
Service Manual

Model

812

RECORDING MIXER

Fostex

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1. NOTES, CAUTION

NOTES

- * Adjustment procedures are given in this manual which also includes a Parts List and schematic diagrams to assist the service technician in maintaining the Model 812. Please feel free to contact the nearest Fostex Dealer and Distributor, or write directly to a Fostex office, the addresses of which are printed on the back cover of this manual.
- * The following accessory is supplied with 812 as the standard accessory.

Owner's manual: 1 copy (P/N 8288241000 export model)
(P/N 8288242000 domestic model)

CAUTION

- ⚠ Parts marked with this sign are safety critical components. They must always be replaced with identical components. Refer to the Fostex Parts List and ensure exact replacement.
- * The Phantom switch on the Phantom SW PCB ASSY must be mounted in specified direction when replacement since the slide switch is of shorting/non-shortening contacts. Please refer to page 25 for details.

AUX OUTPUT (L/R) (× 1)	
Output load impedance	10k Ω or more
Nominal output level	-10dBV (0.3V)
Maximum output level	+15dBV (5.6V)
MONITOR OUTPUT (L/R) (× 1)	
Output load impedance	10k Ω or more
Nominal output level	-10dBV (0.3V)
Maximum output level	+15dBV (5.6V)
HEADPHONES OUTPUT (Stereo)	
Output load impedance	8 ~ 50 Ω
Maximum output	80mW
DIRECT OUTPUT (× 12)	
Output load impedance	10k Ω or more
Nominal output level	-10dBV (0.3V)
Maximum output level	+15dBV (5.6V)
FREQUENCY RESPONSE	
Microphone input	20 ~ 20kHz +1/-3dB
Line input	20 ~ 20kHz +1/-1dB
Monitor output	20 ~ 20kHz +1/-2dB
Headphones output	20 ~ 20kHz +1/-3dB
EQUIVALENT INPUT NOISE	-124dBV weighted
OVERALL SIGNAL TO NOISE	
1 mic input	64dB weighted
12 mic input	52dB weighted
T.H.D.	0.05% (1kHz, nominal level)
	0.1% (headphones, 1kHz, 10mW/50 Ω)
FADER ATTENUATION	70dB (1kHz)
CROSSTALK	60dB (1kHz)
PARAMETRIC EQUALIZER	
	60 ~ 1kHz \pm 15dB
	400 ~ 6kHz \pm 15dB
	10kHz \pm 15dB

AUX OUTPUT (L/R) (x 1)	
Output load impedance	10k Ω or more
Nominal output level	-10dBV (0.3V)
Maximum output level	+15dBV (5.6V)
MONITOR OUTPUT (L/R) (x 1)	
Output load impedance	10k Ω or more
Nominal output level	-10dBV (0.3V)
Maximum output level	+15dBV (5.6V)
HEADPHONES OUTPUT (Stereo)	
Output load impedance	8 ~ 50 Ω
Maximum output	80mW
DIRECT OUTPUT (x 12)	
Output load impedance	10k Ω or more
Nominal output level	-10dBV (0.3V)
Maximum output level	+15dBV (5.6V)
FREQUENCY RESPONSE	
Microphone input	20 ~ 20kHz +1/-3dB
Line input	20 ~ 20kHz +1/-1dB
Monitor output	20 ~ 20kHz +1/-2dB
Headphones output	20 ~ 20kHz +1/-3dB
EQUIVALENT INPUT NOISE	-124dBV weighted
OVERALL SIGNAL TO NOISE	
1 mic input	64dB weighted
12 mic input	52dB weighted
T.I.D.	0.05% (1kHz, nominal level)
	0.1% (headphones, 1kHz, 10mW/50 Ω)
FADER ATTENUATION	70dB (1kHz)
CROSSTALK	60dB (1kHz)
PARAMETRIC EQUALIZER	
	60 ~ 1kHz \pm 15dB
	400 ~ 6kHz \pm 15dB
	10kHz \pm 15dB

POWER REQUIREMENTS

AC 100V 42W
AC 120V 45W
AC 220V 45W
AC 240V 45W

DIMENSIONS (H x W x D)

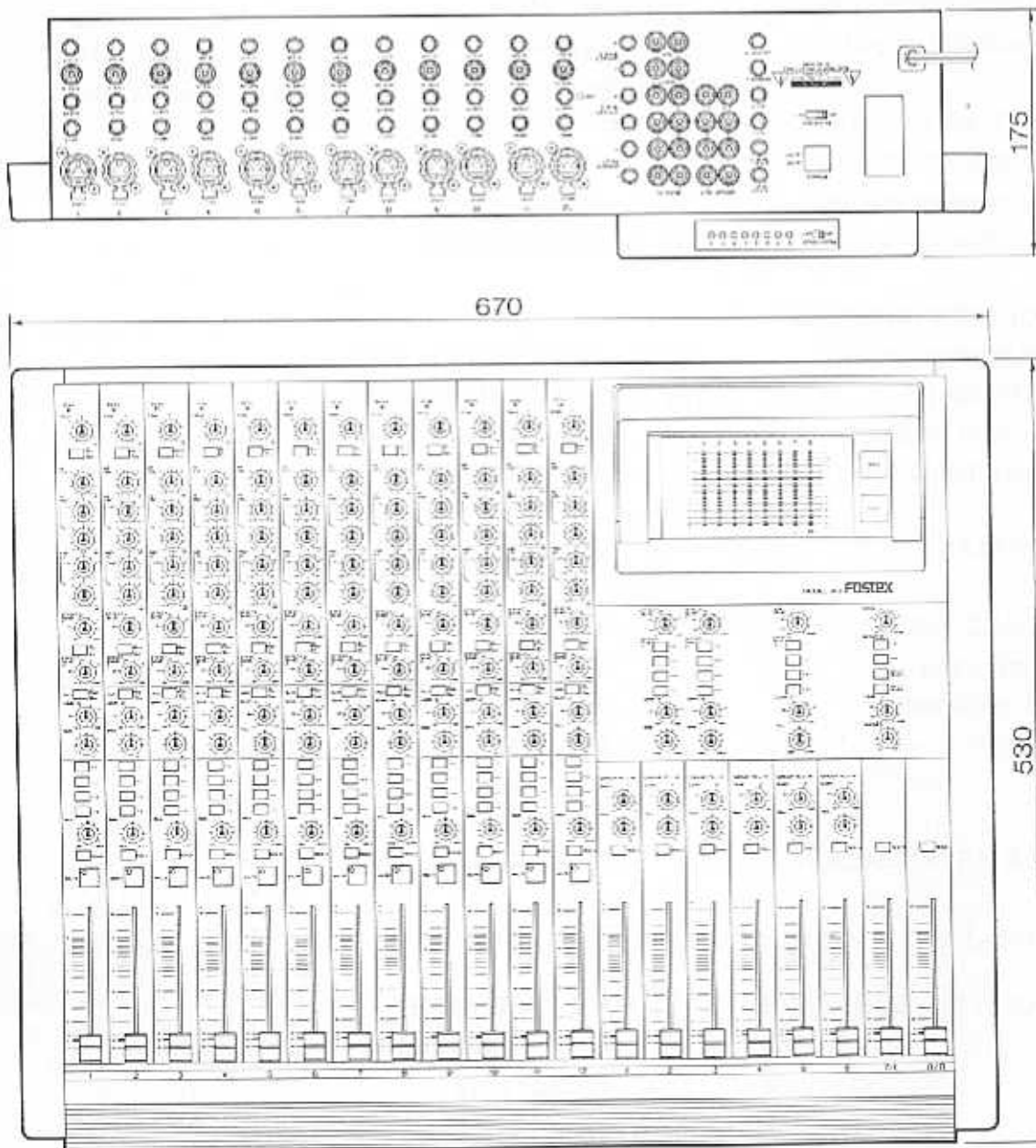
175mm x 670mm x 530mm

WEIGHT

13kg (29lbs)

PHANTOM POWER SUPPLY

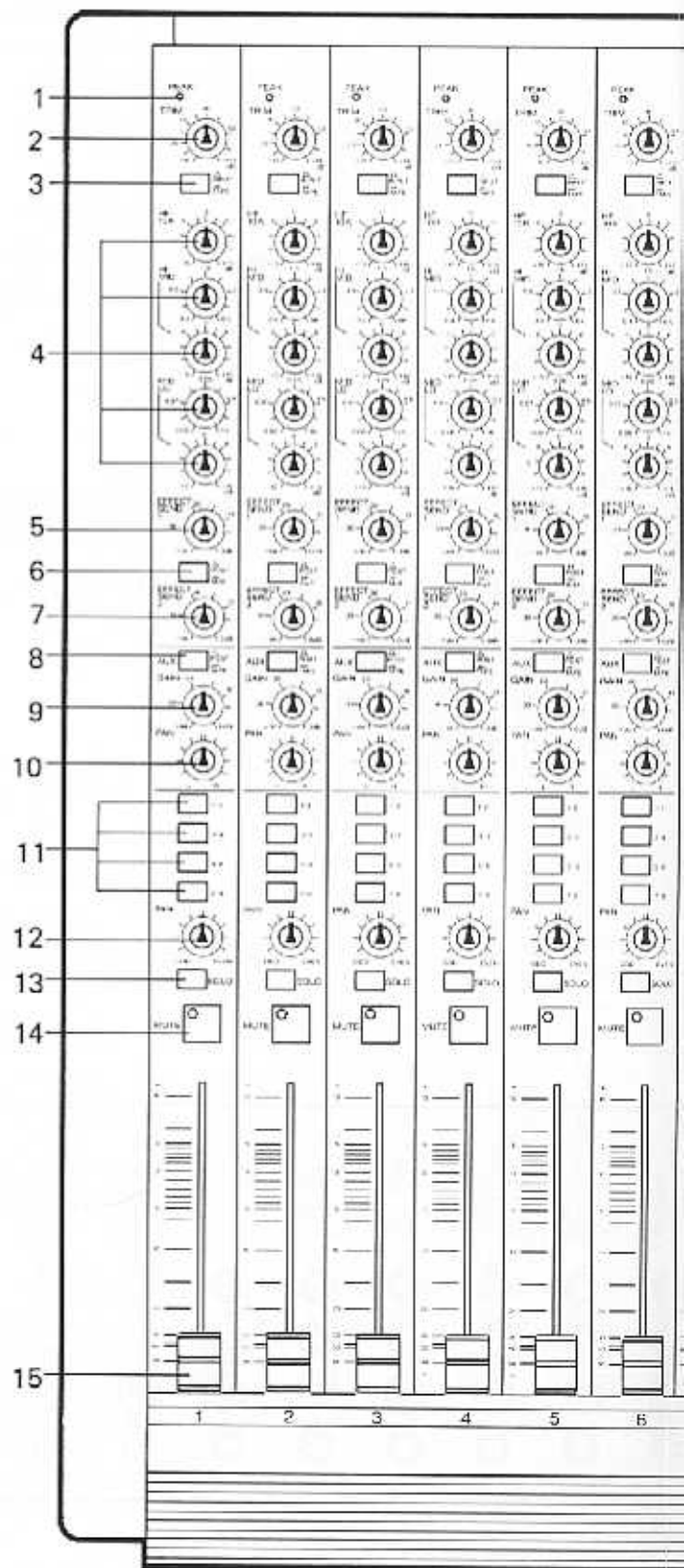
DC24V



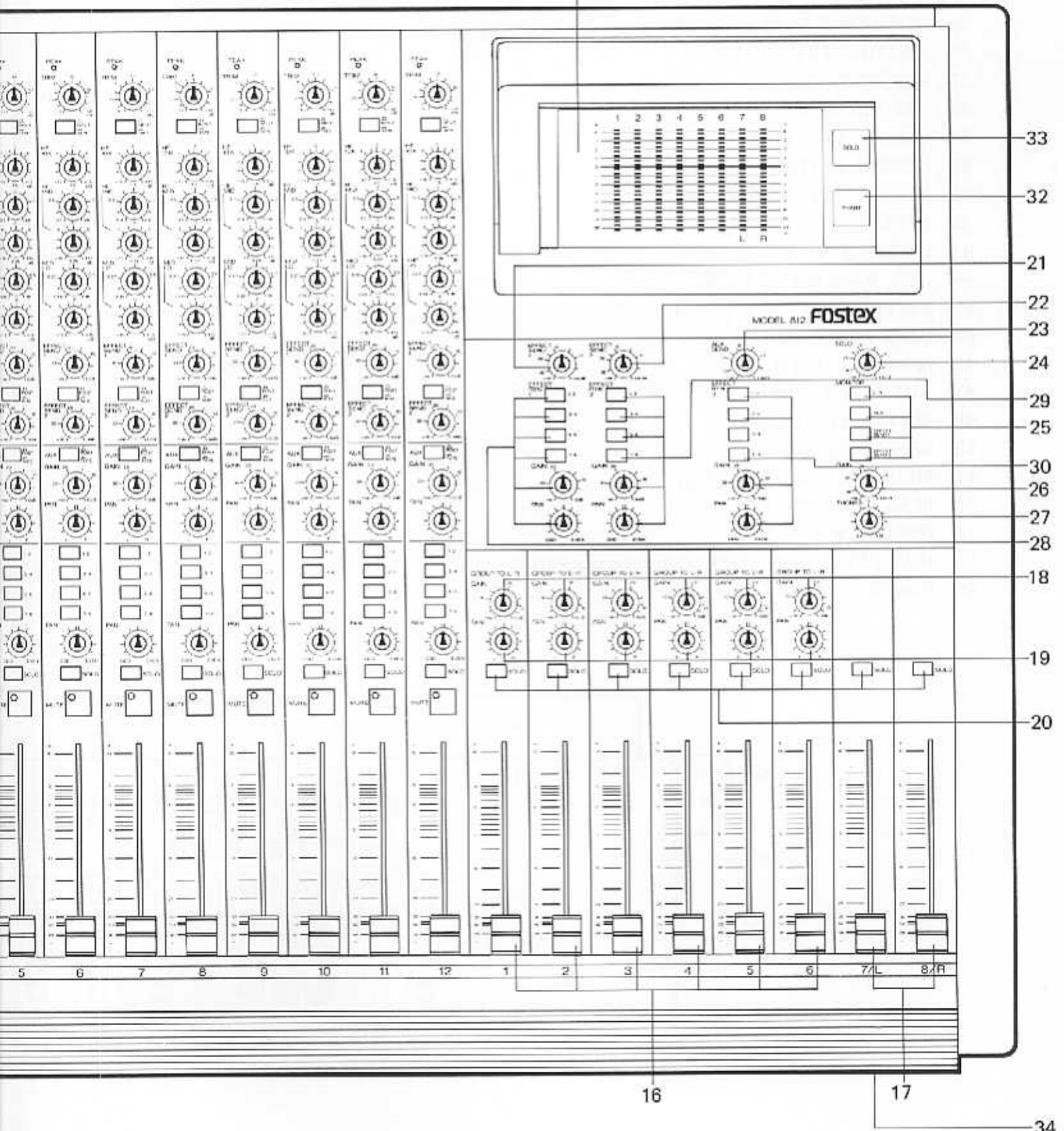
3. CONTROLS, INDICATORS & CONNECTORS

FRONT PANEL

1. PEAK LED
2. INPUT TRIM
3. INPUT SELECTOR (INPUT / TAPE)
4. EQUALIZER SECTION
5. EFFECT SEND 1
6. EFFECT SEND 2 SELECTOR (AUX / POST)
7. EFFECT SEND 2
8. AUX INPUT SELECTOR (POST / TAPE)
9. AUX GAIN
10. AUX PAN
11. GROUP ASSIGN SWITCHES
12. GROUP PAN
13. INPUT SOLO SWITCH
14. MUTE SWITCH
15. INPUT FADER
16. GROUP MASTER FADERS (busses 1 ~ 6)
17. GROUP MASTER FADERS (busses 7/L, 8/R)
18. GROUP TO L-R GAIN
19. GROUP TO L-R PAN
20. GROUP SOLO SWITCH
21. EFFECT SEND 1 MASTER LEVEL KNOB
22. EFFECT SEND 2 MASTER LEVEL KNOB
23. AUX SEND MASTER LEVEL KNOB
24. SOLO LEVEL KNOB
25. MONITOR SELECTOR
26. MONITOR LEVEL KNOB
27. PHONES VOLUME
28. EFFECT RETURN 1 SECTION
29. EFFECT RETURN 2 SECTION
30. EFFECT RETURN 3 SECTION
31. FL BAR-GRAPH METER
32. PHANTOM LED
33. SOLO LED
34. PHONES JACK

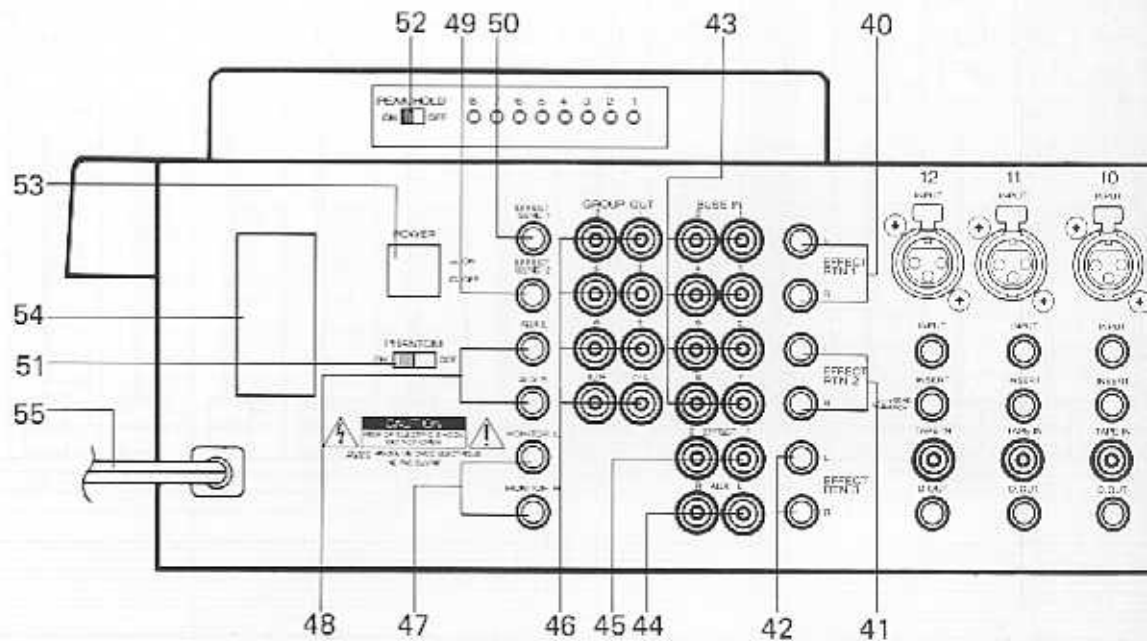


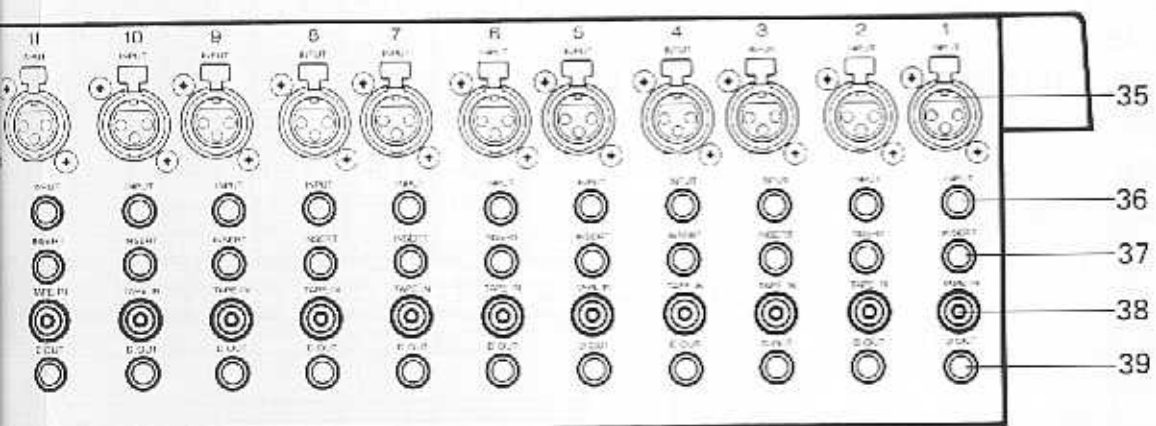
31



REAR PANEL

35. XLR INPUT JACK
36. PHONE INPUT JACK
37. INSERT JACK
38. TAPE INPUT JACK
39. DIRECT OUT JACK
40. EFFECT RETURN 1 JACK
41. EFFECT RETURN 2 JACK
42. EFFECT RETURN 3 JACK
43. GROUP BUSS INPUT JACKS
44. AUX BUSS INPUT JACKS
45. EFFECT SEND BUSS INPUT JACKS
46. GROUP OUT JACKS
47. MONITOR OUT JACKS
48. AUX OUT JACKS
49. EFFECT SEND 2 JACK
50. EFFECT SEND 1 JACK
51. PHANTOM POWER SWITCH
52. PEAK HOLD SWITCH
53. POWER SWITCH
54. MIDI EXPANSION SLOTS (Refer to page 29.)
55. POWER CORD





4. THE FUNCTION CHECK

The following is an explanation regarding Model 812 Recording Mixer basic function check. The function check for other signal routes can be made in the same way.

The 1kHz, sine wave signal is used for the function check in this manual but the frequency or the level should be changed accordingly for the frequency response check and signal to noise ratio check etc., if necessary.

The response you measured should be referred to the specifications on page 2.

Please proceed the function check referring to the Mixer panel layout drawing as the reference number at the parameters of the function check is related to the reference number appeared on the panel layout drawing.

4.1 Check for INPUT → GROUP OUT

- 1) Connect an oscillator to INPUT (36) and apply 1kHz/-10dBV sine wave signal.
- 2) Connect an AC volt meter to GROUP OUT 1 - 6 (46), GROUP OUT 7/L, 8/R (46) and MONITOR OUT L, R (47) respectively.

3) Parameter setting

TRIM	(2)	: Min. (-10dB) position
INPUT SELECTOR	(3)	: INPUT
EQ	(4)	: All gain pots to 0dB position (center)
INPUT FADER	(15)	: At about 0 position
PAN	(12)	: ODD (CCW Max.) / EVEN (CW Max.)
ASSIGN SW	(11)	: 1-2/3-4/5-6
MASTER FADER	(16), (17)	: At about 0 position
GROUP TO L-R GAIN	(18)	: At about 0 position
GROUP TO L-R PAN	(19)	: L (CCW Max.) / R (CW Max.)
MONITOR SELECTOR	(25)	: L, R
MONITOR (GAIN)	(26)	: At about 0 position

- 4) With the settings above, the bargraph meters 1 - 8 will indicate 0dB and the AC volt meter connected to each point will measure -10dBV.

4.2 Check and adjustment of BARGRAPH METER

- 1) Connect an oscillator to BUSS IN 1 - 8 (43) respectively and apply 1kHz/-10dB V sine wave signal.

- 2) Connect an AC volt meter to GROUP OUT 1 – 8 (46) respectively.
- 3) Set the MASTER FADER (16), (17) at about 0 position so that the reading of the output level on the AC volt meter will be -10dBV.
- 4) With the setting above, the bargraph meters 1 – 8 will indicate 0dB.
If the meter requires calibration, adjust the pot on the rear panel as follows.

CH1 : V901

2 : V902

3 : V903

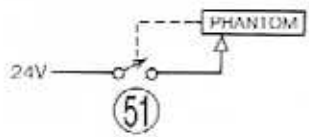
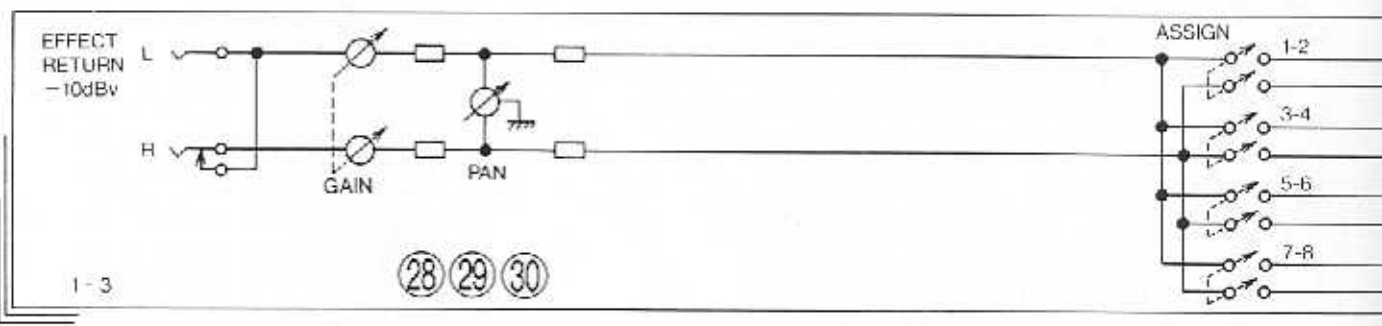
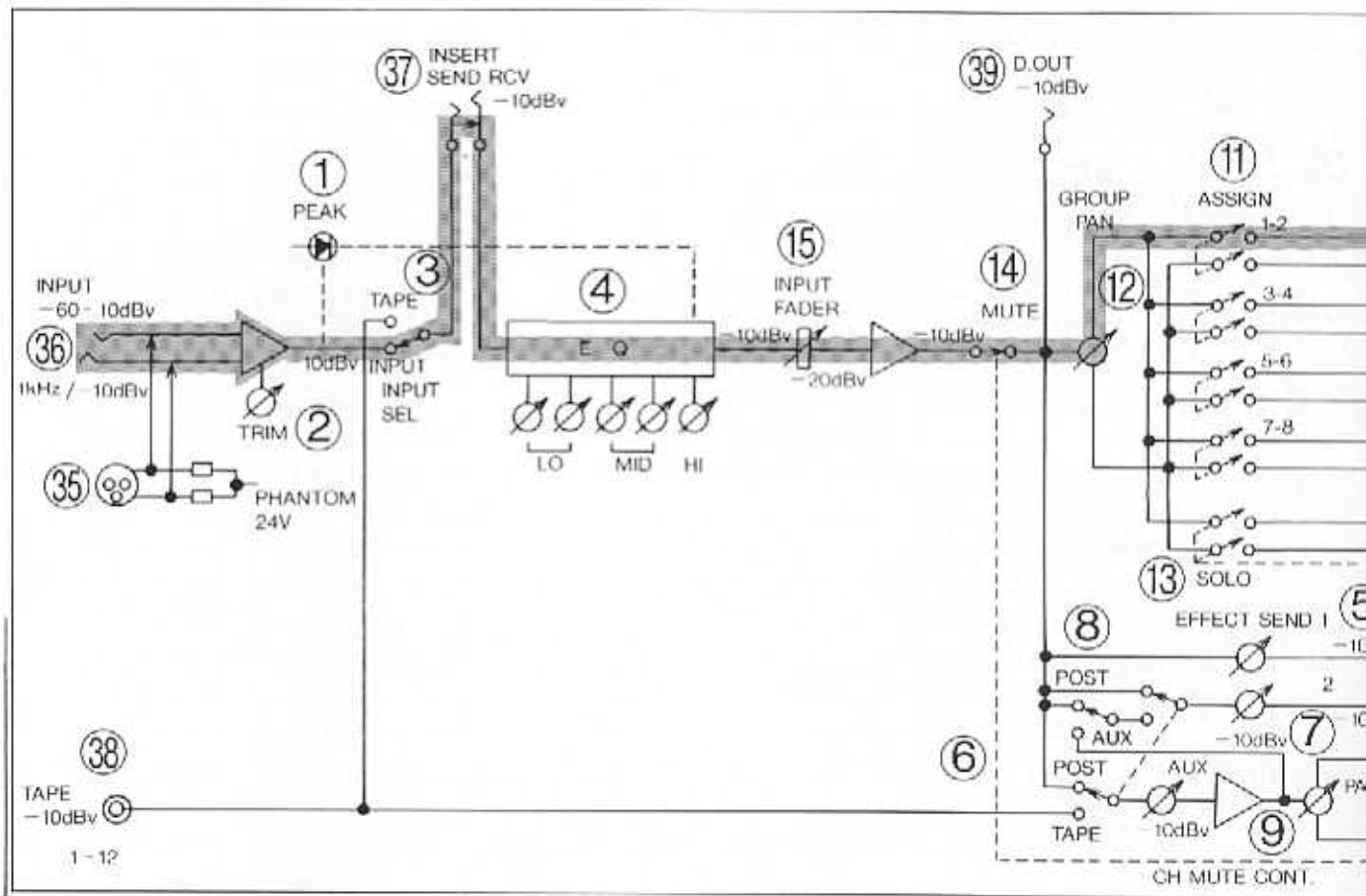
4 : V904

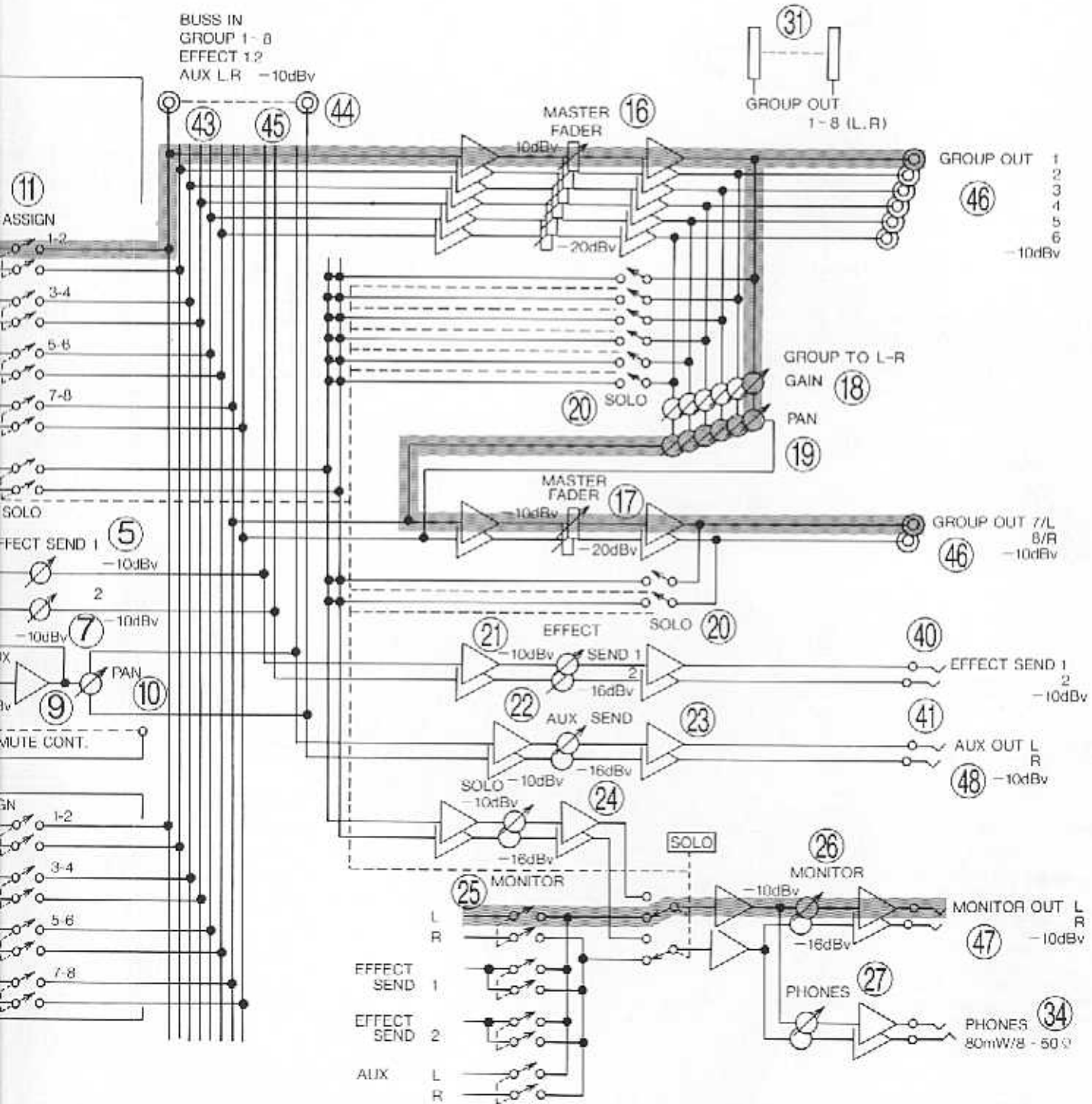
CH5 : V905

6 : V906

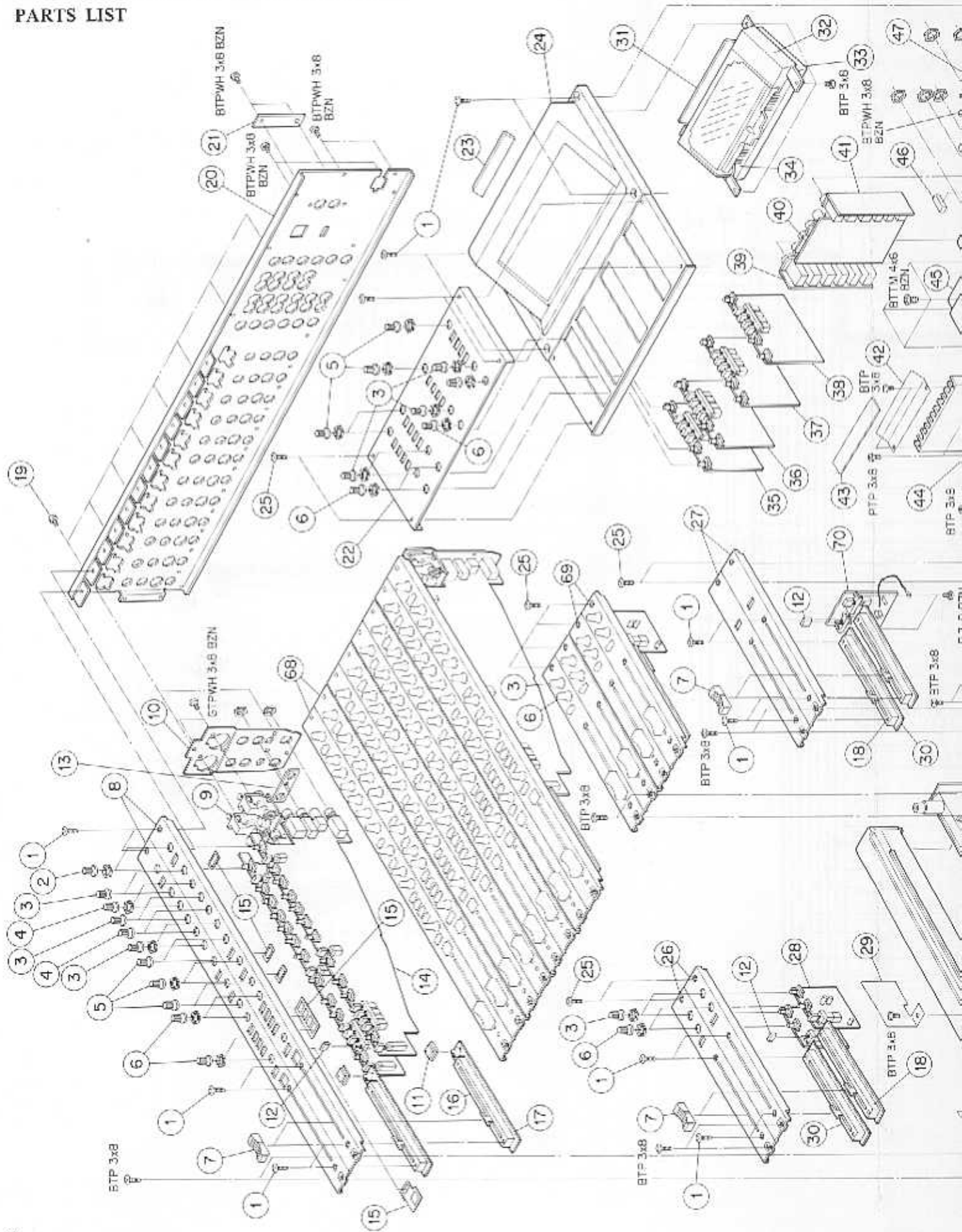
7 : V907

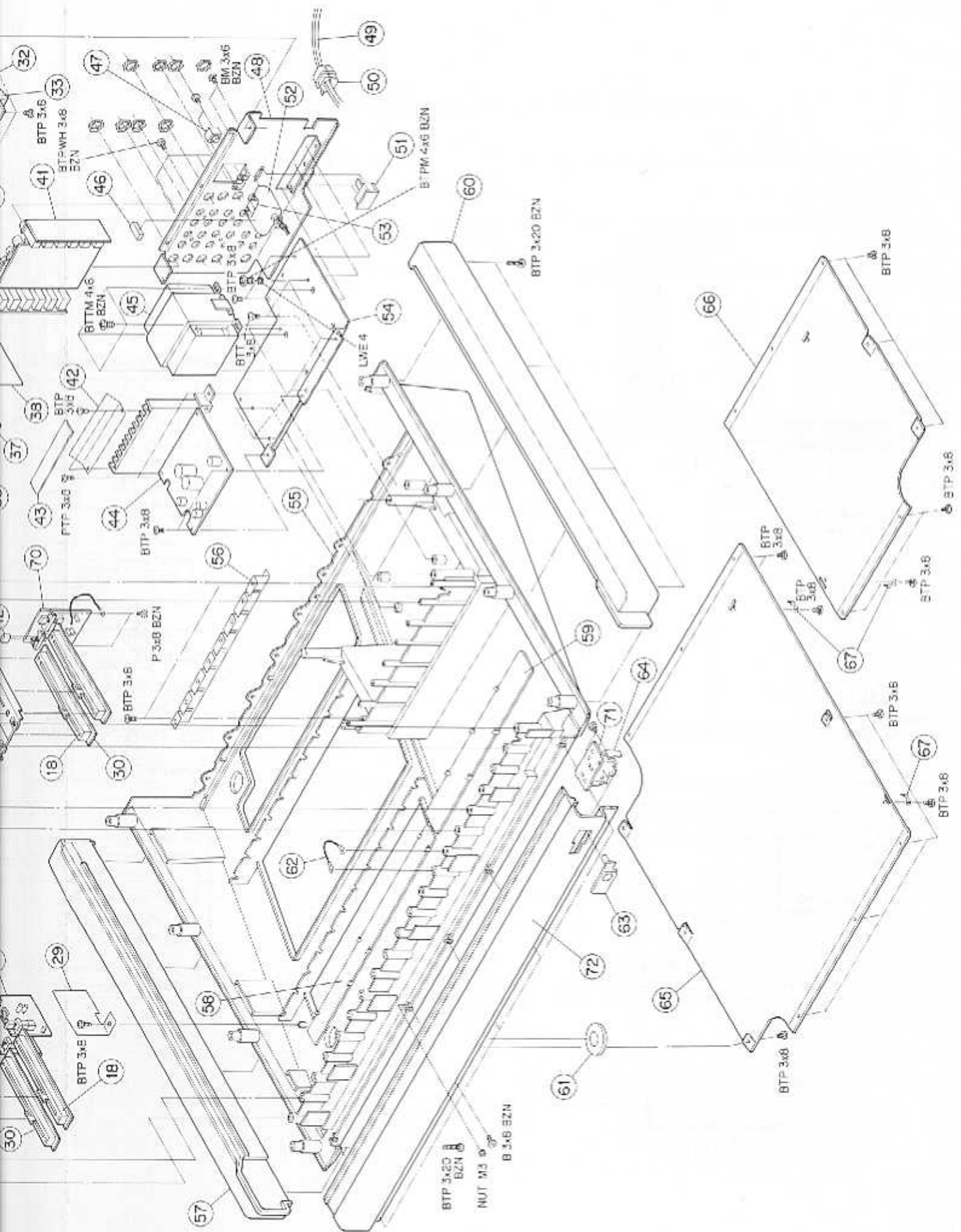
8 : V908





5. EXPLODED VIEW, PCB ASSEMBLY AND PARTS LIST





Ref. No.	Parts No.	Nomenclature	Ref. No.	Parts No.	Nomenclature
1	8204 0230 05	Screw, Button Head, HSB, M3x5 BZN	44	△ 8273 5590 00	PCB Assy, Power Supply
2	8226 1320 01	Knob, Volume, Red	45	△ 8242 1380 00	Transformer, Power, 120V, USA/CND
3	8226 1320 03	Knob, Volume, Gry		△ 8242 1390 00	Transformer, Power, 100V, DM
4	8226 1320 05	Knob, Volume, Blu		△ 8242 1400 00	Transformer, Power, 220V, EUR
5	8226 1320 04	Knob, Volume, Grn		△ 8242 1410 00	Transformer, Power, 240V, UK/AUS
6	8226 1320 02	Knob, Volume, Org			
7	8226 0982 02	Knob, Fader, H-W	46	8216 2970 00	Cusion, Rubber
8	8220 6890 00	Panel, Input	47	8226 1350 00	Button, Push, Power
9	8273 5620 00	PCB Assy, Cannon	48	8220 6900 00	Bracket, Jack
10	8220 6910 00	Bracket, Cannon	49	△ 8276 8200 00	Cord, Power, 100V, DM
11	8226 1340 00	Button, Push Ass'y, Mute		△ 8276 8210 00	Cord, Power, 120V, USA/CND
12	8226 1330 00	Button, Push, A		△ 8276 8220 00	Cord, Power, 220V, EUR
13	8212 2870 00	Cover, Jack		△ 8276 8230 00	Cord, Power, 240V, UK/AUS
14	8273 5440 00	PCB Assy, Input	50	△ 8207 0060 00	Bushing
15	8212 2730 00	Escutcheon Assy	51	8273 5610 00	PCB Assy, Phantom SW
16	8240 1740 01	VR, Slide, 90, 10KA	52	8207 0058 00	Cover, Switch
17	8273 5630 00	PCB Assy, Input Fader		△ 8253 4100 00	Switch, Push, Power, SDLIP
18	8240 1740 02	VR, Slide, 90, 100KA		△ 8239 0007 76	Fuse, 0.315A, Time-lag EUR/UK/AUS
19	8204 0670 00	Screw, BTP 3x10 with GND		△ 8239 0027 78	Fuse, 0.63A, Anti-rush, USA/CND/DM
20	8220 6860 00	Panel, Rear		△ 8256 0840 00	Spark Killer, CKF45F2B103PKC
21	8212 2840 00	Cover, MIDI		8207 0053 00	Cover, Capacitor
22	8220 6850 00	Panel, Monitor Amp.	53	△ 8273 5600 00	PCB Assy, Power Switch, EUR/UK/AUS
23	8216 2980 00	Cover, FL		△ 8273 5600 01	PCB Assy, Power Switch, USA/CND/DM
24	8260 3330 00	Panel Assy, FL	54	8220 6820 00	Bracket, Power Transformer
25	8204 0230 03	Screw, Buttonhead, HSB, 3x10 BZN (Tapping)	55	8212 2850 00	Frame
26	8220 6880 00	Panel, Sub Master	56	8220 6920 00	Plate, Earth
27	8220 6870 00	Panel, Master	57	8212 2800 01	Panel, Side, L
28	8273 5470 00	PCB Assy, Master, A	58	8273 5460 00	PCB Assy, Buss In
29	8216 2950 00	Plate, Shield	59	8273 5450 00	PCB Assy, Buss Out
30	8273 5490 00	PCB Assy Output Fader	60	8212 2800 02	Panel, Side, R
31	8273 5580 00	PCB Assy, Meter, VR	61	8207 0054 00	Foot
32	8212 2830 00	Holder, FL	62	8270 5390 00	Cable Kit, A
33	8220 6840 00	Cover, Shield, FL	63	8212 2810 00	Cover, Headphones
34	8273 5570 00	PCB Assy, Meter	64	8220 6830 00	Bracket, Headphones
35	8273 5510 00	PCB Assy, Output, B	65	8220 6950 00	Cover, Bottom, A
36	8273 5520 00	PCB Assy, Output, C	66	8220 6960 00	Cover, Bottom, B
37	8273 5530 00	PCB Assy, Output, D	67	8270 5400 00	Cable Kit, B
38	8273 5500 00	PCB Assy, Output, A	68	8270 5470 00	Input Assy
39	8273 5540 00	PCB Assy, Phone, A	69	8270 5480 00	Master Assy, 1-6
40	8273 5550 00	PCB Assy, Phone, B	70	8273 5480 00	PCB Assy, Master, B
41	8273 5560 00	PCB Assy, Phone, C	71	8273 5640 00	PCB Assy, Headphones
42	8216 2960 00	Cover, Shield, Jack	72	8212 2820 00	Cover, Front
43	8273 5650 00	PCB Assy, Terminal			

INPUT PCB ASSEMBLY

Ass'y No. 8273 5440 00

Ref. No.	Parts No.	Nomenclature
	8251 8560 01	Plain PCB, Input
		IC's
U101	8236 0364 00	Analog, NJM2043LD
U102	8236 0365 00	Analog, NJM2041LD
U103,104	8236 0366 00	Analog, NJM2068LD
U105,106	8236 0366 00	Analog, NJM2068LD
U107	8236 0576 00	Digital, TC4027BAP

TRANSISTORS

Q101	8236 0574 00	IC, driver, DTA114GR
Q102	8236 0575 00	IC, driver, DTA114ES
Q103,104	8234 1723 00	2SD1302-S

DIODES

D107	8234 2030 00	Opt., LED, red, SLC22VR3F
D101,102	8234 0176 00	ISS131
D103,104	8234 0176 00	ISS131
D105,106	8234 0176 00	ISS131
D108,109	8234 0176 00	ISS131
D111	8234 0176 00	ISS131

CARBON POTS

V101	8240 1720 06	Pot., trimmer 11, 400KC
V102,103	8240 1720 07	Pot., trimmer 11, 20KCC
V105,106	8240 1720 03	Pot., trimmer 11, 10KB
V107	8240 1720 03	Pot., trimmer 11, 10KB
V108	8240 1720 01	Pot., trimmer 11, 5KB
V109,110	8240 1720 05	Pot., trimmer 11, 50KA
V111	8240 1720 05	Pot., trimmer 11, 50KA
V112	8240 1720 01	Pot., trimmer

CARBON RESISTORS

All resistors 1/6W, ±5% unless noted otherwise.

R101,102	8230 1381 04	Flat mtg., 100kΩ
R105,106	8230 1381 04	Flat mtg., 100kΩ
R107,108	8230 1384 73	Flat mtg., 47kΩ
R109,110	8230 1381 01	Flat mtg., 100Ω
R111,112	8230 1392 23	Flat mtg., 22kΩ, Metal, 1%
R113,114	8230 1392 22	Flat mtg., 2.2kΩ, Metal, 1%
R115	8230 1391 31	Flat mtg., 130Ω, Metal, 1%
R116,117	8230 1392 02	Flat mtg., 2kΩ
R118	8230 1384 73	Flat mtg., 47kΩ
R119	8230 1381 01	Flat mtg., 100Ω

Ref. No.	Parts No.	Nomenclature
R120,121	8230 1384 73	Flat mtg., 47kΩ
R122,123	8230 1382 72	Flat mtg., 2.7kΩ
R124	8230 1382 72	Flat mtg., 2.7kΩ
R125,126	8230 1382 22	Flat mtg., 2.2kΩ
R127	8230 1384 74	Flat mtg., 470kΩ
R128,129	8230 1381 02	Flat mtg., 1kΩ
R130,131	8230 1381 02	Flat mtg., 1kΩ
R132,133	8230 1381 02	Flat mtg., 1kΩ
R134,135	8230 1381 02	Flat mtg., 1kΩ
R136,137	8230 1381 02	Flat mtg., 1kΩ
R138,139	8230 1381 02	Flat mtg., 1kΩ
R140	8230 1382 22	Flat mtg., 2.2kΩ
R141	8230 1382 72	Flat mtg., 2.7kΩ
R142	8230 1382 22	Flat mtg., 2.2kΩ
R143	8230 1381 04	Flat mtg., 100kΩ
R144	8230 1383 35	Flat mtg., 3.3MΩ
R146	8230 1382 22	Flat mtg., 2.2kΩ
R147	8230 1381 03	Flat mtg., 10kΩ
R149,150	8230 1384 73	Flat mtg., 47kΩ
R151,152	8230 1381 03	Flat mtg., 10kΩ
R153,154	8230 1381 51	Flat mtg., 150Ω
R155	8230 1381 02	Flat mtg., 1kΩ
R156,157	8230 1383 32	Flat mtg., 3.3kΩ
R158,159	8230 1384 73	Flat mtg., 47kΩ
R160,161	8230 1384 73	Flat mtg., 47kΩ
R162,163	8230 1384 73	Flat mtg., 47kΩ
R164,165	8230 1384 73	Flat mtg., 47kΩ
R166,167	8230 1381 03	Flat mtg., 10kΩ
R168,169	8230 1384 73	Flat mtg., 47kΩ
R170,171	8230 1384 73	Flat mtg., 47kΩ
R172,173	8230 1384 73	Flat mtg., 47kΩ
R174,175	8230 1384 73	Flat mtg., 47kΩ
R176,177	8230 1381 03	Flat mtg., 10kΩ
R178	8230 1381 01	Flat mtg., 100Ω
R179	8230 1384 73	Flat mtg., 47kΩ
R180,181	8230 1383 32	Flat mtg., 3.3kΩ
R182,183	8230 1382 23	Flat mtg., 22kΩ
R184,185	8230 1381 23	Flat mtg., 12kΩ
R186	8230 1382 22	Flat mtg., 2.2kΩ
R187	8230 1381 03	Flat mtg., 10kΩ
R188	8230 1381 04	Flat mtg., 100kΩ

CAPACITORS

ALU = Electrolytic type

CER = Ceramic type

PES = Mylar type

C103,104	8232 1511 06	ALU, 25V, 10μF, 20%, BP
C105,106	8232 8022 21	CER, 50V, 220pF, 10%, SL

Ref. No.	Parts No.	Nomenclature
C107,108	8232 8012 20	CER, 50V, 22pF, 5%, SL
C109	8232 0942 27	ALU, 10V, 220μF, 20%, SME
C110,112	8232 8022 21	CER, 50V, 220pF, 10%, SL
C113,114	8232 1511 06	ALU, 25V, 10μF, 20%, BP
C115,116	8232 8022 21	CER, 50V, 220pF, 10%, SL
C117,120	8232 8022 21	CER, 50V, 220pF, 10%, SL
C118	8232 1492 26	ALU, 10V, 22μF, 20%, BP
C119,121	8232 1511 06	ALU, 25V, 10μF, 20%, BP
C122	8232 9012 24	PES, 50V, 0.22μF, 5%, AMZV
C123	8232 9013 93	PES, 50V, 0.039μF, 5%, AMZV
C124	8232 9012 23	PES, 50V, 0.022μF, 5%, AMZV
C125	8232 9011 04	PES, 50V, 0.1μF, 5%, AMZV
C126	8232 9011 83	PES, 50V, 0.018μF, 5%, AMZV
C127	8232 9011 03	PES, 50V, 0.01μF, 5%, AMZV
C128,129	8232 1511 06	ALU, 25V, 10μF, 20%, BP
C130	8232 1511 06	ALU, 25V, 10μF, 20%, BP
C131	8232 8021 04	CER, 50V, 0.1μF, 10%, SL
C132,133	8232 1444 76	ALU, 25V, 47μF, 20%, SME
C134	8232 8112 23	CER, 25V, 0.025μF
C135	8232 1444 76	ALU, 25V, 47μF, 20%, SME
C136	8232 8112 23	CER, 25V, 0.025μF
C138	8232 1492 26	ALU, 10V, 22μF, 20%, BP
C139	8232 8022 21	CER, 50V, 220pF, 10%, SL
C140,141	8232 1511 06	ALU, 25V, 10μF, 20%, BP
C142,143	8232 1444 76	ALU, 25V, 47μF, 20%, SME

MISCELLANEOUS

S101	8253 1190 00	Switch, push, 2-2, Self-lock, non-shorting, PBB
S104,105	8253 1190 00	Switch, push, 2-2, self-lock, non-shorting, PBB
S106	8253 1210 00	Switch, push, 4 gang, 2-2, self-lock, non-shorting
S107	8253 1220 00	Switch, push, 4-2, self-lock, non-shorting, PBB
S103	8253 6640 00	Switch, slide, 2-2, non-shorting, ASA
J102	8245 3430 00	Connector, phone jack, stereo, S
J103	8245 3460 00	Connector, phone jack, stereo, S
J105	8245 3440 00	Connector, phone jack, stereo
J104	8245 2180 00	Connector, pin jack, 1P, S

CANNON PCB ASSEMBLY

Ass'y No. 8273 5620 00

Ref. No.	Parts No.	Nomenclature
	8251 8560 02	Plain PCB, CANNON

Ref. No.	Parts No.	Nomenclature
J101	8245 3980 00	Connector, Cannon, 3P, Female
R103,104	8230 1391 22	Resistor, Metal, 1/6W, 1.2kΩ, 1%
C109	8232 0942 27	Capacitor, ALU, 10V, 220μF, 20%, SE

INPUT FADER PCB ASSEMBLY

Ass'y No. 8273 5630 00

Ref. No.	Parts No.	Nomenclature
	8251 8560 03	Plain PCB, INPUT FADER
D100	8234 2029 00	Opt. LED, red, SLR37VR
C137	8232 8071 03	Capacitor, CER, 16V, 0.01μF, 20%, SL
V104	8240 1740 01	Pot., slide, 90, 10kΩA, 812
S102	8253 1230 00	Switch, tact, SPPQ-B
	8212 2770 00	Spacer, LED, 4
	8245 1711 08	Connector, Jack, 8283, 8P, wht.
	8245 1711 11	Connector, Jack, 8283, 11P, wht.
	8207 0052 05	Holder, cable-lead, 8P
	8207 0052 07	Holder, cable-lead, 11P

BUSS OUT PCB ASSEMBLY

Ass'y No. 8273 5450 00

Ref. No.	Parts No.	Nomenclature
	8251 8570 02	Plain PCB, Buss out
	8276 6700 12	Cable assy, 2P 8283, wht, 9073 straight
	8276 6700 09	Cable assy, 4P 8283, wht, 9073 straight
	8276 6700 08	Cable assy, 5P, 8283, wht, 9073 straight
	8276 6700 10	Cable assy, 6P 8283, red, 9073 straight
	8276 6700 13	Cable assy, 5P 8283, wht, 9073 straight
	8276 6700 05	Cable assy, 4P 8283, red, 9073 straight
	8276 6700 04	Cable assy, 10P 8283, wht, 9073 straight
	8245 1711 08	Connector, jack, 8283, ver., 8P wht
	8245 1711 07	Connector, jack, 8283, ver., 7P wht
	8245 1711 06	Connector, jack, 8283, 6P straight, wht

Ref. No.	Parts No.	Nomenclature
	8276 0020 02	Wire jumper, 5mm, IPS-1041-2

BUSS IN PCB ASSEMBLY

Ass'y No. 8273 5460 00

Ref. No.	Parts No.	Nomenclature
	8251 8570 01	Plain PCB, Buss IN
	8276 6700 06	Cable assy, 8P 8283, wht, 9073 straight
	8276 6700 07	Cable assy, 11P 8283, wht, 9073 straight
	8207 0052 06	Holder, cable-lead, 9P
	8207 0052 07	Holder, cable-lead, 11P

MASTER A PCB ASSEMBLY

Ass'y No. 8273 5470 00

Ref. No.	Parts No.	Nomenclature
	8251 8580 01	Plain PCB, Master A
		IC
U201	8236 0366 00	Analog, NJM2068LD

CARBON RESISTORS

All resistors 1/6W, ±5% unless noted otherwise.

R201	8230 1381 05	Flat mtg., 1MΩ
R202	8230 1382 22	Flat mtg., 2.2kΩ
R203	8230 1387 52	Flat mtg., 7.5kΩ
R204,205	8230 1382 23	Flat mtg., 22kΩ
R206,207	8230 1385 62	Flat mtg., 5.6kΩ
R208,209	8230 1383 93	Flat mtg., 39kΩ
R222	8230 1382 24	Flat mtg., 220kΩ
R226	8230 1382 21	Flat mtg., 220Ω

CARBON POT

V203	8240 1720 01	Pot., trimmer 11, 5KB
V202	8240 1720 02	Pot., trimmer 11, 10KA

CAPACITORS

ALU = Electrolytic type
CER = Ceramic type

C201	8232 1534 74	ALU, 50V, 0.47μF, 20%, BP
C202	8232 8014 70	CER, 50V, 47pF, 5%, SL
C203	8232 1501 06	ALU, 16V, 10μF, 20%, BP

Ref. No.	Parts No.	Nomenclature
C204,205	8232 1444 76	ALU, 25V, 47μF, 20%, SME
C206,207	8232 8112 23	CER, 25V, 0.025μF
C208	8232 1492 26	ALU, 10V, 22μF, 20%, BP

MISCELLANEOUS

S201	8253 1190 00	Switch, push, 2-2, self-lock, non-shorting, PBB
	8245 1721 04	Connector, jack, 8283, flat, 4P, wht.
	8245 1721 05	Connector, jack, 8283, flat, 5P, wht.
	8207 0052 01	Holder, cable-lead, 2P

MASTER B PCB ASSEMBLY

Ass'y No. 8273 5480 00

Ref. No.	Parts No.	Nomenclature
	8251 8580 02	Plain PCB, Master B
		IC
U202,203	8236 0366 00	Analog, NJM2068LD

CARBON RESISTORS

All resistors 1/6W, ±5% unless noted otherwise.

R210,211	8230 1382 24	Flat mtg., 220kΩ
R212,213	8230 1381 05	Flat mtg., 1MΩ
R214,215	8230 1382 22	Flat mtg., 2.2kΩ
R216,217	8230 1387 52	Flat mtg., 7.5kΩ
R218,219	8230 1382 23	Flat mtg., 22kΩ
R220,221	8230 1382 23	Flat mtg., 22kΩ
R227,228	8230 1382 21	Flat mtg., 220Ω

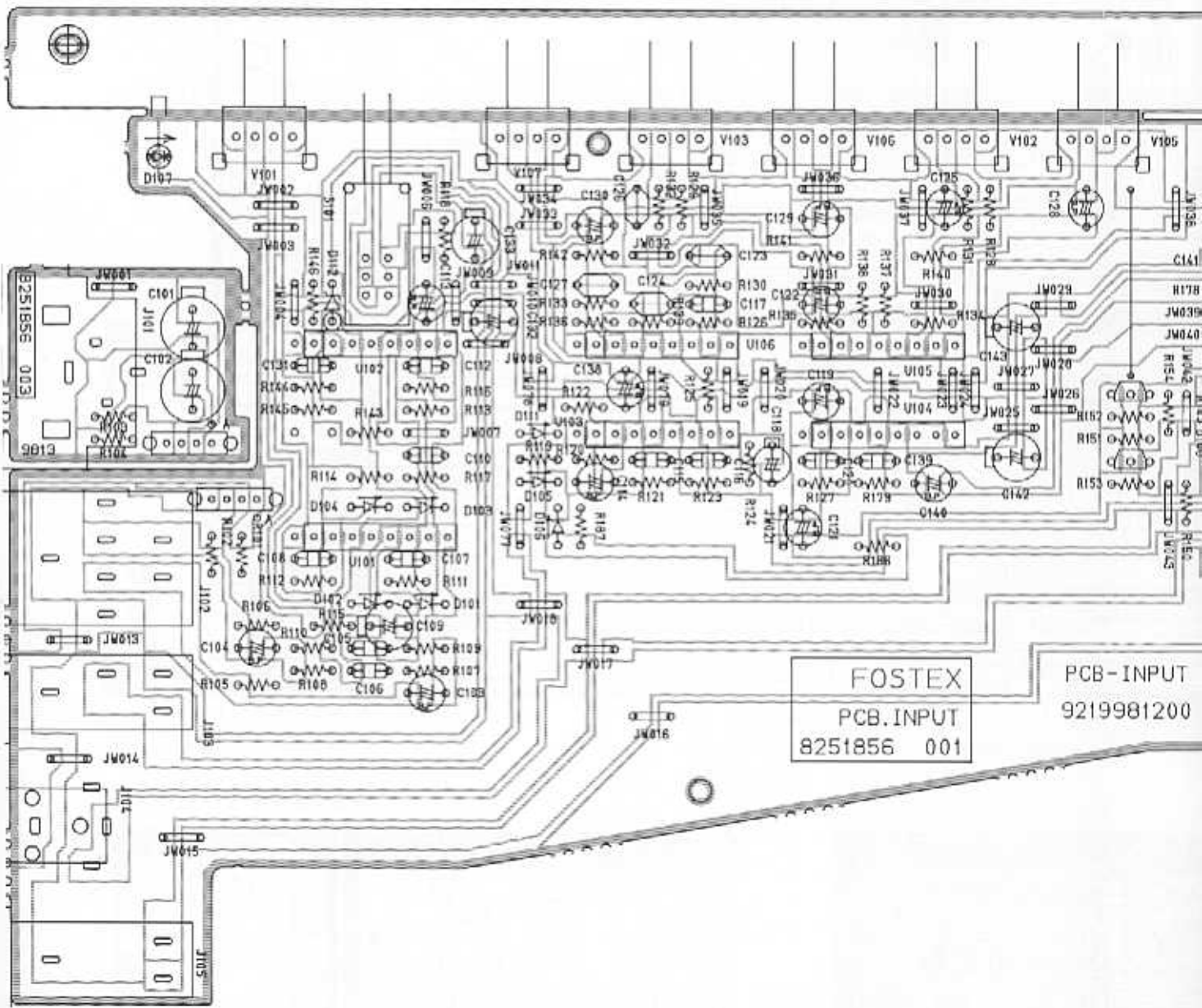
CAPACITORS

ALU = Electrolytic type
CER = Ceramic type

C210,211	8232 1534 74	ALU, 50V, 0.47μF, 20%, BP
C212,213	8232 8014 70	CER, 50V, 47pF, 5%, SL
C214,215	8232 1501 06	ALU, 16V, 10μF, 20%, BP
C216,218	8232 1444 76	ALU, 25V, 47μF, 20%, SME
C220,221	8232 8112 23	CER, 25V, 0.025μF
C224,225	8232 1492 26	ALU, 10V, 22μF, 20%, BP

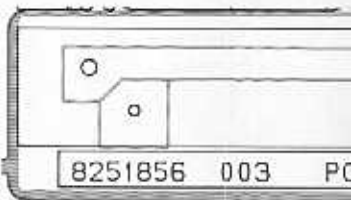
MISCELLANEOUS

S202,203	8253 1200 00	Switch, push, 2-2, self-lock, non-shorting, PBB
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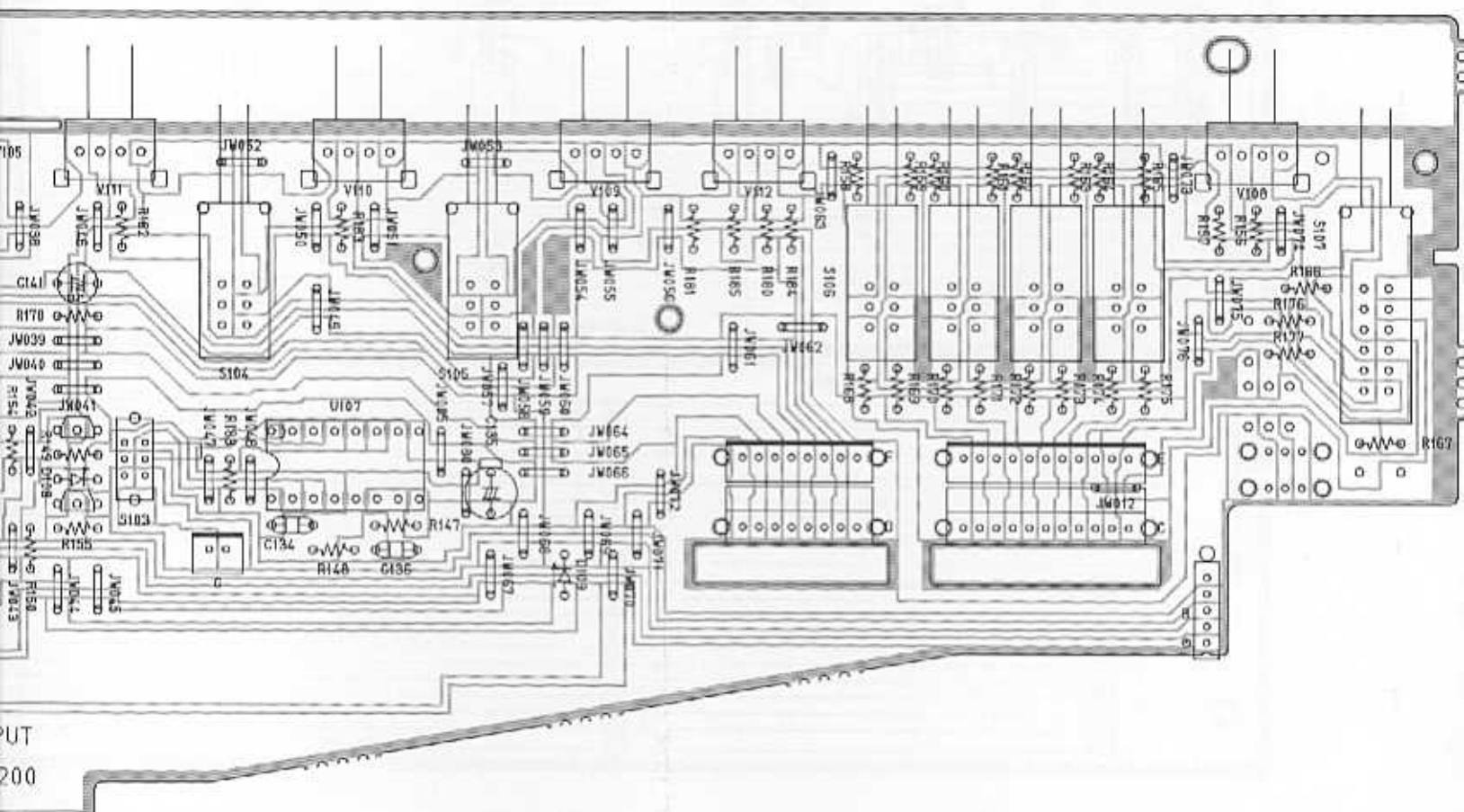


FOSTEX
PCB.INPUT
8251856 001

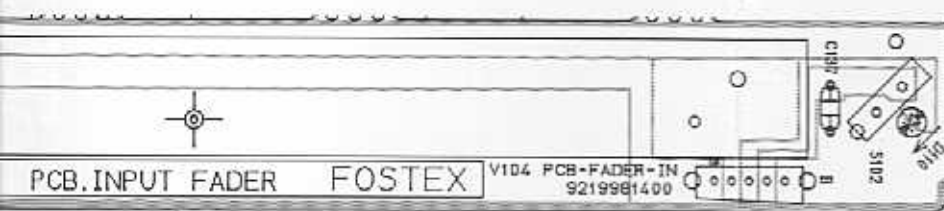
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9219981200

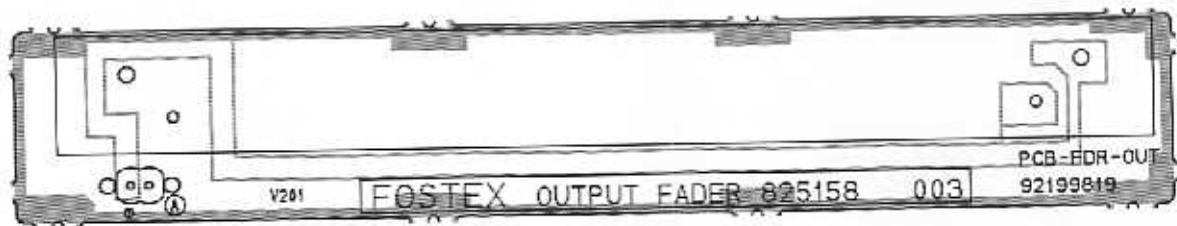
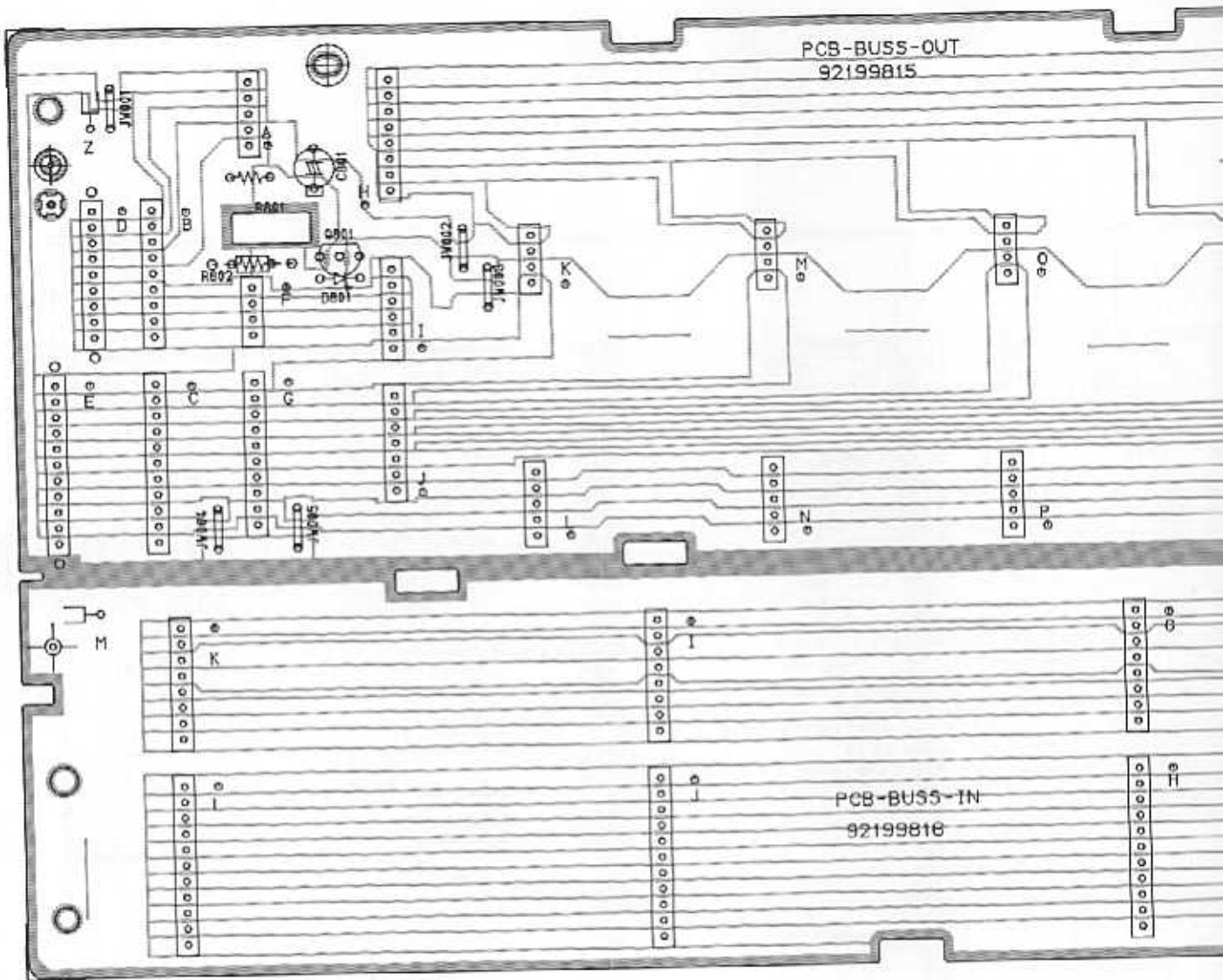


8251856 003 PCB



PUT
200





PCB-MS-A 92199817

Ref. No.	Parts No.	Nomenclature
	8245 1711 05	Connector, jack, 8283, ver., 5P, wht.
	8245 1711 06	Connector, jack, 8283, 6P straight, wht.
	8207 0052 01	Holder, cable-lead, 2P

HEADPHONE PCB ASSEMBLY

Ass'y No. 8273 5640 00

Ref. No.	Parts No.	Nomenclature
	8251 8580 04	Plain PCB, Headphone
J601	8245 3420 00	Connector, phone jack, stereo, 11P
R643,644	8230 1383 30	Resistor, carbon, 1/6W, 33, flat
R641,642	8230 1422 20	Resistor, metal, 1W, 22, flat, 5%
	8245 1980 00	Connector, jack, B3P-PH-K-S, 3, straight, wht.
	8276 6700 18	Cable assy, shield, 2 core, 3P PHR3, wht.

OUTPUT FADER PCB ASSEMBLY

Ass'y No. 8273 5490 00

Ref. No.	Parts No.	Nomenclature
	8251 8580 03	Plain PCB, output fader
V201	8240 1740 02	Pot., slide, 90, 100kΩA
	8207 0052 01	Holder, cable-lead, 2P

OUTPUT A PCB ASSEMBLY

Ass'y No. 8273 5500 00

Ref. No.	Parts No.	Nomenclature
	8251 8590 01	Plain PCB, Output A

IC's

U601-605	8236 0366 00	Analog, NJM2068LD
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TRANSISTORS

Q607,608	8234 1424 00	2SC2458GR
Q605,606	8234 1005 00	2SA1048
Q603,604	8234 1904 00	2SK246GR
Q601,602	8234 1901 00	2SJ103GR
Q611,612	8234 1004 00	2SA854R
Q609,610	8234 1425 00	2SC1741R

Ref. No.	Parts No.	Nomenclature
DIODES		
D601-604	8234 0176 00	1SS131

CARBON RESISTORS

All resistors 1/6W, ±5% unless noted otherwise.

R605,606	8230 1384 74	Flat mtg., 470kΩ
R611,612	8230 1382 23	Flat mtg., 22kΩ
R613,614	8230 1384 74	Flat mtg., 470kΩ
R615-622	8230 1383 32	Flat mtg., 3.3kΩ
R625	8230 1383 32	Flat mtg., 3.3kΩ
R631,632	8230 1384 74	Flat mtg., 470kΩ
R637-640	8230 1381 00	Flat mtg., 10Ω
R645	8230 1381 02	Flat mtg., 1kΩ

CARBON POTS

V601-603	8240 1730 01	Pot., trimmer 14, 50kΩAA
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CAPACITORS

ALU = Electrolytic type

CER = Ceramic type

C601,602	8232 1444 76	ALU, 25V, 47μF, SME
C603,604	8232 1492 26	ALU, 10V, 22μF, 20%, BP
C607,608	8232 8014 70	CER, 50V, 47pF, 5%, SL
C609-612	8232 1501 06	ALU, 16V, 10μF, 20%, BP
C615,616	8232 8012 20	CER, 50V, 22pF, 5%, SL
C617-620	8232 1492 26	ALU, 10V, 22μF, 20%, BP
C621,622	8232 1501 06	ALU, 16V, 10μF, 20%, BP
C623,624	8232 1492 26	ALU, 10V, 22μF, 20%, BP
C625,626	8232 1501 06	ALU, 16V, 10μF, 20%, BP
C627,628	8232 8012 20	CER, 50V, 22pF, 5%, SL
C629,630	8232 8112 23	CER, 25V, 0.025μF
C633	8232 1531 05	ALU, 50V, 1μF, 20%, BP
C634,635	8232 1464 75	ALU, 50V, 4.7μF, 20%, SME

MISCELLANEOUS

S601	8253 1210 00	Switch, push, 4 gang, 2-2, self-lock, non-shorting
	8245 1711 02	Connector, jack, 8283, ver., 2P, wht.
	8245 1980 00	Connector, jack, B3P-PH-K-S, 3P straight, wht.
	8245 1990 00	Connector, jack, B6B-PH-K-S, 6P straight, wht.
	8276 6700 18	Cable assy, shield, 2 core, 3P PHR3, wht.
	8207 0052 03	Holder, cable-lead, 4P

Ref. No.	Parts No.	Nomenclature
	8207 0052 01	Holder, cable-lead, 2P
	8207 0052 02	Holder, cable-lead, 3P

OUTPUT C PCB ASSEMBLY

Ass'y No. 8273 5520 00

OUTPUT B PCB ASSEMBLY

Ass'y No. 8273 5510 00

Ref. No.	Parts No.	Nomenclature
	8251 8590 02	Plain PCB, Output B
		IC
U301	8236 0366 00	Analog, NJM2068LD

CARBON RESISTORS

All resistors 1/6W, ±5% unless noted otherwise.

R301,302	8230 1381 23	Flat mtg., 12kΩ
R319,320	8230 1384 74	Flat mtg., 470kΩ
R321,322	8230 1382 22	Flat mtg., 2.2kΩ
R303-318	8230 1383 33	Flat mtg., 33kΩ

CARBON POTS

V301	8240 1730 01	Pot., trimmer 14, 50KAA
V302	8240 1720 04	Pot., trimmer 11, 20KB
V303	8240 1720 05	Pot., trimmer 11, 50KA

CAPACITORS

ALU = Electrolytic type

CER = Ceramic type

C301	8232 1492 26	ALU, 10V, 22μF, 20%, BP
C303	8232 8012 20	CER, 50V, 22pF, 5%, SL
C304,305	8232 8112 23	CER, 25V, 0.025μF,
C306,307	8232 1444 76	ALU, 25V, 47μF, 20%, SME
C308	8232 1492 26	ALU, 10V, 22μF, 20%, BP

MISCELLANEOUS

S301	8253 1210 00	Switch, push, 4 gang, 2-2, self-lock, non-shorting
	8207 0052 05	Holder, cable-lead, 8P
	8207 0052 03	Holder, cable-lead, 4P
	8207 0052 02	Holder, cable-lead, 3P
	8245 1980 00	Holder, cable-lead, B3P-PH-K-S, 3, straight, wht.

Ref. No.	Parts No.	Nomenclature
	8251 8590 03	Plain PCB, Output C
		IC
U401	8236 0366 00	Analog, NJM2068LD

CARBON RESISTORS

All resistors 1/6W, ±5% unless noted otherwise.

R401,402	8230 1381 23	Flat mtg., 12kΩ
R419	8230 1382 24	Flat mtg., 220kΩ
R420	8230 1384 74	Flat mtg., 470kΩ
R421,422	8230 1382 22	Flat mtg., 2.2kΩ
R403-418	8230 1383 33	Flat mtg., 33kΩ

CARBON POT

V401	8240 1730 01	Pot., trimmer 14, 50KΩAA,
V402	8240 1720 04	Pot., trimmer 11, 20KΩB,
V403	8240 1720 05	Pot., trimmer 11, 50KΩA,

CAPACITORS

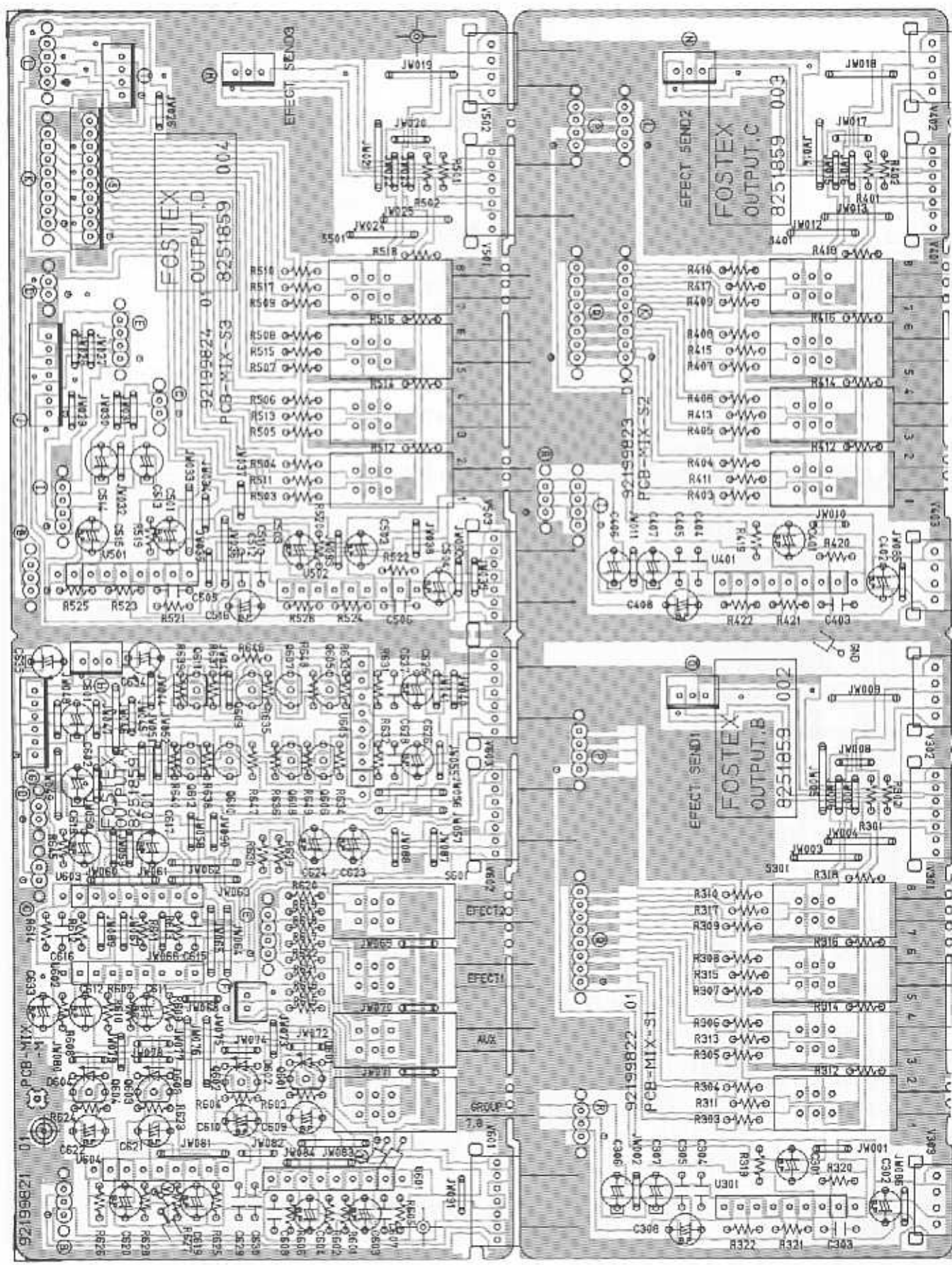
ALU = Electrolytic type

CER = Ceramic type

C401,408	8232 1492 26	ALU, 10V, 22μF, 20%, BP
C402	8232 1501 06	ALU, 16V, 10μF, 20%, BP
C403	8232 8012 20	CER, 50V, 22pF, 5%, SL
C404,405	8232 8112 23	CER, 25V, 0.025μF,
C406,407	8232 1444 76	ALU, 25V, 47μF, 20%, SME

MISCELLANEOUS

S401	8253 1210 00	Switch, push, 4 gang, 2-2, self-lock, non-shorting
	8207 0052 05	Holder, cable-lead, 8P
	8207 0052 03	Holder, cable-lead, 4P
	8207 0052 02	Holder, cable-lead, 3P
	8245 1980 00	Holder, cable-lead, B3P-PH-K-S, 3, straight, wht.



OUTPUT D PCB ASSEMBLY

Ass'y No. 8273 5530 00

Ref. No.	Parts No.	Nomenclature
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8251 8590 04	Plain PCB, Output D
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IC's

U501,502	8236 0366 00	Analog, NJM2068LD
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CARBON RESISTORS

All resistors 1/6W, ±5% unless noted otherwise.

R501,502	8230 1381 23	Flat mtg., 12kΩ
R519,520	8230 1382 24	Flat mtg., 220kΩ
R521,522	8230 1384 74	Flat mtg., 470kΩ
R523-526	8230 1382 22	Flat mtg., 2.2kΩ
R503-518	8230 1383 33	Flat mtg., 33kΩ

CARBON POT

V501,503	8240 1730 01	Pot., trimmer 14, 50KΩAA,
V502	8240 1720 04	Pot., trimmer 11, 20ΩKB,

CAPACITORS

ALU = Electrolytic type

CER = Ceramic type

C501,502	8232 1492 26	ALU, 10V, 22μF, 20%, BP
C503,504	8232 1501 06	ALU, 16V, 10μF, 20%, BP
C505,506	8232 8012 20	CER, 50V, 22pF, 5%, SL
C511,512	8232 8112 23	CER, 25V, 0.025μF,
C513,514	8232 1444 76	ALU, 25V, 47μF, 20%, SME
C515,516	8232 1492 26	ALU, 10V, 22μF, 20%, BP

MISCELLANEOUS

S501	8253 1210 00	Switch, push, 4 gang, 2-2, self-lock, non-shorting
	8207 0052 05	Holder, cable-lead, 8P
	8245 1711 10	Connector, jack, 8283, ver., 10P, wht.
	8245 1711 04	Connector, jack, 8283, 4P, wht.
	8245 1711 07	Connector, jack, 8283, ver., 7P, wht.
	8245 1980 00	Connector, jack, B3P-PH-K-S, 3, straight, wht.
	8207 0052 01	Holder, cable-lead, 2P

Ref. No.	Parts No.	Nomenclature
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8207 0052 03	Holder, cable-lead, 4P
8207 0052 02	Holder, cable-lead, 3P

PHONE A PCB ASSEMBLY

Ass'y No. 8273 5540 00

Ref. No.	Parts No.	Nomenclature
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8251 8600 01	Plain PCB, Phone A	
Q709-714	8234 1724 00	Transistor, 2SD2144-S

CARBON RESISTORS

All resistors 1/6W, ±5% unless noted otherwise.

R730-735	8230 1384 71	Flat mtg., 470Ω
R738-743	8230 1382 24	Flat mtg., 220kΩ
R744-749	8230 1381 23	Flat mtg., 12kΩ

MISCELLANEOUS

J731-736	8245 3440 00	Connector, phone jack, stereo
	8276 6700 03	Cable assy, 7P 8283, wht., 9073 straight

PHONE B PCB ASSEMBLY

Ass'y No. 8273 5550 00

Ref. No.	Parts No.	Nomenclature
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	8251 8600 02	Plain PCB, Phone B
Q701-708	8234 1724 00	Transistor, 2SD2144-S
R701-704	8230 1382 23	Flat mtg., 22kΩ
R705-712	8230 1381 04	Flat mtg., 100kΩ
R713-718	8230 1384 71	Flat mtg., 470Ω
R719-724	8230 1381 23	Flat mtg., 12kΩ
R725,726	8230 1384 71	Flat mtg., 470Ω
R727,728	8230 1381 23	Flat mtg., 12kΩ

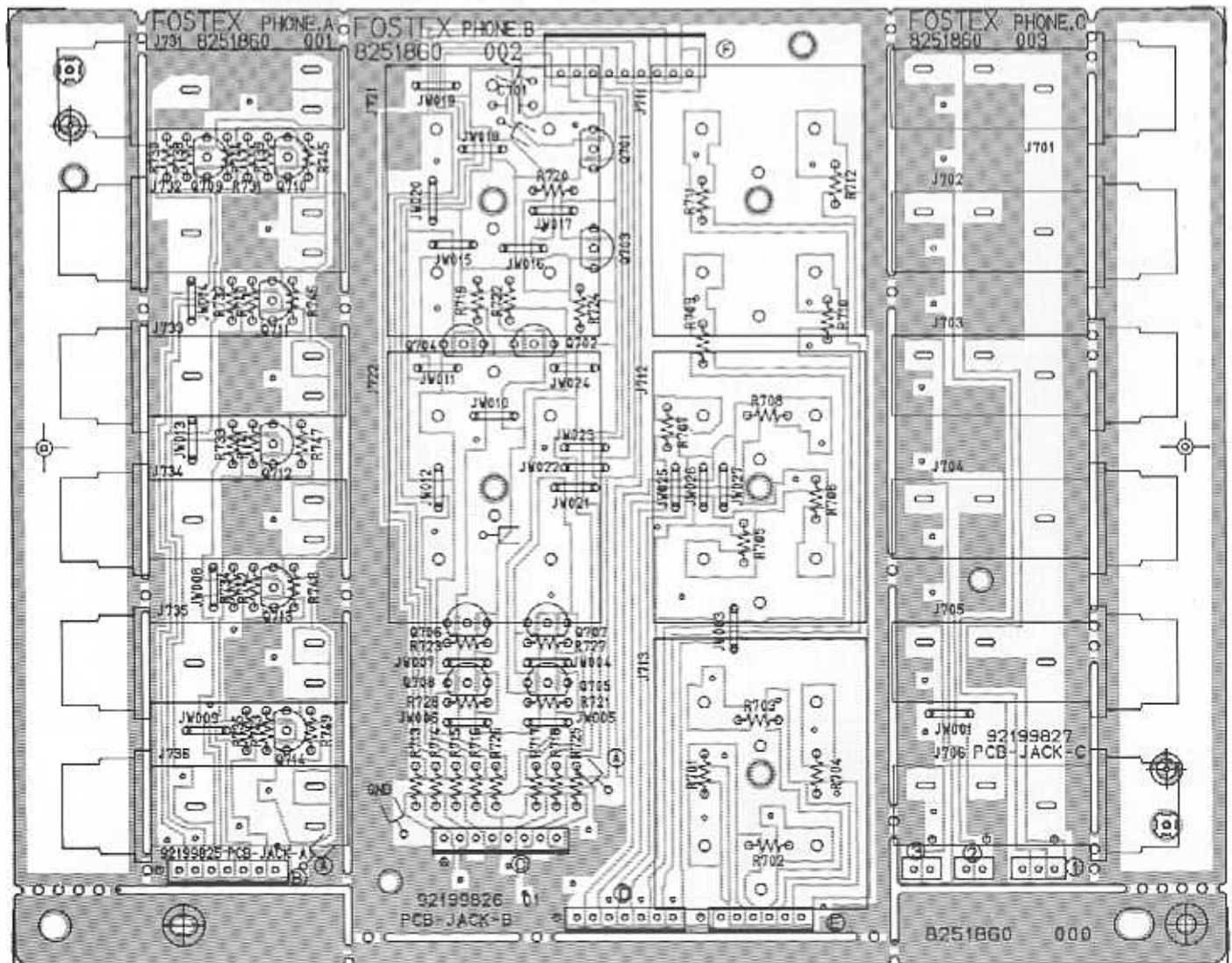
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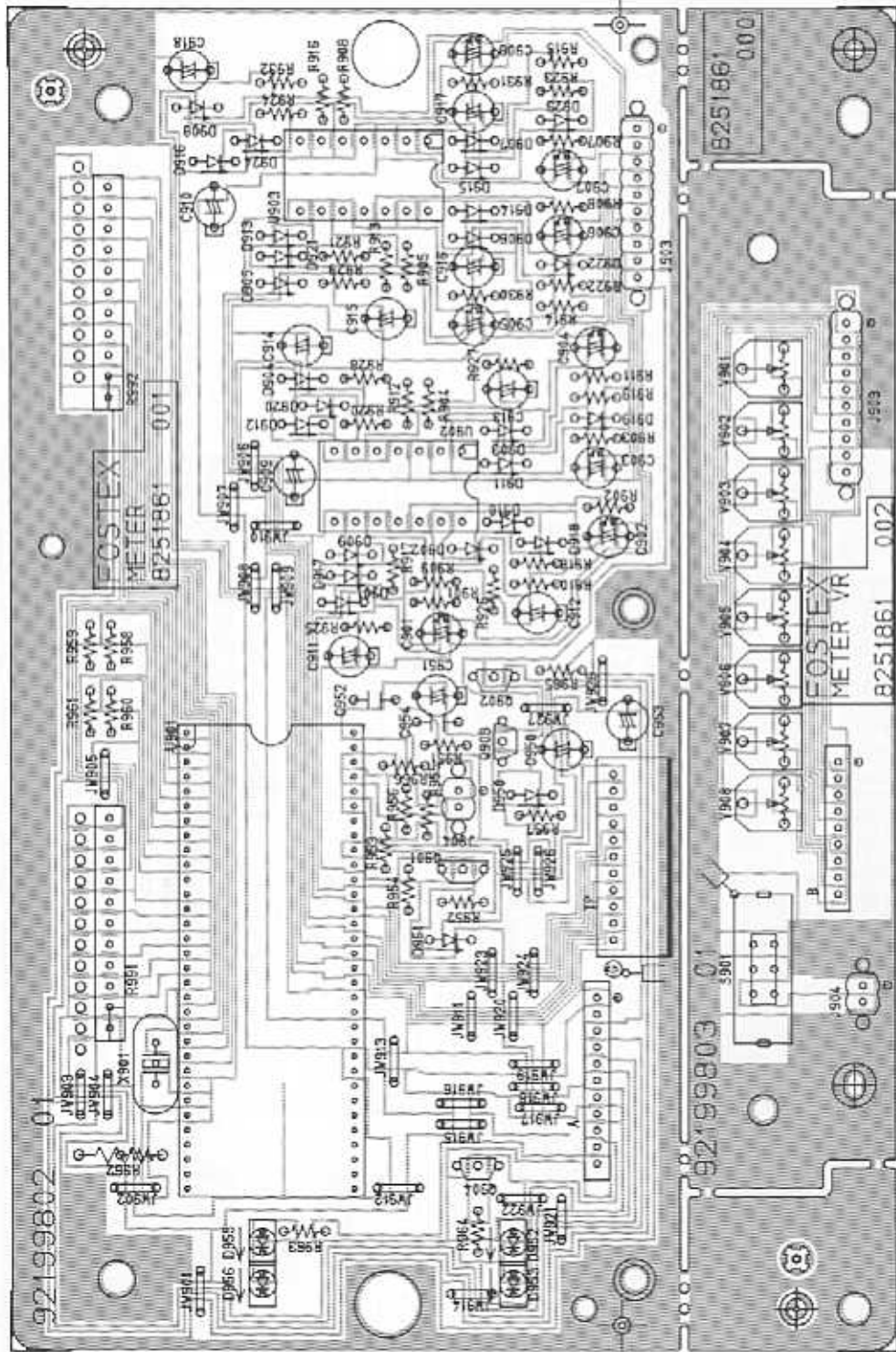
J711-722	8245 2170 00	Connector, pin jack, 4P
	8276 6700 19	Cable assy, 6P 8283, yel. 9073 straight
	8276 6700 20	Cable assy, 7P 8283, red, 9073 straight
	8276 6700 14	Cable assy, 8P 8283, red, 9073 straight
	8245 1721 09	Connector, jack, 8283, 9P, wht.

PHONE C PCB ASSEMBLY

Ass'y No. 8273 5560 00

Ref. No.	Parts No.	Nomenclature
	8251 8600 03	Plain PCB, Phone C
J701-706	8245 3450 00	Connector, phone jack, mono, S
	8276 6700 15	Cable assy, shield, 2 core, 3P PHR3, wht.
	8276 6700 16	Cable assy, shield, 2 core, 3P PHR3, wht.
	8276 6700 17	Cable assy, shield, 2 core, 3P PHR3, wht.





METER PCB ASSEMBLY

Ass'y No. 8273 5570 00

Ref. No.	Parts No.	Nomenclature
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	8251 8610 01	Plain PCB, Meter
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IC's

U901	8236 0577 00	Digital, MB88514
U902,903	8236 0214 00	Analog, NJM2902N

TRANSISTORS

Q901	8234 1423 00	2SC1740-S
Q902	8236 0553 00	IC, driver, DTA114TS
Q903	8236 0573 00	IC, driver, DTC114ES
Q904	8236 0572 00	IC, driver, DTA144ES

DIODES

D901-924	8234 0176 00	1SS131
D950	8234 0177 00	1A2E-X
D951	8234 0176 00	1SS131
D952-955	8234 2031 00	Opt., LED, red, GL8HD22

CARBON RESISTORS

All resistors 1/6W, ±5% unless noted otherwise.

R901-908	8230 1382 24	Flat mtg., 220kΩ
R909-916	8230 1381 04	Flat mtg., 100kΩ
R917-924	8230 1384 74	Flat mtg., 470kΩ
R925-932	8230 1382 23	Flat mtg., 22kΩ
R951,952	8230 1381 03	Flat mtg., 10kΩ
R953	8230 1386 82	Flat mtg., 6.8kΩ
R954-957	8230 1381 03	Flat mtg., 10kΩ
R958-961	8230 1381 02	Flat mtg., 1kΩ
R962	8230 1381 02	Flat mtg., 1kΩ
R963,964	8230 1382 22	Flat mtg., 2.2kΩ
R965	8230 1382 24	Flat mtg., 220kΩ
R966	8230 1384 73	Flat mtg., 47kΩ
R991,992	8230 0980 00	Array, SM, 100kΩ

CAPACITORS

ALU = Electrolytic type

CER = Ceramic type

C901-908	8232 1161 05	ALU, 50V, 1μF, 20%, SRE
C909,910	8232 1134 76	ALU, 16V, 47μF, 20%, SRE
C911-918	8232 1134 74	ALU, 16V, 4.7μF, 20%, SRE
C950	8232 1141 07	ALU, 25V, 100μF, 20%, SRE
C951	8232 1134 76	ALU, 16V, 47μF, 20%, SRE

Ref. No.	Parts No.	Nomenclature
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C952	8232 8112 23	CER, 25V, 0.025μF
C953	8232 1131 06	ALU, 16V, 10μF, 20%, SRE

MISCELLANEOUS

	8212 2780 00	Spacer, LED, 15
X901	8256 0830 00	Ceramic, resonator, 6MHz
	8256 0820 00	Fluorescent display tube FL-CP1099GR
	8204 0620 01	Screw, B3×8, C
	8207 0059 00	Plasti-rivet
	8245 1721 11	Connector, jack, 8283, flat, 11P, wht.
	8207 0052 01	Holder, cable-lead, 2P
	8207 0052 08	Holder, cable-lead, 10P
	8276 6700 01	Cable assy, 11P 8283, wht., 9073 straight

METER VR PCB ASSEMBLY

Ass'y No. 8273 5580 00

Ref. No.	Parts No.	Nomenclature
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	8251 8610 02	Plain PCB, Meter VR
S901	8253 6660 00	Switch, slide, 2-2, non-shorting, AXC
V901-908	8231 0180 00	Pot., semi-fixed, carbon, 100KΩB
	8207 0052 01	Holder, cable-lead, 2P
	8207 0052 08	Holder, cable-lead, 10P
	8276 6700 02	Cable assy, 9P 8283, wht. 9073 straight

POWER SUPPLY PCB ASSEMBLY

Ass'y No. 8273 5590 00

Ref. No.	Parts No.	Nomenclature
	△ 8251 8620 01	Plain PCB, Power
IC's		
U003	△ 8236 0320 01	Analog, NJM78M05FA
U001	△ 8236 0320 05	Analog, NJM78M12FA
U002	△ 8236 0347 05	Analog, NJM79M12FA
U004	△ 8236 0320 09	Analog, NJM78M24FA
U005	△ 8236 0347 09	Analog, NJM79M24FA
U006	△ 8236 0363 00	Analog, NJM79L06

DIODES

D001,002	△ 8234 1961 00	Stack, W02-X
D003-007	△ 8234 1963 00	1A2-E
D006,008	△ 8234 1962 00	Zener, MTZ5.6B-T

CARBON RESISTORS

All resistors 1/6W, ±5% unless noted otherwise.

R001	8230 1384 72	Flat mtg., 4.7kΩ
R002,003	8230 1382 23	Flat mtg., 22kΩ
R004	8230 1384 72	Flat mtg., 4.7kΩ

CAPACITORS

ALU = Electrolytic type

CER = Ceramic type

C002,003	8232 8112 23	CER, 25V, 0.025μF
C011,012	8232 8112 23	CER, 25V, 0.025μF
C015,016	8232 8112 23	CER, 25V, 0.025μF
C019,020	8232 8112 23	CER, 25V, 0.025μF
C023	8232 8112 23	CER, 25V, 0.025μF
C025,026	8232 8112 23	CER, 25V, 0.025μF
C005,006	8232 1784 78	ALU, 25V, 4700μF, 20%
C007-009	8232 1444 77	ALU, 25V, 470μF, 20%, SME
C010	8232 1464 75	ALU, 50V, 4.7μF, 20%, SME
C013,014	8232 1431 07	ALU, 16V, 100μF, 20%, SME
C017	8232 1444 77	ALU, 25V, 470μF, 20%, SME
C018	8232 1464 76	ALU, 50V, 47μF, 20%, SME
C021	8232 1774 77	ALU, 50V, 470μF, 20%
C022	8232 1441 07	ALU, 25V, 100μF, 20%, SME
C024	8232 0942 27	ALU, 10V, 220μF, 20%, SME

Ref. No. Parts No. Nomenclature

MISCELLANEOUS

8276 0020 04	Wire, jumper, 10mm, 1PS, 1041-4
8207 0052 03	Holder, cable-lead, 4P
8207 0052 07	Holder, cable-lead, 11P
8207 0057 00	Heat Sink, L
8207 0056 00	Heat Sink (for U 004, 005)

POWER SW PCB ASSEMBLY

Ass'y No. 8273 5600 00
 EUR/UK/AUS
 8273 5600 01
 USA/CND/DM

Ref. No. Parts No. Nomenclature

	8251 8620 02	Plain PCB, Power SW
S001	△ 8253 4100 00	Switch, push, power, SDLIP
	△ 8239 0028 00	Holder, fuse
F001	△ 8239 0007 76	Fuse, Time lag O-315A, EUR/UK/AUS
	△ 8239 0027 78	Fuse, multi, anti-rush, 0.63A USA/CND/DM
	8245 1970 00	Terminal, power
C001	△ 8256 0840 00	Spark killer, CKF45F2B103PKC
	8207 0053 00	Cover, capacitor
		Label, Fuse, EUR/UK/AUS

TERMINAL PCB ASSEMBLY

Ass'y No. 8273 5650 00

Ref. No. Parts No. Nomenclature

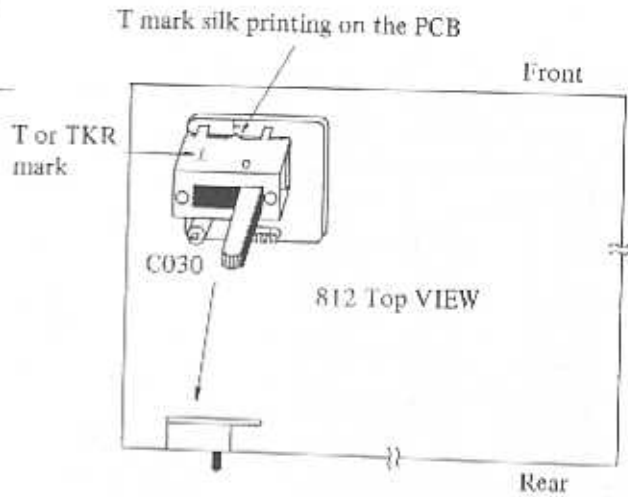
	8251 8620 04	Plain PCB, Terminal
	8207 0052 07	Holder, cable-lead, 11P
	8245 1711 11	Connector, jack, 8283, ver., 11P, wht.
	8245 1960 00	Pin, lapping

PHANTOM SW PCB ASSEMBLY

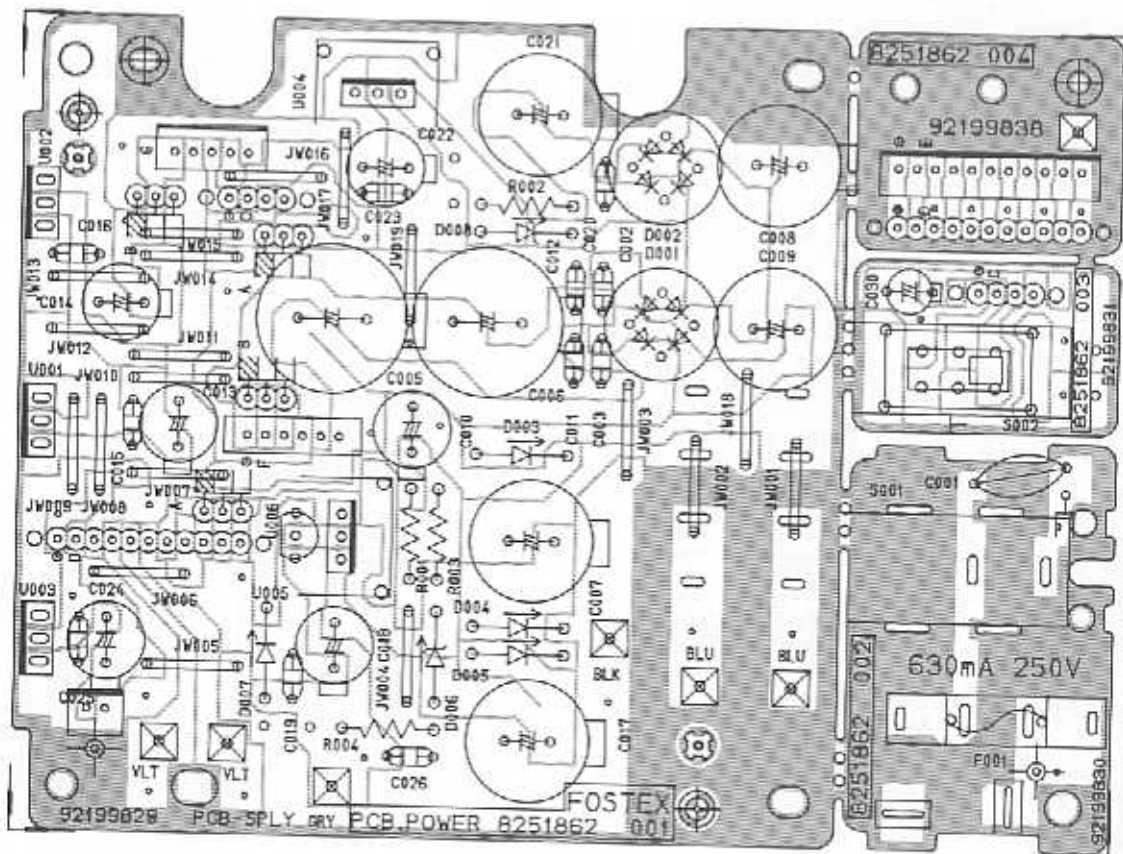
Ass'y No. 8273 5610 00

* Caution when mounting the phantom switch

Ref. No.	Parts No.	Nomenclature
	8251 8620 03	Plain PCB, Phantom SW
S002	△ 8253 6650 00	Switch, slide, 2-2, shorting non-shorting, ASA
C030	8232 1461 06	Capacitor, ALU, 50V, 10μF, 20%, SME
	8207 0052 03	Holder, cable-lead, 4P

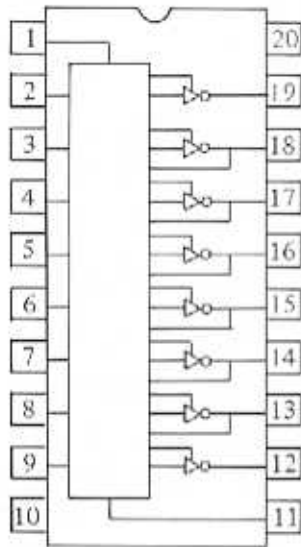


- * Signal should be connected via shorting contact of the slide switch.
- * +24V Phantom power supply should be connected via non-shorting contact of the slide switch in order to avoid any electrical damage.

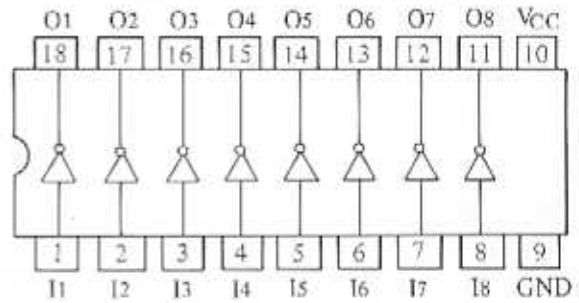


6. PIN INFORMATION FOR IC's

PLD·PEEL 18CV8-15 8236 0711 01

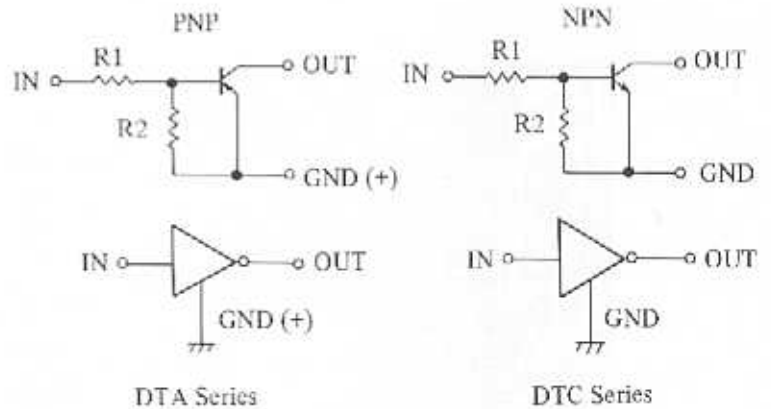
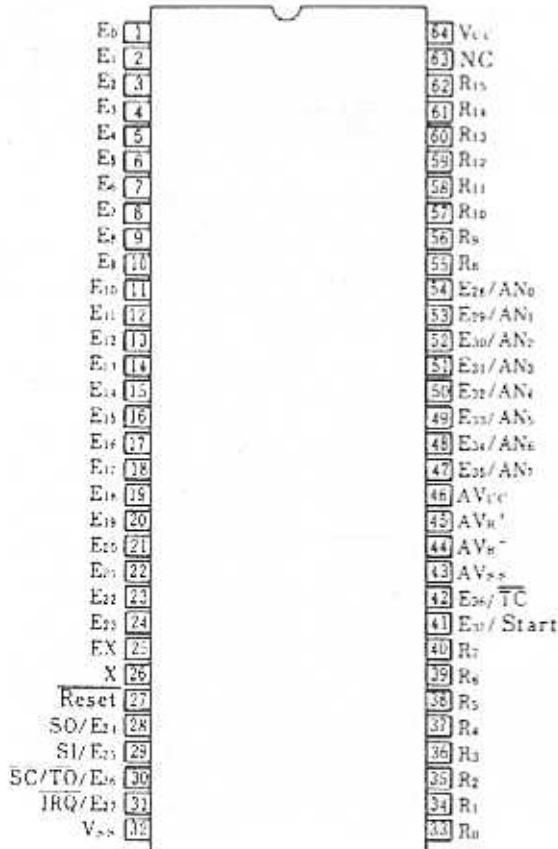


TD62583AP 8236 0565 00

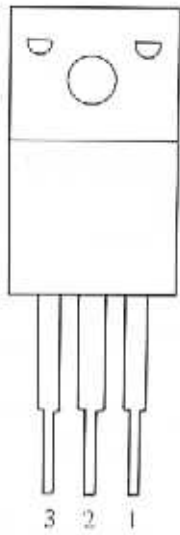


		R1	R2
8236 0572 00	DTA144ES	47k	47k
8236 0573 00	DTC144ES	47k	47k
8236 0574 00	DTA114GS	0	10k
8236 0575 00	DTA114ES	10k	10k
8236 0553 00	DTA114TS	10k	∞

MB88514B 8236 0577 00



NJM79M12FA 8236 0347 05
 NJM79M24FA 8236 0347 09



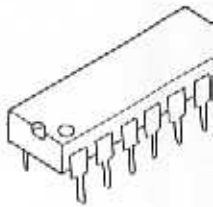
1. OUT
 2. IN
 3. GND

NJM79L06 8236 036 300

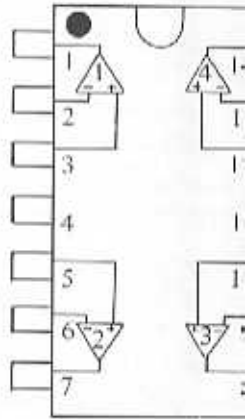


1. OUT
 2. IN
 3. GND

NJM2902N 8236 0

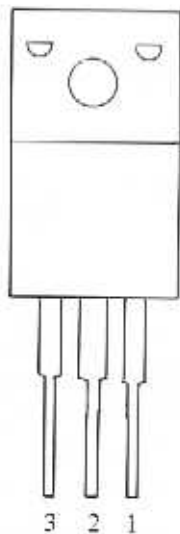


TC4027BAP 8236 0576 00

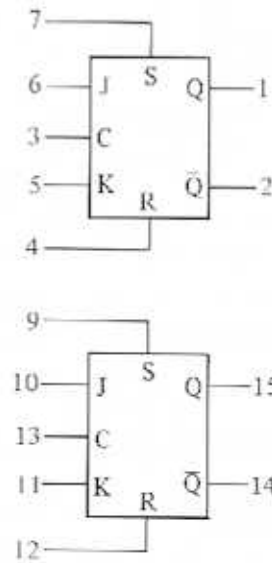


1. OUTPUT 1
 2. - INPUT 1
 3. + INPUT 1
 4. V'
 5. + INPUT 2
 6. - INPUT 2
 7. OUTPUT 2
 8. OUTPUT 3
 9. - INPUT 3
 10. + INPUT 3
 11. GROUND
 12. + INPUT 4
 13. - INPUT 4
 14. OUTPUT 4

NJM78M05FA 8236 0320 01
 NJM78M12FA 8236 0320 05
 NJM78M24FA 8236 0320 09

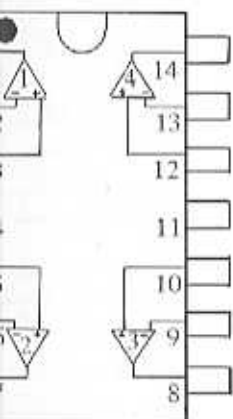
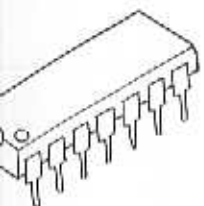


1. OUT
 2. GND
 3. IN



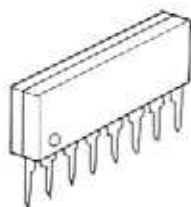
V_{DD} = Pin 16
 V_{SS} = Pin 8

2902N 8236 0214 00

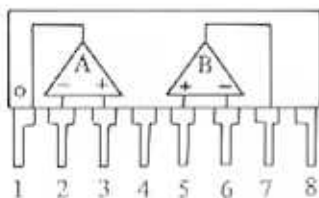


- 1. OUTPUT 1
- 2. - INPUT 1
- 3. + INPUT 1
- 4. V⁻
- 5. + INPUT 2
- 6. - INPUT 2
- 7. OUTPUT 2
- 8. OUTPUT 3
- 9. - INPUT 3
- 10. + INPUT 3
- 11. GROUND
- 12. + INPUT 4
- 13. - INPUT 4
- 14. OUTPUT 4

NJM2043LD 8236 0364 00

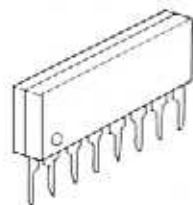


NJM2043L

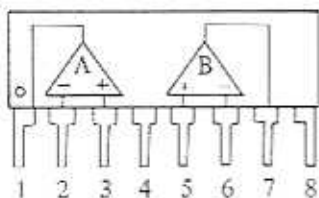


- 1. A OUTPUT
- 2. A - INPUT
- 3. A + INPUT
- 4. V⁻
- 5. B + INPUT
- 6. B - INPUT
- 7. B OUTPUT
- 8. V⁺

NJM2041LD 8236 0365 00

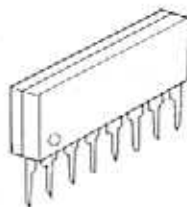


NJM2041L

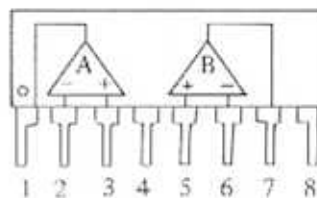


- 1. A OUTPUT
- 2. A - INPUT
- 3. A + INPUT
- 4. V⁻
- 5. B + INPUT
- 6. B - INPUT
- 7. B OUTPUT
- 8. V⁺

NJM2068LD 8236 0366 00

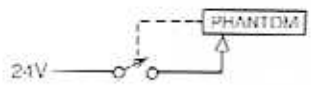
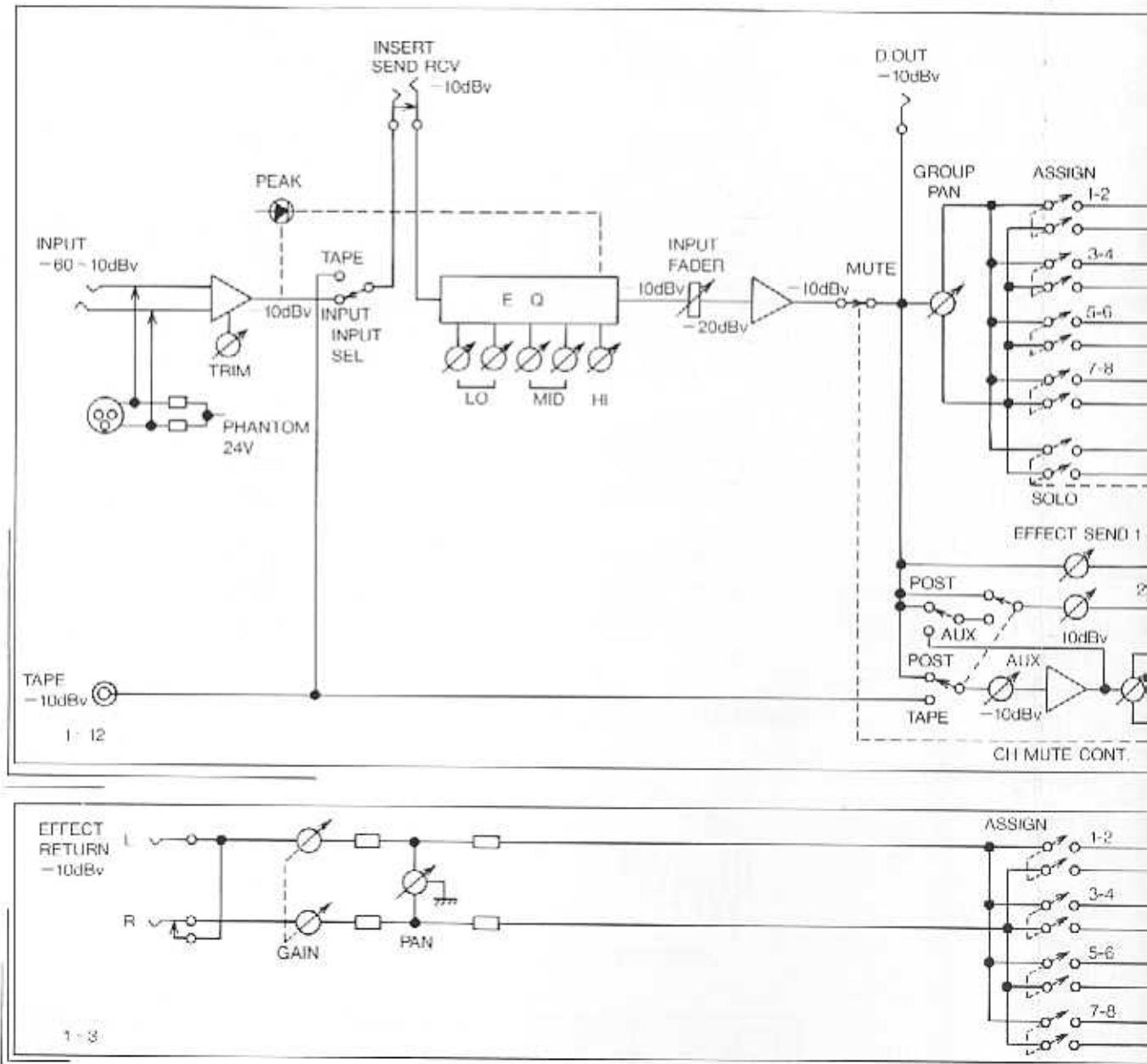


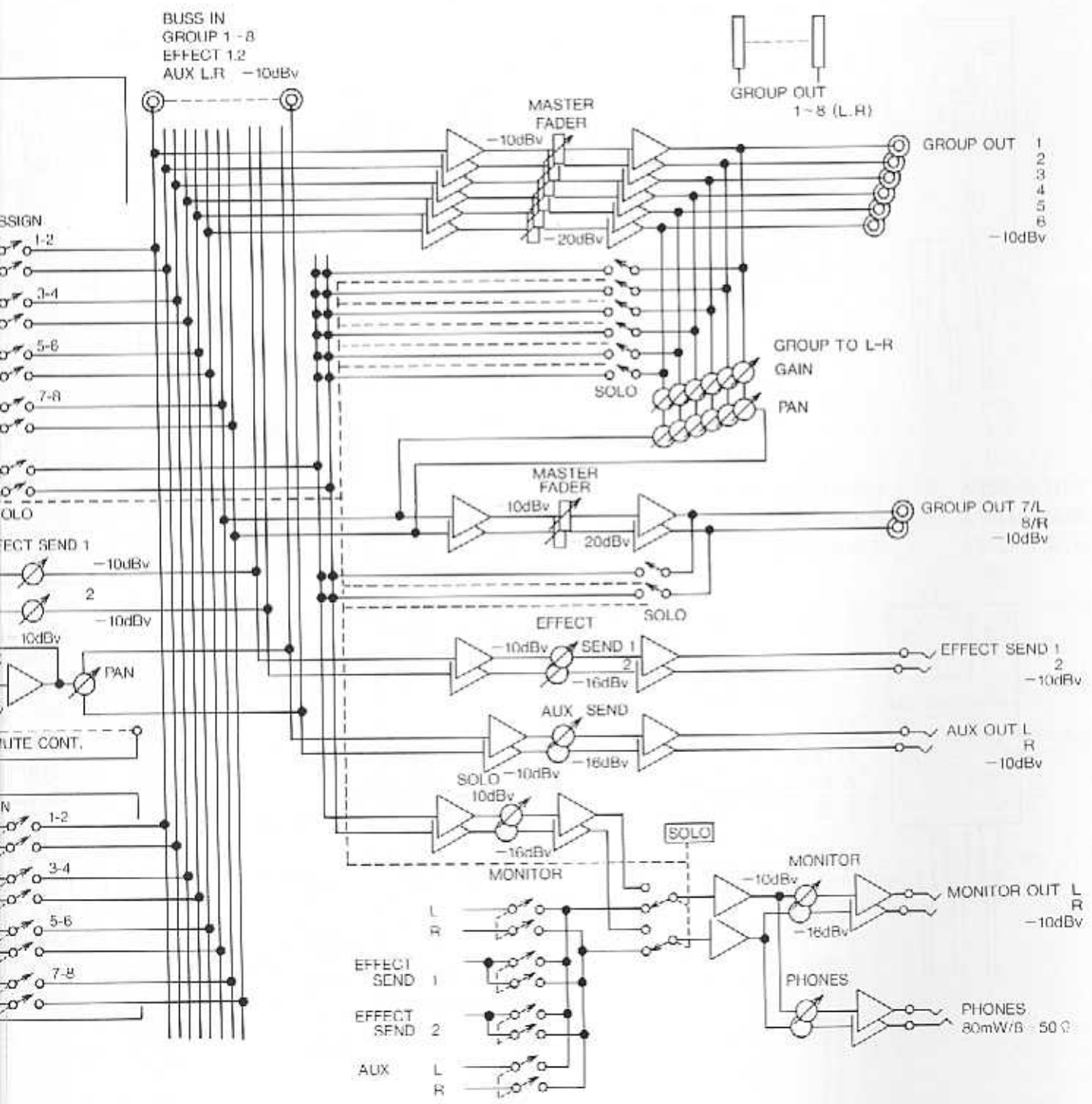
NJM2068L



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

7. BLOCK DIAGRAM





*THE TECHNICAL INFORMATION FOR MODEL 8200 MIDI MUTE CONTROLLER

* The following accessory is supplied with 8200 as the standard accessory.

Owner's manual : 1 copy (P/N 8288243000)

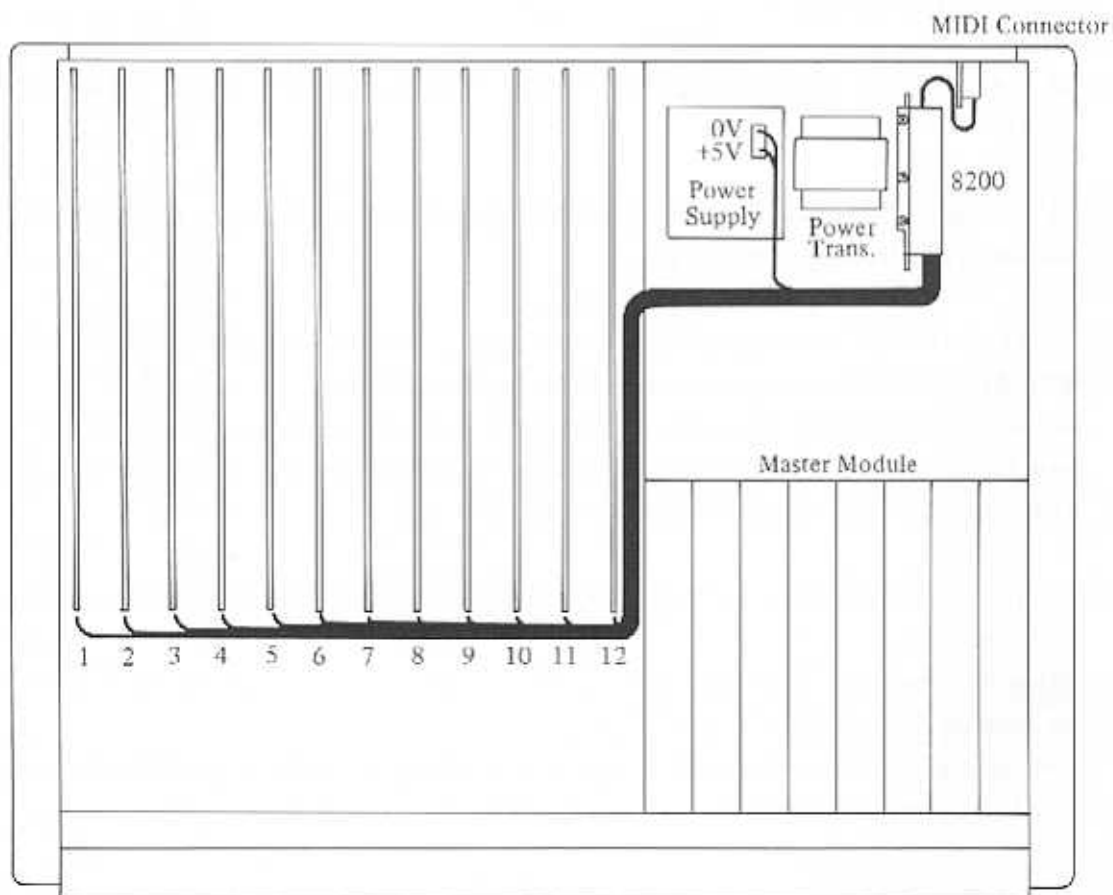
1. How to mount the model 8200 on the 812 Mixer.

The following is the modification procedure for mounting the 8200 on the 812 Mixer.

- 1) Remove all the Input Ass'y (68) from 812.
- 2) Remove the FL Panel Assy (24) from 812.
- 3) Remove the Rear Panel (20) from 812 and remove also the MIDI Cover plate (21) being placed on the rear panel.
- 4) Mount the MIDI PCB Assy of 8200 to the Jack Bracket (48) with 2 screws (PTP 3x8 CZn).
- 5) Mount the 8200 to the Power transformer bracket (54) with 3 screws (PTP 3x6 CZn) as shown in the drawing at next page.
- 6) Check if +5V DC is output at the Power supply connector for 8200 on the Power supply PCB Assy (44) when the power of 812 is turned to ON.
If the correct voltage is obtained, turn OFF the power. Then, connect the 2P Power supply Cable Assy of 8200 to the Power supply connector and connect also the 5P MIDI Cable Assy of 8200 to the MIDI PCB Assy.
- 7) Connect the Cable Assy A, B of 8200 to the MIDI controller connector on each Input PCB Assy.
Please take note that the Cable Assy A, B has 12 different cables in the length for suitable to each 12 channel (CH 1 thru CH 12).
The routing of the cables should be made carefully in order to avoid the cables being pinched by the chassis or panels etc. as shown in the drawing at next page.
- 8) Switch the S103 on each Input PCB Assy to the reverse status to the silk printing on the PCB.
- 9) Mount the Rear Panel (20), FL Panel Assy (24) and all the Input Assy (68) back to the 812.

- 10) There is no electrical adjustment is required for mounting the 8200 on the 812 Mixer.
- 11) Check if the Mute LED's on all the input channels become lighting for about 1 second when the power of 812 is turned to ON.

NOTE: The numbers appeared in the bracket above indicate the components described in the item 5. EXPLODED VIEW at page 10.



CPU PCB ASSEMBLY, 8200

PCB Ass'y No. 8273 5170 00

Ref. No.	Parts No.	Nomenclature	Ref. No.	Parts No.	Nomenclature
	8251 3440 00	Plain PCB, CPU	W004	8276 6600 01	Cable, assy, 8200 A (7 ~ 12ch)
		IC's		8276 0020 04	Wire, jumper, 10mm, IPS-1041-4
U001	8236 0578 00	Digital, CPU, M37700 SFP		8220 6800 00	Cover, shield
U002	8236 0711 01	Digital, PLD, PEEL18CV8-15		8220 6810 00	Bracket, shield
U003	8236 0566 00	Digital, EPROM, LH57256J-12			Screw, PTP 3x6 CZn
U004	8234 0199 00	Opt. photo-cuppler, PC900			
U005					
U006	8236 0201 00	IC, digital, reset, PST518A			
U007,008	8236 0565 00	IC, digital, driver, army, TD62538AP			

MIDI PCB ASSEMBLY, 8200

PCB Ass'y No. 8273 5190 00

Ref. No.	Parts No.	Nomenclature	Ref. No.	Parts No.	Nomenclature
	8251 3450 00	Plain, PCB, MIDI			
Q001	8234 0002 06	Transistor, 2SC1815 Y/GR/BL			
R001	8230 0046 82	Resistor, Carbon, 1/4W, 6.8K, 5%, ver.			
R002-4	8230 0042 21	Resistor, Carbon, 1/4W, 220k, 5%, ver.			
J001	8245 0530 05	Connector, jack 8263, 5P, straight, wht.			
J002	8245 4530 00	Connector, jack, DIN5P, YKF51-5033			
D001	8234 0085 00	GMA01-FY1.5 mm			

CARBON RESISTORS

R001,002	8230 0371 03	Array, 1/8W, 10kx8,5%, RKC
R003		
R004	8230 0371 03	Array, 1/8W, 10kx8, 5%, RKC
R005	8230 0041 05	Carbon, 1/4W, 1M Ω , 5%, ver.
R006	8230 0042 01	Carbon, 1/4W, 200 Ω , 5%, ver.
R007	8230 0044 73	Carbon, 1/4W, 47k Ω , 5%, ver.
R008	8230 0045 10	Carbon, 1/4W, 51 Ω , 5%, ver.
R009	8230 0041 02	Carbon, 1/4W, 1k Ω , 5%, ver.

CAPACITORS

ALU = Electrolytic type

CER = Ceramic type

C001	8232 0941 07	ALU, 10V, 100UF, 20%, SME
C002	8232 0951 06	ALU, 16V, 10UF, 20%, SME
C003,004	8232 0323 90	CER, 50V, 39PF, 5%, NPO
C005-007	8232 8001 04	CER, 16V, 0.1UF, +80-20%, YF

MISCELLANEOUS

X001	8256 0550 00	Ceramic, resonator, 8 MHz
	8245 1580 08	Connector, IC Socket, 28P
	8218 2610 00	Sheet, EPROM
W001	8276 6620 20	Cable, assy, 2P wht. PHR Straight, 200mm (POWER)
W002	8276 2370 12	Cable, assy, 5P wht. 120mm (MIDI)
W003	8276 6600 02	Cable, assy, 8200 B (1 ~ 6ch)

