600**	Rotary Variable Resistor	A 20.0K RK09K113		SUBIN(L,R),G1/A7-G8/A14,		04
-814	**VU804600**	Rotary Variable Resistor	A 20.0K RK09K113		ST(L,R),MONO/C,LEVEL		04
ZD901	**VG443700**	Zener Diode	MTZ J 33.0B 33.0V				01
	VZ353200	Ceramic Capacitor-SL	47P 50V J		C:102-104,202-204, 302-304,402-404, 502-504,602-604, 702-704,802-804, 903-908		01
	VZ353400	Ceramic Capacitor-SL	68P 50V J		C:109,209,309,409,509, 609,709,809		01
	VZ353500	Ceramic Capacitor-SL	100P 50V J		C:107,108,207,208,307, 308,407,408,507,508, 607,608,707,708,807, 808		01
	VZ353600	Ceramic Cap.-B	220P 50V K		C:101,201,301,401,501, 604,701,801		01
	VZ353900	Ceramic Cap.-B	1000P 50V K		C:111,112,211,311,312, 411,511,512,611,711, 712,811,913		01
	VZ354000	Ceramic Capacitor-F	0.01 50V Z		C:113-116,313-316, 513-516,713-716, 911,912		01
	UJ847100	Electrolytic Cap.	10.00 25.0V		C:106,206,306,406,506, 606,706,806,901,902		01
	UJ847470	Electrolytic Cap.	47.00 25.0V		C:105,110,205,210,305, 310,405,410,505,510, 605,610,705,710,805, 810,909,910		01
	HF454100	Carbon Resistor	10.0 1/4 J		R:123,223,323,423,523, 623,723,823,909,910		01
	HF454470	Carbon Resistor	47.0 1/4 J		R:117,217,317,417,517, 617,717,817		01
	HF455100	Carbon Resistor	100.0 1/4 J		R:125,225,325,425,525, 625,725,825		01
	HF455220	Carbon Resistor	220.0 1/4 J		R:118,120,218,220,318, 320,418,420,518,520, 618,620,718,720,818, 820		01
	HF456180	Carbon Resistor	1.8K 1/4 J		R:913,914,916		01
	HF456200	Carbon Resistor	2.0K 1/4 J		R:917,918		01
	HF456220	Carbon Resistor	2.2K 1/4 J		R:915		01

✱: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	HF457100	Carbon Resistor	10.0K 1/4 J		R:121,122,221,222,321, 322,421,422,521,522, 621,622,721,722,821, 822,903,904,907,908		01
	HF457150	Carbon Resistor	15.0K 1/4 J		R:115,116,215,216,315, 316,415,416,515,516, 615,616,715,716,815, 816		01
	HF457160	Carbon Resistor	16.0K 1/4 J		R:901,902,905,906		01
	HF457180	Carbon Resistor	18.0K 1/4 J		R:101-114,119,126,127, 201-214,219,226,227, 301-314,319,326,327, 401-414,419,426,427, 501-514,519,526,527, 601-614,619,626,627, 701-714,719,726,727, 801-814,819,826,827		01
	HF458100	Carbon Resistor	100.0K 1/4 J		R:124,224,324,424,524, 624,724,824,911,912		01
*	**V4314200**	Circuit Board	MAS2		(XW213B0)		
*	**V4467500**	Push Button S	CD-GRAY/WHITE		SW151,251,351,451,551, 651,751,851 (A7/G1-A14/G8(ON)) SW906(OSCILLATOR(ON), SW909(AUX7-10),910(AUX11-14),913(MASTER PFL), 914(MONITOR(L+R))	13	
*	**V4467800**	Push Button S	MX-BLUE/WHITE		SW907(AUX1-2),908(AUX3-6)	2	
*	**V4468000**	Push Button S	RED/WHITE		SW911(ST)		
*	**V4468200**	Push Button S	YELLOW/WHITE		SW912(MONO/C)		
*	**V4469300**	Push Button L	CD-GRAY/WHITE		SW101(AUX1(ON)),201(AUX2 (ON)),301(AUX3(ON)), 401(AUX4(ON)),501(AUX5 (ON)),601(AUX6(ON)), 901(TALKBACK(ON))	7	
*	**V4469400**	Push Button L	CL-GRAY/RED		SW102(AUX1(AFL)),202(AUX2 (AFL)),302(AUX3(AFL)), 402(AUX4(AFL)),502(AUX5 (AFL)),602(AUX6(AFL)), 152(A7/G1(AFL)),252(A8/G2(AFL)),352(A9/G3 (AFL)),452(A10/G4 (AFL)),552(A11/G5(AFL)), 652(A12/G6(AFL)),752 (A13/G7(AFL)),852 (A14/G8(AFL))	14	
	VV307300	LED Spacer					01
	VZ968500	Button S	NO.947 CD-GRAY		SW902-905(OSCILLATOR(PINK, 100Hz,1kHz,10kHz)), 915(MASTER SELECT (G1-8/A7-14)),917(MASTER SELECT(A7-14/G1-8)), 918(MASTER SELECT (MATRIX))	7	01
	V2947200	Button S	MX-BLUE		SW916(AUX1-6)		01
CN201	**VP682200**	Connector, FFC	52045 8P TE				01
CN202	**VV066600**	Connector Base Post	M2426XX 6P TE				01
CN203	**VV066700**	Connector Base Post	M2426XX 7P TE				01
CN204	**VV066500**	Connector Base Post	M2426XX 5P TE				01
CN205	**VV066800**	Connector Base Post	M2426XX 8P TE				01
-207	**VV066800**	Connector Base Post	M2426XX 8P TE				01
CN208	**VV066900**	Connector Base Post	M2426XX 9P TE				01
CN209	**VV067100**	Connector Base Post	M2426XX 11P TE				01
CN210	**VV066500**	Connector Base Post	M2426XX 5P TE				01
CN211	**VV066200**	Connector Base Post	M2426XX 2P TE				01
CN212	**VV066400**	Connector Base Post	M2426XX 4P TE				01
CN213	**VV066300**	Connector Base Post	M2426XX 3P TE				01
CN214	**VV066700**	Connector Base Post	M2426XX 7P TE				01
CN215	**VV067000**	Connector Base Post	M2426XX 10P TE				01

*: New Parts

RANK: Japan only

■M2500 OVERALL CIRCUIT DIAGRAM CONTENTS <P.1>
BLOCK & LEVEL DIAGRAM
WIRING

P.1 ··· CONTENTS
P.2 ··· BLOCK & LEVEL DIAGRAM

P.3 ··· OVERALL CIRCUIT DIAGRAM (IN1, IN2, INJK)
P.4 ··· OVERALL CIRCUIT DIAGRAM (IN3)

P.5 ··· OVERALL CIRCUIT DIAGRAM
(IN4, INPAN, METER, CTRL 1/5, 2/5, 3/5, 4/5, 5/5)
P.6 ··· OVERALL CIRCUIT DIAGRAM (ST1, ST2)

P.7 ··· OVERALL CIRCUIT DIAGRAM (ST3, ST4, STJK)
P.8 ··· OVERALL CIRCUIT DIAGRAM (MAS1 1/2, MAS1 2/2, MAS4)

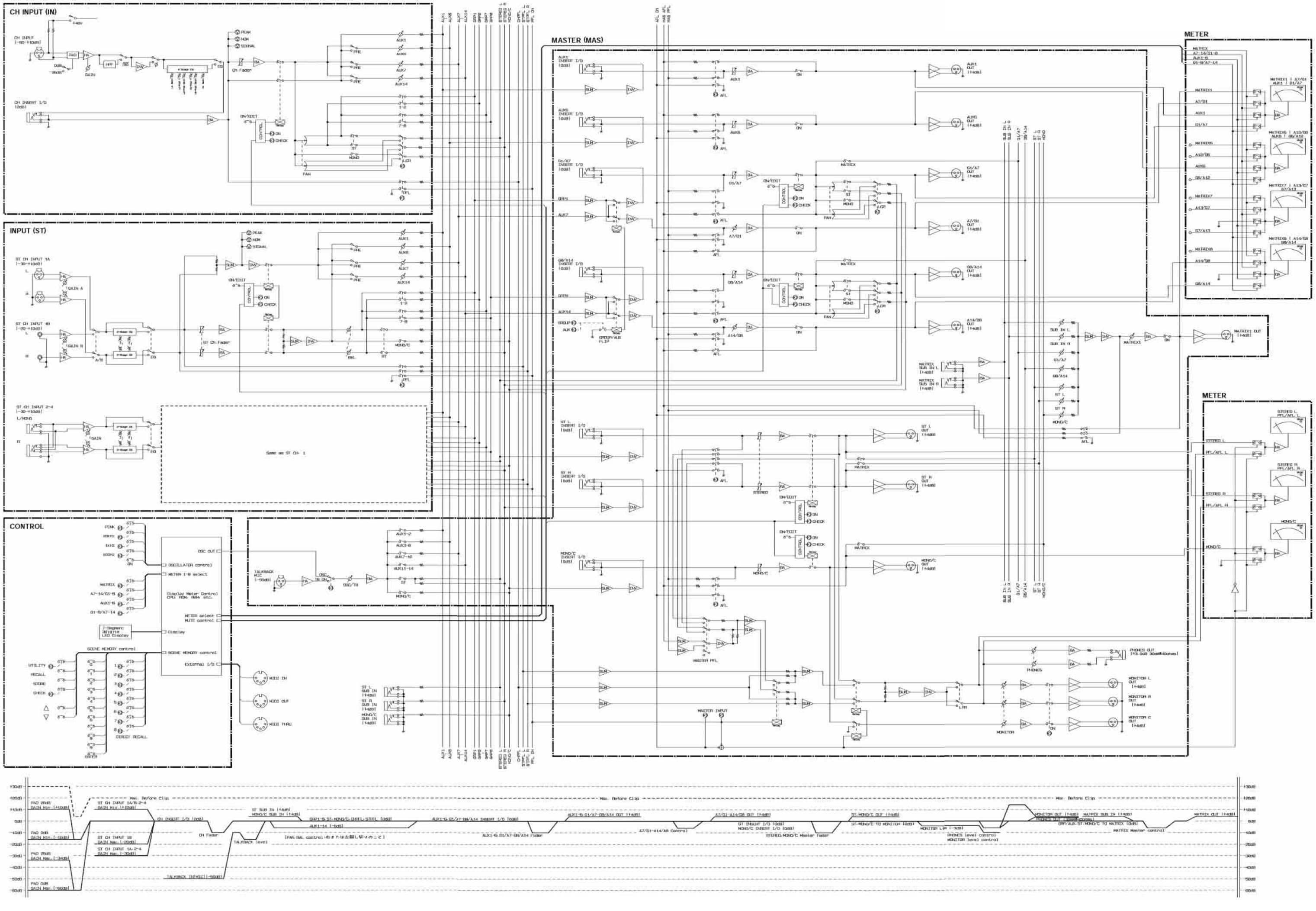
P.9 ··· OVERALL CIRCUIT DIAGRAM (MAS2)
P.10 ··· OVERALL CIRCUIT DIAGRAM (MAS3, MASPAN)

P.11 ··· OVERALL CIRCUIT DIAGRAM (ISRT 1/6, 2/6, 3/6, 4/6, 5/6, 6/6, MASOUT)
P.12 ··· WIRING

(マ): Mylar Capacitor
(セ): Ceramic Capacitor
(F): Metal Film Resistor
(フ): Flame Proof C. Resistor

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

■M2500 BLOCK & LEVEL DIAGRAM <P.2>



■M2500 OVERALL CIRCUIT DIAGRAM (IN1, IN2, INJK) <P.3>

INJK

JK101 NCJFAV1-10 … JK107 NCJFAV1-10

INPUT

INSERT I/O

LJ-0605-SF-A R1101 … R1107

C101 … C107 1000P

to IN1 CN101

CN601 52045-3545

to IN1 CN102

CN602 52045-3545

IN1

OP AMP

F-48V

PAD

GAIN

PHASE

LOW

HIGH

HH-F

LH-F

HH-GAIN

LH-GAIN

EQ

to INJK CN602

to IN2 CN002

NEXT P.C.B. (O2)

to IN1 CN106 or ISRT CN214 or NC [P.11 - L3]

to IN1 CN105 or ISRT CN212 or NC

NEXT P.C.B. (K2) [P.11 - H9]

IN2

NEXT P.C.B. (P7)

to IN2 CN006 or ISRT CN001 or NC [P.11 - K1]

EARTH TERMINAL to EARTH BAR

NEXT P.C.B. (P9)

to IN2 CN007 or ISRT CN003 or NC

ISRT-CN303 [P.11 - K1]

ISRT-CN305 [P.11 - L1]

NEXT P.C.B. (K7)

to IN2 CN005 or ISRT CN201 or NC [P.11 - K3]

NEXT P.C.B. (L9)

to IN2 CN008 or ISRT CN004 or NC

ISRT-CN203 [P.11 - K3]

ISRT-CN205 [P.11 - L3]

to IN1 CN103

to IN2 CN001 [P.4 - B4.5]

to IN2 CN002 [P.4 - I5]

to IN1 CN104

■M2500 OVERALL CIRCUIT DIAGRAM (IN3) <P.4>

IN3

to IN3 CN310 NEXT P.C.B. (P12)
0P: ISRT-CN306 308 ISRT-CN306 308 [P.11 - M1]
0P: NC ISRT-CN308 [P.11 - N1]

to IN4 CN401 [P.5 - E8]
to IN4 CN402 [P.5 - E8] (M3)
to IN4 CN403 [P.5 - G9] (M5) (M8) (M10)
to IN4 CN404 [P.5 - E8]
to IN2 CN203 [P.3 - M11]
to INPAN CN501 [P.5 - B2]
to INPAN CN502 [P.5 - B3,4]
to IN4 CN405 [P.5 - E10]

OP AMP
METER DRIVER
(B2)
(B3)
(H2)
EARTH TERMINAL to EARTH BAR
(O.P2)

to IN4 CN403 [P.5 - G8]
to IN2 CN204 [P.3 - O11]
to INPAN CN503 [P.5 - B5,6]
to IN4 CN404 [P.5 - G10]
to INPAN CN504 [P.5 - B7]
(H12)

NEXT P.C.B. (H1)
to IN3 CN311
0P: ISRT-CN309 308
NC [P.11 - L3,M3]

■M2500 OVERALL CIRCUIT DIAGRAM (IN4, INPAN, METER, CTRL 1/5, 2/5, 3/5, 4/5, 5/5)<P.5>

INPAN

to IN3 CN307 [P.4 - B5]

to IN3 CN308 [P.4 - B6]

to IN3 CN309 [P.4 - I5,6]

to IN3 CN310 [P.4 - I11]

METER

to GOOSE NECK

to METER or N.C [P.11 - I9]

to INSERT or to METER

to MASOUT

[P.11 - E6] to TSRT and METER

MULTIPLEXER

OP AMP

OP AMP

*1

	METER1	METER2-1/2	METER2-2/2
J101- 102	install	not install	not install
R201	not install	install	install
CN107	not install	install	install
CN104	8 P	4 P	4 P
other	——	——	*1

*1 mark ( ) are not install

CTRL 5/5

PhotoCoupler

INVERTER

MIDI IN

MIDI OUT

MIDI THRU

CTRL 4/5

UTL RECALL STORE CHECK 1 3 5 7 9 ENTER DOWN

CTRL 2/5

CTRL 3/5

CTRL 1/5

EPROM 512K

SRAM 256K

CPU

IC104 GATE ARRAY

SYSTEM RESET

OP AMP

OP AMP

BUFFER

D-FF

DECODER

NAND

OR

INVERTER

BUFFER

D-FF

DRIVER

DRIVER

BUFFER

D-FF

IC105 Y28526E-F DSP3

DAC

to ISRT CN405 [P.11 - M7]

NO USE(M2500)

to ISRT CN406 [P.11 - M7]

to MAIB CN409 [P.9 - J8]

to MAIB CN410 [P.9 - N7]

IN4

[P.4 - B2] to IN3 CN316

[P.4 - B3] to IN3 CN315

NEXT P.C.B. (F8) to IN4 CN411 or ISRT CN305 or NC [P.11 - M3]

NEXT P.C.B. (E8) to IN4 CN410 or ISRT CN306 or NC [P.11 - H9]

OP AMP

INTER FACE

to IN3 CN305 [P.4 - I2]

to IN3 CN317 [P.4 - B3]

to IN3 CN304 [P.4 - B7]

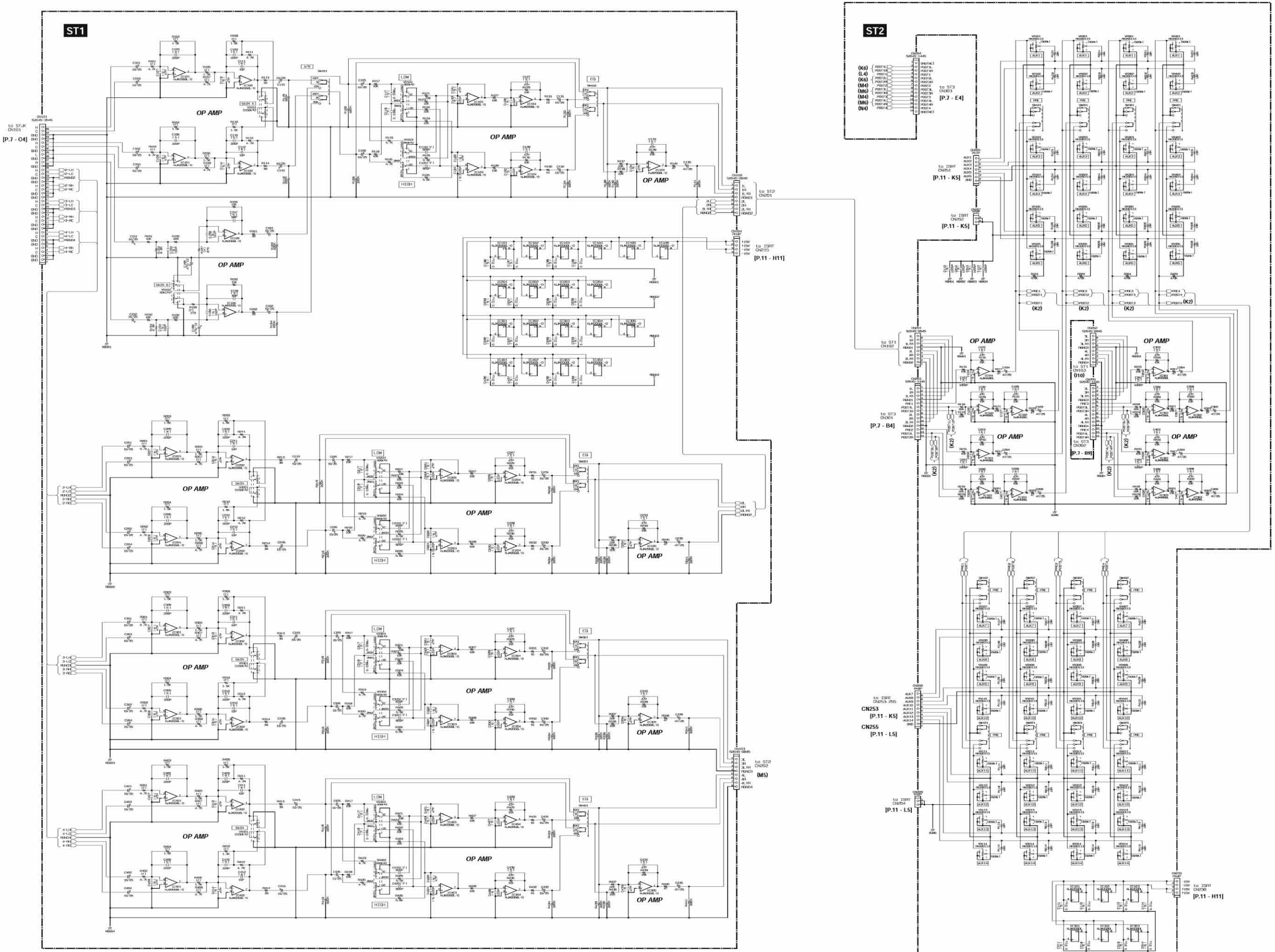
to IN3 CN306 [P.4 - I7]

NEXT P.C.B. (G11) to IN4 CN407 or ISRT CN502 or NC [P.11 - N6]

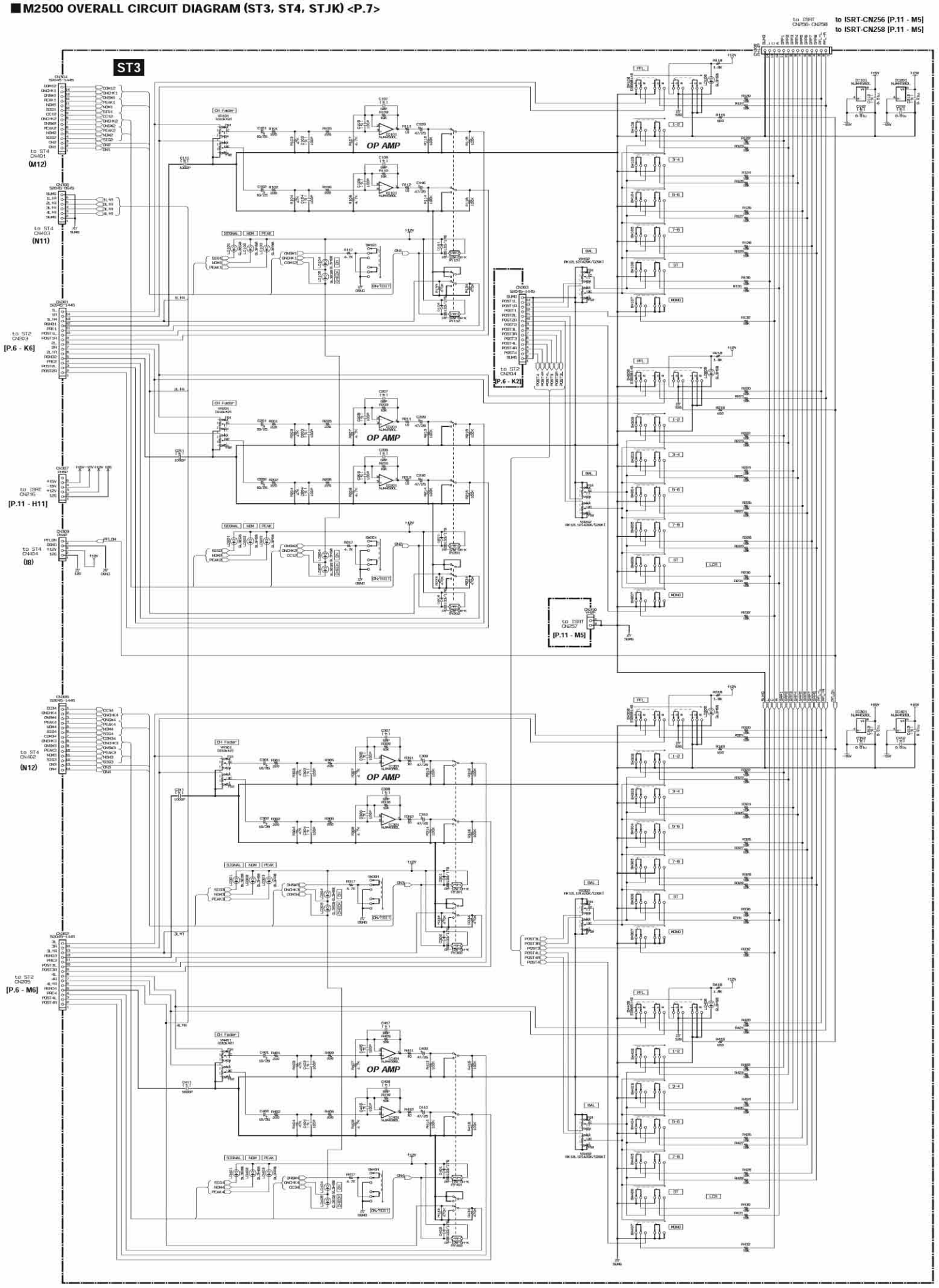
NEXT P.C.B. (A11) to IN4 CN408 or ISRT CN401 or NC [P.11 - K6]

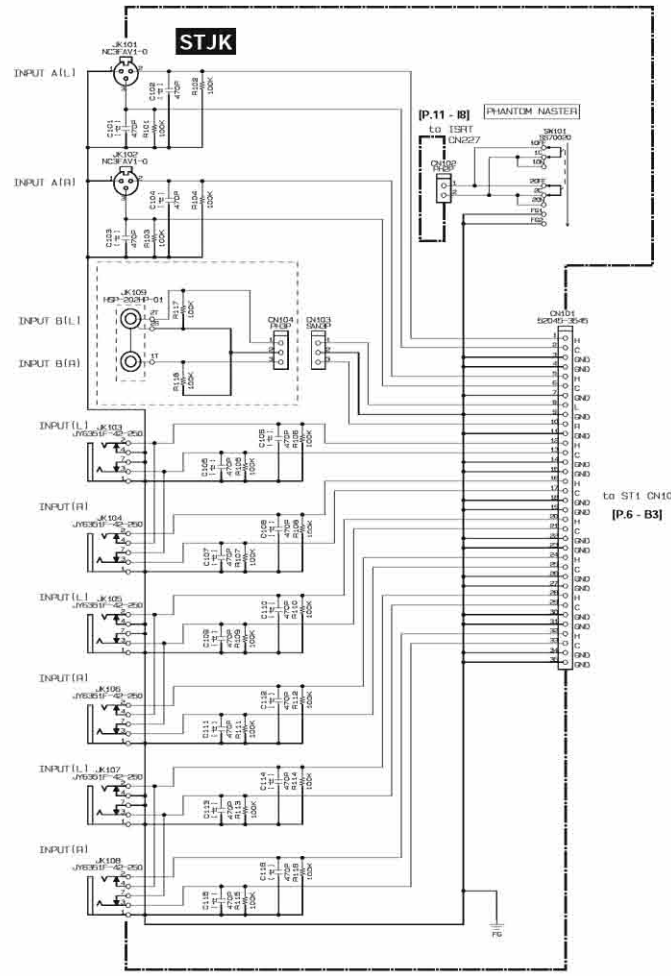
[P.11 - K8] to ISRT CN404

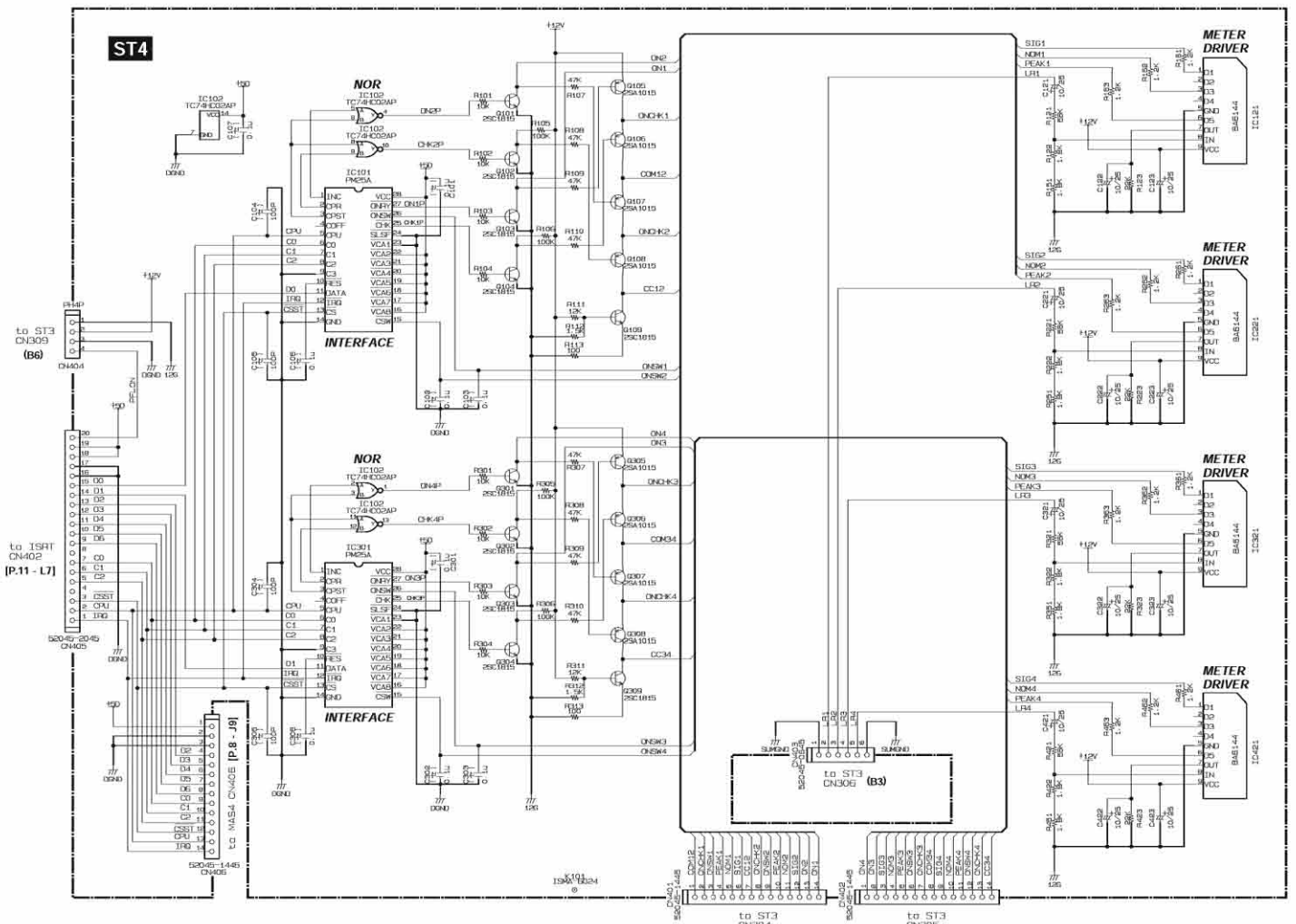
■M2500 OVERALL CIRCUIT DIAGRAM (ST1, ST2) <P.6>



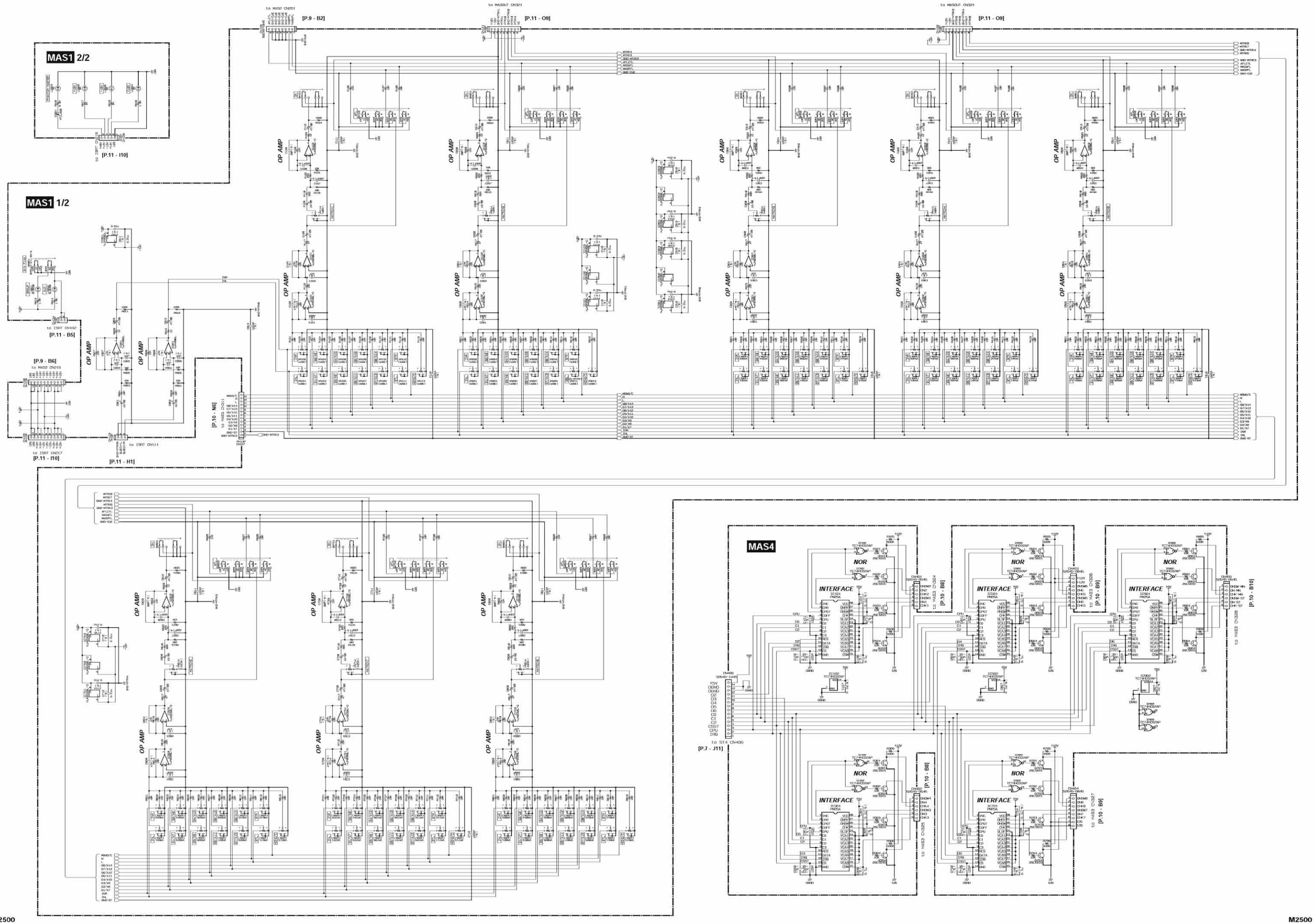
■M2500 OVERALL CIRCUIT DIAGRAM (ST3, ST4, STJK) <P.7>







■M2500 OVERALL CIRCUIT DIAGRAM (MAS1 1/2, MAS1 2/2, MAS4) <P.8>



■M2500 OVERALL CIRCUIT DIAGRAM (MAS2) <P.9>

MAS2

[P.11 - O9] to MASOUT CN321

[P.8 - E1] to MAS1 CN106

[P.10 - H11] to MAS3 CN313

[P.10 - H11] to MAS3 CN312

[P.8 - B6] to MAS1 CN108

[P.11 - G4] to ISRT CN109

[P.11 - E2] to ISRT CN105

[P.11 - O9] to MASOUT CN321

[P.11 - E4] to ISRT CN106

[P.10 - H8] to MAS3 CN309

[P.11 - G11] to ISRT CN225

[P.10 - M7] to MAS3 CN315

[P.11 - E12] to ISRT CN227

[P.10 - M6] to MAS3 CN320

[P.10 - M6] to MAS3 CN316

[P.11 - E10] to ISRT CN223

[P.10 - H8] to MAS3 CN318

[P.5 - P10] to CTRL CN123

[P.5 - P11] to CTRL CN124

[P.11 - L7] to ISRT CN408

[P.11 - B8] to ISRT CN222

[P.11 - D6] to ISRT I/S CN151

DECODER

OP AMP

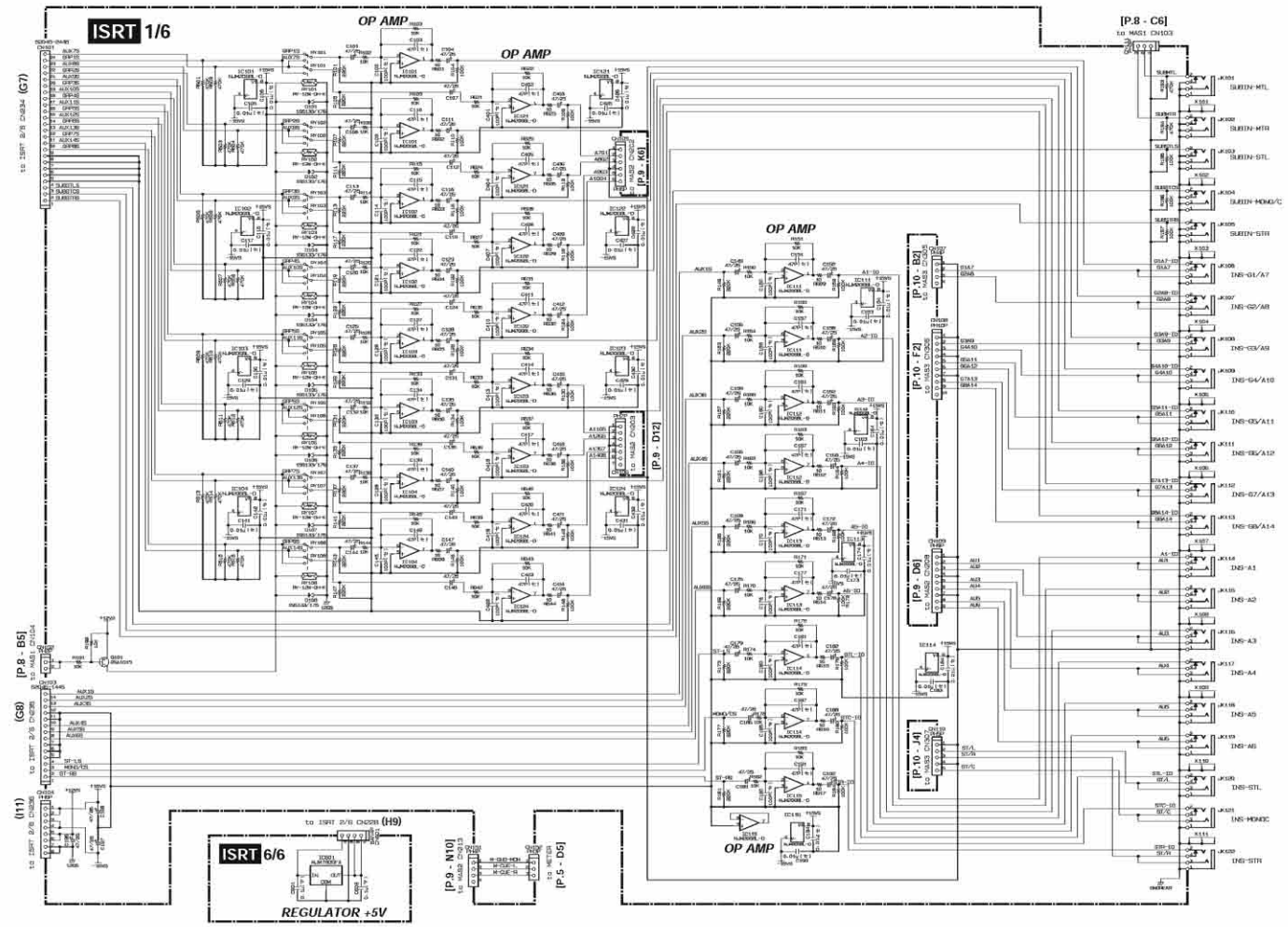
■M2500 OVERALL CIRCUIT DIAGRAM (MAS3, MASPAN) <P.10>

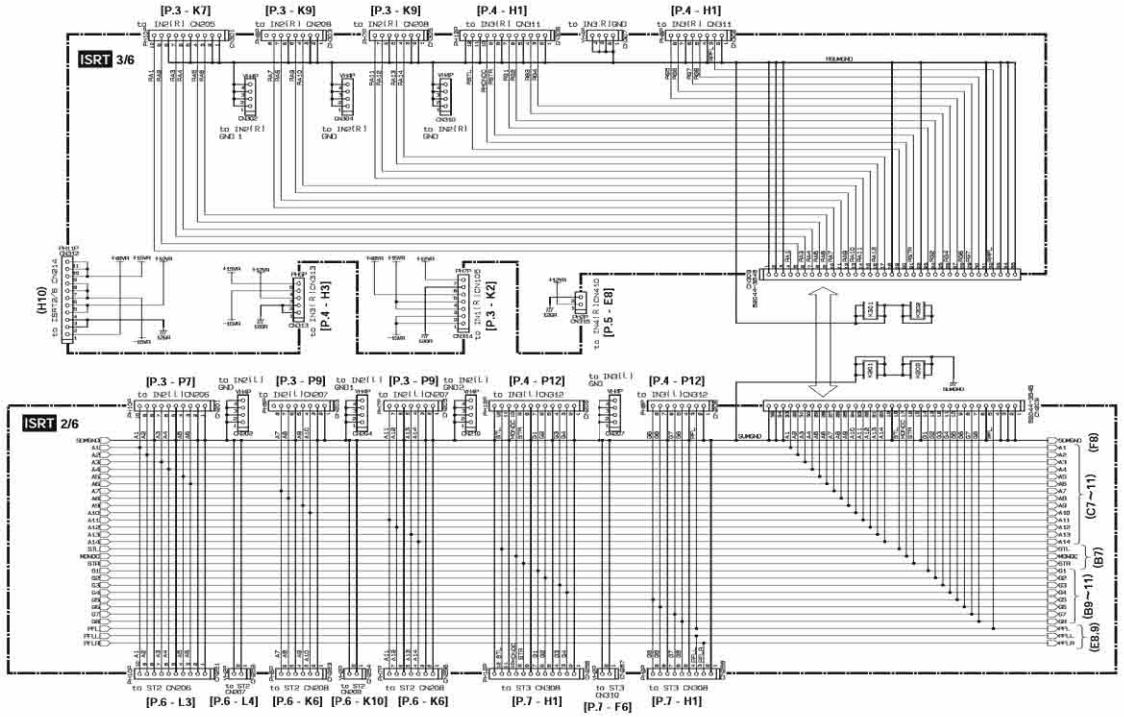
MAS3

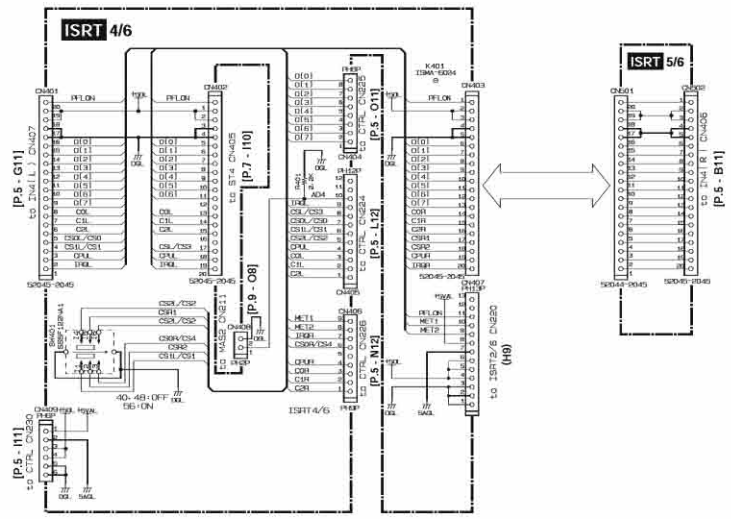
MASPAN

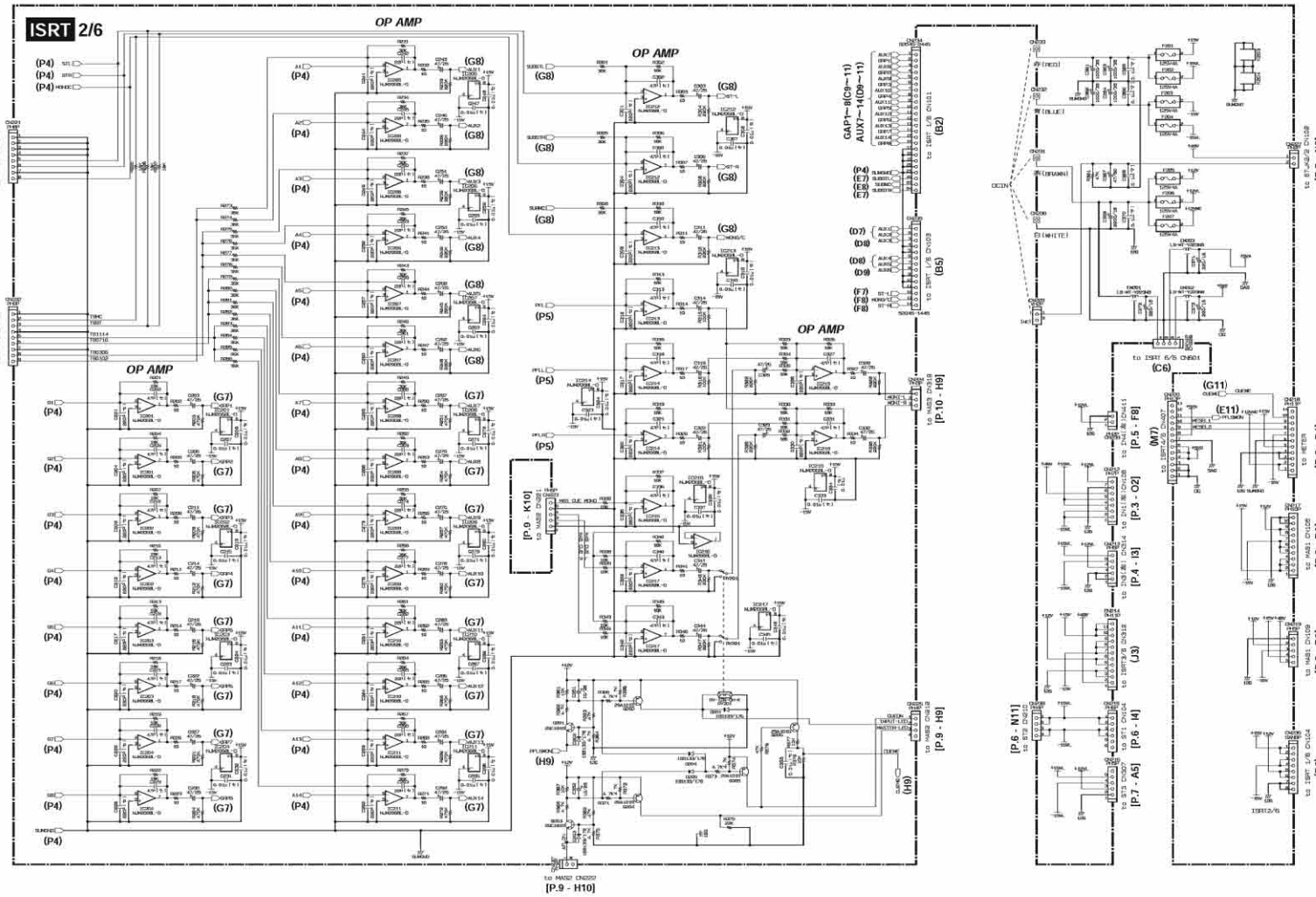
OP AMP

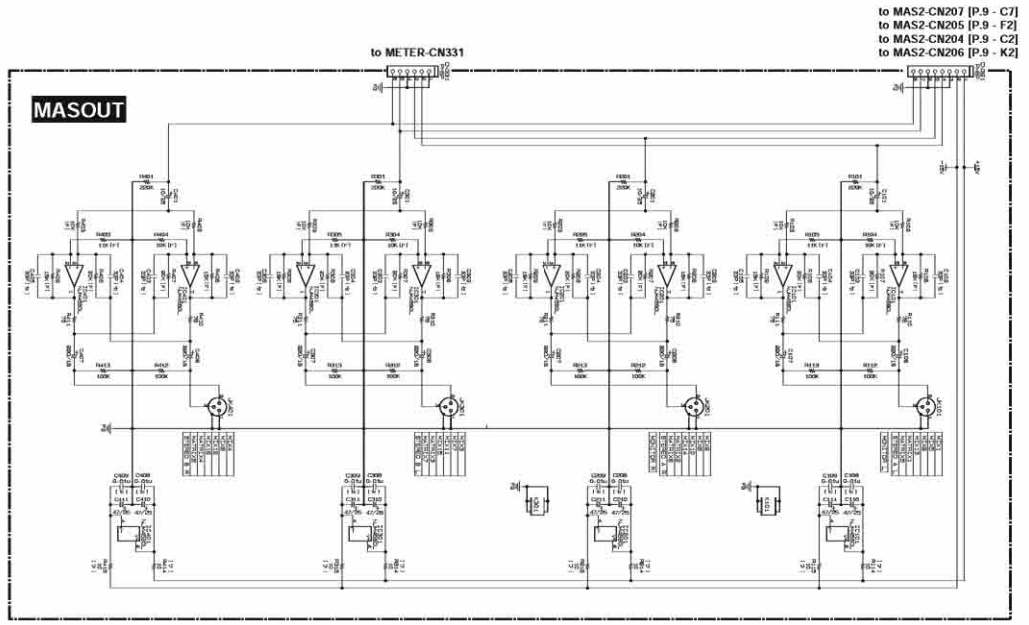
■M2500 OVERALL CIRCUIT DIAGRAM (ISRT 1/6, 2/6, 3/6, 4/5, 5/6, 6/6, MASOUT)

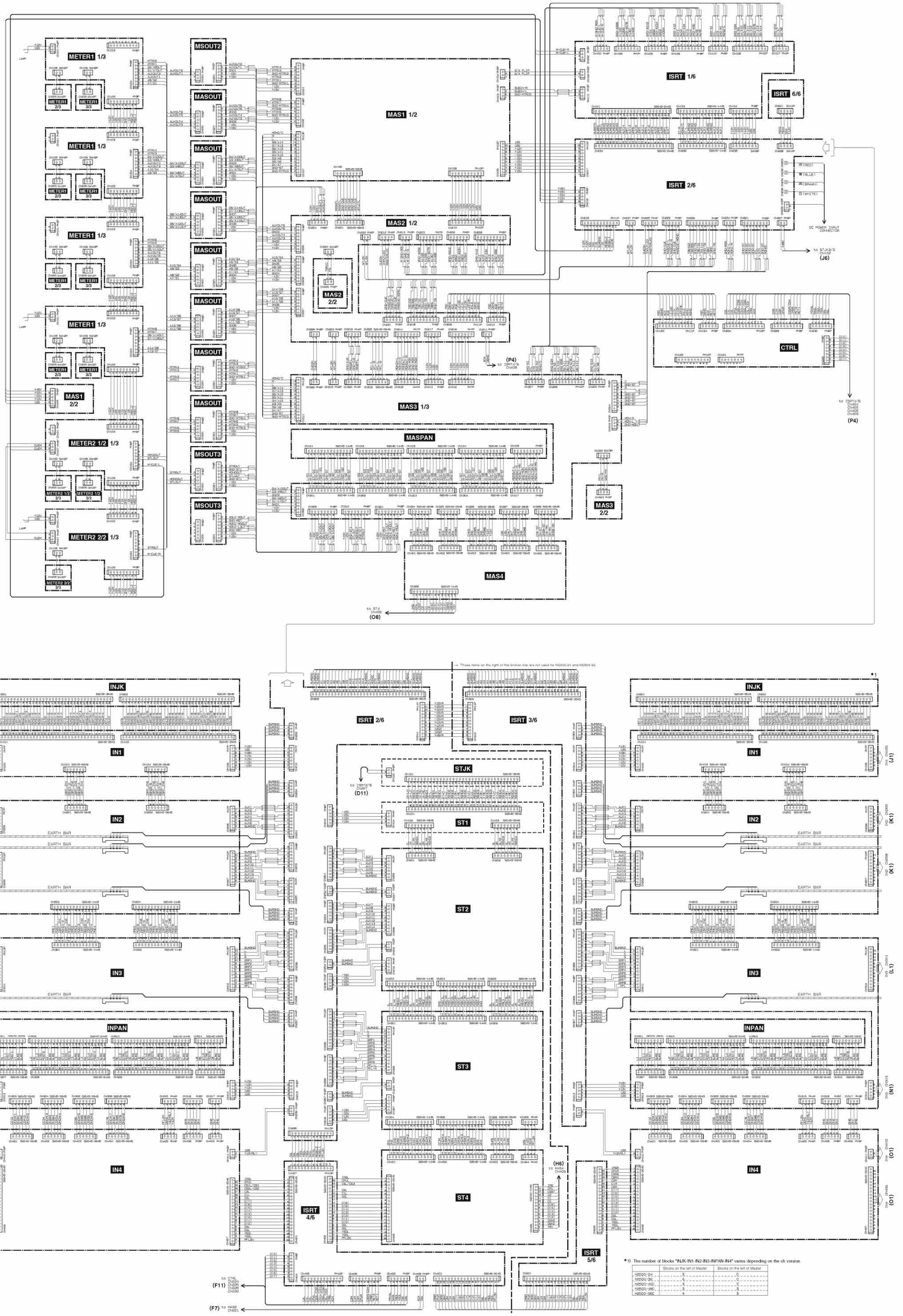












→ Those items on the right of this broken line are not used for M2500-24 and M2500-92.

*1) The number of blocks "INJK-IN1-IN2-IN3-INPAN-IN4" varies depending on the ch version.

	Blocks on the left of Master	Blocks on the left of Master
M2500-24	3	0
M2500-32	4	0
M2500-92	3	3
M2500-96	3	4
M2500-96C	4	3