

XR-C210/C212

SERVICE MANUAL

AEP Model
UK Model

XR-C210

German Model
XR-C212



Photo : XR-C210

Mode Name Using Similar Mechanism	NEW
Tape Transport Mechanism Type	MG-50A-39

SPECIFICATIONS

Cassette player section

Tape track 4-track 2-channel stereo
Wow and flutter 0.08 % (WRMS)
Frequency response 30 – 18,000 Hz
Signal-to-noise ratio

Cassette type

TYPE II, IV 61 dB
TYPE I 58 dB

Tuner section

FM

Tuning range 87.5 – 108.0 MHz
Antenna terminal External antenna connector
Intermediate frequency 10.7 MHz
Usable sensitivity 8 dBf
Selectivity 75 dB at 400 kHz
Signal-to-noise ratio 65 dB (stereo), 70 dB (mono)
Harmonic distortion at 1 kHz 0.5% (stereo), 0.3% (mono)
Separation 35 dB at 1 kHz
Frequency response 30 – 15,000 Hz
Capture ratio 2 dB

MW/LW (SW, for the XR-C212)

Tuning range MW: 531 – 1,602 kHz
LW: 153 – 281 kHz
SW: 5,950 – 6,205 kHz
Antenna terminal External antenna connector
Intermediate frequency 10.71 MHz/450 kHz
Sensitivity MW: 30 μ V
LW: 50 μ V
SW: 50 μ V

Power amplifier section

Outputs Speaker outputs
(sure seal connectors)
Speaker impedance 4 – 8 ohms
Maximum power output 22 W \times 4 (at 4 ohms)

General

Output lead Power antenna relay
control lead
Power amplifier control
lead
Tone controls Bass \pm 8 dB at 100 Hz
Treble \pm 8 dB at 10 kHz
Power requirements 12 V DC car battery
(negative ground)
Dimensions Approx. 186 \times 57 \times 170 mm
(w/h/d) not incl.
projecting parts and
controls
Mounting dimension Approx. 182 \times 53 \times 153 mm
(w/h/d) not incl.
projecting parts and
controls
Mass Approx. 1.3 kg
Supplied accessories Power connecting cord (1)
Mounting hardware (1 set)
Front panel case (1)
Optional accessories Bus (Unilink) cable
(supplied with an RCA pin
cord)
RC-61 (1m), RC-62 (2m)
RCA pin cord
RC-63 (1m), RC-64 (2m),
RC-65 (5m)

Design and specifications are subject to change without notice.

FM/MW/LW CASSETTE CAR STEREO
XR-C210

FM/MW/SW CASSETTE CAR STEREO
XR-C212

SONY®



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SECTION 3 MECHANICAL ADJUSTMENTS

PRECAUTION

- Wipe the following components with an absorbent cotton cloth moistened with alcohol before adjustment :

PB head	Pinch roller
Idler	Rubber belt
Capstan	
- Demagnetize the PB head using a head demagnetizer.
- Be careful not to use a magnetized screwdriver.
- After the adjustment is completed, lock the adjustment parts using screws.
- Unless otherwise specified, make adjustments at the specified voltage (14.4V).

Torque Measurement

Mode	Torque Meter	Meter Reading
FWD	CQ-102C	30 – 65g·cm (0.42 – 0.90 oz·inch)
FWD Back Tension		0.5 – 4.5g·cm (0.01 – 0.06 oz·inch)
REV	CQ-102RC	30 – 65g·cm (0.42 – 0.90 oz·inch)
REV Back Tension		0.5 – 4.5g·cm (0.01 – 0.06 oz·inch)
FF, REW	CQ-201B	60 – 200g·cm (0.83 – 2.78 oz·inch)

Tape Tension Measurement

Mode	Tension Meter	Meter Reading
FWD	CQ-403A	more than 90g (more than 3.18 oz)
REV	CQ-403R	

SECTION 4 ELECTRICAL ADJUSTMENTS

TEST MODE

This set have the test mode function. In the test mode, FM Auto Scan/Stop Level and AM Auto Scan/Stop Level adjustments can be performed easier than it in ordinaly procedure.

<Set the Test Mode>

- Set the "OFF" mode.
- Push the preset [4] button.
- Push the preset [5] button.
- Press the preset [1] button for two seconds.
- Then the display indicates five patterns and stops, the test mode is set.

<Rerease the Test mode>

- Push the "OFF" button.

See the adjustment location from on page 14 for the adjustment.

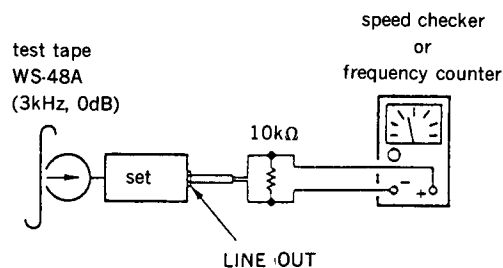
DECK SECTION

0dB=0.775V

Tape Speed Adjustment

Procedure :

- Put the set into the FWD PB mode.



Specification : Constant speed

Speed checker	Frequency counter
-1.5 to +2.5%	2,955 to 3,075Hz

Adjustment Location : See page 14.

TUNER SECTION

0dB=1 μ V

Cautions during repair

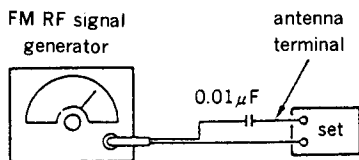
When the front end is defective, replace it by a new one because its internal block is difficult to repair.

FM Auto Scan/Stop Level Adjustment

Setting :

FM button (C210) : FM

TUNER button (C212) : FM

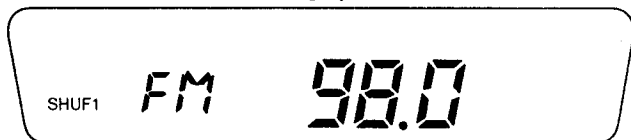


Carrier frequency : 98.0MHz
Output level : 22dB (12.6 μ V)
Mode : mono
Modulation : 1kHz, 75kHz deviation

Procedure :

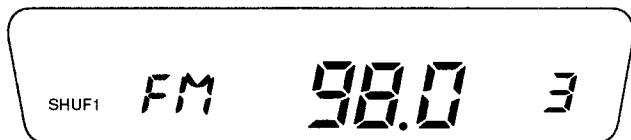
1. Set to the test mode. (See page 11.)
2. Push the **FM** button (C210) or **TUNER** button (C212) and set to FM.

Display



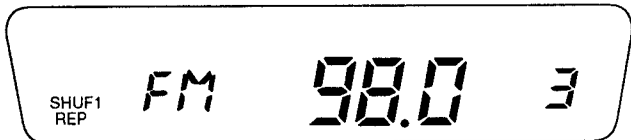
3. Push the preset **[3]** button.

Display



4. Adjust with the volume RV3 on TU10 so that put light "REP" indication on the display window.
But, in case of already indicated "REP", turn the RV3 so that put out light "REP" indication and adjustment.

Display



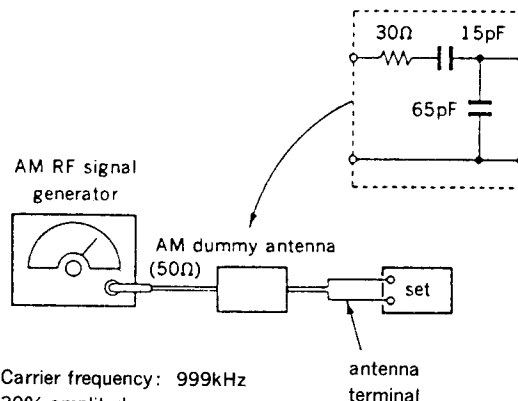
Adjustment Location : See page 14.

MW Auto Scan/Stop Level Adjustment

Setting :

MW/LW button (C210) : MW

TUNER button (C212) : MW

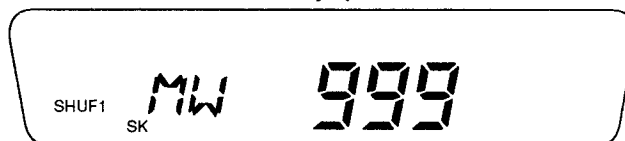


Carrier frequency : 999kHz
30% amplitude
modulation by
400Hz signal
Output level : 33dB (44.7 μ V)

Procedure :

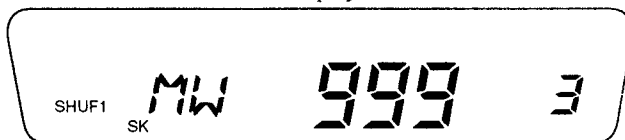
1. Set to the test mode. (See page 11.)
2. Push the **MW/LW** button (C210) or **TUNER** button (C212) and set to MW.

Display



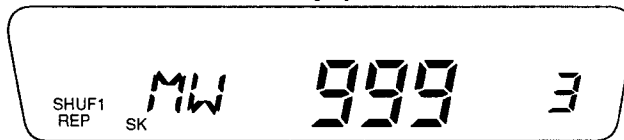
3. Push the preset **[3]** button.

Display



4. Adjust with the volume RV1 on TU10 so that put light "REP" indication on the display window.
But, in case of already indicated "REP", turn the RV1 so that put out light "REP" indication and adjustment.

Display

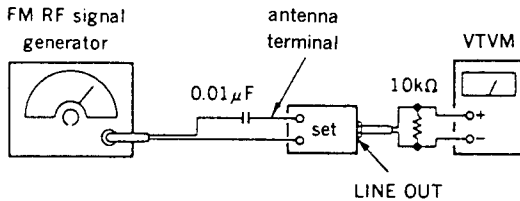


Adjustment Location : See page 14.

High Cut Control Effect Adjustment

Setting :

FM button (C210) : FM
TUNER button (C212): FM



Carrier frequency: 98.0MHz
Output level : 60dB (1mV)
Mode : mono
Modulation : 1kHz, 40kHz deviation

Procedure :

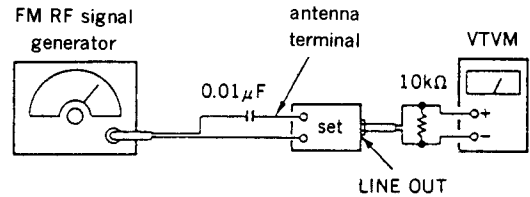
1. Tune the 98.0MHz.
2. The then output level is supposing that (A) dB.
3. Adjust with the volume RV2 on TU10 so that the output level is (A) – 5dB then signal generator input set to 20dB.

Adjustment Location : See page 14.

FM Stereo Separation Adjustment

Setting :

FM button (C210) : FM
TUNER button (C212): FM



Carrier frequency: 98.0MHz
Output level : 70dB (3.2mV)
Mode : stereo
Modulation : main: 1kHz, 20kHz deviation (53%)
sub: 1kHz, 20kHz deviation (53%)
19kHz pilot: 7.5kHz deviation (10%)

Procedure :

FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV4 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV4 for minimum reading.

L-CH Stereo separation: Ⓐ – Ⓑ

R-CH Stereo separation: Ⓒ – Ⓓ

The separations of both channels should be equal.

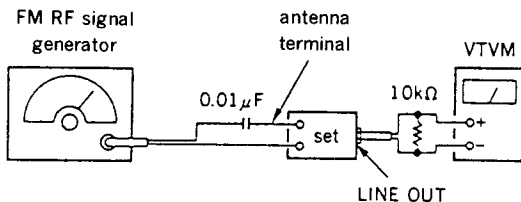
Specification : Separation more than 30dB

Adjustment Location : See page 14.

FM Noise Focus Adjustment

Setting :

FM button (C210) : FM
TUNER button (C212): FM



Carrier frequency: 98.0MHz
Output level : 60dB (1mV)
Mode : mono
Modulation : 10kHz, 75kHz deviation

Procedure :

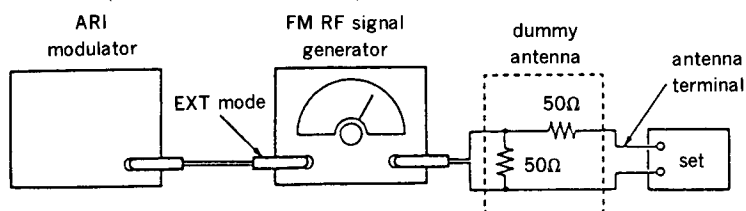
1. Tune the 98.0MHz.
2. The then output level is supposing that (B) dB.
3. Adjust with the volume RV5 on TU10 so that the output level is (B) – 30dB then signal generator input set to – 20dB.

Adjustment Location : See page 14.

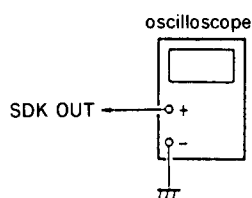
SDK Adjustment (XR-C212 only)

Setting :

SDK (Traffic Announcement) button : ON



ARI modulation Carrier frequency : 98.0MHz
 SK : 1.5% Output level : 60dB (1mV)
 DK : 30% Mode : mono
 BK : 60% Modulation : 1kHz, 7.5kHz deviation

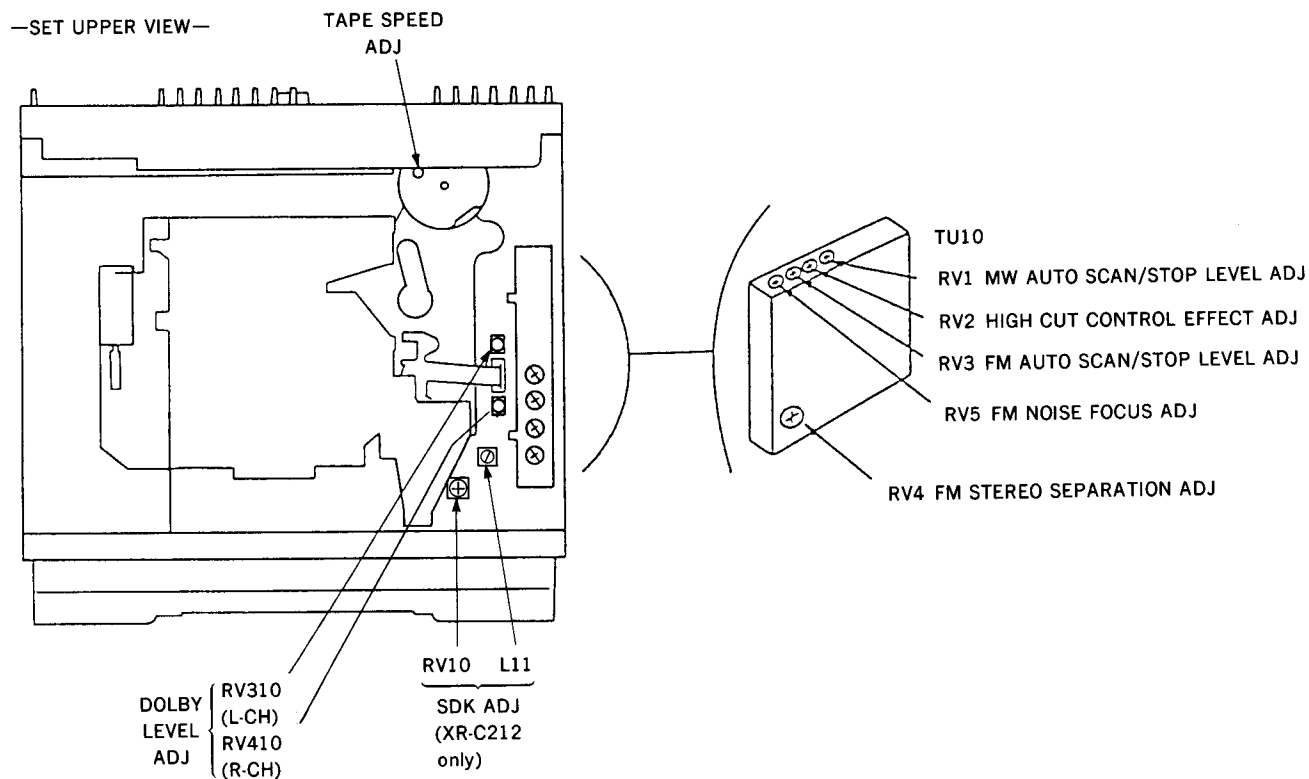


Procedure :

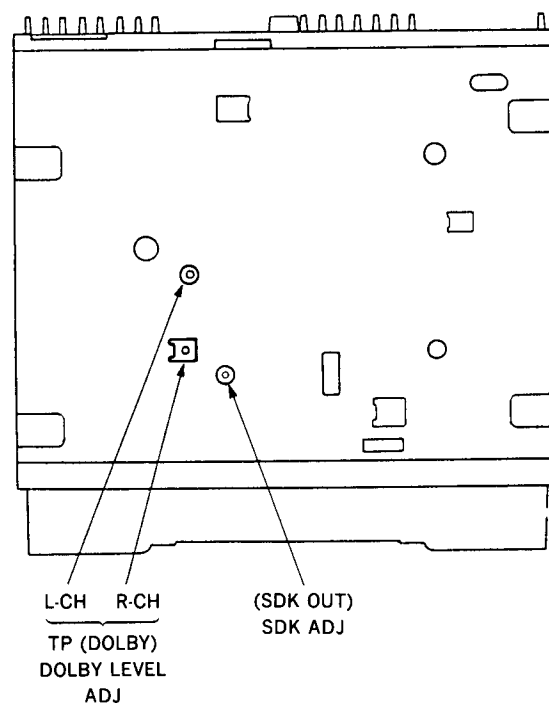
1. Adjust L11 and RV10 so that the output waveform become the maximum.

Adjustment Location :

—SET UPPER VIEW—



—SET LOWER VIEW—



SECTION 5 DIAGRAMS

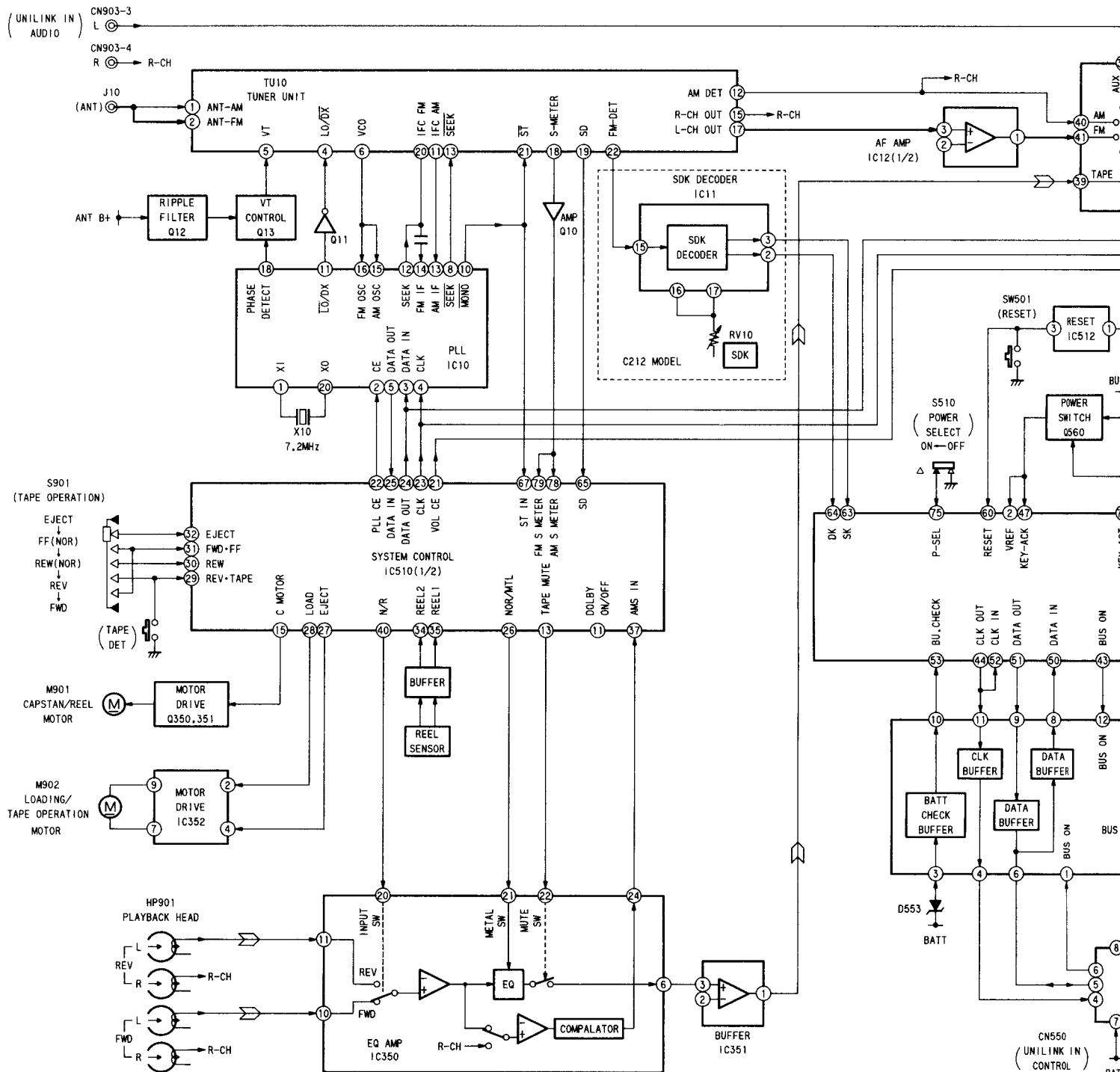
5-1. IC PIN DESCRIPTION

• IC510 μ PD75518GF-219-3B9 (System Control)

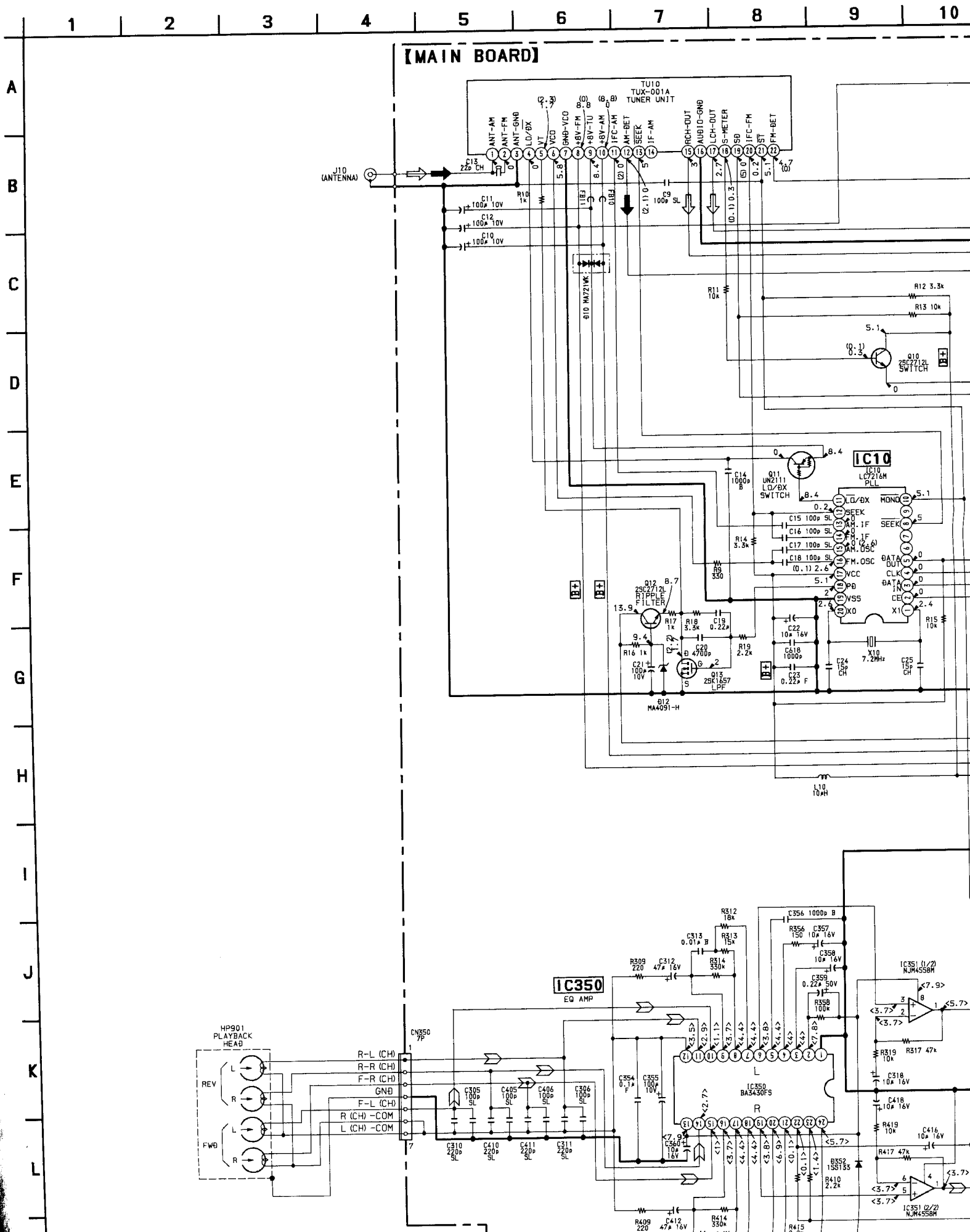
Pin No.	Pin Name	I/O	Pin Description
1	KI0	I	KEY input
2	VREF	I	A/D reference voltage input
3, 4	VDD	—	Power supply terminal
5	N. C	—	No connection
6	P-ON	O	At P-ON : High output
7	ILL-ON	O	At ACC-ON : High output (P-SEL : ON) At P-ON : High output (P-SEL : OFF)
8	COLOR	—	No used.
9	MUTE	O	At MUTE : High output
10	AUX-MUTE	—	No used.
11	DOLBY-ON/OFF	—	Not used.
12	TUNER-MUTE	—	Not used.
13	TAPE-MUTE	O	Except for TAPE PLAYBACK : High output (At movement on FF, REW and AMS : Low output)
14	AMP-ON	O	Inner power amplifier control terminal. At AMP-ON : High output
15	C-MOTOR	O	Capstan motor control terminal. At MOTOR-ON : High output
16	LCD-INH	O	INHIBIT signal to LCD driver IC. At Low output : Light off
17	TEST MODE	I	At Low input : TEST MODE 1. Input available at timing only of RESET L to H and BU CHECK L to H.
18	LCD-DATA	O	DATA output terminal to LCD driver IC.
19	LCD-CLK	O	CLOCK output terminal to LCD driver IC.
20	LCD-CE	O	LATCH output terminal to LCD driver IC.
21	VOL-CE	O	LATCH output terminal to VOL IC.
22	PLL-CE	O	LATCH output terminal to PLL IC.
23	VOL. PLL-CLK	O	CLOCK output terminal to VOL and PLL IC.
24	VOL. PLL-DATA	O	DATA output terminal to VOL and PLL IC.
25	PLL DATA IN	I	DATA input terminal from PLL IC.
26	NOR/MTL	I/O	At AUTO METAL : METAL input terminal. At METAL : Low input, at NORMAL : High input. At no AUTO METAL : METAL output terminal. At METAL : High output, at NORMAL : Low input.
27	EJECT	O	LOADING MOTOR control terminal. At moving in the direction of EJECT : High output.
28	LOAD	O	LOADING MOTOR control terminal. At moving in the direction of LOAD and PLAY.
29—32	POS4—POS1	I	MD position detection terminal
33	GND	—	GND
34	REEL2	I	MD reel table rotation detection terminal. FWD supply side
35	REEL1	I	MD reel table rotation detection terminal. FWD take-up side
36	AUT-MTL	—	Connect to GND.
37	AMS-IN	I	TAPE music with/without detection terminal. Low input : With music, High input : Without music
38	EEPROM-DATA	—	Connect to GND.
39	EEPROM-CLK	—	Not used.
40	N/R	O	NORMAL/REVERSE output terminal
41	TAPE-ON	O	OR output of LM•EJECT and LM•LOAD. At one side ACTIVE : High output, at REEL detection : High output
42	SYSTEM RESET	O	UNILINK SYSTEM RESET terminal. Low output : SYSTEM RESET

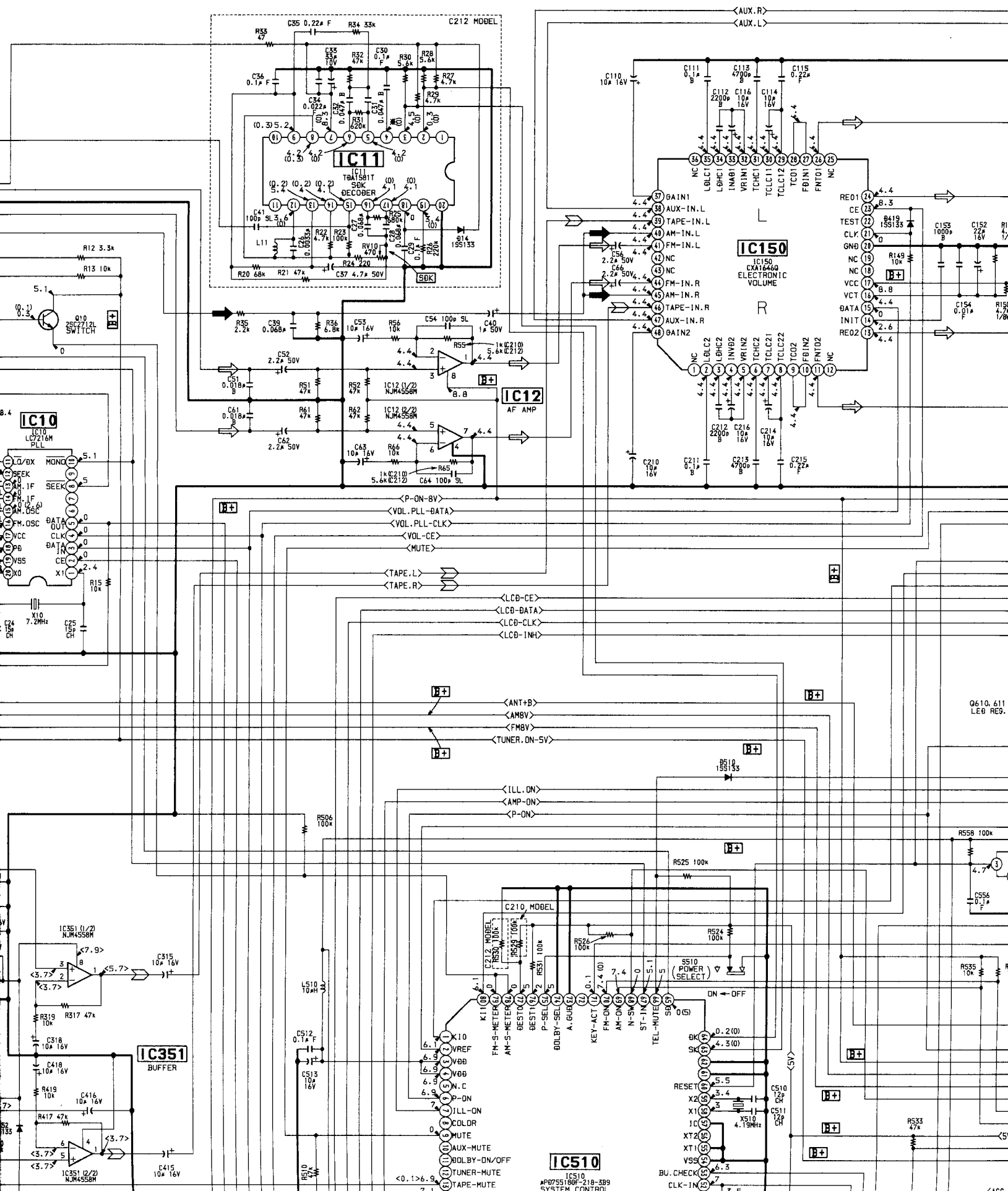
Pin No.	Pin Name	I/O	Pin Description
43	BUS-ON	O	For UNILINK terminal
44	CLK-OUT	O	For UNILINK terminal
45	BEEP	O	For piezoelectric buzzer output terminal
46	ACC-CHECK	I	Accessory detection terminal, Low input : ACC ON
47	KEY-ACK	I	KEY ACKNOWLEDGE input terminal. For KEY insert input
48	C-ALARM	I	Caution alarm with/without initial setting terminal. Low input : With caution alarm
49	SIRCS-IN	I	SIRCS (REM DET) input terminal
50	DATA-IN	I	For UNILINK terminal
51	DATA-OUT	O	For UNILINK terminal
52	CLK-IN	I	For UNILINK terminal
53	BU. CHECK	I	Back Up voltage detection terminal
54	VSS	—	GND
55	XT1	—	Connect to GND.
56	XT2	—	Not used.
57	IC	—	Connect to GND.
58	X1	—	Connect to crystal. (4.19MHz)
59	X2	—	Connect to crystal. (4.19MHz)
60	RESET	I	RESET input
61, 62	—	—	Connect to GND.
63	SK	I	High input : With SK
64	DK	I	High input : With DK
65	SD	I	High input : With SD
66	TEL-MUTE	I	Low input : 20dB audio mute
67	ST-IN	I	Low input : Stereo
68	N-SW	I	Low input : With front panel
69	AM-ON	O	At TUNER ON : High output
70	FM-ON	O	At FM (both playing and behind) : High output
71	KEY-ACT	O	Reverse pin ⑤ and Active output terminal
72	—	—	Not used.
73	A. GND	—	A/D GND
74	DOLBY-SEL	I	Connect to GND.
75	P-SEL	I	POWER SELECT switch input. High input : ON, Low input : OFF. (Low input : Setting without ACC position)
76	DEST1	I	Destination setting terminal
77	DEST0	I	Destination setting terminal
78	AM-S-METER	I	AM S meter input terminal
79	FM-S-METER	I	FM S meter input terminal
80	KI1	I	KEY input terminal

5-2. BLOCK DIAGRAM

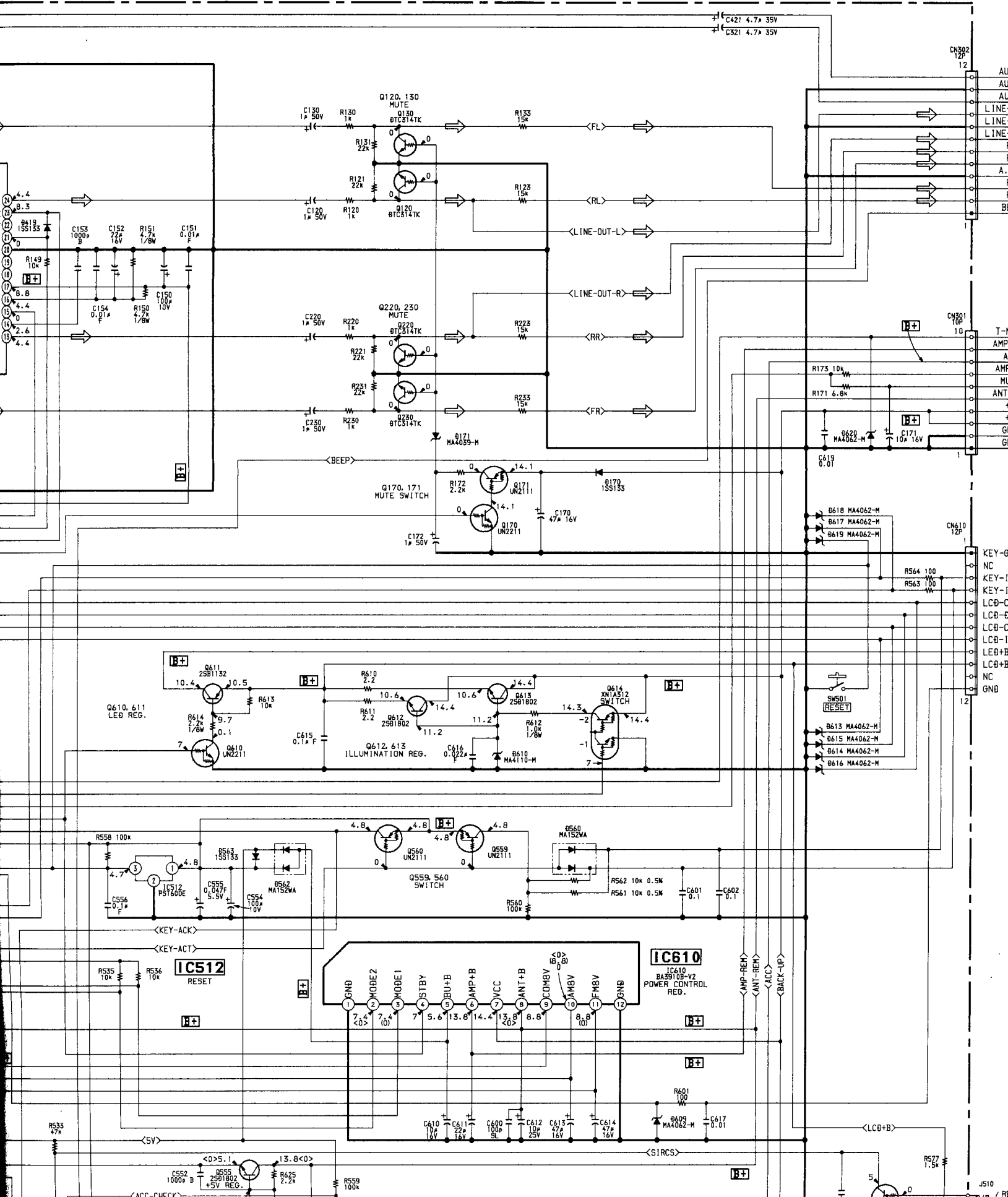


5-5. SCHEMATIC DIAGRAM—MAIN SECTION— • Refer to page 33 for IC Block Diagrams.





18 19 20 21 22 23 24 25 26 27



26

27

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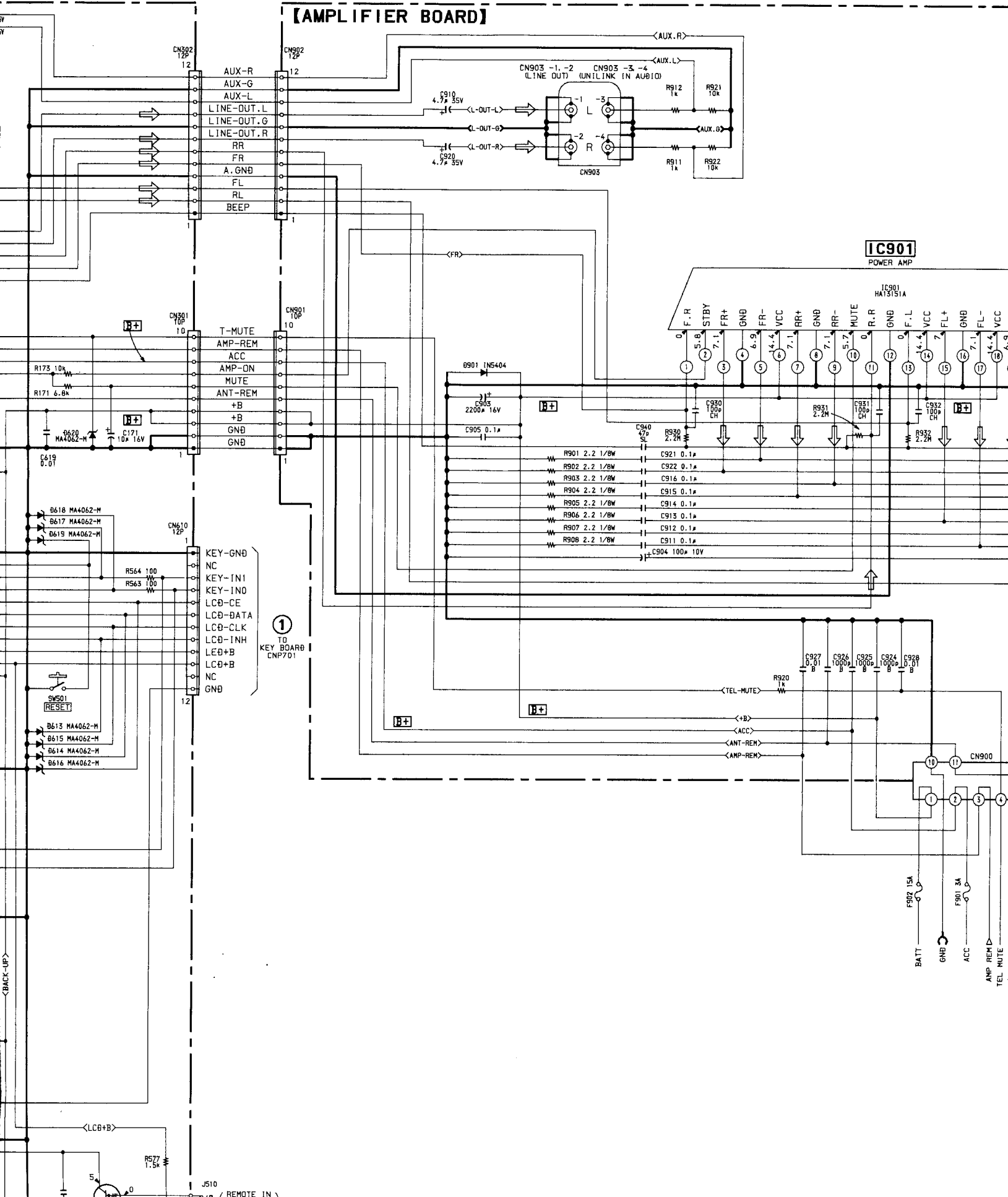
32

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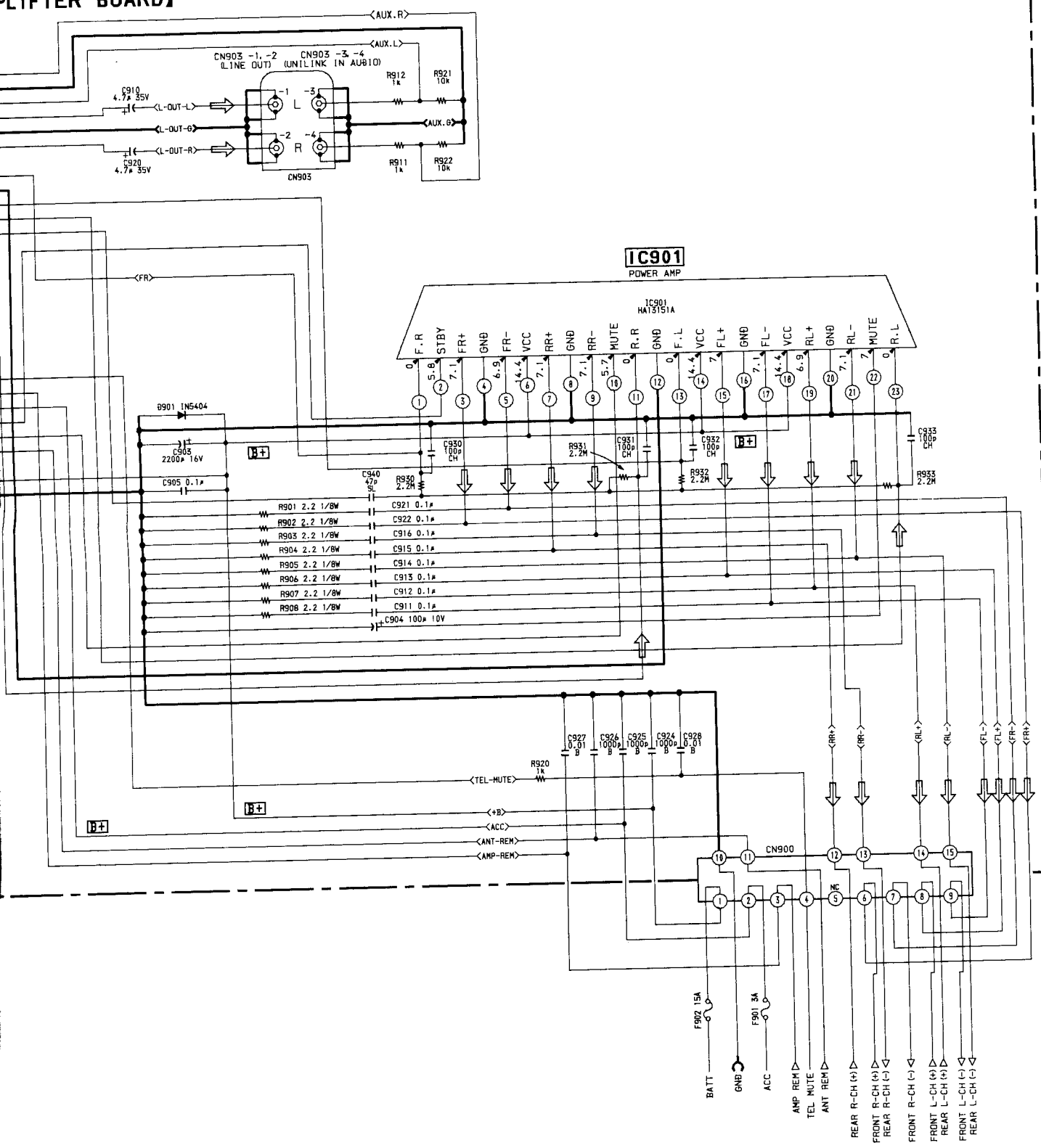
34

35

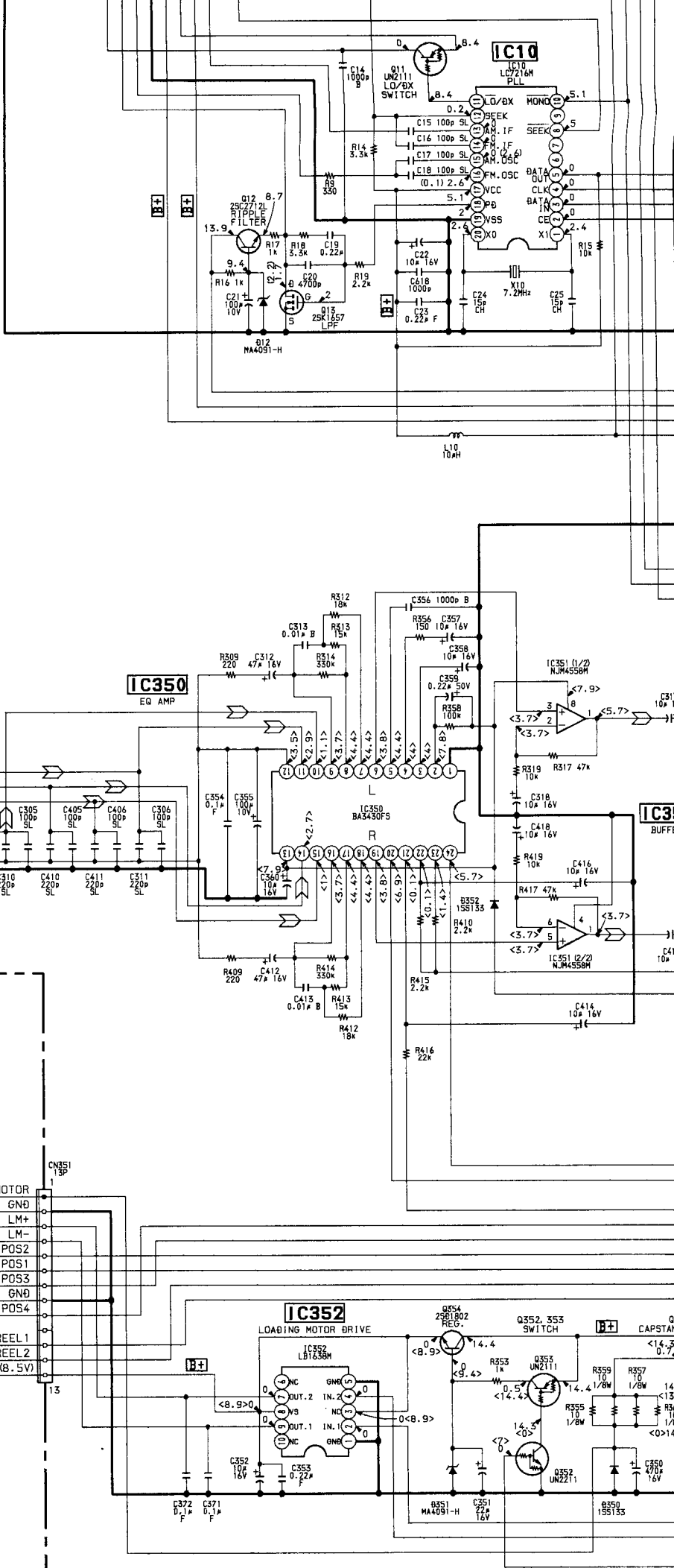
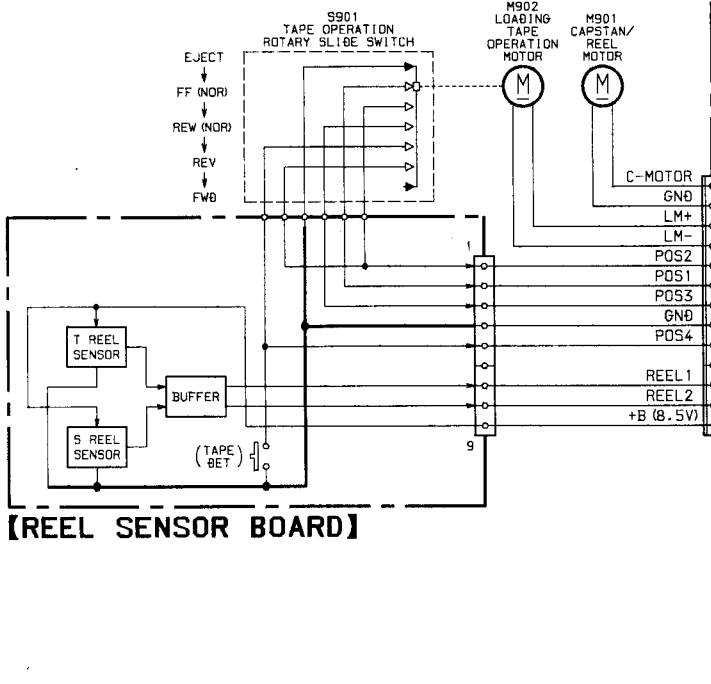
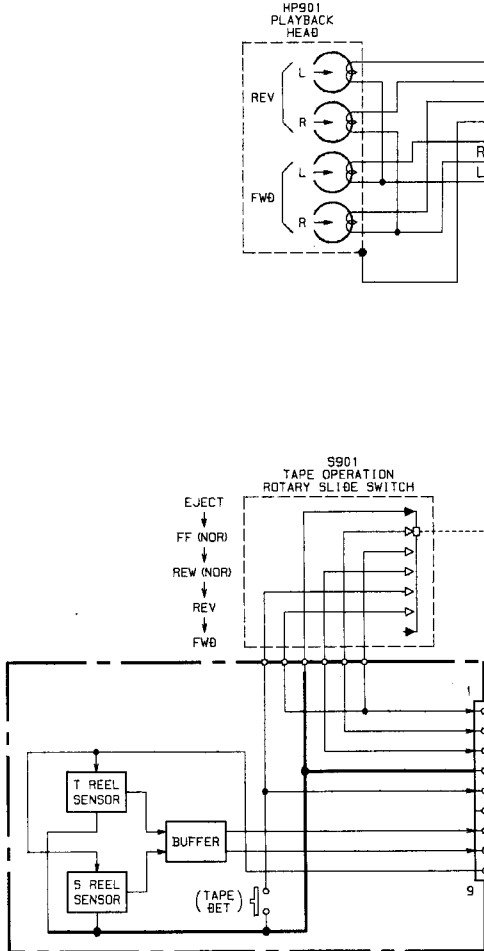
[AMPLIFIER BOARD]

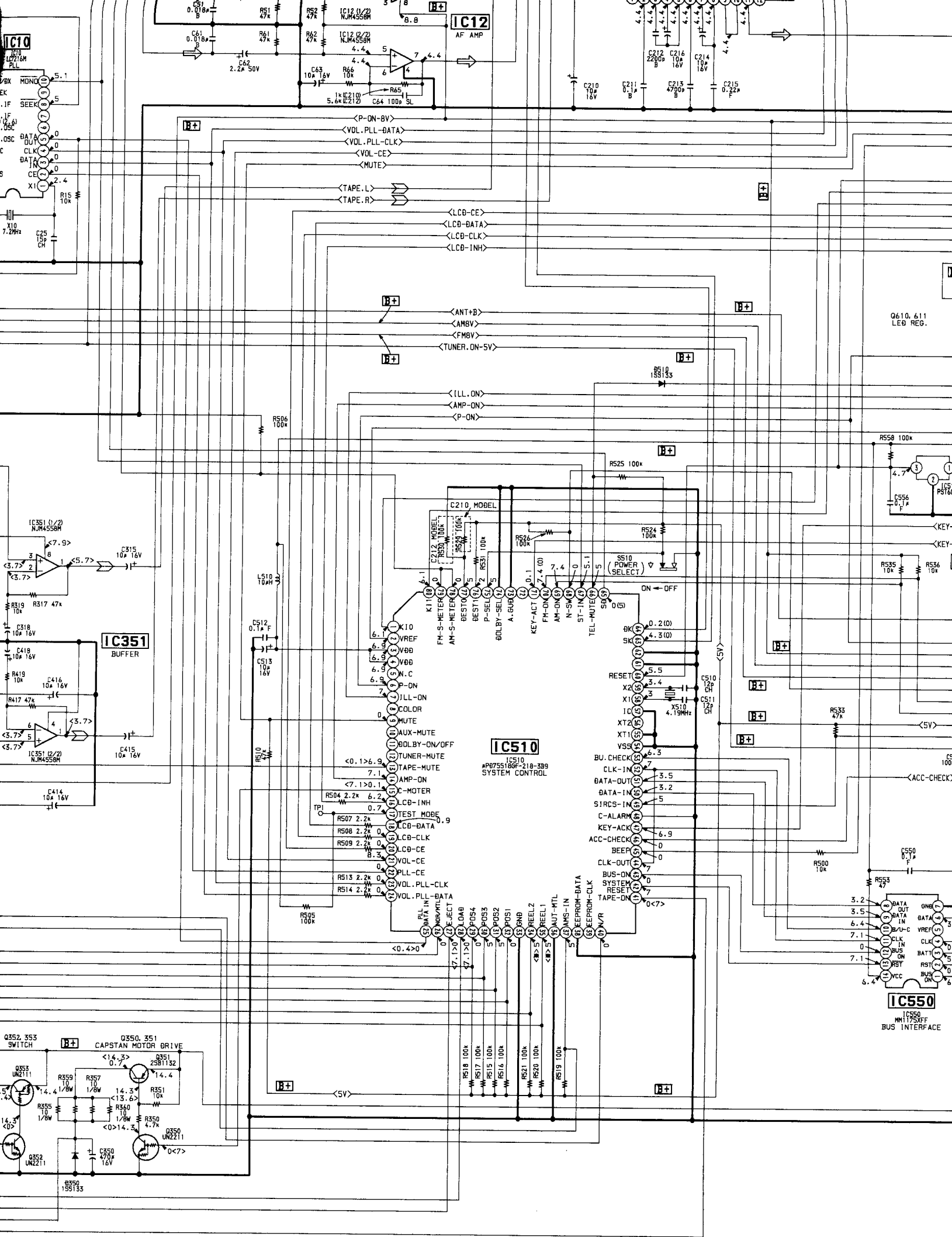


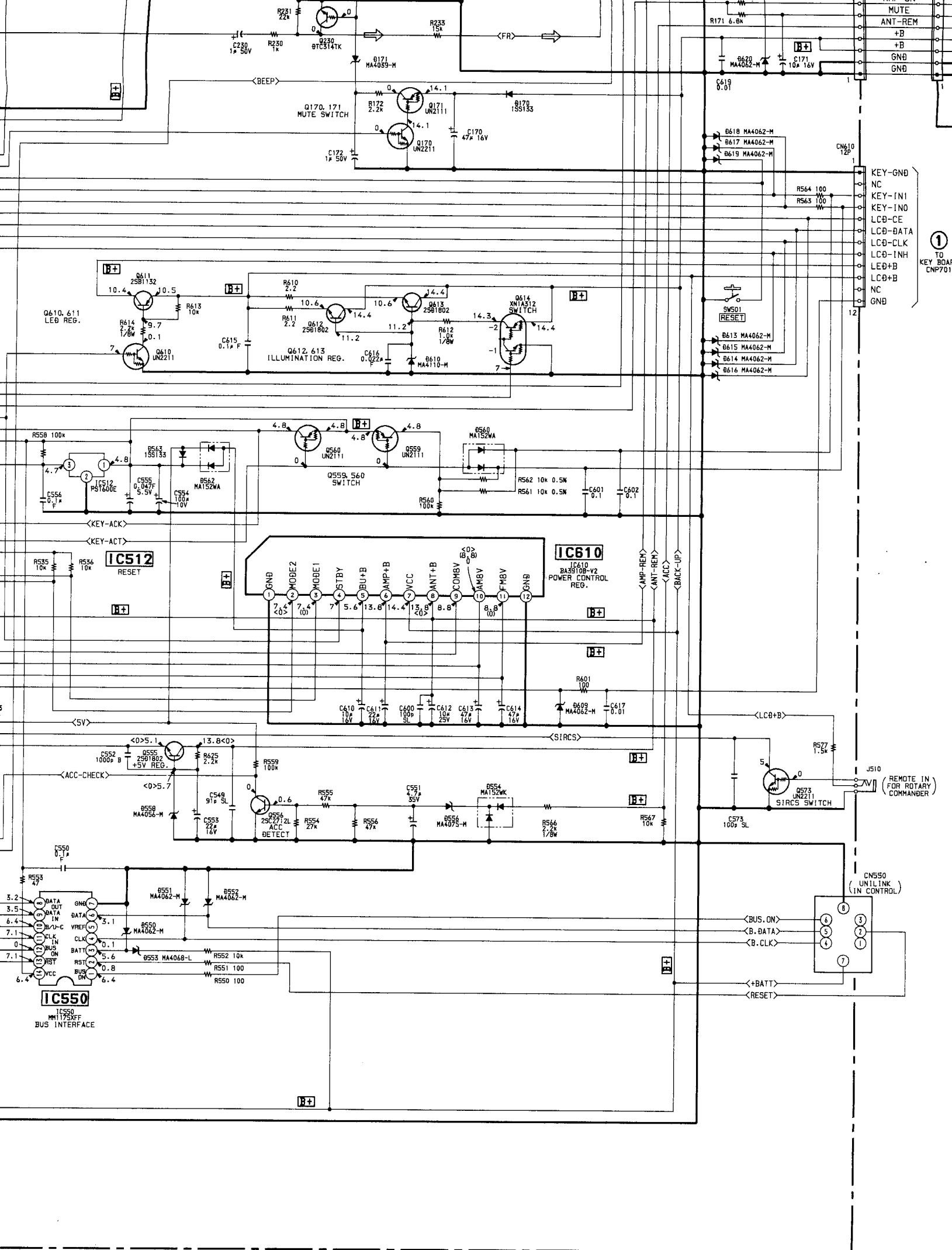
AMPLIFIER BOARD]

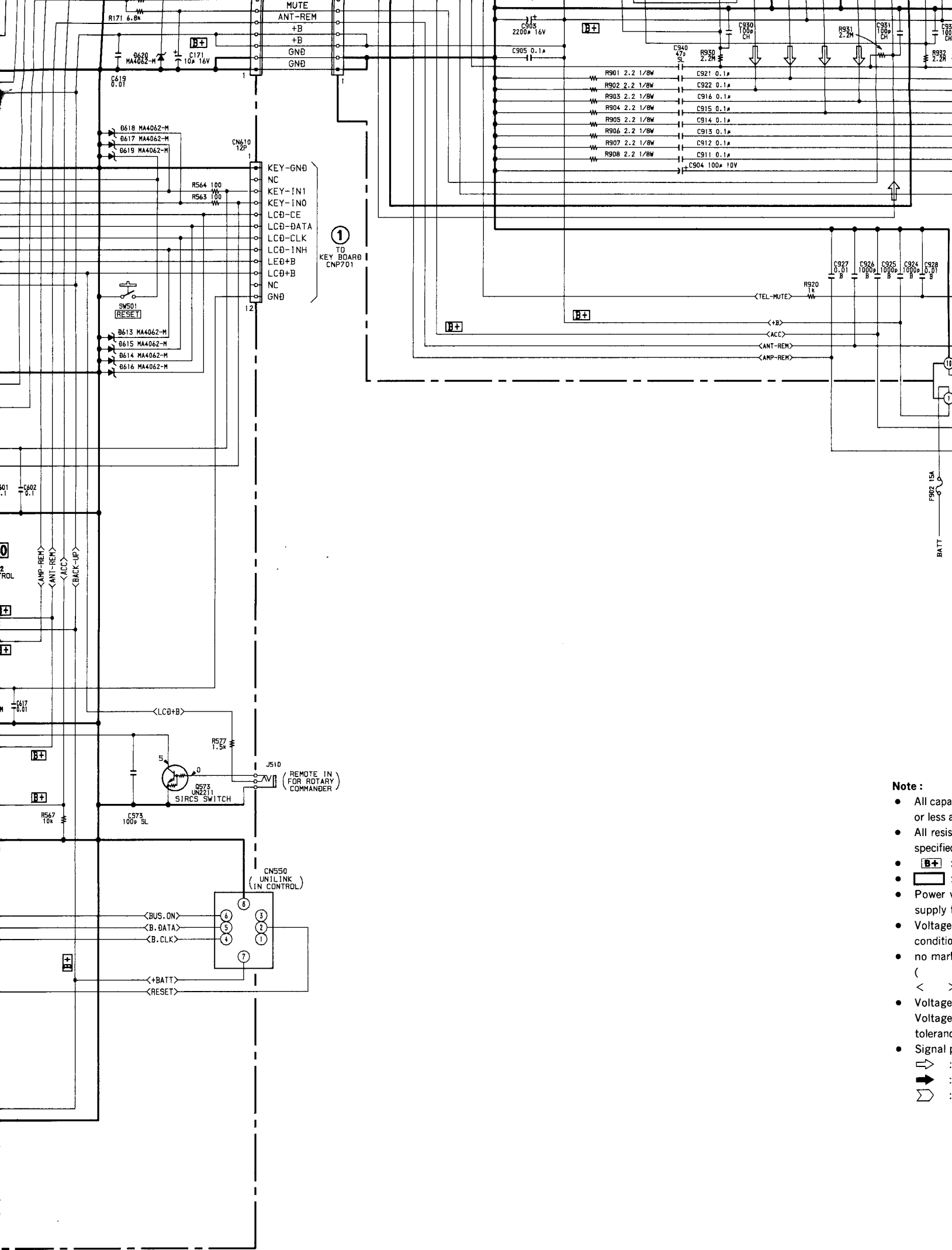


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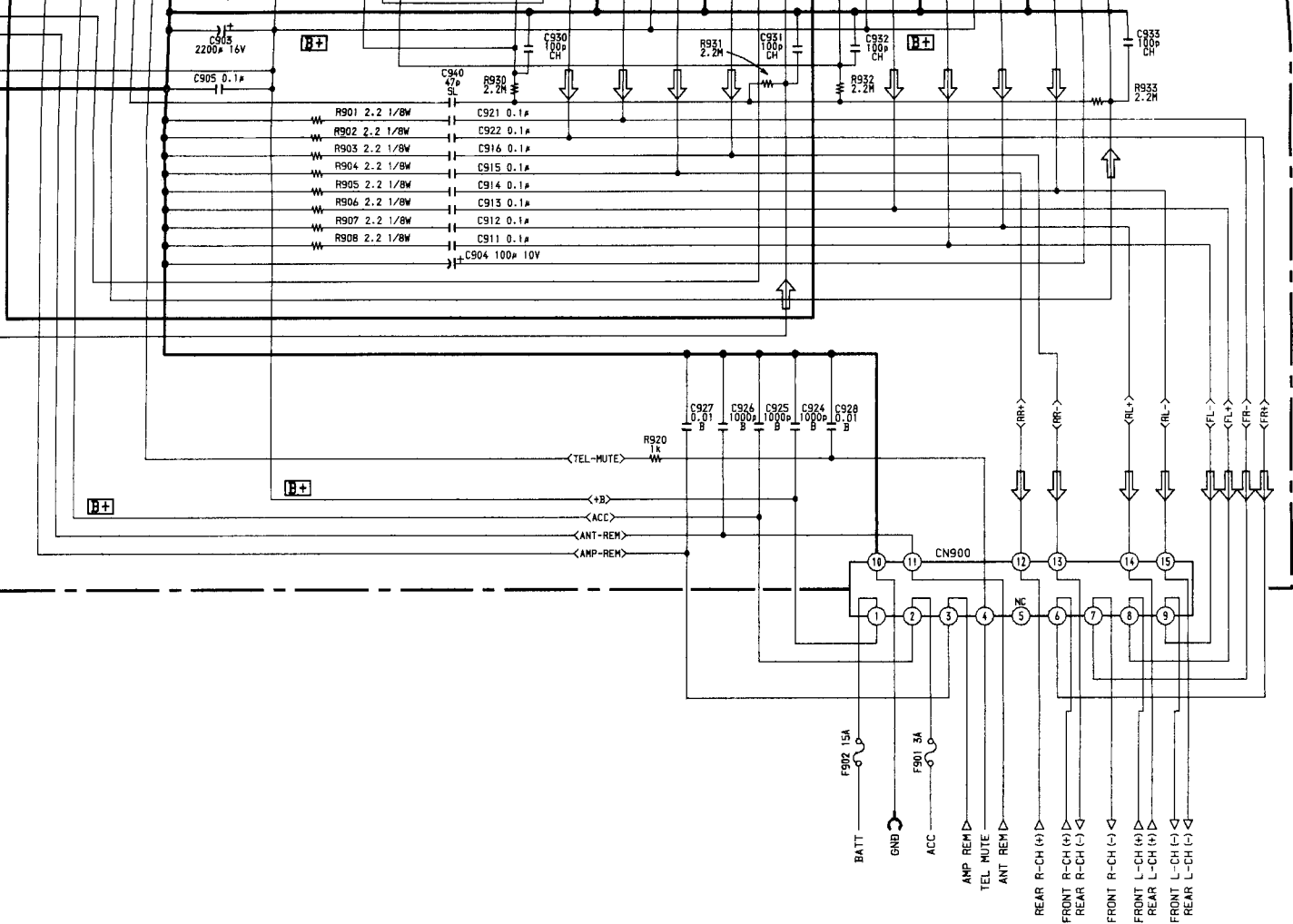






Note :

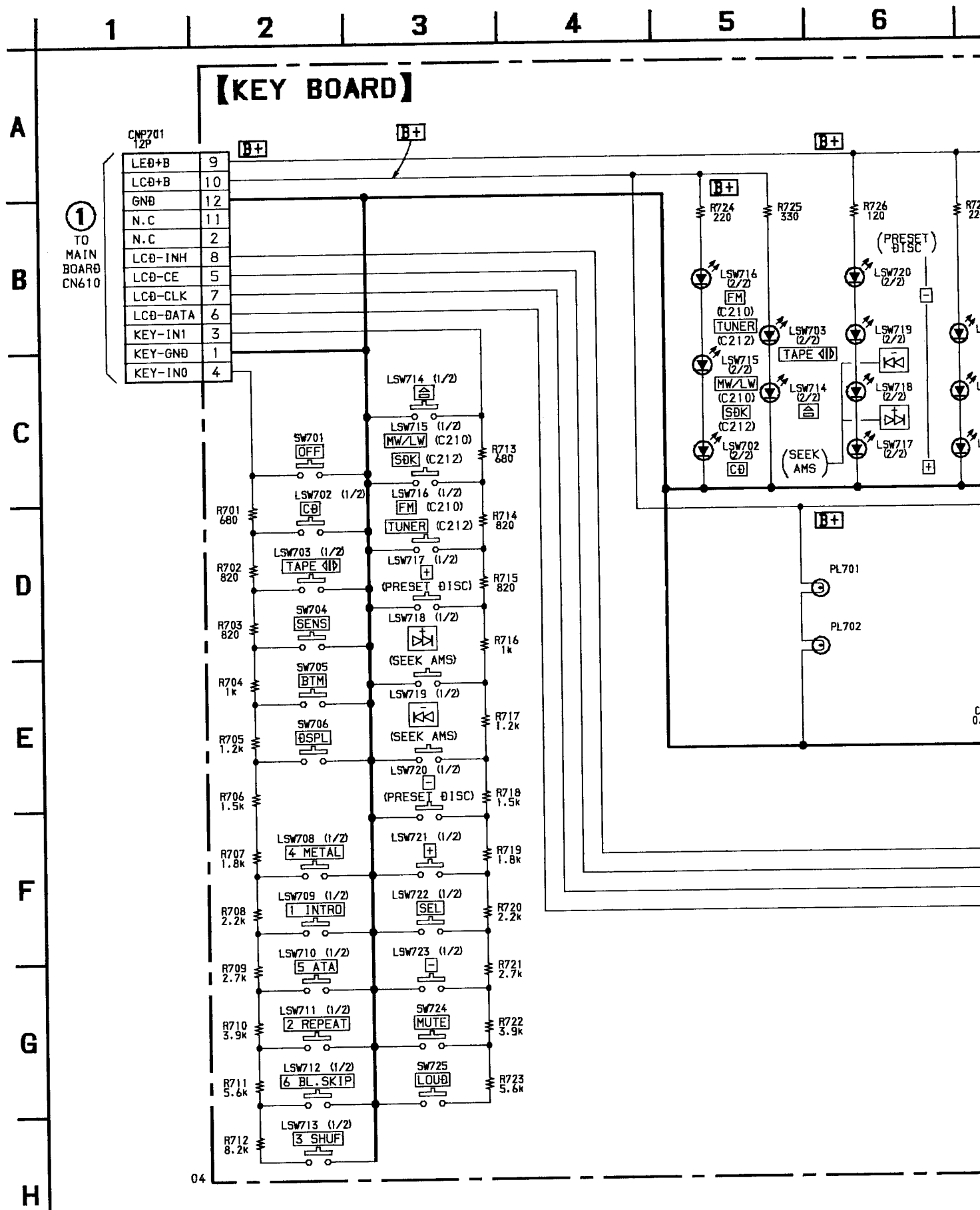
- All capacitors are 0.1μF or less unless otherwise specified.
- All resistors are 1% tolerance unless otherwise specified.
- **B+** : Power supply voltage.
- **B-** : Voltage condition.
- **B0** : no mark.
- **B1** : ()
- **B2** : < >
- **B3** : Voltage tolerance.
- **B4** : Voltage tolerance.
- **B5** : Signal path.
- **B6** : Signal path.
- **B7** : Signal path.
- **B8** : Signal path.
- **B9** : Signal path.
- **B10** : Signal path.
- **B11** : Signal path.
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- **B96** : Signal path.
- **B97** : Signal path.
- **B98** : Signal path.
- **B99** : Signal path.
- **B100** : Signal path.

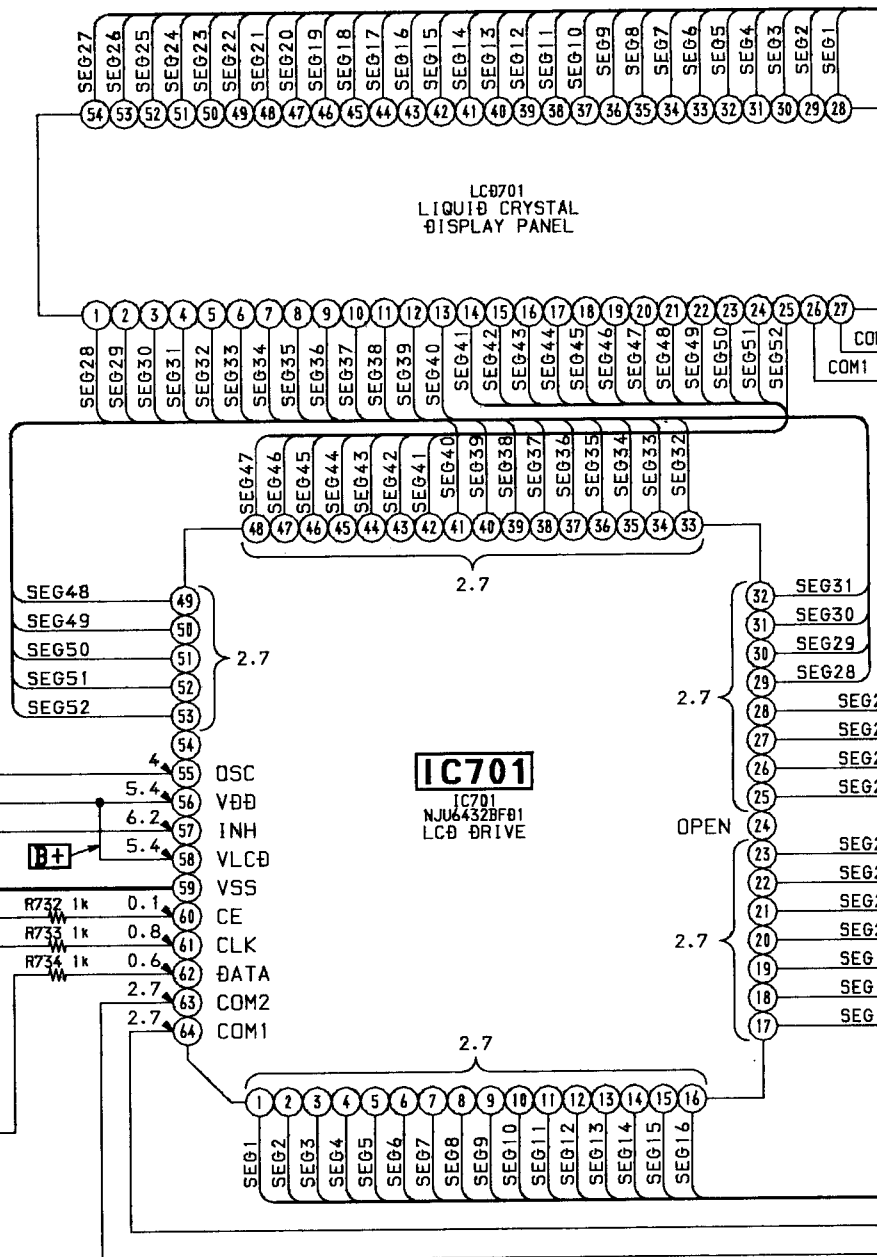
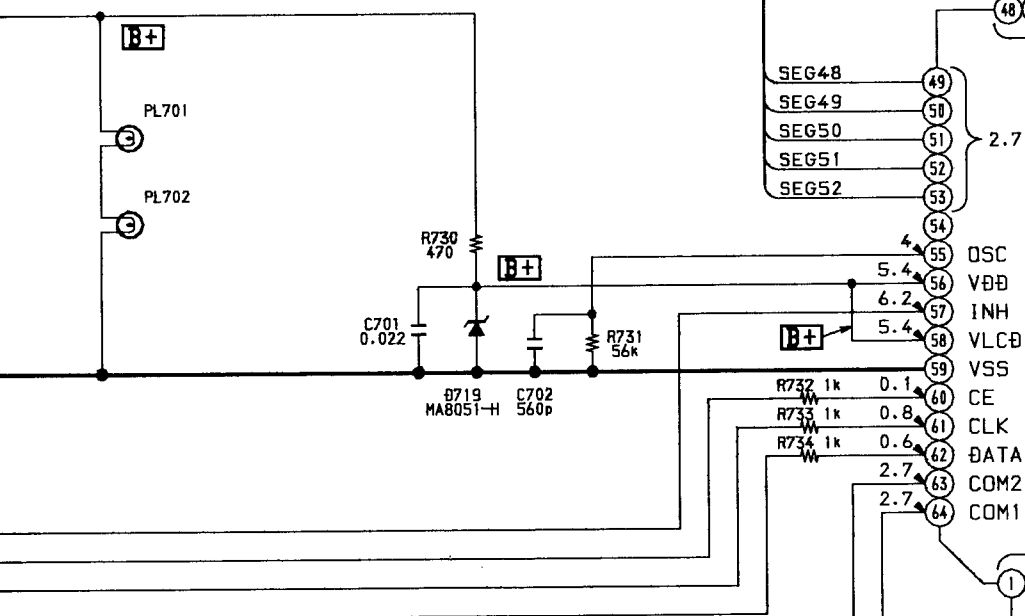
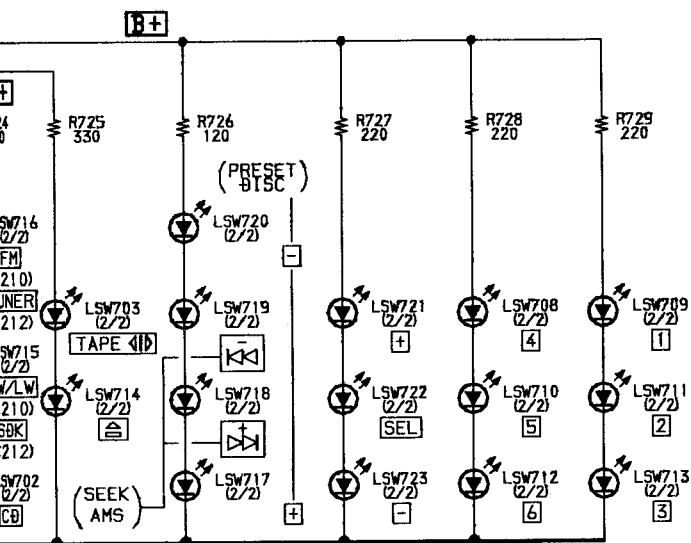


Note :

- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- **B+** : B+ Line
- **adjustment for repair.**
- Power voltage is dc 14.4V and fed with regulated dc power supply from BATT and ACC terminals.
- Voltage is dc with respect to ground under no-signal (detuned) conditions.
- no mark: FM
() : MW
< : PB
- Voltages are taken with a VOM (Input Impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Signal path.
 ⇨ : FM
 ⇨ : MW
 ⇨ : PB

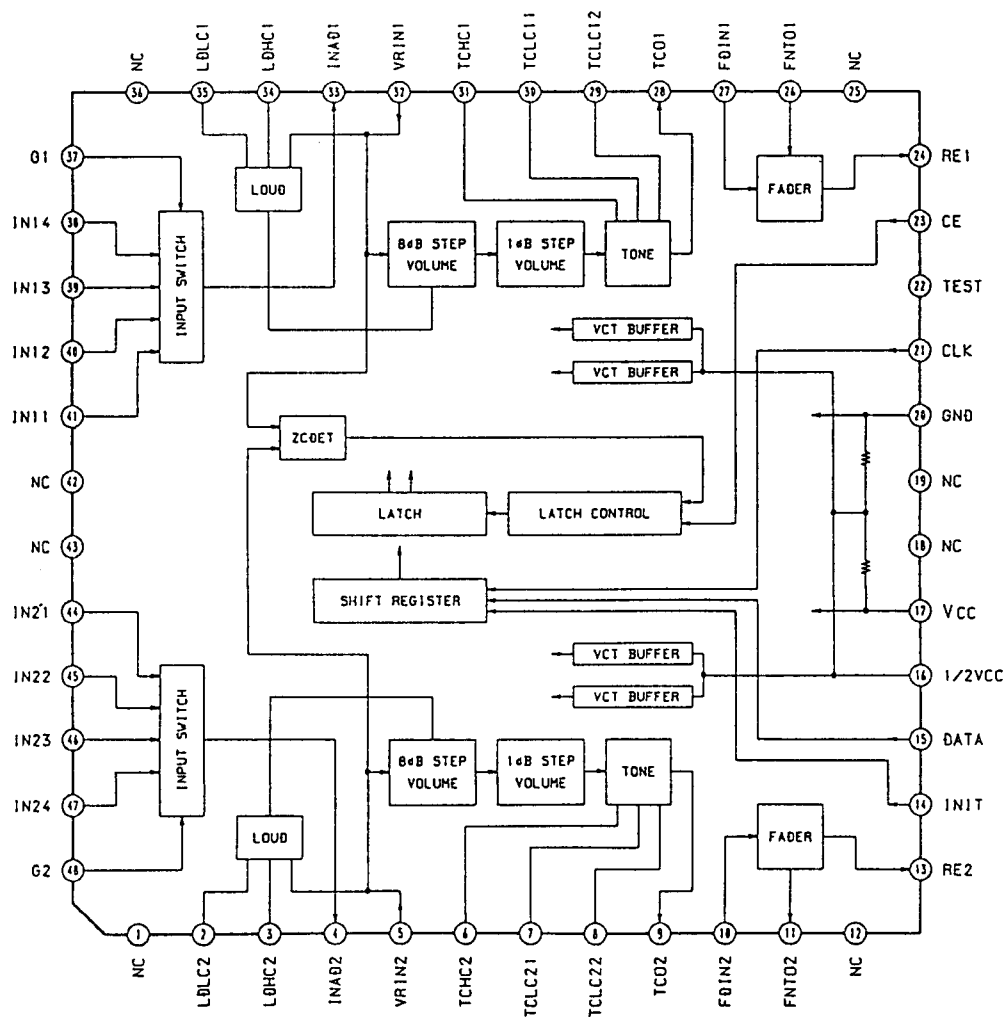
5-7. SCHEMATIC DIAGRAM—PANEL SECTION—



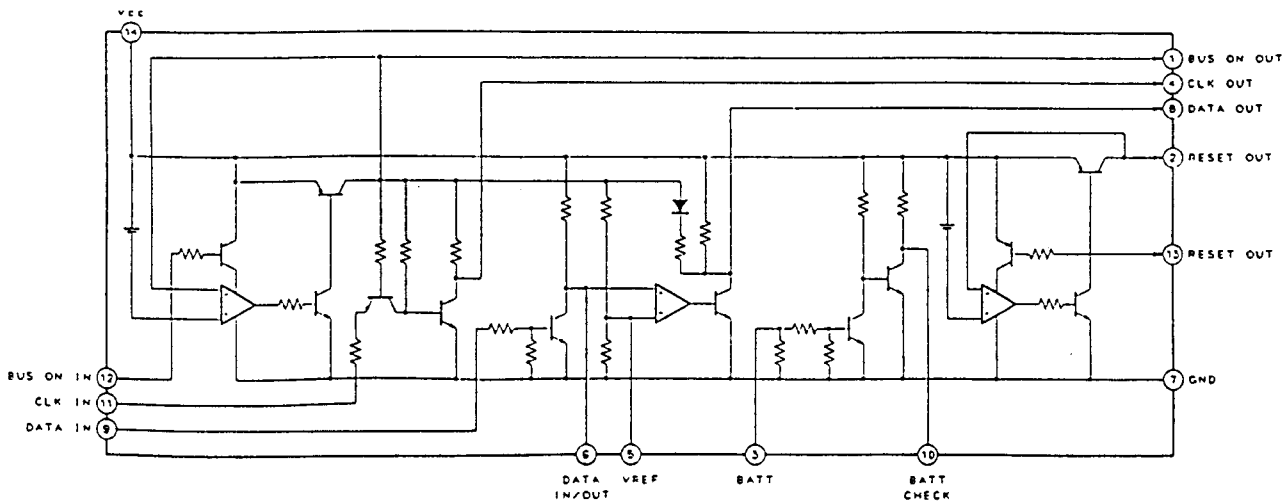


• IC Block Diagrams

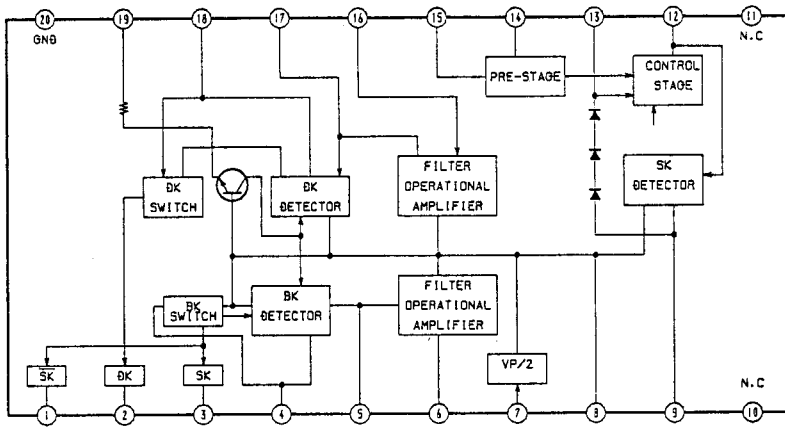
IC150 CXA1646Q



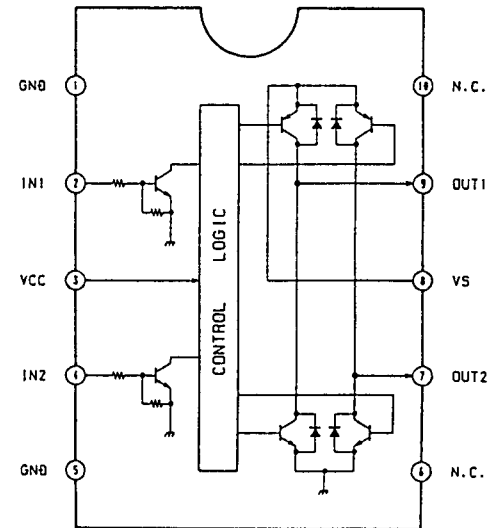
IC550 MM1175XFF



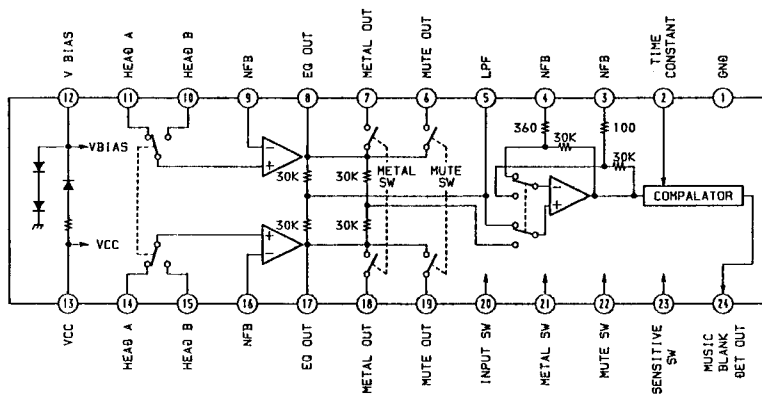
IC11 TDA1581T



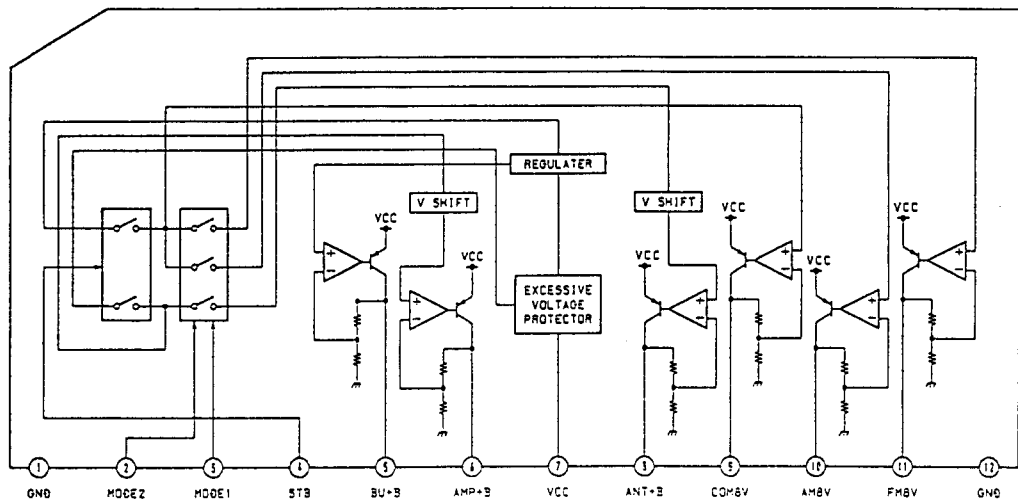
IC352 LB1638M



IC350 BA3430FS

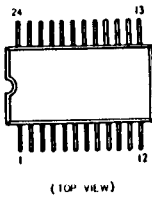


IC610 BA3910B-V2

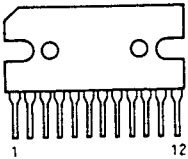


5-8. SEMICONDUCTOR LEAD LAYOUTS

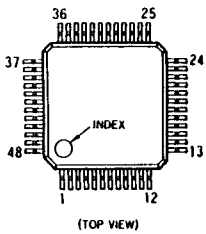
BA3430FS



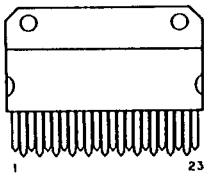
BA3910B-V2



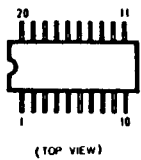
**CXA1646Q
NJU6432BFD1**



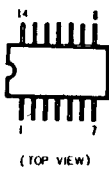
HA13151A



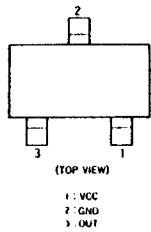
**LC7216M
TDA1581T-T**



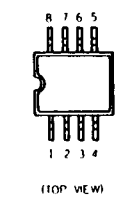
MM1175XFF



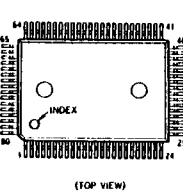
PST600EMT-T1



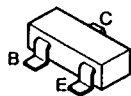
μPC4558G2



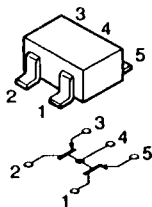
**μPD75518GF-219
-3B9**



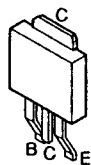
**DTC314TKH04
UN2111
UN2211
2SC2712-YG**



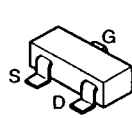
XN1A312-TX



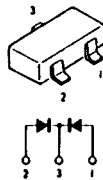
2SD1802-S



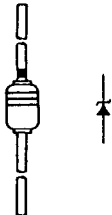
2SK1657-T1B



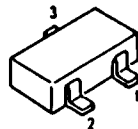
**MA152WA
1SS184**



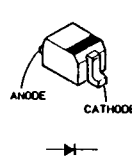
**MA4039-M (QZ)
MA4056-M (QZ)
MA4062-M (QZ)
MA4068-L (QZ)
MA4075-M (QZ)
MA4091-H (QZ)
MA4110-M (QZ)**



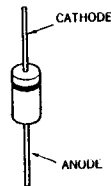
MA721WK-(TX)



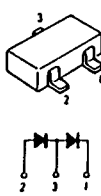
MA8051-H



1N5404TU



1SS226



NOTE:

- The mechanical number supplied by the manufacturer is not always the same as the number shown in the drawing. Some details may differ when ordered.

6-1. CH

Refer

Ref. No.

* 1
2
* 3
* 3
* 4

* 5
* 6
* 7
8
9

SECTION 7 ELECTRICAL PARTS LIST

AMPLIFIER
KEY

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, u: μ , for example:
uA.: μ A.. uPA.: μ PA..
uPB.: μ PB.. uPC.: μ PC.. uPD.: μ PD..
- CAPACITORS
uF: μ F
- COILS
uH: μ H

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	A-3298-255-A	AMPLIFIER BOARD, COMPLETE *****				< IC >	
				IC901	8-759-279-87	IC HA13151A	
*	3-916-377-01	HEAT SINK				< RESISTOR >	
	7-685-134-19	SCREW +P 2.6X8 TYPE2 NON-SLIT					
	7-621-770-67	SCREW +PTT 2.6X6 (S)					
	7-621-770-XX	SCREW +PTT 2.6X8 (S)					
		< CAPACITOR >					
C903	1-126-768-11	ELECT	2200uF 20% 16V	R901-908			
C904	1-124-584-00	ELECT	100uF 20% 10V	1-216-134-00	METAL CHIP	2.2 5% 1/8W	
C905	1-130-495-71	MYLAR	0.1uF 5% 50V	R911	1-216-049-00	METAL CHIP	1K 5% 1/10W
C910	1-126-163-11	ELECT	4.7uF 20% 50V	R912	1-216-049-00	METAL CHIP	1K 5% 1/10W
C911-916				R920	1-216-049-00	METAL CHIP	1K 5% 1/10W
	1-130-495-71	MYLAR	0.1uF 5% 50V	R921	1-216-073-00	METAL CHIP	10K 5% 1/10W
C920	1-126-163-11	ELECT	4.7uF 20% 50V	R922	1-216-073-00	METAL CHIP	10K 5% 1/10W
C921	1-130-495-71	MYLAR	0.1uF 5% 50V	R930-933			
C922	1-130-495-71	MYLAR	0.1uF 5% 50V	1-216-129-00	METAL CHIP	2.2M 5% 1/10W	
C924-926				*****			
	1-163-275-11	CERAMIC CHIP	0.001uF 5% 50V	*	A-3298-259-A	KEY BOARD, COMPLETE (AMBER)	
C927	1-164-232-11	CERAMIC CHIP	0.01uF 10% 100V	*	A-3298-261-A	KEY BOARD, COMPLETE (GREEN)	
C928	1-164-232-11	CERAMIC CHIP	0.01uF 10% 100V			*****	
C930-933				*	3-389-673-01	PLATE (M:LCD), LIGHT GUIDE	
	1-163-251-11	CERAMIC CHIP	100PF 5% 50V	*	3-913-756-01	HOLDER (LCD)	
C940	1-163-109-00	CERAMIC CHIP	47PF 5% 50V	*	3-917-297-01	REFLECTOR, SHEET	
		< CONNECTOR >				< CAPACITOR >	
CN900	1-764-426-21	PLUG, CONNECTOR 15P		C701	1-163-037-11	CERAMIC CHIP	0.022uF 10% 25V
* CN901	1-563-464-11	SOCKET, CONNECTOR 10P		C702	1-163-006-11	CERAMIC CHIP	560PF 10% 50V
CN902	1-573-122-11	SOCKET, CONNECTOR 12P				< CONNECTOR >	
CN903	1-766-453-11	JACK, PIN 4P (UNILINK IN AUDIO/LINE OUT)		CNP701	1-764-423-11	PIN, CONNECTOR 12P	
		< DIODE >				< DIODE >	
D901	8-719-049-38	DIODE 1N5404TU		D719	8-719-422-43	DIODE MA8051-H	
						< IC >	
				IC701	8-759-279-54	IC NJU6432BFD1	
						< LIQUID CRYSTAL DISPLAY >	
				LCD701	1-810-570-11	DISPLAY PANEL, LIQUID CRYSTAL	

KEY

Ref. No.	Part No.	Description	Remark
< SWITCH >			
LSW702	1-762-141-11	SWITCH, KEY BOARD (WITH LED) (CD) (AMBER)	
LSW702	1-762-142-11	SWITCH, KEY BOARD (WITH LED) (CD) (GREEN)	
LSW703	1-762-141-11	SWITCH, KEY BOARD (WITH LED) (TAPE <I>) (AMBER)	
LSW703	1-762-142-11	SWITCH, KEY BOARD (WITH LED) (TAPE <I>) (GREEN)	
LSW708	1-762-141-11	SWITCH, KEY BOARD (WITH LED) (4 METAL) (AMBER)	
LSW708	1-762-142-11	SWITCH, KEY BOARD (WITH LED) (4 METAL) (GREEN)	
LSW709	1-762-141-11	SWITCH, KEY BOARD (WITH LED) (1 INTRO) (AMBER)	
LSW709	1-762-142-11	SWITCH, KEY BOARD (WITH LED) (1 INTRO) (GREEN)	
LSW710	1-762-141-11	SWITCH, KEY BOARD (WITH LED) (5 ATA) (AMBER)	
LSW710	1-762-142-11	SWITCH, KEY BOARD (WITH LED) (5 ATA) (GREEN)	
LSW711	1-762-141-11	SWITCH, KEY BOARD (WITH LED) (2 REPEAT) (AMBER)	
LSW711	1-762-142-11	SWITCH, KEY BOARD (WITH LED) (2 REPEAT) (GREEN)	
LSW712	1-762-141-11	SWITCH, KEY BOARD (WITH LED) (6 BL. SKIP) (AMBER)	
LSW712	1-762-142-11	SWITCH, KEY BOARD (WITH LED) (6 BL. SKIP) (GREEN)	
LSW713	1-762-141-11	SWITCH, KEY BOARD (WITH LED) (3 SHUF) (AMBER)	
LSW713	1-762-142-11	SWITCH, KEY BOARD (WITH LED) (3 SHUF) (GREEN)	
LSW714	1-762-141-11	SWITCH, KEY BOARD (WITH LED) (△) (AMBER)	
LSW714	1-762-142-11	SWITCH, KEY BOARD (WITH LED) (△) (GREEN)	
LSW715	1-762-141-11	SWITCH, KEY BOARD (WITH LED) (SDK) (C212)	
LSW715	1-762-141-11	SWITCH, KEY BOARD (WITH LED) (MW/LW) (C210:AMBER)	
LSW715	1-762-142-11	SWITCH, KEY BOARD (WITH LED) (MW/LW) (C210:GREEN)	
LSW716	1-762-141-11	SWITCH, KEY BOARD (WITH LED) (TUNER) (C212)	
LSW716	1-762-141-11	SWITCH, KEY BOARD (WITH LED) (FM) (C210:AMBER)	
LSW716	1-762-142-11	SWITCH, KEY BOARD (WITH LED) (FM) (C210:GREEN)	
LSW717	1-762-141-11	SWITCH, KEY BOARD (WITH LED) (+ (PRESET DISC)) (AMBER)	

Ref. No.	Part No.	Description	Remark
LSW717	1-762-142-11	SWITCH, KEY BOARD (WITH LED) (+ (PRESET DISC)) (GREEN)	
LSW718	1-762-141-11	SWITCH, KEY BOARD (WITH LED) (+ <D> (SEEK AMS)) (AMBER)	
LSW718	1-762-142-11	SWITCH, KEY BOARD (WITH LED) (+ <D> (SEEK AMS)) (GREEN)	
LSW719	1-762-141-11	SWITCH, KEY BOARD (WITH LED) (- <K> (SEEK AMS)) (AMBER)	
LSW719	1-762-142-11	SWITCH, KEY BOARD (WITH LED) (- <K> (SEEK AMS)) (GREEN)	
LSW720	1-762-141-11	SWITCH, KEY BOARD (WITH LED) (- (PRESET DISC)) (AMBER)	
LSW720	1-762-142-11	SWITCH, KEY BOARD (WITH LED) (- (PRESET DISC)) (GREEN)	
LSW721	1-762-141-11	SWITCH, KEY BOARD (WITH LED) (+) (AMBER)	
LSW721	1-762-142-11	SWITCH, KEY BOARD (WITH LED) (+) (GREEN)	
LSW722	1-762-141-11	SWITCH, KEY BOARD (WITH LED) (SEL) (AMBER)	
LSW722	1-762-142-11	SWITCH, KEY BOARD (WITH LED) (SEL) (GREEN)	
LSW723	1-762-141-11	SWITCH, KEY BOARD (WITH LED) (-) (AMBER)	
LSW723	1-762-142-11	SWITCH, KEY BOARD (WITH LED) (-) (GREEN)	

< PILOT LAMP >

PL701	1-517-165-21	LAMP, PILOT (AMBER)
PL701	1-517-166-21	LAMP, PILOT (GREEN)
PL702	1-517-165-21	LAMP, PILOT (AMBER)
PL702	1-517-166-21	LAMP, PILOT (GREEN)

< RESISTOR >

R701	1-216-045-00	METAL CHIP	680	5%	1/10W
R702	1-216-047-00	METAL CHIP	820	5%	1/10W
R703	1-216-047-00	METAL CHIP	820	5%	1/10W
R704	1-216-049-00	METAL CHIP	1K	5%	1/10W
R705	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R706	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R707	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R708	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R709	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R710	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R711	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R712	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R713	1-216-045-00	METAL CHIP	680	5%	1/10W
R714	1-216-047-00	METAL CHIP	820	5%	1/10W
R715	1-216-047-00	METAL CHIP	820	5%	1/10W
R716	1-216-049-00	METAL CHIP	1K	5%	1/10W
R717	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R718	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R719	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R720	1-216-057-00	METAL CHIP	2.2K	5%	1/10W

Ref. No.	Part No.	Description	Remark		
R721	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R722	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R723	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R724	1-216-033-00	METAL CHIP	220	5%	1/10W
R725	1-216-037-00	METAL CHIP	330	5%	1/10W
R726	1-216-027-00	METAL CHIP	120	5%	1/10W
R727-729					
	1-216-033-00	METAL CHIP	220	5%	1/10W
R730	1-216-041-00	METAL CHIP	470	5%	1/10W
R731	1-216-091-00	METAL CHIP	56K	5%	1/10W
R732-734					
	1-216-049-00	METAL CHIP	1K	5%	1/10W
< SWITCH >					
SW701	1-692-037-31	SWITCH, KEY BOARD (OFF)			
SW704	1-692-037-31	SWITCH, KEY BOARD (SENS)			
SW705	1-692-037-31	SWITCH, KEY BOARD (BTM)			
SW706	1-692-037-31	SWITCH, KEY BOARD (DSPL)			
SW724	1-692-037-31	SWITCH, KEY BOARD (MUTE)			
SW725	1-692-037-31	SWITCH, KEY BOARD (LOUD)			

*	A-3298-253-A	MAIN BOARD, COMPLETE (C212)			
*	A-3298-257-A	MAIN BOARD, COMPLETE (C210)			

< CAPACITOR >					
C9	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C10-12					
	1-124-584-00	ELECT	100uF	20%	10V
C13	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C14	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C15-18					
	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C19	1-136-169-00	FILM	0.22uF	5%	50V
C20	1-130-479-00	MYLAR	0.0047uF	5%	50V
C21	1-124-584-00	ELECT	100uF	20%	10V
C22	1-126-157-11	ELECT	10uF	20%	16V
C23	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C24	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C25	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C26	1-130-477-00	MYLAR	0.0033uF	5%	50V
	(C212)				
C27	1-136-495-11	FILM	0.068uF	5%	50V
	(C212)				
C28	1-136-495-11	FILM	0.068uF	5%	50V
	(C212)				
C29	1-163-038-00	CERAMIC CHIP	0.1uF		25V
	(C212)				
C30	1-163-038-00	CERAMIC CHIP	0.1uF		25V
	(C212)				

Ref. No.	Part No.	Description	Remark		
C31	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
	(C212)				
C32	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
	(C212)				
C33	1-124-229-00	ELECT	33uF	20%	10V
	(C212)				
C34	1-163-033-00	CERAMIC CHIP	0.022uF		50V
	(C212)				
C35	1-164-222-11	CERAMIC CHIP	0.22uF		25V
	(C212)				
C36	1-163-038-00	CERAMIC CHIP	0.1uF		25V
	(C212)				
C37	1-126-163-11	ELECT	4.7uF	20%	50V
	(C212)				
C39	1-136-495-11	FILM	0.068uF	5%	50V
C40	1-162-841-11	ELECT	0.015uF	10%	16V
C41	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
	(C212)				
C51	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
C52	1-124-257-00	ELECT	2.2uF	20%	50V
C53	1-126-157-11	ELECT	10uF	20%	16V
C54	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C56	1-124-257-00	ELECT	2.2uF	20%	50V
C61	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
C62	1-124-257-00	ELECT	2.2uF	20%	50V
C63	1-126-157-11	ELECT	10uF	20%	16V
C64	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C66	1-124-257-00	ELECT	2.2uF	20%	50V
C110	1-126-157-11	ELECT	10uF	20%	16V
C111	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C112	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C113	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C114	1-126-157-11	ELECT	10uF	20%	16V
C115	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C116	1-126-157-11	ELECT	10uF	20%	16V
C120	1-126-044-11	ELECT	1uF	20%	50V
C130	1-126-044-11	ELECT	1uF	20%	50V
C150	1-124-584-00	ELECT	100uF	20%	10V
C151	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C152	1-124-234-00	ELECT	22uF	20%	16V
C153	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C154	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C170	1-124-589-11	ELECT	47uF	20%	16V
C171	1-126-157-11	ELECT	10uF	20%	16V
C172	1-126-301-11	ELECT	1uF	20%	50V
C210	1-126-157-11	ELECT	10uF	20%	16V
C211	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C212	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C213	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C214	1-126-157-11	ELECT	10uF	20%	16V

MAIN

Ref. No.	Part No.	Description	Remark
C215	1-164-222-11	CERAMIC CHIP 0.22uF	25V
C216	1-126-157-11	ELECT 10uF	20% 16V
C220	1-126-044-11	ELECT 1uF	20% 50V
C230	1-126-044-11	ELECT 1uF	20% 50V
C305	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C306	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C310	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C311	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C312	1-124-589-11	ELECT 47uF	20% 16V
C313	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C315	1-126-157-11	ELECT 10uF	20% 16V
C318	1-126-157-11	ELECT 10uF	20% 16V
C321	1-126-163-11	ELECT 4.7uF	20% 50V
C350	1-126-935-11	ELECT 470uF	20% 16V
C351	1-124-234-00	ELECT 22uF	20% 16V
C352	1-126-157-11	ELECT 10uF	20% 16V
C353	1-164-222-11	CERAMIC CHIP 0.22uF	25V
C354	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C355	1-124-584-00	ELECT 100uF	20% 10V
C356	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C357	1-126-157-11	ELECT 10uF	20% 16V
C358	1-126-157-11	ELECT 10uF	20% 16V
C359	1-124-464-11	ELECT 0.22uF	20% 50V
C360	1-126-157-11	ELECT 10uF	20% 16V
C371	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C372	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C405	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C406	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C410	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C411	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C412	1-124-589-11	ELECT 47uF	20% 16V
C413	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C414-416	1-126-157-11	ELECT 10uF	20% 16V
C418	1-126-157-11	ELECT 10uF	20% 16V
C421	1-126-163-11	ELECT 4.7uF	20% 50V
C510	1-163-229-11	CERAMIC CHIP 12PF	5% 50V
C511	1-163-229-11	CERAMIC CHIP 12PF	5% 50V
C512	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C513	1-126-157-11	ELECT 10uF	20% 16V
C549	1-163-116-00	CERAMIC CHIP 91PF	5% 50V
C550	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C551	1-126-163-11	ELECT 4.7uF	20% 50V
C552	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C553	1-124-234-00	ELECT 22uF	20% 16V
C554	1-124-584-00	ELECT 100uF	20% 10V
C555	1-125-701-11	DOUBLE LAYER 0.047F	5.5V
C556	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C573	1-163-117-00	CERAMIC CHIP 100PF	5% 50V

Ref. No.	Part No.	Description	Remark
C600	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C601	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C602	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C610	1-126-157-11	ELECT 10uF	20% 16V
C611	1-124-234-00	ELECT 22uF	20% 16V
C612	1-104-940-11	ELECT 10uF	20% 25V
C613	1-124-589-11	ELECT 47uF	20% 16V
C614	1-124-589-11	ELECT 47uF	20% 16V
C615	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C616	1-163-033-00	CERAMIC CHIP 0.022uF	50V
C617	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C618	1-162-294-31	CERAMIC CHIP 0.001uF	10% 50V
C619	1-164-232-11	CERAMIC CHIP 0.01uF	10% 100V

< CONNECTOR >

* CN301	1-506-981-11	PIN, CONNECTOR 10P
CN302	1-573-121-11	PIN, CONNECTOR 12P
CN350	1-766-260-11	CONNECTOR, FFC/FPC (ZIF) 7P
* CN351	1-506-995-11	PIN, CONNECTOR (PC BOARD) 13P
CN550	1-580-907-31	PLUG, CONNECTOR (UNILINK IN CONTROL)
CN610	1-764-422-11	PLUG, CONNECTOR 12P

< DIODE >

D10	8-719-040-04	DIODE MA721WK-(TX)
D12	8-719-034-63	DIODE MA4091-H(QZ)
D14	8-719-800-76	DIODE 1SS226 (C212)
D149	8-719-800-76	DIODE 1SS226
D170	8-719-800-76	DIODE 1SS226
D171	8-719-034-22	DIODE MA4039-M(QZ)
D350	8-719-800-76	DIODE 1SS226
D351	8-719-034-63	DIODE MA4091-H(QZ)
D352	8-719-800-76	DIODE 1SS226
D510	8-719-800-76	DIODE 1SS226
D550	8-719-034-46	DIODE MA4062-M(QZ)
D551	8-719-034-46	DIODE MA4062-M(QZ)
D552	8-719-034-46	DIODE MA4062-M(QZ)
D553	8-719-034-49	DIODE MA4068-L(QZ)
D554	8-719-801-78	DIODE 1SS184
D556	8-719-034-54	DIODE MA4075-M(QZ)
D558	8-719-034-42	DIODE MA4056-M(QZ)
D560	8-719-400-20	DIODE MA152WA
D562	8-719-400-20	DIODE MA152WA
D563	8-719-800-76	DIODE 1SS226
D609	8-719-034-46	DIODE MA4062-M(QZ)
D610	8-719-034-70	DIODE MA4110-M(QZ)
D613	8-719-034-46	DIODE MA4062-M(QZ)
D614	8-719-034-46	DIODE MA4062-M(QZ)
D615	8-719-034-46	DIODE MA4062-M(QZ)

Ref. No.	Part No.	Description	Remark
D616	8-719-034-46	DIODE MA4062-M(QZ)	
D617	8-719-034-46	DIODE MA4062-M(QZ)	
D618	8-719-034-46	DIODE MA4062-M(QZ)	
D619	8-719-034-46	DIODE MA4062-M(QZ)	
D620	8-719-034-46	DIODE MA4062-M(QZ)	
< FERRITE BEAD >			
FB10	1-414-233-21	INDUCTOR, FERRITE BEAD	
FB11	1-414-233-21	INDUCTOR, FERRITE BEAD	
< IC >			
IC10	8-759-823-81	IC LC7216M	
IC11	8-759-274-75	IC TDA1581T-T (C212)	
IC12	8-759-100-96	IC uPC4558G2	
IC150	8-752-063-44	IC CXA1646Q	
IC350	8-759-988-33	IC BA3430FS	
IC351	8-759-100-96	IC uPC4558G2	
IC352	8-759-823-87	IC LB1638M	
IC510	8-759-284-01	IC uPD75518GF-219-3B9	
IC512	8-759-167-83	IC PST600EMT-T1	
IC550	8-759-096-16	IC MM1175XFF	
IC610	8-759-182-75	IC BA3910B-V2	
< JACK >			
J10	1-764-808-12	JACK (ANT) (ANTENNA)	
J510	1-566-822-11	JACK (REMOTE IN FOR ROTARY COMMANDER)	
< COIL >			
L10	1-410-509-61	INDUCTOR 10uH	
L11	1-409-748-11	COIL (FILTER) (C212)	
L510	1-410-509-61	INDUCTOR 10uH	
< TRANSISTOR >			
Q10	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q11	8-729-424-08	TRANSISTOR UN2111	
Q12	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q13	8-729-021-94	TRANSISTOR 2SK1657-T1B	
Q120	8-729-920-21	TRANSISTOR DTC314TKH04	
Q130	8-729-920-21	TRANSISTOR DTC314TKH04	
Q170	8-729-421-22	TRANSISTOR UN2211	
Q171	8-729-424-08	TRANSISTOR UN2111	
Q220	8-729-920-21	TRANSISTOR DTC314TKH04	
Q230	8-729-920-21	TRANSISTOR DTC314TKH04	
Q350	8-729-421-22	TRANSISTOR UN2211	
Q351	8-729-106-60	TRANSISTOR 2SB1115A-YQ	
Q352	8-729-421-22	TRANSISTOR UN2211	
Q353	8-729-424-08	TRANSISTOR UN2111	
Q354	8-729-807-12	TRANSISTOR 2SD1802-S	

Ref. No.	Part No.	Description	Remark
Q555	8-729-807-12	TRANSISTOR 2SD1802-S	
Q556	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q559	8-729-424-08	TRANSISTOR UN2111	
Q560	8-729-424-08	TRANSISTOR UN2111	
Q573	8-729-421-22	TRANSISTOR UN2211	
Q610	8-729-421-22	TRANSISTOR UN2211	
Q611	8-729-106-60	TRANSISTOR 2SB1115A-YQ	
Q612	8-729-807-12	TRANSISTOR 2SD1802-S	
Q613	8-729-807-12	TRANSISTOR 2SD1802-S	
Q614	8-729-020-67	TRANSISTOR XN1A312-TX	
< RESISTOR >			
R9	1-216-037-00	METAL CHIP 330 5%	1/10W
R10	1-216-049-00	METAL CHIP 1K 5%	1/10W
R11	1-216-073-00	METAL CHIP 10K 5%	1/10W
R12	1-216-061-00	METAL CHIP 3.3K 5%	1/10W
R13	1-216-073-00	METAL CHIP 10K 5%	1/10W
R14	1-216-061-00	METAL CHIP 3.3K 5%	1/10W
R15	1-216-073-00	METAL CHIP 10K 5%	1/10W
R16	1-216-049-00	METAL CHIP 1K 5%	1/10W
R17	1-216-049-00	METAL CHIP 1K 5%	1/10W
R18	1-216-061-00	METAL CHIP 3.3K 5%	1/10W
R19	1-216-057-00	METAL CHIP 2.2K 5%	1/10W
R20	1-216-093-00	METAL CHIP 68K 5%	1/10W (C212)
R21	1-216-089-00	METAL CHIP 47K 5%	1/10W (C212)
R22	1-216-065-00	METAL CHIP 4.7K 5%	1/10W (C212)
R23	1-216-097-00	METAL CHIP 100K 5%	1/10W (C212)
R24	1-216-033-00	METAL CHIP 220 5%	1/10W (C212)
R25	1-216-117-00	METAL CHIP 680K 5%	1/10W (C212)
R26	1-216-105-00	METAL CHIP 220K 5%	1/10W (C212)
R27	1-216-065-00	METAL CHIP 4.7K 5%	1/10W (C212)
R28	1-216-067-00	METAL CHIP 5.6K 5%	1/10W (C212)
R29	1-216-065-00	METAL CHIP 4.7K 5%	1/10W (C212)
R30	1-216-067-00	METAL CHIP 5.6K 5%	1/10W (C212)
R31	1-216-116-00	METAL CHIP 620K 5%	1/10W (C212)
R32	1-216-089-00	METAL CHIP 47K 5%	1/10W (C212)
R33	1-216-017-00	METAL CHIP 47 5%	1/10W (C212)
R34	1-216-085-00	METAL CHIP 33K 5%	1/10W (C212)
R35	1-216-067-00	METAL CHIP 5.6K 5%	1/10W
R36	1-216-069-00	METAL CHIP 6.8K 5%	1/10W
R51	1-216-089-00	METAL CHIP 47K 5%	1/10W
R52	1-216-089-00	METAL CHIP 47K 5%	1/10W
R55	1-216-049-00	METAL CHIP 1K 5%	1/10W (C210)
R55	1-216-067-00	METAL CHIP 5.6K 5%	1/10W (C212)
R56	1-216-073-00	METAL CHIP 10K 5%	1/10W
R61	1-216-089-00	METAL CHIP 47K 5%	1/10W
R62	1-216-089-00	METAL CHIP 47K 5%	1/10W
R65	1-216-049-00	METAL CHIP 1K 5%	1/10W (C210)
R65	1-216-067-00	METAL CHIP 5.6K 5%	1/10W (C212)

MAIN

Ref. No.	Part No.	Description	Remark		
R66	1-216-073-00	METAL CHIP	10K	5%	1/10W
R120	1-216-049-00	METAL CHIP	1K	5%	1/10W
R121	1-216-081-00	METAL CHIP	22K	5%	1/10W
R123	1-216-077-00	METAL CHIP	15K	5%	1/10W
R130	1-216-049-00	METAL CHIP	1K	5%	1/10W
R131	1-216-081-00	METAL CHIP	22K	5%	1/10W
R133	1-216-077-00	METAL CHIP	15K	5%	1/10W
R149	1-216-073-00	METAL CHIP	10K	5%	1/10W
R150	1-216-214-00	METAL GLAZE	4.7K	5%	1/8W
R151	1-216-214-00	METAL GLAZE	4.7K	5%	1/8W
R171	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R172	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R173	1-216-073-00	METAL CHIP	10K	5%	1/10W
R220	1-216-049-00	METAL CHIP	1K	5%	1/10W
R221	1-216-081-00	METAL CHIP	22K	5%	1/10W
R223	1-216-077-00	METAL CHIP	15K	5%	1/10W
R230	1-216-049-00	METAL CHIP	1K	5%	1/10W
R231	1-216-081-00	METAL CHIP	22K	5%	1/10W
R233	1-216-077-00	METAL CHIP	15K	5%	1/10W
R309	1-216-033-00	METAL CHIP	220	5%	1/10W
R312	1-216-079-00	METAL CHIP	18K	5%	1/10W
R313	1-216-077-00	METAL CHIP	15K	5%	1/10W
R314	1-216-109-00	METAL CHIP	330K	5%	1/10W
R317	1-216-089-00	METAL CHIP	47K	5%	1/10W
R319	1-216-073-00	METAL CHIP	10K	5%	1/10W
R350	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R351	1-216-073-00	METAL CHIP	10K	5%	1/10W
R353	1-216-049-00	METAL CHIP	1K	5%	1/10W
R355	1-216-150-00	METAL GLAZE	10	5%	1/8W
R356	1-216-029-00	METAL CHIP	150	5%	1/10W
R357	1-216-150-00	METAL GLAZE	10	5%	1/8W
R358	1-216-097-00	METAL CHIP	100K	5%	1/10W
R359	1-216-150-00	METAL GLAZE	10	5%	1/8W
R360	1-216-150-00	METAL GLAZE	10	5%	1/8W
R409	1-216-033-00	METAL CHIP	220	5%	1/10W
R410	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R412	1-216-079-00	METAL CHIP	18K	5%	1/10W
R413	1-216-077-00	METAL CHIP	15K	5%	1/10W
R414	1-216-109-00	METAL CHIP	330K	5%	1/10W
R415	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R416	1-216-081-00	METAL CHIP	22K	5%	1/10W
R417	1-216-089-00	METAL CHIP	47K	5%	1/10W
R419	1-216-073-00	METAL CHIP	10K	5%	1/10W
R500	1-216-073-00	METAL CHIP	10K	5%	1/10W
R504	1-216-081-00	METAL CHIP	2.2K	5%	1/10W
R505	1-216-097-00	METAL CHIP	100K	5%	1/10W
R506	1-216-097-00	METAL CHIP	100K	5%	1/10W
R507-509	1-216-057-00	METAL CHIP	2.2K	5%	1/10W

Ref. No.	Part No.	Description	Remark		
R510	1-216-089-00	METAL CHIP	47K	5%	1/10W
R513	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R514	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R515-521	1-216-097-00	METAL CHIP	100K	5%	1/10W
R524-526	1-216-097-00	METAL CHIP	100K	5%	1/10W
R529	1-216-097-00	METAL CHIP	100K	5%	1/10W (C210)
R530	1-216-097-00	METAL CHIP	100K	5%	1/10W (C212)
R531	1-216-097-00	METAL CHIP	100K	5%	1/10W
R533	1-216-089-00	METAL CHIP	47K	5%	1/10W
R535	1-216-073-00	METAL CHIP	10K	5%	1/10W
R536	1-216-073-00	METAL CHIP	10K	5%	1/10W
R550	1-216-025-00	METAL CHIP	100	5%	1/10W
R551	1-216-025-00	METAL CHIP	100	5%	1/10W
R552	1-216-073-00	METAL CHIP	10K	5%	1/10W
R553	1-216-017-00	METAL CHIP	47	5%	1/10W
R554	1-216-083-00	METAL CHIP	27K	5%	1/10W
R555	1-216-089-00	METAL CHIP	47K	5%	1/10W
R556	1-216-089-00	METAL CHIP	47K	5%	1/10W
R558-560	1-216-097-00	METAL CHIP	100K	5%	1/10W
R561	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R562	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R563	1-216-025-00	METAL CHIP	100	5%	1/10W
R564	1-216-025-00	METAL CHIP	100	5%	1/10W
R566	1-216-206-00	METAL GLAZE	2.2K	5%	1/8W
R567	1-216-073-00	METAL CHIP	10K	5%	1/10W
R577	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R601	1-216-025-00	METAL CHIP	100	5%	1/10W
R610	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R611	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R612	1-216-198-00	METAL CHIP	1K	5%	1/8W
R613	1-216-073-00	METAL CHIP	10K	5%	1/10W
R614	1-216-206-00	METAL GLAZE	2.2K	5%	1/8W
R625	1-216-057-00	METAL CHIP	2.2K	5%	1/10W

< VARIABLE RESISTOR >

RV10 1-238-596-11 RES. ADJ. CARBON 470 (C212)

< SWITCH >

S510 1-571-478-11 SWITCH, SLIDE (POWER SELECT)
SW501 1-692-431-21 SWITCH, TACTILE (RESET)

< TUNER UNIT >

TU10 A-3282-003-A TUNER UNIT (TUX-001A)

Ref.No.	Part No.	Description	Remark
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< VIBRATOR >

X10	1-567-848-11	VIBRATOR, CRYSTAL (7.2MHz)	
X510	1-567-821-11	VIBRATOR, CRYSTAL (4.19MHz)	

MISCELLANEOUS

8	1-765-081-11	CORD (WITH CONNECTOR)	
130	1-765-460-11	CORD (WITH CONNECTOR)	
F901	1-533-326-11	FUSE (BLADE TYPE) (AUTO FUSE) (3A)	
F902	1-533-331-11	FUSE (BLADE TYPE) (AUTO FUSE) (15A)	
HP901	1-500-105-11	HEAD, MAGNETIC (PLAYBACK)	

M901	X-3368-684-1	MOTOR ASSY, MAIN	
M902	X-3368-685-1	MOTOR ASSY, SUB	
S901	1-692-885-12	SWITCH, ROTARY SLIDE (TAPE OPERATION)	

HARDWARE LIST

#1	7-621-770-67	SCREW +PTT 2.6X6 (S)	
#2	7-621-770-XX	SCREW +PTT 2.6X8 (S)	
#3	7-624-104-04	STOP RING 2.0, TYPE -E	
#4	7-627-553-17	PRECISION SCREW +P 2X2 TYPE 3	
#5	7-628-253-05	SCREW +PS 2X4	
#6	7-685-105-19	SCREW +P 2X8 TYPE2 NON-SLIT	
#7	7-685-134-19	SCREW +P 2.6X8 TYPE2 NON-SLIT	
#8	7-621-773-95	SCREW +PTT 2.6X6 (S)	
#9	7-621-772-10	SCREW +B 2X4	

ACCESSORIES & PACKING MATERIALS

3-759-197-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, FRENCH, GERMAN, ITALIAN)	
3-759-197-41	MANUAL, INSTRUCTION, INSTALL (SPANISH, DUTCH, SWEDISH, PORTUGUESE) (C210)	
3-759-198-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, GERMAN, ITALIAN)	
3-759-198-41	MANUAL, INSTRUCTION (SPANISH, DUTCH, SWEDISH, PORTUGUESE) (C210)	
X-3367-795-1	CASE ASSY	

Ref.No.	Part No.	Description	Remark
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MOUNTING HARDWARE

151	3-916-161-01	FRAME, FITTING	
152	3-386-828-01	SCREW, FITTING	
153	3-349-410-01	BUSHING	
154	3-388-078-01	KEY	
155	X-3366-405-1	SCREW ASSY (EXP), FITTING	

