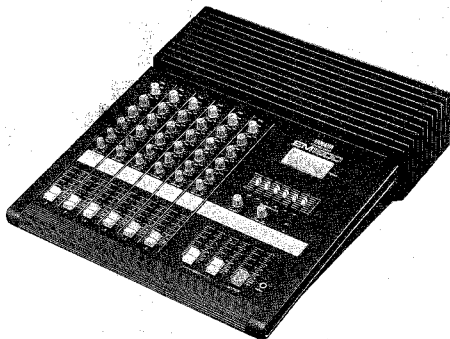


POWERED MIXERS

EM1400
EM1600
EM1800

SERVICE MANUAL



■ CONTENTS

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006787

YAMAHA CORP.

HAMAMATSU, JAPAN

2.95K-412 K Printed in Japan '88.3.

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

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

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

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

■ SPECIFICATIONS

● GENERAL SPECIFICATIONS

Maximum Output Power	150W @ 4ohms 0.5% (THD) @ 1 kHz 100W @ 8ohms 0.3% (THD) @ 1 kHz
Maximum Output Level (LINE OUT)	+20dB @ 10kohms 0.5% 20Hz~20kHz
Total Harmonic Distortion (Power Amp. Section) (Mixer Section)	Less than 0.1% 20Hz~20kHz @ 75W/4ohms (POWER AMP IN to SPEAKER OUT) Less than 0.2% 20Hz~20kHz @ +4dB/10kohms (CH IN to LINE OUT)
Frequency Response (SPEAKER OUT) (LINE OUT)	+1, -3dB 20Hz~20kHz @ 1W/8ohms +1, -3dB 20Hz~20kHz @ +4dB/10kohms
Hum & Noise (20Hz~20kHz) Rs = 150ohms Input Gain = Max. Input Pad = 0dB Input sensitivity = -60dB	-126dB Equivalent Input Noise -64dB residual output noise (SPEAKER OUT) -88dB residual output noise (LINE OUT) -73dB (77dB S/N) LINE OUT Master fader at maximum level and all CH fader at minimum level. -62dB (66dB S/N) LINE OUT Master fader and one CH fader at maximum level. -73dB (77dB S/N) AUX OUT Master fader at maximum and all CH mix level control at minimum level. -62dB (66dB S/N) AUX OUT Master fader and one CH mix level control at maximum level.
Maximum Voltage Gain	90dB CH IN to SPEAKER OUT 64dB CH IN to LINE OUT 64dB CH IN to AUX SEND 1, 2 (+4dB) 50dB CH IN to AUX SEND 2 (-10dB) 24dB AUX RETURN to LINE OUT 26dB POWER AMP IN to SPEAKER OUT
Crosstalk (@ 1 kHz)	60dB adjacent input channels 60dB input to output
Input channel gain control	40dB (-60dB ~ -20dB) variation in gain stop to stop
Input channel pad switch	0/20dB of attenuation
Input channel equalization	±15dB maximum boost or cut in each of three bands. HIGH : 8kHz shelving MIDDLE : 2kHz peaking LOW : 100Hz shelving
Master equalization (GEO)	250Hz, 500Hz, 1kHz, 2kHz, 4kHz, 8kHz ±12dB
Level Meter	Illuminated meter (+5VU = 150W/4ohms)
Clip indicators	RED LED built into each input channel. In turns on when post-EQ signal is 3dB below clipping.
Power Requirements U.S. & Canadian models West Germany model	120V AC, 60Hz 220V AC, 50Hz
Power Consumption U.S. & Canadian models West Germany model	EM1400 330W EM1600 330W EM1800 330W EM1400 330W EM1600 330W EM1800 330W
Dimensions	Height 6-1/8" (155 mm) Depth 20-5/8" (525 mm) Width EM1400 14-1/8" (360 mm) EM1600 16-7/8" (430 mm) EM1800 19-5/8" (500 mm)
Weight	EM1400 28 lbs. 11 ozs. (13 kg) EM1600 33 lbs. 1 ozs. (15 kg) EM1800 35 lbs. 4 ozs. (16 kg)

* 0dB = 0.775 Vr.m.s.

● INPUT CHARACTERISTICS

Input Terminals	PAD	Gain Trim	Actual Load Impedance	For Use With Nominal	Input Level			Connector In Mixer
					Sensitivity	Nominal	Max. before clip	
CH Input *	0	-60	4k ohms	50-600 ohm Mics	-60dB (0.8mV)	-60dB (0.8mV)	-34dB (15.5mV)	XLR-3-31 type & Phone Jack (TRS)
		-20		& 600 ohm Lines	-20dB (77.5mV)	-20dB (77.5mV)	+6dB (1.55V)	
	20			600 ohm Lines	0dB (775mV)	0dB (775mV)	+26dB (15.5V)	Phone Jack
AUX RETURN (1, 2)			10k ohms	600 ohm Lines	-20dB (77.5mV)	-20dB (77.5mV)	—	Phone Jack
GEQ IN			10k ohms	600 ohm Lines	+4dB (1.23V)	+4dB (1.23V)	+20dB (7.75V)	Phone Jack
POWER AMP IN			10k ohms	600 ohm Lines	+4dB (1.23V)	+4dB (1.23V)	+4dB (1.23V)	Phone Jack

(1) Sensitivity is the lowest level that will produce an output of full power or the nominal output level when the unit is set to maximum gain.

(2) XLR type connectors are balanced, CH Phone Jacks are balanced (T = +, R = -, S = GND) and another Phone Jacks are unbalanced.

(3) In these specifications, when dB represents a specific voltage, 0dB is referenced to 0.775V RMS.

(4) * CH No EM1400=4CH EM1600=6 CH EM1800=8CH

● OUTPUT CHARACTERISTICS

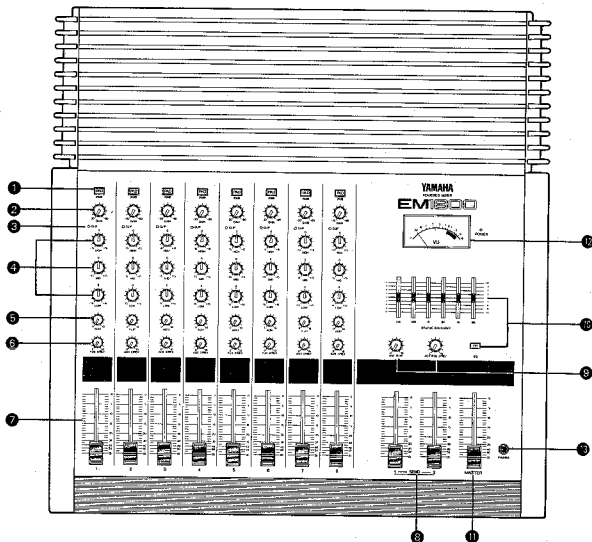
Output Terminals	Actual Source Impedance	For Use With Nominal	Output Level		Connector In Mixer	
			Nominal	Max. before clip		
SPEAKER OUT	0.08 ohms	8 ohm speakers	100 W	100 W	Phone Jack	
		4 ohm speakers	150 W	150 W		
LINE OUT	600 ohms	10k ohm lines	+4dB (1.23V)	+20dB (7.75V)	Phone Jack	
GEQ OUT	600 ohms	10k ohm lines	+4dB (1.23V)	+20dB (7.75V)	Phone Jack	
AUX SEND 1	150 ohms	600 ohm lines	+4dB (1.23V)	+20dB (7.75V)	Phone Jack	
AUX SEND 2	+4dB	150 ohms	600 ohm lines	+4dB (1.23V)	+20dB (7.75V)	Phone Jack
	-10dB	600 ohms	10k ohm lines	-10dB (245mV)	+6dB (1.55V)	Phone Jack
PHONES	150 ohms	8 ohm phones	75mW	75mW	Stereo Phone Jack	

(1) All Phone Jacks are unbalanced.

(2) In these specifications, when dB represents a specific voltage, 0dB is referenced to 0.775V RMS.

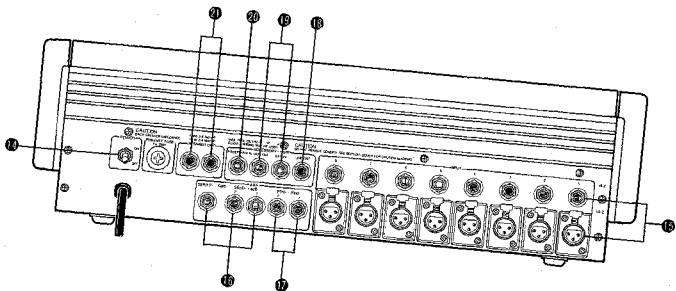
■ PANEL LAYOUT

● Front Panel



- | | |
|----------------------|--------------------------------------|
| ① PAD Switch | ⑧ SEND1 & SEND2 Faders |
| ② GAIN Control | ⑨ AUX RTN 1 & AUX RTN 2/REV Controls |
| ③ CLIP LED indicator | ⑩ Graphic Equalizer & EQ Switch |
| ④ 3-band Equalizer | ⑪ Master Fader |
| ⑤ AUX1 Control | ⑫ VU Meter |
| ⑥ AUX2/REV Control | ⑬ PHONES Jack |
| ⑦ Channel Fader | |

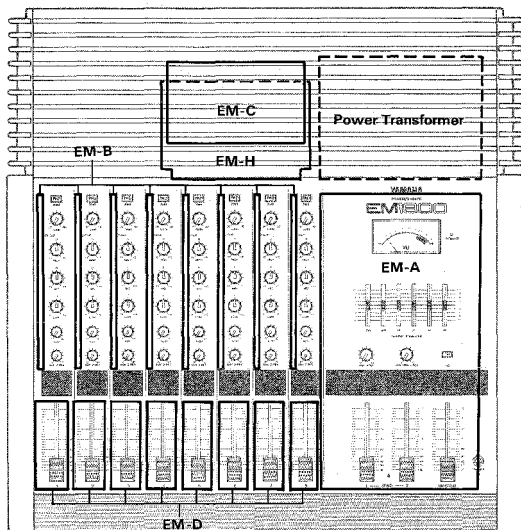
• Rear Panel



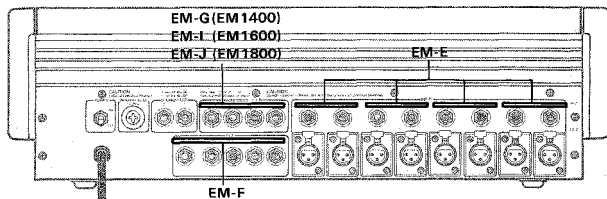
- ① Power Switch
- ② HI-Z and LO-Z Input Connectors
- ③ AUX SEND 1 & AUX SEND 2 Jacks
- ⑦ AUX RTN 1 & AUX RTN 2 Jacks
- ⑤ LINE OUT Jack
- ⑥ GEQ IN & GEQ OUT Jacks
- ④ POWER AMP IN Jack
- ⑧ SPEAKER OUT 1 and 2 Jacks

■ CIRCUIT BOARD LAYOUT

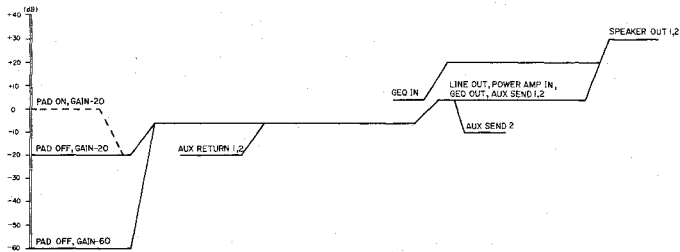
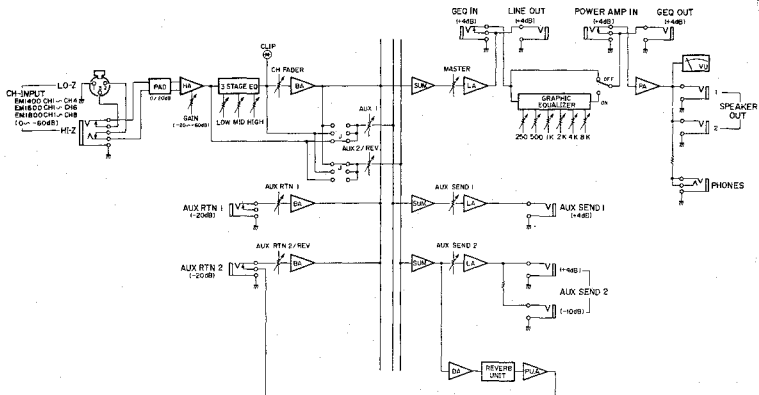
● Front Panel



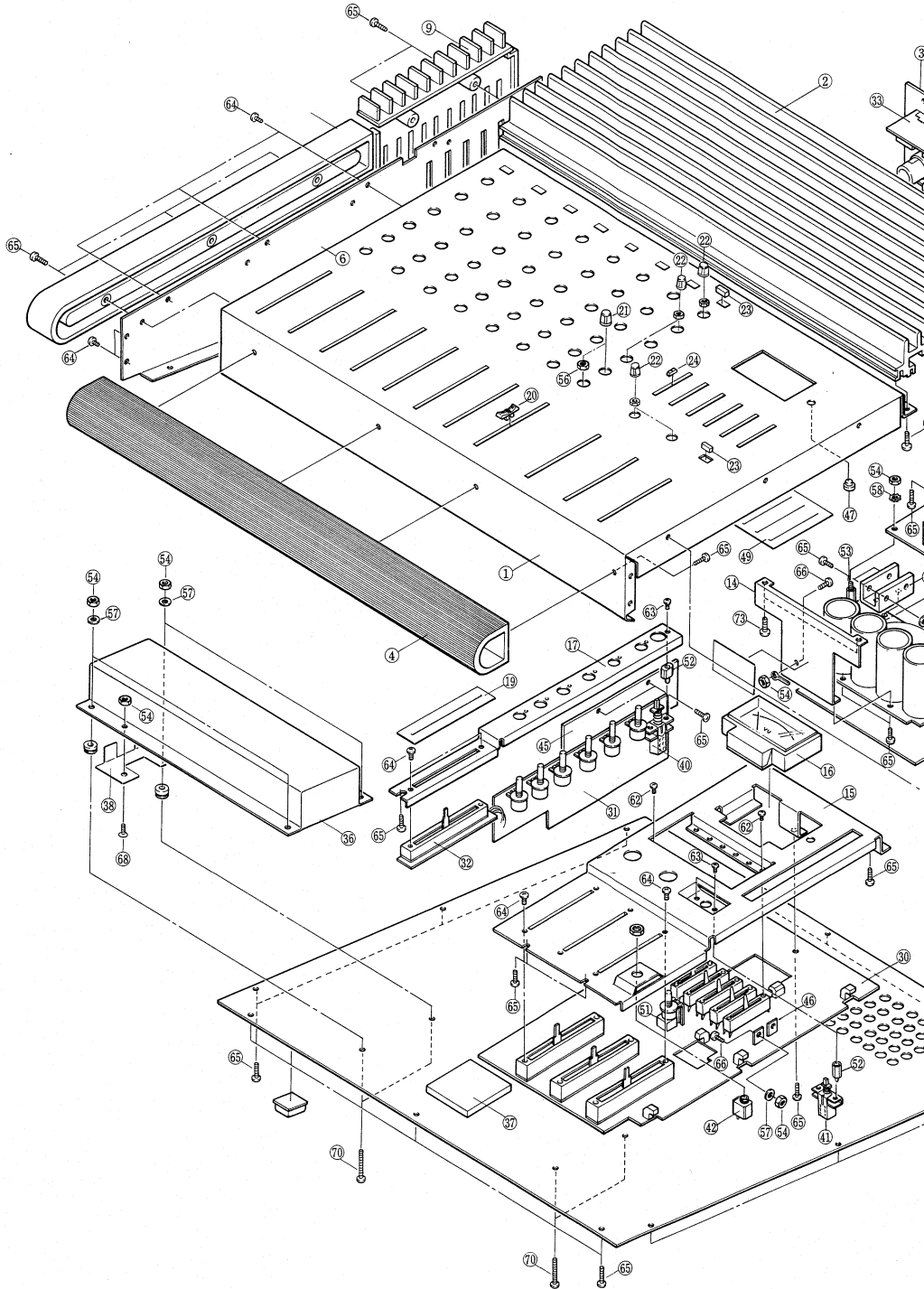
● Rear Panel

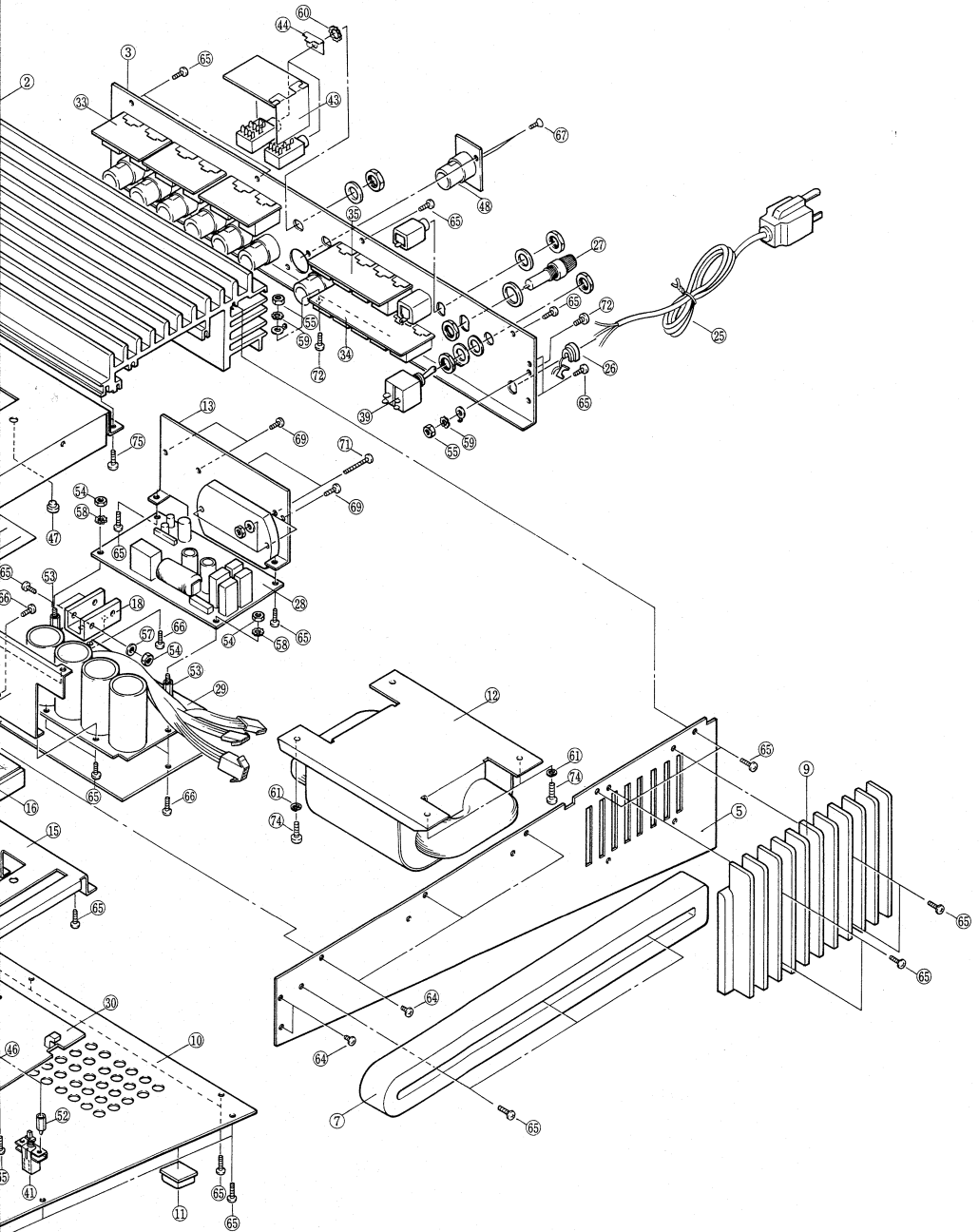


■ BLOCK & LEVEL DIAGRAM



OVERALL ASSEMBLY

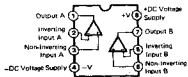




IC BLOCK DIAGRAM

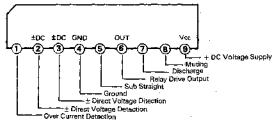
- NJM4558DV (IG001390)
- NJM4556DE (XA772001)

Dual Operational Amplifier



- TA7317 (IG034800)

Relay Driver



■ CIRCUIT BOARDS & WIRING

Notes)

* Circuit Board

EM-A (VO) (NX804090) MASTER
 EM-B (VO) (NX804100) CHANNEL PATCH
 EM-C (VO) (NX804110) POWER IC
 EM-D (HB) (NX804120) LEVEL VR
 EM-E (HB) (NX804130) CH JACK
 EM-F (HB) (NX804140) OUT JACK
 EM-G (HB) (NX804150) RTN JACK (EM1400)
 EM-H (VO) (NX804160) POWER SUPPLY
 EM-I (HB) (NX804190) RTN JACK (EM1600)
 EM-J (HB) (NX804200) RTN JACK (EM1800)

1. IC

IC 101: NJM7815A (IG147400) 1A + 15V IO:1.5
 IC 102: NJM7915A (IG147500) 1A - 15V IO:1.5
 IC 201, 202, 501 - 505: NJM4558DV (IG001390) OP AMP.
 IC 301: STK4048XI (IX803040)
 IC 302: TA7317P (IG034800) Relay Driver
 IC 506: NJM4556DE (XA772001) OP AMP.
 IC 601: M5229P (IX803030)

2. Transistor

Q 201, 202: 2SA970-BL (IA097010)
 Q 203: 2SC1313 (IX802930)
 Q 204: 2SA726 (IX802920)
 Q 301, 501: 2SC3421-Y (IX803090)
 Q 302, 502: 2SA1358 (IX603580)

3. Diode

D 101 - 105: 1N4001 (IX803100)
 D 301 - 304, 501, 502: 1N4148 (IX803110)
 D 503, 504: 1N60P (IF000620)

4. Zener Diode

D 306: 47V 1W (IX803120)

5. Diode Bridge

B 1: 2W06 (IX802960)
 B 2 - 4: KBUBD (IX803140)

6. LED

103HD (IX802980) CLIP
 SE-5013DH (IX803150) POWER

7. Variable Resistor

VR 201: N15KC-05C10K (HX801960) GAIN
 VR 202, 203: N15KC-15A25K (HX801980) AUX1, AUX2/REV
 VR 205 - 207: N15KC-B50K C.C. (HX801970) LOW, HIGH, MID
 VR 501, 502: N15KC-15A20K (HX802160) AUX RTN1, 2

8. Slide Pot

VR 204, 503 - 505: RS60Y11G4023-PJ (HX802030) 10KA × 1 SEND1, 2, MASTER
 VR 601 - 606: S3013K6105- (HX802170) 50KW × 1 G. EQUALIZER

9. Trimmer Pot

VR 506: 5KB 3P (HX802180)

10. Coil

L 301: 1μH (GX801200)

11. Switch

SW1: P-2021 L/B (KX800830) POWER
 SW3: KPB121-SNA (KX800840) EQ
 SW201: KPB122-SSAL (KX800730) PAN 6P

12. Relay

JY1J-DC48V (KX800880)

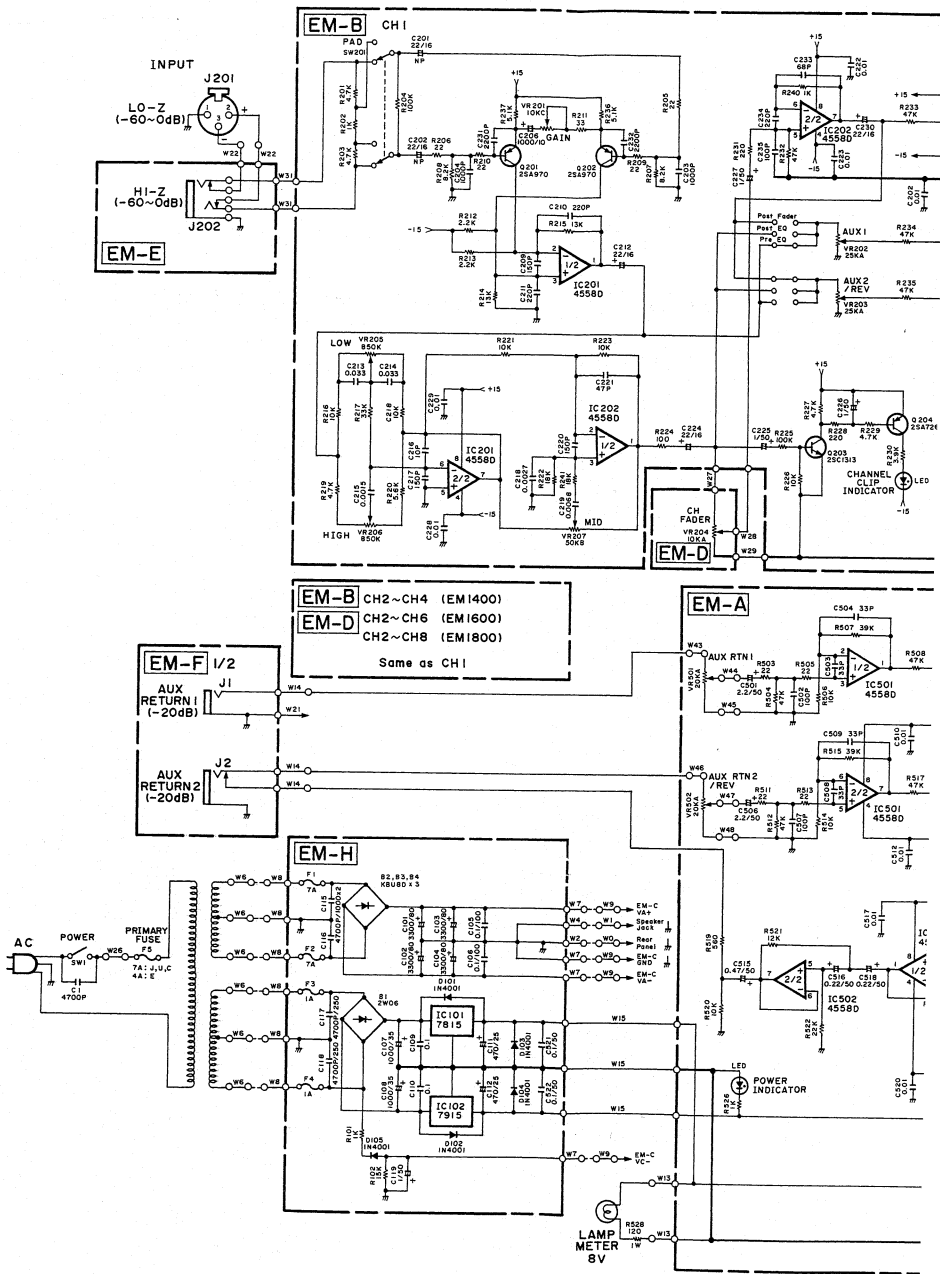
13. Fuse

F1, F2: 7A
 F3, F4: 1A
 F5: 7A (J, U, C)
 4A (E)

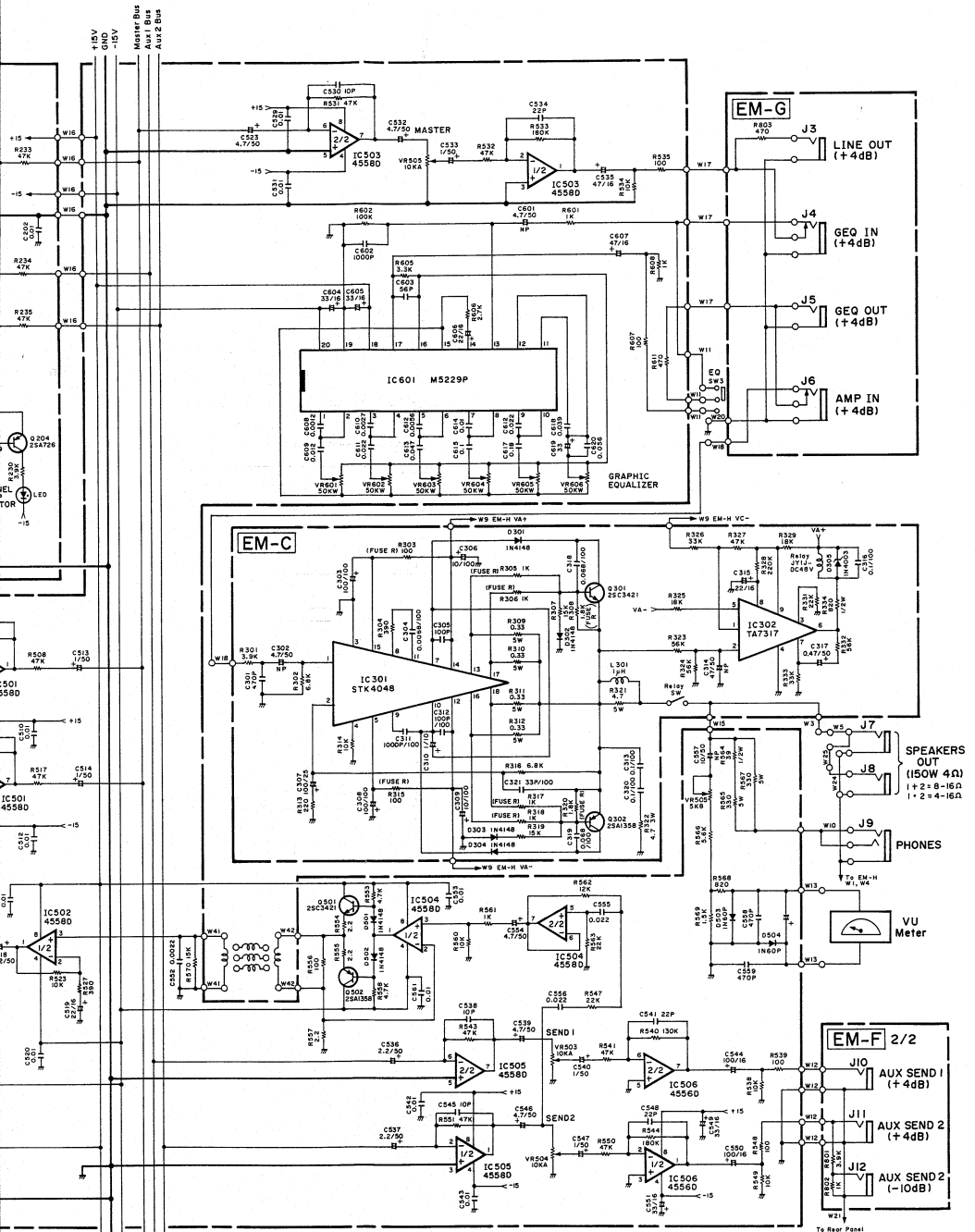
14. Jack

J 1 - 6, J 10 - 12: MIC Jack (AUX, LINE, EQ, AMP IN/OUT)
 J 7 - 9: PHONE Jack (SP. OUT, PHONES)
 J 201: XLR Connector (INPUT)
 J 202: MIC Jack (INPUT)

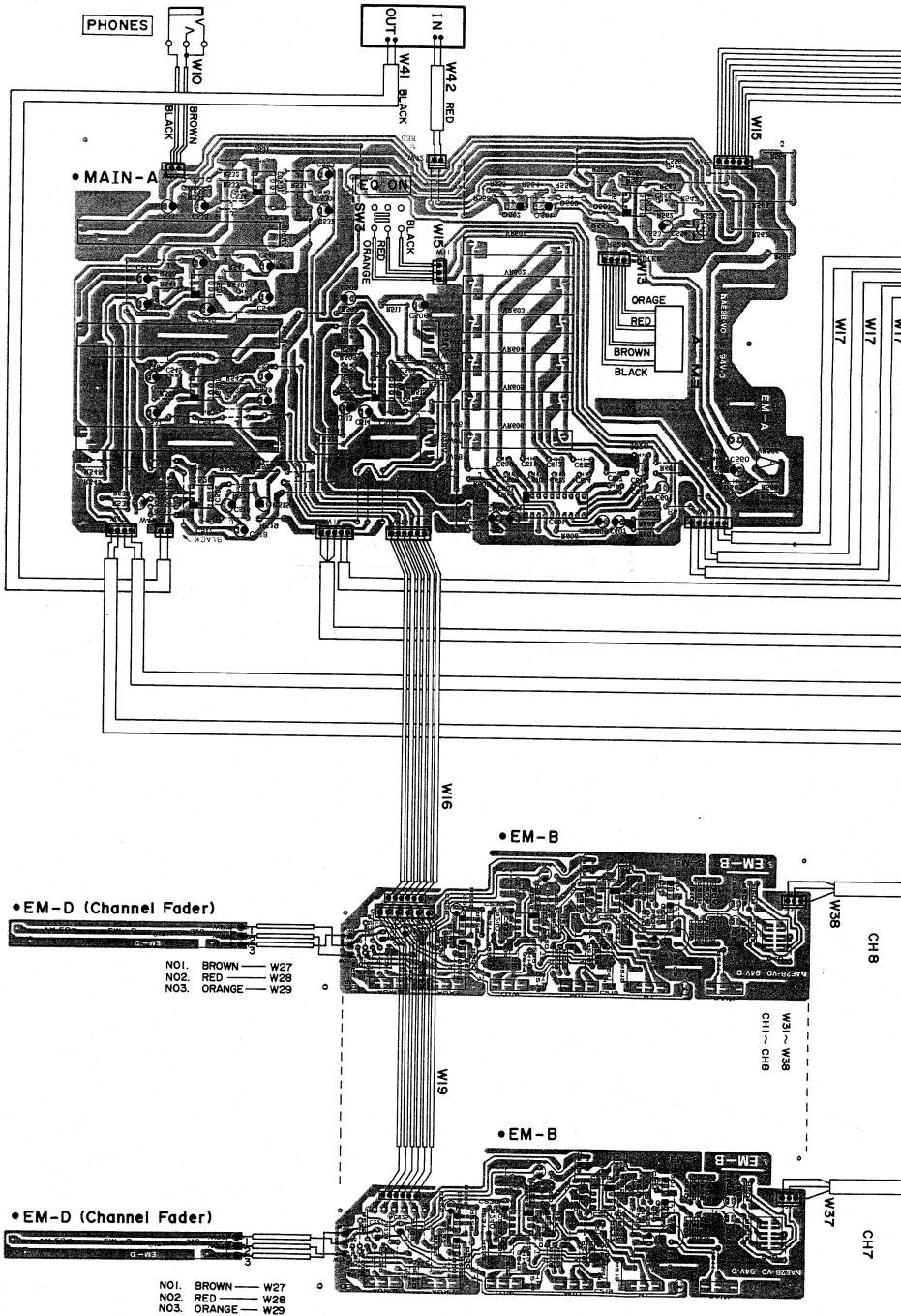
■ OVERALL CIRCUIT DIAGRAM



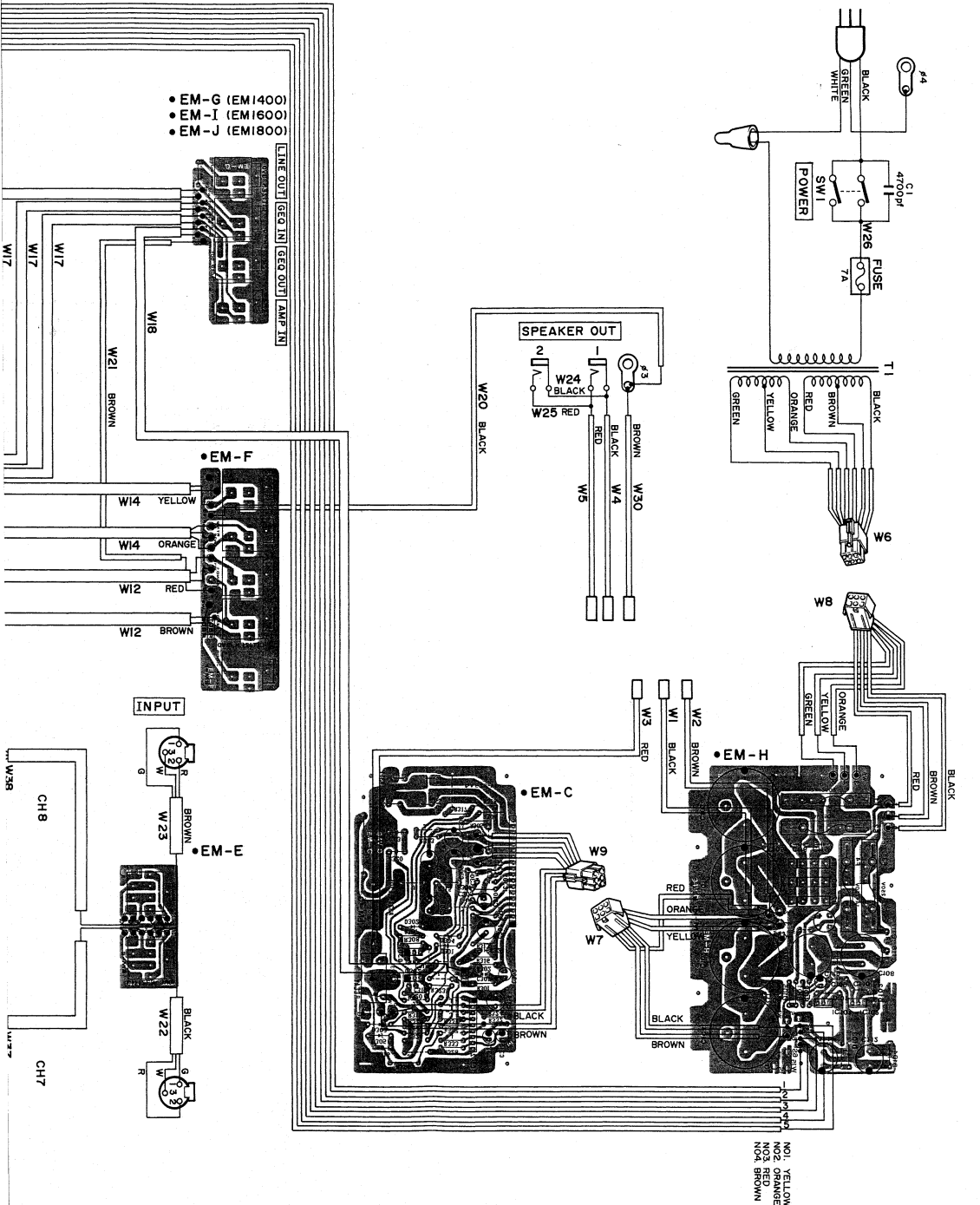
EM 1400/EM 1600/EM 1800



■ CIRCUIT BOARDS & WIRING



CH1~6 AS SAME AS CH8



POWERED MIXERS
EM1400
EM1600
EM1800

PARTS LIST

Notes DESTINATION ABBREVIATIONS

J : Japanese model	A : Australian model
U : U.S. model	E : European model
C : Canadian model	D : West German model
X : General model	B : British model
M : South African model	I : Indonesian model
H : North European model	

ELECTRICAL PARTS

Ref	Part No	Description		部品名	Remarks	ラック
	NX804000	Circuit Board	EM-A (V0)	EM-A シート	MASTER	
	NX804100	Circuit Board	EM-B (V0)	EM-B シート	CHANNEL PATCH	
	NX804110	Circuit Board	EM-C (V0)	EM-C シート	POWER IC	
	NX804120	Circuit Board	EM-D (HB)	EM-D シート	LEVEL VR	
	NX804130	Circuit Board	EM-E (HB)	EM-E シート	CH JACK	
	NX804140	Circuit Board	EM-F (HB)	EM-F シート	OUT JACK	
	NX804150	Circuit Board	EM-G (HB)	EM-G シート	RTN JACK (EM1400)	
	NX804160	Circuit Board	EM-H (V0)	EM-H シート	POWER SUPPLY	
	NX804190	Circuit Board	EM-I (HB)	EM-I シート	RTN JACK (EM1600)	
	NX804200	Circuit Board	EM-J (HB)	EM-J シート	RTN JACK (EM1800)	
	IG001390	IC	NJM4558DV	IC	OP AMP.	03
	XA772001	IC	NJM4556DE	IC	OP AMP.	03
	IX803030	IC	M5229P	IC		
	IX803040	IC	STK4048XI	IC		
	IG034300	IC	TA7377F	IC	Relay Driver	04
	IG147400	IC	NJM7815A	IC	1A-15V 10*1.5	04
	IG147500	IC	NJM7015A	IC	1A-15V 10*1.5	04
	JX802920	Transistor	2SA42B	トランジスタ		
	IA027010	Transistor	2SA970-BL	トランジスタ		03
	IX803580	Transistor	2SA1358	トランジスタ		
	IX802930	Transistor	2SC1313	トランジスタ		
	IX803090	Transistor	2SC3421-Y	トランジスタ		
	IX803100	Diode	1N4001	ダイオード		
	IX803110	Diode	1N4148	ダイオード		
	IF000620	Diode	1N60P	ダイオード		01
	IX803120	Zener Diode	47V 1W	ダイオード	オールドジツ	
	IX802960	Diode Bridge	2V05	ダイオード	ブリッジ	
	IX803140	Diode Bridge	KB88D	ダイオード	ブリッジ	
	IX802980	LED	103HD	LED	CLIP	
	IX803150	LED	SE-5013DH	LED	POWER	
	HX802110	Carbon Resistor	320 Ω 1/2W	カーボン抵抗		
	HX802120	Carbon Resistor	120 Ω 1W	カーボン抵抗		
	HX802130	Carbon Resistor	120 Ω 1W	カーボン抵抗		
	HW495100	Fuse Resistor	100 Ω 1/4W	ヒューズ抵抗		02
	HW795100	Fuse Resistor	1K Ω 1/4W	ヒューズ抵抗		02
	HX802150	Fuse Resistor	1.8K Ω 1/4W	ヒューズ抵抗		02
	HW553470	Wire Wound Resistor	4.7 Ω 3W	セメント抵抗		02
	HW553530	Wire Wound Resistor	330 Ω 5W	セメント抵抗		02
	HW553530	Wire Wound Resistor	0.33 Ω 5W	セメント抵抗		02
	HW553470	Wire Wound Resistor	4.7 Ω 3W	セメント抵抗		02
	HX801960	Rotary Pot.	N15KC-05C10K	セメント抵抗	ボリューム	
	HX801980	Rotary Pot.	N15KC-15A25K	ロータリーボリューム	GAIN	
	HX801970	Rotary Pot.	N15KC-850K C.C.C.	ロータリーボリューム	LOV, HI, MID	
	HX802160	Rotary Pot.	N15KC-15A20K	ロータリーボリューム	AUX RTN1, 2	
	HX802030	Slide Pot.	RS80V1G4023-FJ	スライドボリューム	10KX1 SND1, 2, W	
	HX802170	Slide Pot.	S3013K6105-	スライドボリューム	50KX1 G, EQ	
	HX802180	Trimmer Pot.	5K8 3P	半固定ボリューム		01
	UV809100	Electrolytic Cap.	1 μ F 100V	ケミコン		01
	UV297100	Electrolytic Cap.	10 μ F 100V	ケミコン		02
	UV798100	Electrolytic Cap.	100 μ F 100V	ケミコン		02
	UV129100	Electrolytic Cap.	1000 μ F 10V	ケミコン		02
	UV159100	Electrolytic Cap.	1000 μ F 35V	ケミコン		03
	FZ002320	Electrolytic Cap.	3300 μ F 80V	ケミコン		07
	FX500550	Ceramic Cap.	4700PF AC400V	セラコン		
	FX800120	Ceramic Cap.	4700PF AC250V	セラコン		
	FX500510	Ceramic Cap.	4700PF 1KV	セラコン		05
	FX800270	Ceramic Cap.	100PF 100V	セラコン		
	FX800280	Ceramic Cap.	1000PF 100V	セラコン		
	FX800290	Ceramic Cap.	68PF 100V	セラコン		
	FX800300	Nylon Cap.	0.1 μ F 100V	マイラコン		
	GX801200	Coil	1 μ H	コイル		
	XX800820	Power Switch	P-2021 L/B	パワースイッチ	POWER	
	KX800720	Push Switch	KPB122-SSAL	プッシュスイッチ	PAN GP	
	KX800840	Push Switch	KPB121-SNA	プッシュスイッチ	EQ	
	LX801230	MIC Jack	KDJ-245	MICジャック	AUX, LINE, EQ, AMP	
	LX801220	MIC Jack	KDJ-06	MICジャック	INPUT	
	LX801250	Phone Jack	HLJ-9249-01-070	ホンジャック	SP. OUT, PHONES	
	LX801260	XLR Connector	Y-92-R	XLRコネクタ	INPUT	
	KX800820	Relay	JYJ-DC48V	リレー		
	KX800860	Fuse	7A 31.75mm	ヒューズ	SLOW J, D, C	
	LX801290	Fuse	1A 31.75mm	ヒューズ	SLOW J, E, C	
	KX800870	Fuse	7A 31.75mm	ヒューズ	FAST J, D, C	
	KX800880	Fuse	7A 20mm	ヒューズ	SLOW E	
	LX801300	Fuse	1A 20mm	ヒューズ	SLOW E	
	KX800890	Fuse	4A 20mm	ヒューズ	FAST E	
	LX801310	Fuse Clip	PH-1208	ヒューズクリップ		

OVERALL ASSEMBLY

Ref	Part No	Description		部品名	Remarks	ランク
* 1	AX802000	Control Panel		コントロールパネル	29401 (EM1400)	
* 1	AX802250	Control Panel		コントロールパネル	29401 (EM1600)	
* 1	AX802070	Control Panel		コントロールパネル	29401 (EM1800)	
* 2	AX802260	Heat Sink		放熱板	29411-1 (EM1400)	
* 2	AX802330	Heat Sink		放熱板	29411-1 (EM1600)	
* 2	AX802330	Heat Sink		放熱板	29411-1 (EM1800)	
* 3	AX802080	Rear Panel	J	リアパネル	29403 (EM1400)	
* 3	AX802270	Rear Panel	J	リアパネル	29403 (EM1600)	
* 3	AX802340	Rear Panel	J	リアパネル	29403 (EM1800)	
* 3	AX802000	Rear Panel	U	リアパネル	29403 (EM1400)	
* 3	AX802280	Rear Panel	U	リアパネル	29403 (EM1600)	
* 3	AX802350	Rear Panel	U	リアパネル	29403 (EM1800)	
* 3	AX802190	Rear Panel	C	リアパネル	29403 (EM1400)	
* 3	AX802290	Rear Panel	C	リアパネル	29403 (EM1600)	
* 3	AX802300	Rear Panel	C	リアパネル	29403 (EM1800)	
* 3	AX802110	Rear Panel	E	リアパネル	29403 (EM1400)	
* 3	AX802300	Rear Panel	E	リアパネル	29403 (EM1600)	
* 3	AX802370	Rear Panel	E	リアパネル	29403 (EM1800)	
* 4	CX804780	Front Pad		フロントパッド	29404 (EM1400)	
* 4	CX804900	Front Pad		フロントパッド	29404 (EM1600)	
* 4	CX804910	Front Pad		フロントパッド	29404 (EM1800)	
* 5	AX802120	Side Panel	Right	側板 (右)	29408-2	
* 6	AX802130	Side Panel	Left	側板 (左)	29408-1	
* 7	CX804790	Side Pad	Right	サイドパッド (右)	29409-3	
* 8	CX804500	Side Pad	Left	サイドパッド (左)	29409-2	
* 9	CX804510	Decoration Pad		飾りパッド	29409-1	
* 10	AX802140	Bottom Board		底板	29406 (EM1400)	
* 10	AX802310	Bottom Board		底板	29406 (EM1600)	
* 10	AX802470	Bottom Board		底板	29406 (EM1800)	
* 11	CX804820	Rubber Cushion	RF-028T BL	スベリ座	29406 (EM1800)	22
* 12	GX801210	Power Transformer	R-320	電源トランス	29411-2	
* 13	AX802150	Heat Sink, Power IC		電源放熱板	29413-3	
* 14	AX802180	Holder, Circuit Board		電源基板固定金具	29413-2	
* 15	NX804170	Master Module		HASTERモジュール	29413-2	
* 16	CX804830	VU Meter	TN-72-8657	音圧表	29413-1	
* 17	AX802170	VR Fixing Plate		V R 固定板	29411-3	
* 18	AX802180	Heat Sink, IC		C 放熱板	29411-3	
* 19	CX804500	Dust Cover, Cloth	20 x 90mm BL	防塵クロス	29122	
* 20	CX804510	CH Slide Knob	GY-BL (CH)	ツマミ	29122	
* 20	CX804850	CH Slide Knob	VH-BL (SEND)	ツマミ	29122	
* 20	CX804520	CH Slide Knob	RE-BL (MASTER)	ツマミ	29122	
* 21	CX804580	Rotary Knob B	BE-GY (AUX)	ツマミ	29120-2	
* 22	CX804530	Rotary Knob A	GY-GY (GAIN)	ツマミ	29120-1	
* 22	CX804540	Rotary Knob A	GR-GY (EQUALIZER)	ツマミ	29120-1	
* 22	CX804560	Rotary Knob A	BE-GY (AUX RTN)	ツマミ	29120-1	
* 23	CX804710	Push Knob	BL (PAD)	ツマミ	29121	
* 23	CX804770	Push Knob	BL (ON)	ツマミ	29121	
* 24	CX804560	EQ Slide Knob	VH-BL	ツマミ	29422-1	
* 25	NX800460	AC Cord	110V	電源コード	5	
* 25	NX800470	AC Cord	220V	電源コード	5	
* 26	CX804870	Cord Strain Relief	SK4	コードストッパー	J, U, C	
* 27	CX804800	Fuse Holder	R3-13	ヒューズホルダー	E	
* 27	CX804610	Fuse Holder	FH-R02	ヒューズホルダー	E	
* 28	NX804110	Circuit Board	EM-C (VO)	EM-C シート	POWER IC	
* 29	NX804160	Circuit Board	EM-H (VO)	EM-H シート	POWER SUPPLY	
* 30	NX804090	Circuit Board	EM-A (VO)	EM-A シート	MASTER	
* 31	NX804100	Circuit Board	EM-B (VO)	EM-B シート	CHANNEL PATCH	
* 32	NX804120	Circuit Board	EM-D (HB)	EM-D シート	LEVEL VR	
* 33	NX804130	Circuit Board	EM-E (HB)	EM-E シート	CH JACK	
* 34	NX804140	Circuit Board	EM-F (HB)	EM-F シート	OUT JACK	
* 35	NX804150	Circuit Board	EM-G (HB)	EM-G シート	RTR JACK (EM1400)	
* 35	NX804190	Circuit Board	EM-I (HB)	EM-I シート	RTR JACK (EM1600)	
* 35	NX804200	Circuit Board	EM-J (HB)	EM-J シート	RTR JACK (EM1800)	
* 35	NX804180	Reverb Unit	8AB3C1B	リバーブユニット		
* 37	CX804880	Reverb Sponge Cushion		リバーブクッション	29437	
* 38	AX802190	Reverb Unit Shield Plate		リア・ア・シールド板	29415-1	
* 39	NX800830	Power Switch	P-2021 L/B	パワースイッチ	POWER	
* 40	KX800730	Push Switch	KPB122-SSAL	プッシュスイッチ	PAN GP	
* 41	KX800840	Push Switch	KPB121-SNA	プッシュスイッチ	EQ	
* 42	LX801250	Phone Jack	HLJ-0249-01-070	ホーンジャック		
* 43	AX802200	Angle Bracket, Jack		ジャック金具	29415	
* 44	CX804820	Ground Lug		ラグ	29438	
* 45	AX802210	VR Separated Plate		V R 仕切板	29413-4	
* 46	AX802220	Heat Sink, Transistor		T 3 ック放熱板	29411-4	
* 47	AX802230	LED Cover	N3 (HPY-7000) RE	L E D カバー		
* 48	LX801260	Connector	V-G2-R	コネクタ		
* 49	CX804840	Dust Cover, Cloth, EQ	95 x 65mm BL	防塵クロス		
* 50	AX802240	Isolation Sheet	BL	絶縁シート	29416	
* 51	CX804920	Cushion, VR		V R クッション	29437-1	

