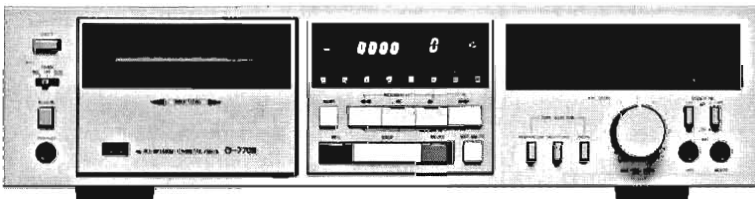


SERVICE MANUAL

AUTO REVERSE CASSETTE DECK

SANSUI D-770R



• SPECIFICATIONS

Track	4-Track (2-Channel Stereo)
Tape speed	4.8 cm/sec. (1-7/8 ips)
Heads	Record/Playback: High Bs Hard Parmalloy Erase: Double Gap Ferrite Head
Motor	Capstan: Electronically Controlled DC Motor Reels: DC Motor Mechanism: DC Motor
Wow and flutter	within 0.04% WRMS
Fast wind time	approximately 80 seconds (C-60)
Frequency response (Record/Playback)	
Normal Tape (LH) (-20 VU)	20 to 17,000 Hz
Metal Tape (-20 VU)	20 to 20,000 Hz
(0 VU)	35 to 16,000 Hz \pm 3 dB
(0 VU)	35 to 13,000 Hz \pm 3 dB
Signal to noise ratio (Record/Playback)	
Metal Tape (without Dolby Noise Reduction Effect)	better than 60 dB (weighted)
(With Dolby Noise Reduction)	
B-NR	better than 70 dB (above 5 kHz)
C-NR	better than 80 dB (above 1 kHz)
Erasure factor (Metal Tape)	more than 70 dB at 1,000 Hz
Input sensitivity and impedance (0 VU, 1,000 Hz)	
MIC	0.4 mV/200 Ω ~ 5 k Ω
LINE IN (REC)	70 mV/47 k Ω
Output level (0 VU, 1,000 Hz)	
LINE OUT (PLAY)	350 mV
PHONES	100 mV
Power requirements	
Power voltage	100, 120, 220, 240 V (50/60 Hz)
For U.S.A. and Canada	120 V (60 Hz)
Power consumption	32 W
Dimensions	430 mm (16-15/16") W 111 mm (4-3/8") H 324 mm (12-3/4") D
Weight	6.6 kg (14.6 lbs) net 7.7 kg (17.0 lbs) packed

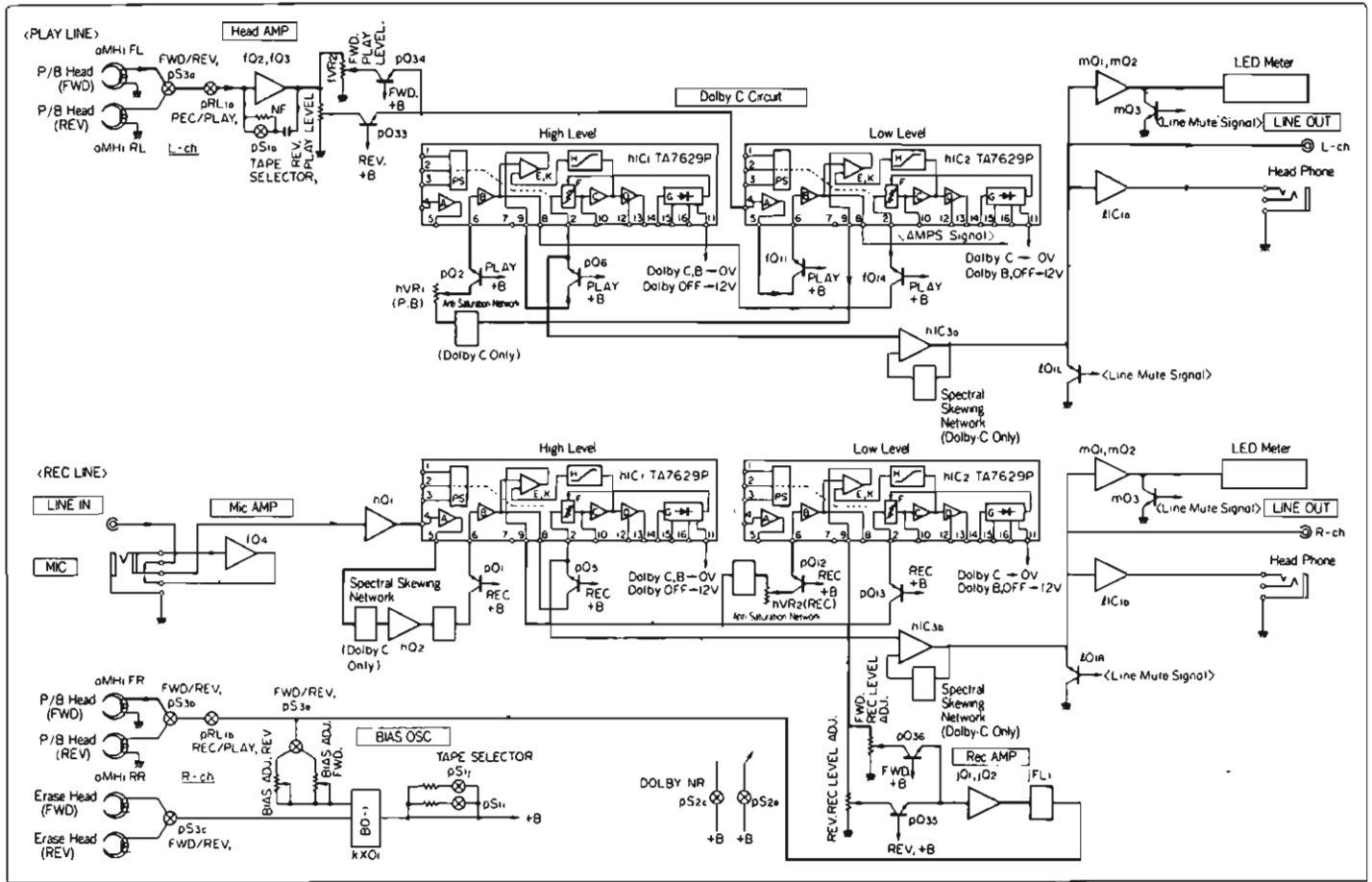
* Design and specifications subject to changes without notice for improvements.

* 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.

Sansui

SANSUI ELECTRIC CO., LTD.

1. BLOCK DIAGRAM



2. OPERATIONS

2-1. Features

This Model No. D-770R is a stereophonic cassette deck provided with two microcomputers and a Dolby C system, by which forward-and-reverse recording/playing quickly-reversing function has been newly realized.

1) Quick-turn reverse function

An independent microcomputer is mounted for controlling automatic reverse operation, and an infrared ray photocoupler is used to detect the magnetic tape end. Therefore, the tape feeding direction can momentarily be switched from forward direction (▶) to reverse direction (◀) and the fixed-type four-track head can also momentarily be switched from forward record/play line to reverse record/play line.

2) Three tape-feeding modes by reverse mode selector

☐: One-way record/play operation can be made in either of the forward direction or the reverse direction.

◁: Both-way record/play operation can be made beginning from the forward direction. Beginning from the reverse direction, one way record/play operation can be made.

○: In the case of recording operation, after the both-way recording operation beginning from the forward direction has been completed, automatic endless playing operation is successively made in such a way as from A surface, through B surface, to A surface After the one-way recording operation beginning from the reverse direction has been completed, automatic endless playing operation is successively made in such a way as from A surface, through B surface, to A surface

In the case of playing operation, endless playing operation

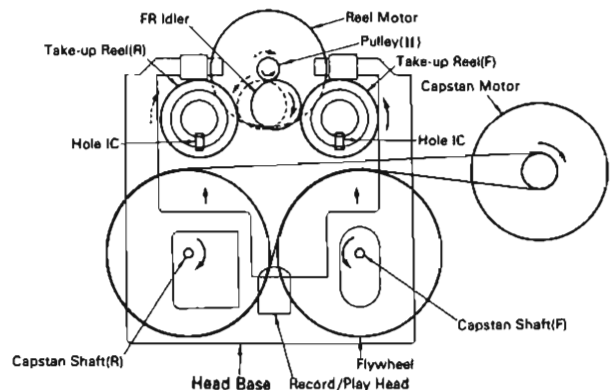
can be made, even if the operation starts from either of the forward direction or the reverse direction.

- 3) Memory play, memory stop, two-point memory repeat functions by microcomputer control.
- 4) Successive double-face (A and B surfaces) record/play operation, 15-music jump music-selection, and AMPS functions.
- 5) Electronic dual-mode counter function of tape-run time period display and four-digit counter display.
- 6) Two motors for driving the capstan and the reel, and one separate cam motor for engaging/disengaging the pinch roller.
- 7) Dolby B-type and C-type NR systems.

2-2. Mechanism Operation

A. Driving of capstan and take-up reels (See Fig. 2-1)

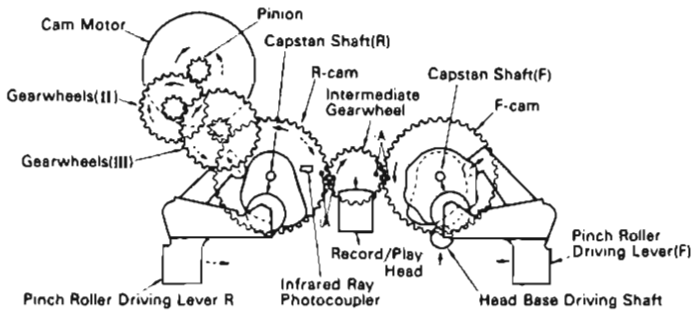
Fig. 2-1 Driving of capstan and take-up reels



- 1) The rotary power of the capstan motor rotates the flywheel, the capstan shaft F, and the capstan shaft R through the pulley and the capstan belt.
- 2) The rotary power of the reel motor rotates the take-up reel F or the take-up reel R through the pulley (II) and the FR idler. Since the FR idler is brought into pressure-contact with the pulley (II) by the spring force of the idler bearing plate, when the pulley (II) starts rotating, the FR idler is moved toward the turning direction of the pulley (II) so as to be brought into pressure-contact with the take-up reel. Therefore, when the reel motor rotates counterclockwise, the FR idler is brought into pressure-contact with the take-up reel F to rotate it. On the other hand, when the reel motor rotates clockwise, the FR idler is brought into pressure-contact with the take-up reel R to rotate it.

B. Operations of pinch roller and head base (See Fig. 2-2).

Fig. 2-2 Operations of pinch roller and head base



- 1) The rotary power of the cam motor rotates the R-cam through the pinion and the gearwheels (II) and (III), and further rotates the F-cam through the intermediate gearwheel.
- 2) When the F-cam rotates, the head base driving shaft in pressure-contact with the head base driving cam portion of the F-cam moves to shift the record/play head.
- 3) When the F-cam rotates counterclockwise, the pinch roller driving lever F in pressure-contact with the pinch roller driving cam portion of the F-cam moves to bring the pinch roller F into pressure-contact with the capstan shaft F.
- 4) Further, when the R-cam rotates clockwise, the pinch roller driving lever R in pressure-contact with the pinch roller driving cam portion of the R-cam moves to bring the pinch roller R into pressure-contact with the capstan shaft R.
- 5) The cam motor stops rotating, when the cam switch aS5 made up of a leaf-spring conductor attached on the back side of the F-cam and a cam switch board detects the revolution angle of the F-cam and outputs a stop command signal to the microcomputer.
- 6) Therefore, the record/play head and the pinch roller can move to each predetermined position in the forward, pause, and record/play operations, respectively.

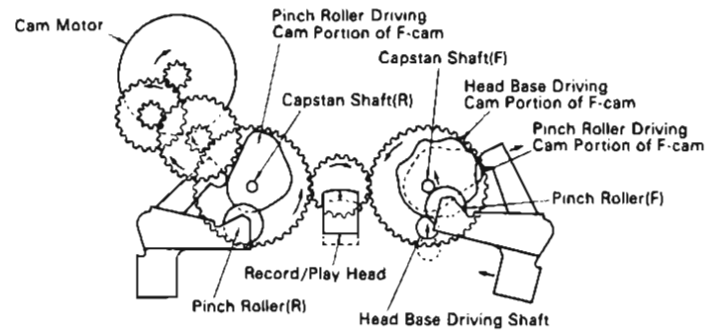
C. Playing operation (See Fig. 2-3)

- 1) When the cam motor rotates, the F-cam also rotates to shift the head base plate upward.
- 2) Although the take-up reels F and R are in pressure-contact with the brake rubber portions of the head base plate in the stop operation, when the head base plate moves upward, the take-up reels F and R are released from the pressure-contact with the brake rubber portions. The record/play head is brought into slight-contact with the tape.

• In Forward Play (▶)

- 3) During the forward playing operation, the cam motor rotates clockwise; the F-cam rotates counterclockwise; the pinch roller driving lever F moves; the pinch roller F is brought into pressure-contact with the capstan shaft F; therefore, the tape runs in the forward direction.

Fig. 2-3 Playing operation



- 4) The instant the pinch roller F is brought into pressure-contact with the capstan shaft F, the cam switch aS5 is turned on to stop the cam motor, the reel motor rotates counterclockwise, so that the take-up reel F winds up the tape.

• In Reverse Play (◀)

- 5) During the reverse playing operation, the cam motor rotates counterclockwise; the F-cam rotates clockwise; the pinch roller driving lever R moves; the pinch roller R is brought into pressure-contact with the capstan shaft R; therefore, the tape runs in the reverse direction.
- 6) The instant the pinch roller R is brought into pressure-contact with the capstan shaft R, the cam switch aS5 is turned on to stop the cam motor; the reel motor rotates clockwise, so that the take-up reel R winds up the tape.

D. Fast forwarding operation (See Figs. 2-1, 2-2, 2-5)

- 1) When the cam motor rotates the F-cam and therefore the head base plate moves upward, the take-up reels F and R are released from brake conditions.
- 2) In the rightward fast forwarding operation (▶▶), the reel motor rotates counterclockwise to bring the FR idler into pressure-contact with the take-up reel F to rotate the take-up reel F counterclockwise, so that the tape is fed rightward quickly.
- 3) In the leftward fast forwarding operation (◀◀), the reel motor rotates clockwise to bring the FR idler into pressure-contact with the take-up reel R to rotate the take-up reel R clockwise, so that the tape is fed leftward quickly.

Fig. 2-4 Pause operation

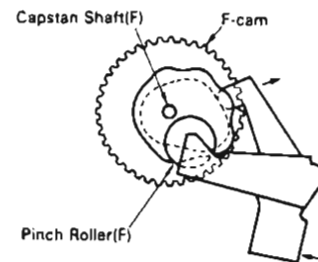
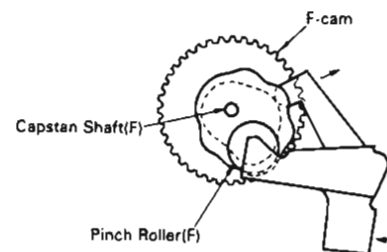


Fig. 2-5 Fast forwarding operation



E. Pause operation (See Fig. 2-4)

- 1) When the PAUSE switch nS1 is depressed in the playing operation, the cam motor rotates to move the R-cam and F-cam.
- 2) The head base driving cam portion of the F-cam pushes the head base driving shaft downward.
- 3) At a position where the record/play head is at some distance away from the tape, the cam switch aS5 detects the pause position to stop the cam motor.
- 4) In the forward playing operation, the pinch roller driving cam portion of the F-cam moves the pinch roller F, so that the pinch roller F moves a little away from the capstan shaft F.
- 5) In the reverse playing operation, the pinch roller driving cam portion of the R-cam moves the pinch roller R, so that the pinch roller R moves a little away from the capstan shaft R.

F. Stop operation (See Fig. 2-1)

- 1) When the STOP switch nS5 is depressed in the playing, fast forwarding and pause operations, the cam motor rotates to move the F-cam, so that the head base is pushed downward.
- 2) As a result, the brake rubber of the head base holds the take-up reel F or R.
- 3) At the same time, the F-cam or R-cam moves to release the pinch roller F or R from pressure-contact condition.

G. Recording operation (See Exploded view on page 13)

- 1) When a cassette half is placed, since the recording prevention arm ⑮ moves upward to turn the recording switches aS2 and aS3 on, the recording operation is enabled in the microcomputer control circuit.
- 2) The operations of the mechanism are the same as in the playing operation.

2-3. Operation of Control Circuit on Microcomputer

(See Block Diagram of Control Circuit on page 4)

A. Forward playing (▶) operation

- 1) When the forward play switch nS3 is depressed, the pin 37 and the pin 39 of the microcomputer aIC1 are connected, so that a forward play command signal is inputted to the microcomputer.
- 2) Accordingly, the cam-motor forward signal at the pin 20 of the microcomputer changes from a L-voltage level to a H-voltage level; the cam motor aM1 rotates clockwise; the record/play head and the pinch roller F move to a position of the forward playing operation.
- 3) When the F-cam rotates to a position of the forward playing operation, the cam switch aS5 is turned on, so that a scanning signal at the pin 35 of the microcomputer is inputted to the pin 6 (See Fig. 2-3).
- 4) As a result, the pin 20 changes from a H-voltage level to a L-voltage level to stop the cam motor from rotating. Additionally, the pin 14 changes from a H-voltage level to a L-voltage level to rotate the reel motor aM2 counterclockwise, so that the tape runs in the forward direction.
- 5) When the cam motor stops rotating, after 0.2 seconds a line muting signal at the pin 16 of the microcomputer changes from a L-voltage level to a H-voltage level, the nQ31 is off; the IQ1L and the IQ1R are both off; the line muting is released.

B. Reverse playing (◀) operation

- 1) When the reverse play switch nS4 is depressed, the pin 37 and the pin 38 of the microcomputer are connected, so that a reverse play command signal is inputted to the microcomputer.
- 2) Accordingly, the cam-motor reverse signal at the pin 19 of the microcomputer changes from a L-voltage level to a H-voltage level, the cam motor aM1 rotates counterclockwise; the record/play head and the pinch roller R move to a position of the reverse playing operation.

- 3) When the F-cam rotates to a position of the reverse playing operation, the cam switch aS5 is turned on, so that a scanning signal at the pin 37 of the microcomputer is inputted to the pin 6 (See Fig. 2-4).
- 4) As a result, the pin 20 changes from a H-voltage level to a L-voltage level to stop the cam motor from rotating. Additionally, the pin 14 changes from a H-voltage level to a L-voltage level to rotate the reel motor aM2 clockwise, so that the tape runs in the reverse direction.
- 5) The line muting is released in the same way as in the forward playing operation.

C. Signal lines in forward and reverse playing operations

- 1) In the forward playing operation, the forward/reverse switching signal at the pin 18 of the microcomputer is at a L-voltage level; therefore, the pQ32 is off; the pQ31 and the pQ30 are both on. Further, in the forward playing operation, since the pQ34 and the pQ36 on the signal line are both on, the signal line is switched to the record/play level adjusting variable resistors fVR2 and jVR2.
- 2) At the same time, the pQ27 and the pQ26 are both turned on to energize the plunger pS3, so that the forward/reverse switches pS3a and pS3b are set at the forward position. Therefore, the record/play head aMH1 FL/FR in the forward playing operation is connected to the recording or playing amplifier.

D. Rightward fast forwarding (▶▶) operation

- 1) When the rightward fast forwarding (▶▶) switch nS6 is depressed, the pin 37 and the pin 41 of the microcomputer are connected, so that a rightward fast forwarding command signal is inputted to the microcomputer.
- 2) Accordingly, the cam-motor forward signal at the pin 20 of the microcomputer changes from a L-voltage level to a H-voltage level; the cam motor aM1 rotates clockwise; the head base moves upward, so that the take-up reels F and R are released from brake condition.
- 3) When the F-cam rotates to a fast forwarding position, the cam switch aS5 is turned on, a scanning signal at the pin 35 is inputted to the pin 6 (See Fig. 2-5).
- 4) As a result, the pin 20 changes from a H-voltage level to a L-voltage level to stop the cam motor from rotating. Additionally, the pin 14 changes from a H-voltage level to a L-voltage level, so that the reel motor aM2 rotates counterclockwise. At the same time, since the pin 15 changes from a H-voltage level to a L-voltage level to turn the aQ2 off; therefore, a voltage applied to the pin 6 of the reel motor driver aIC2 rises higher to increase the revolution speed of the reel motor.

E. Pause operation

- 1) When the PAUSE switch nS1 is depressed during the playing operation, the pin 36 and the pin 40 are connected, so that a pause command signal is inputted to the microcomputer.
- 2) As a result, the reel motor stops rotating; the cam motor starts rotating, so that the pinch roller moves a little away from the capstan shaft and also the record/play head moves a little away from the tape. When the F-cam rotates to the pause position, the cam switch aS5 is turned on to stop the cam motor.
- 3) The instant a pause command signal is inputted to the microcomputer, the line muting signal at the pin 16 changes from a H-voltage level to a L-voltage level, so that the nQ31 and the nQ1L, R are all turned on to mute the line-out signal.
- 4) When the PAUSE switch nS1 is depressed still more, the cam motor rotates to bring the pinch roller into pressure-contact with the capstan shaft. The instant the cam motor stops rotating, the reel motor starts rotating.
- 5) The line-out muting operation is released 0.2 seconds after the cam motor stops rotating.

F. Recording operation

- 1) When a cassette half is mounted on the cassette holder, the forward/reverse recording protection switch aS2/3 is turned on to change the pin 30 and the pin 31 of the microcomputer aIC1 to a L-voltage level. This is the state where a record-enabling command signal is inputted to the microcomputer.
- 2) Next, when the RECORD switch nS2 and the FORWARD PLAY switch nS3 are depressed simultaneously, the pin 37 and pin 39 are connected, so that a record command signal is inputted to the microcomputer.
- 3) As a result, the record/play switching signal at the pin 17 changes from a H-voltage level to a L-voltage level; the pQ24 is turned on to activate the recording bias oscillator. Additionally, the pQ21 is turned on; the relay pRL1 is energized to set the record/play switch pRL1 a/b to a recording condition. At the same time, since the fQ1 is turned on, the input signal to the play amplifier is grounded.

G. Automatic reverse operation

The automatic reverse function is such that the tape is automatically reversed when the end of the magnetic tape is detected in order to realize two way (both surfaces) recording/playing operations, without turning a cassette half over manually.

• Operation from forward play (▶) to reverse play (◀)

- 1) When one of the reverse mode switches nS11c ~ k is depressed in the both-way operation ◁ (only from the forward direction ▶ to the reverse direction ◀) or in the endless operation ○, the end of a magnetic tape in the forward playing operation is detected by the infrared ray combination tape sensor aPH1.
- 2) This tape-end detection signal and the reel motor forward signal at the pin 14 turn the nQ23 on. This state where the nQ23 is on is the same as where the REVERSE PLAY switch nS4 is kept depressed; that is, where a reverse-play command signal is inputted to the microcomputer.

• Operation from reverse play (◀) to forward play (▶)

- 1) In the reverse playing operation, the tape-end detection signal and the reel motor reverse signal at the pin 13 turn the nQ24 on.
- 2) This state where the nQ24 is on is the same as where the FORWARD PLAY switch nS3 is kept depressed; that is, where a forward-play command signal is inputted to the microcomputer.

• Operation from forward record (▶) to reverse record (◀)

- 1) In the forward recording operation, the tape-end detection signal and the reel-motor forward signal at the pin 14 turn the nQ23 on to input a reverse-play command signal in the microcomputer.
- 2) Additionally, the above-mentioned signal to turn the nQ23 on and the record-play signal at the pin 17 turn the nQ25 on to simultaneously input a record command signal to the microcomputer.

• Operation from reverse record to forward play in reverse mode ○

- 1) If the reverse mode is switched to the endless mode ○ during the reverse recording operation, the forward recording is not operated.
- 2) In the reverse recording operation, the tape-end detection signal and the reel-motor reverse signal at the pin 13 turn the nQ24 on to input only a forward-play command signal to the microcomputer. Therefore, the reverse-recording operation can be switched to the forward-playing operation.

H. AMPS function

- 1) The automatic music program search is a function to automatically select a first music to be played.
- 2) When the AMPS switch nS9 is depressed, an AMPS command signal is inputted to the microcomputer, and "0" is indicated on the AMPS display oLD1.

- 3) When the PLAY switch is depressed and next the first forwarding switch is depressed repeatedly and continually, an AMPS data is developed at the pin 5 of the microcomputer and a desired numeral is indicated on the AMPS display, thus it being possible to automatically select a desired music.
- 4) The play signal at the preamplifier output pin 8 of the Dolby NR IC hIC2 is first waveform-shaped through the oQ11, oIC4b, c, d, and next inputted to the pin 29 of the microcomputer. Therefore, the fast forwarding operation is switched to the play operation at the beginning of the designated music.
- 5) A program is stored in the microcomputer, so that jump music selection can be made up to 15 musics ahead or behind.

I. Dual memory function

- 1) It is possible to play musics repeatedly between two desired points on a tape.
 - 2) The play-start point can be stored by depressing the PLAY ADD switch nS11b; the play-stop point can be stored by depressing the STOP ADD switch nS11a.
 - 3) When the PLAY ADD switch and the STOP ADD switch are depressed in the state where the PLAY switch is kept depressed, a numerical value in the counter of the real-time counter display at that time is stored, and the indicator lights nLD1 and nLD2 come on. Then, the playing operation is repeated between the stored two points of play point and stop point.
 - 4) The counter pulse signal is taken out from the Hole IC aIC5, and inputted to the pin 4 of the microcomputer.
- When only the play-start point is stored, the tape is automatically switched to the playing operation at this play-start point during fast forwarding operation.
 - When only the stop point is stored, the tape automatically stops running at this stop point during the playing operation or fast forwarding operation.
 - If each switch is depressed again, each indicator light goes off, the stored numerical values being erased.

J. Real time/counter display

- 1) The real time/counter display is an electronic display device provided with two functions of displaying tape-run time elapsed and a tape counter.
- Real time
 - 1) When the digital counter switch nS11c is set to the REAL TIME, the tape-run time elapsed is displayed in minutes and seconds. The tape-run time is added up only while the tape is running during recording and playing operations.
 - 2) The reel motor drive signals at the pin 13 and the pin 14 of the microcomputer are inputted to the pin 5 of the digital counter FL 4028 as the start/stop signals for displaying the tape-run time elapsed (addition of real time). However, while a fast forwarding signal is developed at the pin 15 of the microcomputer, the addition of real time is disabled.
 - Counter
 - 1) When the digital counter switch nS11c is set to the COUNTER, the real time/counter display serves as a four-digit tape counter. Therefore, the numeral on the display varies as the tape runs. When the tape runs in the rightward direction (▶), the numeral increases; when the tape runs in the leftward direction (◀), the numeral decreases.
 - 2) The number of revolution of the take-up reel F is detected as a counter pulse signal by the Hole IC aIC5; after being amplified through the aQ10 and oQ4, this signal is inputted to the pin 3 of the digital counter FL 4028.
 - 3) During the forward playing operation, since the reel motor forward signal at the pin 14 of the microcomputer is being inputted to the pin 2 of the digital counter FL 4028 as a count-up signal, the numeral in the counter increases.

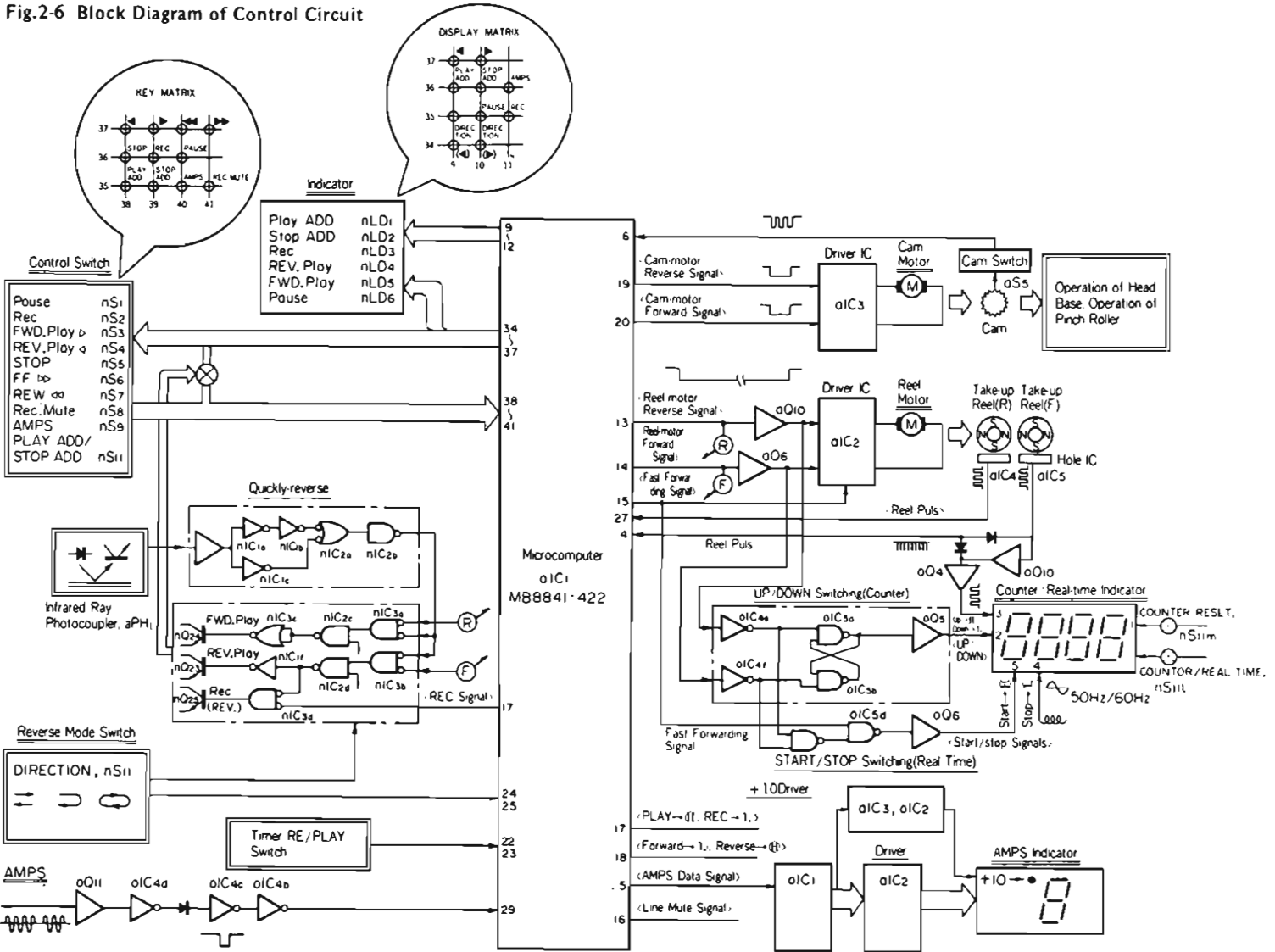
4) During the reverse playing operation, since the reel motor reverse signal at the pin 13 of the microcomputer is being inputted to the pin 2 of the digital counter FL 4028 as a count-down signal, the numeral in the counter decreases.

K. Automatic shut-off operation

- 1) When the reverse mode switch nS11 is set to normal (⇐) position, the tape automatically stops running at the tape end.
- 2) The magnet attached to the take-up reel and the Hole IC, in combination, detect the revolution of the take-up reel to realize automatic shut-off operation.

- 3) When the tape is running in the rightward direction (▶), the revolution of the take-up reel F is detected; when the tape is running in the leftward direction (◀), the revolution of the take-up reel R is detected.
- 4) Accordingly, when the tape is running in the rightward direction, the automatic shut-off operation is made where the pulse signal inputted from the Hole IC aIC4 to the pin 27 of the microcomputer is not given. Further, when the tape is running in the leftward direction, the automatic shut-off operation is made where the pulse signal inputted from the Hole IC aIC5 to the pin 4 of the microcomputer is not given.

Fig.2-6 Block Diagram of Control Circuit



Counter terminal Nos. and functions

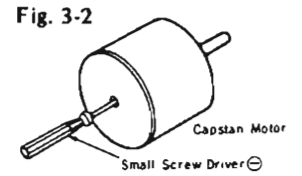
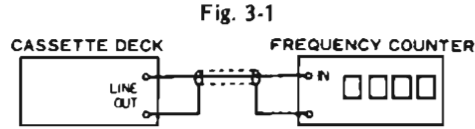
Table 1 Nos. and functions

Connector terminal No.	Terminal labels	Functions
144	RW · RST	Terminal for inputting a power-on or power-off signal
142	RST	Terminal for resetting the selected display mode to zero.
140	G-CLK	Terminal for inputting clock pulse signals for the 4-digit tape counter
139	S-CLK	Terminal for inputting clock pulse signals for stop watch
141	UP/DN	Terminal for inputting a signal for designating addition or subtraction mode to the counter
150	MR	Terminal for inputting a signal to designate memory value display
149	W/C	Terminal for inputting signals to switch from stop watch display to counter display or vice versa. (W = stop watch; C = counter)
148	START/STOP	Terminal for inputting signals to start or stop the stop watch
147	50/60	Terminal for outputting a signal indicative of 50 Hz/60 Hz selection

3. ADJUSTMENTS

3-1. Tape Speed Adjustment

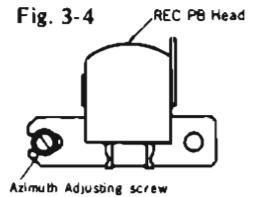
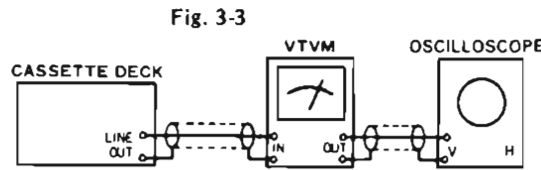
- Note: 1. Use Sansui Test Tape, SCT-S3K
(3 kHz signals are recorded on the tape.)
2. Connections are shown in Fig. 3-1.



STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	TAPE SPEED Adj.	LINE OUT Frequency counter	Playback the TEST TAPE SCT-S3K.	Turn semi-variable resistor as Fig. 3-2.	3000Hz ± 45Hz	Use small screw driver.

3-2. Playback Adjustment

- Note: 1. Before this adjustment, clean REC/P.B. head surface.
2. DOLBY NR Switch OFF
3. Connections are shown in Fig. 3-3.
4. See Top View on page 15 for ADJUSTMENT point.

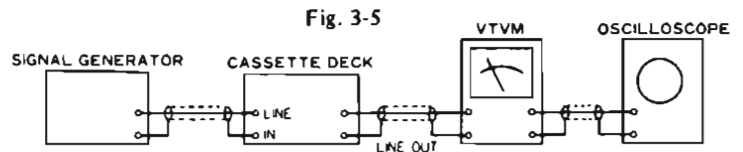


STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	REC/P.B. Head Adj.	LINE OUT VTVM, Scope	Playback the TEST TAPE SCT-F10KN	Adjust the azimuth adjusting screw in Fig. 3-4.	MAX. Output on both channels.	After this adjustment, lock the screw with paint.
2.	Playback Level Adj.	Same as above	Set TAPE SELECTOR to NORMAL (LH) position. Playback the TEST TAPE SCT-L400N.	Adjust fVR2 (FWD. Play, L-CH & R-CH) and fVR1 (REV. Play, L-CH & R-CH)	560mV	
3.	High Frequency Equalization Check	Same as above	Set TAPE SELECTOR to NORMAL (LH) position. Playback the TEST TAPE SCT-F1K.	—	—	Read output levels on both channels.
			Playback the TEST TAPE SCT-F10K.	—	—	Confirm that the output levels are within ± 3dB comparing with the above readings.

Note: On STEP 3, set the TAPE SELECTOR to HIGH (CrO₂) position during playback of SCT-10KN, and confirm the indication on VTVM drops approximately 3dB ~ 4dB.

3-3. Dolby Level Adjustment

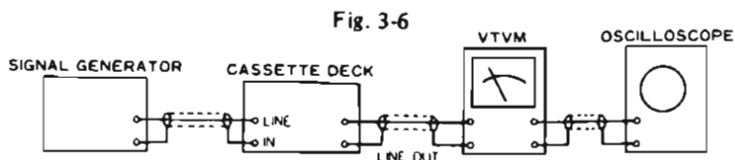
- Note: 1. REC Level Volume MAX.
2. DOLBY NR Switch OFF
3. Connections are shown in Fig. 3-5.
4. See Parts Location G-1360 on page 6 for MEASURE OUTPUT point.



STEP	SUBJECT	INPUT SIGNAL	MEASURE OUTPUT	SETTING	ADJUSTMENT	REMARKS
1.	REC Dolby Level Adj.	LINE IN S.G. 400Hz L-ch & R-ch Load the TEST TAPE SCT-SA	VTVM Scope L-ch . . . TP1 [JW2] R-ch . . . TP1 [JW14]	1. Depress REC/PLAY button. 2. Depress PAUSE button.	Adjust the S.G. for obtaining output level 580mV	
			VTVM Scope L-ch . . . TP2 [JW19] R-ch . . . TP2 [JW21]	Same as above	Adjust the hVR2 (L-ch & R-ch) obtaining output level 580mV.	
2.	PLAYBACK Level Adj.	L-ch . . . hR25 (Point ⊗) R-ch . . . hR25 (Point ⊙) S.G. 400Hz Load the TEST TAPE SCT-SA	VTVM, Scope L-ch . . . TP2 [JW19] R-ch . . . TP2 [JW21]	1. Depress PLAY button. 2. Depress PAUSE button.	Adjust the S.G. for obtaining output level 580mV.	
			VTVM, Scope L-ch . . . TP1 [JW2] R-ch . . . TP1 [JW14]	Same as above	Adjust hVR1 (L-ch & R-ch) obtaining output level 580mV.	

3-4. REC Level & Frequency Response Adjustment

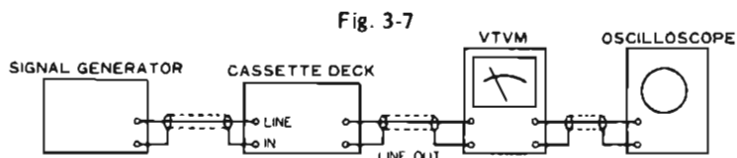
- Note:** 1. REC Level Volume MAX.
 2. Connections are shown in Fig. 3-6.
 3. DOLBY NR Switch OFF
 4. See Top View on page 15 for ADJUSTMENT point.



STEP	SUBJECT	INPUT SIGNAL	MEASURE OUTPUT	SETTING	ADJUSTMENT	REMARKS
1.	REC Level Adj.	Feed 1kHz, 70mV from S.G. into LINE IN.	LINE OUT VTVM Scope	Load the TEST TAPE SCT-SA. Set TAPE SELECTOR to HIGH (CrO ₂) position. 1. Depress PAUSE, PLAY and REC button. 2. Adjust the Rec Level Volume for obtaining 380mV on VTVM. 3. Depress PAUSE button, then record the 1kHz signal. 4. Play back the 1kHz signal. 5. Confirm that the output levels on both channels are 380mV on VTVM.	1. If not, turn jVR2 (FWD. REC, L-CH & R-CH) and jVR1 (REV. REC, L-CH & R-CH) until output level 380mV on both channels are obtained. 2. Repeat this REC adj. until the indication on VTVM will be 380mV.	
2.	Frequency Response Adj.	Feed 1kHz 7mV and 10kHz 7mV from S.G. into LINE IN.	Same as above	Load the TEST TAPE SCT-SA. Set TAPE SELECTOR to HIGH (CrO ₂) position. 1. Record the 1kHz and 10kHz signals from S.G. 2. Play back the 1kHz and 10kHz signals, then confirm that both output levels equal.	1. If not, adjust kVR1L (FWD. BIAS, L-CH), kVR1R (FWD. BIAS, R-CH) and kVR2L (REV. BIAS, L-CH), kVR2R (REV. BIAS, R-CH) slightly until the output levels will be equal.	

3-5. Peak Level Indicator Adjustment

- Note:** 1. Set TAPE SELECTOR NORMAL (LH)
 2. DOLBY NR Switch OFF
 3. Connections are shown in the Fig. 3-7.
 4. See Parts Location G-1382 on page 9 for ADJUSTMENT point.



STEP	SUBJECT	INPUT SIGNAL	MEASURE OUTPUT	SETTING	ADJUSTMENT	REMARKS
1.	Peak Level Indicator Adj.	Feed 1kHz, 150mV from S.G. into LINE IN	LINE OUT VTVM Scope	Load the TEST TAPE SCT-SA 1. Depress PAUSE, PLAY & REC button. 2. Adjust the REC Level Volume for obtaining 0dB point on Level Indicator. 3. Then confirm the output levels on both channels are 560mV on VTVM.	1. If more than it, take off mR16 (180kΩ). 2. If less than it, take off mR17 (39kΩ).	After this adjustment, perform the SETTING 1 ~ 3 again.

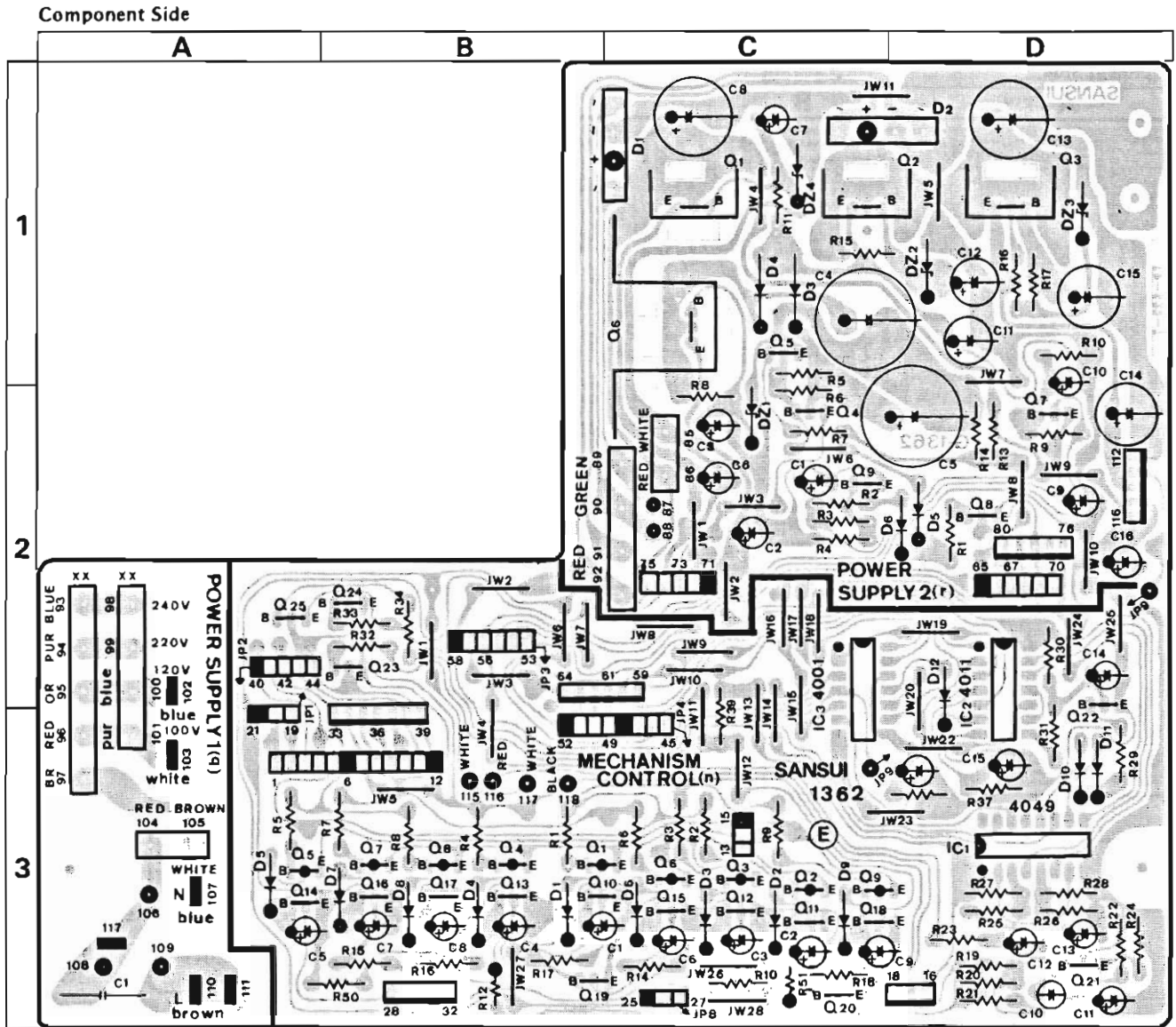
◆ List of Sansui Test Tape

Name of TEST TAPE	Recorded Frequency	Description
SCT-F40	40 Hz	Playback Frequency Response Check
SCT-F1K	1 kHz	High Frequency Equalization Check
SCT-F10K	10 kHz	REC/PB Head Adjustment
SCT-L400N	400 Hz	Playback Level and Indicator Level Adjustment
SCT-S3K	3 kHz	Speed Check and Wow & Flutter Check
SCT-LH NORMAL (LH)		Recording Bias Adjustment
SCT-SA HIGH (CrO ₂)		REC/PB Level Adjustment
SCT-MA (METAL)		Frequency Response Check

◆ Tape Selector Position

NORMAL (LH)		HIGH (CrO ₂)	
FUJI	FL, FX I	FUJI	FX II
MAXELL	UL, UD, XLI, XLI-S	MAXELL	XL II, XL II-S
TDK	D, AD, OD	TDK	SA, SA-X
SCOTCH	TARTAN CRYSTAL MASTER 120	SCOTCH	MASTER 70
SONY	AHF, BHF, CHF Low-Noise	SONY	JHF
AGFA	SUPER SUPER COLOR SUPER FERRO DYNAMIC	AGFA	STEREO CHROM
BASF	LN Super LH I	BASF	SCR
			METAL
		MAXELL	MX
		TDK	MA-R, MA
		SCOTCH	Metafine
		SONY	METALLIC

4-2. G-1362 Mechanism Control Circuit Board (Stock No. 00675801)



Parts List

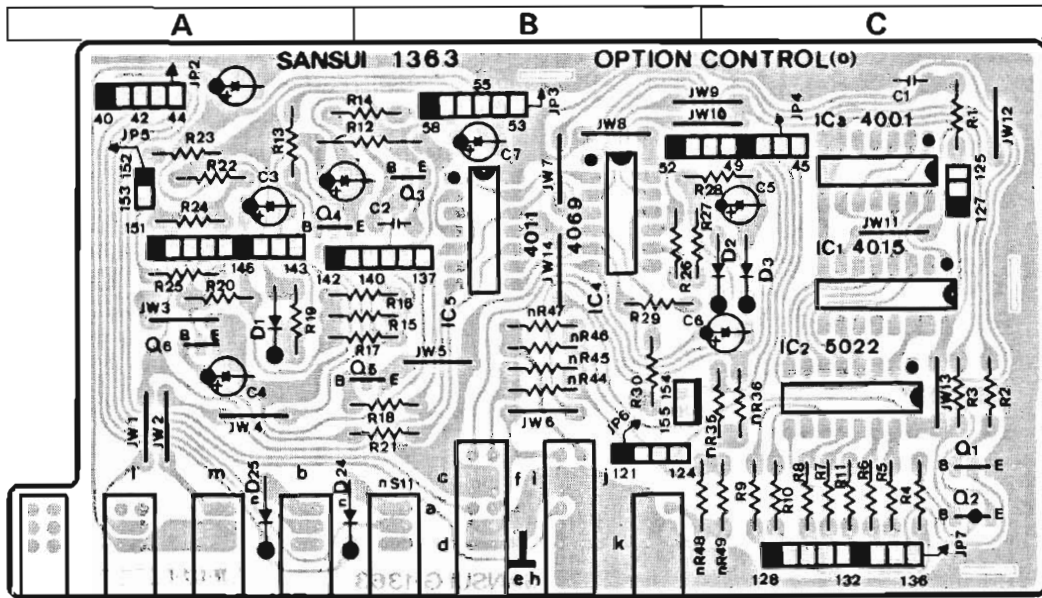
Parts No.	Stock No.	Description	Parts No.	Stock No.	Description	Parts No.	Stock No.	Description	
●Transistor			nQ11	03068301	2SC2320	nQ19	03068301	2SC2320	
nQ1	03012701	2SA999	or 07299701	2SC2603	or 07299701	2SC2603	or 07299701	2SC2603	
	or 07299601	2SA1115	or 07194801	2SC1815	or 07194801	2SC1815	or 07194801	2SC1815	
	or 07194701	2SA1015	nQ12	03068302	2SC2320	nQ20	03068301	2SC2320	
nQ2	03012701	2SA999	or 07299702	2SC2603	or 07299701	2SC2603	or 07299701	2SC2603	
	or 07299601	2SA1115	or 07194801	2SC1815	or 07194801	2SC1815	or 07194801	2SC1815	
	or 07194701	2SA1015	or 03059503	2SC945	nQ21	03068301	2SC2320		
nQ3	03012701	2SA999	nQ13	03068302	2SC2320	or 07299701	2SC2603		
	or 07299601	2SA1115	or 07299702	2SC2603	or 07194801	2SC1815	or 07194801	2SC1815	
	or 07194701	2SA1015	or 07194801	2SC1815	nQ22	03068301	2SC2320		
nQ4	03012701	2SA999	or 03059503	2SC945	or 07299701	2SC2603	or 07299701	2SC2603	
	or 07299601	2SA1115	nQ14	03068302	2SC2320	or 07194801	2SC1815		
	or 07194701	2SA1015	or 07299702	2SC2603	nQ23	03068301	2SC2320		
nQ5	03012701	2SA999	or 07194801	2SC1815	or 07299701	2SC2603	or 07299701	2SC2603	
	or 07299601	2SA1115	or 03059503	2SC945	or 07194801	2SC1815	or 07194801	2SC1815	
	or 07194701	2SA1015	nQ15	03068302	2SC2320	nQ24	03068301	2SC2320	
nQ6	03012701	2SA999	or 07299702	2SC2603	or 07299701	2SC2603	or 07299701	2SC2603	
	or 07299601	2SA1115	or 07194801	2SC1815	or 07194801	2SC1815	or 07194801	2SC1815	
	or 07194701	2SA1015	or 03059503	2SC945	nQ25	03068301	2SC2320		
nQ7	03012701	2SA999	nQ16	03068302	2SC2320	or 07299701	2SC2603		
	or 07299601	2SA1115	or 07299702	2SC2603	or 07194801	2SC1815	or 07194801	2SC1815	
	or 07194701	2SA1015	or 07194801	2SC1815	●IC				
nQ8	03012701	2SA999	or 03059503	2SC945	nIC1	46160500	TC4049BP		
	or 07299601	2SA1115	nQ17	03068302	2SC2320	nIC2	03604000	MSM4011RS	
	or 07194701	2SA1015	or 07299702	2SC2603	or 07299701	2SC1815	nIC3	03609500	MSM4001RS
nQ9	03012701	2SA999	or 07194801	2SC1815	or 03059503	2SC945			
	or 07299601	2SA1115	nQ18	03068301	2SC2320	●Diode			
	or 07194701	2SA1015	or 07299701	2SC2603	or 07299701	03117600	1S2473		
nQ10	03068301	2SC2320	or 07194801	2SC1815	or 07299701	46086000	1S1588		
	or 07299701	2SC2603			or 46092700	US1035			
	or 07194801	2SC1815							

Parts List <G-1362>

Parts No.	Stock No.	Description	Parts No.	Stock No.	Description	Parts No.	Stock No.	Description
nD2	03117600	1S2473	nD11	03117600	1S2473	rQ8	03068301	2SC2320
	or 46086000	1S1588		or 46086000	1S1588		or 07299701	2SC2603
	or 46092700	US1035		or 46092700	US1035		or 07194801	2SC1815
nD3	03117600	1S2473	nD12	03117600	1S2473	rQ9	03068301	2SC2320
	or 46086000	1S1588		or 46086000	1S1588		or 07299701	2SC2603
	or 46092700	US1035		or 46092700	US1035		or 07194801	2SC1815
nD4	03117600	1S2473	nC10	08450900	4.7μF 16V B.P.	●Diode		
	or 46086000	1S1588				rD1	03117000	RB-152
	or 46092700	US1035	nPL1	46203300	Pilot Lamp 14V	rD2	03117000	RB-152
nD5	03117600	1S2473			85mA, ◀	rD3	03117700	10E-2
	or 46086000	1S1588	nPL2	46203400	Pilot Lamp 14V	rD4	03117700	10E-2
	or 46092700	US1035			85mA, ▶	rD5	03117600	1S2473
nD6	03117600	1S2473	qC1	08302200	0.01μF 125V C.C.		or 46086000	1S1588
	or 46086000	1S1588		or 08302600	0.01μF 400V C.C.	rD6	or 46092700	US1035
	or 46092700	US1035	●Transistor				03117600	1S2473
nD7	03117600	1S2473	rQ1	03086101	2SD357-D		or 46086000	1S1588
	or 46086000	1S1588	rQ2	03086101	2SD357-D	●Zener Diode		
	or 46092700	US1035	rQ3	03086101	2SD357-D	rDZ1	46111500	05Z5.6
nD8	03117600	1S2473	rQ4	07254901	2SC1741	rDZ2	46116000	05Z24
	or 46086000	1S1588	rQ5	03068301	2SC2320	rDZ3	46116000	05Z24
	or 46092700	US1035		or 07299701	2SC2603	rDZ4	46112800	05Z8.2
nD9	03117600	1S2473		or 07194801	2SC1815			
	or 46086000	1S1588	rQ6	03086101	2SD357-D			
	or 46092700	US1035	rQ7	03085201	2SD438			
nD10	03117600	1S2473						
	or 46086000	1S1588						
	or 46092700	US1035						

4-3. G-1363 Option Control Circuit Board (Stock No. 00675901)

Component Side

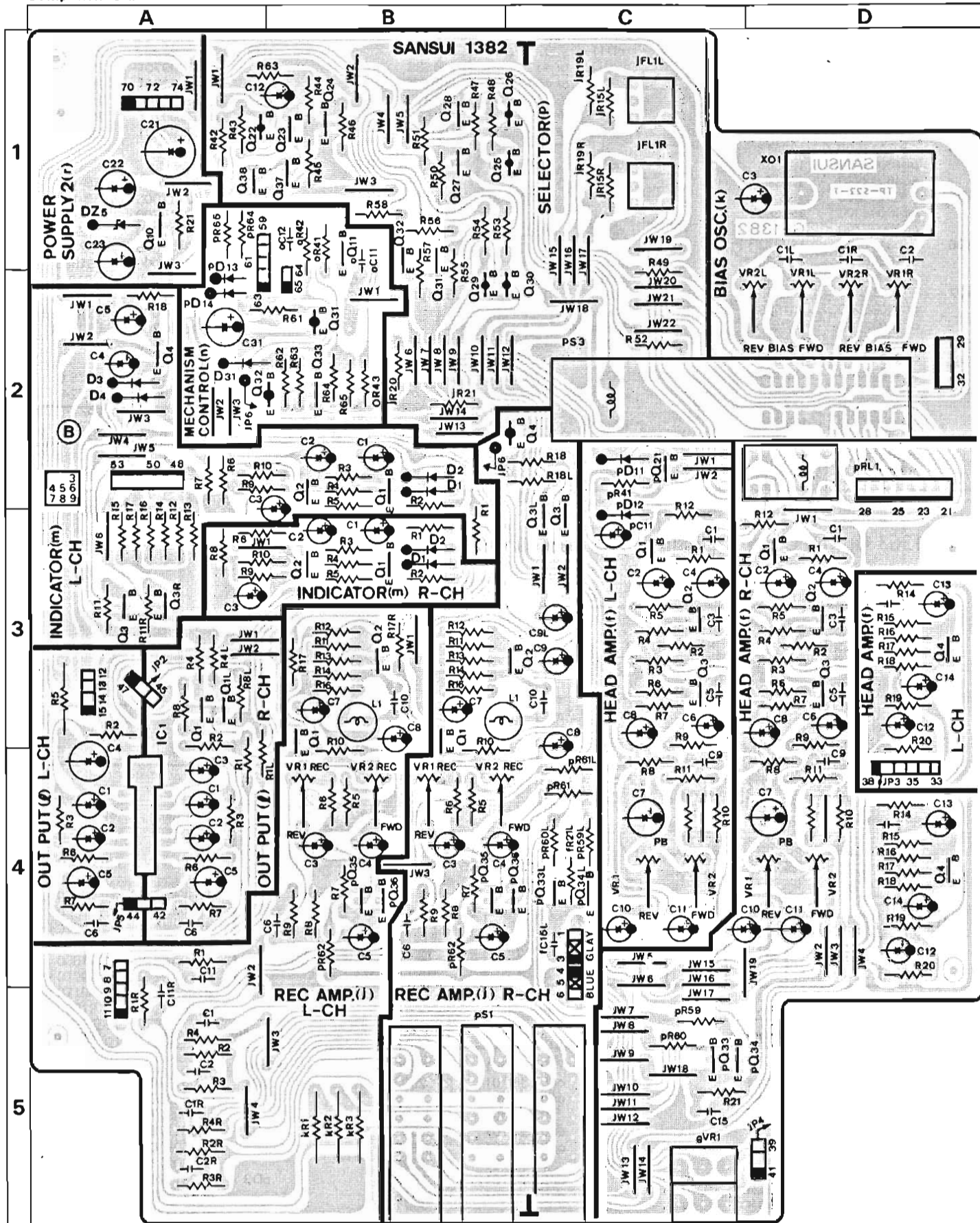


Parts List

Parts No.	Stock No.	Description	Parts No.	Stock No.	Description	Parts No.	Stock No.	Description
●Diode			oQ4	03068301	2SC2320	●Diode		
nD24	03117600	1S2473T		or 07299701	2SC2603	oD1	03117600	1S2473
	or 46086000	1S1588		or 07194801	2SC1815		or 46086000	1S1588
	or 46092700	US1035	oQ5	03068301	2SC2320		or 46092700	US1035
nD25	03117600	1S2473		or 07299701	2SC2603	oD2	03117600	1S2473
	or 46086000	1S1588		or 07194801	2SC1815		or 46086000	1S1588
	or 46092700	US1035	oQ6	03068301	2SC2320		or 46092700	US1035
nS11	46194100	Push Switch, DUAL MEMORY		or 07299701	2SC2603	oD3	03117600	1S2473
				or 07194801	2SC1815		or 46086000	1S1588
							or 46092700	US1035
●Transistor			●IC			oR12	00182200	330Ω 1W N.I.R.
oQ1	07206901	2SC2001	oIC1	46190600	MSM4015RS	oC1	07215400	4700pF 25V C.C.
oQ2	03012701	2SA999	oIC2	07206000	TC5022BP	oC2	07216600	0.047μF 25V C.C.
	or 07299601	2SA1115	oIC3	03609500	MSM4001RS			
	or 07194701	2SA1015	oIC4	03605700	MSM4069RS			
oQ3	03068301	2SC2320	oIC5	03604000	MSM4011RS			
	or 07299701	2SC2603						
	or 07194801	2SC1815						

4-4. G-1382 REC & PLAY Amp. Circuit Board (Stock No. 00676501)

Component Side



Parts List

Parts No.	Stock No.	Description
•Transistor		
fQ1	03068301	2SC2320
	or 07299701	2SC2603
	or 07194801	2SC1815
fQ2	07225401	2SC2320L
fQ3	07225401	2SC2320L
fQ4	07225401	2SC2320L
fc2	46030200	4.7 μ F 25V E.L.
fVR1	10370900	50k Ω (B) S.V.R., REV. PB
fVR2	10370900	50k Ω (B) S.V.R., REV. PB
gVR1	46177000	50k Ω (A) V.R., REC. LEVEL
•Transistor		
jQ1	03068301	2SC2320
	or 07299701	2SC2603
	or 07194801	2SC1815
jQ2	03068301	2SC2320
	or 07299701	2SC2603
	or 07194801	2SC1815
jQ3	03068301	2SC2320
	or 07299701	2SC2603
	or 07194801	2SC1815
jQ4	03012701	2SA999
	or 07299601	2SA1115
	or 07194701	2SA1015
jFL1	07237900	Filter
jL1	46090500	Inductor 2.7MHz
jVR1	10370800	20k Ω (B) S.V.R., REV. REC
jVR2	10370800	20k Ω (B) S.V.R., FWD. REC
kXO1	46194800	OSC Block BO-1
kVR1	10371000	100k Ω (B) S.V.R., FWD. BIAS
kVR2	10371000	100k Ω (B) S.V.R., REV. BIAS
•Transistor		
IQ1	03068301	2SC2320-E
	or 07299701	2SC2603
	or 07194801	2SC1815
•IC		
IIC1	07224500	LA4170
IR5	00182200	330 Ω 1W N.I.R.
IC6	07216600	0.047 μ F 25V C.C.
•Transistor		
mQ1	03068301	2SC2320
	07299701	2SC2603
	or 07194801	2SC1815
mQ2	03068301	2SC2320
	or 07299701	2SC2603
	or 07194801	2SC1815
mQ3	03068301	2SC2320
	or 07299701	2SC2603
	or 07194801	2SC1815
mQ4	03068301	2SC2320
	or 07299701	2SC2603
	or 07194801	2SC1815
•Diode		
mD1	03117600	1S2473
	or 46086000	1S1588
	or 46092700	US1035
mD2	03117600	1S2473
	or 46086000	1S1588
	or 46092700	US1035
mD3	03117600	1S2473
	or 46086000	1S1588
	or 46092700	US1035
mD4	03117600	1S2473
	or 46086000	1S1588
	or 46092700	US1035

Parts No.	Stock No.	Description
•Transistor		
nQ31	03012701	2SA999
	or 07299601	2SA1115
	or 07194701	2SA1015
nQ32	03012701	2SA999
	or 07299601	2SA1115
	or 07194701	2SA1015
nQ33	03068301	2SC2320
	or 07299701	2SC2603
	or 07194801	2SC1815
•Diode		
nD31	03117600	1S2473
	or 46086000	1S1588
	or 46092700	US1035
•Transistor		
oQ11	07194801	2SC1815
	or 03068301	2SC2320
	or 07299701	2SC2603
oC11	07215800	0.01 μ F 25V C.C.
oC12	07216200	0.022 μ F 25V C.C.
•Transistor		
pQ21	03068301	2SC2320
	or 07299701	2SC2603
	or 07194801	2SC1815
pQ22	03012701	2SA999
	or 07299601	2SA1115
	or 07194701	2SA1015
pQ23	03068301	2SC2320
	or 07299701	2SC2603
	or 07194801	2SC1815
pQ24	03068301	2SC2320
	or 07299701	2SC2603
	or 07194801	2SC1815
pQ25	07206801	2SA952
pQ26	07206801	2SA952
pQ27	07206901	2SC2001
pQ28	07206901	2SC2001
pQ29	03012701	2SA999
	or 07299601	2SA1115
	or 07194701	2SA1015
pQ30	03012701	2SA999
	or 07299601	2SA1115
	or 07194701	2SA1015
pQ31	03068301	2SC2320
	or 07299701	2SC2603
	or 07194801	2SC1815
pQ32	03068301	2SC2320
	or 07299701	2SC2603
	or 07194801	2SC1815
pQ33	03068301	2SC2320
	or 07299701	2SC2603
	or 07194801	2SC1815
pQ34	03068301	2SC2320
	or 07299701	2SC2603
	or 07194801	2SC1815
pQ35	03068301	2SC2320
	or 07299701	2SC2603
	or 07194801	2SC1815
pQ36	03068301	2SC2320
	or 07299701	2SC2603
	or 07194801	2SC1815
pQ37	03068301	2SC2320
	or 07299701	2SC2603
	or 07194801	2SC1815
pQ38	03068301	2SC2320
	or 07299701	2SC2603
	or 07194801	2SC1815
•Diode		
pD11	03117600	1S2473
	or 46086000	1S1588
	or 46092700	US1035

to be continued ►

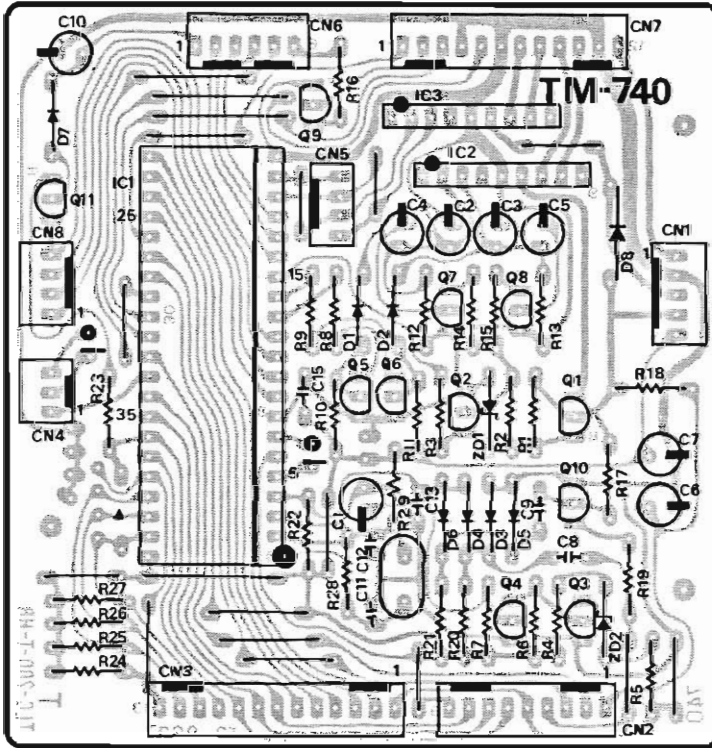
Parts List <G-1382>

Parts No.	Stock No.	Description
pD12	03117600 or 46086000 or 46092700	1S2473 1S1588 US1035
pD13	03111600 or 03111800 or 46052500	1S2473 1S1588 US1035
pD14	03111600 or 03111800 or 46052500	1S2473 1S1588 US1035
pS1	46178000	Push Switch, TAPE SELECTOR
pS3	46194200	Slide Switch, FWD/REV.
pRL1	11506200	Relay

Parts No.	Stock No.	Description
●Transistor		
rQ10	03085200 or 03085201 or 03085202	2SD438-D 2SD438-E 2SD438-F
●Zener Diode		
rDZ5	46115400	05Z20

4-5. TM-740 Mechanism Circuit Board (Stock No. 09476700)

Component Side

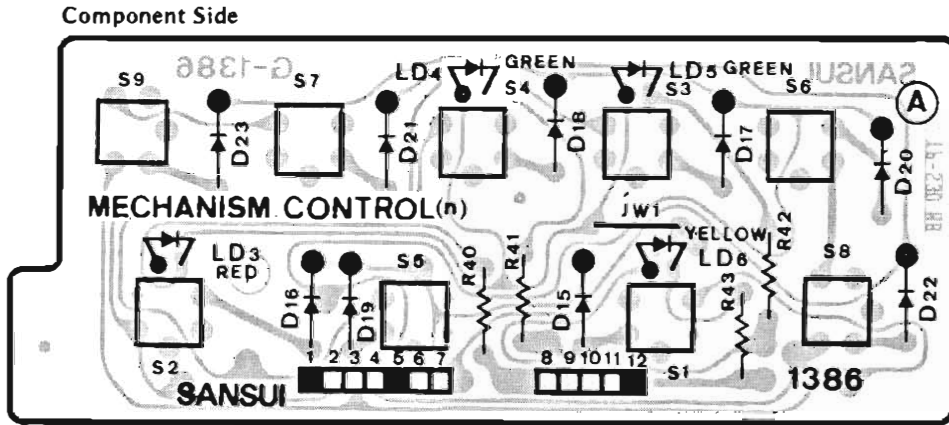


Parts List

Parts No.	Stock No.	Description
●Transistor		
aQ1	09477000	2SD400
aQ2 ~ 10	03068301 or 07299701 or 07194801 or 03051101 or 46078801	2SC2320 2SC2603 2SC1815 2SC458 2SC2458
aQ11	03012701 or 07299601 or 07194701	2SA999 2SA1115 2SA1015
●IC		
aIC1	09476800	MB8841-422
aIC2, 3	09476900	BA6208
●Diode		
aD1 ~ 7	03116200	ITT73N
aD8	03115000	1N4002
●Zener Diode		
aDZ1	03173300	HZ7BL
aDZ2	03167400	RD3.0F-C
aDZ3	03168300	RD4.7F-B
aXO1	09477100	Xtal, 4.194304MHz

•Note: The circuit board, G-1386, G-1361, G-1383, G-1385, G-1364, G-1366, G-1367, G-1384 & G-1365 are not supplied as the assembled. However, the individual parts on the circuit board are provided by orders.

4-6. G-1386 Control Switch Circuit Board

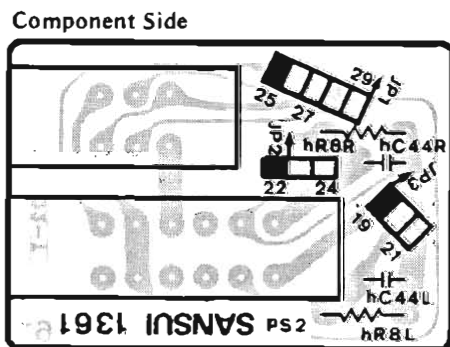


Parts List

Parts No.	Stock No.	Description
•Diode		
nD15	07176400	1S2473
nD16	07176400	1S2473
nD17	07176400	1S2473
nD18	07176400	1S2473
nD19	07176400	1S2473
nD20	07176400	1S2473
nD21	07176400	1S2473
nD22	07176400	1S2473
nD23	07176400	1S2473

Parts No.	Stock No.	Description
•Light Emitting Diode		
nLD3	46176900	TLS-123
nLD4	07250900	TLG-123 (GRN)
nLD5	07250900	TLG-123 (GRN)
nLD6	07251000	TLY-123 (YEL)
nS1	46170500	Push Switch, PAUSE
nS2	46170500	Push Switch, REC
nS3	46170500	Push Switch, FWD. PLAY
nS4	46170500	Push Switch, REV. PLAY
nS5	46170500	Push Switch, STOP
nS6	46170500	Push Switch, FF
nS7	46170500	Push Switch, REW
nS8	46170500	Push Switch, REC MUTE
nS9	46170500	Push Switch, AMPS

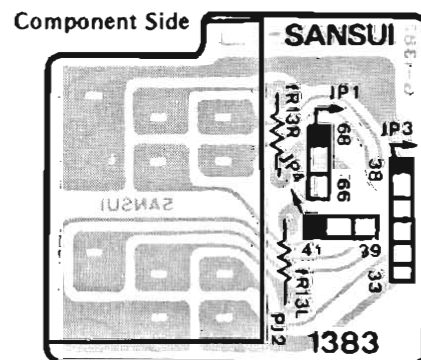
4-7. G-1361 Dolby NR Switch Circuit Board



Parts List

Parts No.	Stock No.	Description
pS2	46177900	Push Switch, DOLBY NR

4-8. G-1383 Mic Jack Circuit Board

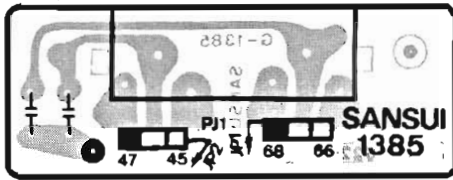


Parts List

Parts No.	Stock No.	Description
pJ2	46212000	Mic Jack

4-9. G-1385 Input-Output Terminal Circuit Board

Component Side

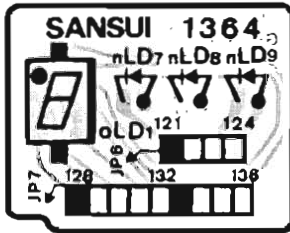


Parts List

Parts No.	Stock No.	Description
IC7	07216600	0.047 μ F 25V C.C.
IC8	07216600	0.047 μ F 25V C.C.
pJ1	07249100	Terminal Board 4P, line in, line out

4-10. G-1364 AMPS Indicator Circuit Board

Component Side



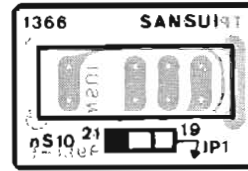
Parts List

Parts No.	Stock No.	Description
●Light Emitting Diode		
nLD7	07250900	TLG-123 (GRN)
nLD8	07250900	TLG-123 (GRN)
nLD9	07250900	TLG-123 (GRN)
oLD1	46190700	7 Segment LED Ass'y

4-11. G-1366 Timer REC/PLAY Switch

Circuit Board

Component Side



Parts List

Parts No.	Stock No.	Description
nS10	46177800	Slide Switch, timer rec/play

4-12. G-1367 Real Time Switch Circuit Board

Parts List

Parts No.	Stock No.	Description
oS1	11102800	Slide Switch, REAL TIME SET

4-13. G-1384 Headphone Jack Circuit Board

Parts List

Parts No.	Stock No.	Description
pJ3	46212100	Phones Jack

4-14. G-1365 STOP ADD. & PLAY ADD. Indicator Circuit Board

Parts List

Parts No.	Stock No.	Description
●Light Emitting Diode		
nLD1	07250900	TLG-123
nLD2	46176900	TLS-123

● Abbreviations

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

Parts List <Mechanism>

Parts No.	Stock No.	Description
1	09471700	Flywheel
2	09471800	FR Idler Ass'y
2-1	09471900	FR Idler
3	09472000	Sub Chassis
4	09472100	Take-up Reel
5	09472500	Direction Lever
6	09472600	F Cam Gear
7	09472800	Cassette Guide (A)
8	09472900	Cassette Guide (B)
9	09473100	Pinch Roller Lever (F)
10	09473200	Pinch Roller Lever (R)
11	09473300	Gear (III)
12	09473400	Gear (III)
13	09473500	R Cam Gear
14	09473600	Intermediate Gear
15	09473700	REC Sensor Lever
16	09473800	Capstan Belt
17	09473900	Brake
18	09480000	Cap
19	51604000	Flywheel Thrust Screw
20	09478900	Pinch Roller Ass'y (F)
21	09479000	Pinch Roller Ass'y (R)
22	09474000	Cassette Well Ass'y
23	09474100	Holder Sleeve
24	09474200	Cassette Holder Leaf Spring
25	09474300	Cassette Lock Lever
26	09474400	Cylinder Ass'y
27	09474500	Mechanism Panel
28	09474600	Cassette Well Leaf Spring
29	09480100	Cassette Illumination
30	09480200	Color Cap
31	09472200	Reel Motor Ass'y
32	09476200	Leaf Switch, REC Sensor
33	09472300	Mechanism Motor Ass'y
34	09476400	REC/PLAY Head
35	09476500	Erase Head
36	09472400	Capstan Motor
37	09480300	Sensor Ass'y
38	09480400	Illumination Lamp
39	09477200	Cam Switch Circuit Board
40	03614000	Hole IC, DN6838
●Spring		
41	09479100	Pinch Roller F Spring
42	09479200	Pinch Roller R Spring
43	09474700	Pinch Roller Lever Spring
44	09480500	Head Base Spring
45	09479700	Idler Spring
46	09479900	Head Base (B) Spring
48	09474900	Back Tension (C) Spring
49	09475000	Cassette Hold Spring
50	09475100	Cassette Well Spring
51	09475200	Eject Lever Spring
52	09475300	Holder Guide (R) Spring
53	09479500	REC/PLAY Head Spring
55	09479800	Erase Head Spring
56	09479300	Pinch Roller F Spring
57	09479400	Pinch Roller R Spring
●Screw, Washer		
101	08321900	Pan Head Screw, M2 x 8
102	07976500	Flat Countersunk Head Screw, M2 x 6
103	09475400	Poly-slider Washer, φ1.5 x φ6.5 x 0.5
104	07736400	Pan Head Screw, M2.6 x 3
105	09480600	Plane Washer, φ1.6 x φ3.5 x 0.3
106	00421800	Binding Head Screw, M3 x 4
107	00421900	Binding Head Screw, M3 x 6
108	00422400	Binding Head Screw, M3 x 16
109	00457700	Taptite Screw, M3 x 12
110	09478000	Poly-slider Washer
111	08321200	Taptite Screw, M3 x 5
112	09475700	Screw, M2 x 8
113	09476000	Poly-slider Washer
114	00488900	Retaining Ring, φ1.5 x 0.4
115	51804000	Poly-slider Washer, φ2.4 x φ6 x 0.25
116	51033220	Pan Head Screw, M2.6 x 5
117	51804300	Poly-slider Washer
118	09475500	Washer, φ2.5
119	51825300	Poly-slider Washer, φ3.1 x φ5.4 x 0.5
120	09475600	Teflon Washer, φ6.1 x φ10 x 0.3
121	08323500	Nylon Washer, φ2.4 x φ6 x 0.25
122	51821600	Poly-slider Washer, φ3.1 x φ5.4 x 0.13
123	00489600	Retaining Ring, φ7
124	65400300	Steel Ball, φ2
125	65400400	Steel Ball, φ2.5
126	00440400	Pan Head Screw, M2.6 x 5
127	08322600	Retaining Ring, φ2.5
129	08322200	Pan Head Screw, M2.6 x 10
131	00450200	Pan Head SEMS Screw, M2.6 x 5
132	09475800	Washer, φ2.6 x φ7 x 1.2
133	00421800	Binding Head Screw
134	09475900	Pan Head Screw
135	13069400	Pan Head Screw, M2 x 5
136	00489200	Retaining Ring, φ3
137	00466000	Plane Washer

6. MAIN PARTS REPLACEMENT

A. Mechanical assembly

(See Mechanism Exploded View and Top View on page 15.)

- 1) Remove the cassette lid.
- 2) Remove the bonnet and the front panel assembly.
- 3) Remove the bottom plate.
- 4) Extract the connector **A** on the mechanism control board G-1362 and the connector **B** on the record/play amplifier board G-1382.
- 5) Disconnect the red and white leads connected to the pilot lamp **Ⓢ** on the mechanism control board G-1362.
- 6) Remove two upper-portion fastening screws and two lower-portion fastening screws, by which the mechanical assembly is fixed.
- 7) Remove the board (G-1362) fixing screws, and then move the board G-1362 to a position where the mechanical assembly can be pulled out.
- 8) Pull out the mechanical assembly from the rear panel side.

B. Capstan motor, reel motor and cam motor.

- 1) Extract the connector on the mechanism board TM-740.
- 2) Remove the three fastening screws to remove the board TM-740.
- 3) Remove the two fastening screws to remove the capstan motor mounting plate.
- 4) Remove the capstan motor.
- 5) Remove the belt and the flywheel.
- 6) Remove the two E-rings **C** and the screw **D** to remove the vertical position adjusting plate **E**.
- 7) Remove the screw **F** to remove the motor mounting plate **G**.
- 8) Remove the reel motor and the cam motor.

C. Take-up reels F and R **④** and the F-R idler **②**

- 1) Remove the motor mounting plate **G**, after the procedures as stated under **B** (reel motor and cam motor) from (1) to (7) above.
- 2) Remove the two washers **H** and the screw **I** to remove the cam switch board **Ⓢ**.
- 3) Remove the F-cam **Ⓢ**, R-cam **Ⓢ** and the intermediate gearwheel **Ⓢ**.
- 4) Remove the two screws fastening the take-up reel case **③**.
- 5) Remove the take-up reel case to remove the take-up reels F and R **④** and the F-R idler **②**.

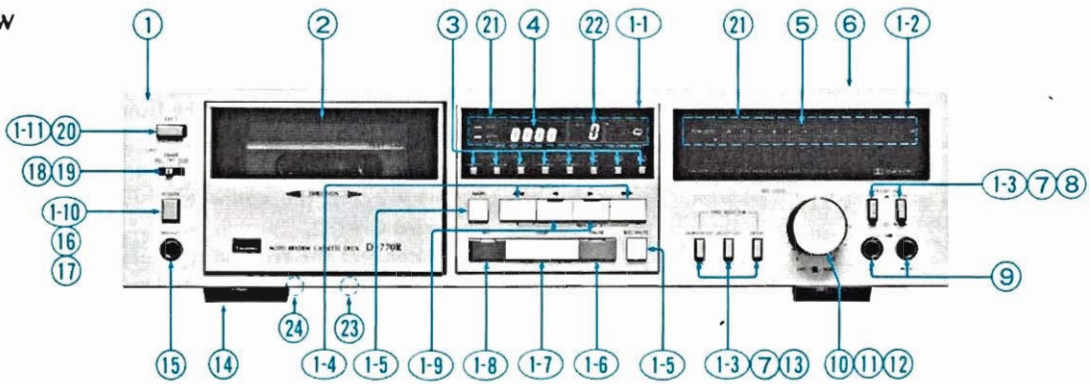
Note: Install the F-cam, R-cam, and the intermediate gearwheel, after matching each positioning point mark with each mate positioning point mark. (See Fig. 2-2 on page 2)
Be careful doing this, because the pinch roller will not operate normally in case the F-cam and R-cam are not well matched with the intermediate gearwheel at their gearing positions.

D. Record/Play head **Ⓢ**

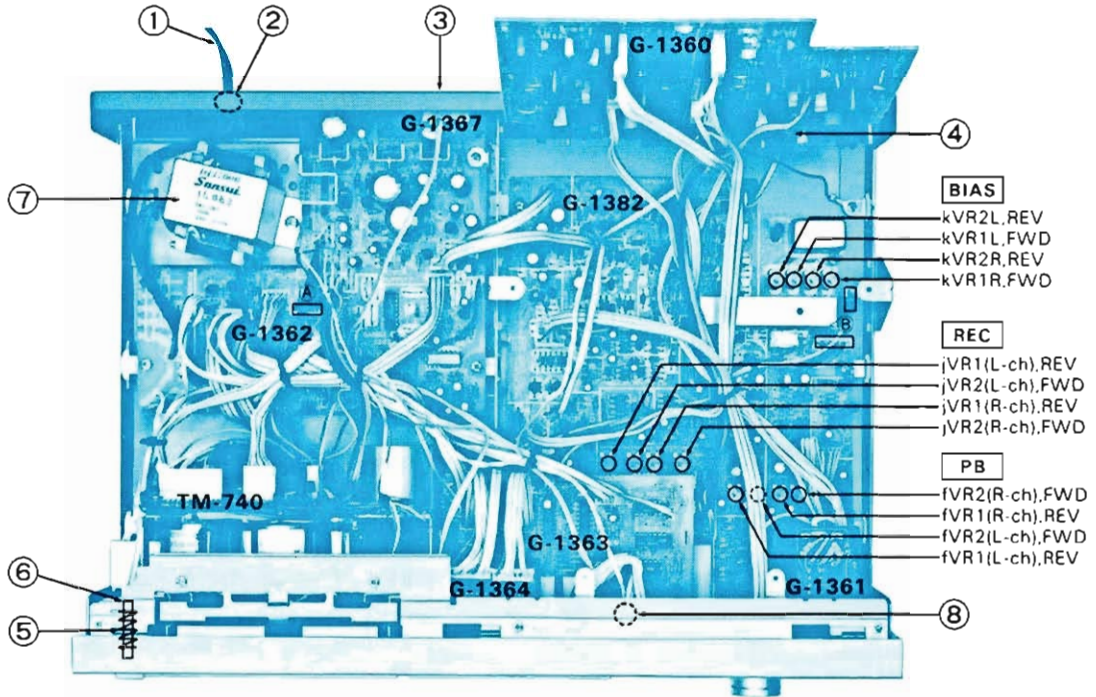
- 1) Remove the cassette lid, bonnet and front panel assembly.
- 2) Check the fastening degree of the azimuth adjusting screw **Ⓢ** (the number of revolution until the screw is removed), and remove the screw **Ⓢ**.
- 3) Remove the azimuth screw **Ⓢ**.
- 4) Disconnect the shield wire from the head terminal board.
- 5) Install a new head by reversing the procedures as stated under **D** from (1) to (4) above. Under the procedure 2), fasten the azimuth adjusting screw **Ⓢ** to the same extent as was checked when removed.

7. OTHER PARTS

7-1. Front View



7-2. Top View



Parts List <Front View>

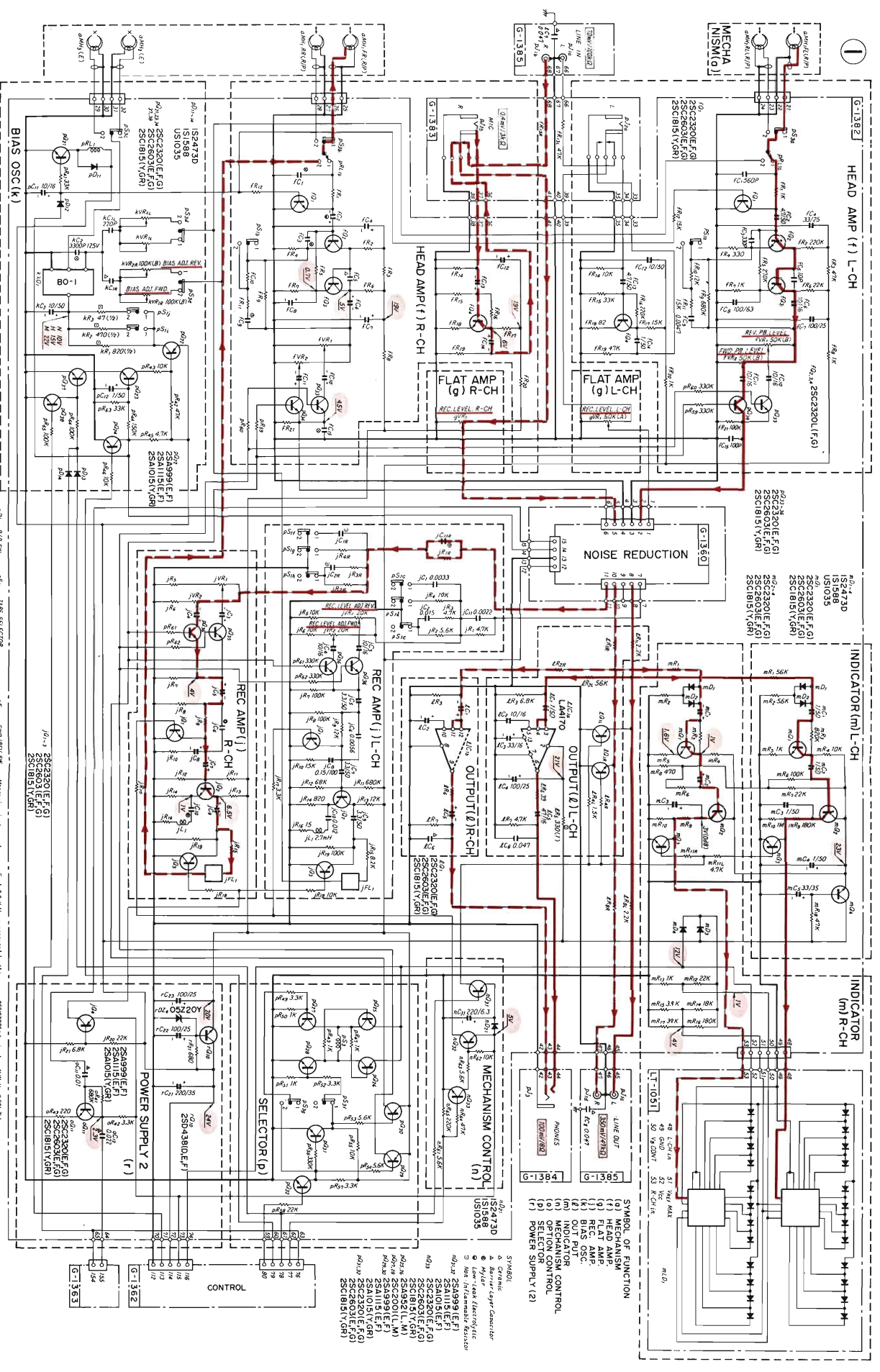
Parts No.	Stock No.	Description
3	09425800	Push Knob, DIGITAL COUNTER
4	46164500	Fluorescent Display Tube, counter
5	46176800	Peak Level Meter (L.E.D. LT1051)
8	46177900	Push SW.
9	46212000	Mic Jack
12	46177000	50k Ω (A) Volume, REC LEVEL
13	46178000	Push SW., TAPE SELECTOR
14	07822700	Leg
15	46212100	Head Phone Jack
17	46087200	Push Switch, POWER
19	46177800	Slide Switch, TIMER
21	09447400	Meter Frame Ass'y
22	46190700	7 Segment LED Ass'y
23	46203400	Pilot Lamp, \blacktriangleright
24	46203300	Pilot Lamp, \blacktriangleleft
<Silver Model>		
1	09446000	Front Panel Ass'y
1-1	09427200	Counter Glass
1-2	09444700	Meter Glass
1-3	07810100	Push Knob Guide, DOLBY NR
1-4	09437700	Push Button, \blacktriangleright , \blacktriangleleft
1-5	09428200	Push Button, REC MUTE, AMPS
1-6	09455000	Push Button, PAUSE
1-7	09437500	Push Button, STOP
1-8	09448900	Push Button, REC
1-9	09448800	Push Button, \blacktriangleright , \blacktriangleleft
1-10	07809900	Push Knob Guide, POWER
1-11	07778400	Push Knob Guide, EJECT
2	09449800	Cassette Lid Ass'y
6	09425200	Bonnet
7	09443600	Push Knob, DOLBY NR
10	09419200	Knob, REC LEVEL LEFT
11	09419300	Knob, REC LEVEL RIGHT
16	07809700	Push Knob, POWER
18	09444300	Slide Knob, TIMER
20	07853800	Push Knob, EJECT

Parts No.	Stock No.	Description
<Black Model>		
1	09478100	Front Panel Ass'y
1-1	09477500	Counter Glass
1-2	09478000	Meter Glass
1-3	07810200	Push Knob Guide, DOLBY NR
1-4	09437800	Push Button, \blacktriangleright , \blacktriangleleft
1-5	09428300	Push Button, REC MUTE, AMPS
1-6	09455000	Push Button, PAUSE
1-7	09437600	Push Button, STOP
1-8	09448900	Push Button, REC
1-9	09454700	Push Button, \blacktriangleright , \blacktriangleleft
1-10	07810000	Push Knob Guide, POWER
1-11	07829300	Push Knob Guide, EJECT
2	09477700	Cassette Lid Ass'y
6	09425300	Bonnet
7	09443700	Push Knob, DOLBY NR
10	09419400	Knob, REC LEVEL LEFT
11	09419500	Knob, REC LEVEL RIGHT
16	07809800	Push Knob, POWER
18	09444600	Slide Knob, TIMER
20	07829400	Push Knob, EJECT

Parts List <Top View>

Parts No.	Stock No.	Description
1	38004700	Power Supply Cord
2	39106000	Strain Relief
3	11102800	Real Time Set Switch
4	07249100	4P Terminal, LINE IN/OUT
5	09419100	Eject Bar
6	09419800	Compression Spring
7	15006401	Power Transformer
8	46177100	Pilot Lamp 12V 0.1A

8. SCHEMATIC DIAGRAM 8-1. Amp. Section



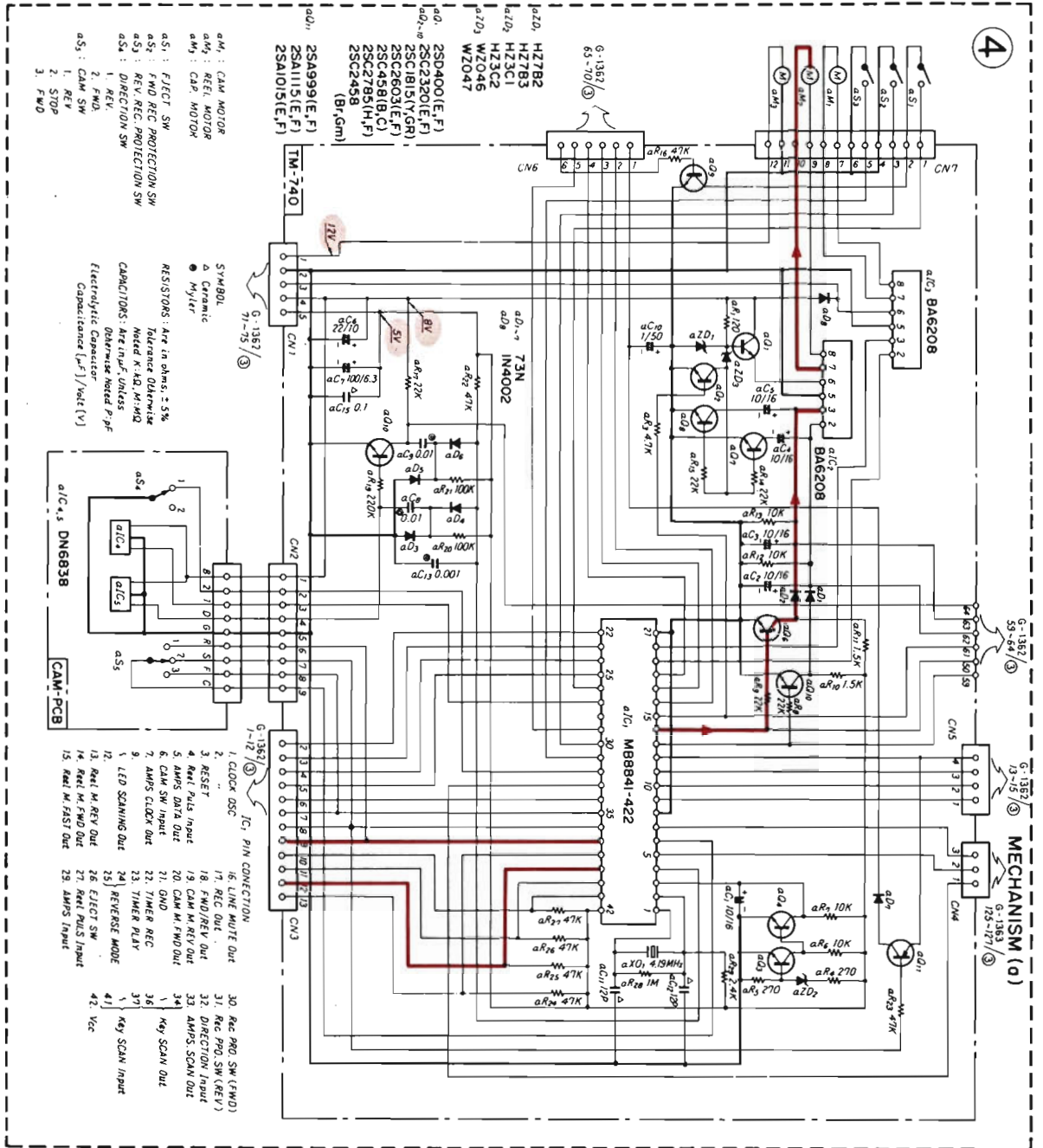
Signal Line on PLAY
 Signal Line on REC

- PR1, PR2, PR3, PR4, PR5, PR6, PR7, PR8, PR9, PR10, PR11, PR12, PR13, PR14, PR15, PR16, PR17, PR18, PR19, PR20, PR21, PR22, PR23, PR24, PR25, PR26, PR27, PR28, PR29, PR30, PR31, PR32, PR33, PR34, PR35, PR36, PR37, PR38, PR39, PR40, PR41, PR42, PR43, PR44, PR45, PR46, PR47, PR48, PR49, PR50, PR51, PR52, PR53, PR54, PR55, PR56, PR57, PR58, PR59, PR60, PR61, PR62, PR63, PR64, PR65, PR66, PR67, PR68, PR69, PR70, PR71, PR72, PR73, PR74, PR75, PR76, PR77, PR78, PR79, PR80, PR81, PR82, PR83, PR84, PR85, PR86, PR87, PR88, PR89, PR90, PR91, PR92, PR93, PR94, PR95, PR96, PR97, PR98, PR99, PR100, PR101, PR102, PR103, PR104, PR105, PR106, PR107, PR108, PR109, PR110, PR111, PR112, PR113, PR114, PR115, PR116, PR117, PR118, PR119, PR120, PR121, PR122, PR123, PR124, PR125, PR126, PR127, PR128, PR129, PR130, PR131, PR132, PR133, PR134, PR135, PR136, PR137, PR138, PR139, PR140, PR141, PR142, PR143, PR144, PR145, PR146, PR147, PR148, PR149, PR150, PR151, PR152, PR153, PR154, PR155, PR156, PR157, PR158, 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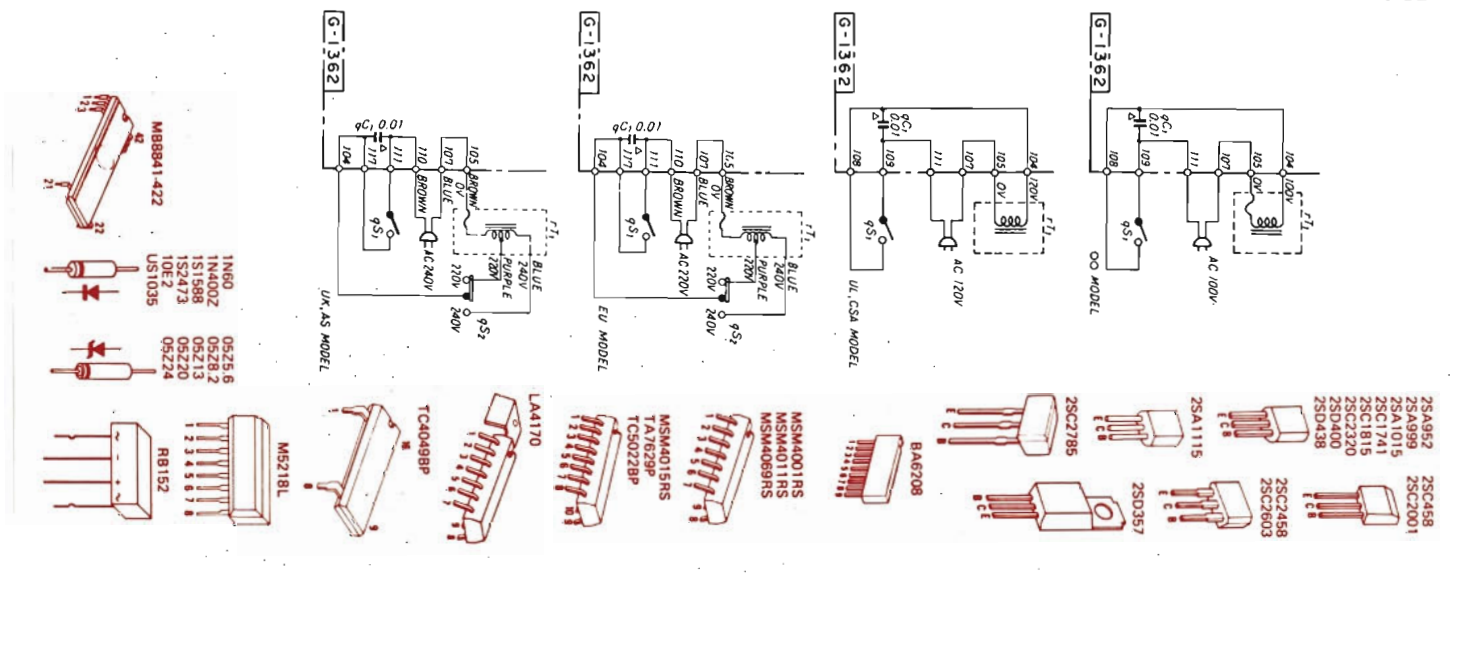
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8-4. Mechanism Control Section (II)



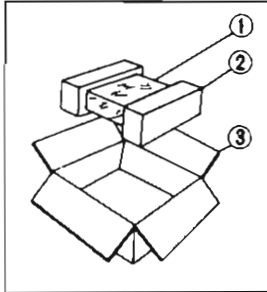
FWD. PLAY

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



9. PACKING LIST

Parts No.	Stock No.	Description
1	91167610	Vinyl Cover
2	0781 1900	Styrofoam Packing
3	09458500	Carton Case <Silver Model>
	09478300	Carton Case <Black Model>



10. ACCESSORY LIST

Stock No.	Description
46143600	Operating Instruction
38103300	PJP Cord x 2
94300500	Head Cleaner (Cotton Buds)



SANSUI ELECTRIC CO., LTD.:
SANSUI ELECTRONICS CORPORATION:
SANSUI ELECTRONICS (U.K.) LTD.:
SANSUI ELECTRONICS G.M.B.H.:

14-1, Izumi 2-chome, Suginami-ku, Tokyo 168 Japan
PHONE: (03) 324-8891/TELEX: 232-2076 (International Division)
1250 Valley Brook Ave. Lyndhurst, N.J. 07071 U.S.A.
333 West Alondra Blvd. Gardena, California 90247 U.S.A.
3036 Koapaka 5t. Honolulu, Hawaii 96819 U.S.A.
Unit 10A, Lyon Industrial Estate, Rockware Avenue, Greenford, Middx UB6, OAA, England
Paul Ehrlich Strasse 8, 6074 Rödermark 2, West Germany

SERVICE MANUAL SUPPLEMENT EDITION

AUTO REVERSE CASSETTE DECK

SANSUI D-770R

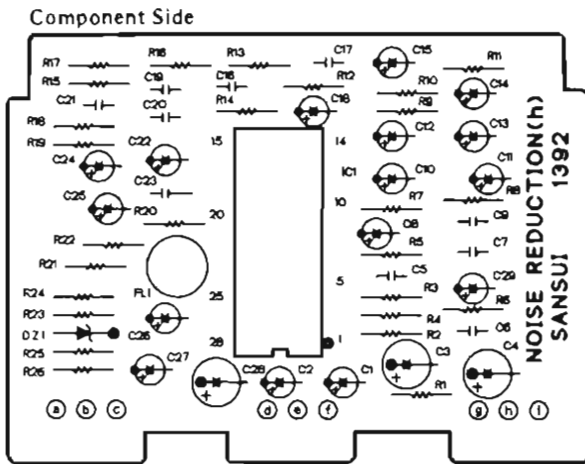
NOTE: This edition is supplement for D-770R service manual previously issued, and only description of improved section is inserted. Therefore, please refer to original service manual when description of original section is needed.

<This edition applies all D-770R with serial No. after 862040001>

1. PARTS LOCATION & PARTS LIST

1-1. G-1392 Noise Reduction Circuit Board (Stock No. 00688601)

•Since some of capacitors and resistors are omitted from parts lists in this Service Manual, refer to the Common Parts List for capacitors & resistors, which was appended previously to Sansui Manual.



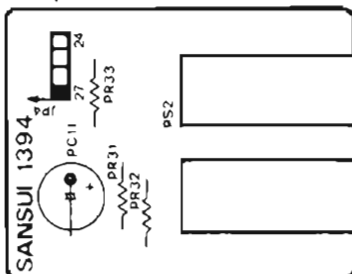
Parts List

Parts No.	Stock No.	Description
•IC		
hIC1	46212500	HA12038
hC2	46034600	1 μ F 50V E.L.
hC5	07216000	15000pF 25V C.C.
hC6	07216000	15000pF 25V C.C.
hC7	07215800	10000pF 25V C.C.
hC9	07216100	18000pF 25V C.C.
hC17	07215500	5600pF 25V C.C.
hC19	07211700	1000pF 25V C.C.
hC20	07215200	3300pF 25V C.C.
hC21	07215300	3900pF 25V C.C.
hFL1	46177600	Trap Filter

•Note: The circuit board, G-1394, G-1396 & G-1395 are not supplied as the assembled. However, the individual parts on the circuit board are provided by orders.

1-2. G-1394 Dolby NR Switch Circuit Board

Component Side

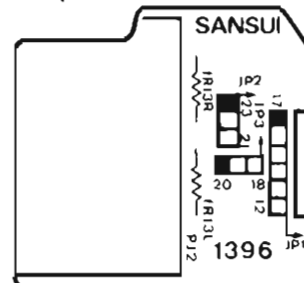


Parts List

Parts No.	Stock No.	Description
pS2	46260400, 1	Push SW., DOLBY NR

1-3. G-1396 Mic Jack Circuit Board

Component Side



Parts List

Parts No.	Stock No.	Description
pJ2	46212000	Mic Jack

1-4. G-1395 Headphone Jack Circuit Board

Parts List

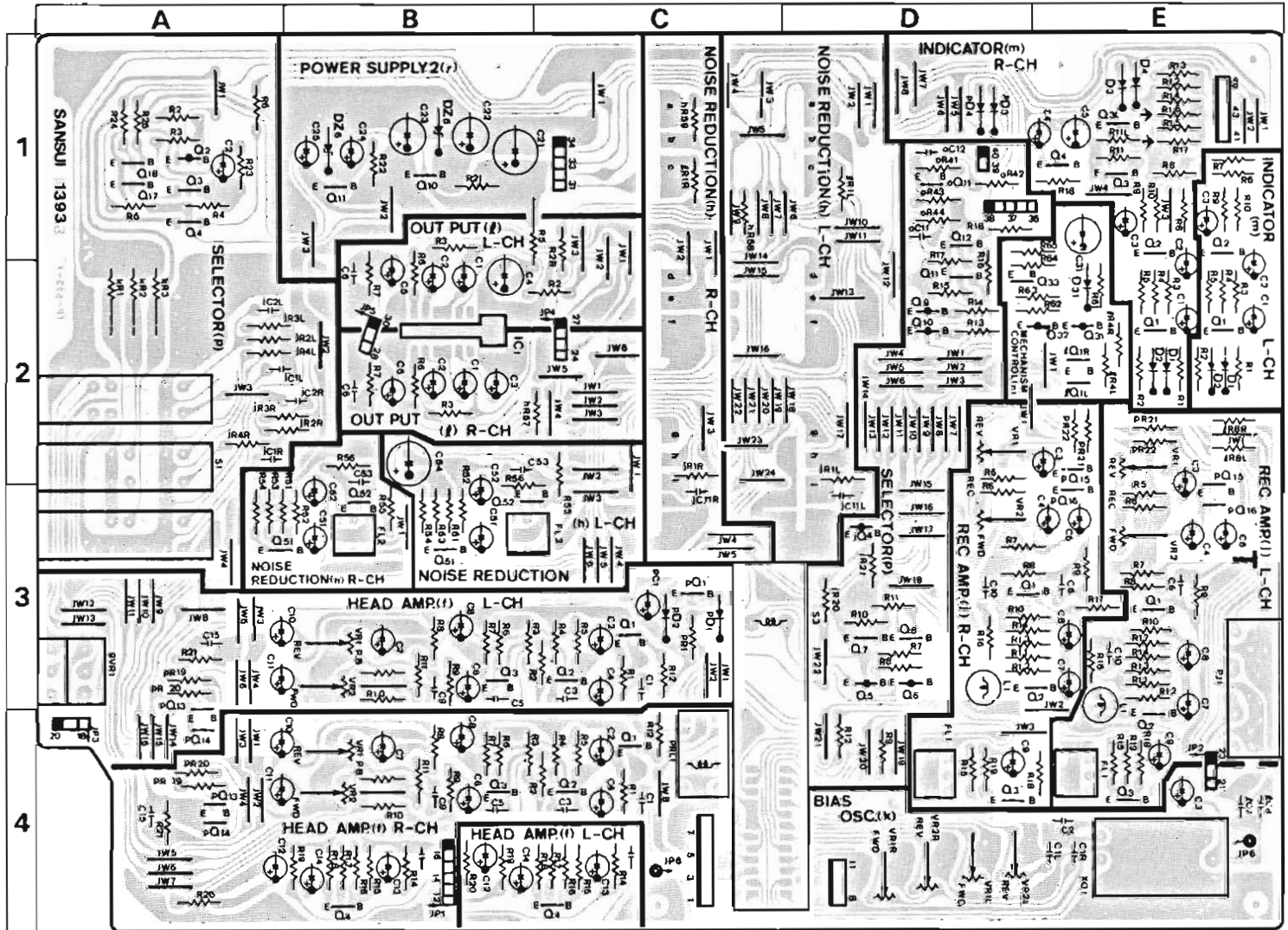
Parts No.	Stock No.	Description
pJ3	46265700	Phones Jack

• Abbreviations

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

1-5. G-1393 REC & PLAY Amp. Circuit Board (Stock No. 00691101)

Component Side



Parts List

Parts No.	Stock No.	Description
• Transistor		
fQ1	03068301	2SC2320-E
	or 07299701	2SC2603
	or 07194801	2SC1815
fQ2	07225401	2SC2320L-G
fQ3	07225401	2SC2320L-G
fQ4	07225401	2SC2320L-G
fc2	46030200	4.7µF 25V E.L.
fc9	07215400	4700pF 25V C.C.
fVR1	10370900	50kΩ (B) S.V.R., REV. PB
fVR2	10370900	50kΩ (B) S.V.R., FWD. PB
gVR1	46177000	50kΩ (A) V.R., REC. LEVEL
• Transistor		
hQ51	07225401	2SC2320L
hQ52	03068301	2SC2320
	or 07299701	2SC2603
	or 07194801	2SC1815

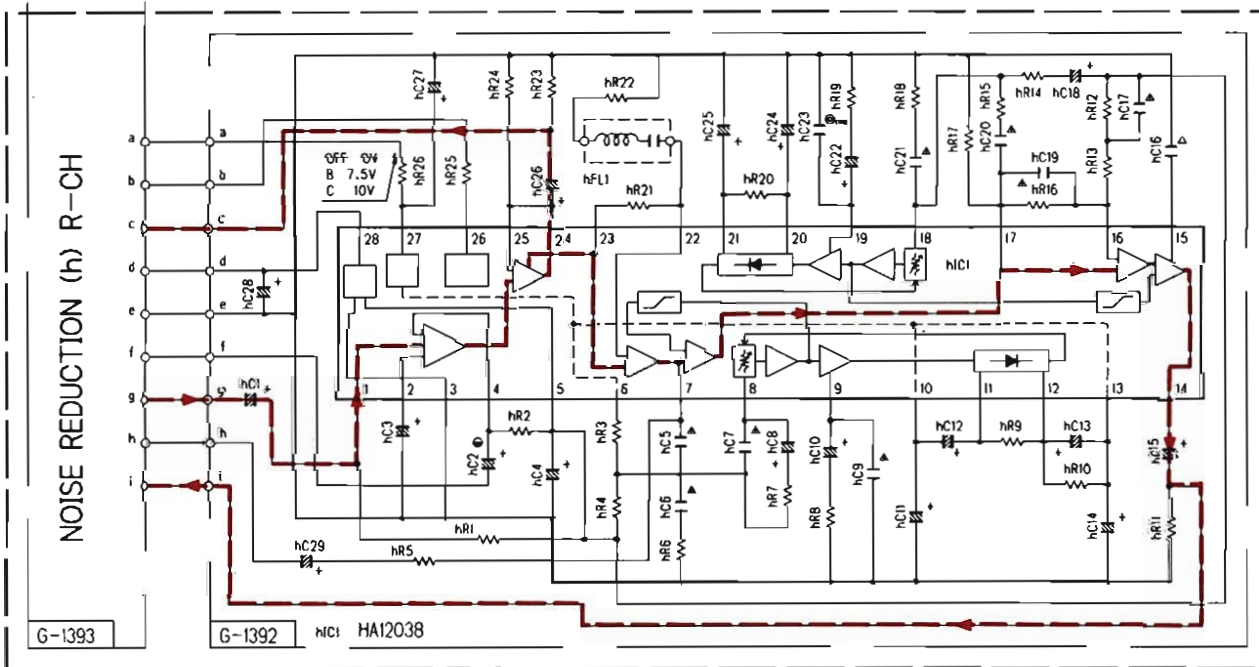
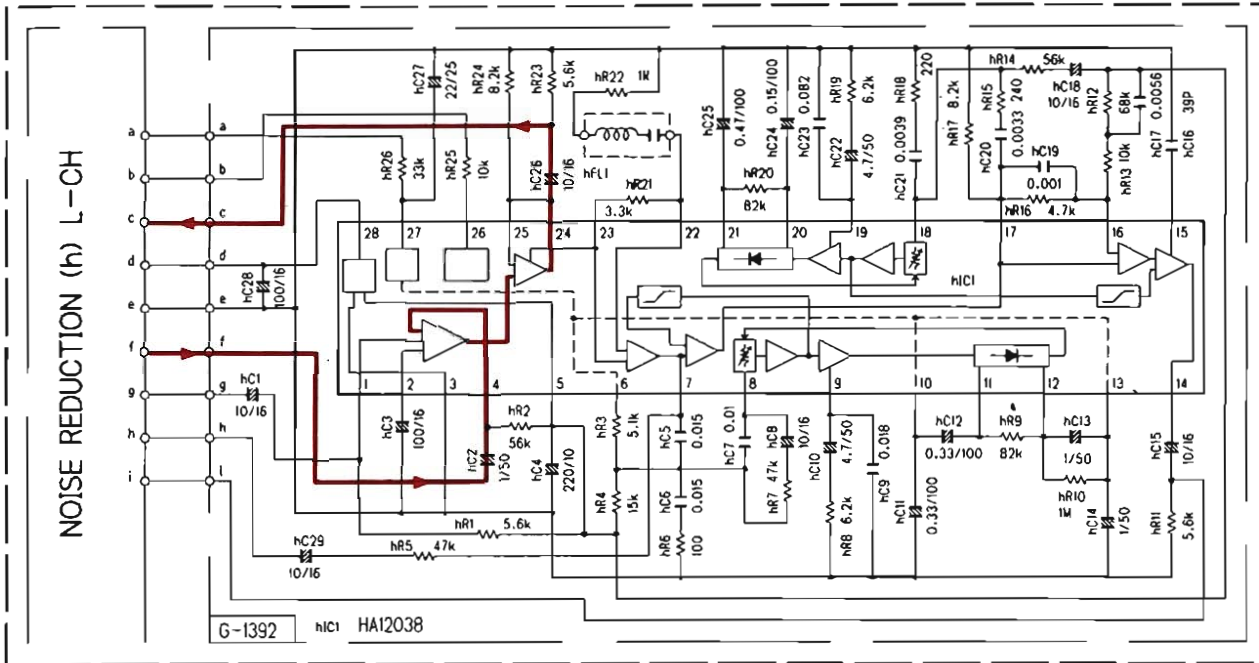
Parts No.	Stock No.	Description
hC53	07215100	2700pF 25V C.C.
hFL2	46177500	Dolby Filter
• Transistor		
jQ1	03068301	2SC2320
	or 07299701	2SC2603
	or 07194801	2SC1815
jQ2	03068301	2SC2320
	or 07299701	2SC2603
	or 07194801	2SC1815
jQ3	03068301	2SC2320
	or 07299701	2SC2603
	or 07194801	2SC1815
jQ4	03012701	2SA999
	or 07299601	2SA1115
	or 07194701	2SA1015
jC1	07215200	3300pF 25V C.C.
jC2	07216000	1500pF 25V C.C.
jC6	07215500	5600pF 25V C.C.

Parts List <G-1393>

Parts No.	Stock No.	Description	Parts No.	Stock No.	Description
jC10	07216300	27000pF 25V C.C.	oC11	07215800	10000pF 25V C.C.
jC11	07215000	2200pF 25V C.C.	oC12	07216200	22000pF 25V C.C.
jFL1	07237900	Filter	●Transistor		
jL1	46313900	Inductor 2.7 mH	pQ1	03068301	2SC2320
jVR1	10370800	20kΩ (B) S.V.R., REV. REC		or 07299701	2SC2603
jVR2	10370800	20kΩ (B) S.V.R., FWD. REC		or 07194801	2SC1815
kR1	46230100	820Ω 1/2W N.I.R.	pQ2	03012701	2SA999
kR2	46229800	470Ω 1/2W N.I.R.		or 07299601	2SA1115
kR3	46228600	47Ω 1/2W N.I.R.		or 07194701	2SA1015
kXO1	46194800	OSC Block BO-1	pQ3	03068301	2SC2320
kVR1	10371000	100kΩ (B) S.V.R., FWD. BIAS		or 07299701	2SC2603
kVR2	10371000	100kΩ (B) S.V.R., REV. BIAS		or 07194801	2SC1815
●Transistor			pQ4	03068301	2SC2320
IQ1	03068301	2SC2320		or 07299701	2SC2603
	or 07299701	2SC2603		or 07194801	2SC1815
	or 07194801	2SC1815	pQ5	07206801	2SA952
●IC			pQ6	07206801	2SA952
IIC1	07224500	LA4170	pQ7	07206901	2SC2001
IR5	46249900	330Ω 1W N.I.R.	pQ8	07206901	2SC2001
IC6	07216600	47000pF 25V C.C.	pQ9	03012701	2SA999
IC7	07216600	47000pF 25V C.C.		or 07299601	2SA1115
IC8	07216600	47000pF 25V C.C.		or 07194701	2SA1015
●Transistor			pQ10	03012701	2SA999
mQ1	03068301	2SC2320		or 07299601	2SA1115
	or 07299701	2SC2603		or 07194701	2SA1015
	or 07194801	2SC1815	pQ11	03068301	2SC2320
mQ2	03068301	2SC2320		or 07299701	2SC2603
	or 07299701	2SC2603		or 07194801	2SC1815
	or 07194801	2SC1815	pQ12	03068301	2SC2320
mQ3	03068301	2SC2320		or 07299701	2SC2603
	or 07299701	2SC2603		or 07194801	2SC1815
	or 07194801	2SC1815	pQ13	03068301	2SC2320
mQ4	03068301	2SC2320		or 07299701	2SC2603
	or 07299701	2SC2603		or 07194801	2SC1815
	or 07194801	2SC1815	pQ14	03068301	2SC2320
●Diode				or 07299701	2SC2603
mD1	03117600	1S2473		or 07194801	2SC1815
	or 46086000	1S1588	pQ15	03068301	2SC2320
	or 46092700	US1035		or 07299701	2SC2603
mD2	03117600	1S2473		or 07194801	2SC1815
	or 46086000	1S1588	pQ16	03068301	2SC2320
	or 46092700	US1035		or 07299701	2SC2603
mD3	03117600	1S2473		or 07194801	2SC1815
	or 46086000	1S1588	pQ17	03068301	2SC2320
	or 46092700	US1035		or 07299701	2SC2603
mD4	03117600	1S2473		or 07194801	2SC1815
	or 46086000	1S1588	pQ18	03068301	2SC2320
	or 46092700	US1035		or 07299701	2SC2603
				or 07194801	2SC1815
●Transistor			●Diode		
nQ31	03012701	2SA999	pD1	03117600	1S2473
	or 07299601	2SA1115		or 46086000	1S1588
	or 07194701	2SA1015		or 46092700	US1035
nQ32	03012701	2SA999	pD2	03117600	1S2473
	or 07299601	2SA1115		or 46086000	1S1588
	or 07194701	2SA1015		or 46092700	US1035
nQ33	03068301	2SC2320	pD3	03117600	1S2473
	or 07299701	2SC2603		or 46086000	1S1588
	or 07194801	2SC1815		or 46092700	US1035
●Diode			pD4	03117600	1S2473
nD31	03117600	1S2473		or 46086000	1S1588
	or 46086000	1S1588		or 46092700	US1035
	or 46092700	US1035	pS1	46178000	Push SW., TAPE SELECTOR
●Transistor			pS3	46194200	Slide SW., FWD/REV.
oQ11	03068302	2SC2320	pRL1	11506200	Relay
	or 07194801	2SC1815	pJ1	07249100	Terminal Board 4P, LINE-IN, LINE OUT
	or 03068301	2SC2320	●Transistor		
	or 07299701	2SC2603	rQ10	03085200	2SD438
				or 03085201	2SD438
			rQ11	03085201	2SD438
			●Zener Diode		
			rDZ5	46115400	05Z20
			rDZ6	46114200	05Z13

2. SCHEMATIC DIAGRAM 2-1. Noise Reduction Section

2



RESISTORS
Are in ohms, 1/4 Watts, ±5% Tolerance
Unless Otherwise Noted. k:KΩ, M: MΩ

CAPACITORS
Are in μF, Unless Otherwise Noted. P:pF

TOLERANCE
J: ±5% G: ±2% F: ±1%

Each D.C Voltage shows the nominal value
in volts during recording.

Electrolytic Capacitor: Capacitance (μF)/Volt (V)

SYMBOL

- △ Ceramic Capacitor
- ▲ Barrier Layer Capacitor
- ⊖ Mylar
- ⊕ Low-Leak Electrolytic

— Signal Line on PLAY
- - - Signal Line on REC

2SA952
2SA999
2SA1015
2SC1741
2SC1815
2SC2320
2SD400
2SD438



2SC2458
2SC2603



2SA1115



2SC2785



BA6208



MSM4001RS
MSM4011RS
MSM4069RS



MSM4015RS
TC5022BP



LA4170



TC4049BP



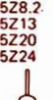
M5218L



RB152



1N60



05Z5.6



1N400Z



1S1588



05Z13



152473



05Z20



10E2



05Z24



US1035



M88841-422



HAI2038



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

