SERVICE MANUAL

AUTO REVERSE CASSETTE TUNER

SANSUI GT-X7000 GT-X7000L GT-X7000F

Sansui

SANSUI ELECTRIC CO., LTD.

•SPECIFICATIONS

GT-X7000/X7000F

Audio section

Input sensitivity and impedance (1 kHz)
- LINE IN ..... 120 mV/10 kohms

Output voltage
- LINE-OUT ..... 120 mV
- PRE-OUT (LOW)..... 500 mV
- PRE-OUT (HIGH)..... 1,000 mV

Controls
- BASS ..... ±10 dB at 100 Hz
- TREBLE..... ±10 dB at 10 kHz
- LOUDNESS ..... +8 dB at 100 Hz
  +6 dB at 10 kHz
  (VOLUME: —30 dB)

Tuner section

(FM)
- **Tuning range**..... 88 to 108 MHz
- **Usable sensitivity**
  - Mono IHF ..... 11.2 dBf (1 μV/75 ohms)
- **50 dB quieting sensitivity**
  - Stereo ..... 16.2 dBf
- **Signal to noise ratio** (at 65 dBf)
  - Stereo/mono..... 65 dB/70 dB
- **Frequency response** (LINE OUT)
  ..... 30 to 15,000 Hz±3 dB
- **Stereo separation** ..... 35 dB at 1 kHz

(AM)
- **Tuning range**..... 531 to 1,600 kHz
- **Usable sensitivity** ..... 30 dB/μV at 1,000 kHz
- **Signal to noise ratio** ..... 45 dB

Tape section
- **Track format**..... 4-track/2-channel system
- **Tape speed**..... 4.8 cm/sec.
- **Tape transport system**..... Auto reverse playback
- **Wow/flutter** ..... 0.08% max. (WRMS)
- **Frequency response**
  - Normal (LH) tape ..... 30 to 16,000 Hz±3 dB
  - Metal tape..... 30 to 18,000 Hz±3 dB
- **Signal-to-noise ratio** (with metal tape)
  - DOLBY NR OFF ..... Better than 58 dB
  - DOLBY-B NR ON..... Better than 67 dB (above 5 kHz)
  - DOLBY-C NR ON..... Better than 75 dB (above 1 kHz)

General
- **Power requirements** ..... DC 12.0V/Rated: 14.4V (Usable: 10.8~15.6V) negative ground
- **Current consumption** ..... 500 mA Maximum
- **Dimensions**..... 187 mm (7-3/8″) W
  57 mm (2-1/4″) H
  188 mm (7-3/8″) D
  - Chassis size ..... 179 mm (7-1/16″) W
    50 mm (2″) H
    160 mm (6-5/16″) D
- **Weight** (net) ..... 1.6 kg (3.5 lbs)

* **Design and specifications subject to changes without notice for improvements.**
* **Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.**
  "Dolby" and the double D symbol are trade marks of Dolby Laboratories Licensing Corporation.

to be continued ►

GT-X7000L

Audio section

Input sensitivity and impedance (1 kHz)
LINE IN ..... 120 mV/10 kohms
Output voltage
LINE-OUT ..... 120 mV
PRE-OUT (LOW)..... 500 mV
PRE-OUT (HIGH)..... 1,000 mV
Controls
BASS ..... ±10 dB at 100 Hz
TREBLE..... ±10 dB at 10 kHz
LOUDNESS ..... +8 dB at 100 Hz
+6 dB at 10 kHz
(VOLUME: —30 dB)

Tuner section

(FM)
Tuning range..... 88 to 108 MHz
Usable sensitivity
Mono IHF ..... 11.2 dBf (1 μV/75 ohms)
50 dB quieting sensitivity
Stereo ..... 16.2 dBf
Signal to noise ratio (at 65 dBf)
Stereo/mono..... 65 dB/70 dB
Frequency response (LINE OUT)
..... 30 to 15,000 Hz—3 dB
Stereo separation ..... 35 dB at 1 kHz
(MW)
Tuning range..... 531 to 1,600 kHz
Usable sensitivity ..... 30 dB/μV at 1,000 kHz
Signal to noise ratio ..... 45 dB
(LW)
Tuning range (LW1)..... 155 to 281 kHz
(LW2)..... 153 to 279 kHz
Usable sensitivity ..... 35 dB/μV at 225 kHz
Signal to noise ratio ..... 45 dB

Tape section

Track format..... 4-track/2-channel system
Tape speed..... 4,8 cm/sec.
Wow/flutter ..... 0.08% max. (WRMS)
Frequency response
Normal (LH) tape ..... 30 to 16,000 Hz±3 dB
Metal tape..... 30 to 18,000 Hz±3 dB
Signal-to-noise ratio (with metal tape)
DOLBY NR OFF ..... Better than 58 dB
DOLBY-B NR ON..... Better than 67 dB
(above 5 kHz)
DOLBY-C NR ON..... Better than 75 dB
(above 1 kHz)

General

Power requirements ..... DC 12.0V/Rated: 14.4V
(Usable: 10.8~15.6V)
negative ground
Current consumption ..... 500 mA Maximum
Dimensions..... 187 mm (7-3/8″) W
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Chassis size ..... 179 mm (7-1/16″) W
50 mm (2″) H
160 mm (6-5/16″) D
Weight (net) ..... 1.6 kg (3.5 lbs)

CAUTION

1. The symbols, AS and XX on the parts list and the schematic diagram mean followings respectively.

   AS ..... Manufactured for Australian market.
   XX ..... Standard Version.
   NON MARK .... Common Parts.

2. Some printed circuit boards are not supplied as the assembled.
   To separate these in this service manual, the stock No's are not indicated at the ends of the board names. However, the individual parts on the circuit boards are provided by orders.

3. Since some capacitors and resistors are omitted from parts lists in this service manual, refer to the Common Parts List for capacitors & resistors, which was issued on February 1983.

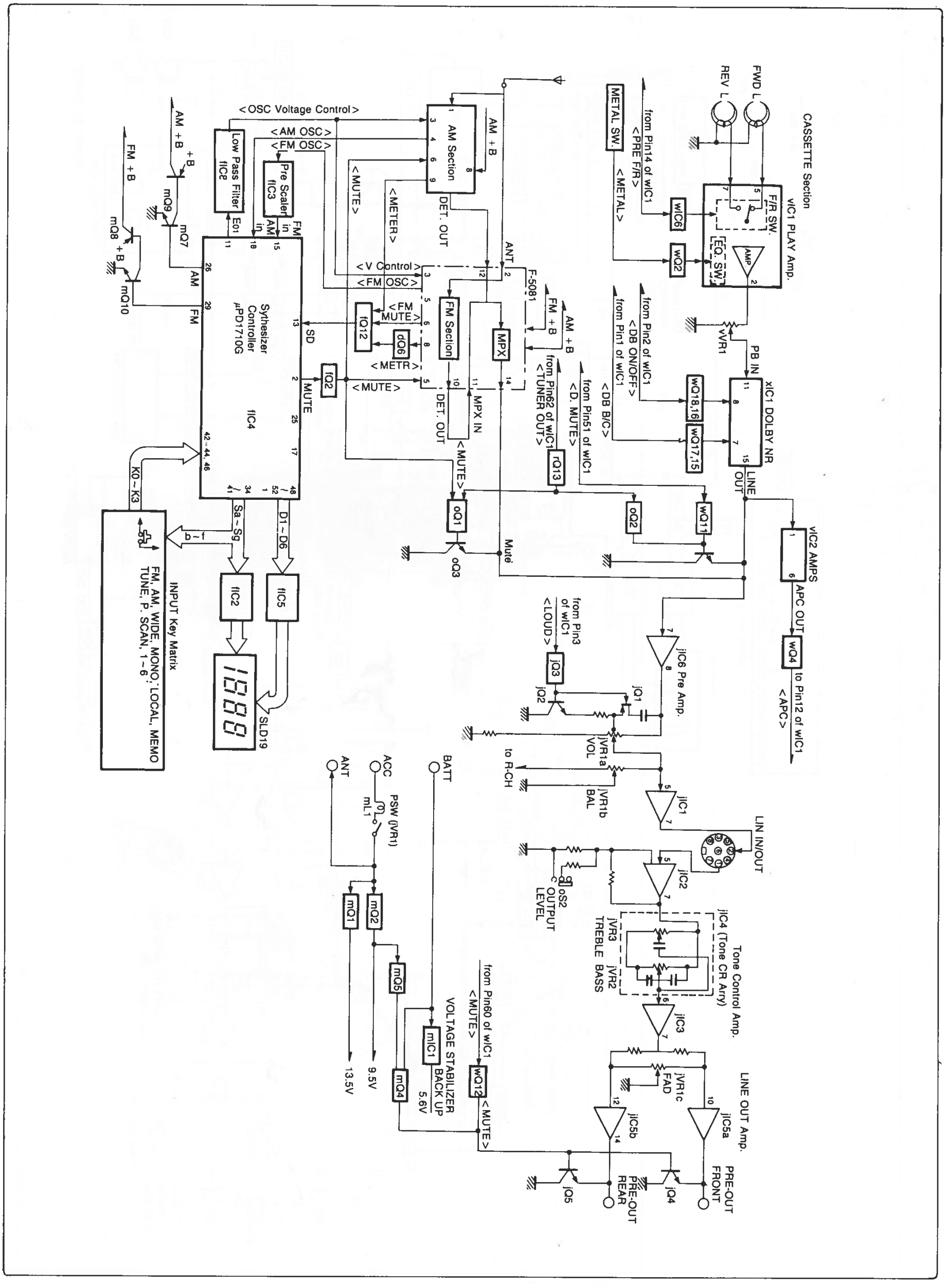
4. Abbreviations in this service manual are as follows.

•Abbreviations List

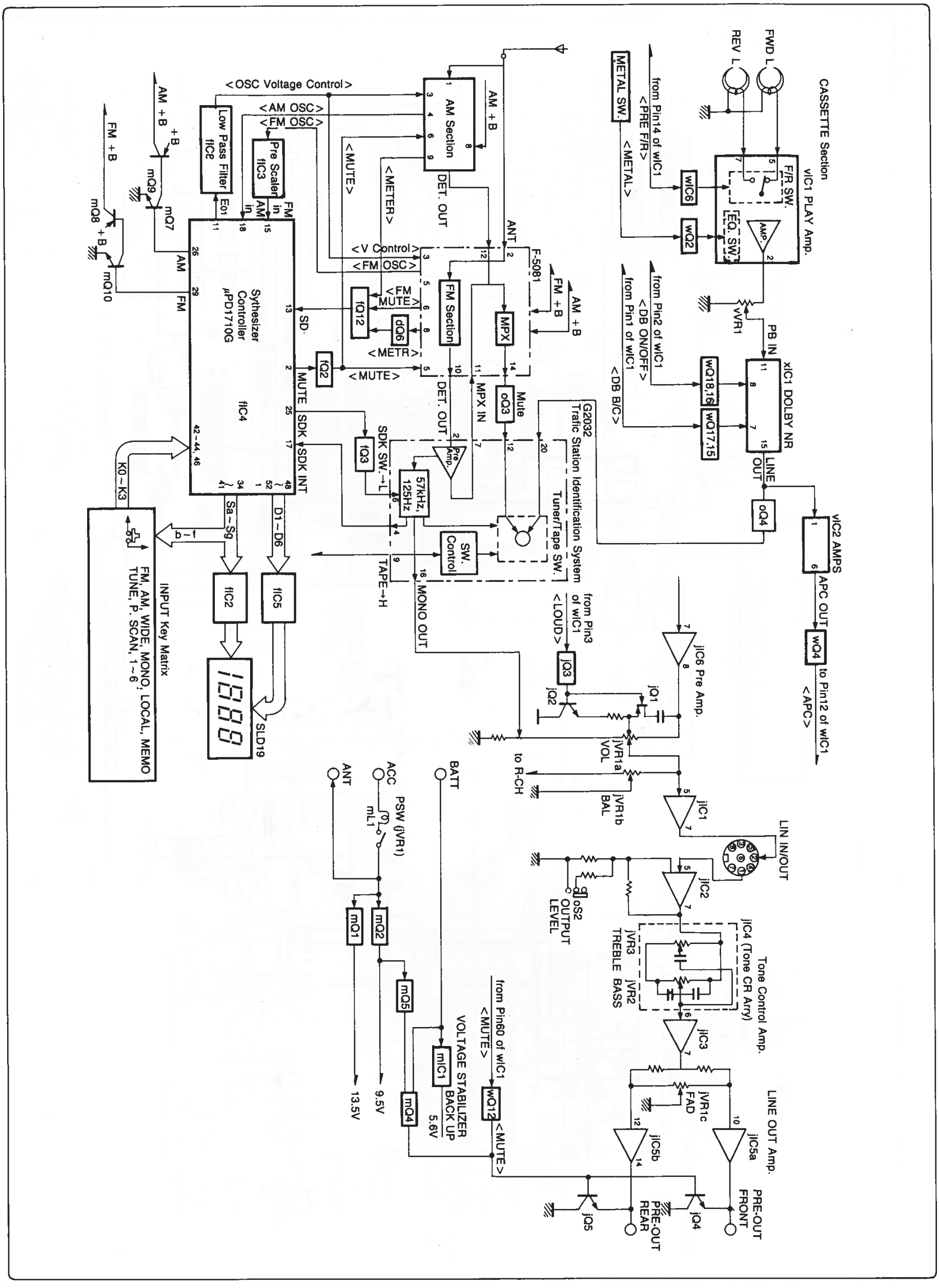
C.R.	: Carbon Resistor
S.R.	: Solid Resistor
Ce.R.	: Cement Resistor
M.R.	: Metal Film Resistor
F.R.	: Fusing Resistor
N.I.R.	: Non-Inflammable Resistor
A.R.	: Array Resistor
C.C.	: Ceramic Capacitor
C.T.	: Ceramic Capacitor, Temperature Compensation
E.C.	: Electrolytic Capacitor
E.L.	: Low Leak Electrolytic Capacitor
E.B.	: Bi-Polar Electrolytic Capacitor
E.B.L.	: Low Leak Bi-Polar Electrolytic Capacitor
Ta.C.	: Tantalum Capacitor
F.C.	: Film Capacitor
M.P.	: Metalized Paper Capacitor
P.C.	: Polystyrene Capacitor
G.C.	: Gimmic Capacitor
A.C.	: Array Capacitor
V.R.	: Variable Resistor
S.V.R.	: Semi Variable Resistor
SW.	: Switch
Chip R.	: Chip Resistor
Chip C.	: Chip Capacitor

1. BLOCK DIAGRAM

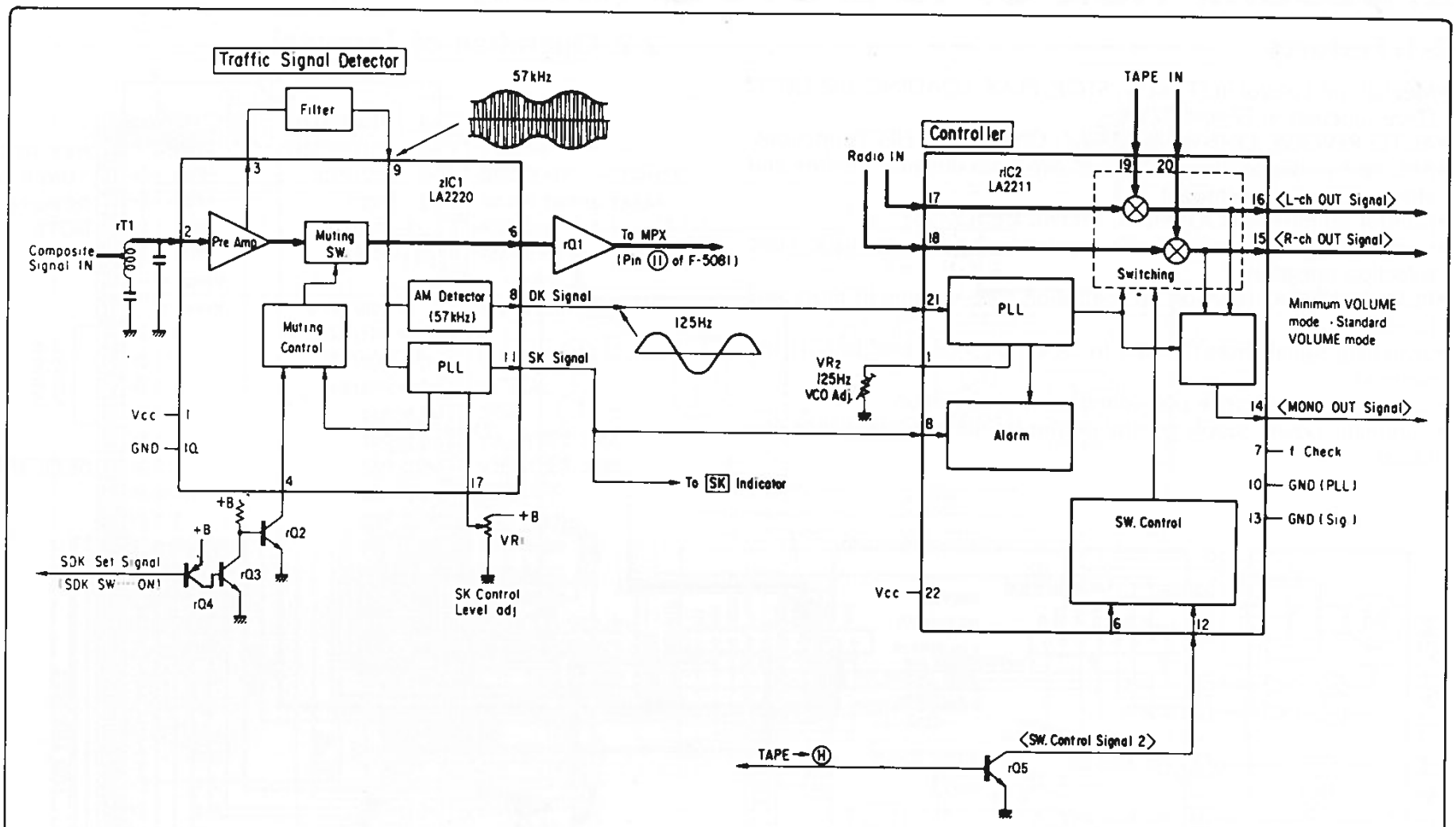
1-1. GT-X7000/X7000L



1-2. GT-X7000F


CASSETTE Section
vIC1 PLAY Amp.
REV L
FWD L
F/R SW.
EQ. SW.
AMP.
wIC6
wQ2
METAL SW.
from Pin14 of wIC1
<PRE F/R>
<METAL>
VVR1
PB IN
xIC1 DOLBY NR
wQ18,16
wQ17,15
from Pin2 of wIC1
<DB ON/OFF>
from Pin1 of wIC1
<DB B/C>
LINE OUT
oQ4
vIC2 AMPS
APC OUT
wQ4
to Pin12 of wIC1
<APC>
<OSC Voltage Control>
<AM OSC>
<FM OSC>
AM Section
DET. OUT
<MUTE>
<METER>
AM +B
ANT
F-5081
FM +B
<V Control>
<FM OSC>
<FM MUTE>
fQ12
dQ6
<METR>
FM Section
MPX
AM +B
Low Pass Filter
fIC2
Pre Scaler
fIC3
AM in
FM in
Eo1
mQ9
mQ7
mQ8
mQ10
FM +B
+B
AM
FM
Sythesizer Controller
µPD1710G
fIC4
SD
MUTE
SDK
SDK INT
fQ2
<MUTE>
MPX IN
Mute
oQ3
SDK SW.→L
fQ3
Pre Amp.
57kHz, 125Hz
SW. Control
TAPE→H
MONO OUT
G2032
Trafic Station Identification System
Tuner/Tape SW.
from Pin3 of wIC1
<LOUD>
jQ3
jQ2
jQ1
jIC6 Pre Amp.
jVR1a
VOL
jVR1b
BAL
to R-CH
jIC1
LIN IN/OUT
jIC2
oS2
OUTPUT LEVEL
jVR3
TREBLE
jVR2
BASS
Tone Control Amp.
jIC4 (Tone CR Arry)
jIC3
jVR1c
FAD
jIC5a
jIC5b
PRE-OUT FRONT
PRE-OUT REAR
jQ4
jQ5
LINE OUT Amp.
K0~K3
Sa~Sg
D1~D6
INPUT Key Matrix
FM, AM, WIDE, MONO, LOCAL, MEMO
TUNE, P. SCAN, 1~6
fIC2
fIC5
SLD19
ACC
ANT
PSW (jVR1)
mL1
BATT
from Pin60 of wIC1
<MUTE>
mIC1
VOLTAGE STABILIZER
BACK UP
5.6V
wQ12
mQ1
mQ2
mQ4
mQ5
9.5V
13.5V

1-3. Traffic Station Identification System Block Diagram (This diagram is applied to the GT-X7000F)



Note: Traffic information reception

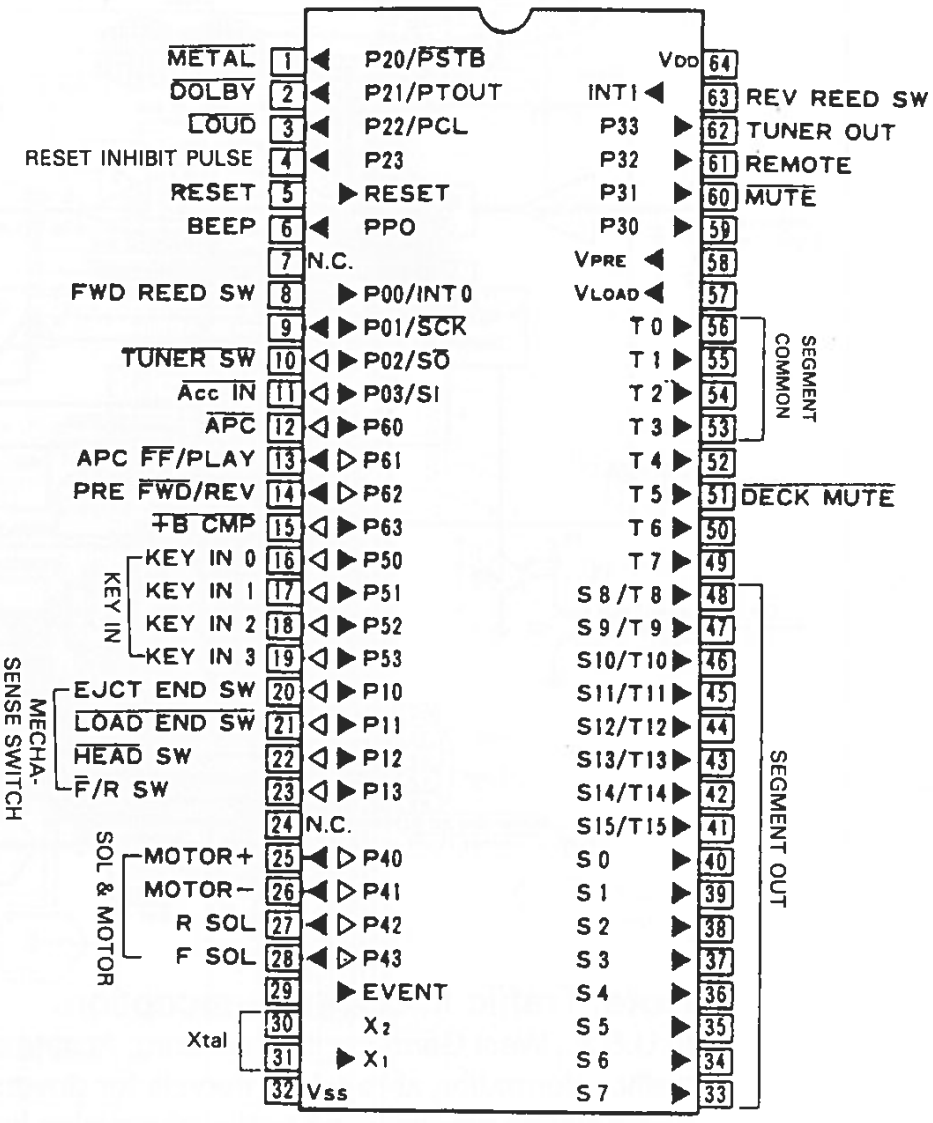
In U.S.A., West Germany, Luxembourg, Austria and Switzerland, particular FM stations broadcast useful traffic information at regular intervals for drivers in the respective areas. The name and frequencies of the station broadcasting traffic information in various areas are available from the billboards beside the roads in those areas. Also, these stations always transmit discriminating (SK) signals to identify themselves as traffic information broadcasting stations. Monitoring these SK signals, the unit can select and pick up only those stations.

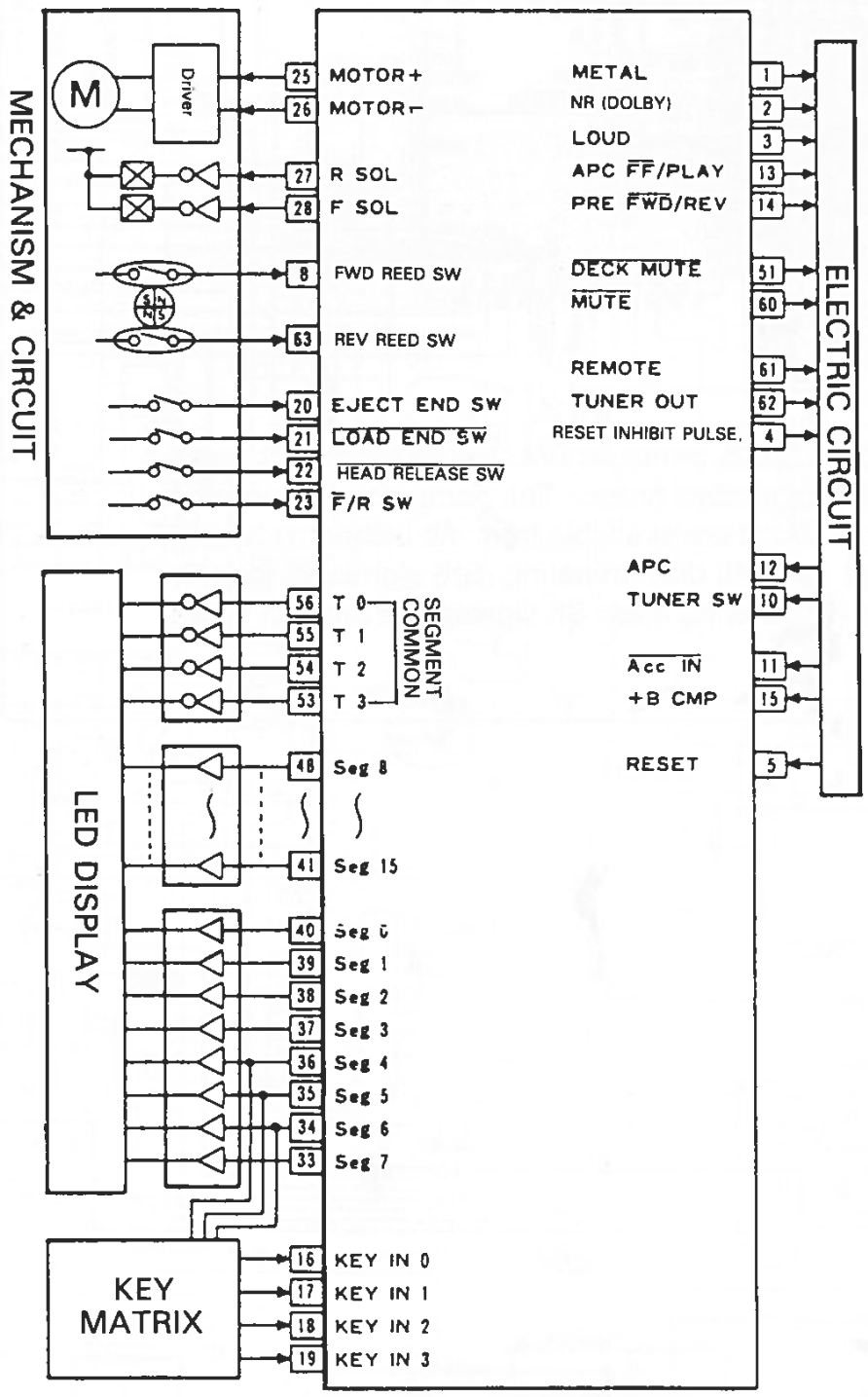
2. DESCRIPTION OF IC μPD7519 (wIC1)

2-1. Features

- Mechanism control in FF, REW, STOP, PLAY, LOADING and EJECT. (True function in FF and REW)
- AUTO REVERSE, ONE-WAY REPEAT, ONE-CYCLE EJECT functions.
- APC (one-music before and after) SCAN (both directions before and after), REPEAT (one music)
- Control outputs in LOUDNESS, METAL and DOLBY
- Confirmation sound generation in key depression and automatic music selection opeation.
- PLAY RUNNING function for indication tape running in more real fashion.
- Switching signals from TUNER to DECK on vice versa (MECH has priority)
- Complete fine-advance pop-sound muting operation
- Automatic power supply control output for tuning ON/OFF the amplifier.

2-2. Operation of Terminal





<Terminal Discription>

Terminal	Name	Logic	Description
11	$\overline{\text{Acc IN}}$	Low input in Acc-ON	•Detection of ON/OFF of car-side KEY SW (Acc) •No detection when the mechanism is in motion and each key input is being processed. •Comparator (7~8V) should be connected. •Microcomputer is set to STOP mode in Acc-OFF.
15	$\overline{\text{+B CMP}}$	Low input in +B-ON	•Detection of ON/OFF of power which turns ON amplifier relay in response to REMOTE signal. •No detection when REMOTE signal is OFF. •Prevention of microcomputer error operation due to fine delay caused when relay is turned ON. •Detection of low voltage of car battery because of cell motor operation. •One detection for each one periodic operation when the mechanism is in motion. •Detection of 5 msec intervals in usual.

to be continued ►

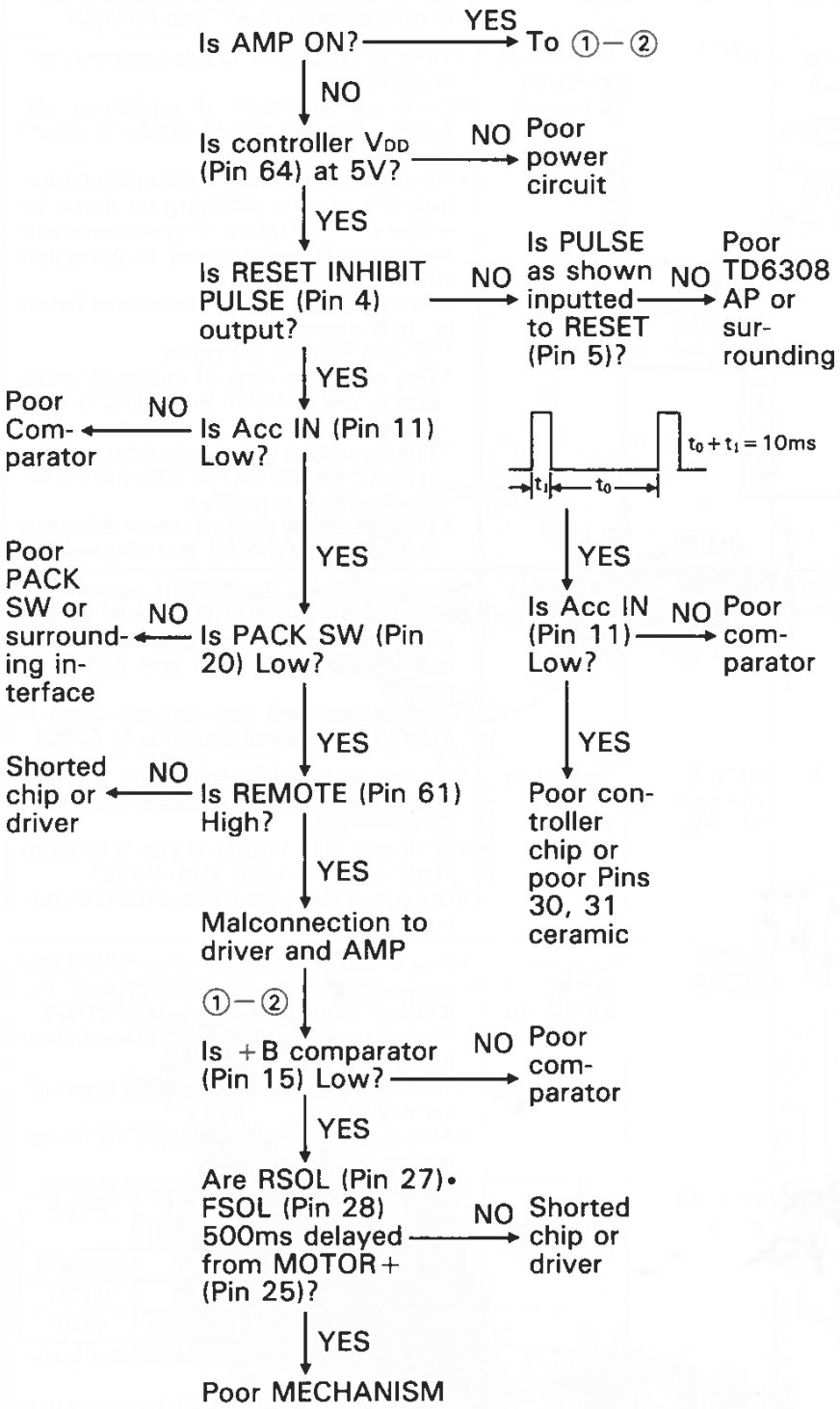
<μPD7519>

Terminal	Name	Logic	Description
20	EJECT END SW (RACK SW)	Hi input in EJECT-END	•Detection of LOADING start and EJECT end. •Detection should be made correctly when either of Acc or +B is ON. •LOADING starts by turning on REMOTE when this SW indicates PACK-IN under Acc-ON status.
8	FWD REED SW	Input	•Detection of a rise from Low to Hi. •TAPE-END when this stays unchanged 1800 msec in PLAY. •TAPE-END when this output stays unchanged for 500 msec in FF and REW. •Effective in FWD-PLAY, FWD-FF, and REV-REW.
23	F/R SW	Low input in FWD	•Input of FWD/REV of the mechanism.
22	HEAD SW	Low input in release	•Detection of coming-out of head. •Detection is tried 4 times when head does not come out in PLAY, FF and REW mechanism routine. •If head is released in PLAY, FF and REW, error processing is made as when STOP key is turned ON.
1	METAL	Low output in METAL-ON	•Output of METAL ON/OFF control signal.
2	DOLBY	Low output in DOLBY-ON	•Output of DOLBY ON/OFF control signal. •DOLBY-OFF level signal is outputted for prevention of error operation in automatic music selection in FF and REW.
14	PRE FWD/REV	Low output in FWD	•Output of PRE IC FWD/REV switching. •Note that this output is opposite to the mechanism operation direction during BACK PLAY in FF APC.
27	R SOL	Hi output in SOL-ON	•ON in PLAY, FWD-FF and REV-REW. •ON for 880 msec at program change.
28	F SOL	Hi output SOL-ON	•ON in PLAY, FWD-REW and REV-FF.
25	MOTOR +	Hi output in motor forward revolution	•ON in PLAY, FF, REW and LOADING.
26	MOTOR −	Hi output in motor reverse revolution	•On in EJECT.
63	REV REED SW	Input	•Detection of a rise from Low to High. •TAPE END when this input stays unchanged for 1800 msec in PLAY. •TAPE END when this input stays unchanged for 500 msec in FF and REW. •Available in REV-PLAY, REV-FF and FWD-REW.
60	MUTE	Low output in MUTE ON	•MUTE is ON 50 msec before each operation. •Since this output is high in impedance at RESET, circuit should be designed to turn MUTE ON even under these conditions. •When TUNER is turned ON, it takes 1000 msec to MUTE release. •It takes 1000 msec at minimum to release MUTE after REMOTE-ON. Therefore, devices connected between amplifier (including MUTE circuit) and deck should become steady state during this time interval.
61	REMOTE	Hi output in REMOTE-ON	•This output is ON in PACK-IN or TUNER-ON when car power switch (Acc) is ON. •Once turned ON, this output is kept ON when the mechanism is in motion, even if Acc is OFF, as long as +B CMP is not turned OFF. •The power supply for circuits turned ON/OFF by this terminal should be connected to car battery via some switches. Further, it is possible to turn ON this output by turning on Acc circuit. However, once turned ON, this output should be kept ON, even if Acc switch is turned off, as long as the terminal output is not turned OFF.
3	LOUD	Low output in LOUD-ON	•Output of LOUDNESS ON/OFF control signal

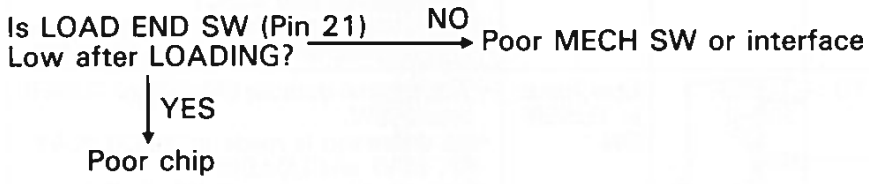
Terminal	Name	Logic	Description
13	APC FF/PLAY	Hi in PLAY	•Output of detection level switching control in automatic music selection operation between PLAY and FF REW.
12	APC	Low input in music presence	•Input of automatic music selection level detection •Time management of presence/ absence of music can be made by counter in this chip. •No action is etlected against level fluctuations due to cattering on noise by software. Therefore, it si necessary to set about 10 msec delay to detection circuit. •The basic step time of detection counter is 5 msec. *FF and REW is 60 msec. *The detection time of music absence during BACK PLAY in FF APC is 600 msec. *The detection time of music presence in PLAY for REPEAT is 500 msec (Discontinuity is possible) *The detection time of music absence in PLAY for REPEAT is 1500 msec.
62	TUNER OUT	Hi output in TUNE-ON	•A signal to enable TUNER operation •This output is ON if TUNER-IN is ON, when Acc is ON and additionally the mechanism is at stop and EJECT is ended. •This output will not change even if TUNER-IN terminal changes in EJECT.
4	RESET INHIBIT PULSE	Output of 100Hz signal	•Do not reset while this pulse is being outputted, because access to RAM may be disturbed. •Note that this 100Hz signal is fixed to LOW for 140 msec after RESET. •Output of this signal indicates that this chip is in operation.
51	DECK MUTE	Low output in MUTE-ON	•Pop sound is produced when MUTE (for prevention of sound generation in FF, REW) of the deck is turned ON or OFF. Therefore, a fine difference is necessary in relation to AMP MUTE. •This output is turned to ON 50 msec after MUTE-ON. •This output is turned to OFF 50 msec before MUTE-OFF.
16 ~ 19	KEY INP 0~3	Key matrix input logic	<table><tr><th></th><th>Seg 4</th><th>Seg 5</th><th>Seg 6</th></tr><tr><td>KEY IN 0</td><td>PLAY/PRO</td><td>P.MODE</td><td></td></tr><tr><td>KEY IN 1</td><td>REW</td><td>FF</td><td>POWING</td></tr><tr><td>KEY IN 2</td><td>REP</td><td>NR</td><td>METAL</td></tr><tr><td>KEY IN 3</td><td>LOUD</td><td>R.MODE</td><td>STOP</td></tr></table>•Double key depression is inhibited by local lock-up method. •For chattering prevention, the presence or absence of key depression is checked 3 times of 5 msec intervals, and then a depressed key is comfirmed by effecting a single SCAN.
21	LOAD END SW	Low input in LOAD-END	•This output checks that pack is located at the playable position. •This output detects when RESET starts in LOADING and EJECT. •The above detection should be made when either one of Acc or +B is ON.
10	TUNER SW	Low input in TUNER-ON	•This output detects ON/OFF of TUNER power SW. •No detection is made in MECH PLAY, FF, REW and LOADING. •Detection is made in MECH EJECT only when TUNER SW changes from ON to OFF because MUTE is outputted. •In EJECT END and STOP. REMOTE-ON/OFF and TUNER-OUT ON/OFF operations are made by turning this switch ON or OFF. •No detection is made in each key depression processing. •The detection should be enabled when either one of Acc or +B is ON.
5	RESET	Position pulse input	•Resetting of this chip. •When OFF of +B or Acc is detected, since this chip is in STOP mode, restart is enabled only by this RESET input. •RESET is necessary when BACK UP is turned from OFF to ON or when Acc is turned from OFF to ON. •Never input RESET when RESET INHIBIT pulse is being outputted, because access to memory may be disturbed.

2-3. Troubleshooting Guide to Controller

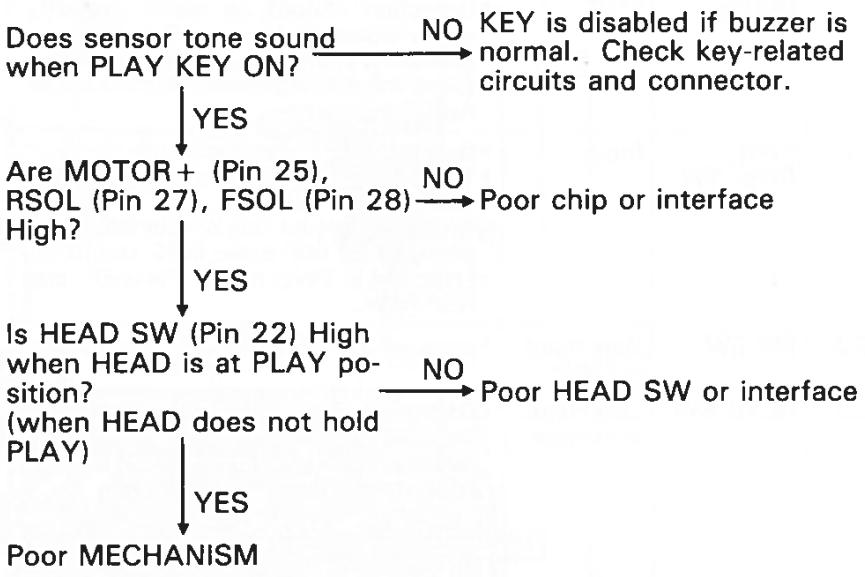
1. No Loading



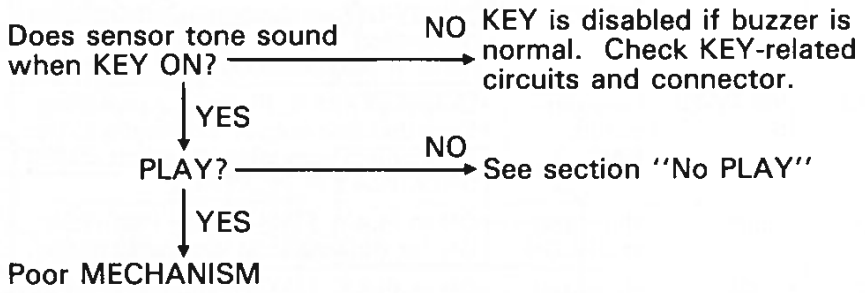
2. Immediate EJECT after LOADING



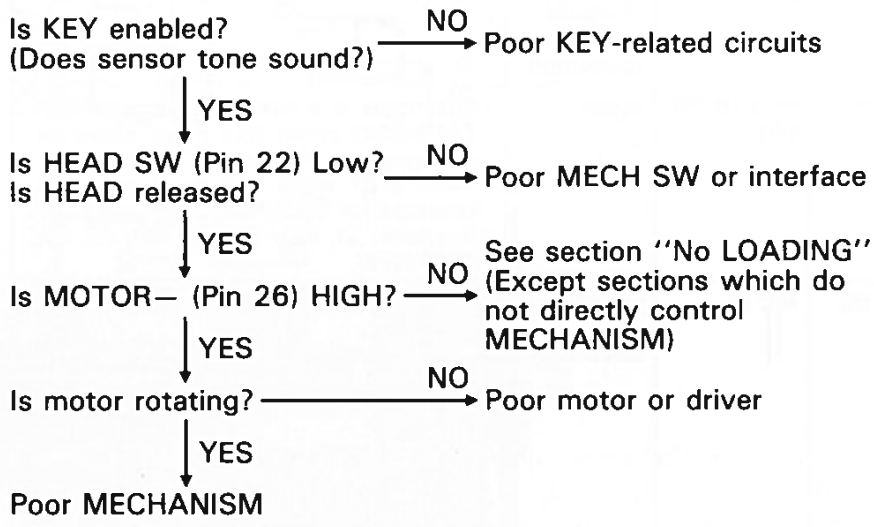
3. No PLAY (AMP is ON)



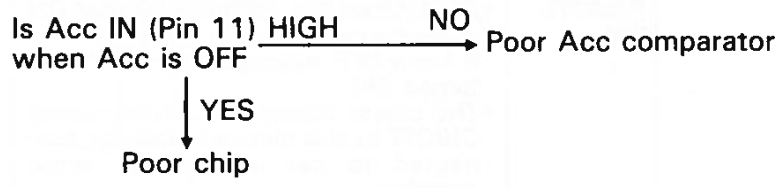
4. No FF, REW



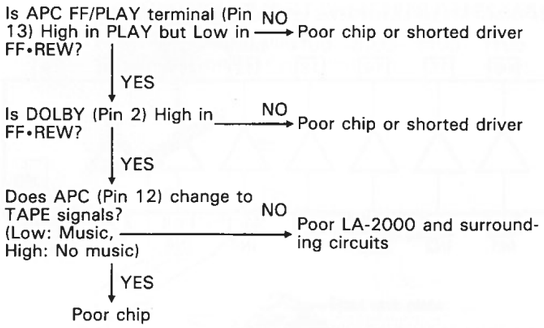
5. No EJECT



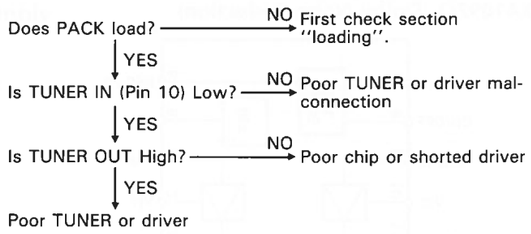
6. Set is not OFF when Acc is OFF



7. No auto music selection



8. No TUNER-ON



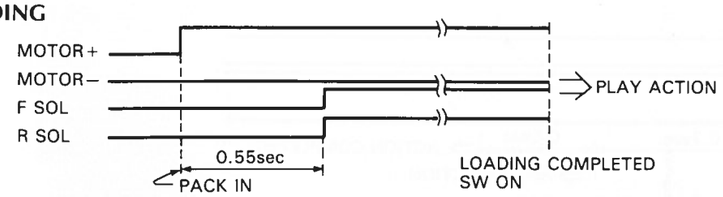
9. Some phenomena which occur when input/output ports and the connected circuits are detective will be explained below:

14	PRE FWD/REV	•Sound representative of reverse revolution is produced in PLAY. •Automatic music selection is disabled in FF.
27 28 25	RSOL FSOL MOTOR+	•Loading PLAY, FF, REW are disabled.
11	Acc IN	•When fixed at Low level, the set will not be turned off if Acc is off. •When fixed at High level, the set will not be turned on and all operations are disabled.
62	TUNER OUT	
11	TUNER IN	•TUNER will not be turned on.
63	REV REED SW	•In case one side is defective, abnormal reverse revolution occurs sometimes.
8	FWD REED SW	•In case both are defective, abnormal reverse revolution 6 times in succession, and then stops.
23	F/R SW	•Sound representative of reverse revolution is produced in PLAY. •Automatic music selection is disabled in FF. •Even if program changes, the display and PRE FWD/REW are immediately switched in one direction to playback reverse sound.
21	LOAD END SW	•When fixed at Low, loading ends in the midst of operation. •When fixed at High, EJECT starts immediately after loading.
22	HEAD SW	•When fixed at High, EJECT is disabled if PACK is in. •When fixed at Low, HEAD is released four times (if the HEAD does not come out) whenever PLAY, FF, REW KEYs are turned on, and then the release operation stops.

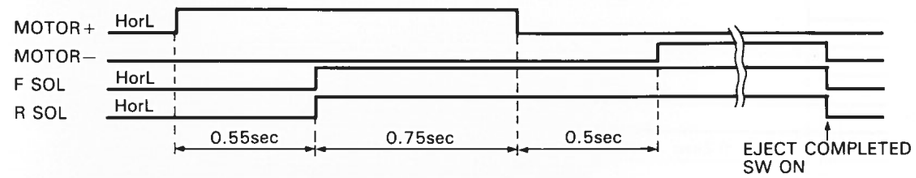
20	EJECT END SW (PACK IN SW)	•When fixed at Low, loading starts, if no PACK is in, immediately after EJECT ends. •When fixed at High, PACK IN is disabled, if PACK is in, EJECT end in the midst.
30 31	X_0 X_1	•Controller will not operate.
61	REMOTE	•The system is held ON or OFF without change.
6	BEEP	•Sensor tone will not be produced.
4	RESET INHIBIT	•RESET is made continuously while repeating ON/OFF.
5	RESET	•When fixed at High, the system will not operate. •When fixed at Low, the system operates erroneously, and all the operations are not stabled and not securred.
12	APC	•Automatic music selection is disabled.
15	+B COMPARATOR	•When fixed at Low, maloperation may occur when power voltage drops. •When fixed at High, system operations are disabled.
60	MUTE	•When fixed at Low, no sound is produced. •When fixed at High, pop sound is noisy, sound is produced in FF, REW.
51	D MUTE	•Pop sound does not change. •Sound is produced in FF, REW.
3	LOUD	•LOUD is fixed and inoperative.
2	DOLBY	•DOLBY is inoperative. •Erroneous operation may occur in automatic music selection.
13	APC FF/PLAY	•Maloperation may occur in automatic music relation.
1	METAL	•METAL is inoperative.

2-4. Timing Chart

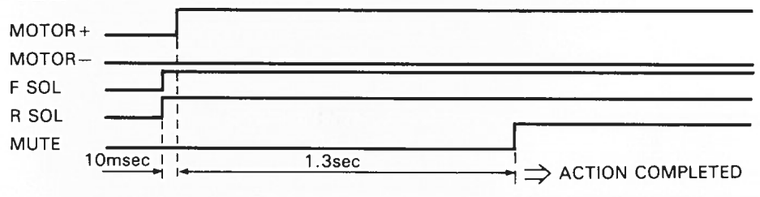
1. LOADING



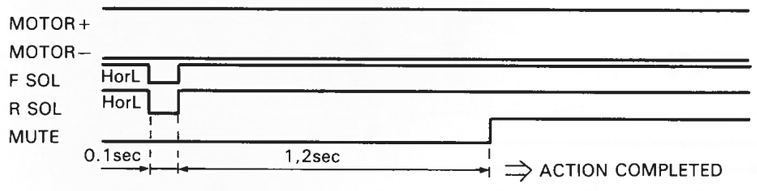
2. STOP, PLAY, FF, REW→EJECT



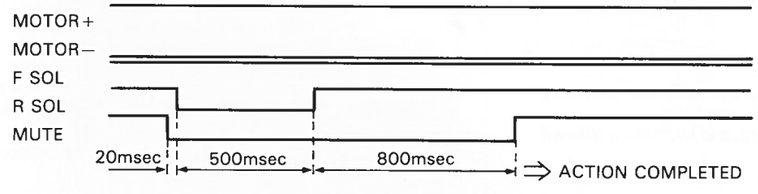
3. STOP→PLAY



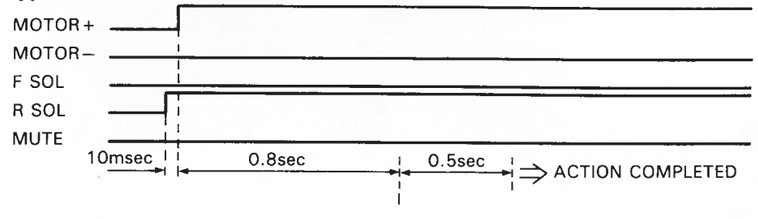
4. LOADING, FF, REW→PLAY



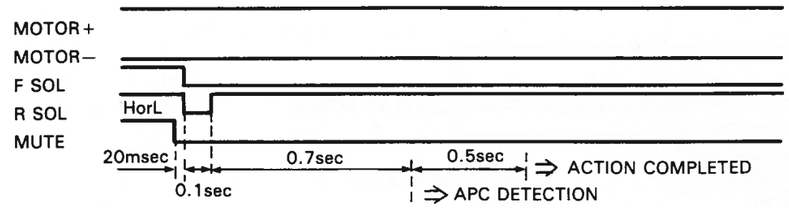
5. PROGRAM



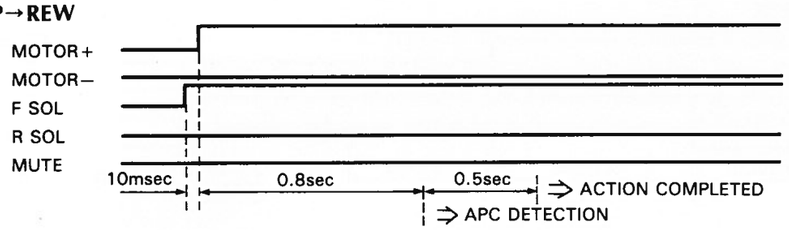
6. STOP→FF



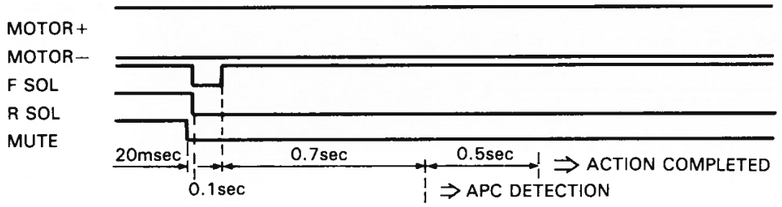
7. PLAY, REW→FF 8. STOP→REW



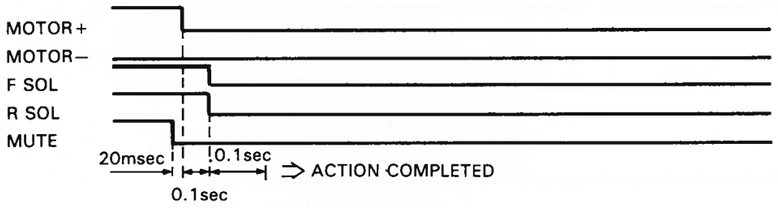
8. STOP→REW



9. PLAY, FF→REW



10. PLAY, FF, REW→STOP (KEY OFF)

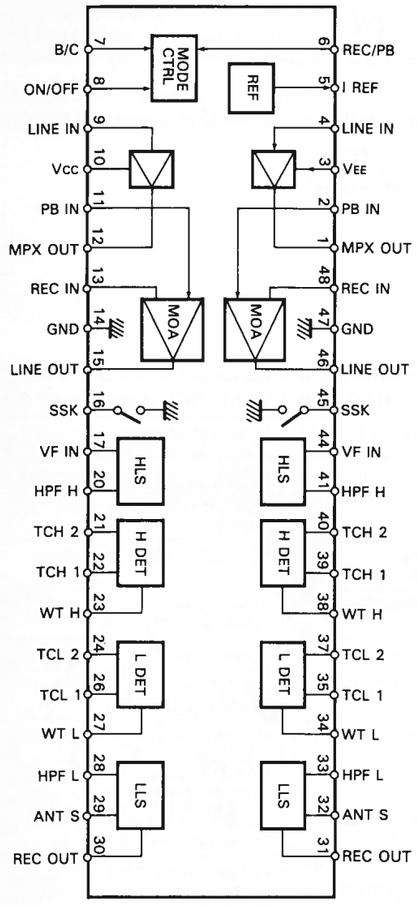


***PLAY, FF, REW→STOP (KEY OFF)**

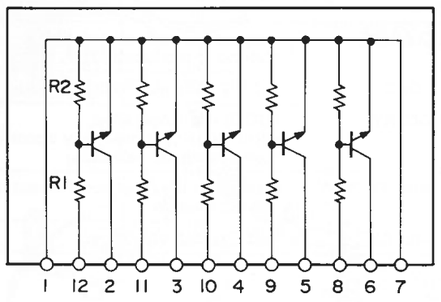
- FF indicates the rolling-up of tape foward the FWD side, and REW indicates the rolling-up of tape foward the REV side.
- Each output indicates a logic from control IC, and MUTING is released when MUTE is at "H".
- APC detects that HEAD is in contact with a tape stably and the detector circuit is at an operative timing.
- In the first 0.5 sec of APC detection, only the return to PLAY in automatic music selection is enabled, and the return to other modes is disabled.
- See flowchart about PLAY RETURN MODE by APC detection in FF, REW.

3. INTERIOR BLOCK DIAGRAM OF IC

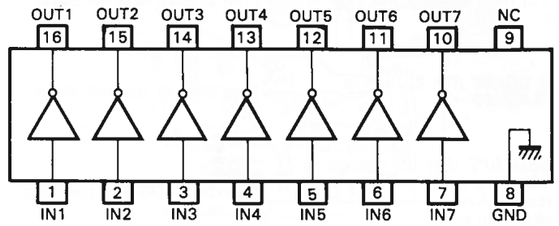
•CXA1097Q (Dolby Noise Reduction)



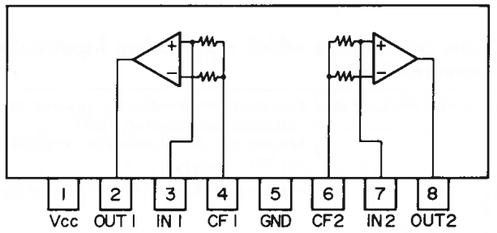
•DT5C114E (Digital Transistor Array)



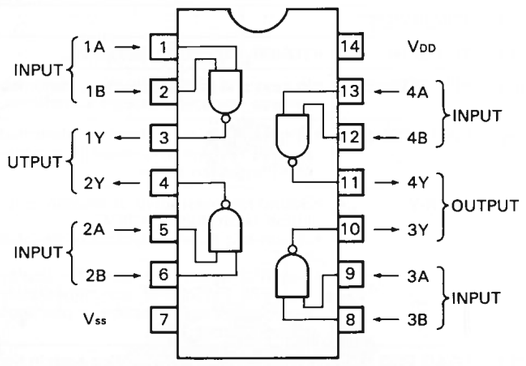
•BA6251F/LB1213M (7 Unit Transistor Array)



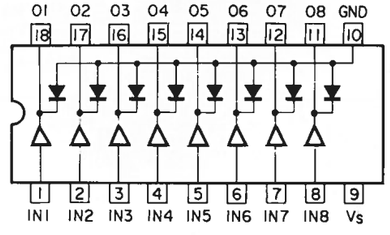
•BA3112 (Dual Pre Amp.)



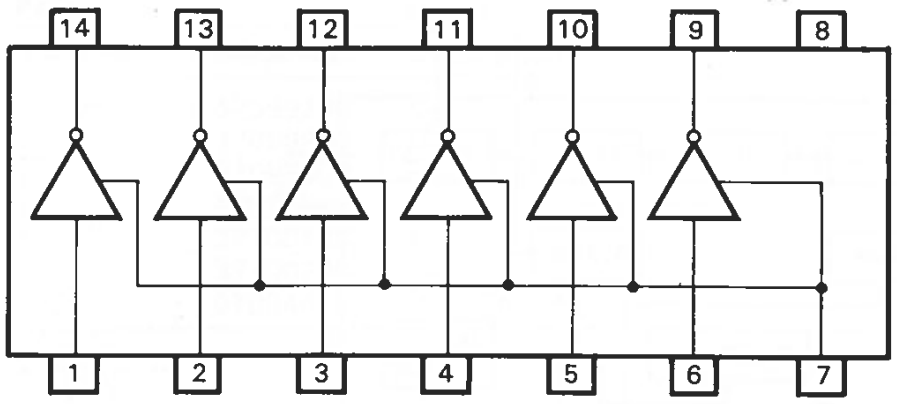
•BU4011B/M4011BP/TC4011P (NAND Gate)



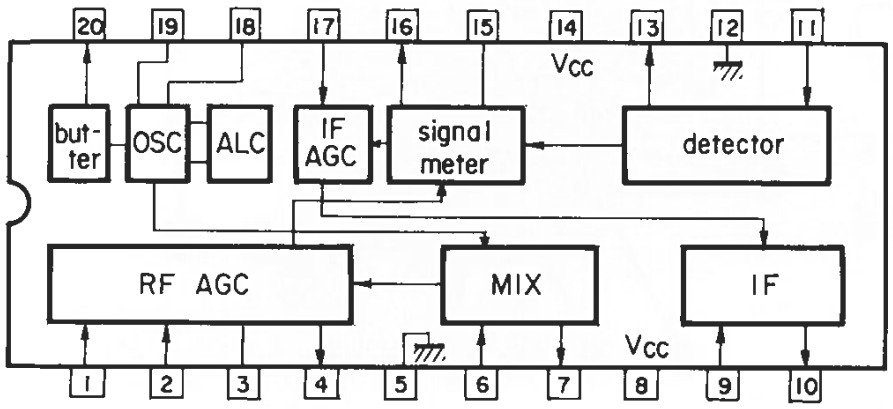
•M54563P (8 Unit Transistor Array)



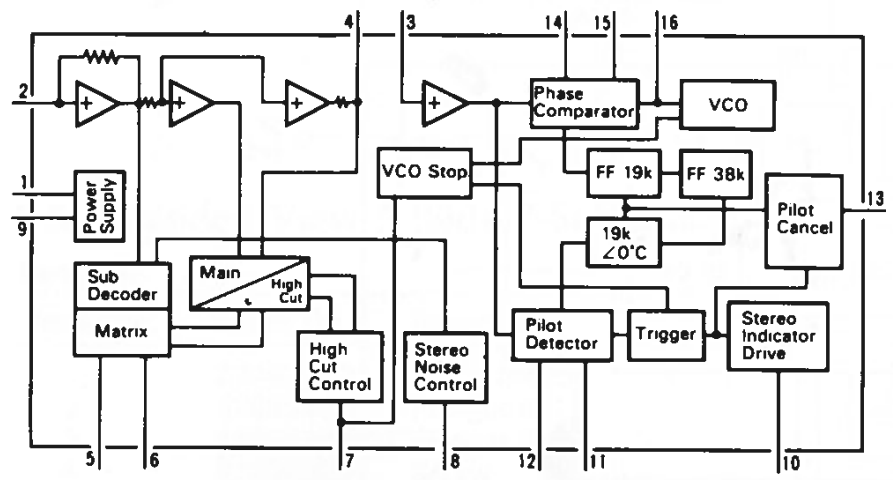
•IR2415 (6 Unit Driver)



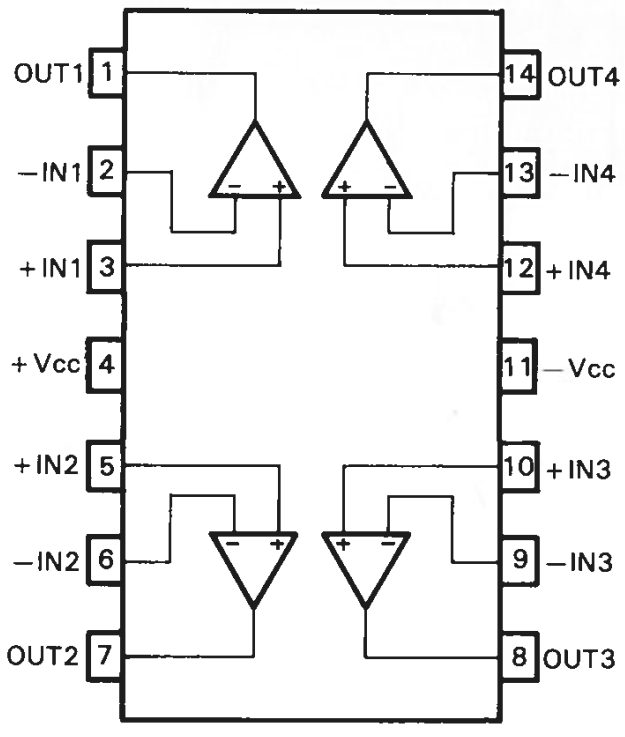
•LA1135 (AM Tuner)



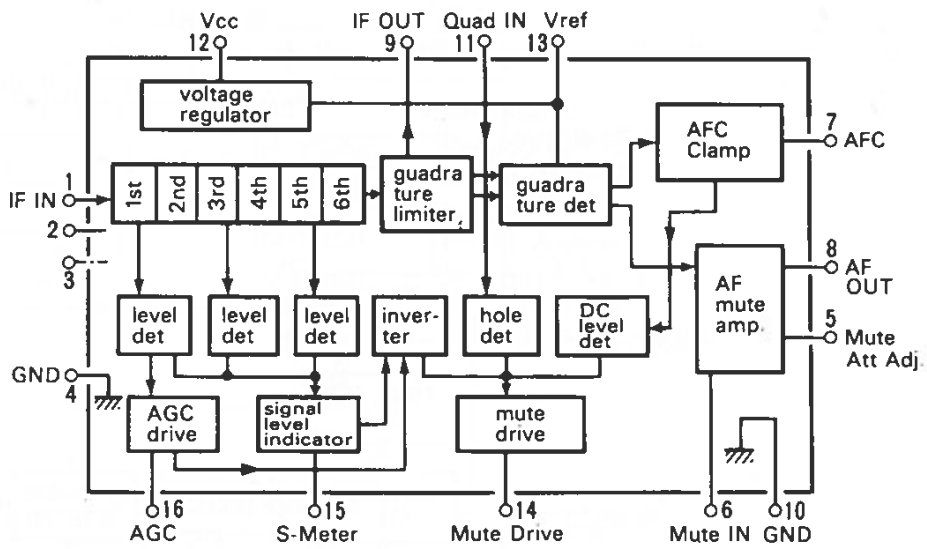
•LA3430 (FM Stereo MPX)



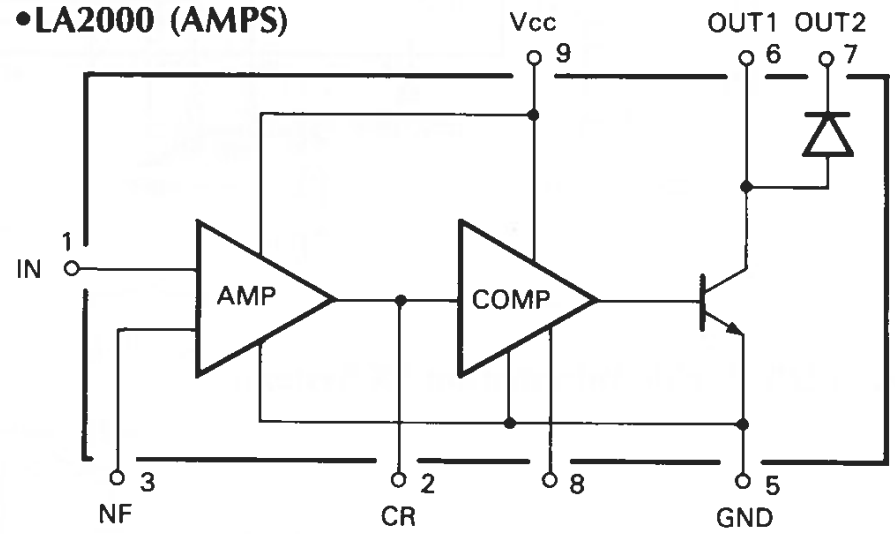
•M5228P (Operation Amp.)



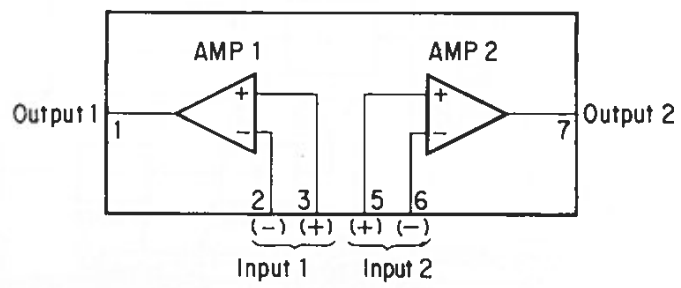
•LA1140 (FM IF Amp. & Quadrature Detector)



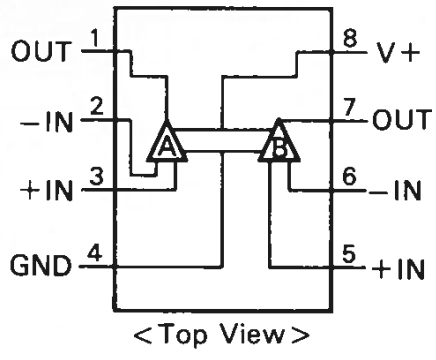
•LA2000 (AMPS)



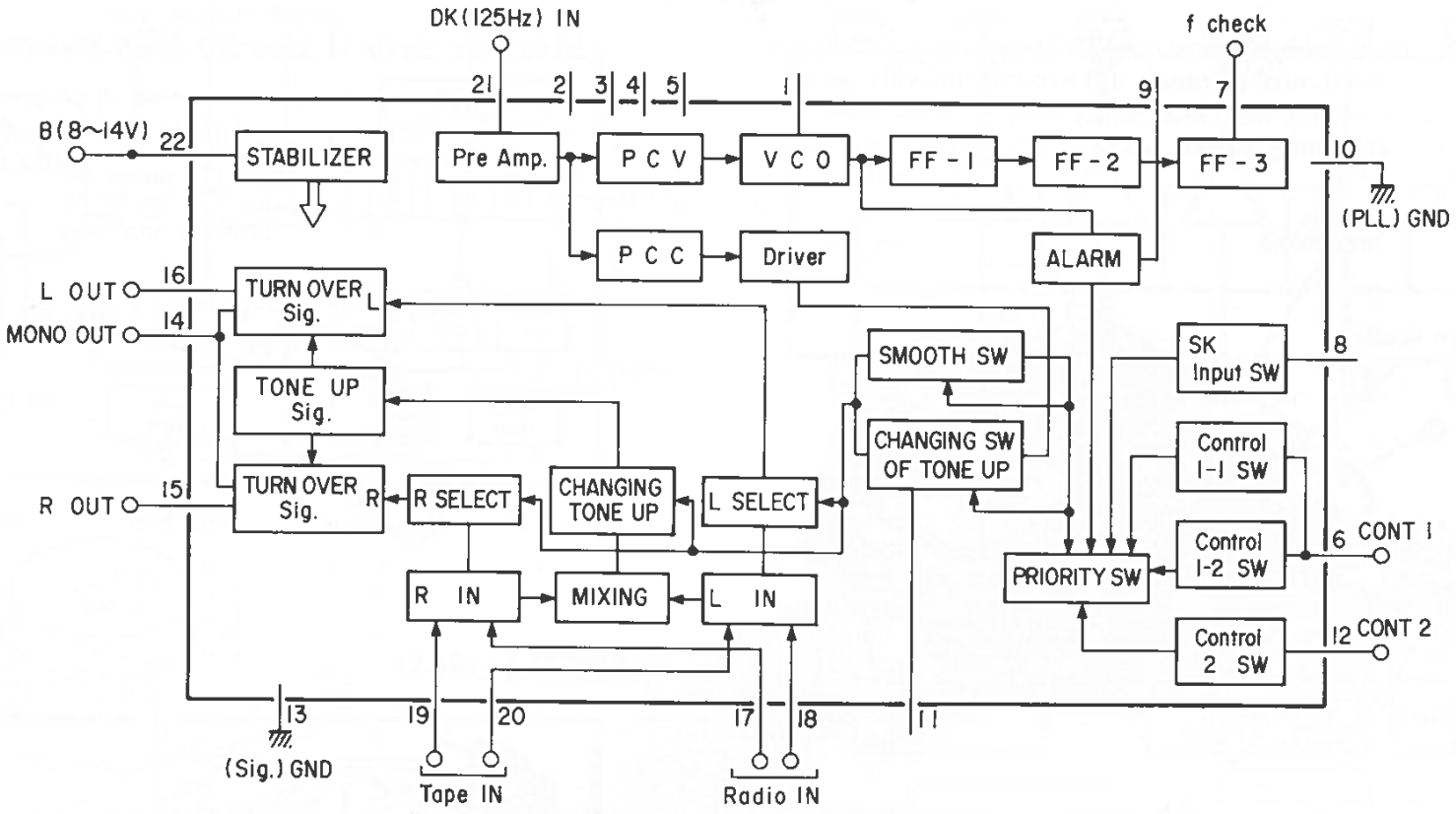
•M5218L (Dual Operation Amp.)



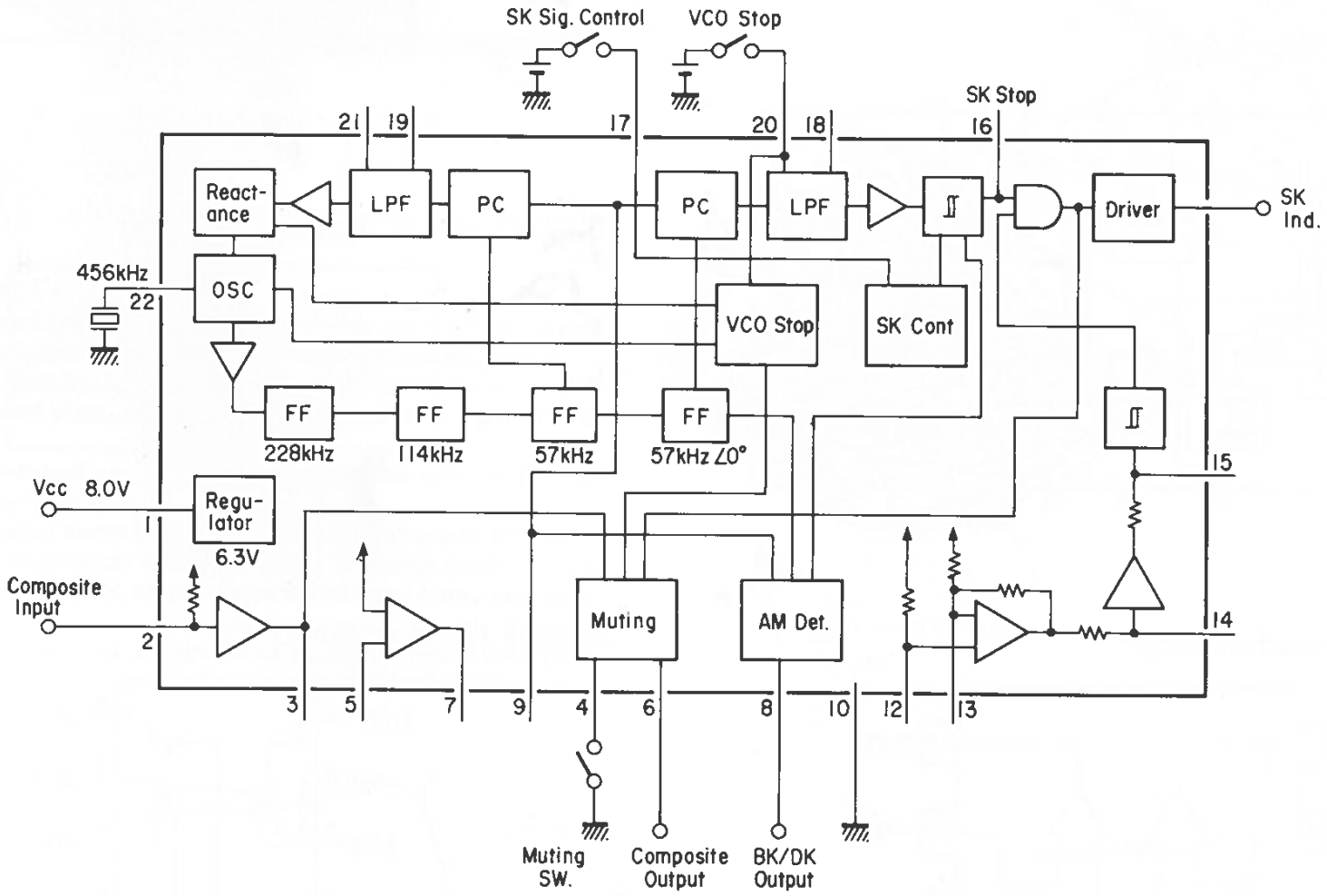
•IR9393 (Dual Comparator)



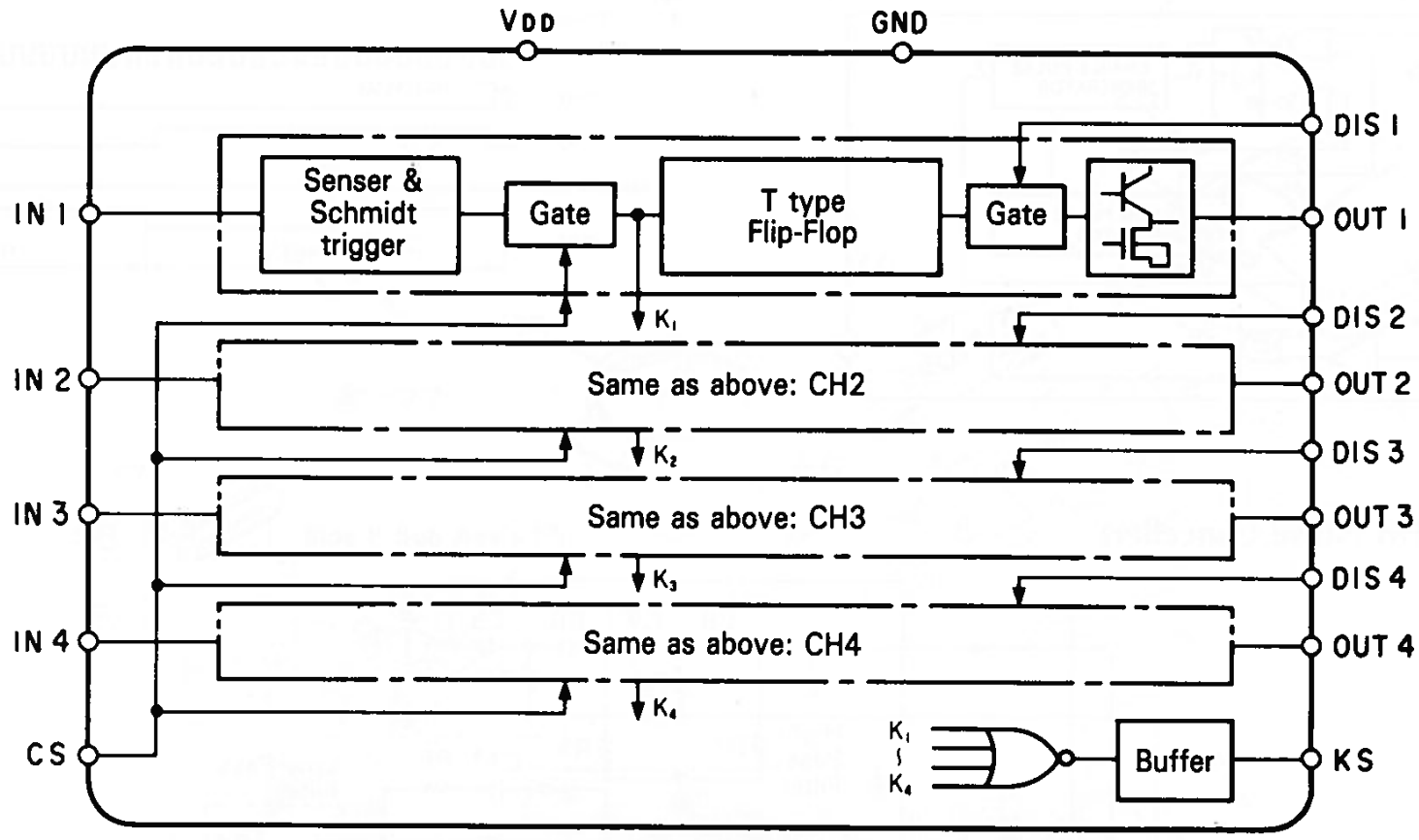
•LA2211 (Traffic Information DK Sig. Processing)



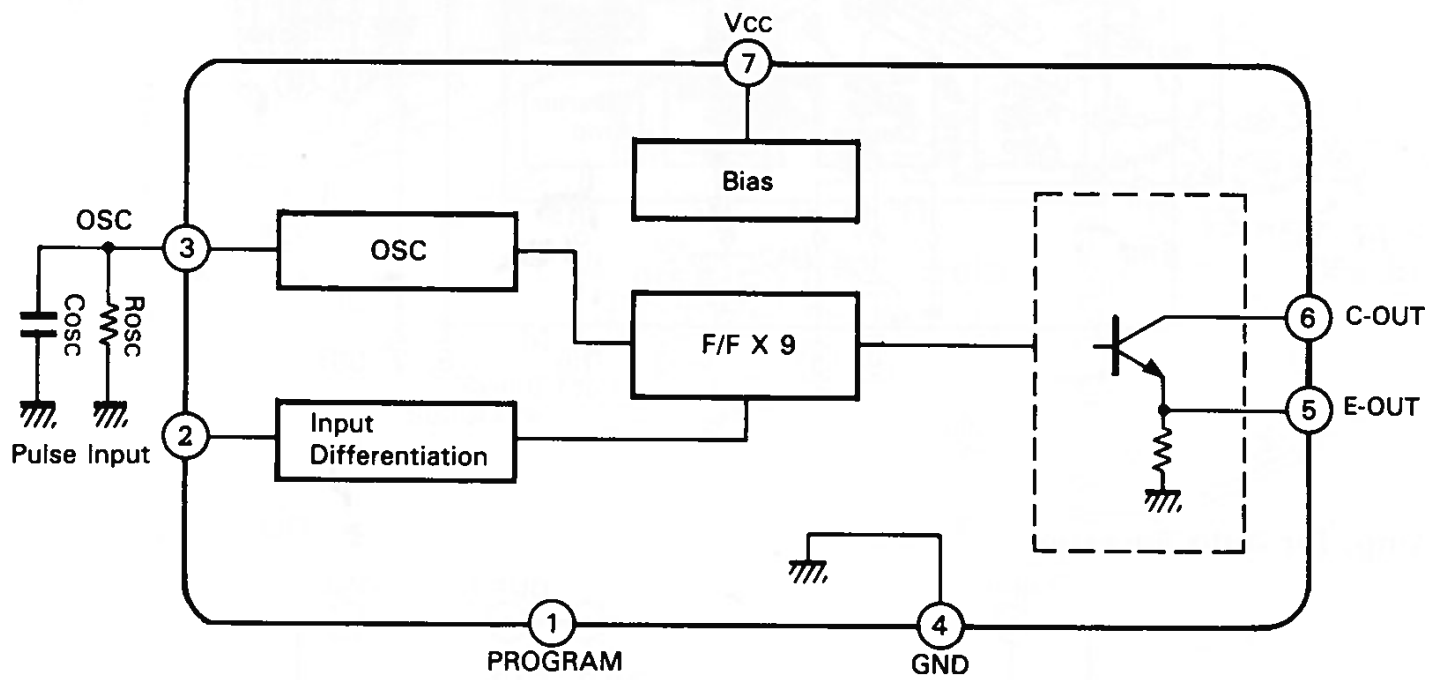
•LA2220 (Traffic Information SK System)



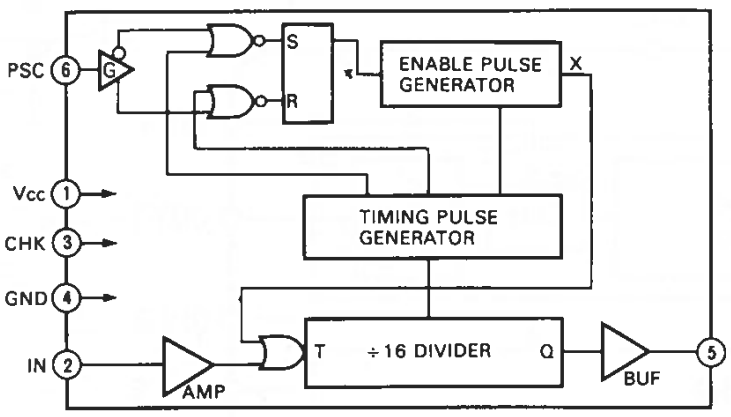
•TC9130P (4ch Touch Switch)

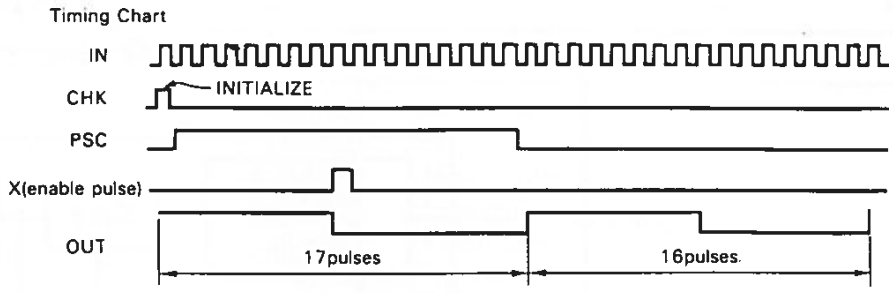


•TD6308AP (OSC for Mechanism Control IC)

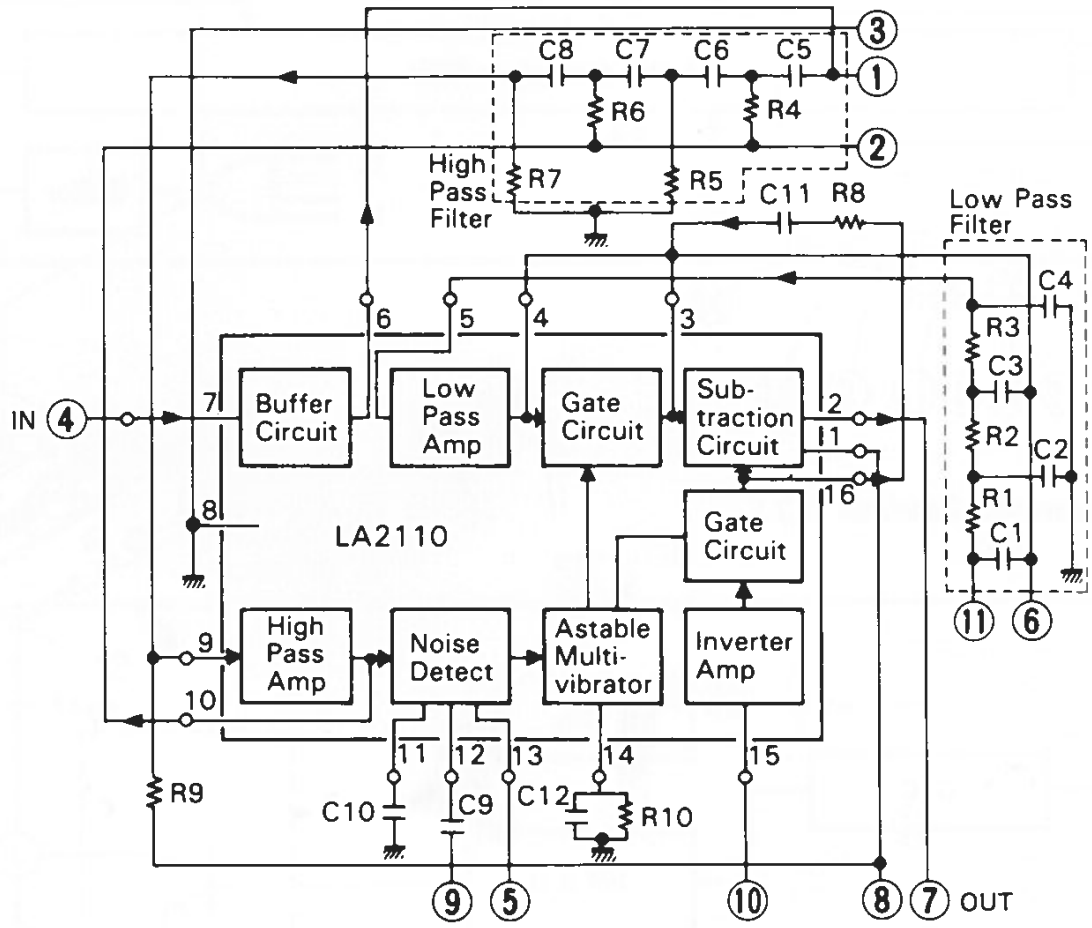


•μPB553AC (Prescaler)

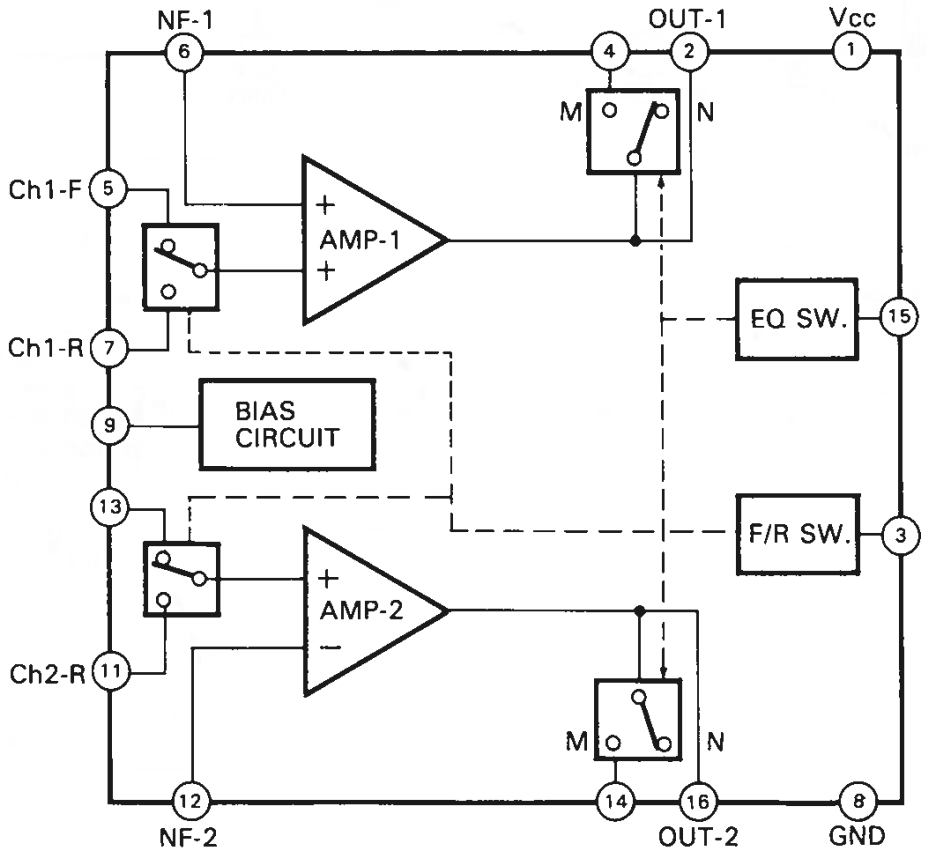




•NC3S301 (FM Noise Canceller)



•TA7405P (Pre Amp. for Auto Reverse)



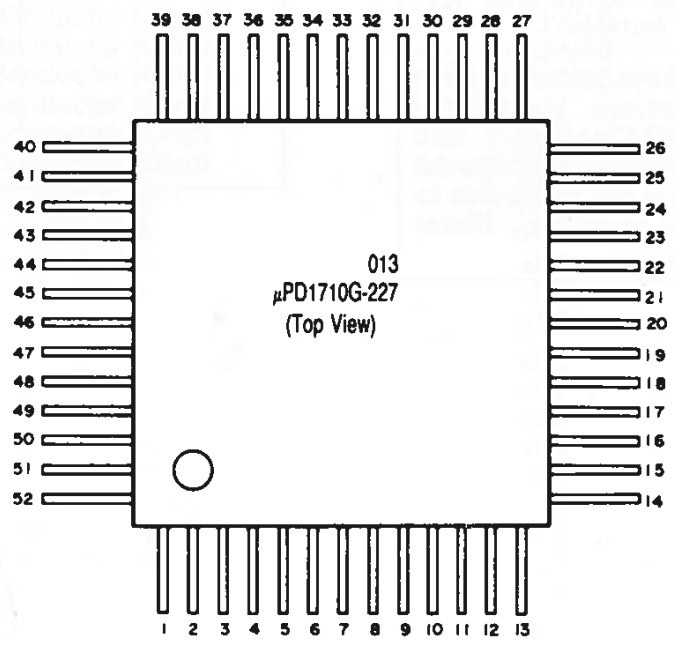
•Terminal Function of IC, μPD1710G-013<EU, SA Model>/227•526<XX Model>

Pin No.	Label	Input/Output	Description
2	MUTE	Output	Terminal for outputting muting. Active at Low level. (1)When received signal band changes; (2) When TAPE (PD_3) changes; (3) When preset memory is called; (4) When MANUAL UP/DOWN operates; (5) When AUTO UP/DOWN operates; (6) When AUTO SCAN operates; (7) When preset memory SCAN operates.
3, 4	X_2, X_1	Input, Output	Terminals for connecIting a quartz oscillator (4.5 MHz)
5, 6, 7	V_{DD}	—	Power supply terminal (+5V)
8, 11	E_{01}, E_{02}	Output	Terminals for deriving PLL error outputs in order to form PLL by externally connecting a low-pass filter.
9, 10	GND	—	Ground terminal
12	CE	Input	Terminal for inputting a chip enable signal: normal operation at High-level, back-up operation at Low-level.
13	SD	Input	Terminal for inputting Auto-Search stop. Stopped at High-level.
15	FM	Input	Terminal for inputting a count signal from prescaler through AC capacitor coupling.
16	PSC	Output	Terminal for outputting control signals to prescaler (μPB553AC)
17	SK-SD	Input	Termina for inputting SK STOP signal. Stopped at LOW-level.
18	AM	Input	Terminal for inputting V_{CO} of AM and LM through AC coupling.

Pin No.	Label	Input/Output	Description
20	MEMO-RY	Output	Terminal for outputting a High-level signal for 5 secs when memory write is being enabled.
25	SDK	Output	Terminal for outputting SK set signal. When SDK switch is depressed, output level is inverted.
26 <013>	MW	Output	Terminal for outputting a High-level signal in MW.
28 <013>	LW	Input	Terminal for outputting a High-level signal in LW.
29	FM <013> FM/MW <227, 526>	Output	Terminal for outputting an FM-tuner control output. At High level when TAPE terminal is at Low-level (radio mode) and additionally FM is being selected. <013> At Low-level in MW. <227,526>
31	TAPE	Input	Terminal for inputting tape modes. Tape mode is selected by High-level and radio mode is selected by Low level.
32	KEY ACK	Output	Terminal for outputting on audible-sound to confirm each key operation.
33	Voo	—	Power supply terminal (+5V) connected to pin 7 internally.
34~38 40 41	Sa~Se Sf Sg	Output Output Output	Terminal for outputting 7-segment signal for display digits. Simultaneously used as key-matrix alternate switches and key lease of momentary switch. Active at High-level (3V).
42~44,46	K0~K3	Input	Terminals for inputting momentary key and initializing matrix sense signals.
48~52 1	D6~ D21	Output	Terminals for outputting displayed figure signals. D_2 is used for diode-matrix lease. Active at High-level.

Note: Pins 14, 19, 21~24, 27, 30, 33, 39, 45, and 47 among 52 pins are not used.

Fig. 1



4. DESCRIPTION OF EACH FUNCTION OF IC μPD1710G & MOMENTARY SWITCHES

•Momentary-Switch Functions

fIC2 PIN NO.	K3 (46)	K2 (44)	K1 (43)	K0 (42)	fIC4, μPD1710G Type
Sa (34)	AU	AD	SCAN		ALL Type
Sb (35)	MU	MD	M5	M6	ALL Type
Sc (36)	M1	M2	M3	M4	ALL Type
Sd (37)	SDK				013 Type
Se (38)	RECALL (NOT 013 Type)	PRESET SCAN	MEMORY		ALL Type
Sf (40)	FM, FM1, BAND		LW	MW	013 Type
Sf (42)	FM, FM1, BAND	FM2	FM3	MW	227 Type

•Description of Each Function

Labels	Description
AU AD	These are UP and DOWN keys for automatic tuning. When started by the use of these keys, the automatic research operation is being executed until SD terminal changes to High-level. When one of these keys is depressed again during the search operation, the operation stops. The searching speed is about 40ms per step in FM and MW and about 80ms per step in CW.
MU MD	These are UP and DOWN keys for manual tuning. Whenever depressed once the frequency changes by one step. When kept depressed for 0.5 sec or more, the tuning operation is quickly forwarded. The quickforward speed is about 20ms per step in FM and 40ms per step in MW and LW.
SCAN	This is a key for scanning in the up-direction only during automatic tuning. That is, when SD terminal changes to High-level during automatic tuning, the frequency at that time is held as it is for 5sec. When nothing is made thereafter, the automatic tuning operation restarts. By depressing this key once again for 5sec, the scanning operation is released.
M1 ~ M6	These are preset memory buttons. Each independent memory unit is provided internally for each band for calling each preset station. To write any desired station in the memory, depress one of M1 to M6 after having depressed MEMORY button.
FM FM-1 BAND MW LW	These are band-selecting keys for calling each independent band, respectively. In combination of initializing BAND-CHANGE-1 and BAND-CHANGE-2, it is possible to change the function from independent FM operation to one-button band selecting operation. (Refer to Paragraph ''Initialization'')
PRESET SCAN	This is a key for calling the preset memory automatically during each 5sec. When this key is depressed once more during the holding operation of 5sec, the scanning operation stops at the present preset memory.
RECALL (227 Type)	This is a key for selecting from clock display to frequency display. After 5sec, the display is returned automatically to the original state.
MEMORY	This is key for holding the memory output port (pin no. 20) at High-level for 5sec when depressed. When one of M1 to M6 is depressed during this holding operation, the writing ends. After 5sec, the holding operation is automatically released. When it is desired to release this operation within 5sec, depress this memory key twice. In Model Nos. 227 and 017, it is possible to adjust the minute and the hour by depressing this switch together with MU/MD keys during clock display. Take care, depress this key before depressing MU/MD keys.
SDK	When this key is depressed, the SDK indicator lights up and you can select and listen to only those FM stations broadcasting traffic information. When the SDK key is depressed and tuning is performed using the TUNE/SEEK key, stations broadcasting traffic information can be picked up as a result of the discrimmination (SK) signals transmitted by only those stations. The SK indicator lights at this time. SK indicator: When FM band key and SDK key are depressed and a station broadcasting traffic information is tuned in, the indicator lights.

5. ADJUSTMENT

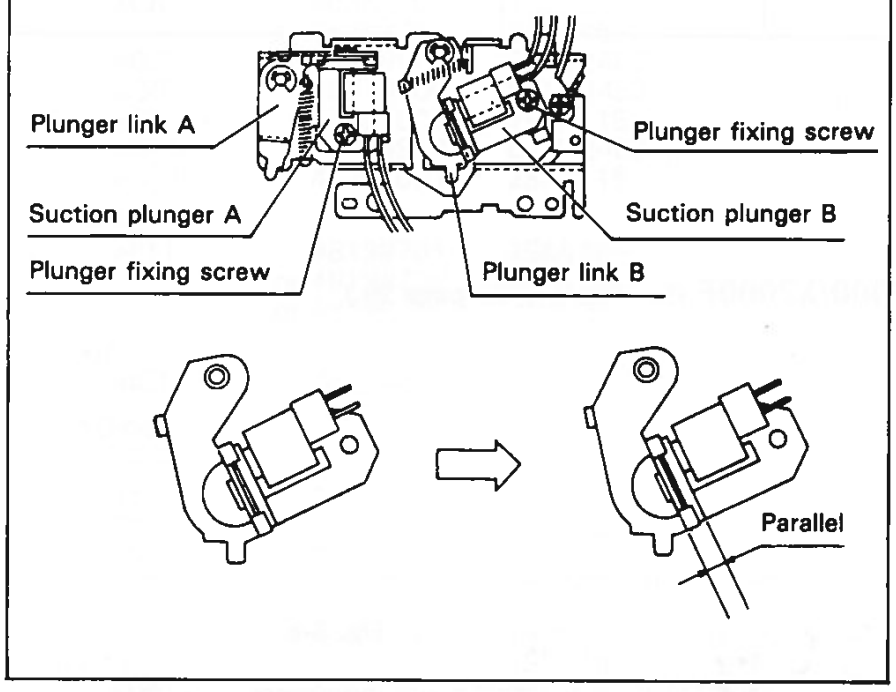
5-1. Cassette Deck Adjustment

1) Mecha. Adjustment

a. Plunger B

In case suction plunger is released in FF operation, fix the plunger so that the suction surface of suction plunger B is in parallel to the bent surface of plunger link B, and then bond the rear side of the screws.

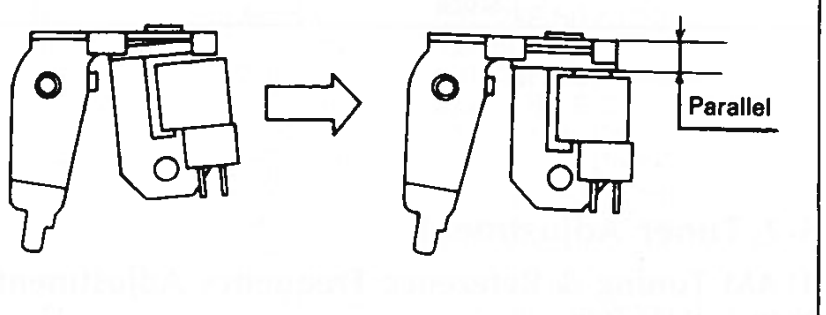
Fig. 5-1



b. Plunger A

In case suction plunger is released in REW operation, fix the plunger so that the suction surface of suction plunger A is in parallel to the bent surface of plunger link A, and then bond the rear side of the screws.

Fig. 5-2



2) Head Azimuth Adjustment

Note: 1. Before this adjustment, clean P.B. head surface.
2. For this adjustment, use Sansui Test Tape, SCT-F10K.
3. Set the Dolby NF switch to be OFF.
4. Set the VOL control to the MAX. position.
5. Set the tone control and BAL controls to the mechanical center position.
6. Connections are shown in Fig. 5-3.

Fig. 5-3

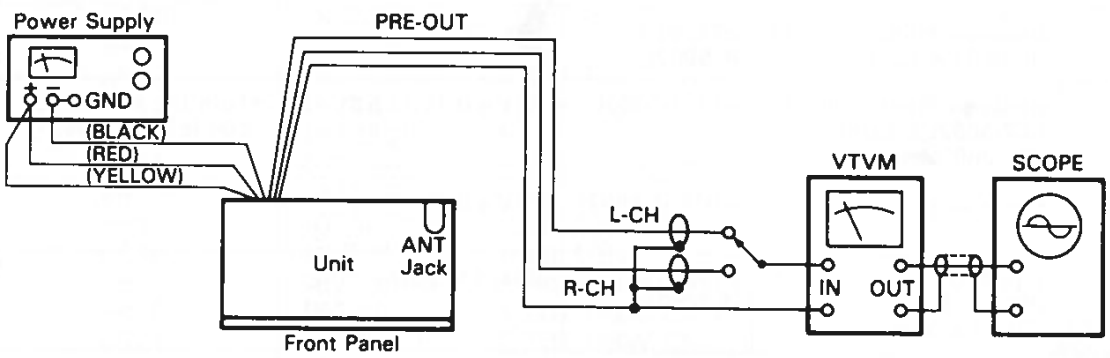
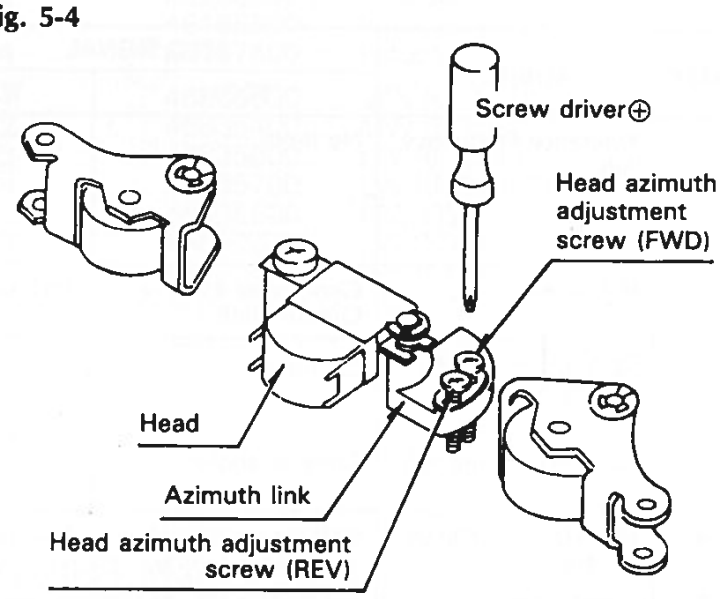


Fig. 5-4



STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	P.B. Head Adj.	L or R-CH PRE-OUT VTVM and Scope	Playback the TEST TAPE SCT-F10K	Adjust the azimuth adjusting screw in Fig. 5-4.	MAX. Output both channels on FWD and REV PLAY	After this adjustment, lock the screw with paint.

3) Playback Adjustment

Note: 1. Before this adjustment, clean P.B. head surface.
2. For this adjustment, use Sansui Test Tape, SCT-L400.
3. Set the Dolby NF switch to be OFF.
4. Set the VOL control to the MAX position.
5. Set the tone control and BAL controls to the mechanical center position.

STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	Playback Level Adj.	L or R-CH PRE-OUT VTVM and Scope	Playback (FWD) the TEST TAPE SCT-L400	Adjust vVR1L for L-CH and vVR1R for R-CH (G-2039)	400mV ± 2dB both channels on FWD and REV PLAY	See Fig. 5-8 on Page 20.

5-2. Tuner Adjustment

1) AM Tuning & Reference Frequency Adjustment For GT-X7000/X7000F (See Fig. 5-9 on page 20.)

Note: 1. SELECTOR ..... AM
2. Set the tone control, the volume and balance controls to the mechanical center position.
3. Connections are shown in Fig. 5-5, 5-6.

Fig. 5-5

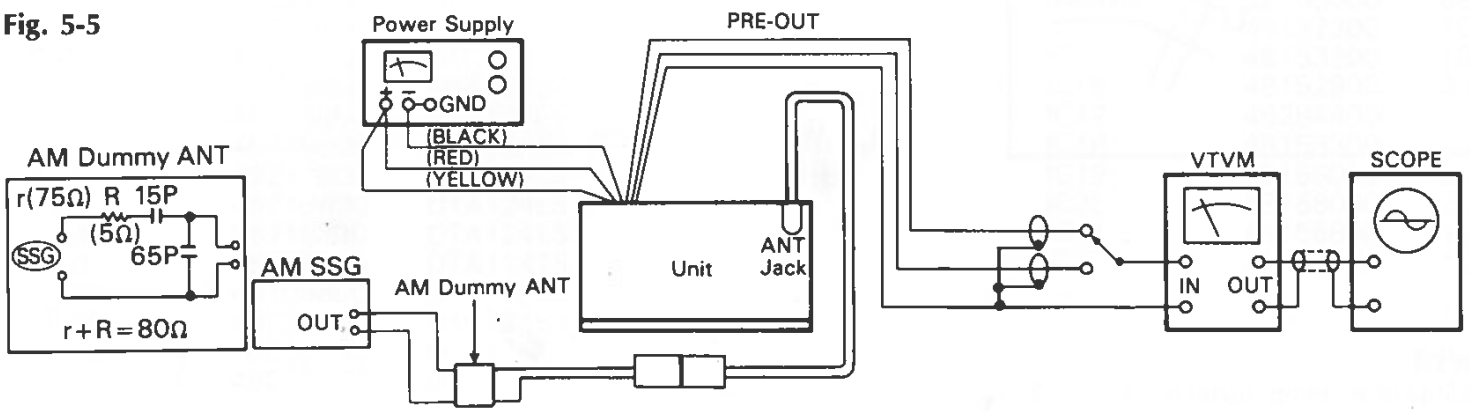
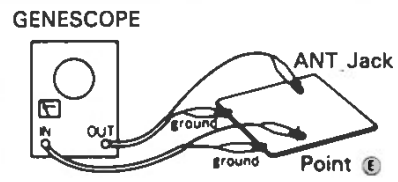


Fig. 5-6



STEP	SUBJECT	FEED SIGNAL FROM	FEED SIGNAL TO	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
1.	Reference Frequency Adj.	No Input	—	Between Point© (Pin 4 of F-5082) through 100pF Capacitor & Earth Freq. Counter •See Fig. 5-8 on Page 20.	fTC1 (G-2033)	1854kHz ± 10Hz	•Set the display to 1404kHz.
						1850kHz ± 10Hz	•Set the display to 1400kHz (10kHz step)
2.	IF Coil Adj.	Genescope 450kHz Output 70dB	ANT Jack	Between PointⒺ (Pin 13 of eIC1) & Earth	eT4, eT5 (F-5082)	Max. Waveform	
3.	522kHz (or 520kHz) Tuning Adj.	No Input	—	Between PointⒻ (Pin 3 of F-5082) & Earth DC Volt Meter	eT3 (F-5082)	1.2V ± 0.1V	•Turn the MW OSC coil (eT3) slowly.
	1620kHz Tuning Adj.	Same as above	—	Same as above	eTC3 (F-5082)	8.2V ± 0.1V	
4.	603kHz (or 600kHz) RF Adj.	603kHz (or 600kHz) 30dB 400Hz (30% MOD.), AM SSG	ANT Jack	L or R-CH PRE-OUT VTVM & Scope	eT1, eT2 (F-5082)	Max. Output	
5.	1404kHz (or 1400kHz) RF Adj.	1404kHz (or 1400kHz) 30dB 400Hz (30% MOD.), AM SSG	Same as above	L or R-CH PRE-OUT VTVM & Scope	eTC1, eTC2 (F-5082)	Max. Output	
6.	Auto Stop Level Adj.	999kHz (9kHz Step) 1000kHz (10kHz Step) 45dB 400Hz (30% MOD.), AM SSG	Same as above	Digital Display	eVR1 (F-5082)	Tune the tuner to 999kHz (9kHz Step) or 1000kHz (10kHz Step) by using the Automatic Search tuning operation	•MANU ..... OFF

2) AM (MW) Tuning & Reference Frequency Adjustment For GT-X7000L (See Fig. 5-11 on page 20.)

Note: 1. BAND ..... MW
2. Set the tone control, the volume and balance controls to the mechanical center position.
3. Connections are shown in Fig. 5-5.

STEP	SUBJECT	FEED SIGNAL		MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
		FROM	TO				
1.	Reference Frequency Adj.	No Input	—	Between Point© (Pin 4 of G-2004) through 100pF Capacitor & Earth Freq. Counter •See Fig. 5-8 on Page 20.	fTC1 (G-2033)	1854kHz ± 10Hz	•Set the display to 1404kHz (9kHz Step).
2.	IF Coil Adj.	Genescope 450kHz Output 70dB	ANT Jack	Between Point Ⓔ (Pin 13 of eIC1) & Earth	eT7, eT8 (G-2004)	Max. Waveform	
3.	522kHz Tuning Adj.	No Input	—	Between Point Ⓕ (Pin 3 of G-2004) & Earth DC Volt Meter	eT5 (G-2004)	1.2V ± 0.1V	•Turn the MW OSC coil (eT5) slowly.
	1620kHz Tuning Adj.	Same as above	—	Same as above	eTC6 (G-2004)	8.2V ± 0.1V	
4.	603kHz RF Adj.	603kHz 30dB 400Hz (30% MOD.), AM SSG	ANT Jack	L or R-CH PRE-OUT VTVM & Scope	eT1, eT2 (G-2004)	Max. Output	
5.	1404kHz RF Adj.	1404kHz 30dB 400Hz (30% MOD.), AM SSG	Same as above	L or R-CH PRE-OUT VTVM & Scope	eTC1, eTC2 (G-2004)	Max. Output	
6.	Auto Stop Level Adj.	999kHz (9kHz Step) 45dB 400Hz (30% MOD.), AM SSG	Same as above	Digital Display	eVR1 (G-2004)	Tune the tuner to 999kHz (9kHz Step) by using the Automatic Search tuning operation	•MANU ..... OFF

3) LW Tuning Adjustment For GT-X7000L (See Fig. 5-11 on page 20.)

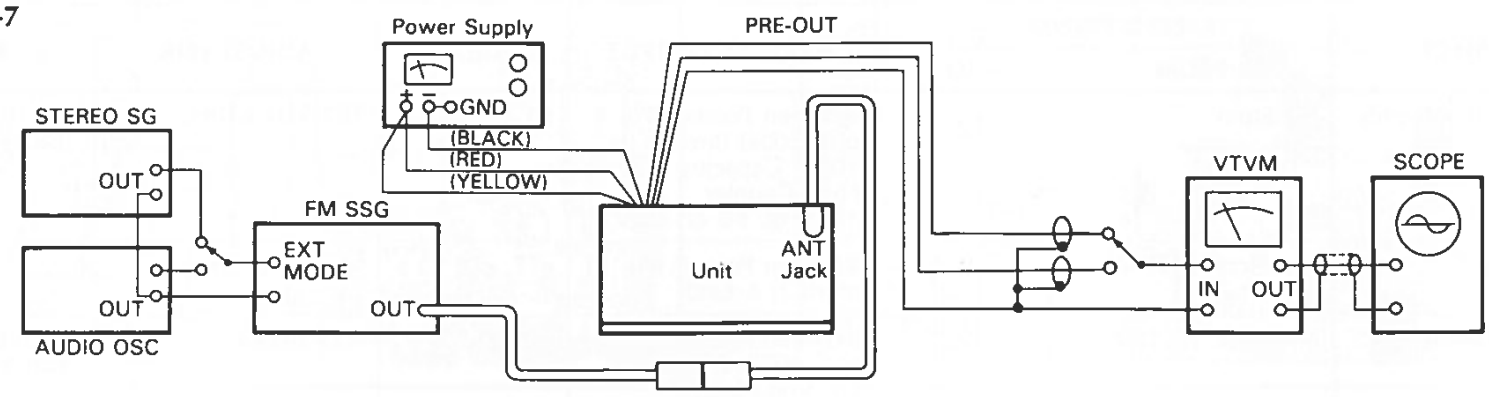
Note: BAND ..... LW

STEP	SUBJECT	FEED SIGNAL		MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
		FROM	TO				
1.	155kHz Tuning Adj.	No Input	—	Between Point Ⓕ (Pin 3 of G-2004) & Earth DC Volt Meter	eT6 (G-2004)	1.2V ± 0.1V	•Repeat procedures as stated in subject 1 & 2.
2.	281kHz Tuning Adj.	No Input	—	Same as above	eTC5 (G-2004)	8.2V ± 0.1V	
3.	170kHz RF Adj.	170kHz 30dB 400Hz (30% MOD.), AM SSG	ANT Jack	L or R-CH PRE-OUT VTVM & Scope	eT3, eT4 (G-2004)	Max. Output	
4.	260kHz RF Adj.	260kHz 30dB 400Hz (30% MOD.), AM SSG	Same as above	L or R-CH PRE-OUT VTVM & Scope	eTC3, eTC4 (G-2004)	Max. Output	

4) FM Adjustment (See Fig. 5-10 on page 20.)

Note: 1. BAND ..... FM
2. Set the tone control, the volume and balance controls to the mechanism center position.
3. FM MODE ..... MONO (STEP 1 & 2)
..... STEREO (STEP 3,4,5 & 6)
4. Connections are shown in Fig. 5-7.

Fig. 5-7



STEP	SUBJECT		FEED SIGNAL FROM	FEED SIGNAL TO	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
1.	IF Coil Adj.		98MHz 20dBf (14.8dB), 1kHz (100% MOD.), FM SSG	ANT Jack	Between Point© (Pin 15 of dIC1) & Earth DC Volt Meter	IFT Coil (F-5081)	Max. DC Volt	•See Fig. 5-11 & 5-12 on Page 20.
2.	Discriminator Coil Adj.	①	No Input	—	Between TP-1 & TP-2 DC Volt Meter	dT1 (F-5081)	DC 0V ± 50mV	•Repeat procedures as stated in subject ① & ②
		②	98MHz 65dBf (59.8dB), 1kHz (100% MOD.), FM SSG	ANT Jack	L or R-CH PRE-OUT Dist Meter	dT2 (F-5081)	Min. THD	
3.	Pilot Cancelling Adj.		98MHz 65dBf (59.8dB.), FM SSG, Pilot 19kHz (9% MOD.), STEREO SG.	Same as above	Between Point Ⓗ (Pin 5 of dIC4) & Earth SCOPE	dVR4 (F-5081)	Min. 19kHz Pilot signal level	
4.	Separation Adj.		98MHz 65dBf (59.8dB) FM SSG, Pilot 19kHz (9% MOD.), L MODE 1kHz + Pilot (100% MOD.) STEREO SG.	Same as above	L-ch PRE-OUT VTVM & Scope	—	Read this indication on VTVM	
					R-CH PRE-OUT VTVM & Scope	dVR3 (F-5081)	−26 ~ −35dB from the indication above.	Confirm R-CH→L-CH
5.	Auto Noise Control Level Adj.		98MHz 45dBf (39.8dB), FM SSG, Pilot 19kHz (9% MOD.), L MODE 1kHz + Pilot (100% MOD.), STEREO SG.	Same as above	L-ch PRE-OUT VTVM & Scope	—	Read this indication on VTVM	
					R-ch PRE-OUT VTVM & Scope	dVR2 (F-5081)	−15dB from the indication above.	Confirm R-CH→L-CH
6.	Auto stop Level Adj.		98MHz ANT Input 35dBf (29.8dB) 1kHz (100% MOD.) FM SSG	Same as above	Digital Display	dVR1 (F-5081)	Tune the tuner to 98MHz by using the automatic search tuning operation.	•MANU ..... OFF •LOC ..... OFF
	Auto stop Level Adj. For LOCAL		98MHz ANT Input 55dBf (49.8dB) 1kHz (100% MOD.) FM SSG	Same as above	Digital display	dVR5 (F-5081)	Tune the tuner to 98MHz by using the automatic search tuning operation.	•MANU ..... OFF •LOC ..... ON
7.	SK Indicator lighting level Adj. For GT-X7000F		Station broadcasting traffic information is tuned in.		SK Indicator	rVR1 (G-2032)	Light up indicator	•SDK Switch .... ON •See Fig. 5-12 on page 20.
8.	125Hz Free Run Adj. For GT-X7000F		—	—	TP1 (G-2032) through high impedance prove Freq. Counter	rVR2 (G-2032)	125Hz	•SDK Switch .... ON •See Fig. 5-12 on page 20.

◆Technical Hint for FM Adjustment

- The impedance of FM antenna terminal is 75Ω. Therefore, connect coaxial cable (3C-2V etc.) between FM SG and antenna terminal when wiring.
- There are two kind in indication of FM SG output attenuator
  1. Attenuator with marking of 75Ω open ... open indication type.
  2. Attenuator with marking of 75Ω load or close ... load or close indication type.
- FM SG output level in this FM adjustment are described as open indication type. The right table shows relations among FM SG attenuator indication (dB), available power ratio (dBf) and antenna terminal voltalge (dB/μV) in each indication type.
  close indication type.

	FM SG Attenuator Indication	Available Power Ratio	Antenna Terminal Voltage
Open indication type	0 dB 60 dB	5.2 dBf 65.2 dBf	6 dB/μV 66 dB/μV
Load or close indication type	0 dB 54 dB	11.2 dBf 65.2 dBf	12 dB/μV 66 dB/μV

Fig. 5-8
G-2033 Main Board

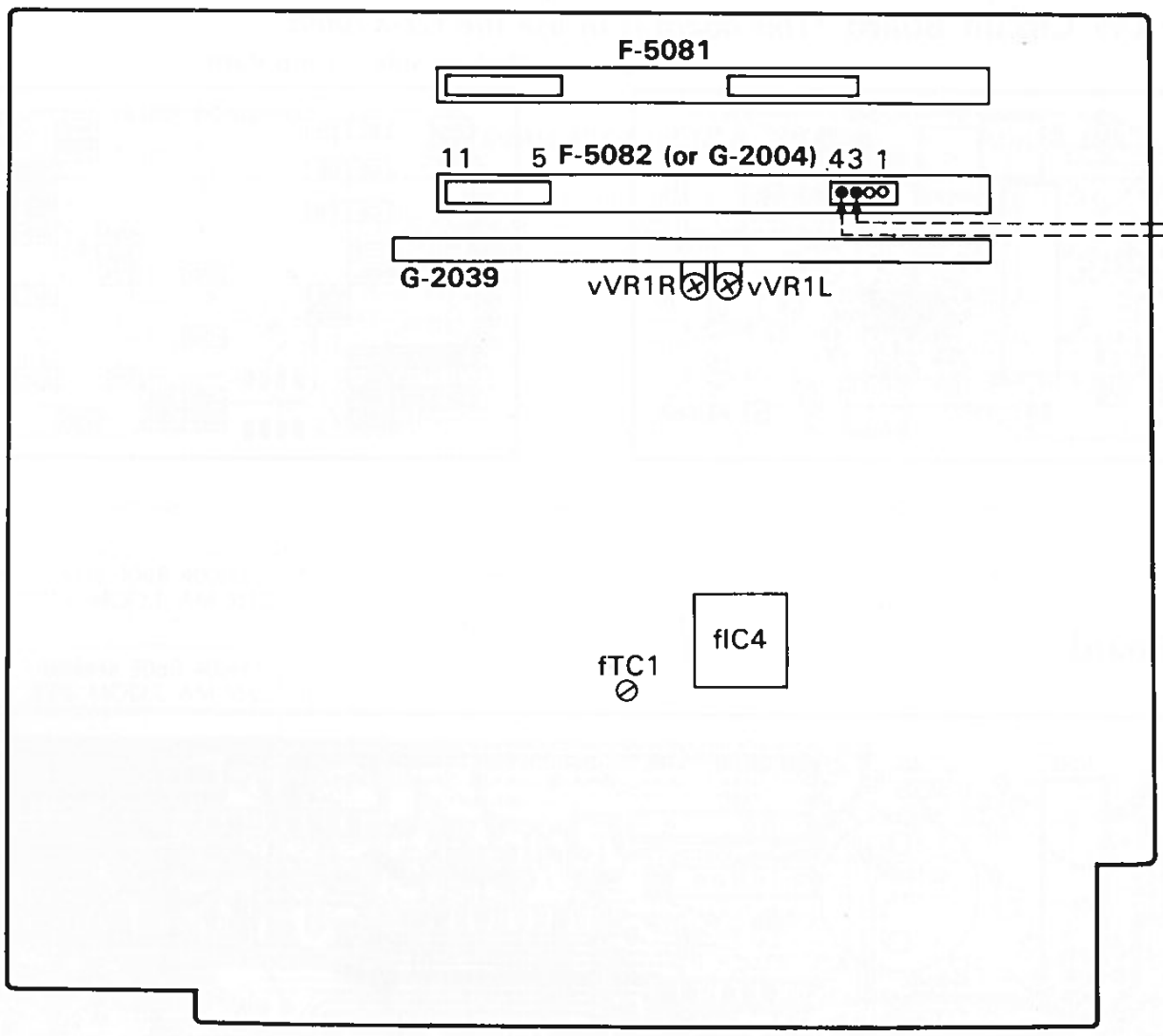


Fig. 5-9 F-5082 AM Board for GT-X7000/X7000F

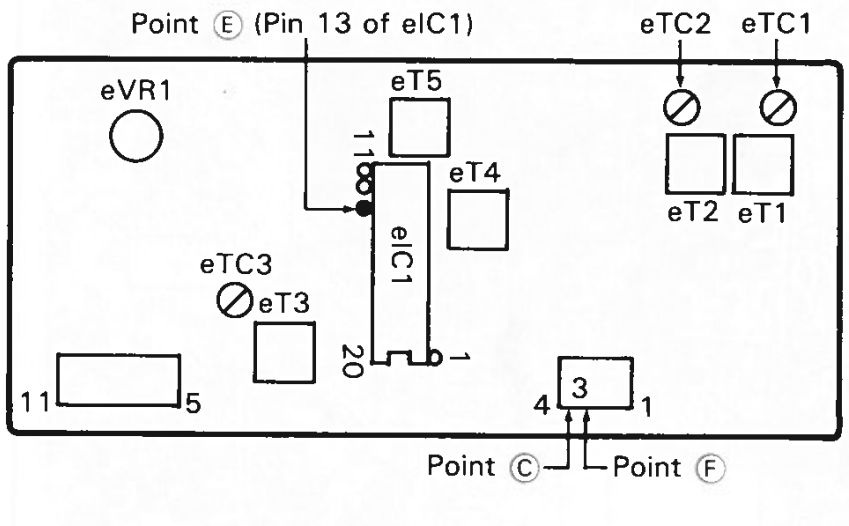


Fig. 5-11 G-2004 AM Board for GT-X7000L

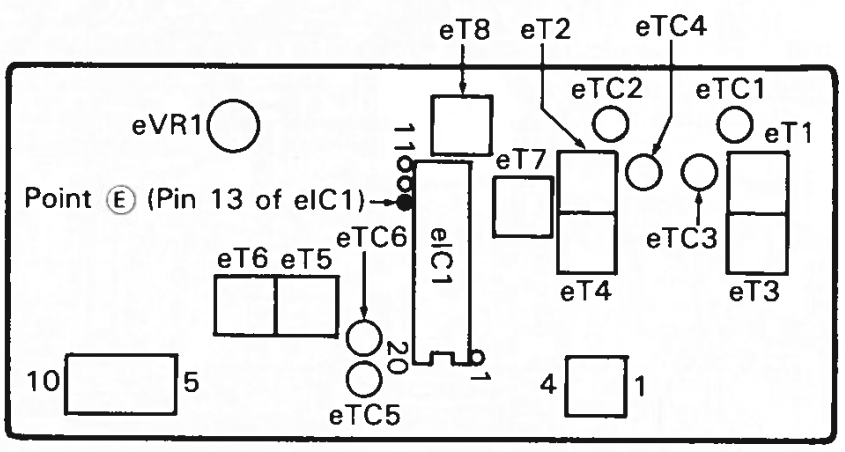


Fig. 5-10 F-5081 FM Board

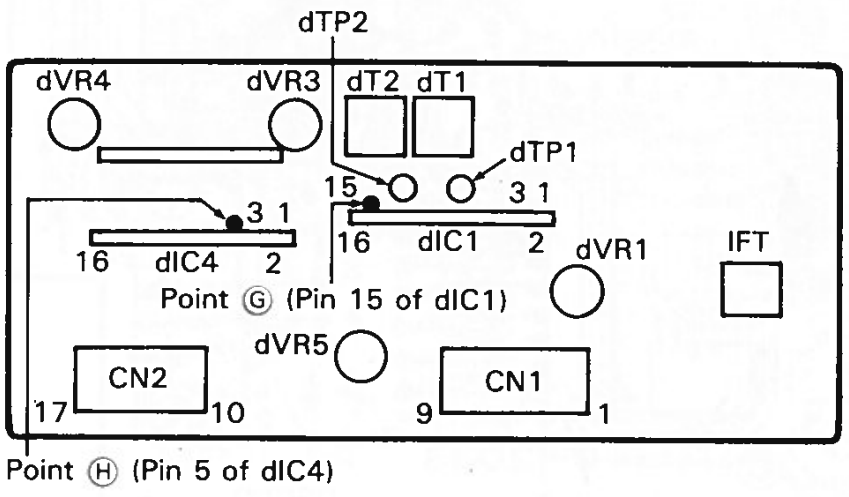
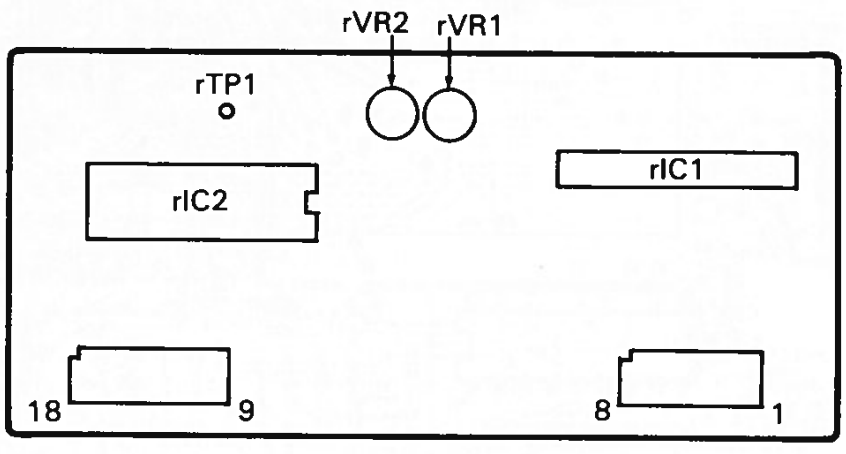


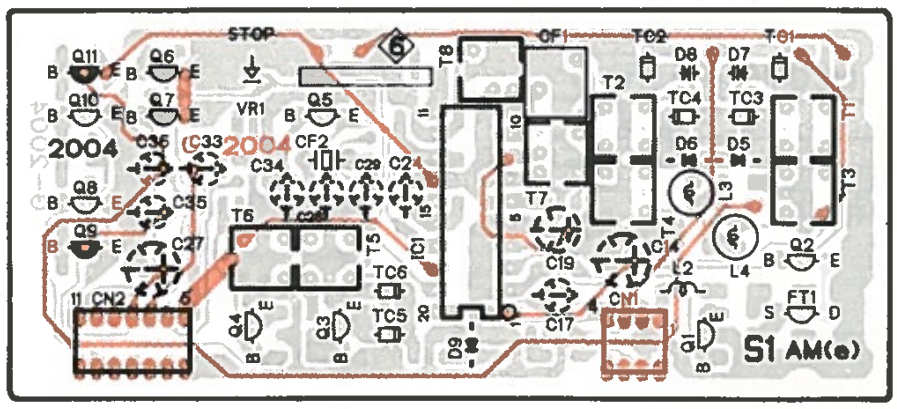
Fig. 5-12 G-2032 SDK Board for GT-X7000F



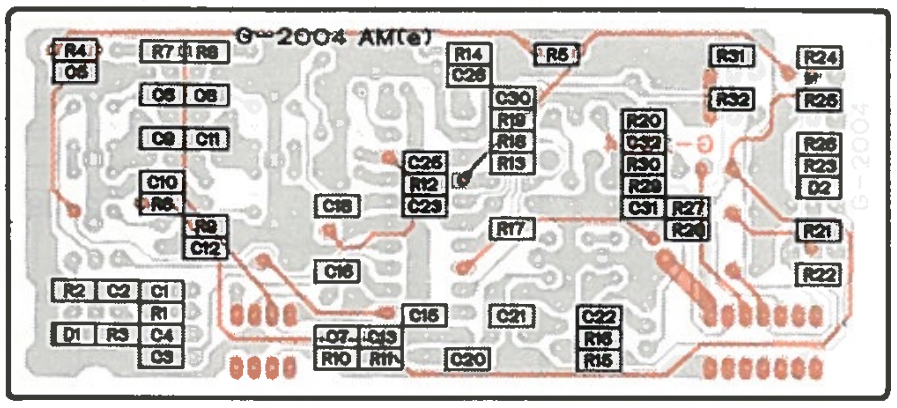
6. PARTS LOCATION ON BOARD

6-1. G-2004 MW & LW Circuit Board **This board is in use the GT-X7000L*

Component Side

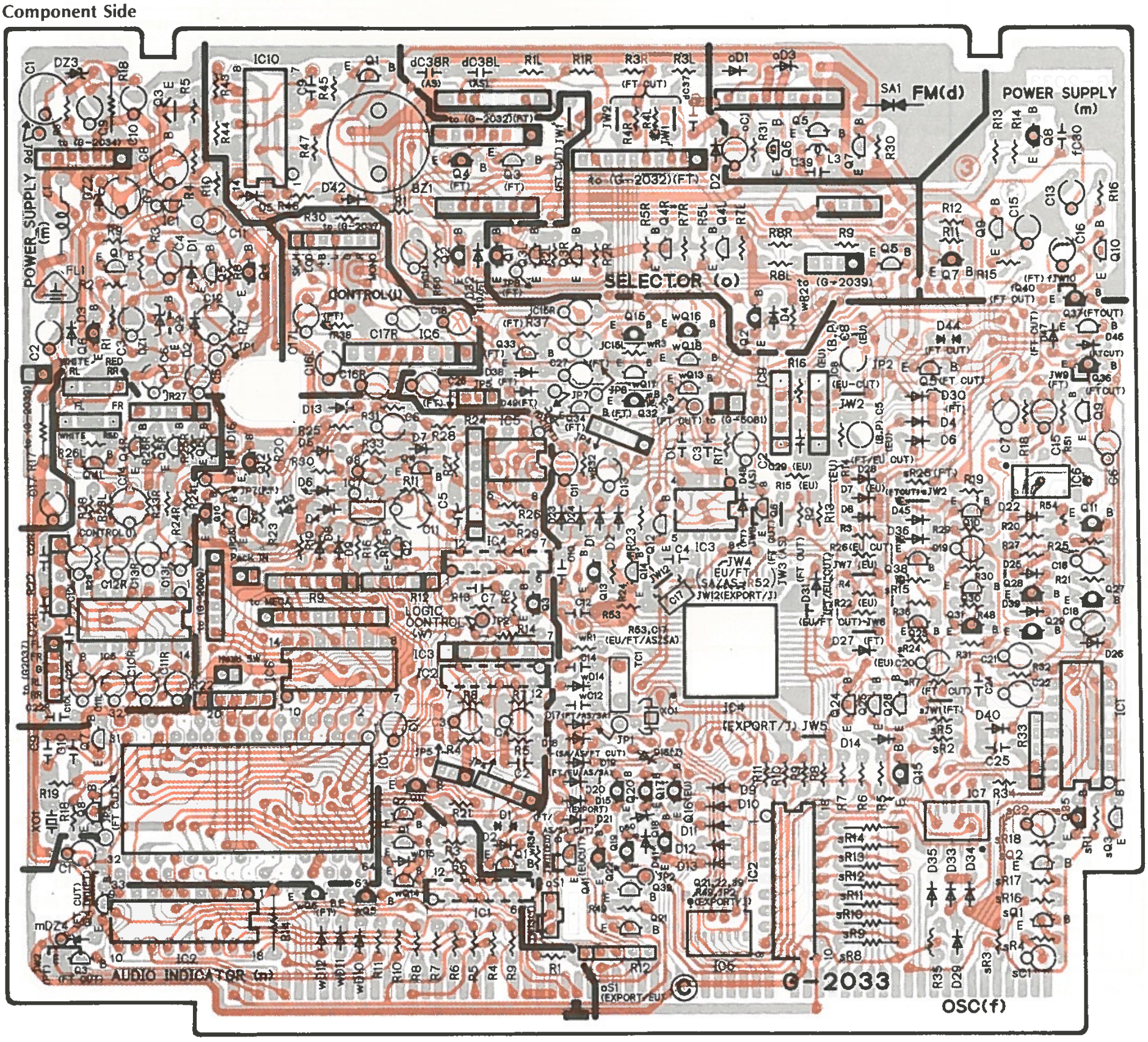


Pattern Side <Chip Parts>



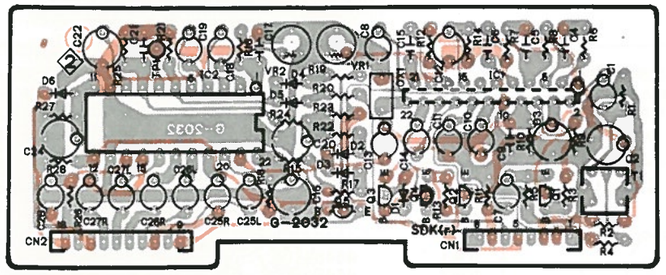
6-2. G-2033 Main Board

Component Side



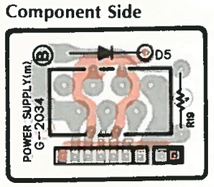
6-3. G-2032 Traffic Station Board **This board is in use the GT-X7000F*

Component Side



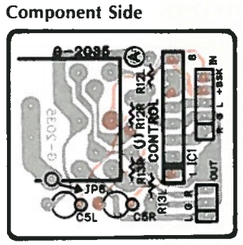
6-4. G-2034 DC Cord Jack Board

Component Side



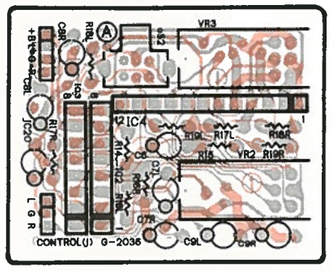
6-5. G-2035 LINE IN/OUT DIN Jack Board

Component Side



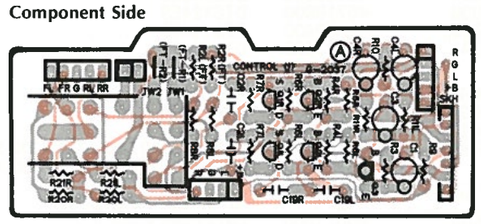
6-6. G-2036 Treble & Bass Volume Board

Component Side



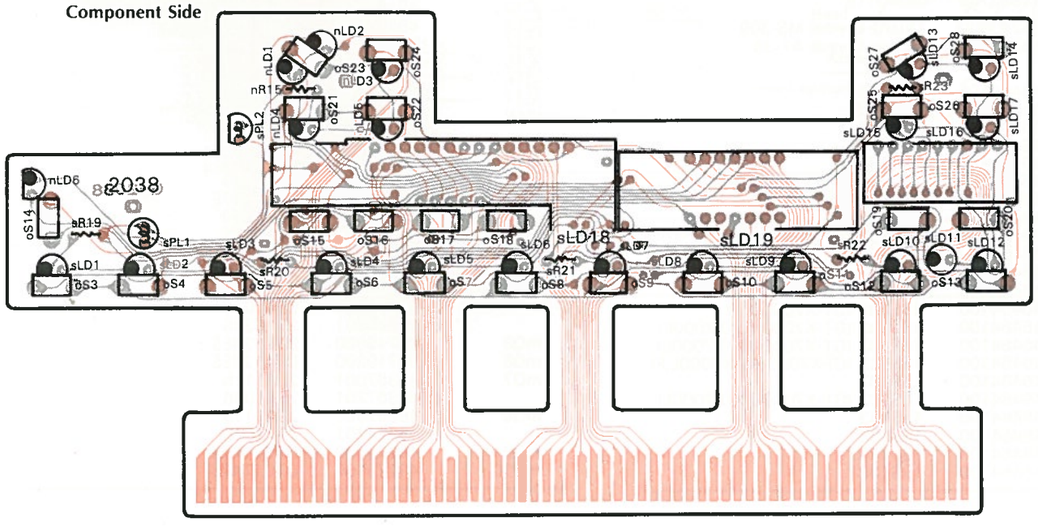
6-7. G-2037 Master Volume Board

Component Side



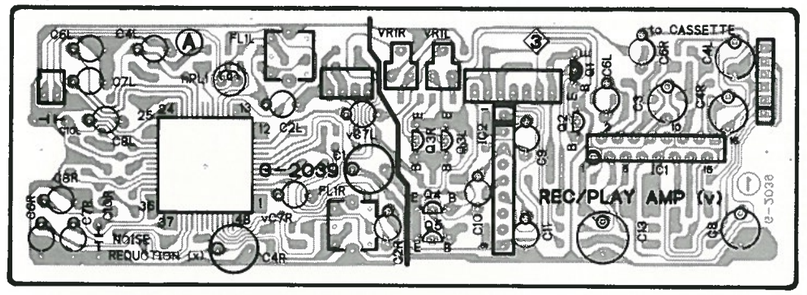
6-8. G-2038 Control Switch Board

Component Side

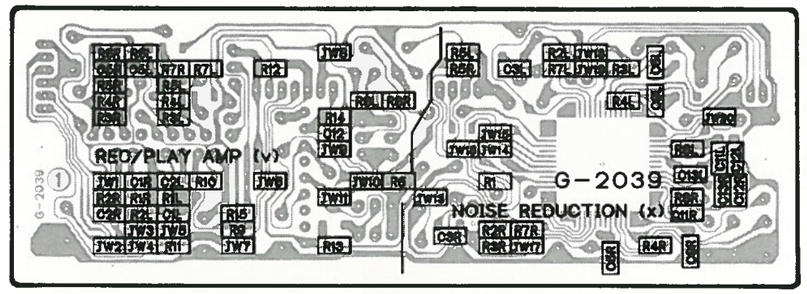


6-9. G-2039 Play Back Amp. Board

Component Side

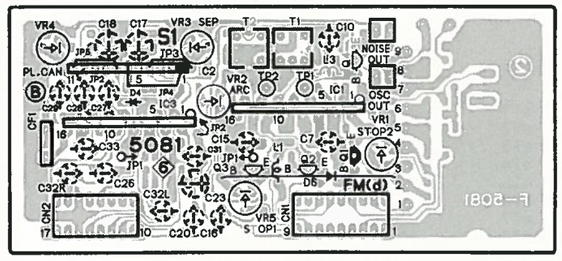


Pattern Side <Chip Parts>

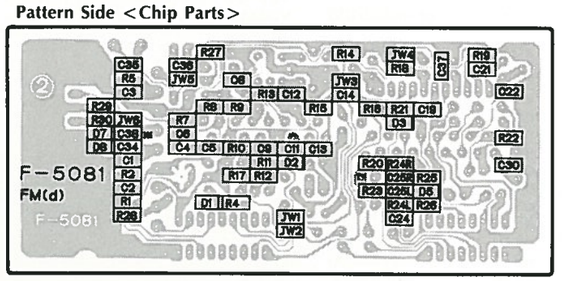


6-10. F-5081 FM Circuit Board

Component Side

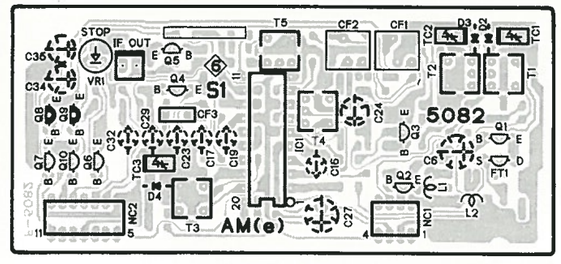


Pattern Side <Chip Parts>

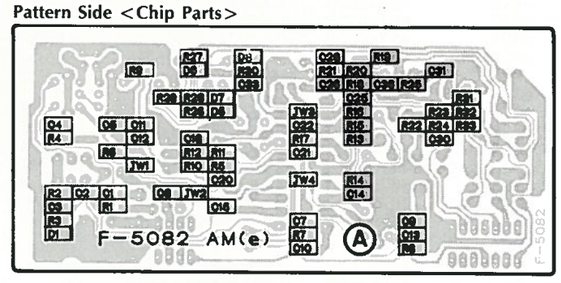


6-11. F-5082 AM Circuit Board **This board is in use the GT-X7000/X7000F*

Component Side



Pattern Side <Chip Parts>



7. ELECTRIC PARTS LIST OF BOARD

7-1. G-2004 MW & LW Circuit Board **This board is in use the GT-X7000L* (Stock No. 00924005)

Parts No.	Stock No.	Description
•Transistor		
eQ1	46604301	2SC3327
eQ2	03068501	2SC1844
eQ3	46367301	2SC2458
eQ4	46367301	2SC2458
eQ5	46367301	2SC2458
eQ6	46367101	2SC2603
	or 46367301	2SC2458
eQ7	46719900	DTC124ES
eQ8	46719900	DTC124ES
eQ9	46367001	2SA1115
eQ10	46719900	DTC124ES
eQ11	46367001	2SA1115
•FET		
eFT1	48198701	2SK519-F
	or 48198702	2SK519-H
	or 48198703	2SK519-J
•IC		
eIC1	46669000	LA1135
•Diode		
eD1	46852000	RLS-73 (Chip)
eD2	46852000	RLS-73 (Chip)
eD5	46728000	1SS216
eD6	46728000	1SS216
eD7	46254600	Variable Capacitance Diode 1SV100
	or 46835100	Variable Capacitance Diode 1SV149
eD8	46254600	Variable Capacitance Diode 1SV100
	or 46835100	Variable Capacitance Diode 1SV149
eD9	46254600	Variable Capacitance Diode 1SV100
	or 46835100	Variable Capacitance Diode 1SV149
eD11	46421300	IN60P SP
eR1	46745200	100Ω 1/8W Chip R.
eR2	46752400	100kΩ 1/8W Chip R.
eR3	46745200	100Ω 1/8W Chip R.
eR4	46744400	47Ω 1/8W Chip R.
eR5	46743600	22Ω 1/8W Chip R.
eR6	46746200	270Ω 1/8W Chip R.
eR7	46753200	220kΩ 1/8W Chip R.
eR8	46753200	220kΩ 1/8W Chip R.
eR9	46746400	330Ω 1/8W Chip R.
eR10	46747600	1kΩ 1/8W Chip R.
eR11	46750800	22kΩ 1/8W Chip R.
eR12	46744400	47Ω 1/8W Chip R.
eR13	46744400	47Ω 1/8W Chip R.
eR14	46745200	100Ω 1/8W Chip R.
eR15	46748800	3.3kΩ 1/8W Chip R.
eR16	46751600	47kΩ 1/8W Chip R.
eR17	46750000	10kΩ 1/8W Chip R.
eR18	46750000	10kΩ 1/8W Chip R.
eR19	46748600	2.7kΩ 1/8W Chip R.
eR20	46749200	4.7kΩ 1/8W Chip R.
eR21	46749200	4.7kΩ 1/8W Chip R.
eR22	46750000	10kΩ 1/8W Chip R.
eR23	46750000	10kΩ 1/8W Chip R.
eR24	46750000	10kΩ 1/8W Chip R.
eR25	46749200	4.7kΩ 1/8W Chip R.
eR26	46751600	47kΩ 1/8W Chip R.
eR27	46748800	3.3kΩ 1/8W Chip R.
eR28	46751600	47kΩ 1/8W Chip R.
eR29	46752400	100kΩ 1/8W Chip R.
eR30	46750000	10kΩ 1/8W Chip R.
eR31	46750000	10kΩ 1/8W Chip R.
eR32	46750200	12kΩ 1/8W Chip R.
eC1	46854500	0.022μF 50V Chip C.
eC2	46854500	0.022μF 50V Chip C.
eC3	46854500	0.022μF 50V Chip C.
eC4	46854900	0.047μF 50V Chip C.
eC5	46854900	0.047μF 50V Chip C.
eC6	46854500	0.022μF 50V Chip C.
eC7	46854500	0.022μF 50V Chip C.
eC8	46854500	0.022μF 50V Chip C.
eC9	46773600	39pF 50V Chip C.
eC10	46854900	0.047μF 50V Chip C.
eC11	46773800	47pF 50V Chip C.
eC12	46854900	0.047μF 50V Chip C.
eC13	46854500	0.022μF 50V Chip C.
eC14	46847400	100μF 10V E.C.
eC15	46795500	0.01μF 50V Chip C.
eC16	46854500	0.022μF 50V Chip C.
eC17	46850300	1μF 50V E.C.
eC18	46854500	0.022μF 50V Chip C.
eC19	46716500	22μF 16V E.C.
eC20	46856600	510pF 50V Chip C.
eC21	46855900	270pF 50V Chip C.
eC22	46854500	0.022μF 50V Chip C.
eC23	46854900	0.047μF 50V Chip C.
eC24	46849000	3.3μF 35V E.C.
eC25	46795500	0.01μF 50V Chip C.
eC26	46854500	0.022μF 50V Chip C.
eC27	46847400	100μF 10V E.C.
eC28	46848300	4.7μF 25V E.C.
eC29	46849000	3.3μF 35V E.C.
eC30	46854700	0.033μF 50V Chip C.
eC31	46854900	0.047μF 50V Chip C.
eC32	46795500	0.01μF 50V Chip C.
eC33	46849700	0.1μF 50V E.C.
eC34	46850300	1μF 50V E.C.
eC35	46848200	100μF 16V E.C.
eC36	46848200	100μF 16V E.C.
eTC1	46613200	Trimmer Capacitor 20pF
eTC2	46613200	Trimmer Capacitor 20pF
eTC3	46613300	Trimmer Capacitor 30pF
eTC4	46613300	Trimmer Capacitor 30pF
eTC5	46613300	Trimmer Capacitor 30pF
eTC6	46613300	Trimmer Capacitor 30pF
eCF1	46724500	Ceramic Filter SFP450H
	or 46724501	Ceramic Filter KBF450P-6AS
eCF2	46578100	Ceramic Filter BFU-450C10N
eL2	48286900	Inductor 10mH
eL3	46166800	Inductor 4.7μH
eL4	46167600	Inductor 100μH
eT1	46835300	MW RF Coil (1)
eT2	46835400	MW RF Coil (2)
eT3	46835600	LW RF Coil (1)
eT4	46835700	LW RF Coil (2)
eT5	46835500	MW OSC Coil
eT6	46835800	LW OSC Coil
eT7	46724300	AM IF Coil
eT8	46836000	AM IF Coil (2)
eVR1	46839600	10kΩ S.V.R., Auto Stop Level adj.

7-2. G-2033 Main Board

(Stock No. 01002401=GT-X7000-XX/Stock No. 01002407=GT-X7000-AS)
(Stock No. 01010705=GT-X7000L/(Stock No. 01011408=GT-X7000F)

Parts No.	Stock No.	Description
•Transistor		
dQ5	46604301	2SC3327
dQ6	46367101	2SC2603
	or 46367301	2SC2458
dQ7	46834300	DTC144ES
dSA1	48234800	Varistor DSP-301NL
dL3	48286100	Inductor 22μH
•Transistor		
fQ1	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
fQ2	46719800	DTA124ES
fQ5	48223100	DTC114TS
fQ6	48109800	DTC143ES

Parts List <G-2033>

Parts No.	Stock No.	Description
fQ9	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
fQ10	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
fQ11	46367001	2SA1115
	or 46367201	2SA1048
	or 48058601	2SA933S
fQ12	48223100	DTC114TS
fQ13	46719800	DTA124ES
fQ14	46719900	DTC124ES
fQ15	46719800	DTA124ES
fQ17	46719800	DTA124ES
fQ18	46719800	DTA124ES
fQ19	46719800	DTA124ES
fQ20	46719800	DTA124ES
fQ21	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
fQ22	46719800	DTA124ES
fQ23	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
fQ24	48223100	DTC114TS
fQ25	48223100	DTC114TS
fQ26	48223100	DTC114TS
fQ27	46719800	DTA124ES
fQ28	46719800	DTA124ES
fQ29	46719800	DTA124ES
fQ30	48217800	DTC114ES
fQ31	46719800	DTA124ES
fQ35	46719800	DTA124ES
fQ36	48229400	DTA114TS
fQ37	48109800	DTC143ES
fQ38	46719900	DTC124ES
fQ40	48229400	DTA114TS
fQ41	48223100	DTC114TS
•IC		
fIC1	48239100	TC9130P
fIC2	46730300	M54563P
fIC3	46253400	μPB553AC
fIC4	48120500	μPD1710G-227-03 (GT-X7000-XX)
	or 48123300	μPD1710G-526-01 (GT-X7000-XX)
	46610800	μPD1710G-013 (GT-X7000-AS/X7000L,F)
fIC5	48521300	LB1213M
fIC6	48521500	BA6251F
fIC7	48521500	BA6251F
fIC9	48570600	BX6283
fIC10	03604100	TC4011P
	or 46631900	M4011BP
	or 48063700	BU4011B
fXO1	46253600	Quartz Crystal MS-309
	or 46253601	Quartz Crystal AT-38
•Diode		
fD1	46464100	1SS133
fD2	46464100	1SS133
fD4	46464100	1SS133
fD5	46464100	1SS133
fD6	46464100	1SS133
fD8	46464100	1SS133
fD9	46464100	1SS133
fD10	46464100	1SS133
fD11	46464100	1SS133
fD12	46464100	1SS133
fD13	46464100	1SS133
fD14	46464100	1SS133
fD15	46464100	1SS133 (GT-X7000-XX)
fD17	46464100	1SS133 (GT-X7000-AS/X7000F)
fD18	46464100	1SS133 (GT-X7000-XX/X7000L)
fD19	46464100	1SS133 (GT-X7000-AS/X7000L,F)
fD20	46464100	1SS133
fD21	46464100	1SS133 (GT-X7000-XX/X7000L)
fD22	46464100	1SS133
fD23	46464100	1SS133
fD24	46464100	1SS133
fD25	46464100	1SS133
fD26	46464100	1SS133
fD27	46464100	1SS133
fD29	46464100	1SS133
fD33	46464100	1SS133
fD34	46464100	1SS133
fD35	46464100	1SS133
fD36	46464100	1SS133
fD39	46464100	1SS133
fD40	46464100	1SS133
fD41	46464100	1SS133
fD42	46464100	1SS133
fD44	46464000	MC921 (Chip)
fD45	46464100	1SS133
fD46	46464100	1SS133
fD47	46464100	1SS133
fD48	46078000	1SS133 (GT-X7000)
fR12	46342300	22kΩX4 1/8W A.R.
fR33	46343100	100kΩX4 1/8W A.R.
fC2	48152300	100μF 6.3V E.C.
fC6	48156000	2.2μF 50V E.C.
fC7	48153300	10μF 16V E.C.
fC8	48361500	2.2μF 35V E.B.
fC9	46693200	1500pF 50V F.C.
fC11	48153000	68μF 10V E.C.
fC13	48152300	100μF 6.3V E.C.
fC15	48153300	10μF 16V E.C.
fC16	48152800	33μF 10V E.C.
fC17	46284400	0.22μF 6.3V F.C. (GT-X7000-AS)
fC18	48153300	10μF 16V E.C.
fC19	48156000	2.2μF 50V E.C.
fC20	48156000	2.2μF 50V E.C.
fC21	48155800	1μF 50V E.C.
fC22	48155800	1μF 50V E.C.
fTC1	46444600	Trimmer Capacitor 30pF
fBZ1	48520700	Buzzer
•Transistor		
jQ4	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
jQ5	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
•IC		
jIC5	48348300	M5228P
jIC6	48313300	BA3112
jR22	46342700	47kΩX4 1/8W A.R.
jR27	46341900	10kΩX4 1/8W A.R.
jC10	48153100	4.7μF 16V E.C.
jC11	48153100	4.7μF 16V E.C.
jC12	48153300	10μF 16V E.C.
jC13	48153300	10μF 16V E.C.
jC14	48152900	47μF 10V E.C.
jC15	48156000	2.2μF 50V E.C.
jC16	48151900	22μF 6.3V E.C.
jC17	48153100	4.7μF 16V E.C.
jC18	48153300	10μF 16V E.C.
•Transistor		
mQ1	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
mQ2	48518701	2SD1760
mQ3	03070301	2SC1827
	or 03083901	2SD313HP
	or 46546701	2SD880
mQ4	46367001	2SA1115
	or 46367201	2SA1048
	or 48058601	2SA933S
mQ5	46719900	DTC124ES
mQ6	46719800	DTA124ES
mQ7	46367001	2SA1115
	or 46367201	2SA1048
mQ8	46367001	2SA1115
	or 46367201	2SA1048
mQ9	48223100	DTC114TS
mQ10	48223100	DTC114TS

Parts List <G-2033>

Parts No.	Stock No.	Description
•IC		
mIC1	48065900	M5278L56
•Diode		
mD1	46464100	1SS133
mD2	46464100	1SS133
mD3	46464100	1SS133
•Zener Diode		
mDZ1	48554300	MTZ10CT-77
mDZ2	48554300	MTZ10CT-77
	or 48554400	MTZ10DT-77
mDZ3	48552300	MTZ5.6AT-77
	or 48552400	MTZ5.6BT-77
	or 48552500	MTZ5.6CT-77
mDZ4	48552600	MTZ6.2AT-77
	or 48552700	MTZ6.2BT-77
	or 48552800	MTZ6.2CT-77
mC1	46929100	100μF 16V E.C.
mC2	46929100	100μF 16V E.C.
mC3	46929100	100μF 16V E.C.
mC4	46929100	100μF 16V E.C.
mC5	46929100	100μF 16V E.C.
mC6	46929100	100μF 16V E.C.
mC7	48153700	47μF 16V E.C.
mC8	48153700	47μF 16V E.C.
mC9	48153300	10μF 16V E.C.
mC10	48153300	10μF 16V E.C.
mC11	48153300	10μF 16V E.C.
mC12	48153600	33μF 16V E.C.
mC13	48153000	68μF 10V E.C.
mC14	48153000	68μF 10V E.C.
mC15	48155800	1μF 50V E.C.
mC16	48155800	1μF 50V E.C.
mFL1	46271100	Filter
mL1	46273800	50UH Filter Coil
•Transistor		
nQ1	48223100	DTC114TS
nQ2	48223100	DTC114TS
nQ3	46719900	DTC124ES
nQ4	48223100	DTC114TS
•IC		
nIC1	46933800	DT5C114E
nIC2	46730300	M54563P
•Transistor		
oQ1	46719800	DTA124ES
oQ2	46719800	DTA124ES
oQ3	46540801	2SC2878
	or 46604301	2SC3327
oQ4	46540801	2SC2878
	or 46604301	2SC3327
oQ5	48217800	DTC114ES
•Diode		
oD1	46464100	1SS133
oD2	46464100	1SS133
oD3	46464100	1SS133
oD4	46464100	1SS133
oC1	48153100	4.7μF 16V E.C.
oS1	46394000	Slide SW., 9k/10k (GT-X7000-XX/X7000L)
•Transistor		
sQ1	46719900	DTC124ES
sQ2	46719900	DTC124ES
sQ3	46719900	DTC124ES
sC1	48153300	10μF 16V E.C.
sC2	48153300	10μF 16V E.C.
•Transistor		
wQ1	46719900	DTC124ES
wQ2	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
wQ3	46719800	DTA124ES
wQ4	46719900	DTC124ES
wQ5	46719800	DTA124ES
wQ7	46719900	DTC124ES
wQ8	46719900	DTC124ES
wQ9	46719900	DTC124ES
wQ10	48370501	2SA1150
wQ11	46719800	DTA124ES
wQ12	46719800	DTA124ES
wQ13	48223100	DTC114TS
wQ14	48223100	DTC114TS
wQ15	46719800	DTA124ES
wQ16	46719800	DTA124ES
wQ17	46719900	DTC124ES
wQ18	46719900	DTC124ES
•IC		
wIC1	48507800	μPD7519-M311
wIC2	46933800	DT5C114E
wIC3	48499600	TD6308AP
wIC4	46933800	DT5C114E
wIC5	48521200	IR9393
wIC6	48518100	IR2415
wIC7	48065800	M5278L05
wXO1	46925800	Ceramic OSC Element KBR 4.19M
•Diode		
wD1	46464000	MC921 (Chip)
wD2	46464100	1SS133
wD3	46464100	1SS133
wD4	46464100	1SS133
wD5	46464100	1SS133
wD6	46464100	1SS133
wD7	46464100	1SS133
wD8	46464100	1SS133
wD9	46464100	1SS133
wD10	46464100	1SS133
wD11	46464100	1SS133
wD12	46464100	1SS133
wD13	46464100	1SS133
wD14	46464100	1SS133
wD15	46464100	1SS133
wR9	46722100	10kΩX5 1/8W A.R.
wR12	46341900	10kΩX4 1/8W A.R.
wR22	46341900	10kΩX4 1/8W A.R.
wR24	48521600	47kΩ A.R.
wC1	48152300	100μF 6.3V E.C.
wC3	48153100	4.7μF 16V E.C.
wC4	48153100	4.7μF 16V E.C.
wC6	48153100	4.7μF 16V E.C.
wC8	48153300	10μF 16V E.C.
wC11	48152000	33μF 6.3V E.C.

7-3. G-2032 Traffic Station Board

This board is in use the GT-X7000F **(Stock No. 01011308)**

Parts No.	Stock No.	Description
•Transistro		
rQ1	46367101	2SC2603
	or 46367301	2SC2458
rQ2	48223100	DTC114TS
rQ3	46719900	DTC124ES
rQ4	48229600	DTA114ES
rQ5	46719900	DTC124ES
•IC		
rIC1	48306200	LA2220
rIC2	46836500	LA2211
rOX1	48272800	Ceramic Element CSB456
•Diode		
rD1	46464100	1SS133
rD2	46464100	1SS133
rD3	46464100	1SS133
rD4	46464100	1SS133
rD5	46464100	1SS133

Parts List <G-2032>

Parts No.	Stock No.	Description
rR6	48344800	1.8kΩ 1/6W M.R.
rR7	48344600	160Ω 1/6W M.R.
rR8	48345000	47kΩ 1/6W M.R.
rC1	46928500	10μF 16V E.C.
rC2	46928400	100μF 10V E.C.
rC3	46928400	100μF 10V E.C.
rC4	46692800	1000pF 50V F.C.
rC5	46692800	1000pF 50V F.C.
rC6	46693600	2200pF 50V F.C.
rC7	46928500	10μF 16V E.C.
rC8	46931000	0.47μF 50V E.C.
rC9	48330600	0.47μF 50V E.C.
rC10	46931000	0.47μF 50V E.C.
rC11	46930900	0.33μF 50V E.C.
rC12	46709100	220μF 4V E.C.
rC13	46928500	10μF 16V E.C.
rC14	46928500	10μF 16V E.C.
rC15	48331000	0.068μF 50V F.C.
rC16	46928400	100μF 10V E.C.
rC17	46286100	0.22μF 63V F.C.
rC18	46931200	1μF 50V E.C.
rC19	46931200	1μF 50V E.C.
rC20	46928200	47μF 10V E.C.
rC22	46928400	100μF 10V E.C.
rC23	46928400	100μF 10V E.C.
rC24	46928400	100μF 10V E.C.
rC25	46931200	1μF 50V E.C.
rC26	46931200	1μF 50V E.C.
rC27	46931200	1μF 50V E.C.
rC28	46931200	1μF 50V E.C.
rT1	46836700	Filter
rVR1	46839600	10kΩ S.V.R., VCO adj.
rVR2	46839500	4.7kΩ S.V.R., SK Ind.

7-4. G-2034 DC Cord Jack Board

Parts No.	Stock No.	Description
•Diode		
mD5	03103400	10D1
qZ16	48524900	Connection Cord ASSY

7-5. G-2035 LINE IN/OUT DIN Jack Board

(Stock No. 01002601)

Parts No.	Stock No.	Description
•IC		
jIC1	46147700	M5218L
jC5	48156000	2.2μF 50V E.C.
qZ13	46852400	DIN Jack, LINE IN/OUT

7-6. G-2036 Treble & Bass Volume Board

(Stock No. 01002701)

Parts No.	Stock No.	Description
•IC		
jIC2	46147700	M5218L
jIC3	46147700	M5218L
jC6	48152900	47μF 10V E.C.
jC7	48156000	2.2μF 50V E.C.
jC8	48156000	2.2μF 50V E.C.
jC9	48153300	10μF 16V E.C.
jC20	48152500	10μF 10V E.C.
jIC4	48279500	CR Array
jVR2	48517900	50KBX2 V.R., BASS
jVR3	48517900	50KBX2 V.R., TREBLE
oS2	48354300	Slide SW., OUTPUT LEVEL

7-7. G-2037 Master Volume Board (Stock No. 01002801)

Parts No.	Stock No.	Description
•Transistor		
jQ2	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
jQ3	46719800	DTA124ES
•FET		
jQ1	46643801	2SJ103-GR
	or 46643802	2SJ103-BL
jC1	48153300	10μF 16V E.C.
jC3	48152800	33μF 10V E.C.
jC4	48156000	2.2μF 50V E.C.
jC19	48331000	0.068μF 50V F.C.
jVR1	48518000	V.R., OFF/VOL PULL/BAL-FAD

7-8. G-2038 Control Switch Board (Stock No. 01002901)

Parts No.	Stock No.	Description
•LED		
nLD1	48499400	GL-8HY25
nLD2	48499400	GL-8HY25
nLD3	48499400	GL-8HY25
nLD4	48499400	GL-8HY25
nLD5	48499400	GL-8HY25
nLD6	48499400	GL-8HY25
oS3	48243600	Tact SW., FM
oS4	48243600	Tact SW., AM (GT-X7000/X7000F)/ MW (GT-X7000L)
oS5	48243600	Tact SW., WIDE (GT-X7000/ X7000F)/LW (GT-X7000L)
oS6	48243600	Tact SW., 1
oS7	48243600	Tact SW., 2
oS8	48243600	Tact SW., 3
oS9	48243600	Tact SW., 4
oS10	48243600	Tact SW., 5
oS11	48243600	Tact SW., 6
oS12	48243600	Tact SW., MONO
oS13	48243600	Tact SW., LOCAL
oS14	48243600	Tact SW., LOUDNESS
oS15	48243600	Tact SW., B-SKIP
oS16	48243600	Tact SW., REP
oS17	48243600	Tact SW., B/C
oS18	48243600	Tact SW., ON/OFF
oS19	48243600	Tact SW., MEMO
oS20	48243600	Tact SW., INTRO-M
oS21	48243600	Tact SW., REW
oS22	48243600	Tact SW., FF
oS23	48243600	Tact SW., △▽
oS24	48243600	Tact SW., STOP/EJECT
oS25	48243600	Tact SW., SEEK
oS26	48243600	Tact SW., P. SCAN
oS27	48243600	Tact SW., TUNE DOWN
oS28	48243600	Tact SW., TUNE UP
•LED		
sLD1	48499400	GL-8HY25
sLD2	48499400	GL-8HY25
sLD3	48499400	GL-8HY25
sLD4	48499400	GL-8HY25
sLD5	48499400	GL-8HY25
sLD6	48499400	GL-8HY25
sLD7	48499400	GL-8HY25
sLD8	48499400	GL-8HY25
sLD9	48499400	GL-8HY25
sLD10	48499400	GL-8HY25
sLD11	48499400	GL-8HY25
sLD12	48499400	GL-8HY25
sLD13	48499400	GL-8HY25
sLD14	48499400	GL-8HY25
sLD15	48499400	GL-8HY25
sLD16	48499400	GL-8HY25
sLD17	48526600	LED Level Meter LT-3377
sLD18	48526500	LED Level Meter LT-3376
sLD19	48526400	LED Level Meter LT-4065
sPL1	48576900	Pilot Lamp 16V 0.04A
sPL2	48576900	Pilot Lamp 16V 0.04A

7-9. G-2039 Play Back Amp. Board (Stock No. 01003001)

Parts No.	Stock No.	Description
nPL1	48576800	Pilot Lamp 14V 0.05A
•Transistor		
vQ1	46719800	DTA124ES
vQ2	46719900	DTC124ES
vQ3	46719900	DTC124ES
vQ4	46719900	DTC124ES
vQ5	46719900	DTC124ES
•IC		
vIC1	48499500	TA7405P
vIC2	48499700	LA2000
vJW1	46741100	Cross Conductor (Chip)
vJW2	46741100	Cross Conductor (Chip)
vJW3	46741100	Cross Conductor (Chip)
vJW4	46741100	Cross Conductor (Chip)
vJW5	46741100	Cross Conductor (Chip)
vJW6	46741100	Cross Conductor (Chip)
vJW7	46741100	Cross Conductor (Chip)
vJW8	46741100	Cross Conductor (Chip)
vJW9	46741100	Cross Conductor (Chip)
vJW10	46741100	Cross Conductor (Chip)
vJW11	46741100	Cross Conductor (Chip)
vJW12	46741100	Cross Conductor (Chip)
vR1	46751600	47kΩ 1/8W Chip R.
vR2	46751600	47kΩ 1/8W Chip R.
vR3	46753600	330kΩ 1/8W Chip R.
vR4	46750200	12kΩ 1/8W Chip R.
vR5	46750600	18kΩ 1/8W Chip R.
vR6	46745400	120Ω 1/8W Chip R.
vR7	46748800	3.3kΩ 1/8W Chip R.
vR8	46747200	680Ω 1/8W Chip R.
vR9	46750000	10kΩ 1/8W Chip R.
vR10	46750000	10kΩ 1/8W Chip R.
vR11	46751200	33kΩ 1/8W Chip R.
vR12	46750000	10kΩ 1/8W Chip R.
vR13	46750000	10kΩ 1/8W Chip R.
vR14	46753200	220kΩ 1/8W Chip R.
vR15	46746400	330Ω 1/8W Chip R.
vC1	48516800	1000pF 50V Chip C.
vC2	48516800	1000pF 50V Chip C.
vC3	48153300	10μF 16V E.C.
vC4	48152100	47μF 6.3V E.C.
vC5	46795500	10000pF 50V Chip C.
vC6	48153100	4.7μF 16V E.C.
vC7	48156000	2.2μF 50V E.C.
vC8	48153100	4.7μF 16V E.C.
vC9	48155600	0.47μF 50V E.C.
vC10	48155800	1μF 50V E.C.
vC11	48155200	0.1μF 50V E.C.
vC12	46854500	22000pF 50V Chip C.
vC13	46928400	100μF 10V E.C.
vVR1	46840900	10kΩ S.V.R., Play Back Level Adj.
•IC		
xIC1	48518300	CXA1097Q
xJW13	46741100	Cross Conductor (Chip)
xJW14	46741100	Cross Conductor (Chip)
xJW15	46741100	Cross Conductor (Chip)
xJW16	46741100	Cross Conductor (Chip)
xJW17	46741100	Cross Conductor (Chip)
xJW18	46741100	Cross Conductor (Chip)
xJW19	46741100	Cross Conductor (Chip)
xJW20	46741100	Cross Conductor (Chip)
xR1	46752400	100kΩ 1/8W Chip R.
xR2	48210900	1.5kΩ 1/8W Chip R.
xR3	48213300	15kΩ 1/8W Chip R.
xR4	46749600	6.8kΩ 1/8W Chip R.
xR5	46752800	150kΩ 1/8W Chip R.
xR6	46753600	330kΩ 1/8W Chip R.
xR7	46746700	430Ω 1/8W Chip R.
xR8	46747200	680Ω 1/8W Chip R.
xC1	46928400	100μF 10V E.C.
xC2	48153300	10μF 16V E.C.
xC3	46856900	680pF Chip C.V
xC4	46927400	220μF 4V E.C.
xC5	46795100	4700pF 50V Chip C.
xC6	48155600	0.47μF 50V E.C.
xC7	48155300	0.15μF 50V E.C.
xC8	48155400	0.22μF 50V E.C.
xC9	46854300	15000pF 50V Chip C.
xC10	48331000	0.068μF 50V F.C.
xC11	46854900	47000pF 50V Chip C.
xC12	46795300	6800pF 50V Chip C.
xC13	46795500	10000pF 50V Chip C.
xFL1	48560800	Filter

7-10. F-5081 FM Circuit Board (Stock No. 01008001=GT-X7000-XX/Stock No. 01008007=GT-X7000-AS/Stock No. 01008005=GT-X7000L) (Stock No. 01008008=GT-X7000F)

Parts No.	Stock No.	Description
dZ1	48490500	FM Frontend Pack
•Transistor		
dQ1	48273400	2SA1435
dQ2	46367101	2SC2603
	or 46367301	2SC2458
dQ3	46719900	DTC124ES
•IC		
dIC1	46465000	LA1140
dIC2	48499000	NC3S301
dIC3	48270500	LA3430
dCF1	48272800	Ceramic OSC Element CSB456
•Diode		
dD1	46852000	RLS-73 (Chip)
dD2	46852000	RLS-73 (Chip)
dD3	46852000	RLS-73 (Chip)
dD4	46852000	RLS-73 (Chip)
dD5	46852000	RLS-73 (Chip)
dD6	03401700	Varistor MV103
•Diode		
dD7	46852000	RLS-73 (Chip)
dD8	46852000	RLS-73 (Chip)
dJW1	46741100	Cross Conductor (Chip)
dJW2	46741100	Cross Conductor (Chip)
dJW3	46741100	Cross Conductor (Chip)
dJW4	46741100	Cross Conductor (Chip)
dJW5	46741100	Cross Conductor (Chip)
dJW6	46741100	Cross Conductor (Chip)
dR1	46746000	220Ω 1/8W Chip R.
dR2	46747600	1kΩ 1/8W Chip R.
dR4	46749200	4.7kΩ 1/8W Chip R.
dR5	46742800	10Ω 1/8W Chip R.
dR7	46745600	150Ω 1/8W Chip R.
dR8	46745800	180Ω 1/8W Chip R.
dR9	46753200	220kΩ 1/8W Chip R.
dR10	46752400	100kΩ 1/8W Chip R.
dR11	46750800	22kΩ 1/8W Chip R.
dR12	46747600	1kΩ 1/8W Chip R.
dR13	46750400	15kΩ 1/8W Chip R. (GT-X7000-XX)
	46750600	18kΩ 1/8W Chip R. (GT-X7000-AS/GT-X7000L,F)
dR14	46748000	1.5kΩ 1/8W Chip R.
dR15	46753200	220kΩ 1/8W Chip R.
dR16	46750800	22kΩ 1/8W Chip R.
dR17	46749200	4.7kΩ 1/8W Chip R.
dR18	46751600	47kΩ 1/8W Chip R.
dR19	46747600	1kΩ 1/8W Chip R.
dR20	46750800	22kΩ 1/8W Chip R. (GT-X7000)
	46750200	12kΩ 1/8W Chip R. (GT-X7000L,F)
dR21	46748400	2.2kΩ 1/8W Chip R.
dR22	46747600	1kΩ 1/8W Chip R.
dR23	46750800	22kΩ 1/8W Chip R.
dR24	46748800	3.3kΩ 1/8W Chip R.
dR25	46752400	100kΩ 1/8W Chip R.
dR26	46747600	1kΩ 1/8W Chip R.
dR28	46752400	100kΩ 1/8W Chip R.
dC1	46854900	47000pF 50V Chip C.
dC2	46854500	22000pF 50V Chip C.
dC3	46854500	22000pF 50V Chip C.
dC4	46854900	47000pF 50V Chip C.
dC5	46854900	47000pF 50V Chip C.
dC6	46854900	47000pF 50V Chip C.
dC7	46849700	0.1μF 50V E.C.
dC8	46794500	1500pF 50V Chip C.
dC9	46757100	33pF 50V Chip C.CH
dC10	46848300	4.7μF 25V E.C.
dC11	46854900	47000pF 50V Chip C.
dC12	46854900	47000pF 50V Chip C.
dC13	46854500	22000pF 50V Chip C.
dC14	46854500	22000pF 50V Chip C.
dC15	46850300	1μF 50V E.C.
dC16	46847600	10μF 16V E.C.
dC17	46847000	22μF 10V E.C.
dC18	46847000	22μF 10V E.C.
dC19	46854900	47000pF 50V Chip C.
dC20	46847600	10μF 16V E.C.
dC21	46794900	3300pF 50V Chip C.
dC22	46854700	33000pF 50V Chip C.
dC23	46843500	100μF 10V E.C.
dC24	46854600	27000pF 50V Chip C.
dC25	46854500	22000pF 50V Chip C. (GT-X7000)
	46854300	1500pF 50V Chip C. (GT-X7000L,F)
dC26	46849900	0.22μF 50V E.C.
dC27	46715400	6.8μF 10V E.C.
dC28	46276500	1μF 50V E.C.
dC29	46850600	3.3μF 50V E.C.
dC30	46756300	15pF 50V Chip C.CH
dC31	46847600	10μF 16V E.C.
dC32	46850000	0.33μF 50V E.C.
dC33	46850300	1μF 50V E.C.
dC34	46854900	47000pF 50V Chip C.
dC38	46795500	10000pF 50V Chip C.
dL1	48286100	Inductor 22μH
dL2	48284900	Inductor 2.2mH
dT1	48449000	FM IF Coil
dT2	48449100	FM IF Coil
dVR1	46839400	2.2kΩ S.V.R., Auto Stop Level Adj.
dVR2	46839700	22kΩ S.V.R., Auto Noise Adj.
dVR3	46839600	10kΩ S.V.R., Separation Adj.
dVR4	46839800	47kΩ S.V.R., Pilot Cancel Adj.
dVR5	46839800	47kΩ S.V.R., LOCAL Auto Stop Level Adj.

7-11. F-5082 AM Circuit Board

This board is in use the GT-X7000/X7000F

(Stock No. 00920901 = GT-X7000/Stock No. 00948008 = GT-X7000F)

Parts No.	Stock No.	Description
•Transistor		
eQ1	03068501	2SC1844
eQ2	46604301	2SC3327
eQ3	46367301	2SC2458
eQ4	46367301	2SC2458
eQ6	46367301	2SC2458
eQ7	46719900	DTC124ES
eQ8	46719800	DTA124ES
eQ9	46719800	DTA124ES
eQ10	46719900	DTC124ES
•FET		
eFT1	48198701	2SK519-F
	or 48198702	2SK519-H
	or 48198703	2SK519-J
•IC		
eIC1	46669000	LA1135
•Diode		
eD1	46852000	RLS-73 (Chip)
eD2	46254600	Variable Capacitance, Diode 1SV100
	or 46835100	Variable Capacitance, Diode 1SV149
eD3	46254600	Variable Capacitance, Diode 1SV100
	or 46835100	Variable Capacitance, Diode 1SV149
eD4	46254600	Variable Capacitance, Diode 1SV100
	or 46835100	Variable Capacitance, Diode 1SV149
•Diode		
eD5	46852000	RLS-73 (Chip)
eD6	46852000	RLS-73 (Chip)
eD7	46852000	RLS-73 (Chip)
eD8	46852000	RLS-73 (Chip)
eJW1	46741100	Cross Conductor (Chip)
eJW2	46741100	Cross Conductor (Chip)
eJW3	46741100	Cross Conductor (Chip)
eJW4	46741100	Cross Conductor (Chip)
eR1	46745000	82Ω 1/8W Chip R.
eR2	46752400	100kΩ 1/8W Chip R.
eR3	46745200	100Ω 1/8W Chip R.
eR4	46744800	68Ω 1/8W Chip R.
eR5	46743600	22Ω 1/8W Chip R.
eR6	46752400	100kΩ 1/8W Chip R.
eR7	46748600	2.7kΩ 1/8W Chip R.
eR8	46750800	22kΩ 1/8W Chip R.

GT-X7000/X7000L/X7000F

Parts List <F-5082>

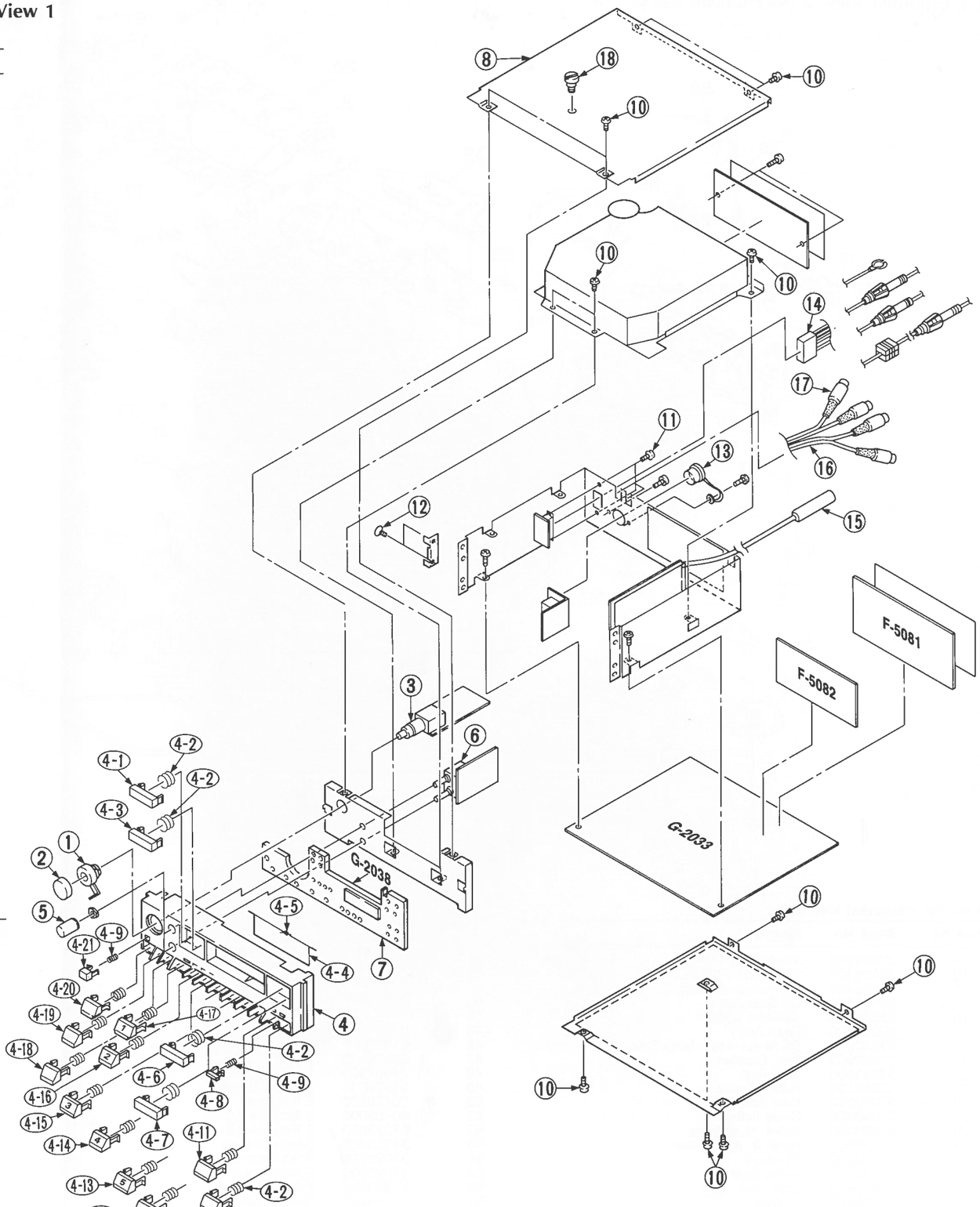
Parts No.	Stock No.	Description
eR9	46747800	1.2kΩ 1/8W Chip R.
eR10	46750000	10kΩ 1/8W Chip R.
eR11	46749800	8.2kΩ 1/8W Chip R.
eR12	46746000	220Ω 1/8W Chip R.
eR13	46745000	82Ω 1/8W Chip R.
eR14	46750000	10kΩ 1/8W Chip R.
eR15	46750000	10kΩ 1/8W Chip R.
eR16	46748600	2.7kΩ 1/8W Chip R.
eR17	46744400	47Ω 1/8W Chip R.
eR20	46747600	1kΩ 1/8W Chip R.
eR21	46745200	100Ω 1/8W Chip R.
eR22	46752400	100kΩ 1/8W Chip R.
eR23	46750000	10kΩ 1/8W Chip R.
eR24	46749200	4.7kΩ 1/8W Chip R.
eR26	46750000	10kΩ 1/8W Chip R.
eR27	46750000	10kΩ 1/8W Chip R.
eR28	46750000	10kΩ 1/8W Chip R.
eR29	46750000	10kΩ 1/8W Chip R.
eR30	46748400	2.2kΩ 1/8W Chip R.
eR31	46748400	2.2kΩ 1/8W Chip R.
eR32	46752400	100kΩ 1/8W Chip R.
eR33	46750000	10kΩ 1/8W Chip R.
eC1	46854500	22000pF 50V Chip C.
eC2	46854500	22000pF 50V Chip C.
eC3	46854900	47000pF 50V Chip C.
eC4	46854900	47000pF 50V Chip C.
eC5	46854900	47000pF 50V Chip C.
eC6	46847400	100μF 10V E.C.
eC7	46854900	47000pF 50V Chip C.
eC8	46854500	22000pF 50V Chip C.
eC9	46772600	15pF 50V Chip C.UJ
eC10	46854500	22000pF 50V Chip C.
eC11	46758300	100pF 50V Chip C.CH
eC12	46854500	22000pF 50V Chip C.
eC13	46856600	510pF 50V Chip C.
eC14	46854900	47000pF 50V Chip C.
eC15	46854500	22000pF 50V Chip C.
eC16	46850300	1μF 50V E.C.
eC17	46848300	4.7μF 25V E.C.
eC18	46854900	47000pF 50V Chip C.
eC19	46849000	3.3μF 35V E.C.
eC20	46854500	22000pF 50V Chip C.
eC21	46795100	4700pF 50V Chip C.
eC22	46795500	10000pF 50V Chip C.
eC23	46849000	3.3μF 35V E.C.
eC24	46847200	47μF 10V E.C.
eC25	46854700	33000pF 50V Chip C.
eC27	46847400	100μF 10V E.C.
eC28	46854500	22000pF 50V Chip C.
eC29	46850300	1μF 50V E.C.
eC30	46795500	10000pF 50V Chip C.
eC32	46849700	0.1μF 50V E.C.
eC33	46854500	22000pF 50V Chip C.
eC34	46847100	33μF 10V E.C.
eC35	46847100	33μF 10V E.C.
eTC1	46613200	Trimmer Capacitor 20pF
eTC2	46613200	Trimmer Capacitor 20pF
eTC3	46613300	Trimmer Capacitor 30pF
eCF1	46724500	Ceramic Filter SFP450H
eCF2	48309800	Ceramic Filter SFG450F
eCF3	46578100	Ceramic Filter BFU-450C10N
eL1	48286900	Inductor 10mH
eL2	46838300	Inductor 3.3mH
eT1	48264700	AM RF Coil
eT2	46835400	MW RF Coil (2)
eT3	46835500	MW OSC Coil
eT4	46724300	AM IF Coil
eT5	46836000	AM IF Coil (2)
eVR1	46839600	10kΩ S.V.R., Auto Stop Level Adj.

8. OTHER PARTS

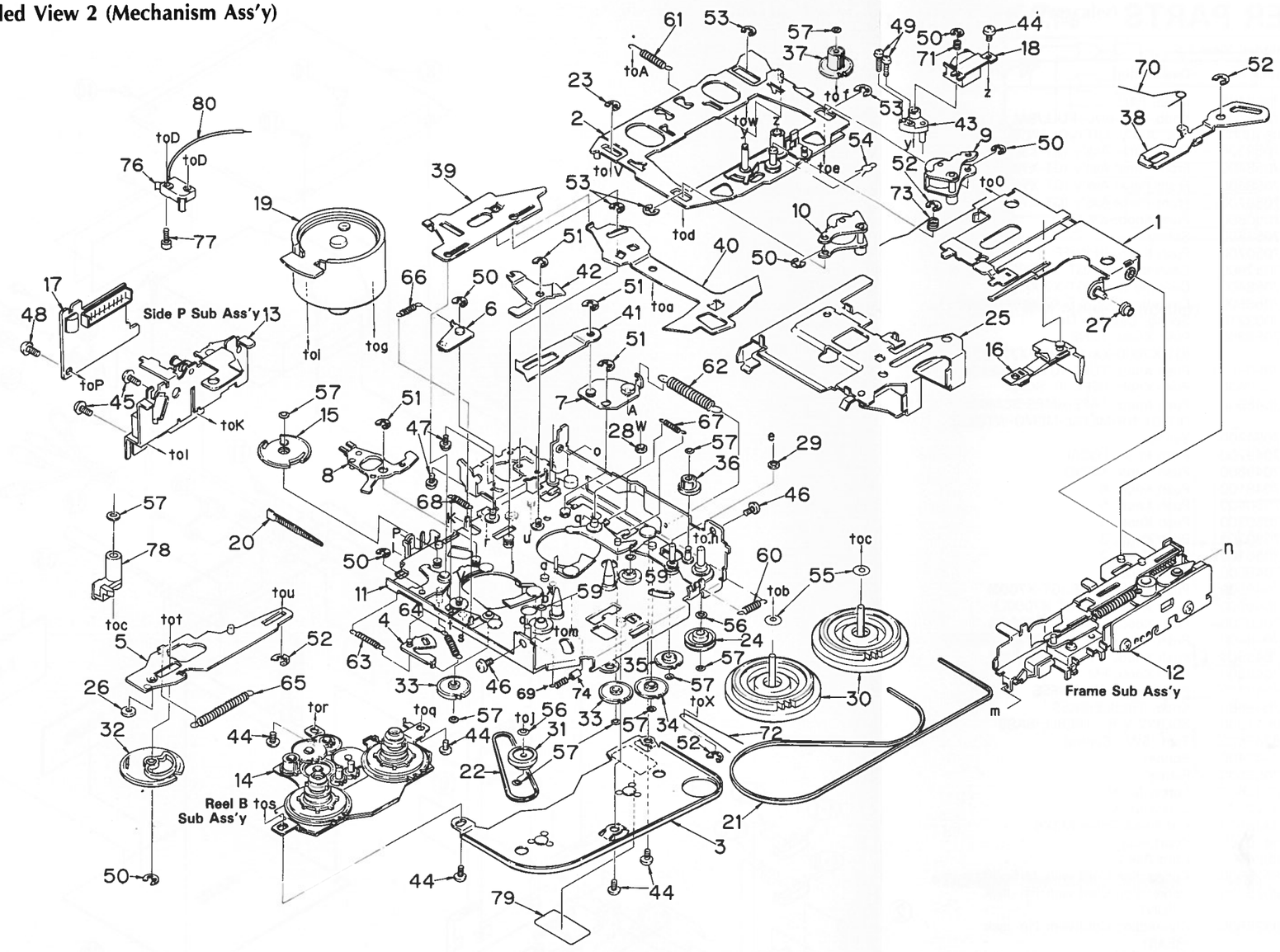
8-1. Exploded View 1

•Parts List <Exploded View 1>

Parts No.	Stock No.	Description
1	67053100	Knob, FAD
2	67048700	Knob, OFF/VOL. PULL/BAL
3	48518000	V.R. Ass'y, OFF/VOL. PULL/BAL
4	67058300	Front Panel Ass'y (GT-X7000-XX)
	67058400	Front Panel Ass'y (GT-X7000-AS)
	67058600	Front Panel Ass'y (GT-X7000L)
	67058700	Front Panel Ass'y (GT-X7000F)
4-1	67050800	Push Knob, △▽
4-2	67054800	Spring
4-3	67050700	Push Knob, REW•FF
4-4	67052900	Cassette Door (GT-X7000)
	67068400	Cassette Door (GT-X7000L)
	67068500	Cassette Door (GT-X7000F)
4-5	67003210	Spring, Cassette Door
4-6	67059800	Push Knob, TUNE (GT-X7000-XX/X7000L/X7000F)
	67050500	Push Knob, TUNE (GT-X7000-AS)
4-7	67050600	Push Knob, SEEK, P. SCAN
4-8	67048900	Push Knob, TAPE•AMPS•SCAN•REP•DOLBY NR•METAL•MEMO•INTRO-M
4-9	67054700	Spring
4-10	67049700	Push Knob, LOCAL
4-11	67049600	Push Knob, MONO
4-12	67049100	Push Knob, 6
4-13	67050400	Push Knob, 5
4-14	67050300	Push Knob, 4
4-15	67050200	Push Knob, 3
4-16	67050100	Push Knob, 2
4-17	67049000	Push Knob, 1
4-18	67049500	Push Knob, WIDE (GT-X7000)
	67049900	Push Knob, LW (GT-X7000L)
	67050000	Push Knob, SDK (GT-X7000F)
4-19	67049400	Push Knob, AM (GT-X7000/X7000F)
	67049800	Push Knob, MW (GT-X7000L)
4-20	67049300	Push Knob, FM
4-21	67053300	Push Knob, LOUDNESS
5	67048800	Knob, TREBLE•BASS
6	48517900	50kBX2 V.R., TREBLE•BASS
7	48243600	Tact, SW., Control
8	67047400	Bonnet
9	67055500	Frame
10	46933600	Screw M3X4
11	13122300	Screw M3X6
12	48368500	Flat Head Screw M3X6
13	46610100	Short Plug
14	48524900	Cord Ass'y
15	48525900	Connection Cord with ANT Jack
16	48525700	Connection Cord with Pin Jack (FRONT)
17	48525800	Connection Cord with Pin Jack (REAR)
18	67055000	Transit Screw



8-2. Exploded View 2 (Mechanism Ass'y)



•Parts List <Exploded View 2>

Parts No.	Stock No.	Description
9	37092200	Pinch Roller (F) Ass'y
10	37092300	Pinch Roller (R) Ass'y
11	37092400	Mechanism Chassis Ass'y
15	37092500	CH Gear Ass'y
16	37092600	Cassette CATCH
18	37092700	Head Ass'y
19	37092800	DC Motor Ass'y (with Pulley)
21	37092900	Belt, Capstan
22	37093000	Belt, Reel
24	37093100	Pulley, Tension
26	37093200	Cam Roller
27	37093300	Guide Roller
28	37093400	Roller, Head Plate
29	37093500	Roller B, Head Plate
30	37093600	Flywheel
31	37093700	Pulley Gear
32	37093800	Cam Gear
33	37093900	FF-Gear
34	37094000	Gear A, Loading

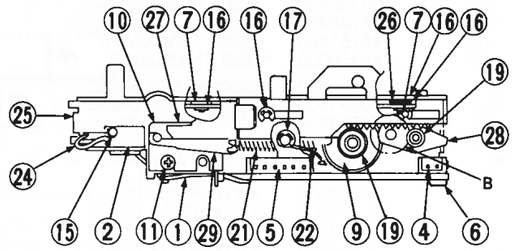
Parts No.	Stock No.	Description
35	37094100	Gear B, Loading
36	37094200	Gear C, Loading
37	37094300	Gear D, Loading
43	37094400	Azimuth Arm
44	37094500	M2X3 Binding Head Screw
45	07938100	M2.6X3 Binding Head Screw
46	07938200	M2.6X4 Binding Head Screw
47	07938400	Special Screw
48	37094900	Special Screw
49	37095000	Azimuth Screw
50	00488900	E Ring d=1.5
51	00489000	E Ring d=2.0
52	08322600	E Ring d=2.5
53	37095400	Special E Ring
54	37095500	Snap Retainer
55	37095600	Special Washer
56	07938800	Special Washer
57	37095800	Special Washer

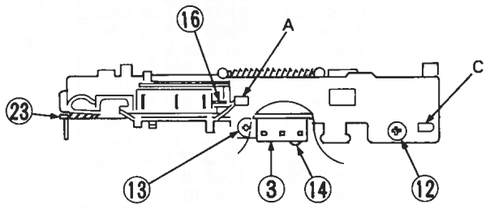
Parts No.	Stock No.	Description
59	37095900	Special Washer
60	37096000	Loading Spring
61	37096100	Head Plate Spring
62	37096200	Power Link Spring
63	37096300	Lock Spring
64	37096400	Timing Spring
65	37096500	Power Plate Spring
66	37096600	Power Lock Spring
67	37096700	FF Spring
68	37096800	REW Spring
69	37096900	Brake Spring
70	37097000	Eject Arm Spring
71	37097100	Azimuth Spring
72	37097200	Change Spring
73	37097300	Roller Spring
76	37097400	Micro Switch
77	37097500	Special Screw
78	37097600	Sensor Arm

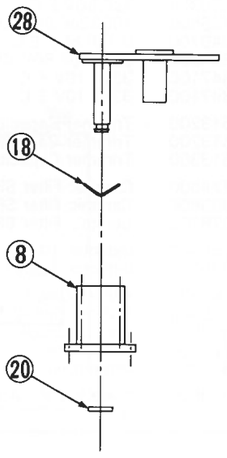
8-3. Exploded View 3 (Frame Sub Ass'y)

Parts List

Parts No.	Stock No.	Description
1	37097700	Micro Switch
2	37097400	Micro Switch
3	37097900	Micro Switch
8	37098000	Swing Gear
9	37098100	Eject Gear
11	37098200	Screw
13	37094900	Special Screw
15	37098400	Special Screw
18	07938600	Special Washer
19	37095800	Special Washer
20	37098700	Special Washer
21	37098800	EJ-Rack Spring
22	37098900	EJ-Gear Spring



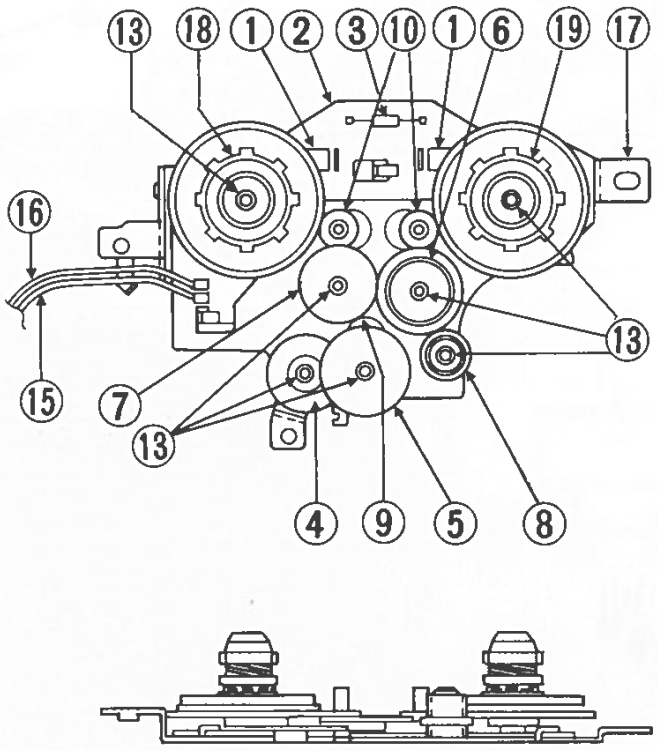


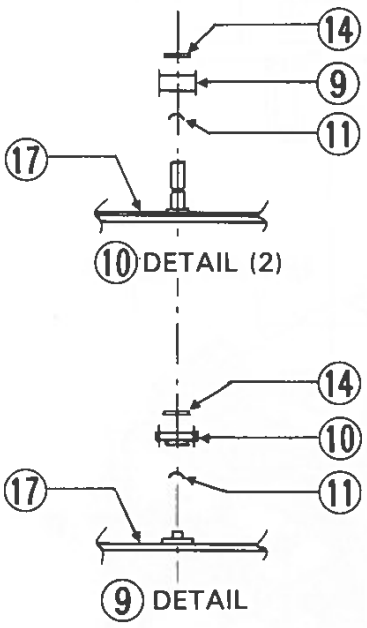


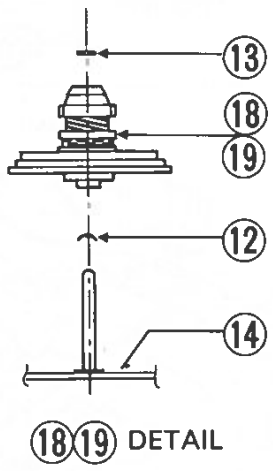
8-4. Exploded View 4 (Reel-B-Sub Ass'y)

Parts List

Parts No.	Stock No.	Description
1	37099700	Lead Switch
4	37099800	Gear-1
5	37099900	Gear-2
6	37100000	Gear-3
7	37100100	Gear-4
8	37100200	Gear-5
9	37094600	Idler Gear-A
10	37094700	Idler Gear B
11	37094800	Special Washer
12	37095100	Special Washer
13	37095800	Special Washer
14	37095300	Special Washer
18	37098600	Reel Hub F Ass'y
19	37098500	Reel Hub R Ass'y



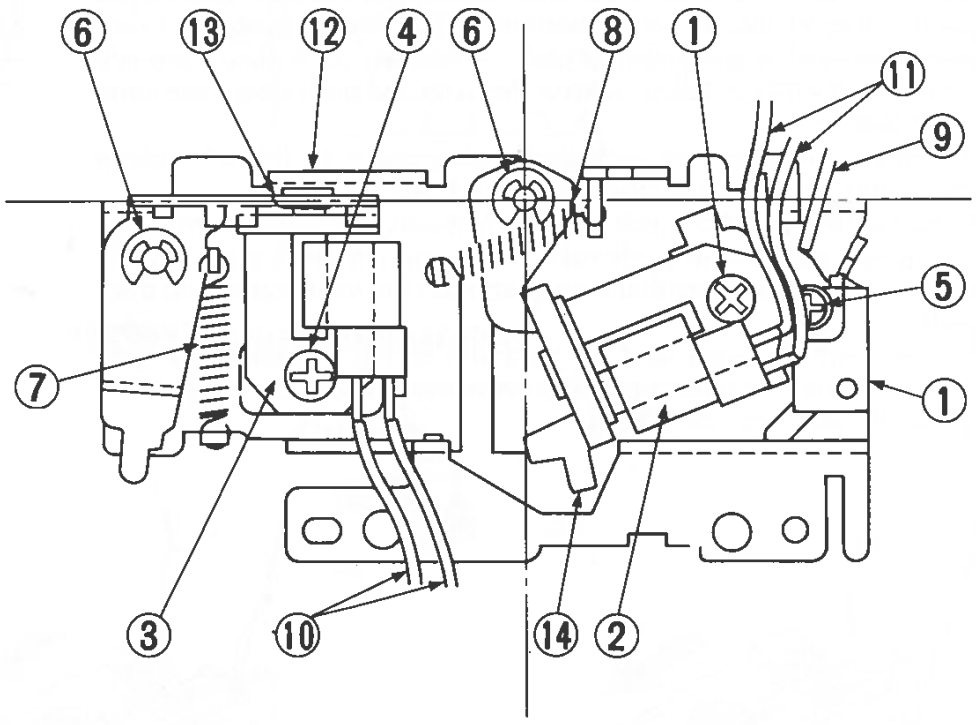




8-5. Exploded View 5 (Side-P-Sub Ass'y)

Parts List

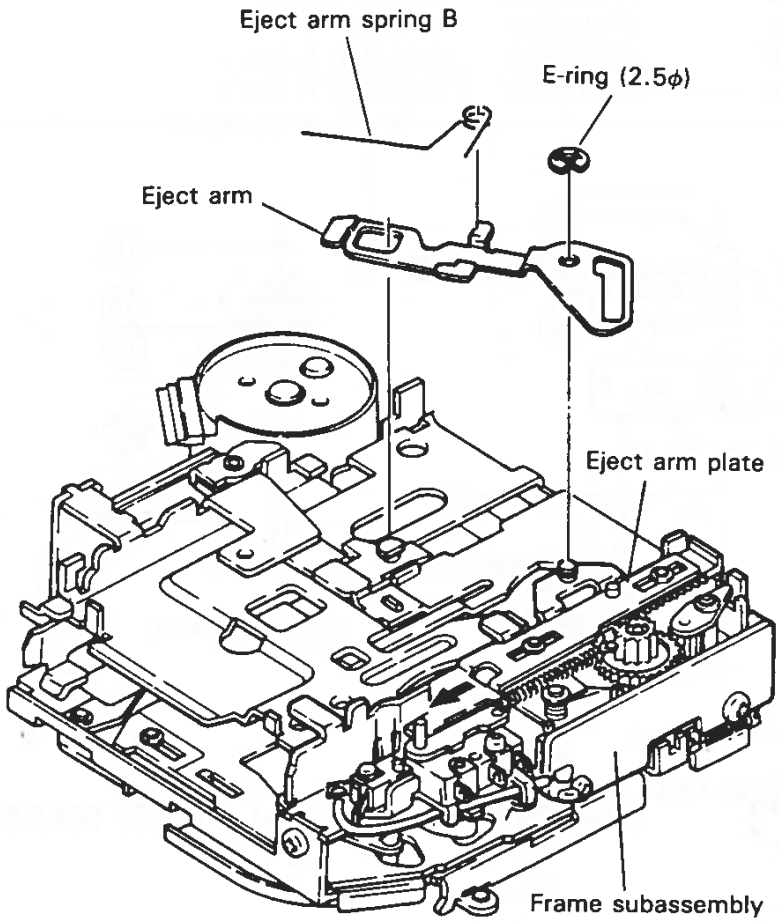
Parts No.	Stock No.	Description
1	37097400	Micro Switch
2	37099100	Plunger B
3	37099200	Plunger A
4	37099300	Screw
5	37099400	Special Screw
7	37099500	PL-Spring-A
8	37099600	PL-Spring-B



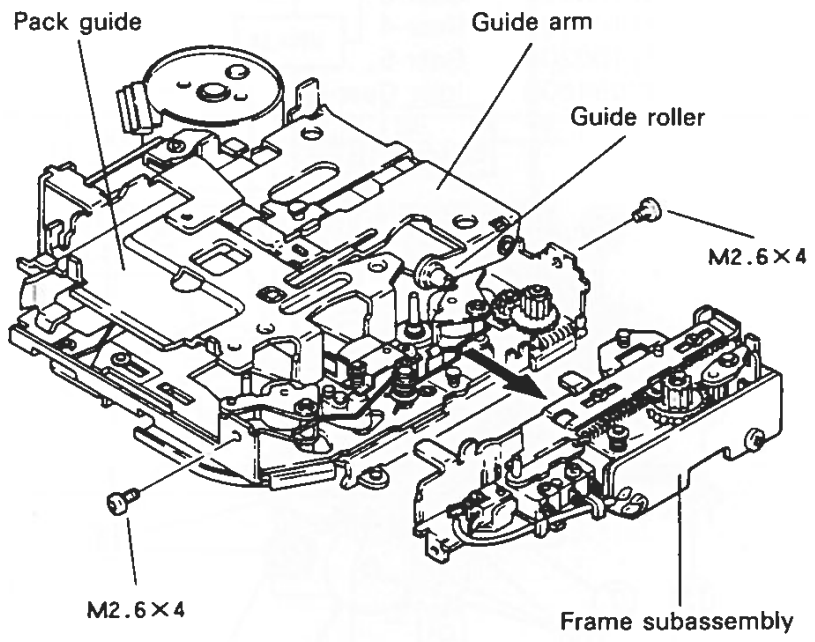
9. MAIN PARTS REPLACEMENT

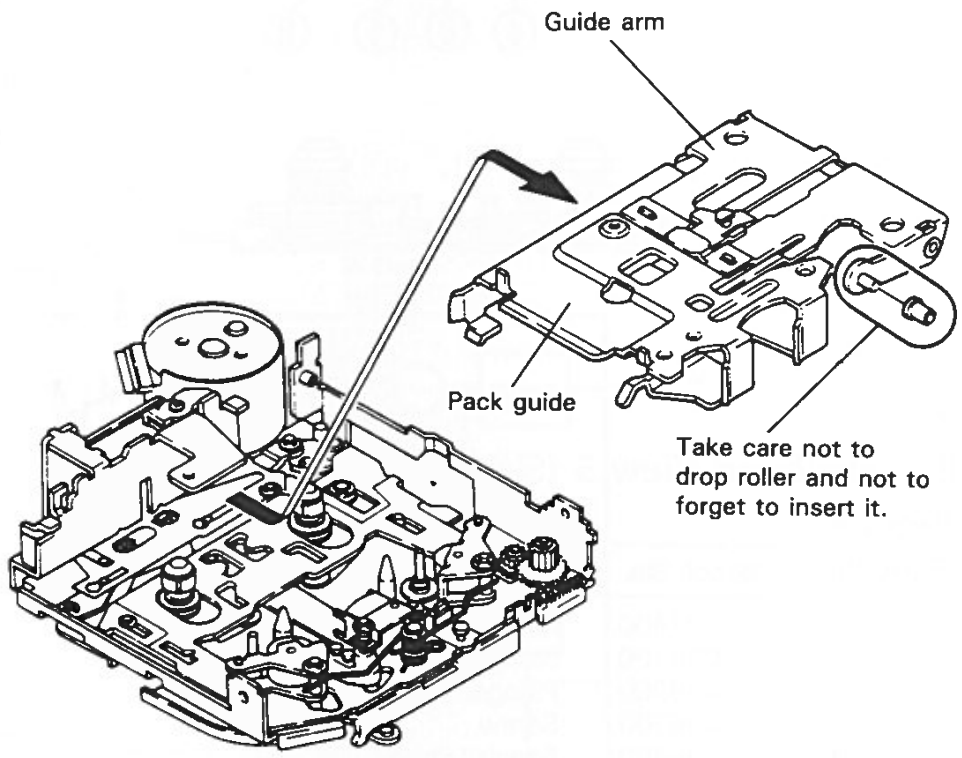
1. How to remove and mount frame assembly

Remove eject arm spring B, E-ring (2.5ϕ), and then remove eject arm by pulling eject arm plate foward the front side of the mechanism (cassette half insertion side).



Remove two screws (M2.6x4) on both the sides of deck plate, lift frame subassembly and remove the assembly from the mechanism together with guide arm and pack guide, and then remove guide arm and pack guide from frame subassembly. In doing htis, take care not to drop guide roller.





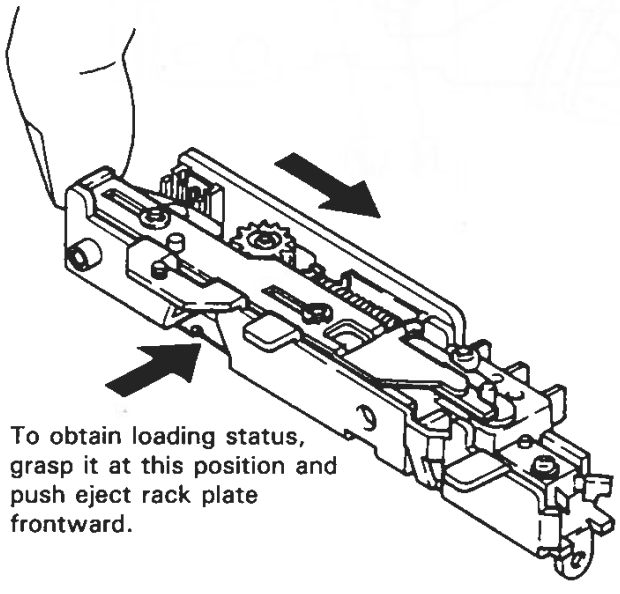
•How to mount

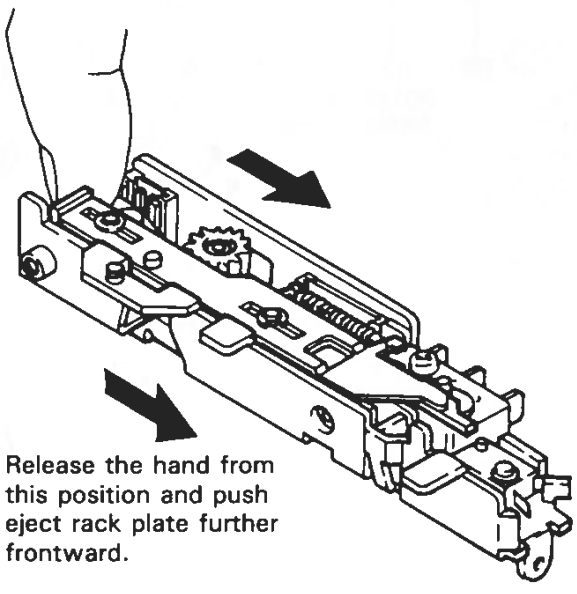
To assemble the mechanism, set frame subassembly to eject status (eject plate and eject rack plate are positioned backward), push eject rack plate frontward by grasping eject plate. When eject rack plate is brought into contact with eject plate, release the hand and push eject plate frontward together.

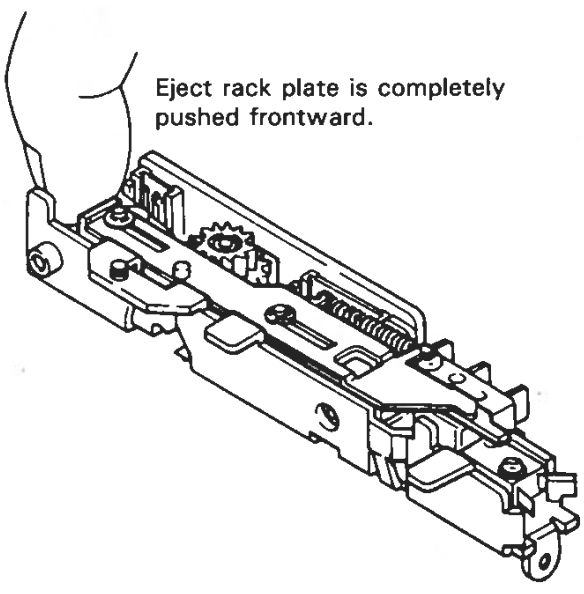
Assemble guide arm and pack guide, and engage the left side hole in guide arm with bar ring dowel of deck plate.

Insert bar ring dowel of frame into the right side hole in guide arm while taking care not to drop guide roller, set frame into deck plate, and fix it by a screw. Take care that no gap appears between frame and deck plate.

Fix eject arm by E-ring, and set eject arm spring B. Make sure eject operation after the mechanism has been assembled in the set and wiring work has been completed.

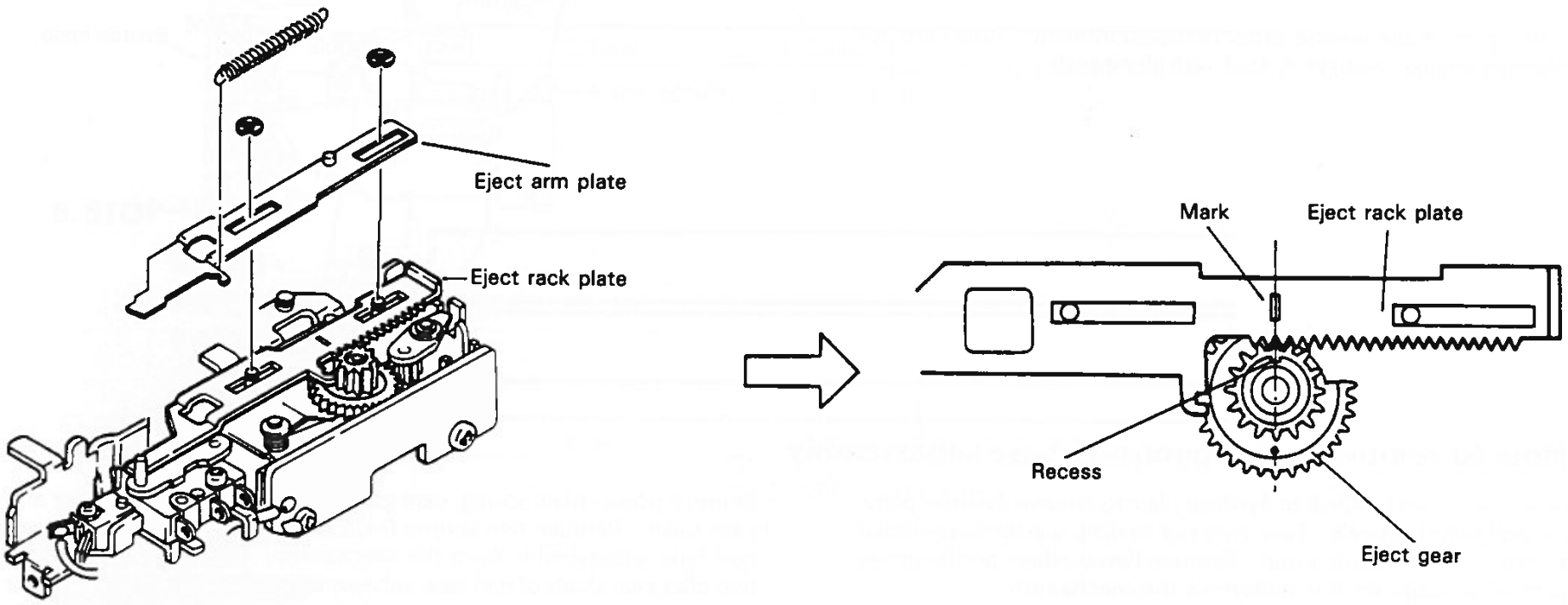






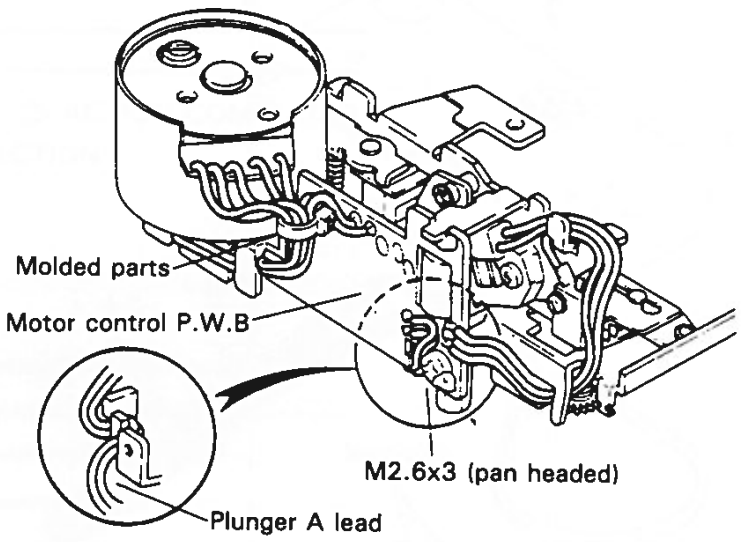
2. Caution in disassembling/assembling subframe assembly

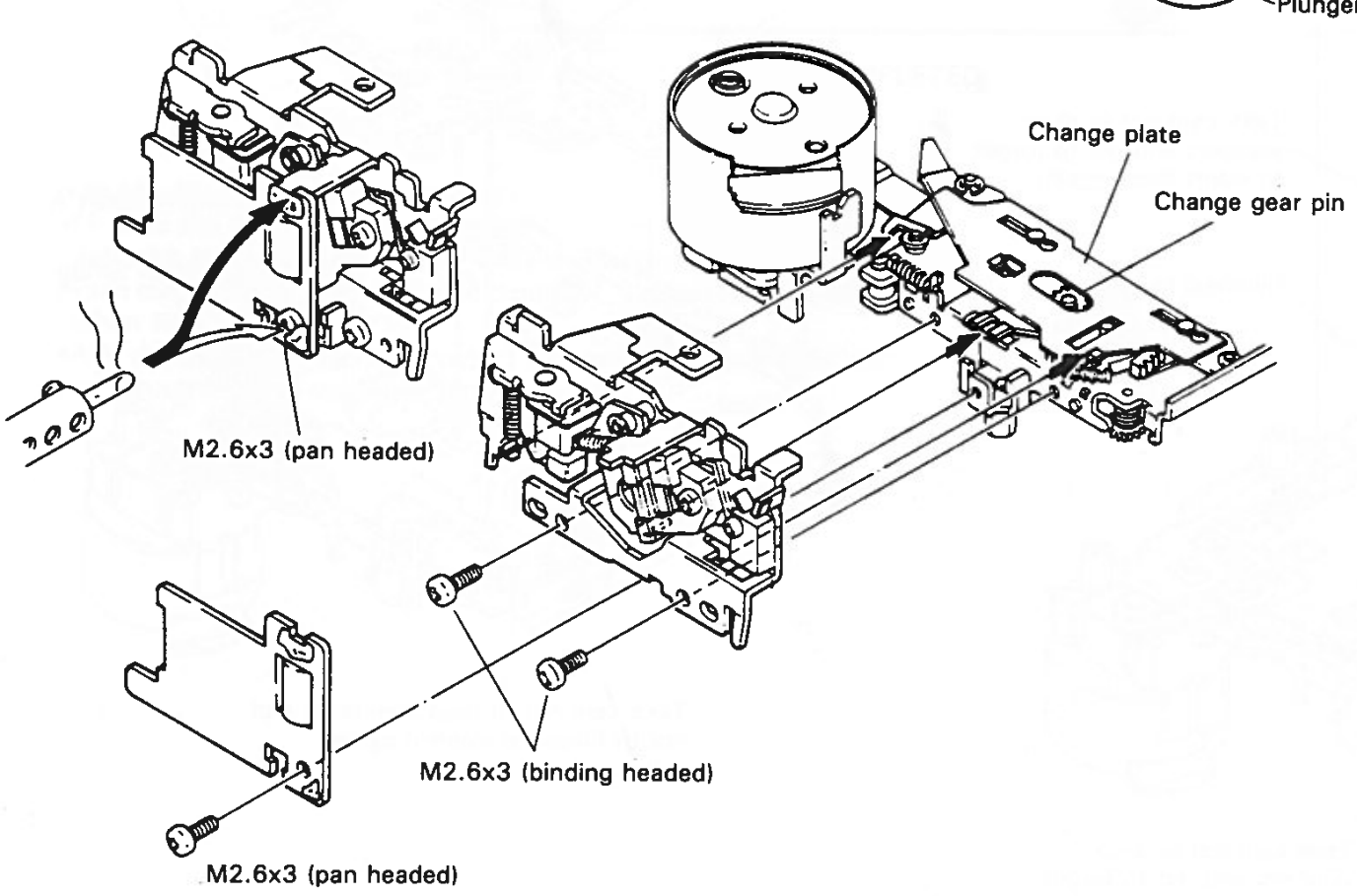
When subassembly is assembled after having further been disassembled, match the recessed portion of eject gear with the mark on eject rack plate.



3. How to remove and mount side panel subassembly

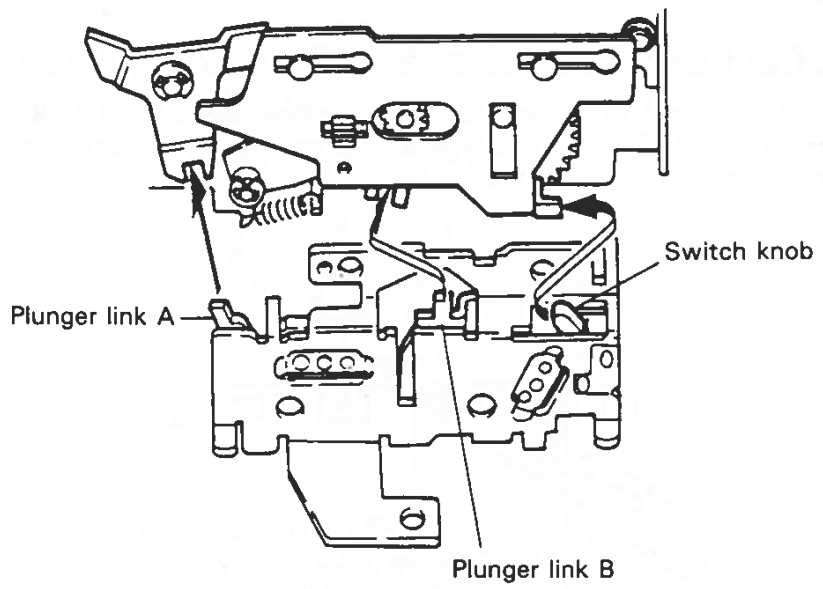
Remove a mold parts for bundling wires in deck plate, unsolder a ground solder contact and screw ground solder contact with the side panel of motor control P.W.B, and remoe a tin-plated screw (M2.6x3 pan headed).
Disengage plunger A lead (yellow) from deck plate. Unscrew screw (M2.6x3 binding headed), and then remove side panel assembly from deck plate.





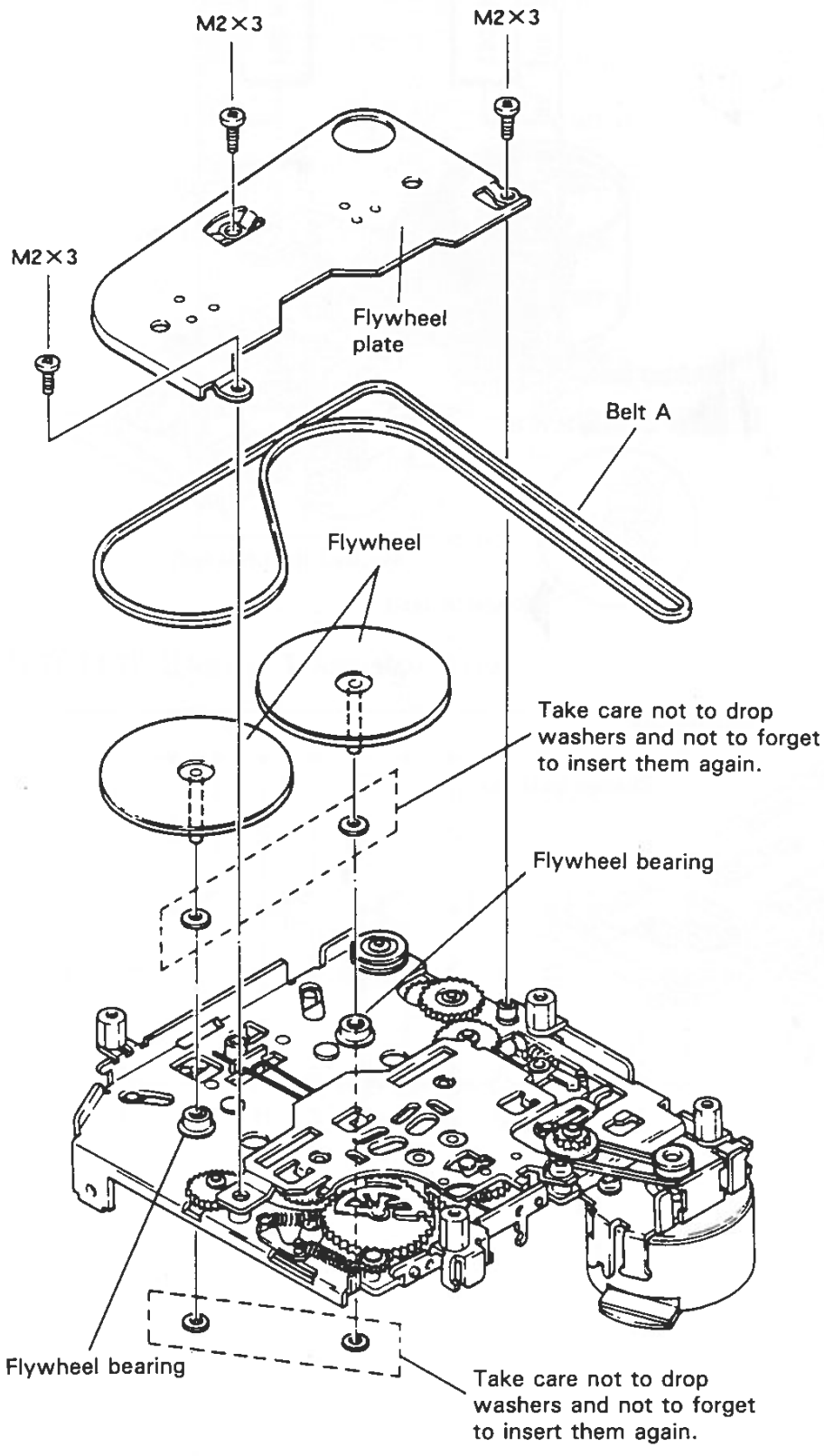
In assembling, engage SW lead (orange) and plunger B lead (green) with side panel, engage claws of plunger links A and B with each connecting position of FF link and REW link, separately. Mount a switch knob onto a stepedly bent portion of change plate, engage two holes in side panel with two dowels of deck plat, and fixed it by screw. In doing this, take care that change plate does not come off from change gear pin of change gear.

Assembly parts in the reverse order of disassemblying. Take care not to forget to engage plunger A lead with deck plate.

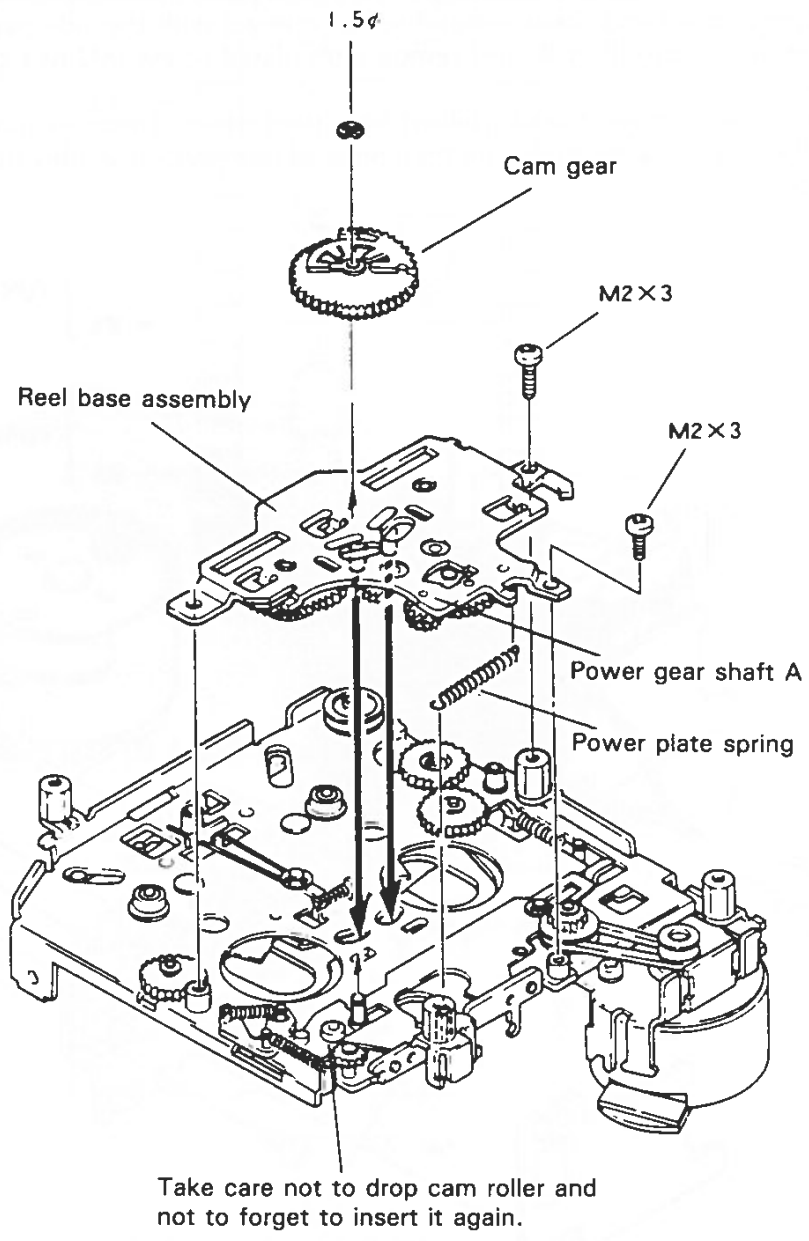


4. How to remove and mount reel base subassembly

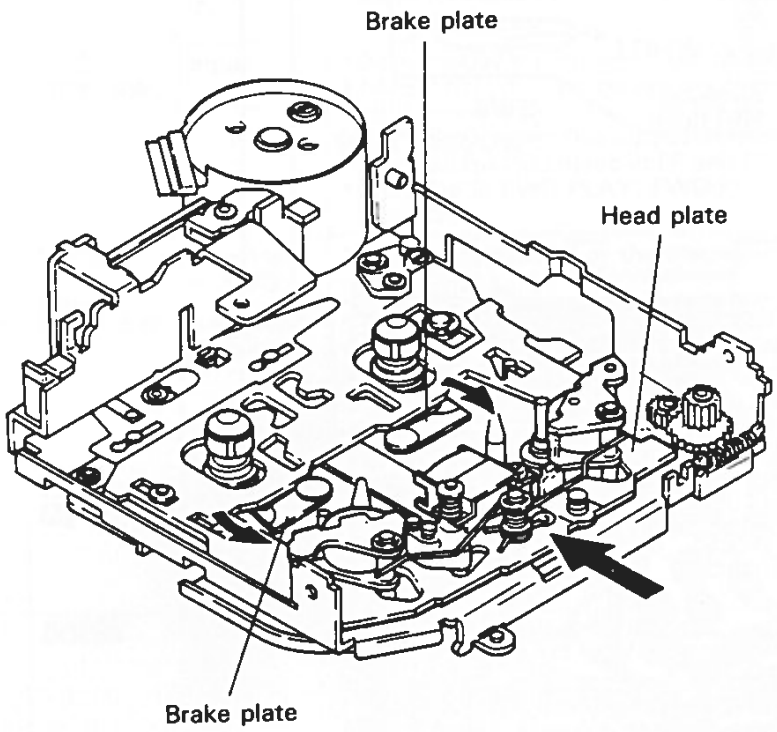
Remove three screws (M2x3) of flywheel plate to remove flywheel plate, belt A, and two flywheels. Take care not to drop washers assembled between flywheels and bearings. Remove two washers on the upper surfaces of bearings on the supface of the mechanism.

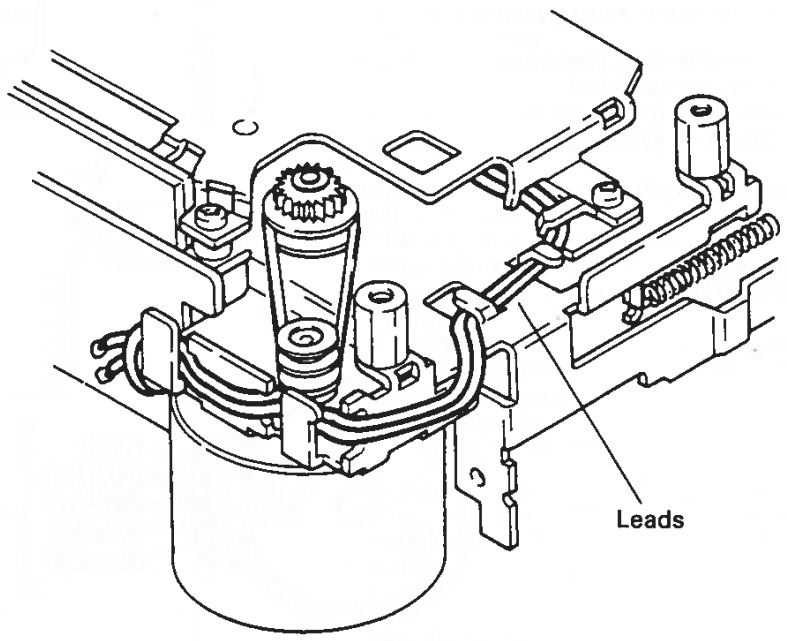


Remove power plate spring, cam gear E-ring (1.5ϕ), and cam gear and cam roller. Remove two screws (M2x3) of reel base plate to remove reel base subassembly from the mechanism. In assembling, engage two idler gear shafts of reel base subassembly with holes in change gear arm, insert power gear shaft A into a hole in deck plate. Pull head plate foward you by the hand to remove brake plate mounted onto reel base, and fix them by screws while making sure the gear mesh conditions between power gear A and pulley gear and between power gear E and change gear. In doing this, take care that leads are not sandwiched between reel base plate and deck plate.



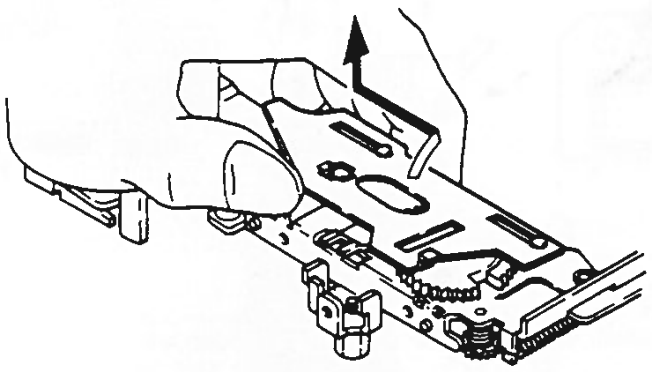
After leads have been engaged with deck plate, assemble the set in the reverse order of disassembling. Take care not to forget to mount washers on the upper surface of bearings.
After the mechanism has been assembled to the set and wiring work has been completed, push pack stopper by the hand and operate the set in loading play mode to clean capstan and pinch rollers in FWD/REV mode.



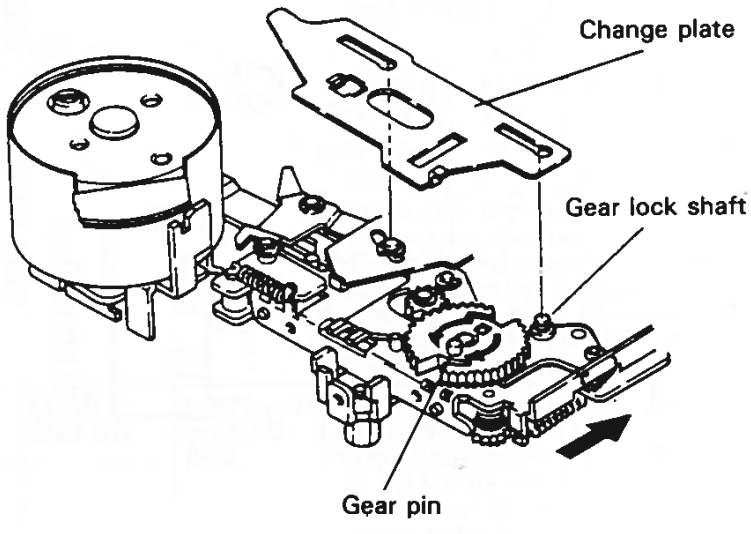


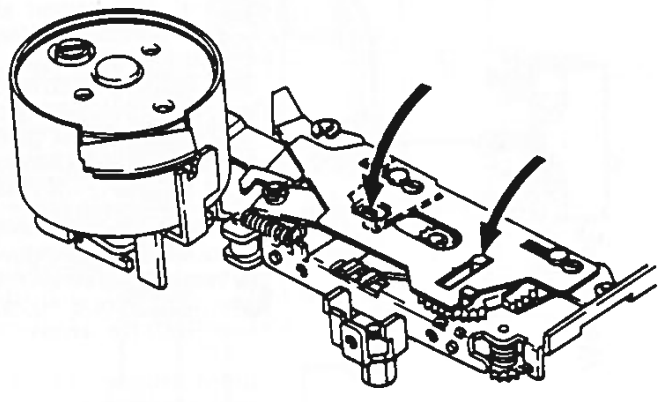
5.How to remove and mount change plate

After having removed each subassembly of frame, side panel, and reel base, rotate change gear so that change gear pin is located on the left side (motor side) of the mechanism while releasing gear lock plate by the head. Remove change gear pin by lifting one side of change plate, and slide change plate to remove change plate shaft and gear lock shaft.

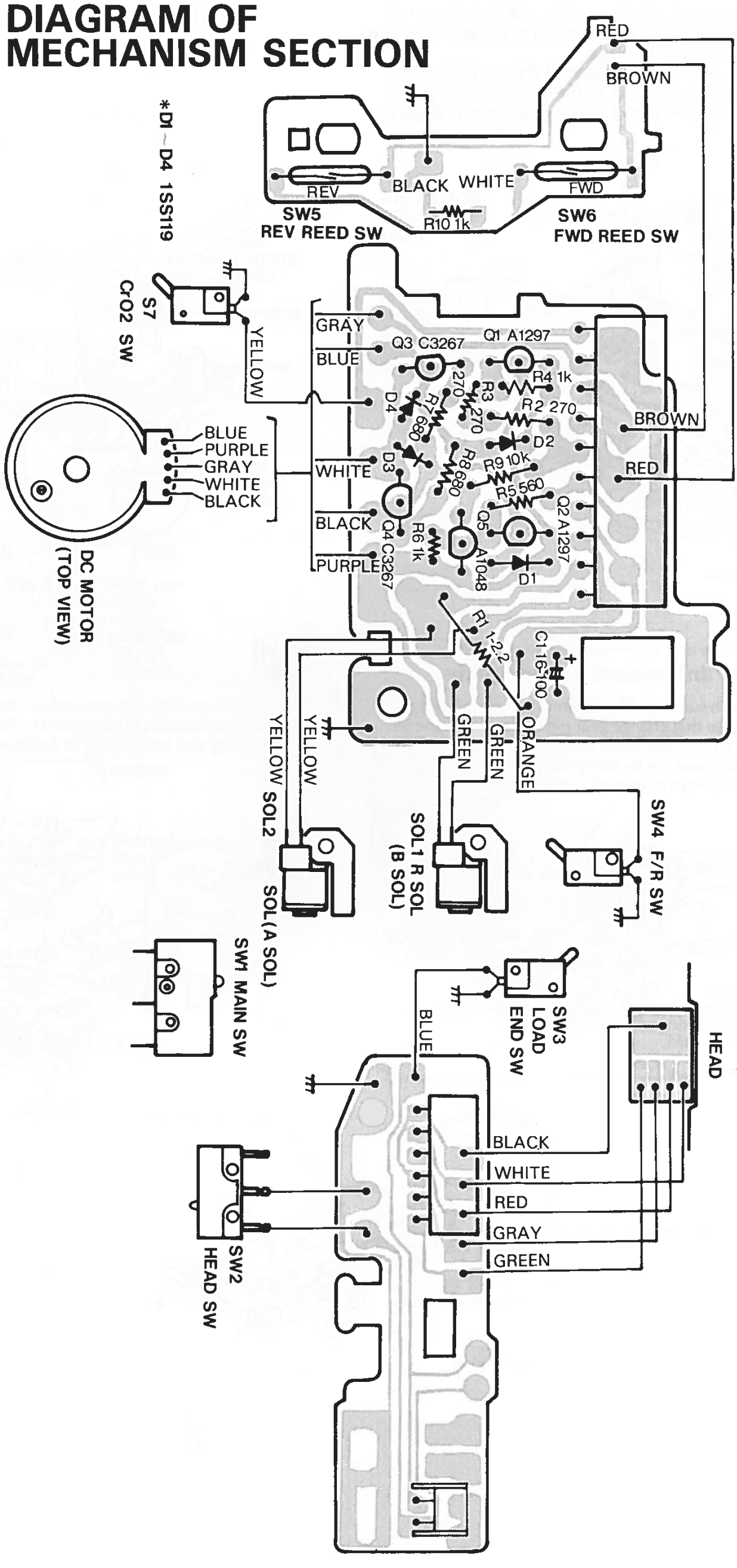


Assemble the set in the reverse order. Make sure the coupling condition at the bent portion of change arm. (Refer to each item about each disassembling and assembling of frame, side panel and reel base.)





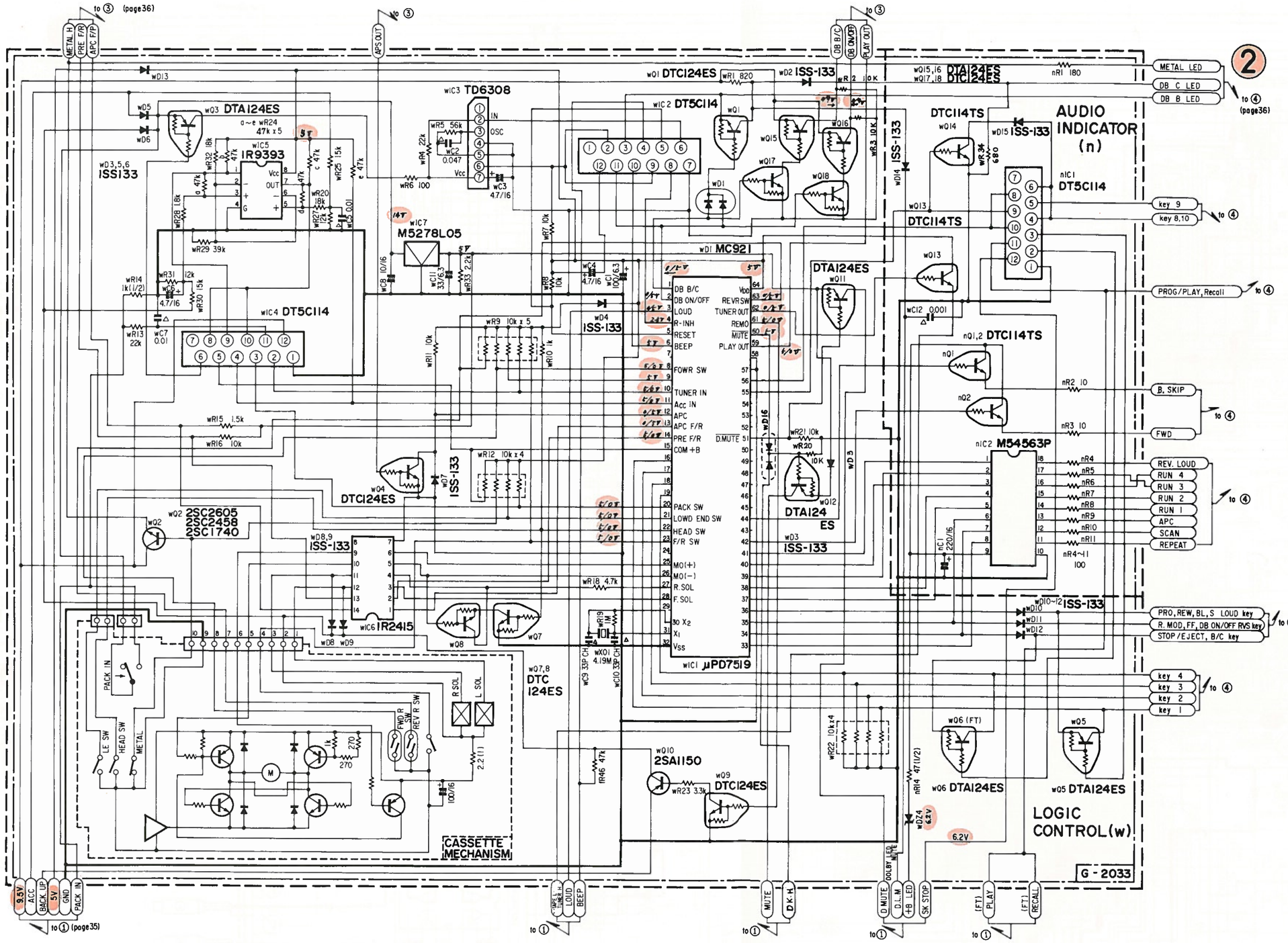
10. WIRING DIAGRAM OF MECHANISM SECTION



11. SCHEMATIC DIAGRAM

11-1. Cassette Mechanism Control Circuit

* Design and specifications subject to change without notice for improvement.
* La présention et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
* Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.



2SA1435 2SC1827 2SA933S
2SC1844 2SD313 2SA1048
2SC2878 2SD880 2SA1115
2SA1150
2SC1740S
2SC2458
2SC2603
DTA124ES

2SC3327
DTA114TS
DTC114ES
DTC143ES
DTC144ES

TD6308AP

LA2000

M5218L

µPB553AC
µPD7519-M311
BA6251F
BU4011B
IR2415
IR9393
LA1135
LB1213M
M4011BP
M5228P
M54563P
TC4011P
TC9130P

BA3112

M5278L05
M5278L56

µPD1710G-013/227/52
CXA10970

NC3S301

DT5C114E

LA1140
LA3430
TA7405P

2SK519
2SJ103

10D1

1SV100
1SV149

RLS-73

MV103

GL-9HY44

1SS133

MC921

MTZ5.6A
MTZ6.2A
MTZ10C

11-2. Main Circuit

* Design and specifications subject to change without notice for improvement.
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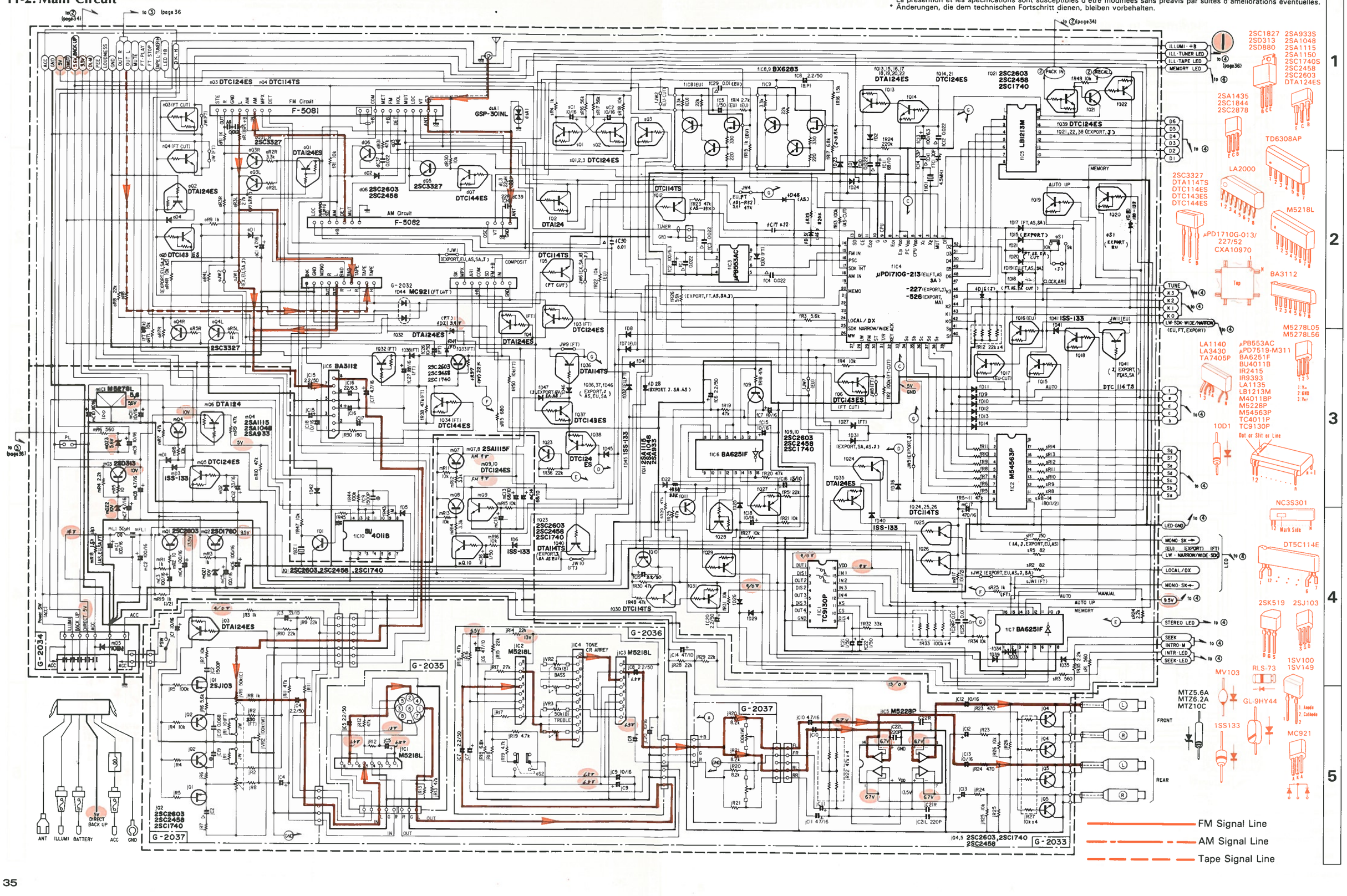
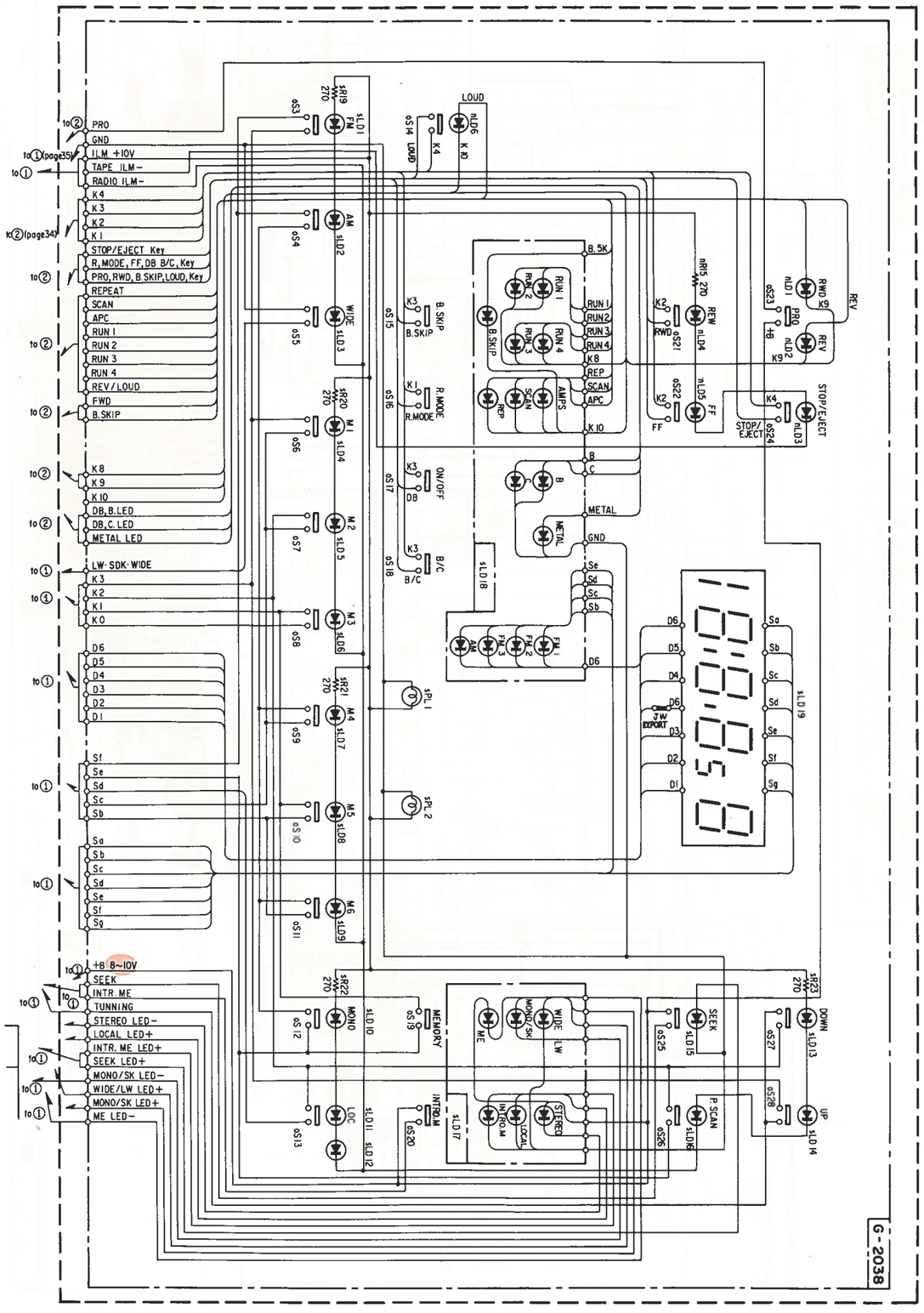
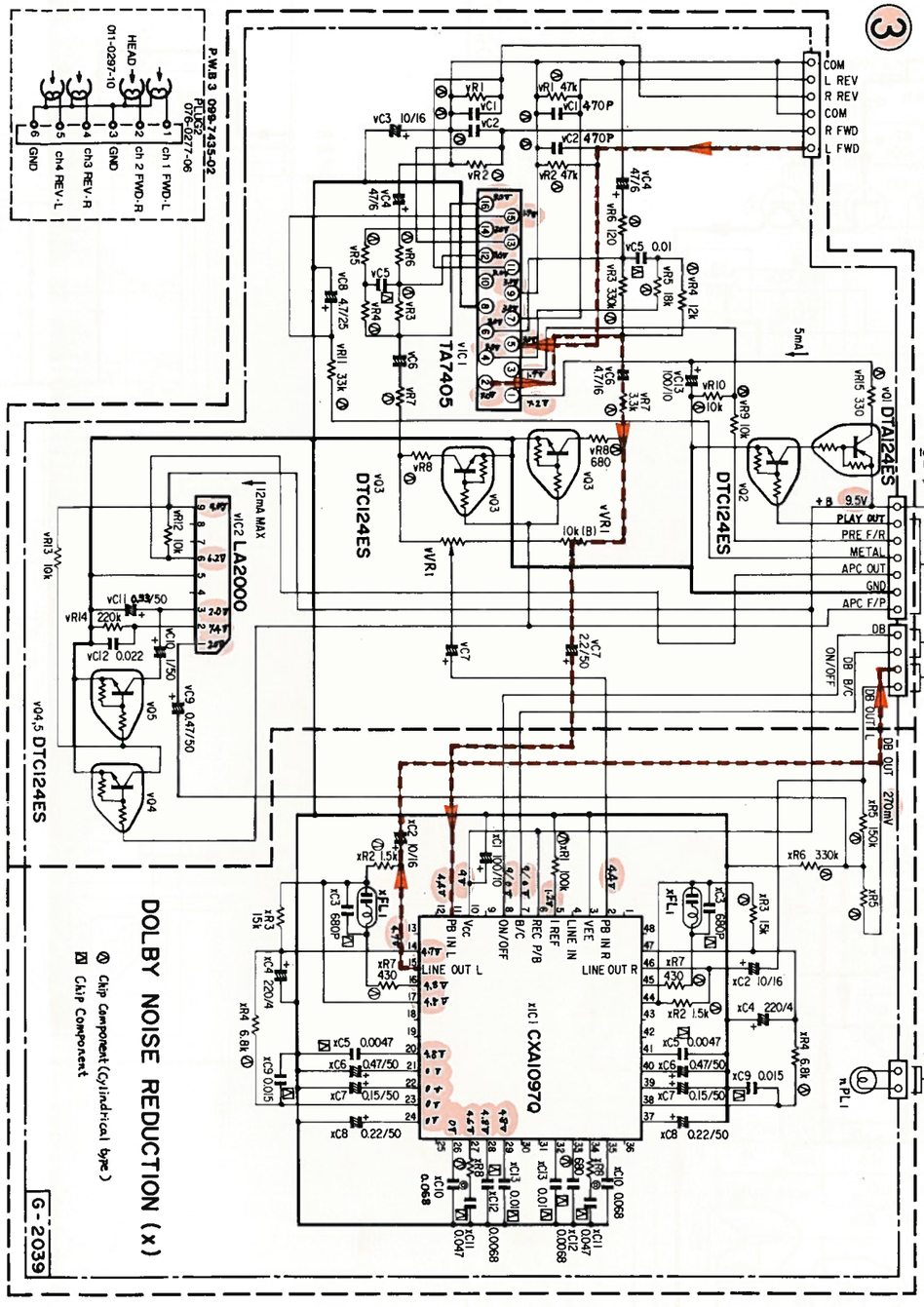
* Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.



11-3. Control Switch Circuit



11-4. Play Amp. Circuit



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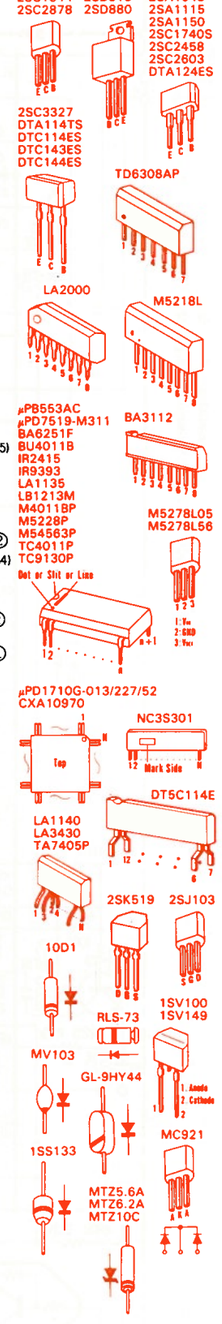
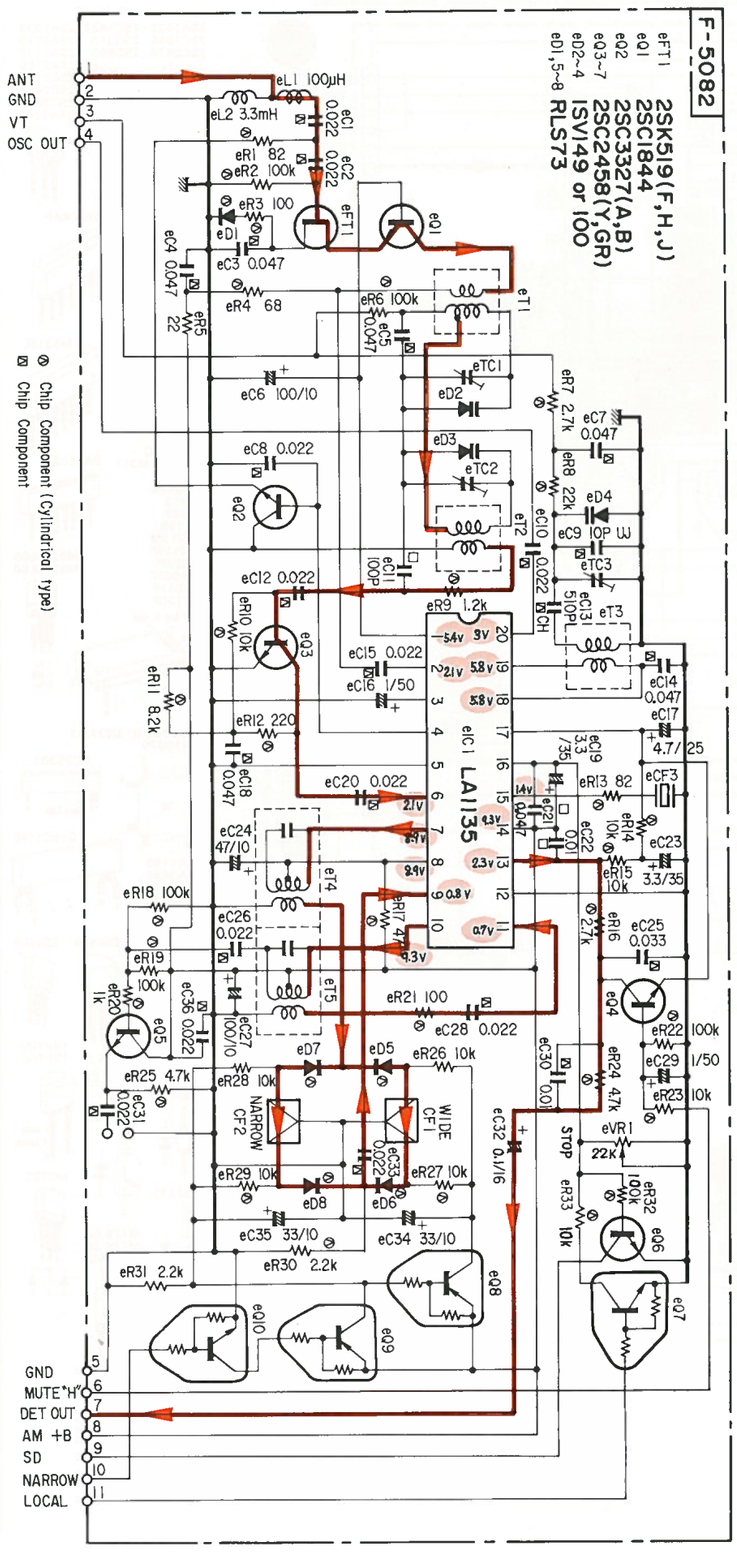
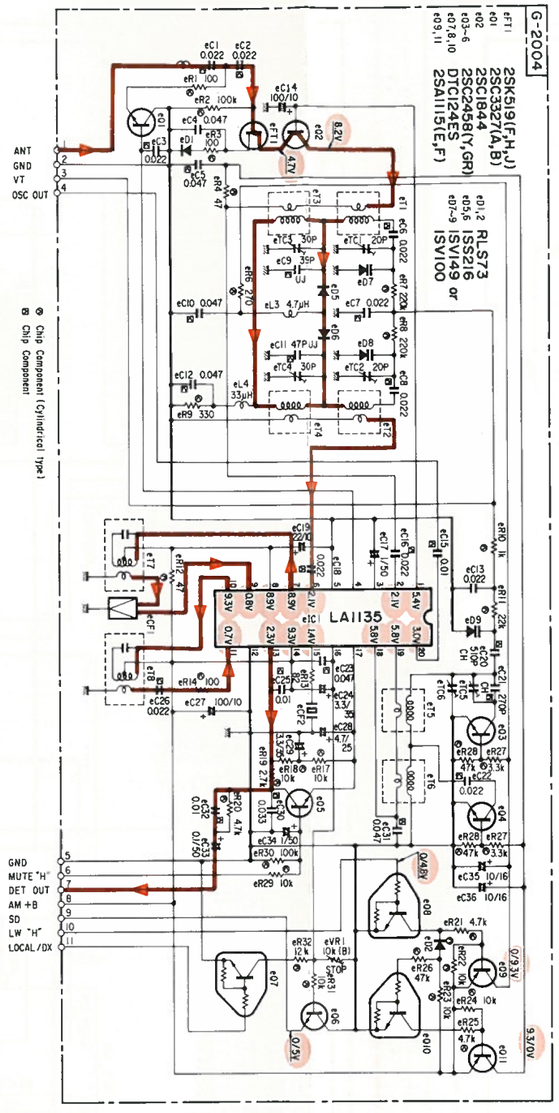
- Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.



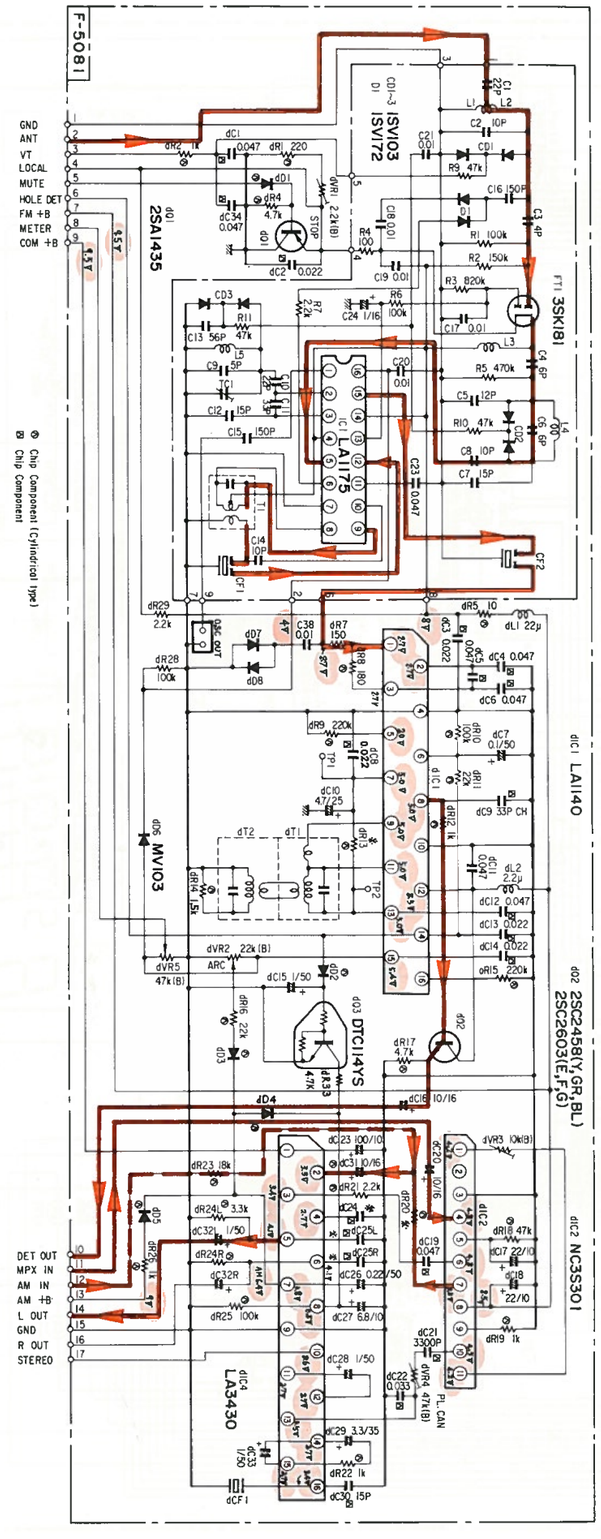
11-5. AM Circuit for GT-X7000/GT-X7000F



11-6. AM Circuit for GT-X7000L



11-7. FM Cirucit



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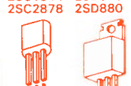
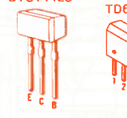
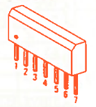
2SC1844 2SD313 2SA1048
2SC2878 2SD880 2SA1115
2SA1150
2SC1740S
2SC2458
2SC2603
DTA124ES



2SC3327
DTA114TS
DTC114ES
DTC143ES
DTC144ES



TD6308AP



LA2000

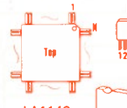
M5218L

μPB553AC
μPD7519-M311
BA6251F
BU4011B
IR2415
IR9393
LA1135
LB1213M
M4011BP
M5228P
M54563P
TC4011P
TC9130P

BA3112

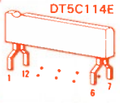
M5278L05
M5278L56

μPD1710G-013/227/52
CXA10970



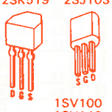
NC3S301

DT5C114E

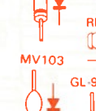


LA1140
LA3430
TA7405P

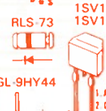
2SK519 2SJ103



10D1

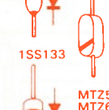


RLS-73

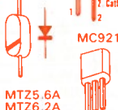


1SV100
1SV149

MV103



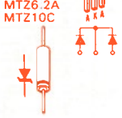
GL-9HY44



MC921

1SS133

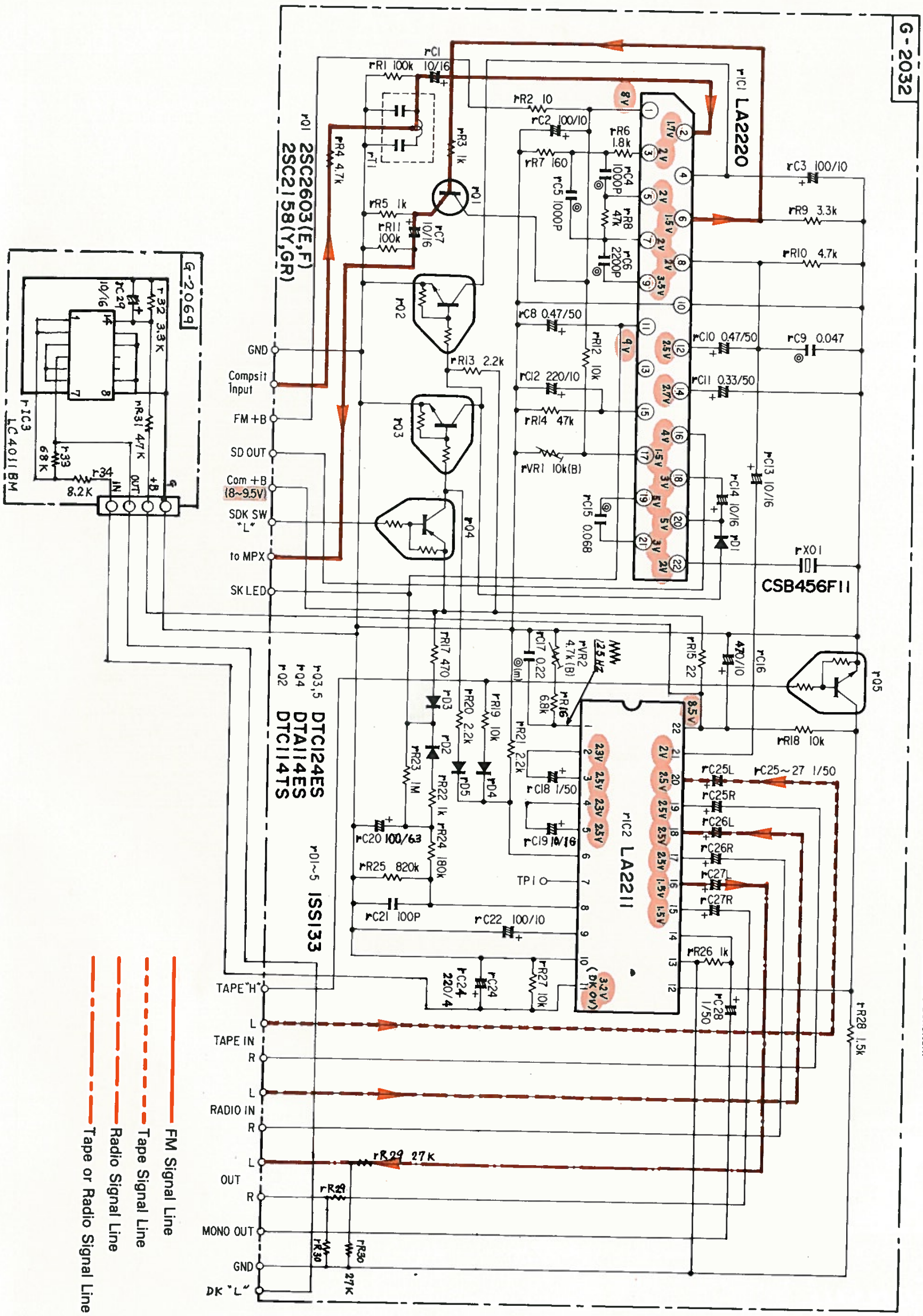
MTZ5.6A
MTZ6.2A
MTZ10C



AM Signal Line
AM Signal Line
FM Signal Line
AM Signal Line

A	B	C	D

11-8. Traffic Station Indentification for GT-X7000F



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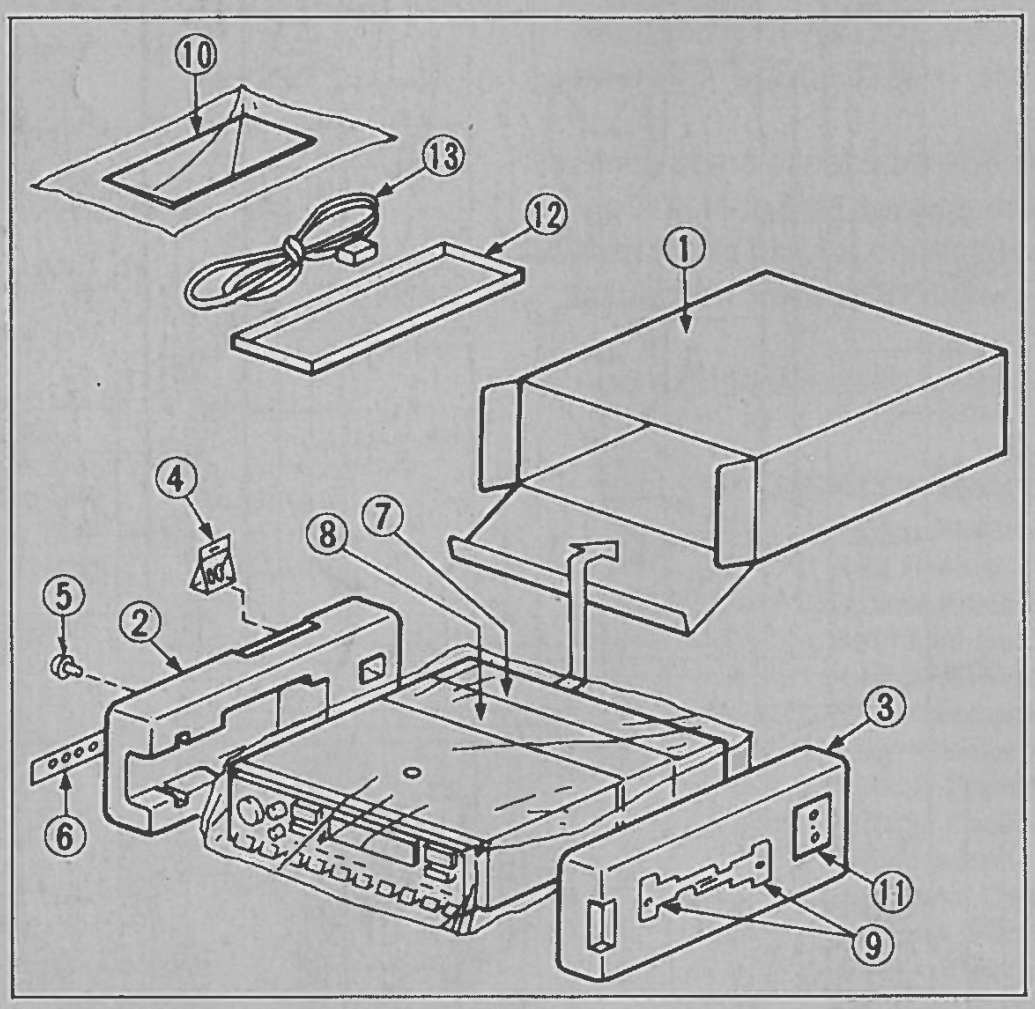
1
2
3
4
5

12. PACKING LIST

Parts No.	Stock No.	Description
1	67058200	Carton Case for GT-X7000
	67059000	Carton Case for GT-X7000L
	67059100	Carton Case for GT-X7000F
2	67058000	Styrofoam Packing <Right>
3	67058100	Styrofoam Packing <Left>
4	47483900	Mounting Screw
5	47387700	Rubber Bushing
6	07900100	Metal Mounting Strap
7	67039900	Vinyl Bag

Parts No.	Stock No.	Description
8	47345410	Housing Case
9	47348700	Lever
10	49016500	Operating Instruction for GT-X7000
	49016600	Operating Instruction for GT-X7000L
	49016700	Operating Instruction for GT-X7000F
11	47387600	Holder
12	67055500	Frame Ass'y
13	48524900	Cord Ass'y



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PHONE: (03) 324-8891/TELEX: 232-2076 (International Division)
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3036 Koapaka Street. Honolulu, Hawaii 96819 U.S.A.
SANSUI ELECTRONICS (U.K.) LTD.: Unit 10A, Lyon Industrial Estate, Rockware Avenue, Greenford, Middx UB6, 0AA, England
SANSUI ELECTRONICS G.M.B.H.: Pau Ehrich Strasse 8, 6074 Rödermark 2, West Germany

(SM1-322) (1986.9.M) <Stock No. 36525600>