

ADDITIONAL

 PIONEER

Service Manual

ORDER NO.
CRT-319-0

COMPONENT CAR STEREO HIGH POWER MAIN AMPLIFIER

GM-4

US, CA, E

Applicable serial No. are as below.

GM-4/US	78001~
GM-4/CA	27901~
GM-4/E	506001~

Subject:

- This manual is a supplement to the GM-4/US,CA,E service manual (CRT-234-0) which was issued in October 1980.
- This supplement concerns changes in the muting IC and pattern.

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CONNECTION DIAGRAM

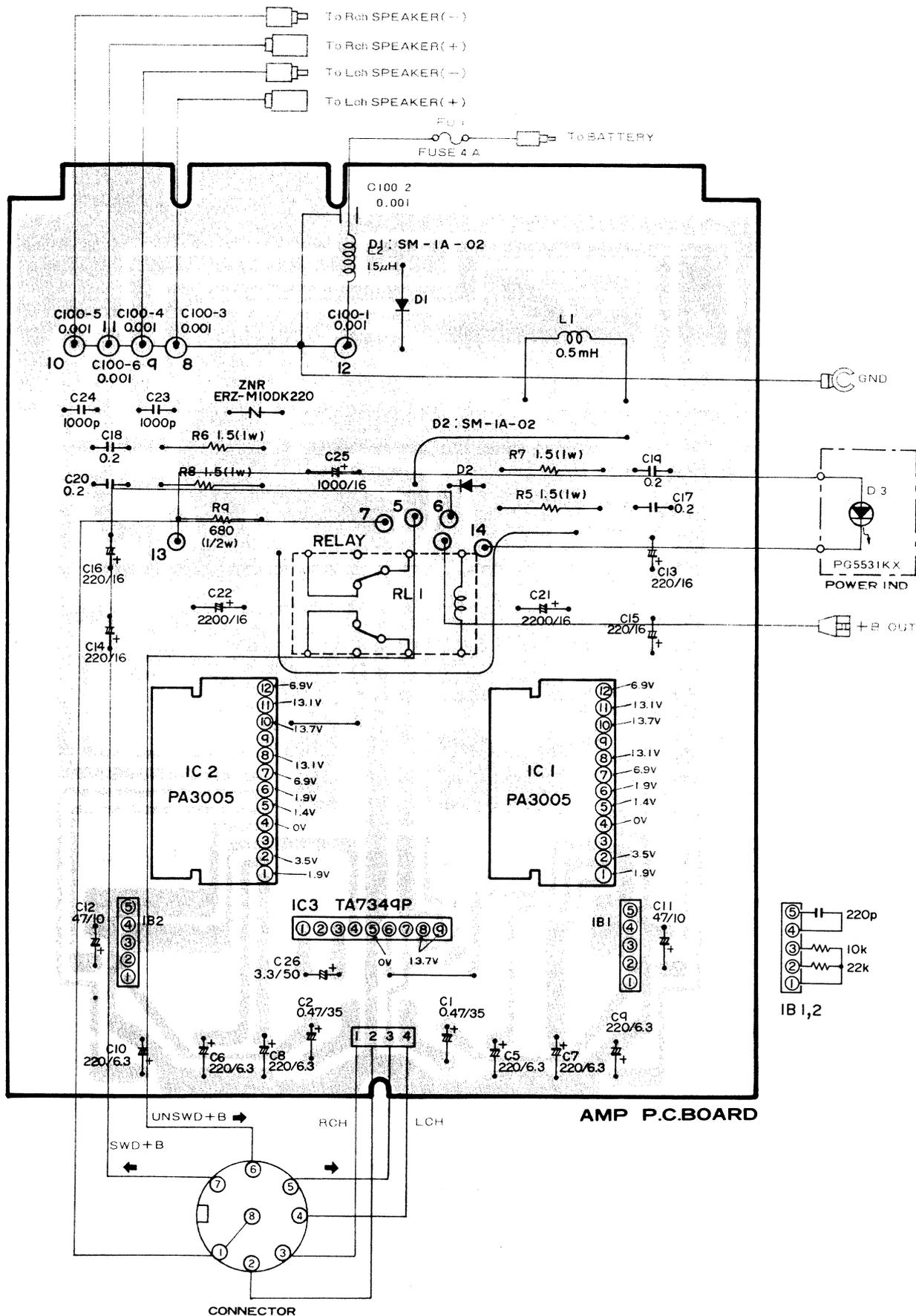


Fig. 1

1 2 3 4 5 6
SCHEMATIC CIRCUIT DIAGRAM

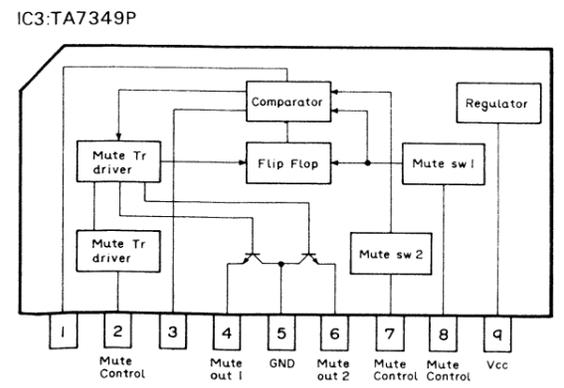
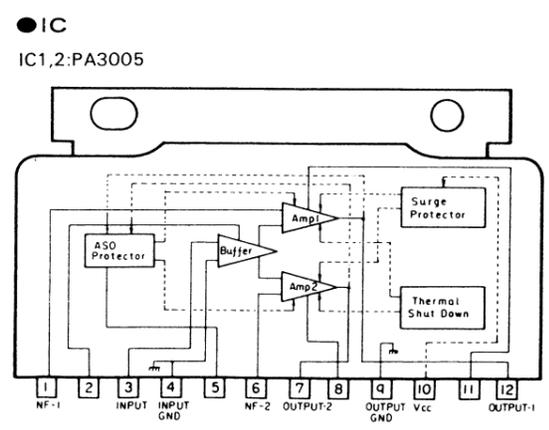
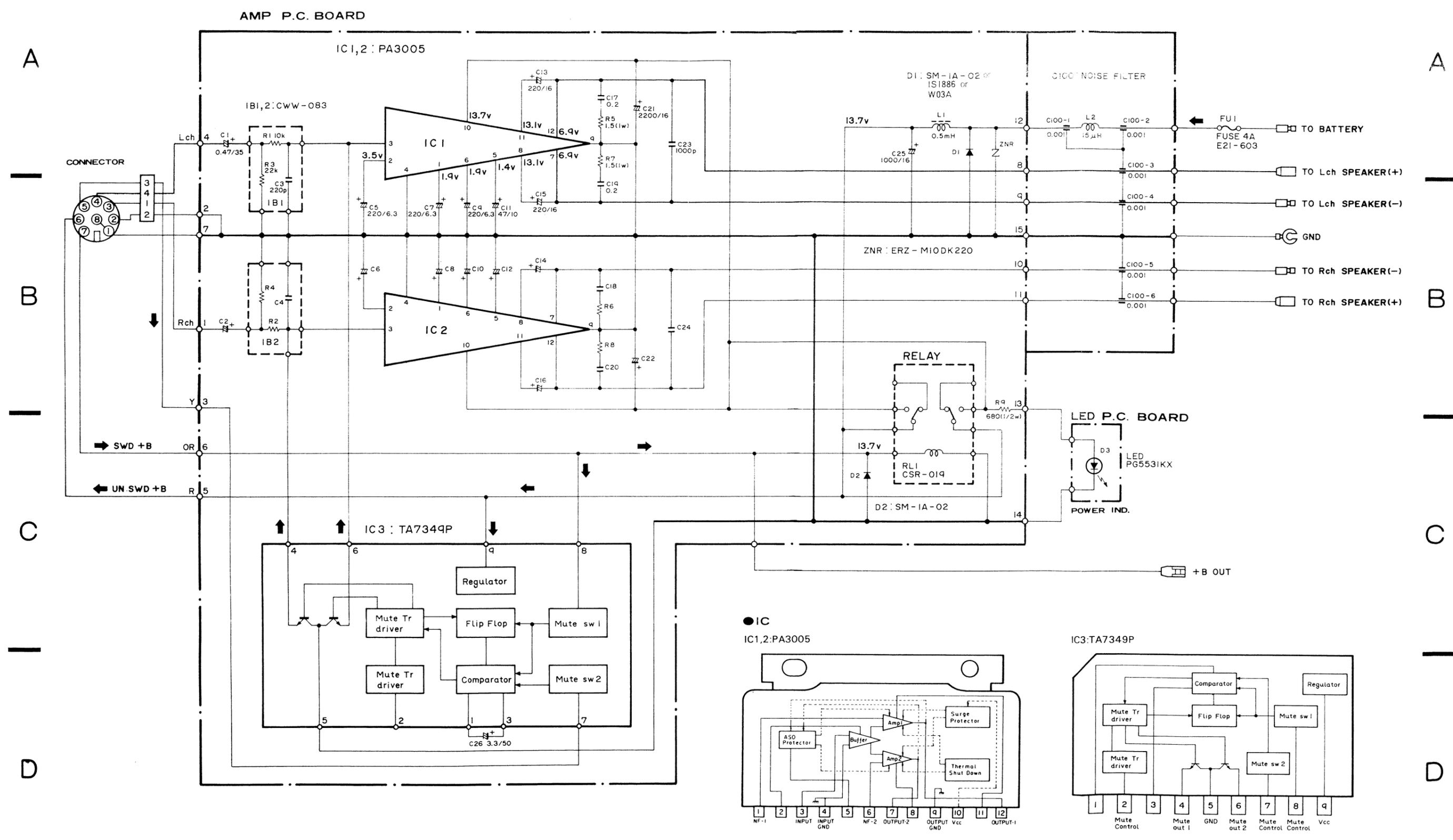
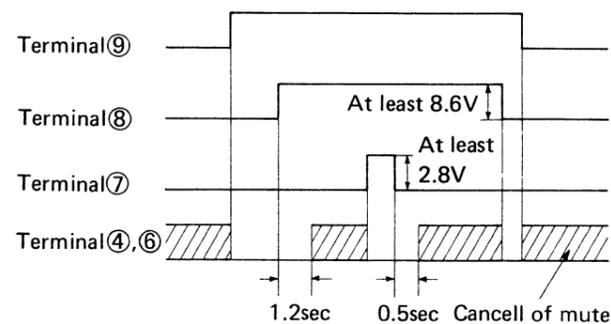


Fig. 2

CIRCUIT DESCRIPTION

• The Muting IC (TA7349P)



(Timing of muting operation) Fig. 3

• Refer to figure 3 while reading the following description.

1. When +B is supplied to the TO BATTERY terminal, a voltage is applied to terminal 9 of IC3, the muting transistor inside the IC is turned on and muting is activated.
2. When power is turned on to the external set, +B is supplied to pin 7 of the connector. Muting is cancelled 1.2 seconds after the voltage at terminal 8 of IC3 reaches 8.6V or more.
3. When a muting output is generated in the external set, a voltage is applied from pin 5 of the connector to terminal 7 of IC3 and muting is activated when this voltage reaches 2.8V or more. Muting is cancelled 0.5 seconds after the voltage drops below 2.8V.
4. The muting restoration time is determined by the discharge time of the capacitor placed between terminals 4 and 6 of IC3.

ELECTRICAL PARTS LIST

NOTE:

When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω	56 × 10 ¹	561	RD1/4PS	5 6 1 J
47kΩ	47 × 10 ³	473	RD1/4PS	4 7 3 J
0.5Ω	0R5		RN2H	0 5 K
1Ω	010		RS1P	0 1 0 K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ	562 × 10 ¹		RN1/4SR	5 6 2 F
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• For your Parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.

★★: GENERALLY MOVES FASTER THAN ★.

This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.

• Parts whose parts numbers are omitted are subject to being not supplied.

Amp P. C. Board

MISCELLANEOUS

NOTE:

As for the IC1, IC2, use the same rank for both channels.

Mark.	Part No.	Symbol & Description
★★	PA3005	IC1, IC2
★★	TA7349P	IC3
★	IS1886 or SM-1A-02 or W03A	D1
★	SM-1A-02	D2
	CTH-065	L1 Coil 0.5mH
	CTF-021	L2 Coil 15μH
	CRS-019	RL1
	ERZ-M10DK220	ZNR
	CWW-083	IB1, IB2 R1 - R4, C3, C4

RESISTORS

Mark	Part No.	Symbol & Description
	PN1P□□□K (CCN-093)	R5 - R8
	RD½PS□□□J	R9

CAPACITORS

Mark	Part No.	Symbol & Description
	CSZAR47M35 or CSYAR47M25SAN	C1, C2
	CEA221M6R3L	C5 - C10
	CEA470M10L	C11, C12
	CEA221M16L	C13 - C16
	CCG-006	C17 - C20 0.2μF/12V
	CCH-058	C21, C22 2200μF/16V
	CKDYB102K50	C23, C24
	CEA102M16L	C25
	CEA3R3M50L	C26
	CCL-100	C100 Feed through Capacitor

LED P. C. Board

Mark	Part No.	Symbol & Description
★	PG5531KX	D3

Miscellaneous Part List

Mark	Part No.	Symbol & Description
★★	E21-603	FU1 Fuse, 4A

EXPLODED VIEW (Page 8)

GM-4/US (Service Manual ORDER No. CRT-234)				GM-4/US (Serial No. 78001 ~)	
Mark	No.	Part No.	Description	Part No.	Description
	18.	CKS-136	Plug	.....	.....
	19.	CKS-137	Plug	.....	.....
	20.	CWG-086	Mute Unit	.....	.....
	21.	CKS-106	Plug	CKS-075	Plug
	28.	CWH-126	Amp Unit	CWH-174	Amp Unit
	34.	PMZ30P080FZK	Screw	PMZ30P080FMC	Screw
	.....	.....	.....	CDE-922	Cord

GM-4/CA (Service Manual ORDER No. CRT-234)				GM-4/CA (Serial No. 27901 ~)	
Mark	No.	Part No.	Description	Part No.	Description
	18.	CKS-136	Plug	.....	.....
	19.	CKS-137	Plug	.....	.....
	20.	CWG-086	Mute Unit	.....	.....
	21.	CKS-106	Plug	CKS-075	Plug
	28.	CWH-126	Amp Unit	CWH-175	Amp Unit
	34.	PMZ30P080FZK	Screw	PMZ30P080FMC	Screw
	.....	.....	.....	CDE-922	Cord

GM-4/E (Service Manual ORDER No. CRT-234)				GM-4/E (Serial No. 506001 ~)	
Mark	No.	Part No.	Description	Part No.	Description
	18.	CKS-136	Plug	.....	.....
	19.	CKS-137	Plug	.....	.....
	20.	CWG-086	Mute Unit	.....	.....
	21.	CKS-106	Plug	CKS-075	Plug
	28.	CWH-126	Amp Unit	CWH-174	Amp Unit
	34.	PMZ30P080FZK	Screw	PMZ30P080FMC	Screw
	.....	.....	.....	CDE-922	Cord

PACKING (Page 10)

GM-4/CA (Service Manual ORDER No. CRT-234)				GM-4/CA (Serial No. 27901 ~)	
Mark	No.	Part No.	Description	Part No.	Description
	3.	CRD-149	Owner's Manual	CRD-176	Owner's Manual (English, French)