M-480

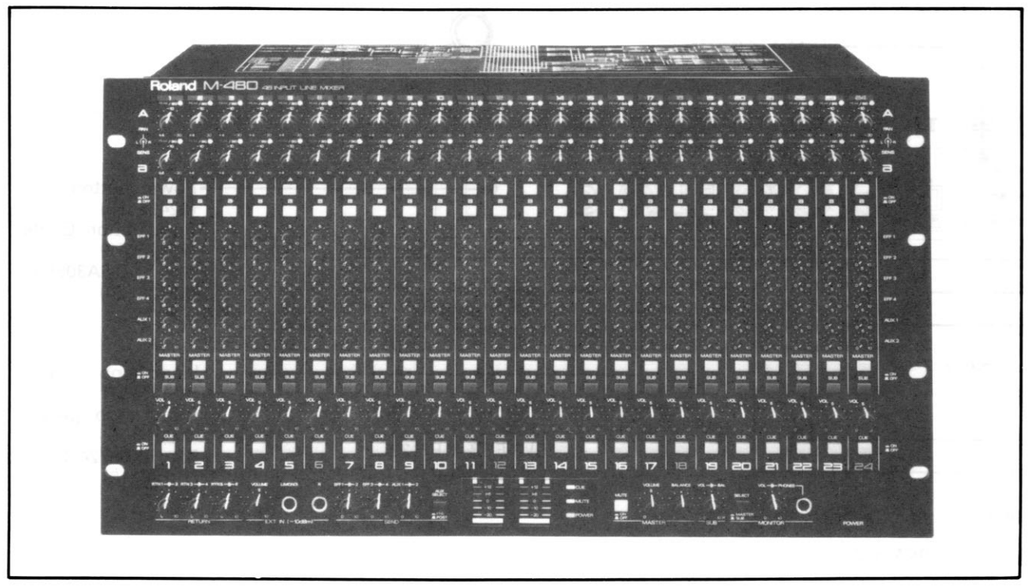
48 INPUT LINE MIXER

SERVICE NOTES

First Edition

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SPECIFICATIONS/仕様

Frequency Response/
周波数特性 ····· 10Hz - 60kHz +1/−2dB (SENS = min.)
Total Harmonic Distortion/
全高調波歪 ····· 0.06% or less (20Hz - 20kHz at normal output)
Noise Level/ ノイズ・レベル
(Input terminated with 150Ω, IHF-A, Typ.)
Equivalent Input Noise Level/
入力換算ノイズ・レベル ····· −124dBm
Residual Noise Level/
残留ノイズ・レベル ····· −102dBm [All Volume :min.]
−80dBm [Master Volume :max.]
[All Channel Volume :min.]
−77dBm [Master Volume :min.]
[All Channel Volume :max.]
[All SENS. :max.]
−65dBm [Master Volume :max.]
[All Channel Volume :max.]
[All SENS. :max.]

Crosstalk/ クロストーク ····· −70dB or less (1kHz Between Channels)
−70dB or less (1kHz Between L and R)
Power Supply/ 電源 ····· AC 117, 230V or 240V (50/60Hz)
Power Consumption/ 消費電力 ·· 80W (117V)
93W (230V, 240V)
Dimensions/ 外形寸法 ····· 482(W) x 247(D) x 268(H) mm
19"(W) x 9"-3/4(D) x 10"-9/16 inch.
Weight/ 重量 ····· 12.6kg / 27.8lbs.
Accessories/ 付属品 ····· Owner's Manual
(English/Japanese common/共通):26045366

* Specifications and appearance pf this product are subject to change without notice for improvement.

＊製品の仕様及び外観は，改良のため予告なく変更することがあります。

Input/Output Standard/入出力規格

■ Input Standard/入力規格

Input Jack/入力端子		Input Sensitivity /入力感度	Nominal Input Level /規定入力レベル	Input Impedance /入力インピーダンス	Recommended Source Impendance /推奨ソース・インピーダンス	Type of Connector /使用コネクター
CHANNEL INPUT (SENS=MAX)	CH. 1 to 24 (A, B)	−36dBm (12.3mV)	−30dBm (24.5mV)	20kΩ	2kΩ or less/2kΩ以下	1/4" PHONE type/標準タイプ
RETURN	RTN 1 to 6	−26dBm (38.8mV)	−20dBm (77.5mV)	20kΩ (STEREO) 10kΩ (MONO)	2kΩ or less/2kΩ以下 (STEREO) 1kΩ or less/1kΩ以下 (MONO)	1/4" PHONE type/標準タイプ
EXTERNAL IN		−16dBm (123mV)	−10dBm (245mV)	8kΩ (STEREO) 4kΩ (MONO)	1kΩ or less/1kΩ以下 (STEREO) 1kΩ or less/1kΩ以下 (MONO)	1/4" PHONE type/標準タイプ
BUS IN	MASTER, SUB EFF1 to 4, AUX1, 2	−2dBm (615mV)	+4dBm (1.23V)	8kΩ (STEREO) 4kΩ (MONO)	1kΩ or less/1kΩ以下 (STEREO) 1kΩ or less/1kΩ以下 (MONO)	1/4" PHONE type/標準タイプ
	MONITOR	−2dBm (615mV)	+4dBm (1.23V)	15kΩ (STEREO) 7.5kΩ (MONO)	1.5kΩ or less/1.5kΩ以下 (STEREO) 1kΩ or less/1kΩ以下 (MONO)	1/4" PHONE type/標準タイプ

■ Output Standard/出力規格

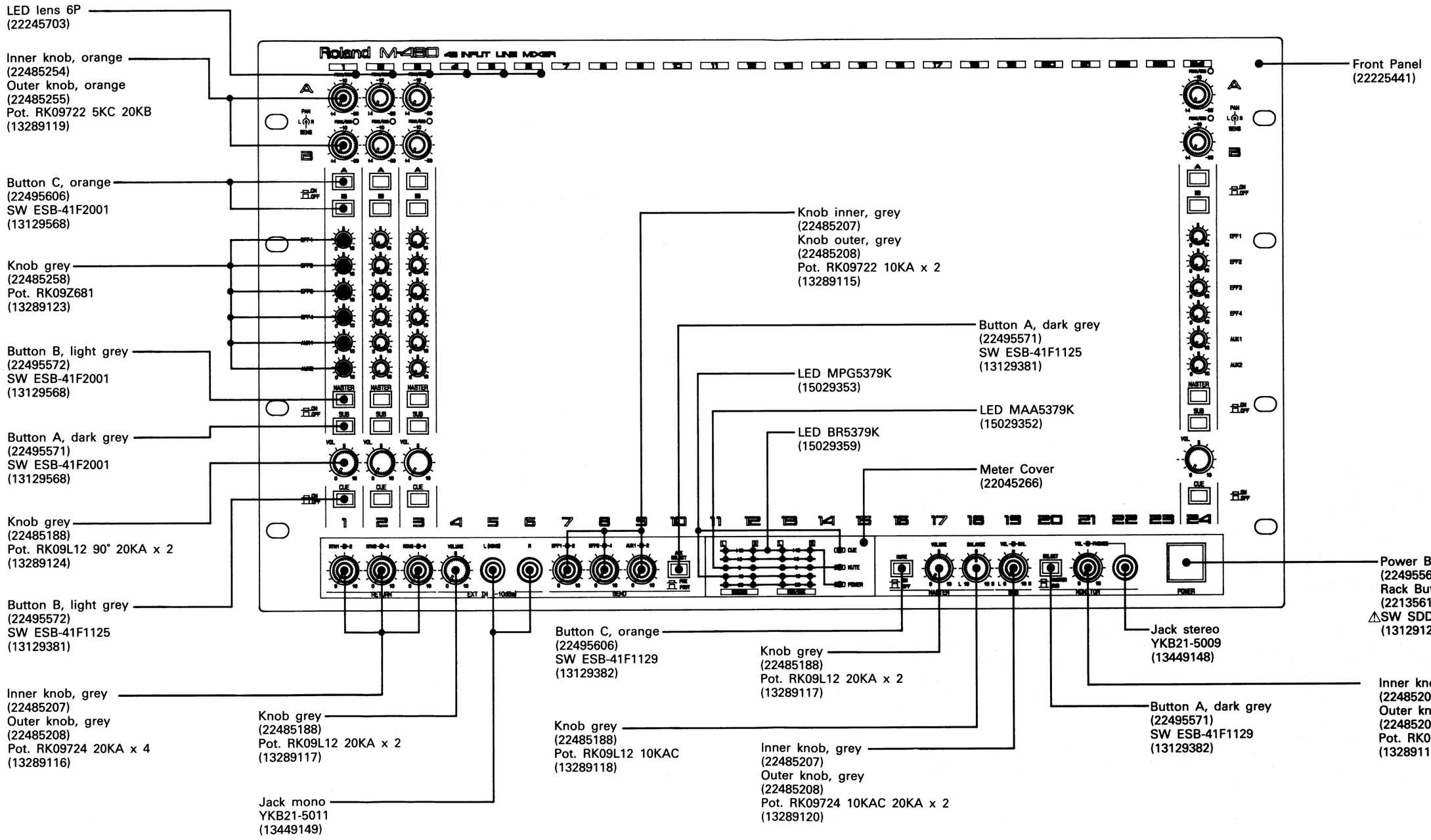
Output Jack/出力端子	Nominal Output Level /規定出力レベル	Non-Clip Max. Output /ノン・クリップ最大出力レベル	Output Impedance /出力インピーダンス	Recommended Load Impendance /推奨負荷インピーダンス	Type of Connector /使用コネクター
MASTER OUT (BALANCED)	+4dBm*1 (1.23V)	+20dBm*1 (7.75V)	600Ω	600Ω or greater/600Ω以上	XLR-3-32 type /XLR タイプ(XLR-3-32 Type)
MASTER OUT (UNBALANCED)	+4dBm (1.23V)	+20dBm (7.75V)	300Ω	3kΩ or greater/3kΩ以上	1/4" PHONE type/標準タイプ
SUB OUT	+4dBm (1.23V)	+20dBm (7.75V)	300Ω	3kΩ or greater/3kΩ以上	1/4" PHONE type/標準タイプ
MONITOR	+4dBm (1.23V)	+20dBm (7.75V)	1kΩ (STEREO) 500Ω (MONO)	10kΩ or greater/10kΩ以上 (STEREO) 5kΩ or greater/5kΩ以上 (MONO)	1/4" PHONE type/標準タイプ
SEND (EFF1 to 4, AUX1, 2	+4dBm (1.23V)	+20dBm (7.75V)	300Ω	3kΩ or greater/3kΩ以上	1/4" PHONE type/標準タイプ
PHONES	—	250mW + 250mW*2	60Ω	8Ω or greater/8Ω以上	1/4" STEREO PHONE type /ステレオ標準タイプ

@ 0dBm=0.775Vrms
*1 : 600Ω Loaded/600Ω負荷時
*2 : Both Channel 100Ω Loaded/100Ω両チャンネル負荷時

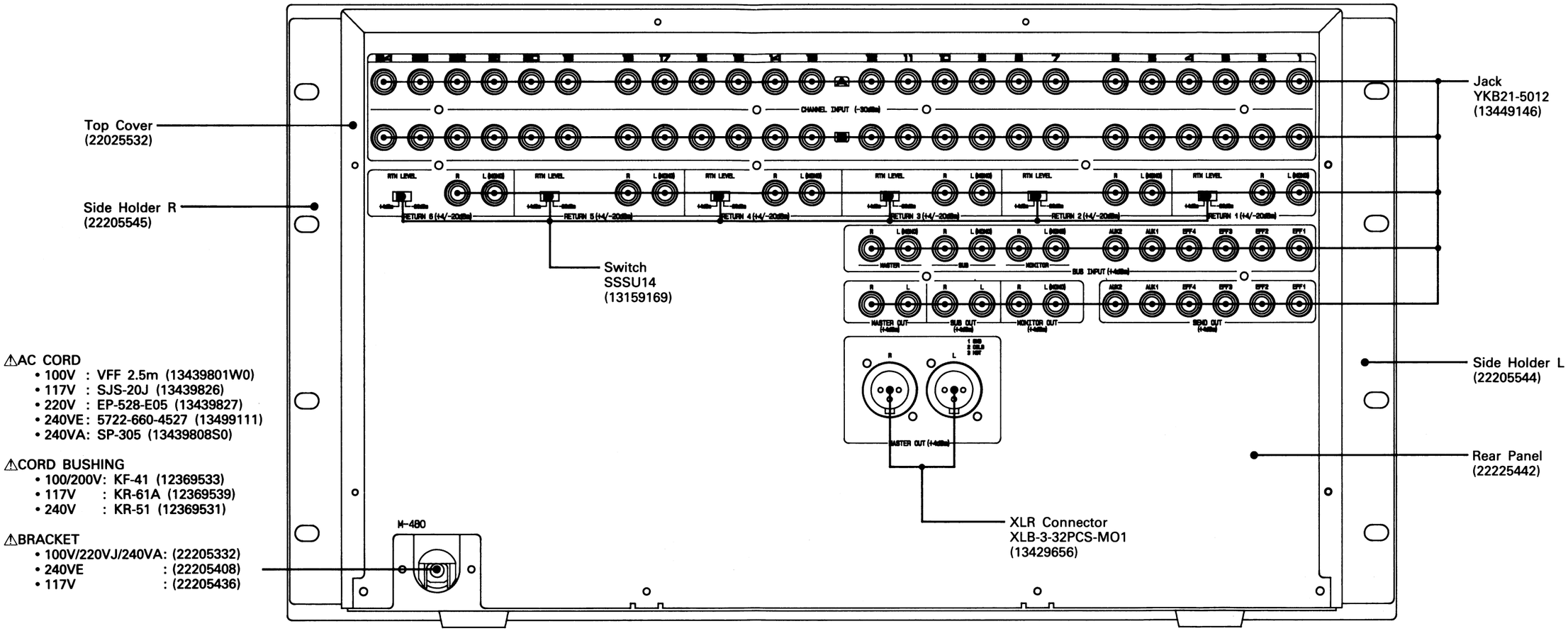
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GENERAL VIEW/概観図



Front view



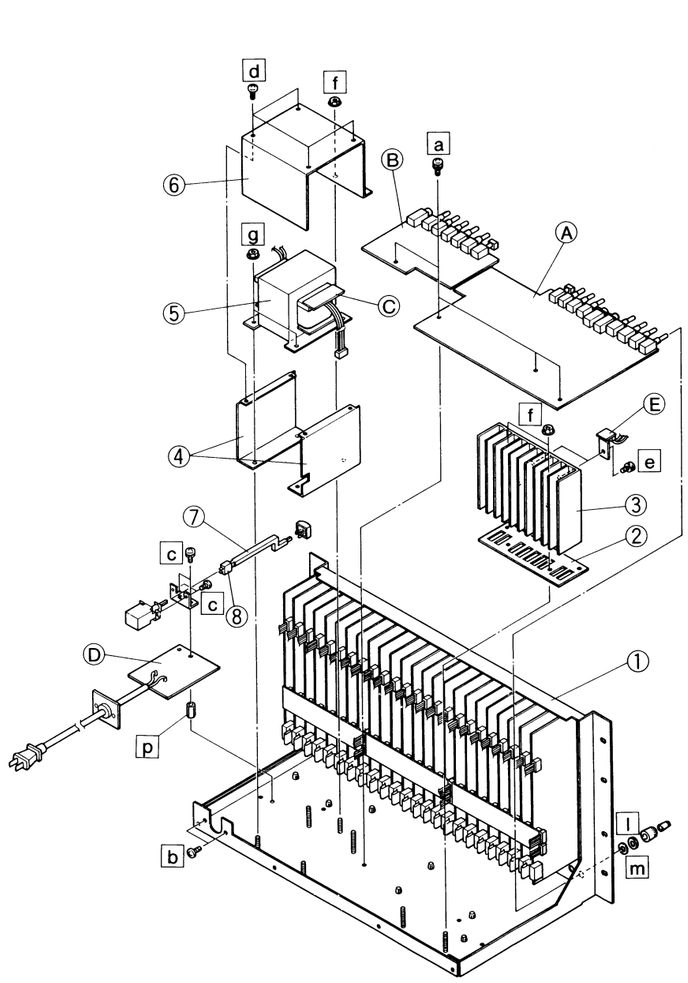
⚠AC CORD
- 100V : VFF 2.5m (13439801W0)
- 117V : SJS-20J (13439826)
- 220V : EP-528-E05 (13439827)
- 240VE: 5722-660-4527 (13499111)
- 240VA: SP-305 (13439808S0)

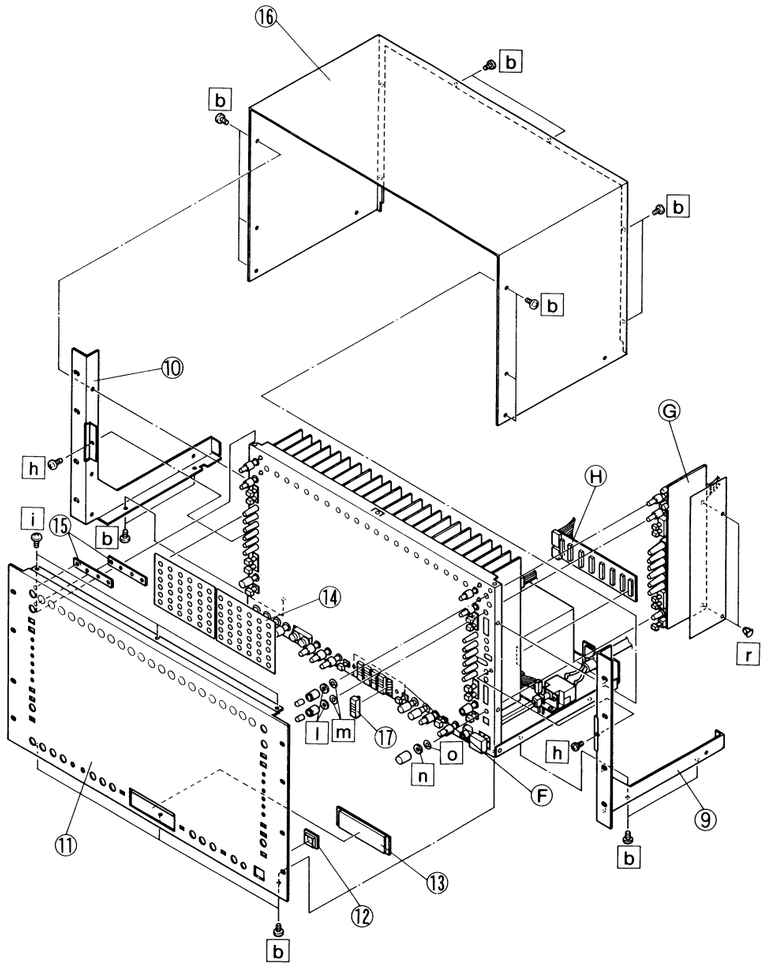
⚠CORD BUSHING
- 100/200V: KF-41 (12369533)
- 117V : KR-61A (12369539)
- 240V : KR-51 (12369531)

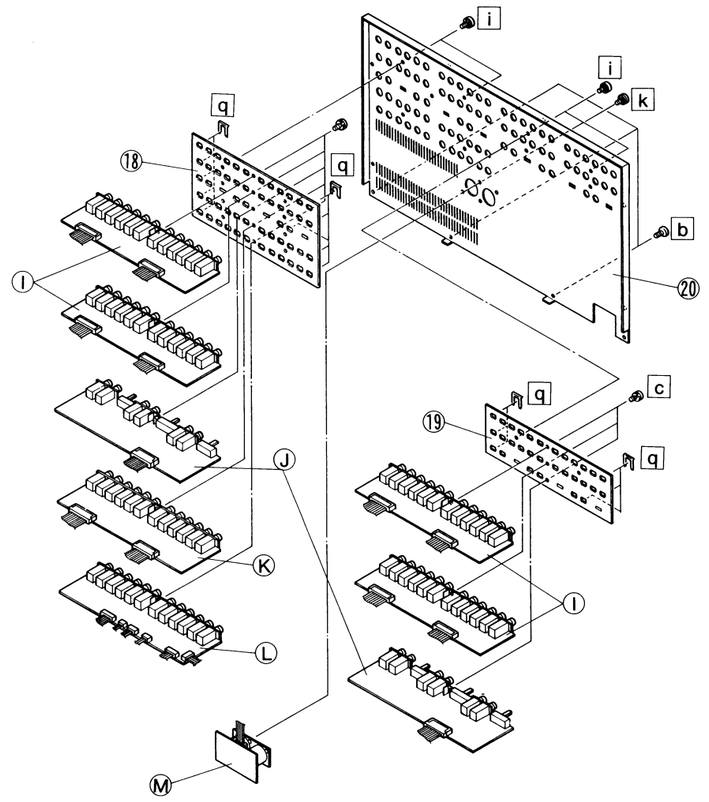
⚠BRACKET
- 100V/220VJ/240VA: (22205332)
- 240VE : (22205408)
- 117V : (22205436)

Rear view

EXPLODED VIEW/分解図







—PARTS (PCB)—

	Parts Number	Parts Name & Discription
Ⓐ	********	MASTER AMP BOARD A (pcb 2292595300 1/9)
Ⓑ	********	MASTER AMP BOARD B (pcb 2292595300 2/9)
Ⓒ	********	TRANS BOARD (pcb 2292595300 9/9)
Ⓓ	********	SWITCH BOARD (pcb 2292595300 3/9)
Ⓔ	********	TR BOARD A (pcb 2292595300 5/9)
	********	TR BOARD B (pcb 2292595300 6/9)
	********	REG BOARD A (pcb 2292595300 7/9)
	********	REG BOARD B (pcb 2292595300 8/9)

NOTE: Refer to fig.1.(Left to right)
注：fig. 1 を参照。(左から右へ)

Ⓕ	********	LED BOARD (pcb 2292595300 4/9)

NOTE: PCB Ⓐ-Ⓕ are included the MASTER BOARD (100/117V: PNo. 7128451100, 230/240V: PNo. 7128451400)
注：基板Ⓐ-Ⓕは MASTER BOARD (100/117V: PNo. 7128451100, 230/240V: PNo. 7128451400) として，供給されます。

Ⓖ	7128453000	CHANNEL BOARD (pcb 2292595800)

NOTE: Replacement CHANNEL BOARD distributes as 2ch unit.
注：補修用 CHANNEL BOARD は，2ch 単位で供給されます。

Ⓗ	7128452000	BUS BOARD (pcb 2292597800)

NOTE: Replacement BUS BOARD consists of the following 3 PCBs.
注：補修用 BUS BOARD は，下記の 3 点から構成されます。
CH1-8 is BUS BOARD A (pcb 2292597800 1/3)
CH9-16 is BUS BOARD B (pcb 2292597800 2/3)
CH17-24 is BUS BOARD C (pcb 2292597800 3/3)

Ⓘ	7128454000	INPUT JACK BOARD (pcb 2292595400)

NOTE: Replacement INPUT JACK BOARD distributes as 2ch unit.
注：補修用 INPUT JACK BOARD は，2ch 単位で供給されます。

Ⓙ	7128455000	RETURN JACK BOARD (pcb 2292595500)

NOTE: Replacement RETURN JACK BOARD distributes as 2ch unit.
注：補修用 RETURN JACK BOARD は，2ch 単位で供給されます。

Ⓚ	********	BUS IN BOARD (pcb 2292595600 2/3)
Ⓛ	********	SEND BOARD (pcb 2292595600 1/3)
Ⓜ	********	XLR BOARD (pcb 2292595600 3/3)

NOTE: PCB Ⓚ-Ⓜ are included the OUTPUT JACK BOARD (PNo. 7128456000)
注：基板Ⓚ-Ⓜ は OUTPUT JACK BAORD (PNo. 7128456000) として，供給されます。

—PARTS—

	Parts Number	Parts Name & Discription
①	22815780	Chassis
②	22205579	Heat Sink Holder
③	22465524	Heat Sink
④	22205593	Trans Shiled A
⚠⑤	22455633U0	Power Transformer
⑥	22205594	Trans Shiled B
⑦	2214021900	Arm
⑧	2215040400	Sleeve
⑨	22205545	Side Holder R
⑩	22205544	Side Holder L
⑪	22225441	Front Panel
⑫	22135612	Rack Bottom Guide
⑬	22045266	Meter Cover
⑭	22245560	VR Mask
⑮	22245703	LED Lens
⑯	22025532	Top Cover
⑰	2220041900	LED Holder
⑱	22205548	Jack Holder A
⑲	22025534	Jack Holder B
⑳	22225442	Rear Panel

—SCREWS—

[a]	3x6mm Binding Head Machine FeCm w/external tooth washer
[b]	3x6mm Binding Head Machine FeBc
[c]	3x6mm SEMS FeCm
[d]	3x6mm Binding Head B-tight FeCm
[e]	3x10mm W SEMS FeCm
[f]	M3 NUT
[g]	M4 NUT
[h]	3x6mm S-tight FeBc w/internal tooth washer
[i]	3x6mm Flat Head FeCm
[j]	3x6mm Binding Head Machine FeBc w/external tooth washer
[k]	3x8mm Binding Head Machine FeBc w/internal tooth washer
[l]	M7 VR Nut
[m]	M7 VR Washer
[n]	M9 VR Nut
[o]	M9 VR Washer
[p]	12mm Stand Off (PNo. 2215051300)
[q]	Snap Plate
[r]	Nylon Rivet

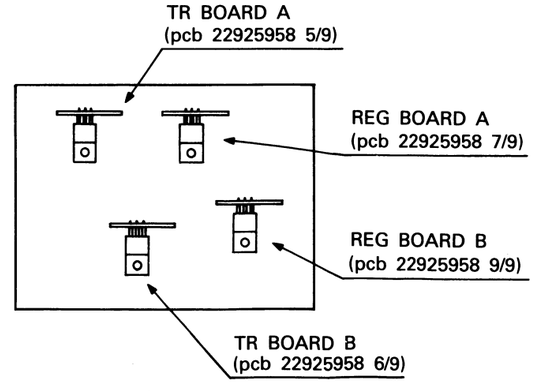
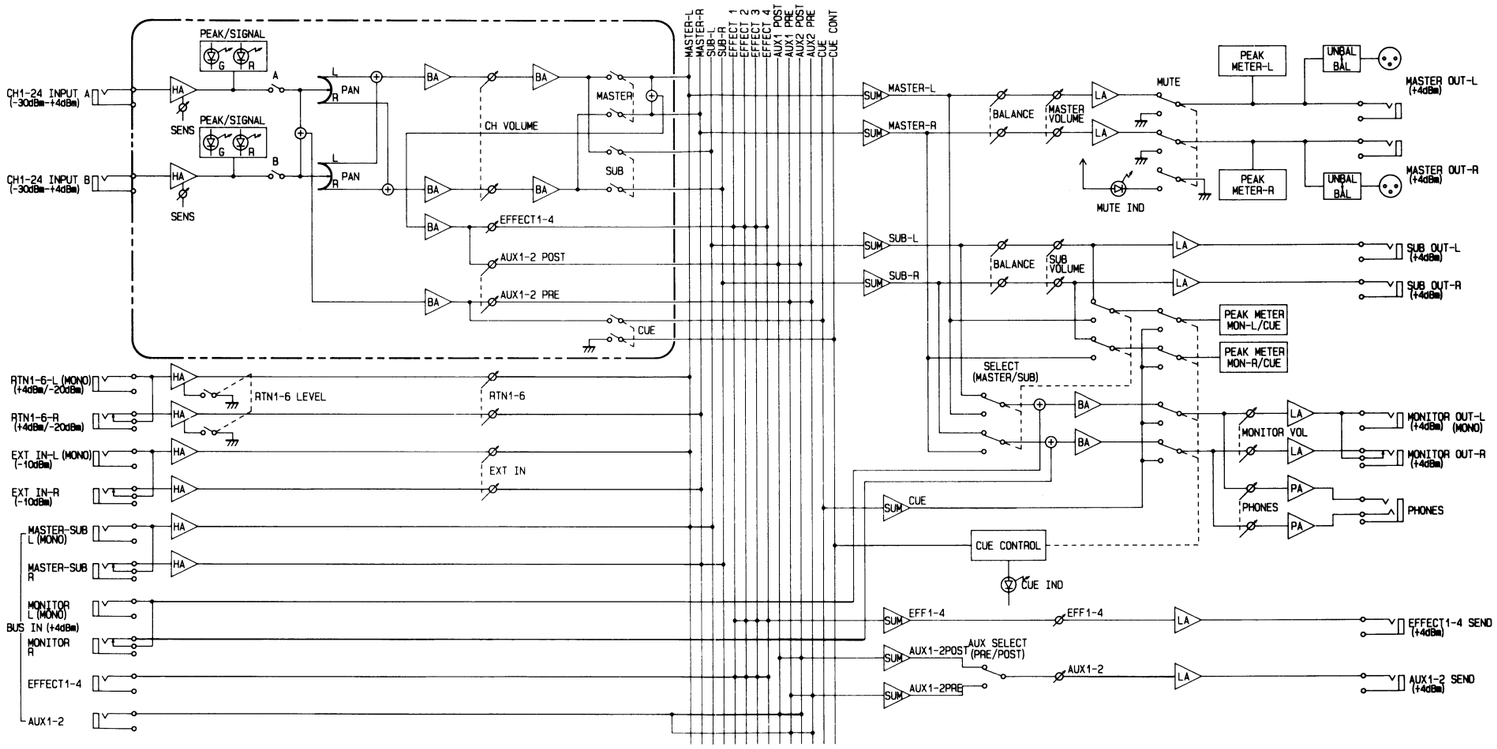


Fig. 1

BLOCK DIAGRAM/ブロック図



PARTS LIST/パーツリスト

SAFETY PRECAUTIONS:
The parts marked ⚠ have safety-related characteristics. Use only listed parts for replacement.
安全上の注意：
⚠が付いている部品は，安全上特別な規格でつくられたものです。
交換の際は，指定された部品番号以外の部品は使わないようにして下さい。

CONSIDERATIONS ON PARTS ORDERING

When ordering any parts listed in the parts list, please specify the following items in the order sheet.

	QTY	PART NUMBER	DESCRIPTION	MODEL NUMBER
Ex.	*10*	*22575241*	*Sharp Key*	*C-20/50*
	15	*2247017300*	*Knob (orange)*	*DAC-15D*

Failure to completely fill the above items with correct number and description will result in delayed or even undelivered replacement.

パーツ発注に関するお願い

オーダーシートには，必ず下記の4項目は正確に記入して下さい。(例外は除く)

	必要数	パーツナンバー	名　称	使用機種
例)	10	22575241	Sharp Key	C-20/50
	15	2247017300	Knob (orange)	DAC-15D

もし記入漏れ，誤記等が有る場合，必要部品が発送出来なかったり，大幅な遅れの原因になります。
御協力をお願いします。

MABA ----->	MASTER AMP BOARD A	TBB -------->	TR BOARD B	BBB -------->	BUS BOARD B
MABB ----->	MASTER AMP BOARD B	RBA -------->	REG BOARD A	BBC -------->	BUS BOARD C
SB --------->	SWITCH BOARD	RBB--------->	REG BOARD B	CB --------->	CHANNEL BOARD
LB --------->	LED BOARD	TB --------->	TRANS BOARD	IJB -------->	INPUT JACK BOARD
TBA -------->	TR BOARD A	BBA -------->	BUS BOARD A	RJB -------->	RETURN JACK BOARD
SEB -------->	SEND BOARD	BIB --------->	BUS-IN BOARD	XB --------->	XLR BOARD

CASING　ケース

22025532	Top Cover
22225441	Front Panel
22225442	Rear Panel
22045266	Meter Cover
2220041900	LED Holder
22245703	LED Lens
22355334	Foot Base (Rubber Foot)

CHASSIS　シャーシ

22815780	Chassis
22205544	Side Holder L
22205545	Side Holder R
22205548	Jack Holder A
22025534	Jack Holder B
22205593	Trans Shield A
22205594	Trans Shield B
22205579	Heat Sink Holder

KNOB, BUTTON　ツマミ，ボタン

22485207	Inner Knob	#248-207	grey	
22485208	Outer Knob	#248-208	grey	
22485254	Inner Knob	#248-254	orange	SENS
22485255	Outer Knob	#248-255	orange	PAN
22485188	Knob	#248-188	grey	
22495571	Button A		dark grey	
22495572	Button B		light grey	
22495606	Button C		orange	
22495565	Power Button			POWER
22455258	Knob		grey	

SWITCH　スイッチ

13129381	ESB-41F1125	2 poles	Push	CUE, PRE/POST	on MABA
13129382	ESB-41F1129	4 poles	Push	MON SELECT, MUTE	on MABB
13129568	ESB-41F2001	2 poles·2 poles	Push	A, B, MASTER, SUB	on CB
13159169	SSSU 14		Slide	RETURN LEVEL	on RJB
⚠13129124	SDDGA 3078A		Push	POWER	on SB

JACK, SOCKET　ジャック，ソケット

13449146	YKB21-5012			on IJB, RJB, BIB, SEB
13449148	YKB21-5009		PHONES	on MABB
13449149	YKB21-5011		EXT IN	on MABA
13429656	XLB-3-32PCS-M01	XLR Connector (XLR-3-32TYPE)	MASTER OUT	on XB

PCB ASSY　基板完成品

7128451100	MASTER BPARD (pcb 2292595300)	(100V/117V)
7128451400	MASTER BOARD (pcb 2292595300)	(230V/240V)

NOTE: Replacement MASTER BOARD consists of the following 9 PCBs.
This documents is common to both 100/117V version and 230/240V version.

注：補修用 MASTER BOARD は下記の9点から構成されます。
(この文章は，100/117V 用と 230/240V 用に共通です。)

MASTER AMP BOARD A	(pcb 2292595300 1/9)
MASTER AMP BOARD B	(pcb 2292595300 2/9)
SWITCH BOARD	(pcb 2292595300 3/9)
LED BOARD	(pcb 2292595300 4/9)
TR BOARD A	(pcb 2292595300 5/9)
TR BOARD B	(pcb 2292595300 6/9)
REG BOARD A	(pcb 2292595300 7/9)
REG BOARD B	(pcb 2292595300 8/9)
TRANS BOARD	(pcb 2292595300 9/9)

NOTE: Replacement MASTER BOARD (Difference between 100/117V and 220/240V versions)
230/240V version differs from 100/117V version only in fuse system.
(Refer to the following table A)

注：補修用 MASTER BOARD について。(100/117V 仕様と 220/240V 仕様の違い)
100/117V 仕様と 220/240V 仕様とは，ヒューズ関連だけが違います。(下表参照)

TABLE A

	F1 (SB)	F2 (MABA)	F3 (MABA)
100/117V	CEE-400MAT	JUMPER	JUMPER
230/240V	SB 2.0	SB 4.0	SB 4.0

7128452000　BUS BOARD (pcb 2292597800)

NOTE: Replacement BUS BOARD consists of the following 3 PCBs.

注：補修用 BUS BOARD は下記の3点から構成されます。

BUS BOARD A	(pcb 2292597800 1/3)
BUS BOARD B	(pcb 2292597800 2/3)
BUS BOARD C	(pcb 2292597800 3/3)

7128453000　CHANNEL BOARD (pcb 2292595800)

NOTE: Repalcement CHANNEL BOARD distributes as 2ch unit.

注：補修用 CHANNEL BOARD は 2CH 単位で供給されます。

7128454000　INPUT JACK BOARD (pcb 2292595400)

NOTE: Replacement INPUT JACK BOARD distributes as 2ch unit.

注：補修用 INPUT JACK BOARD は 2CH 単位で供給されます。

7128455000　RETURN JACK BOARD (pcb 2292595500)

NOTE: Replacement RETURN JACK BOARD distributes as 2ch unit.

注：補修用 RETURN JACK BOARD は 2CH 単位で供給されます。

7128456000　OUTPUT JACK BOARD (pcb 2292595600)

NOTE: Replacement OUTPUT JACK BOARD consists of the following 3 PCBs.

注：補修用 OUTPUT JACK BOARD は下記の3点から構成されます。

SEND BOARD	(pcb 2292595600 1/3)
BUS-IN BOARD	(pcb 2292595600 2/3)
XLR BOARD	(pcb 2292595600 3/3)

IC　集積回路

15189186	uPC4570C	OP Amp		
15189242	NJM4565SD	OP Amp		
15189250	M5218AL	OP Amp		
15209130	IR2E28	LED Driver		on MABA
15199563	LA6515	Power IC		on MABB
⚠15199208	NJM7915FA	−15V voltage regulator		on RBB
⚠15199209	NJM7815FA	+15V voltage regulator		on RBA

TRANSISTOR　トランジスター

15119113	2SA1015-GR			
15129114	2SC1815-GR			
15129136	2SC2878-A			on SEB
15139138	2SK381-E	FET		
⚠15119719	2SB1259	Power TR.		on TBB
⚠15129725	2SD2081	Power TR.		on TBA

DIODE　ダイオード

15019125	1SS-133			
⚠15039118	S5688G			on MABA
⚠15019409	MTZ5.6C	Zener		on MABA
⚠15019273	4B4B41 LC1	Bridge		on MABA
15029352	MAA5379K (orange)	LED		on LB
15029353	MPG5379K (green)	LED		on LB
15029359	BR5379K (red)	LED		on LB
15029350	LN11WP23 (red/green)	LED	PEAK/SIG	on CB

RESISTOR　抵抗

⚠13829179	CRH100 FH11J	56 Ω	1W	
⚠13829869	CRH50 FH01J	2.2 Ω	1/2W	
⚠13749572T0	SR25NJ	91 Ω	1/6W	

POTENTIOMETER　可変抵抗

13289115	RK09722	10KAx2	SEND	on MABA
13289116	RK09724	20KAx4	RETURN	on MABA
13289117	RK09L12	20KAx2	EXT IN	on MABA
13289118	RK09L12	10KAC	BAL	on MABB
13289119	RK09722	20KB, 5KC	PAN/SENS	on CB
13289120	RK09724	10KAC 20KAx2	SUB/BAL	on MABB
13289123	RK09Z681	4-20KB, 2-20KBx2	CH SEND	on CB
13289124	RK09L12	20KAx2	CH VOL	on CB

CAPACITOR　コンデンサ

13639277J0	SRA16VB10	10uF/ 16V	
13629614	SRA16VB22	22uF/ 16V	
13629615	SRA16VB33	33uF/ 16V	
13629203J0	SRA50VB2R2	2.2uF/ 50V	
13639146J0	SME16VB10	10uF/ 16V	
13639147J0	SME16VB22	22uF/ 16V	
13649149J0	SME16VB47	47uF/ 16V	
13639150J0	SME16VB100	100uF/ 16V	
13639209J0	SME50VB47	47uF/ 50V	
⚠13529104	DE7150F472MVA1	0.047uF/600V	Line Capacitor
13649152J0	SME50VB33	33uF/ 50V	
13649688	SME35VB3300	3300uF/ 35V	

FUSE, FUSE HOLDER　ヒューズ，ヒューズ・ホルダー

⚠12559441	5x20 SB2.0	100V/117V
⚠12559444	5x20 SB4.0	100V/117V
⚠12559544	5x20 CEE-400MAT	220V/240V
⚠12199550	Fuse Clip HO446	

CONNECTOR コネクター

13439387	MOLEX 5484-05AX	2.5mm PITCH	(5P)	CN6 on SEB
13439390	MOLEX 5484-08AX	2.5mm PITCH	(8P)	CN9 on BIB
13439391	MOLEX 5484-09AX	2.5mm PITCH	(9P)	CN8 on BIB
13439371	MOLEX 5483-03AX	2.5mm PITCH	(3P)	CN33 on TBA
13439372	MOLEX 5483-04AX	2.5mm PITCH	(4P)	CN34 on TBB
13439373	MOLEX 5483-05AX	2.5mm PITCH	(5P)	CN7 on XB, CN12-14 on MABA
13439375	MOLEX 5483-07AX	2.5mm PITCH	(7P)	CN5 on MABA
13439376	MOLEX 5483-08AX	2.5mm PITCH	(8P)	CN18-20 on MABA
13429308	MOLEX 53025-0510	2.0mm PITCH	(5P)	CN3 on BBA, CN3 on BBB, CN3 on BBC
13429254	MOLEX 53025-0810	2.0mm PITCH	(8P)	CN2 on BBA, CN2 on BBB, CN2 on BBC
13369570	JST B2B-PH-K-S	2.0mm PITCH	(2P)	CN22 on MABA
13369568	JST B3B-PH-K-S	2.0mm PITCH	(3P)	CN15 on MABA, CN32 on MABB
13369503	JST B7B-PH-K-S	2.0mm PITCH	(7P)	CN23, 26 on MABA, CN23, 26 on MABB
13369564	JST B12B-PH-K-S	2.0mm PITCH	(12P)	CN25 on MABA, CN25 on LB
13369563	JST B14B-PH-K-S	2.0mm PITCH	(14P)	CN24 on MABA, CN24 on LB
13369595	JST B3B-XH-A	2.5mm PITCH	(3P)	CN6 on MABA, CN6 on MABB
13369594	JST B4B-XH-A	2.5mm PITCH	(4P)	CN8 on MABA
13369540	JST B6B-XH-A	2.5mm PITCH	(6P)	CN9 on MABA
13369556	JST B8B-XH-A	2.5mm PITCH	(8P)	CN17 on MABA
13369517	JST B9B-XH-A	2.5mm PITCH	(9P)	CN7 on MABA
13369756	JST S6B-XH-A	2.5mm PITCH	(6P)	CN3 on CB
13369581	JST B2B-EH-A	2.5mm PITCH	(2P)	CN2 on MABA
13369580	JST B3B-EH-A	2.5mm PITCH	(3P)	CN35 on MABB, CN35 on RBA
13369579	JST B4B-EH-A	2.5mm PITCH	(4P)	CN36 on MABB, CN36 on RBB
13369578	JST B5B-EH-A	2.5mm PITCH	(5P)	CN27 on MABB
13369555	JST B6B-EH-A	2.5mm PITCH	(6P)	CN3 on MABA
13369576	JST B7B-EH-A	2.5mm PITCH	(7P)	CN21 on MABA
13369575	JST B8B-EH-A	2.5mm PITCH	(8P)	CN35 on MABA
13369574	JST B9B-EH-A	2.5mm PITCH	(9P)	CN10 on MABA
13369573	JST B10B-EH-A	2.5mm PITCH	(10P)	CN11 on MABA, CN11 on MABB
13369738	JST S2B-EH	2.5mm PITCH	(2P)	CN2 on SEB, CN1 on CB
13369739	JST S3B-EH	2.5mm PITCH	(3P)	CN4 on SEB
13369740	JST S4B-EH	2.5mm PITCH	(4P)	CN3 on SEB
13369741	JST S5B-EH	2.5mm PITCH	(5P)	CN5 on SEB
13369743	JST S7B-EH	2.5mm PITCH	(7P)	CN1 on SEB
13369745	JST S9B-EH	2.5mm PITCH	(9P)	CN1 on RJB
13369748	JST S12B-EH	2.5mm PITCH	(12P)	CN1 on IJB
13369833	JST 19PS-JE	1.25mm PITCH	(19P)	CN2 on CB
13369832	JST 19R-JE	1.25mm PITCH	(19P)	CN1 on BBA, CN1 on BBB CN1 onBBC
13369586	JST B3P-VH	3.96mm PITCH	(3P)	CN1 on MABA

TRANSFORMER トランス

⚠22455633U0	Power Transformer	245-612	Universal

AC CORD (Installed) AC コード(据え付け式)

⚠23495197	AC CORD ASSEMBLY	100V
or ⚠13439801W0	VFF2.5m	100V
⚠23495199	AC CORD ASSEMBLY	117V
or ⚠13439826	SJS-20J	117V
⚠23495200	AC CORD ASSEMBLY	220V
or ⚠13439827	EP-528-E05	220V
⚠23495201	AC CORD ASSEMBLY	240VE
or ⚠13499111	5722-660-4527	240VE
⚠23495202	AC CORD ASSEMBLY	240VA
or ⚠1343980850	SP-305	240VA

SCREW ネジ類

********	3x6mm Binding Head Machine FeCm w/external tooth washer
********	3x6mm Binding Head Machine FeBc
********	3x6mm SEMS FeCm
********	3x6mm Binding Head B-tight FeCm
********	3x10mm W SEMS FeCm
********	M3 NUT
********	M4 NUT
********	3x6mm S-tight FeBc w/internal tooth washer
********	3x6mm Flat Head FeCm
********	3x6mm Binding Head Machine FeBc w/external tooth washer
********	3x8mm Binding Head Machine FeBc w/internal tooth washer
********	M7 VR Nut
********	M7 VR Washer
********	M9 VR Nut
********	M9 VR Washer
********	12mm Stand Off (PNo. 2215051300)
********	Nylon Rivet

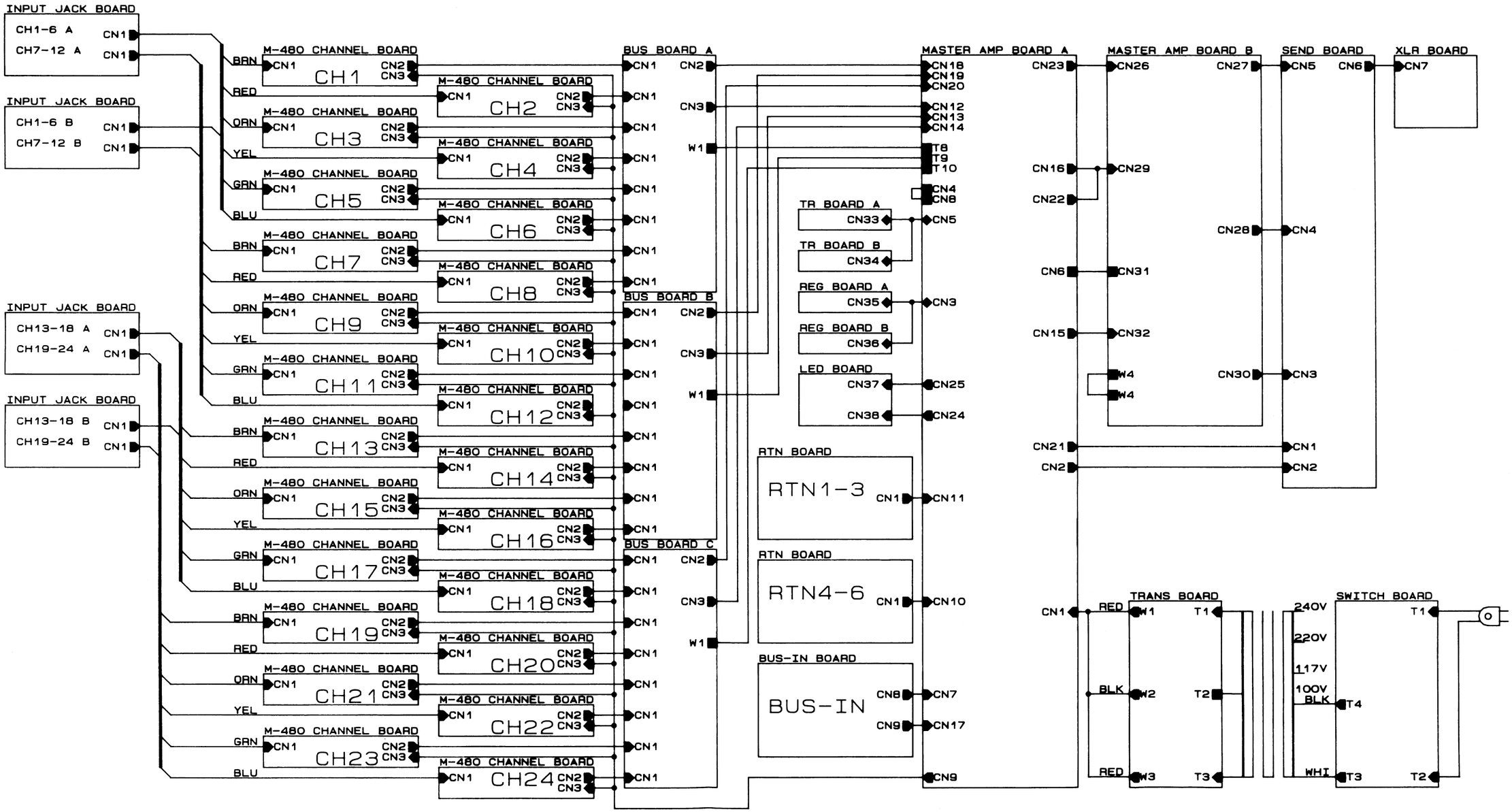
MISCELLANEOUS その他

2215050100	Standoff #501 10mm	MASTER AMP BOARD A, B, LED BOARD
2215051300	Standoff #513 12mm	SWITCH BOARD
12199584	TERMINAL M1698	
12189803	PCB SPACER RSPS-5LU	
22255156	Insulating Sheet A	
22255157	Insulating Sheet B	
13459193	Faston Tab P-92	
13459194	Faston Tab P-93	
12159799	Edge Holder EHS-11V	
22465524	Heat Sink	
2214021900	Arm	
2215040400	Sleeve	
22245560	VR Mask	
22135612	Rack Button Guide	
⚠12369533	Cord Bushing KF-41	100V/220VJ
⚠12369539	Cord Bushing KR-61A	117V
⚠12369531	Cord Bushing KR-51	240V
⚠22205332	Blacket	100V/220V/240VA
⚠22205408	Blacket	240VE
⚠22205436	Blacket	117V
********	SNAP PLATE HLJ-0999-01-480	

ACCESSORIES 付属品

26045367	Owner's Manual Set (English/Japanese common/共通)

WIRING DIAGRAM/ワイヤリングダイヤグラム



MASTER BOARD

ASSY 7128451100 : 100/117V
ASSY 7128451400 : 230/240V
(pcb 2292595300)

REPLACEMENT （補修用）

MASTER BOARD
ASSY 7128451100 : 100/117V
ASSY 7128451400 : 230/240V
◆ Master Board consists of the following 9PCBs
◆ マスター基板は，下記の９点から成ります。

• Master Amp Board A	(pcb 2292595300 1/9)	• TR Board B	(pcb 2292595300 6/9)
• Master Amp Board B	(pcb 2292595300 2/9)	• REG Board A	(pcb 2292595300 7/9)
• Switch Board	(pcb 2292595300 3/9)	• REG Board B	(pcb 2292595300 8/9)
• LED Board	(pcb 2292595300 4/9)	• Trans Board	(pcb 2292595300 9/9)
• TR Board A	(pcb 2292595300 5/9)		

MASTER AMP BOARD A
(pcb 2292595300 1/9)

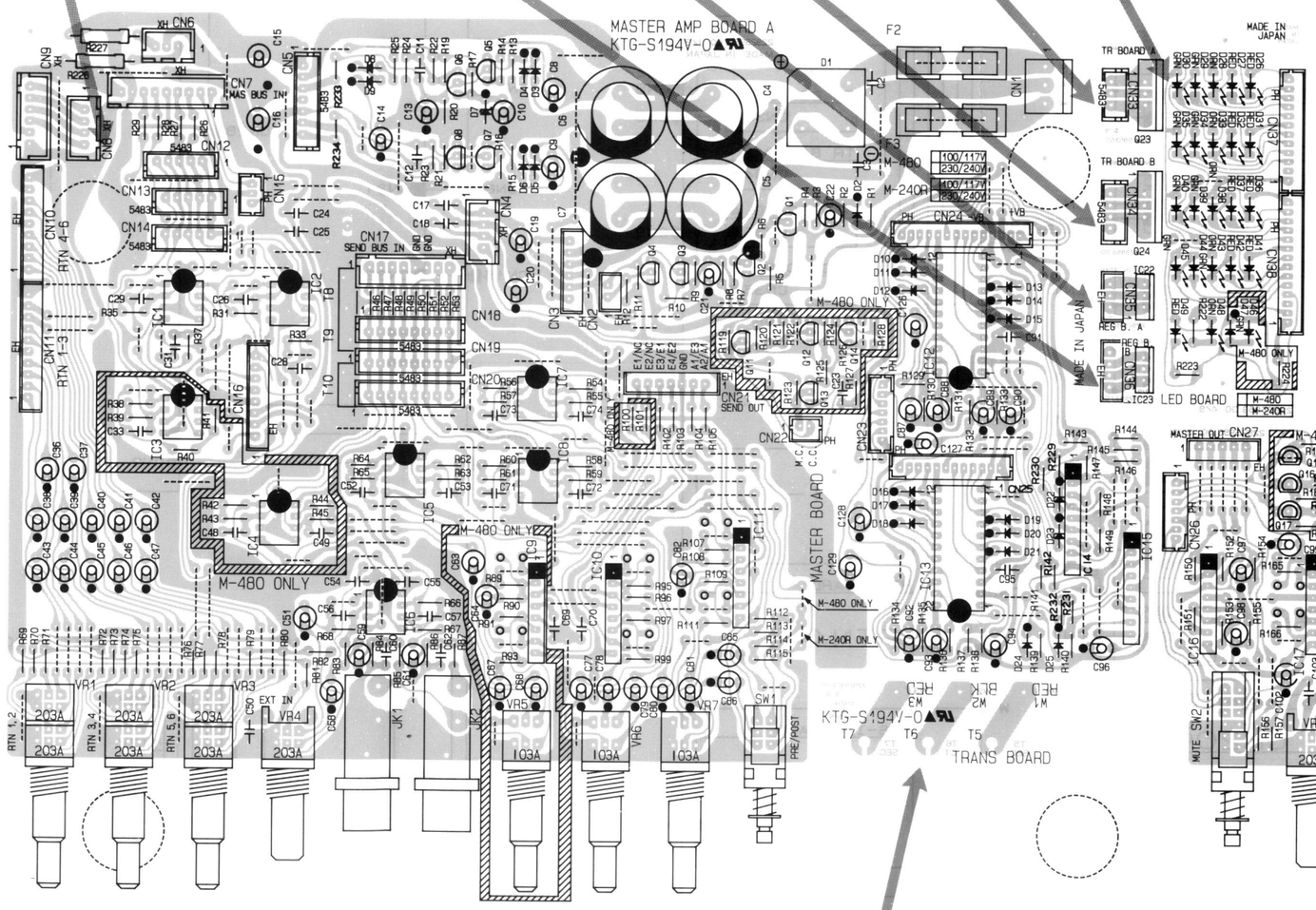
REG BOARD B
(pcb 2292595300 8/9)

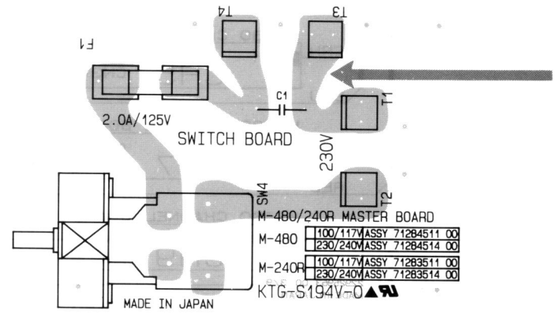
REG BOARD A
(pcb 2292595300 7/9)

TR BOARD B
(pcb 2292595300 6/9)

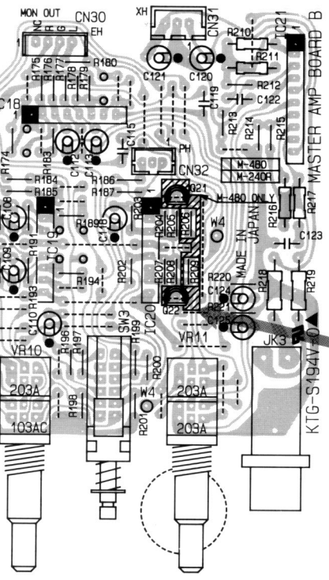
TR BOARD A
(pcb 2292595300 5/9)

LED BOARD
(pcb 2292595300 4/9)





SWITCH BOARD
(pcb 2292595300 3/9)



MASTER AMP BOARD B
(pcb 2292595300 2/9)

View from component side

TRANS BOARD
(pcb 2292595300 9/9)

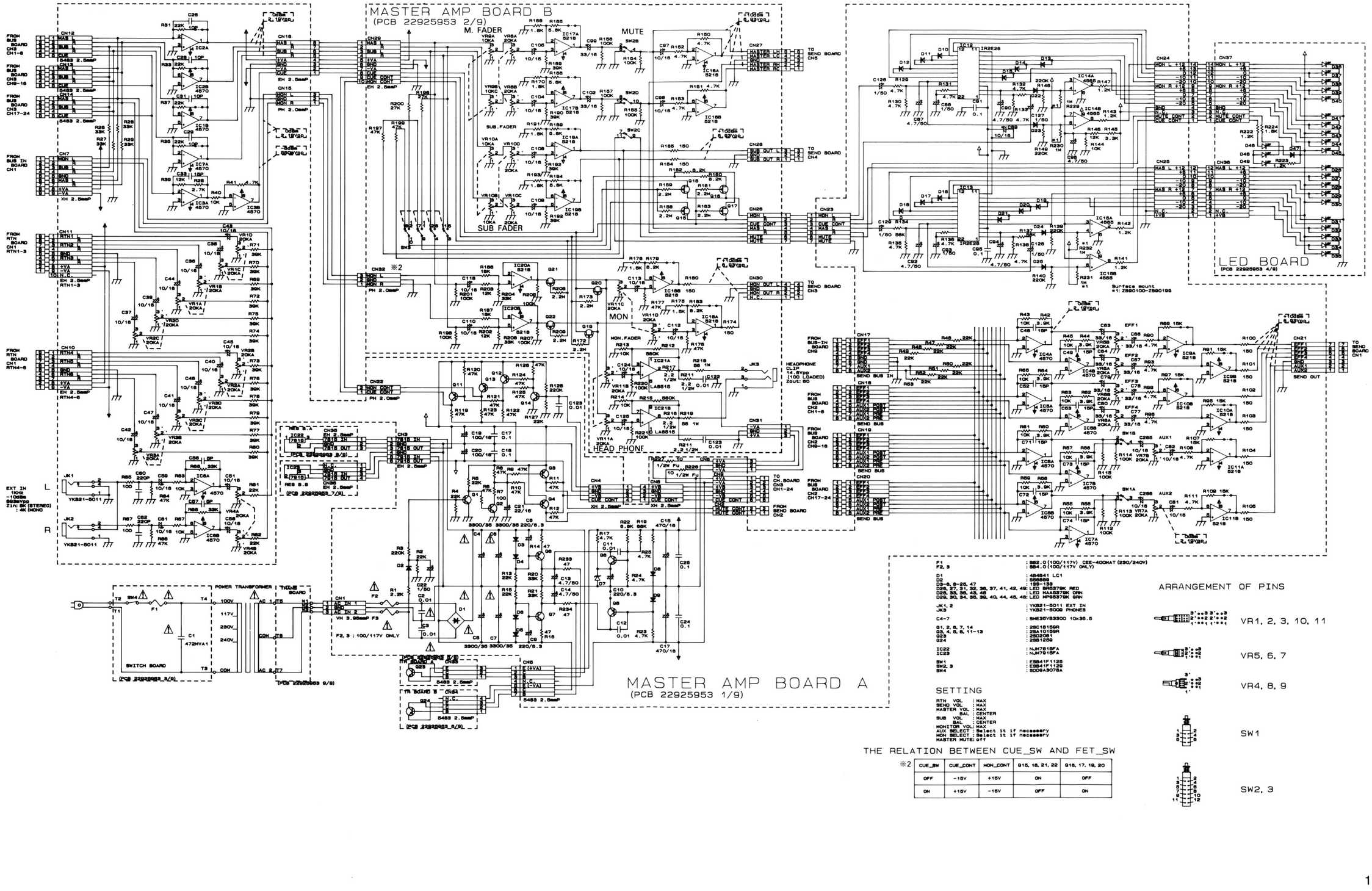
NOTE: Replacement MASTER BOARD (Difference between 100/117V and 220/240V versions) 230/240V version differs from 100/117V version only in fuse system. (Refer to the following table A)

注：補修用マスター基板について。(100/117V 仕様と 220/240V 仕様の違い)
110/117V 仕様と 220/240V 仕様とは，ヒューズ関連だけが違います。(右表参照)

TABLE A

	F1 (SB)	F2 (MABA)	F3 (MABA)
100/117V	CEE-400MAT	JUMPER	JUMPER
230/240V	SB 2.0	SB 4.0	SB 4.0

MASTER BOARD



CHANNEL BOARD

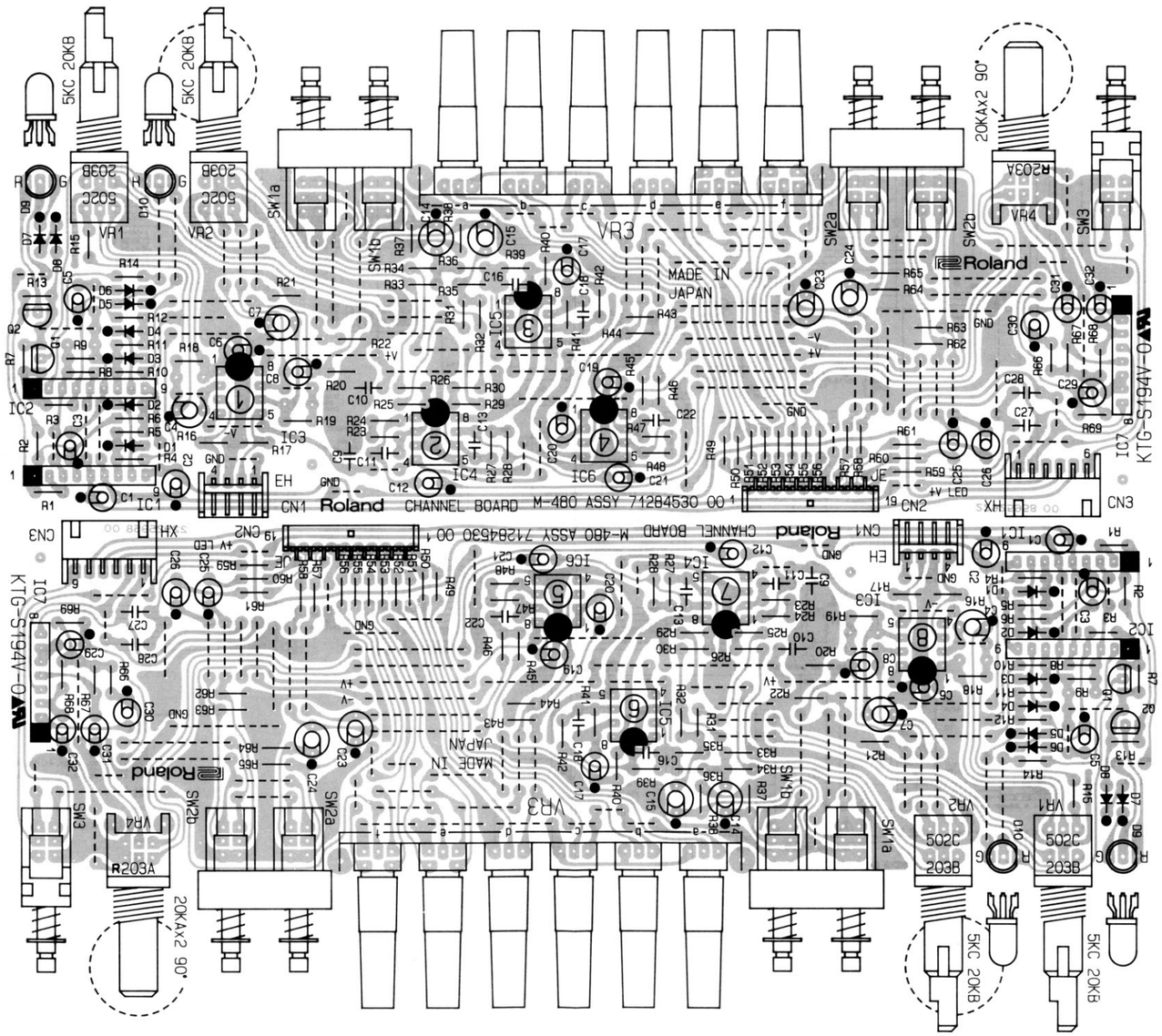
ASSY 7128453000

(pcb 2292595800)

REPLACEMENT （補修用）

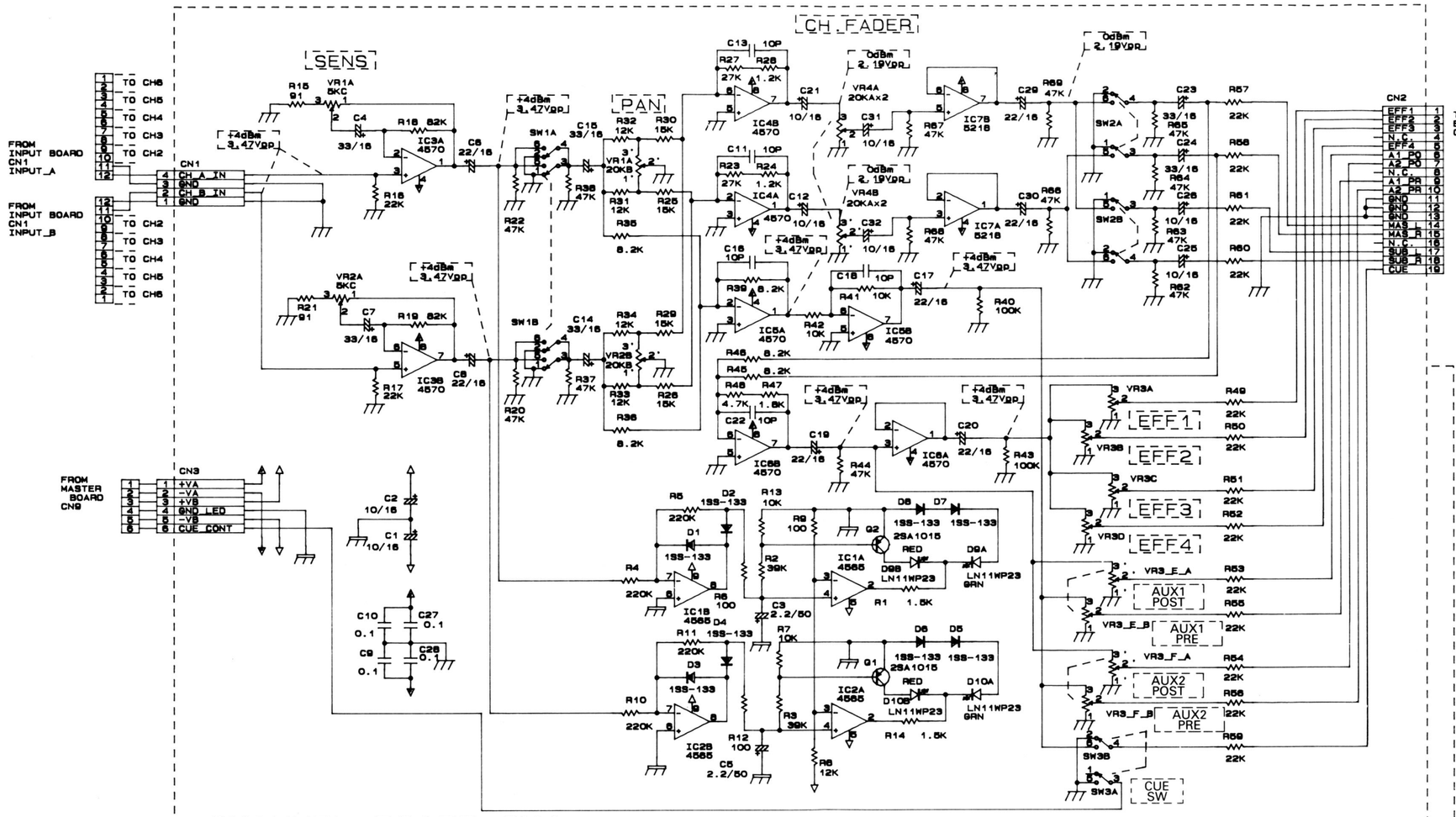
CHANNEL BOARD
ASSY 7128453000
NOTE: Replacement CHANNEL BOARD distributes as 2ch unit.

注：補修用チャンネル基板は 2CH 単位で供給されます。



View from component side

CHANNEL BOARD



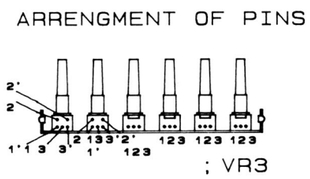
CHANNEL BOARD CH1
(PCB 22925958)

CHANNEL BOARD CH2
SAME AS CH1

SETTING

SENS VOL : MAX
PAN VOL : CENTER
EFF VOL : MAX
CH.FADER : MAX

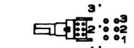
ARRENGMENT OF PINS



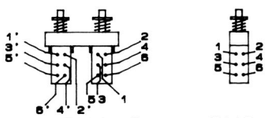
; VR3



; VR1, 2



; VR4



; SW1, 2 ; SW3

INPUT JACK BOARD

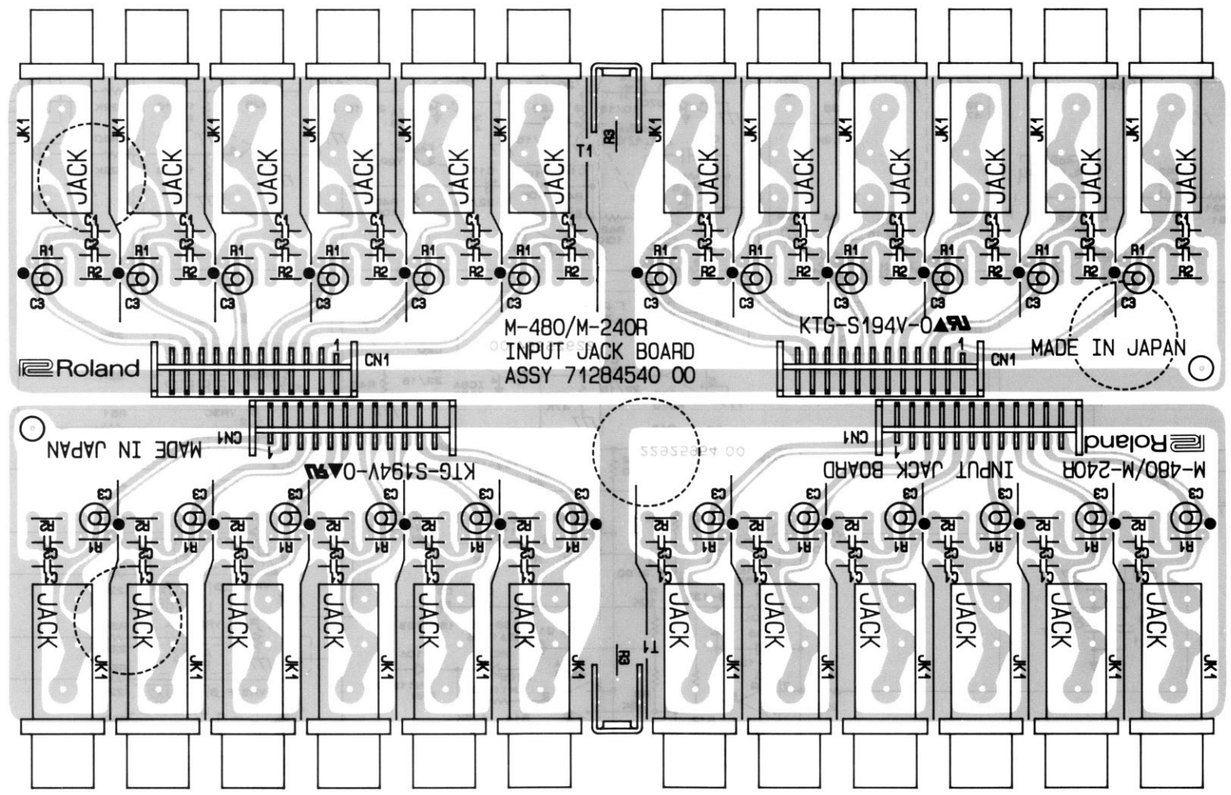
ASSY 7128454000

(pcb 2292595400)

REPLACEMENT （補修用）

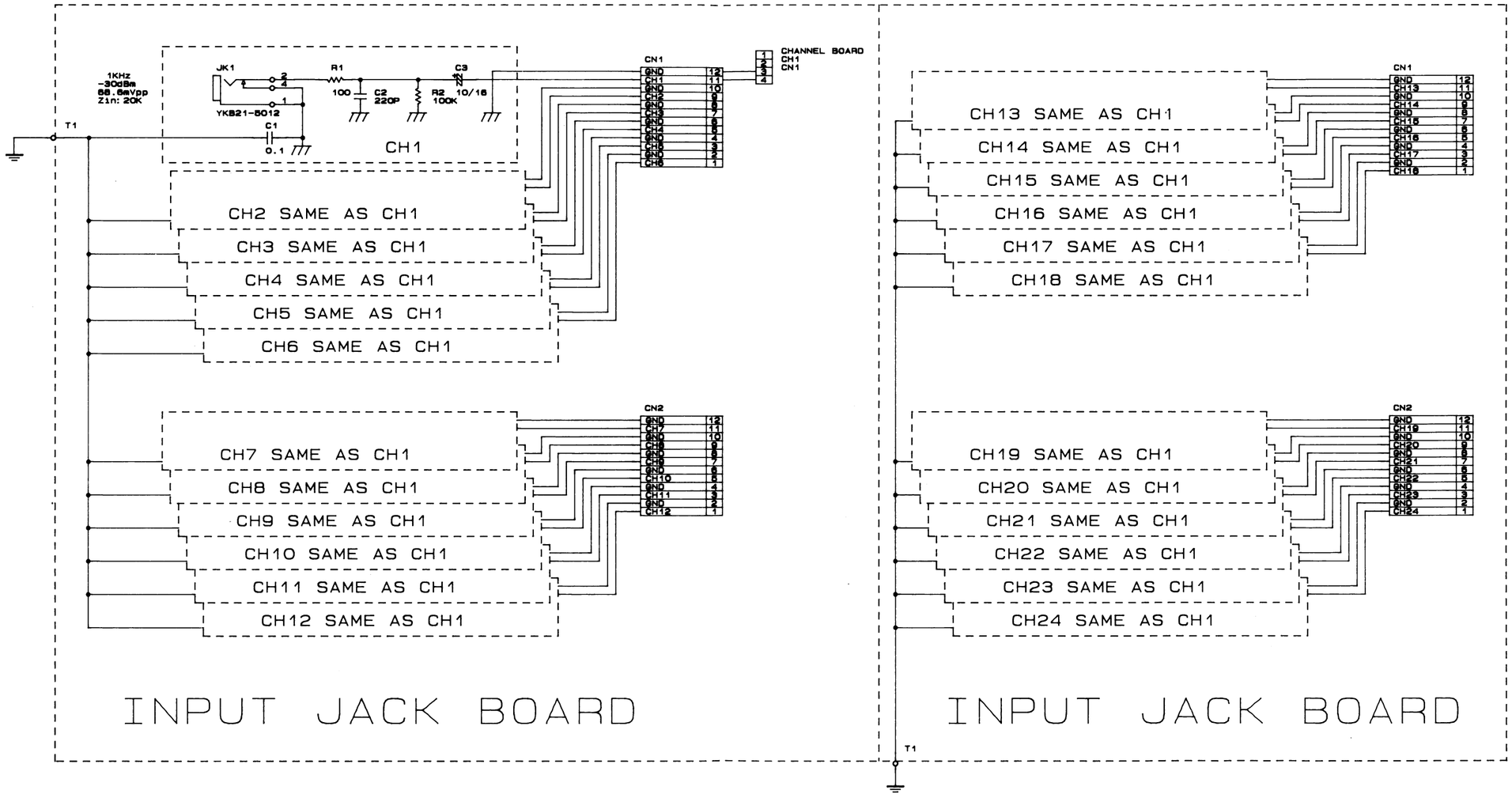
INPUT JACK BOARD
ASSY 7128454000
NOTE: Replacement INPUT JACK BOARD distributes as 2ch unit.

注：補修用インプットジャック基板は 2CH 単位で供給されます。



View from component side

INPUT JACK BOARD



RETURN JACK BOARD

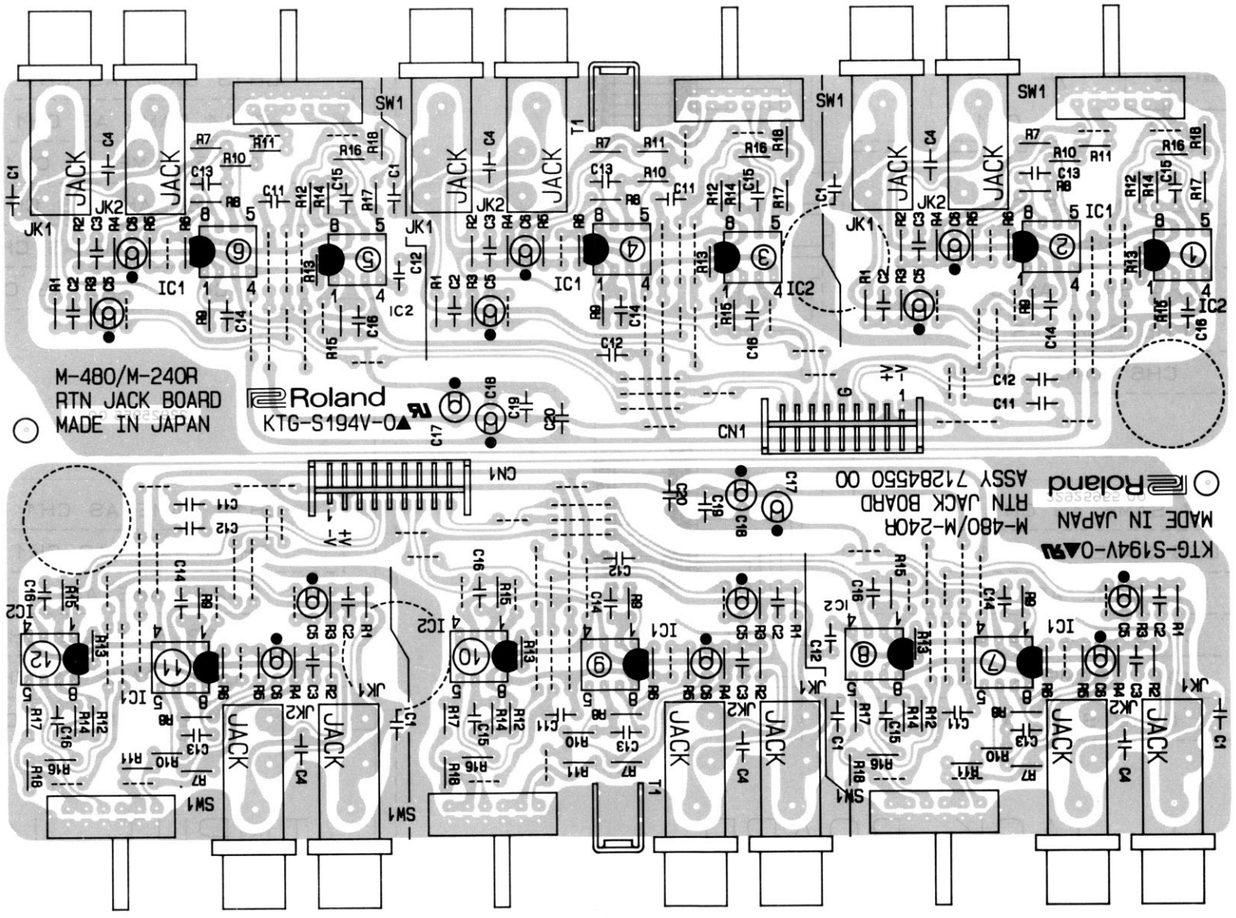
ASSY 7128455000

(pcb 2292595500)

REPLACEMENT （補修用）

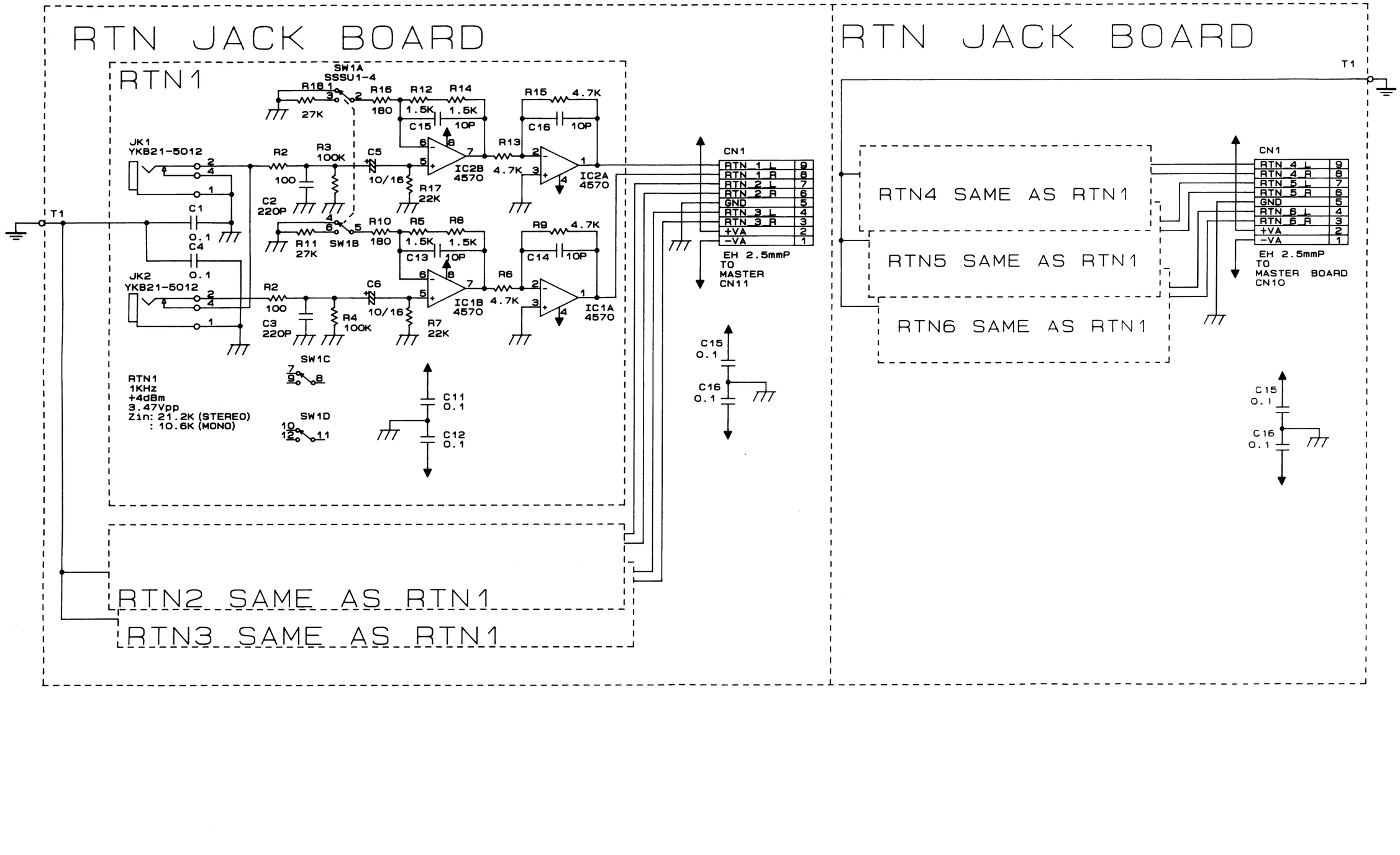
RETURN JACK BOARD
ASSY 7128455000
NOTE: Replacement RETURN JACK BOARD distributes as 2ch unit.

注：補修用リターンジャック基板は 2CH 単位で供給されます。



View from component side

RETURN JACK BOARD



OUTPUT JACK BOARD

ASSY 7128456000)

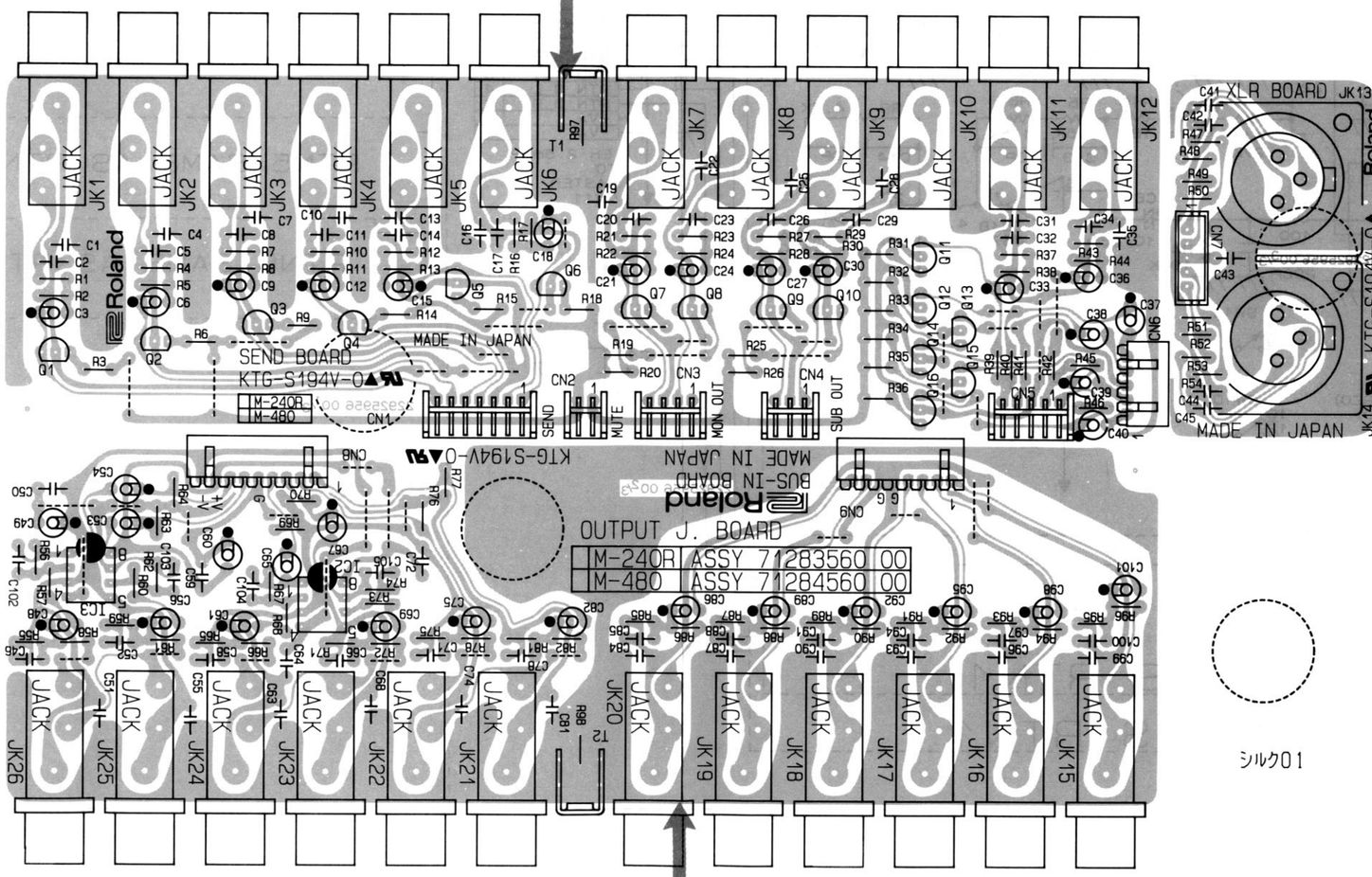
(pcb 2292595600)

REPLACEMENT （補修用）

OUTPUT JACK BOARD
ASSY 7128456000
◆ OUTPUT JACK Board consists of the following 3PCBs
◆ アウトプットジャック基板は，下記の３点から成ります。
- Send Board (pcb 2292595600 1/3)
- Bus Board (pcb 2292595600 2/3)
- XLR Board (pcb 2292595600 3/3)

SEND BOARD
(pcb 2292595600 1/3)

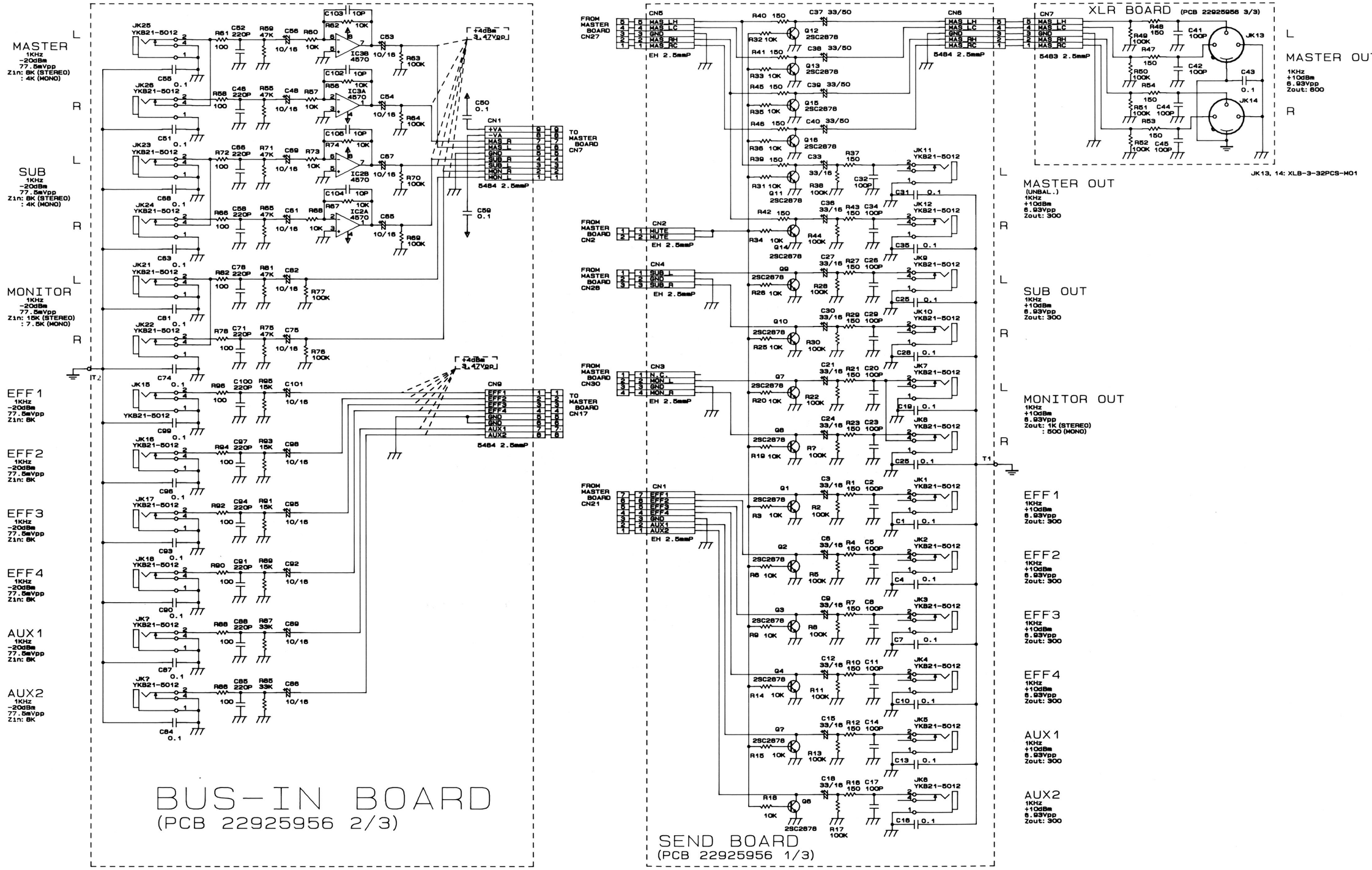
XLR BOARD
(pcb 2292595600 3/3)



View from component side

BUS-IN BOARD
(pcb 2292595600 2/3)

OUTPUT JACK BOARD



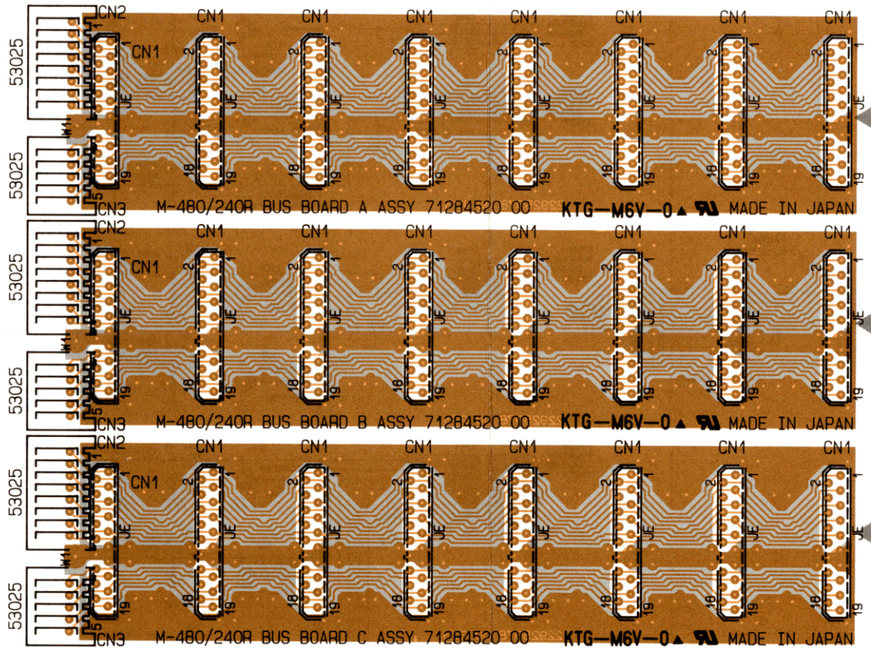
BUS BOARD

ASSY 7128452000

(pcb 2292597800)

REPLACEMENT （補修用）

BUS BOARD
ASSY 7128452000
◆ BUS Board consists of the following 3PCBs
◆ バス基板は，下記の 3 点から成ります。
- Bus Board A (pcb 2292597800 1/3)
- Bus Board B (pcb 2292597800 2/3)
- Bus Board C (pcb 2292597800 3/3)



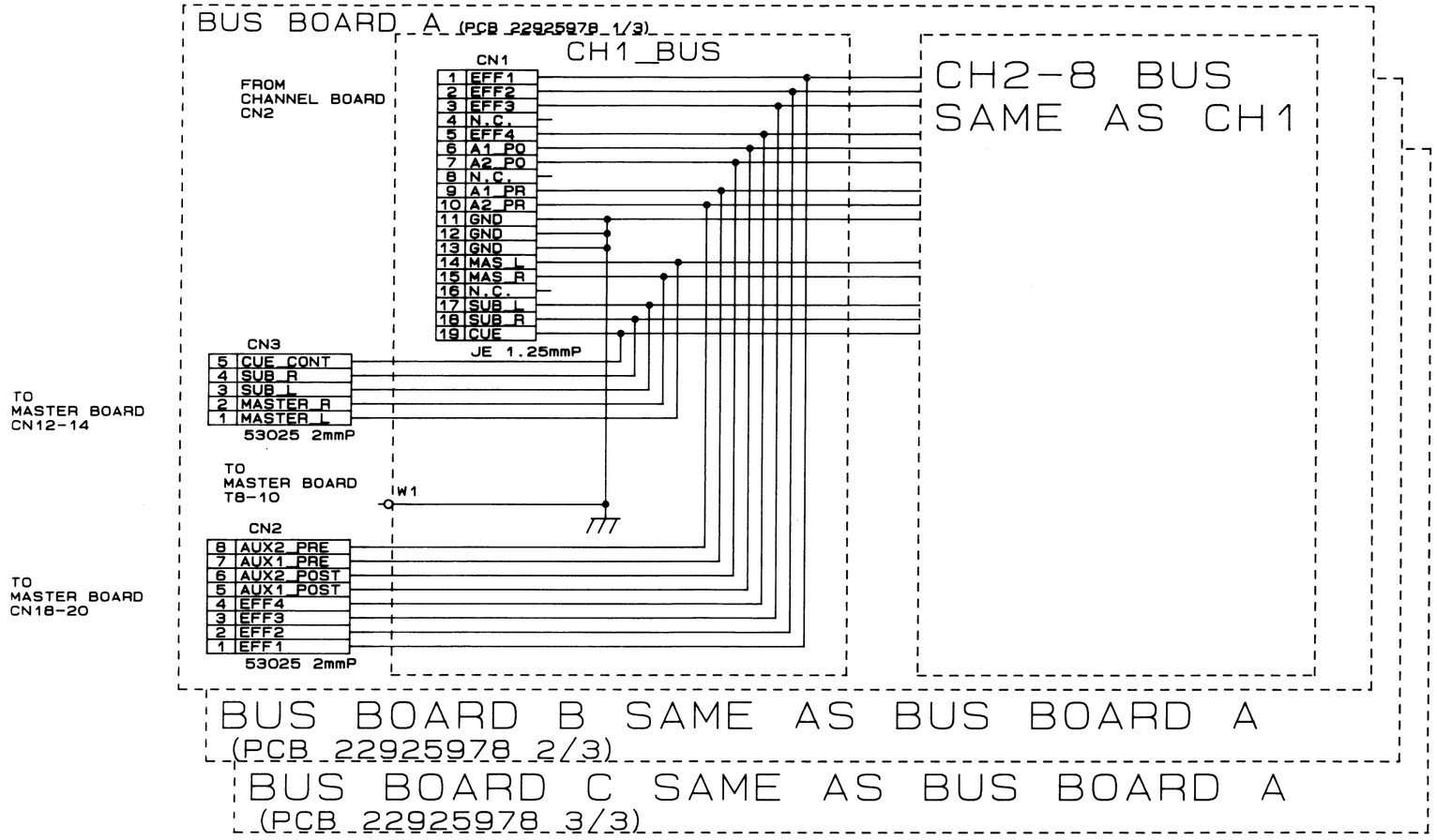
BUS BOARD A
(pcb 2292597800 1/3)

BUS BOARD B
(pcb 2292597800 2/3)

BUS BOARD C
(pcb 2292597800 3/3)

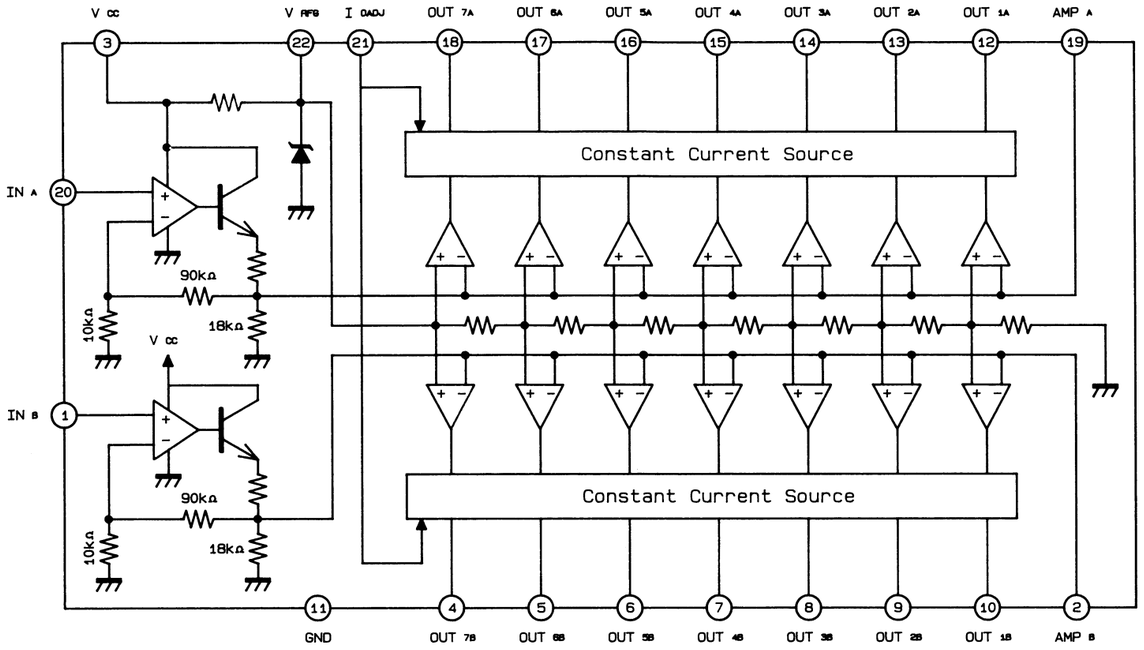
View from component side

BUS BOARD


BUS BOARD A (PCB 22925978 1/3)
CH1_BUS
CN1
1 EFF1
2 EFF2
3 EFF3
4 N.C.
5 EFF4
6 A1_PO
7 A2_PO
8 N.C.
9 A1_PR
10 A2_PR
11 GND
12 GND
13 GND
14 MAS_L
15 MAS_R
16 N.C.
17 SUB_L
18 SUB_R
19 CUE
JE 1.25mmP
FROM CHANNEL BOARD CN2
CH2-8 BUS SAME AS CH1
CN3
5 CUE_CONT
4 SUB_R
3 SUB_L
2 MASTER_R
1 MASTER_L
53025 2mmP
TO MASTER BOARD CN12-14
TO MASTER BOARD T8-10
W1
CN2
8 AUX2_PRE
7 AUX1_PRE
6 AUX2_POST
5 AUX1_POST
4 EFF4
3 EFF3
2 EFF2
1 EFF1
53025 2mmP
TO MASTER BOARD CN18-20
BUS BOARD B SAME AS BUS BOARD A
(PCB 22925978 2/3)
BUS BOARD C SAME AS BUS BOARD A
(PCB 22925978 3/3)

IC DATA/IC データ

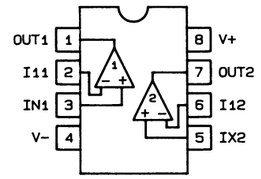
LED Driver (Q12, 13 on MASTER AMP BOARD A)
IR2E28
(15209130)



Note: Each OP amp is electrically incompatible with the others though pin-for-pin compatible. Replacement must be only the OP amp specified on the circuit diagram.

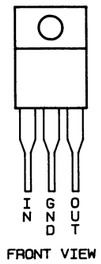
注: 各OP.ampは，足ピン配置は同じですが，性能の互換性はありません．
修理する際は，回路図で指定されたOP.ampを使用して下さい．

OP Amp
μPC4570C
(15189186)

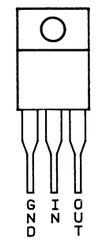


Power Amp
LA6515
(IC21 on MASTER AMP BOARD B)
(15199563)

+15V Voltage Regulator
(IC22 on REG BOARD A)
NJM7815FA (15199208)



-15V Voltage Regulator
(IC23 on REG BOARD B)
NJM7915FA (15199209)

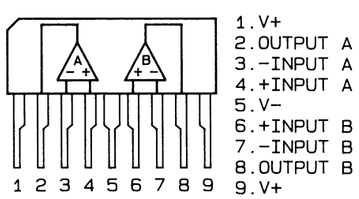


Note: Each OP amp is electrically incompatible with the others though pin-for-pin compatible. Replacement must be only the OP amp specified on the circuit diagram.

注: 各OP.ampは，足ピン配置は同じですが，性能の互換性はありません．
修理する際は，回路図で指定されたOP.ampを使用して下さい．

OP Amp

NJM4565SD (15189242)

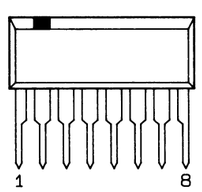


1.V+
2.OUTPUT A
3.-INPUT A
4.+INPUT A
5.V-
6.+INPUT B
7.-INPUT B
8.OUTPUT B
9.V+

Note: Each OP amp is electrically incompatible with the others though pin-for-pin compatible. Replacement must be only the OP amp specified on the circuit diagram.

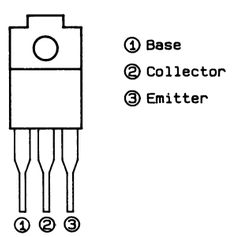
注: 各OP.ampは，足ピン配置は同じですが，性能の互換性はありません．
修理する際は，回路図で指定されたOP.ampを使用して下さい．

OP Amp
BA15218N
(15189235)



1.OUTPUT A
2.-INPUT A
3.+INPUT A
4.V-
5.+INPUT B
6.-INPUT B
7.OUTPUT B
8.V+

Power Transistor
(Q23 on TR BOARD A)
2SD2081 (15129725)
Darlington Type



Power Transistor
(Q24 on TR BOARD B)
2SD1259 (15129719)
Darlington Type

