

JVC

SERVICE MANUAL

REMOTE CONTROL PANEL

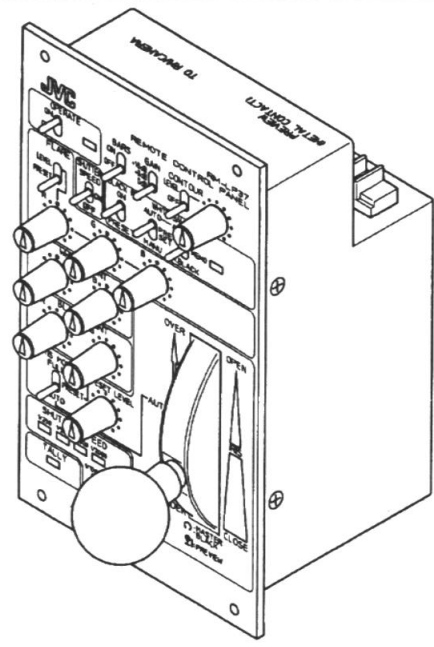
RM-LP37



- Included
Cable assembly (5m)

JVC | Instructions

REMOTE CONTROL PANEL ***RM-LP37***



Due to design modifications, data given in this instruction book are subject to possible change without prior notice.

WARNING:
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

AVERTISSEMENT:
POUR EVITER LES RISQUES D'INCENDIE OU D'ELECTROCUTION, NE PAS EXPOSER L'APPAREIL A L'HUMIDITE OU A LA PLUIE.

POWER SYSTEM

Connection of power supply.
The RM-LP37 is designed only for connection to the model. RM-P350 Triaxial Unit .
Power is supplied from the RM-P350.

Thank you for purchasing the RM-LP37 remote control panel unit.

Please read this instruction manual carefully to fully utilize the functions of the RM-LP37.

CONTENTS

Features	1
Controls, connectors, and indicators	2
Connections	4
Operation	4
Specifications	6

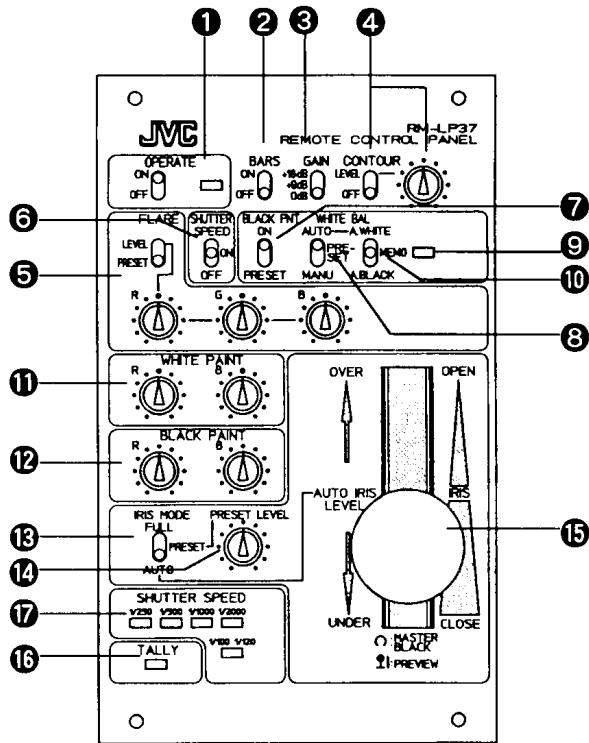
FEATURES

- The RM-LP37 is used to control the KY - 90/35 three ccd color video camera via the optional RM-P350 Triaxial Unit.

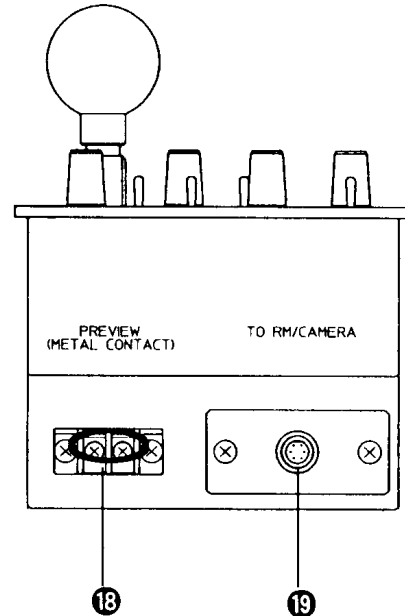
The camera can be controlled by directly connecting the RM-LP37 to it . The controller becomes effective when both the RM-LP37 and RM-P350 are connected to the camera.

CONTROLS, CONNECTORS, AND INDICATORS

Operation panel



Rear panel



- 1 [OPERATE] Operate switch and light**
 ON : Control the camera using this unit. (The light illuminates.)
 OFF: The camera can be controlled using this unit.
- 2 [BARS] Color bars switch**
 Turn the color bars signal ON (BARS) or OFF (camera).
- 3 [GAIN] Sensitivity select switch**
 This three - mode switch is used to boost the camera's sensitivity in three steps: 0 dB, +9 dB and +18 dB.
- 4 [CONTOUR] Contour switch and control**
 Set the Contour switch to LEVEL to compensate contour. Use the Contour control on the right of the switch to adjust the level. When this switch is OFF, the contour set by the camera will be effective.
- 5 [FLARE] Flare switch and controls**
 Set the FLARE switch to LEVEL to compensate flare. Use the R/G/B controls to adjust the flare compensation level of each channel. When the FLARE switch is set to PRESET, the flare set by the camera will be effective.
- 6 [SHUTTER SPEED] Shutter switch**
 When the SHUTTER switch is ON, the camera enters the shutter mode. The shutter speed changes each time this switch is pushed. The shutter speed is displayed on the "SHUTTER SPEED" block below the switch. The shutter does not function when this switch is OFF.

- 7 [BLACK PNT] Black paint mode switch**
 Set to one of the two modes to control the black balance of the camera to which this unit is connected.
 ON : Set to this to use the black balance data obtained by the auto black operation.
 PRESET: The black balance set by the BLACK PAINT controls **12** will be effective.
- 8 [WHITE BAL] White balance mode switch**
 Set to one of three modes to control the white balance of the camera to which this unit is connected.
 AUTO : Set to this to use the white balance data obtained by the **10** A.WHITE operation.
 PRESET: Set to this to use the camera's preset white balance (3,200K).
 MANU : Set to this to alter the gain using the **11** WHITE PAINT controls for the R and B channels.
- 9 Auto indicator light**
 This LED illuminates while the auto circuit which is activated by switch **10** is operating. It goes off when adjustment is complete. When an error occurs during operation, it blinks and then goes off.

10 A. WHITE/A. BLACK switch

This three – mode (non – lock, return to center) switch is used to activate the auto white or auto black circuit of the camera.

A. WHITE: Push to this side (no lock) to activate the camera's auto white circuit.

MEMO : In this position, the A. WHITE/A. BLACK adjustments are stored in memory.

A. BLACK: Push to this side (no lock) to activate the camera's auto black circuit.

Note:

To use the auto white mode, set the WHITE BAL switch ⑧ to AUTO.

11 [WHITE PAINT] White paint controls

The functions of these controls differ according to the setting of the WHITE BAL switch ⑧.

MANU: These work as gain adjustment controls of the R/B channels.

AUTO : These work as gain fine adjustment controls for the white balance mode obtained by the auto white balance adjustment.

(When the controls are in their center positions, the setting is that obtained in the auto white balance.)

Note:

The auto white operation works assuming that these controls are in their center modes. Therefore, when the controls are not in their center modes, the white balance mode set by the controls will be effective after the auto white operation.

12 [BLACK PAINT] Black paint controls

Alter the black level of the B and R channels using these controls when the black paint mode switch ⑦ is set to PRESET.

13 [IRIS MODE] Iris mode select switch

FULL : Set to this position to alter the iris from CLOSE to OPEN using the IRIS control lever ⑮.

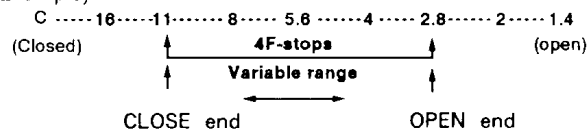
PRESET: Set to this to restrict the variable range of the IRIS control lever ⑮ to one of four apertures between CLOSE and OPEN.

AUTO : Set to this position to enter the auto iris mode.

14 [PRESET LEVEL] Preset level control

Use this control to determine the aperture when the IRIS MODE switch ⑬ is set to PRESET.

(Example)



15 [IRIS] Iris control lever

This lever has three functions:

1. Use this lever to control the iris when the IRIS MODE switch ⑬ is set to PRESET or FULL.
2. When the IRIS MODE switch ⑬ is set to AUTO, the iris can be set to a value under or over the optimum value.
3. Alter the block to level(master black)by turning panel of this unit.
3. Press the knob to output a contact signal from the PREVIEW terminal on the rear panel of this unit.

16 [TALLY] Tally light

This lights when a tally signal is input in the TALLY terminal on the rear panel of the RM - P350. It blinks when a call signal arrives.

17 [SHUTTER SPEED] Shutter speed

The shutter speed set by the SHUTTER switch ⑥ is displayed.

18 [TO RM/CAMERA] Connector

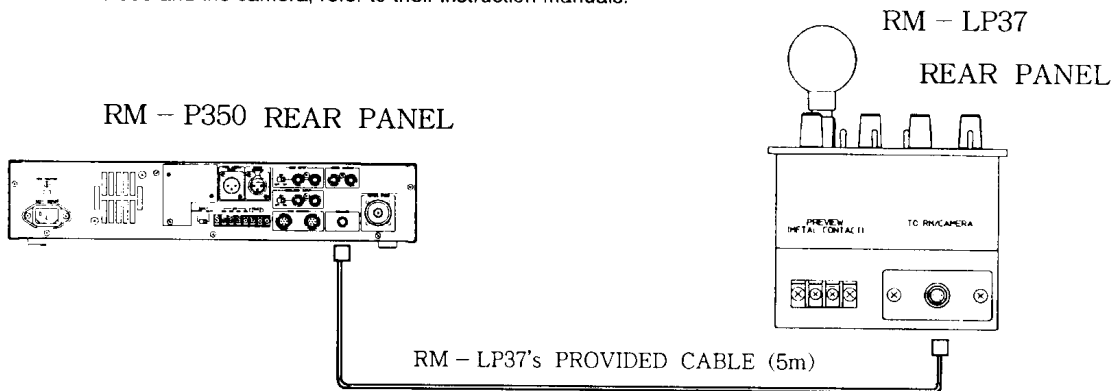
Connect to the optional RM - P350 using the cable provided.

19 [PREVIEW] Switch output connector

A make contact signal is output to this terminal when the IRIS control lever on the operation panel of this unit is pressed.

CONNECTIONS

Connect this unit and the optional RM - P350 using the cable provided. Before connecting them, be sure to turn their power OFF. For the connections of the RM - P350 and the camera, refer to their instruction manuals.



Note:

When the RM - LP37 is installed in an EIA 19" rack, an equivalent of one unit (44 mm) will be required for the cable connector because it protrudes from the case.

OPERATION

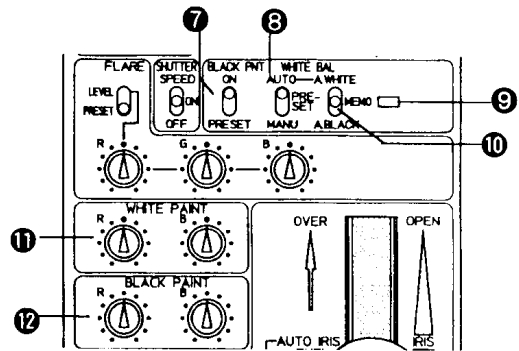
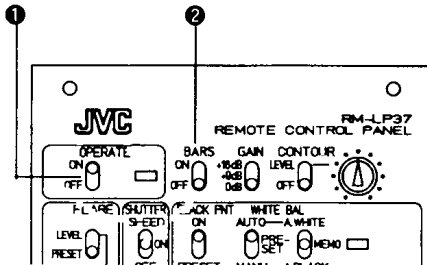
BEFORE USE

1. Connect and set up the RM-LP37, RM-P350, and KY - 90/35 according to their instruction manuals. When these connection and setup are to be performed, set the RM-LP37's OPERATE switch ❶ to OFF.

Note on setup:

Set the iris mode switch of the lens to "AUTO" or "A".

2. Set the RM-LP37's OPERATE switch ❶ to ON. The light on the right of the switch lights, and the RM-LP37 can now control the camera.



Note:

- The camera's AUTO 1 white balance memory is always selected while the RM - LP37 is being operated. The AUTO 2 white balance mode cannot be selected.
- If the Auto indicator lamp blinks and then goes out, an error has occurred in the auto operation. Correct the cause of the error (lighting, filter setting, subject, etc.), and perform the adjustment again.

WHITE BALANCE/BLACK BALANCE ADJUSTMENT

Preparation

1. Set the BARS switch ❷ to OFF.
2. Shoot a gray scale with an illumination of 2,000 lux or more.
3. Set the camera's optical filter according to a color temperature.

Auto adjustment

a) White balance adjustment

1. Set the WHITE PAINT controls ❶ for both R and B to the center positions.
2. Set the WHITE BAL switch ❸ to AUTO.
3. Push the A.WHITE/A.BLACK switch ❿ towards A.WHITE. The auto white balance operation will be performed. When it is complete, the white balance data will be held in the camera's auto white balance memory. While in the auto operation, the Auto indicator light ❹ illuminates. It will go out when auto operation is finished.

4. If necessary, use the WHITE PAINT controls ❶ to perform fine adjustment of the R and B gain. Normally, set the controls to their center modes.

Note:

The adjustment range of the R and B channel controls may vary depending on the color temperature of the subject.

b) Black balance adjustment

1. Turn OFF the BLACK PNT switch ❷.
2. Push the A.WHITE/A.BLACK switch ❿ to the A.BLACK side. The auto black balance adjustment will be performed. The Auto indicator light ❹ illuminates during auto operation. It will go out when the auto operation is finished during auto operation.

Manual adjustment

a) White balance adjustment

1. Set the WHITE BAL switch ⑧ to MANU
2. Use the WHITE PAINT controls ⑩ to adjust the gain of the R and B channels.

b) Black balance adjustment

1. Set the BLACK PNT switch ⑦ to ON.
2. Use the BLACK PAINT controls ⑫ to adjust the gain of the R and B channels. For accurate adjustment, a vectorscope, waveform monitor, etc. are necessary.

Note:

The auto adjustment is performed even if the RM-LP37's BLACK BAL switch is ON when the auto black balance adjustment is performed. When the adjustment is finished, the black balance mode will be engaged according to the settings of the BLACK PAINT controls.

Contour compensation

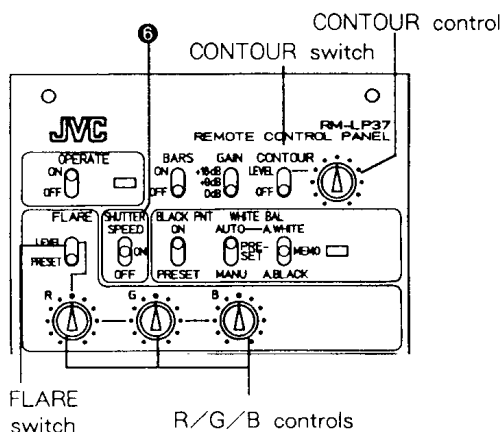
1. Set the CONTOUR switch to LEVEL.
2. Use the CONTOUR control on the right of the CONTOUR switch to adjust the contour levels. The center mode of the control sets the camera's original contour levels.

Flare adjustment

1. Set the FLARE switch to LEVEL.
2. Use the R, G, and B controls below the switch to perform level adjustment for flare compensation in the R, G, and B channels. The center mode of the controls sets the camera's original FLARE level.

Note:

The RM-LP37 cannot control the camera when the CONTOUR and FLARE switches inside the camera are OFF.



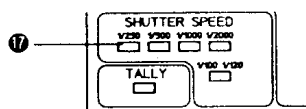
Shutter setting

1. Set the SHUTTER switch ⑥ to "ON" to set the camera to the shutter mode.
2. Each time the SHUTTER switch ⑥ is pushed up, the shutter speed changes.

Note:

- Only the shutter speeds preset in the camera can be selected. Shutter speeds that are not preset will not be displayed by shutter speed ⑮.
- The shutter speed is kept in memory of this unit for approx. 10 days.

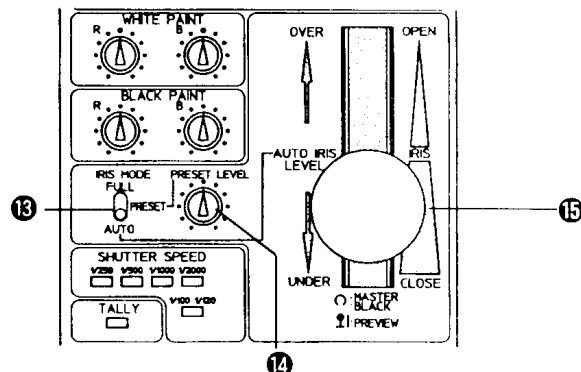
3. Turn "OFF" the SHUTTER switch ⑥ to cancel the shutter mode.



Iris Control Operation

Iris control is automatic when IRIS MODE switch ⑬ is set to "AUTO". When the switch is set to "FULL", the iris can be manually controlled in the range from CLOSE to OPEN using the IRIS control lever ⑮.

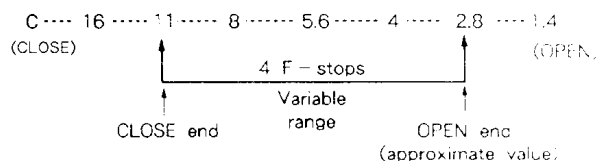
When IRIS MODE switch ⑬ is set to "PRESET", the range of IRIS control lever ⑮ adjustments are restricted to 4 F-stops (PRESET IRIS mode).



How to set the range in the PRESET IRIS mode

1. Set IRIS MODE switch ⑬ to the "PRESET" position.
2. Slide IRIS control lever ⑮ to the "CLOSE" side.
3. Adjust the iris value the CLOSE side of the variable range (4 F-stops) using the PRESET LEVEL control ⑭.

(Example) Lens iris



Information:

Presetting can also be performed with the IRIS control lever ⑮ set to "OPEN". In this case, the lowest iris value (at the OPEN end) at the variable range for the iris can be adjusted using the PRESET LEVEL control ⑭.

Note:

To use the iris control lever ⑮ as the AUTO IRIS LEVEL control, the ROM of the following camera models must be replaced. Contact your nearest JVC Service Center for servicing. The ROM will be replaced at an extra charge.

KY-90U Serial No. from □□□ 50001 to □□□ 50025

KY-35U Serial No. from □□□ 50001 to □□□ 50279

KY-90E Serial No. from □□□ 50001 to □□□ 50054

KY-35E Serial No. from □□□ 50001 to □□□ 50785

★ Service Information

- If the ROM of a camera whose serial number comes under the above-mentioned serial number is not replaced, the camera functions as follows.

- 1) AUTO IRIS LEVEL cannot be controlled with the IRIS CONTROL lever ⑮.
- 2) In the case the shutter speed is set by the RM-LP37 and its OPERATE switch is turned off afterwards, the shutter speed set once is not automatically reset to the speed that was previously set by the camera.
- 3) Replace IC2 on the CP board of the KY-90/KY-35 with the following part (common to the KY-90 and KY-35).

U version : PLSC1040-VI-04

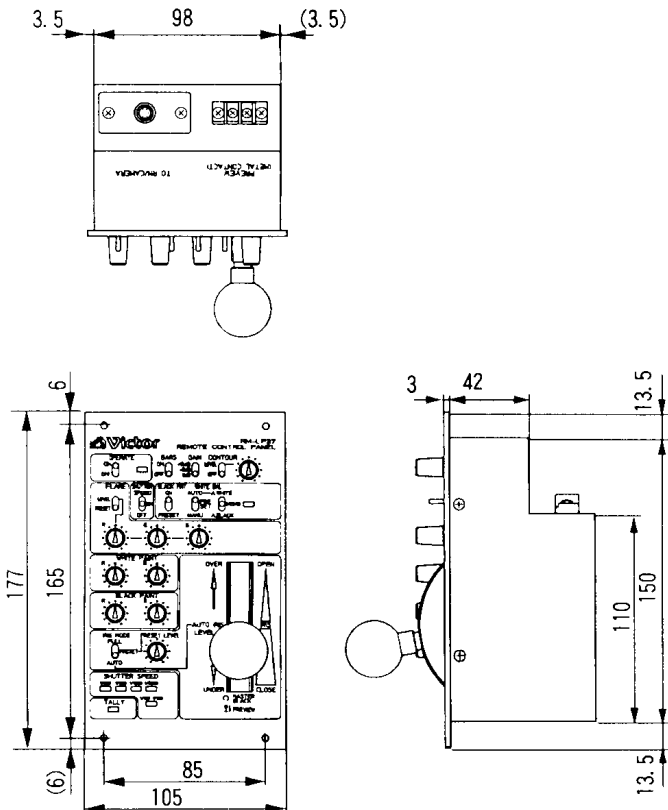
E version : PLSC1041-VI-04

SPECIFICATIONS

- Control functions :** IRIS AUTO/MANUAL
 (PRESET mode provided)
 Camera/color bar changeover
 Sensitivity increase (GAIN)
 Contour ON/OFF, level adjustment
 Flare compensation ON/OFF,
 level adjustment
 White/black paint
 AUTO WHITE/AUTO BLACK adjustment
 Shutter ON/OFF, speed selection
 Master black
 PREVIEW CONTROL
 (MAKE – CONTACT signal output)
- Control select switch :** OPERATION ON/OFF
- Control distance :** 5 m max. (To RM – P350)
- Power consumption :** 9V DC80 mA
- Weight :** 1.2 Kg
- Ambient temperature :** – 5 °C to +45 °C
- Accessories :** Remote cable (5 m) 1
 (SCV1652 – 5MO)
- Documents provided :** Instruction manual 1
 Warranty card 1
 Service information 1

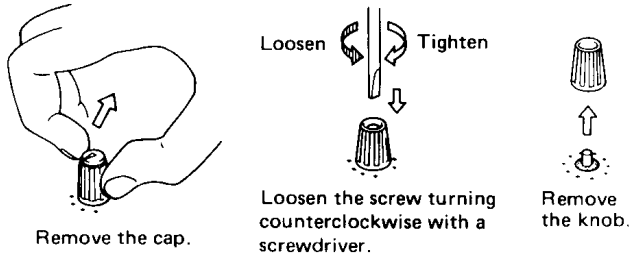
Design and specifications are subject to change without prior notice.

Dimensions :(mm)



SECTION 1 DISASSEMBLY

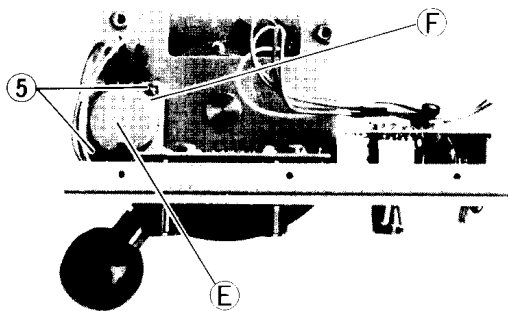
1.1 REMOVING THE KNOB



1.2 DISSASSEMBLY OF IRIS POTENTIOMETER

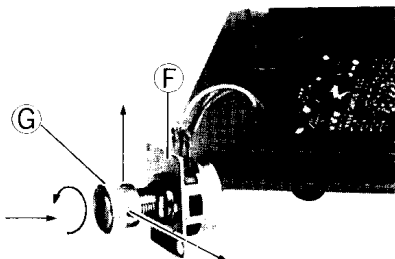
Note: Once the potentiometer is removed, adjustment of the setting position becomes necessary.
(See item 1.3)

1. Remove the LB and SB boards.
2. Remove two screws (5) then remove potentiometer (E) together with bracket (F).

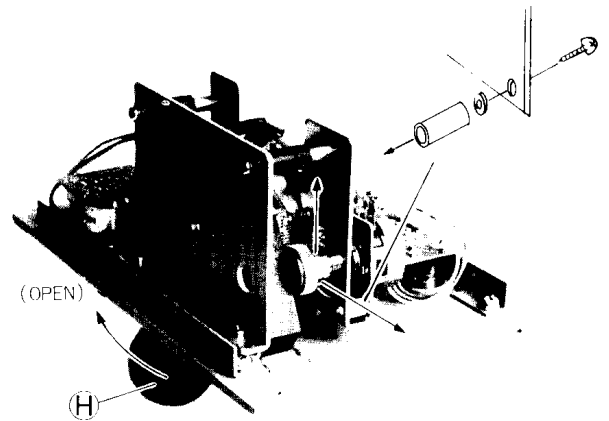


1.3 ASSEMBLY OF IRIS POTENTIOMETER AND ADJUSTMENT METHOD

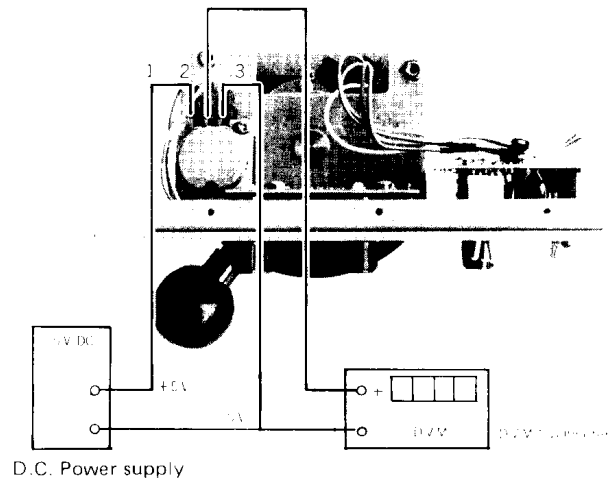
1. Install the potentiometer to bracket (F).
2. Rotate the potentiometer fully counterclockwise and install gear (G).
3. With the set screw position of gear (G) as shown in bellow Fig. temporarily fix the shaft so that it does not rotate too easily.



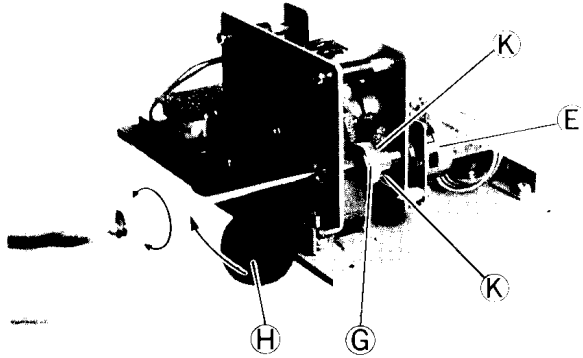
4. With iris control lever (H) rotated to the "OPEN" end, install the potentiometer.



5. Apply 5 V DC between terminals "1" and "3" of the potentiometer and connect a digital voltmeter to terminals "2" and "3".

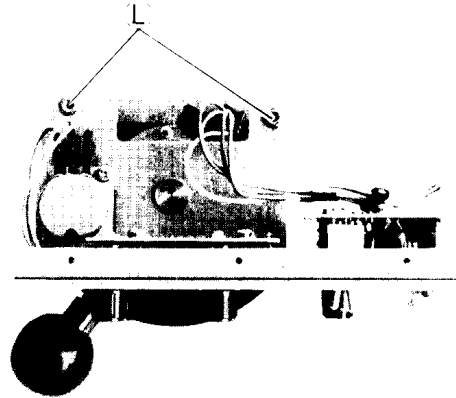


6. Loosen set screw (K) fixing gear (G) and potentiometer (E).
7. Turn the potentiometer so that the voltage becomes 4.6 V when iris control lever (H) is set to the "OPEN" end.
8. Secure the shaft using set screws (K).



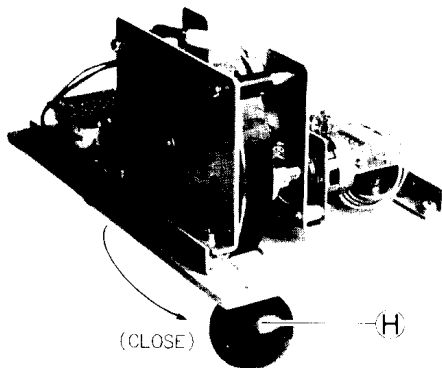
1.4 ADJUSTMENT OF IRIS CONTROL LEVER TORQUE

When IRIS CONTROL LEVER is too heavy or too light, it can be changed the torque by double nut (L).

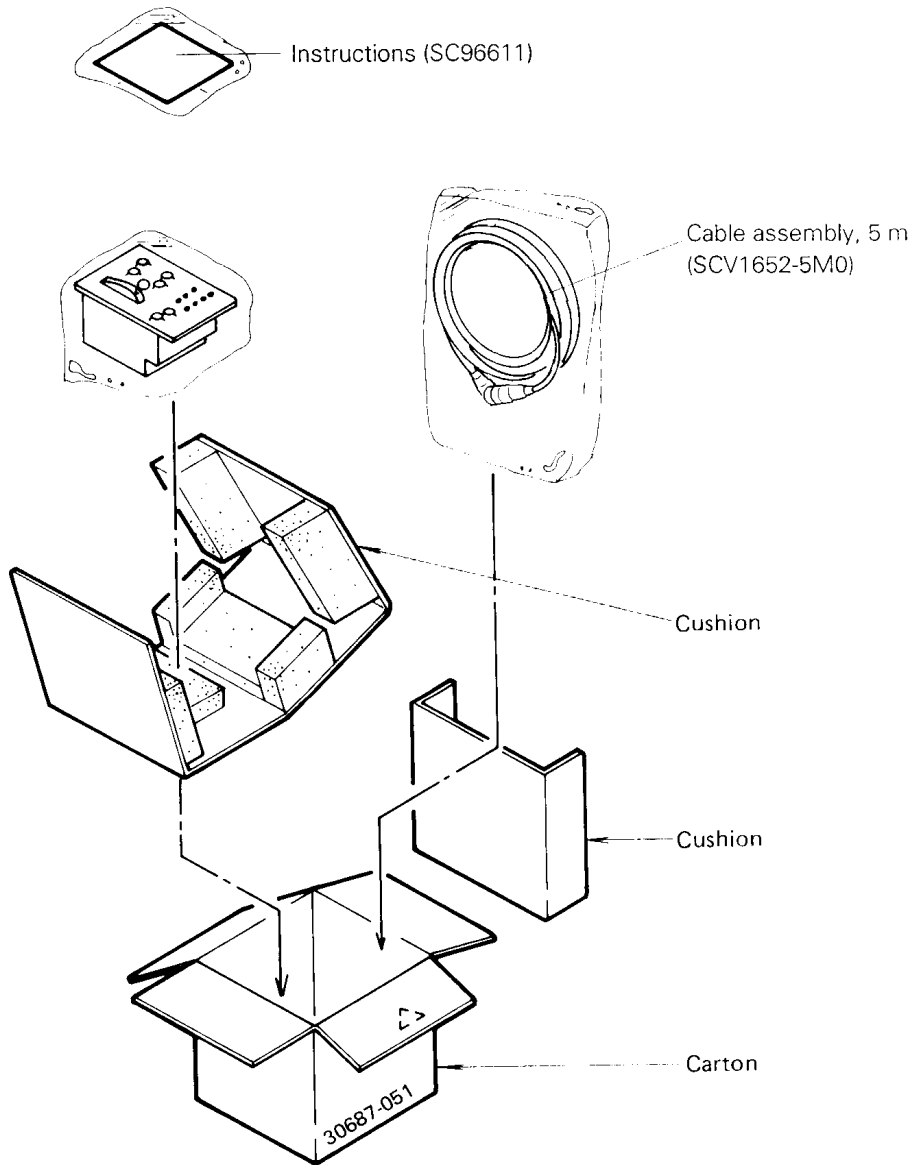


9. Check that the voltage is 0.6 V when iris control lever (H) is set to the "CLOSE" end. If it is below 0.6 V, set lever (H) to the "OPEN" end, shift the potentiometer setting position a little and check again.

The important point in this adjustment is to adjust the voltage to 0.6 V when iris control lever (H) is set to the "CLOSE" end.

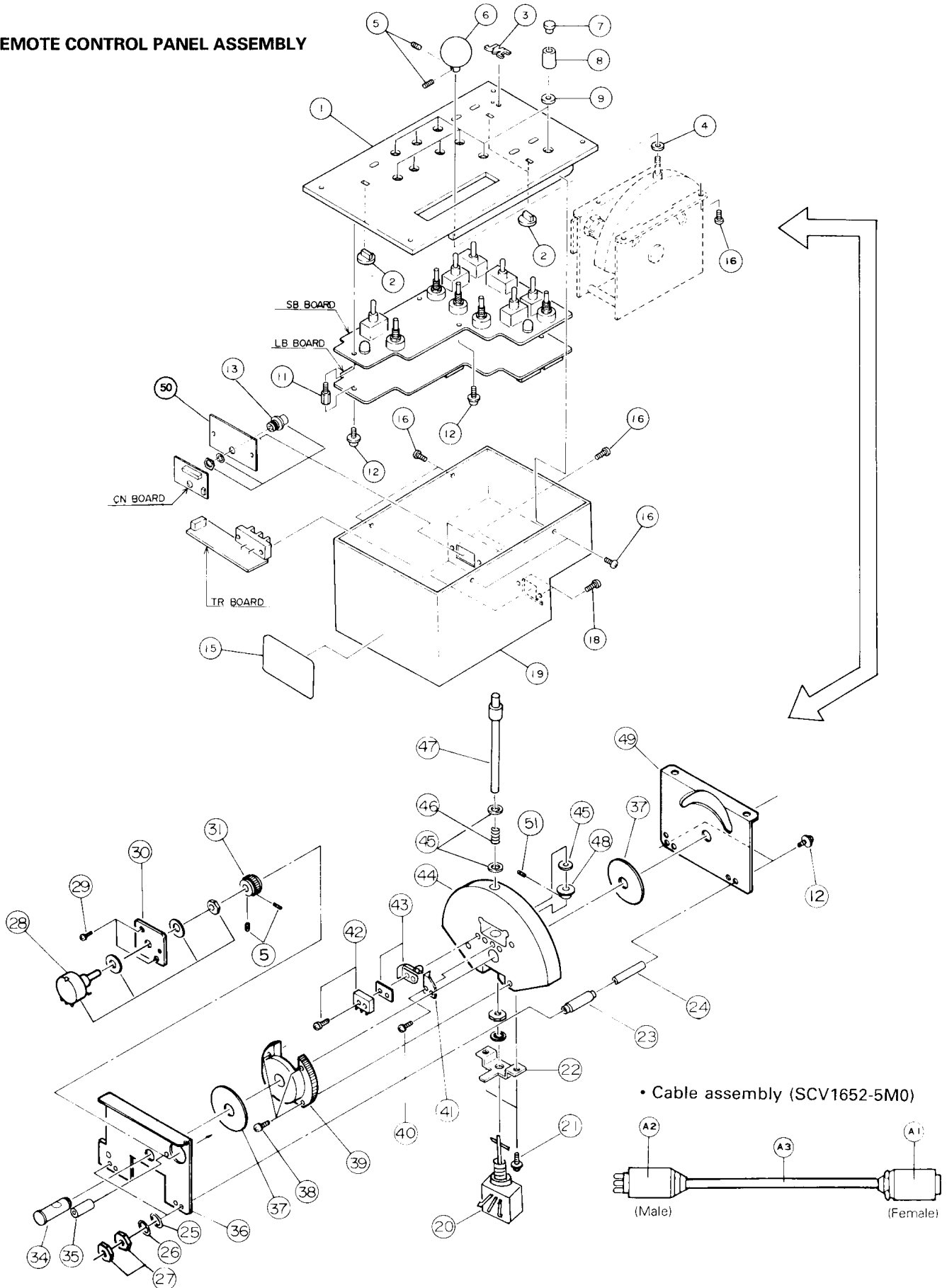


SECTION 2 REPACKING



SECTION 3 EXPLODED VIEW AND PARTS LIST

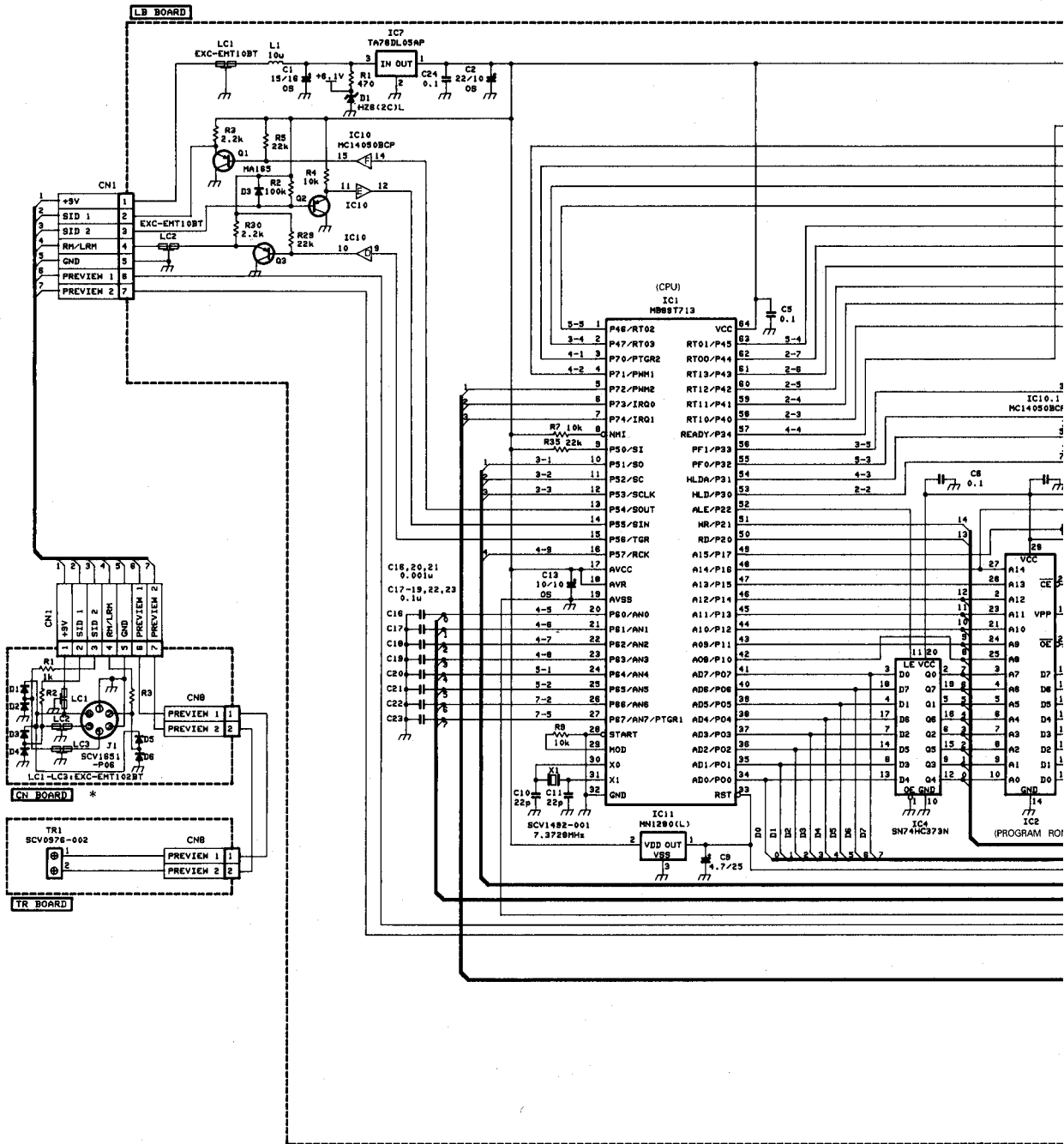
3.1 REMOTE CONTROL PANEL ASSEMBLY



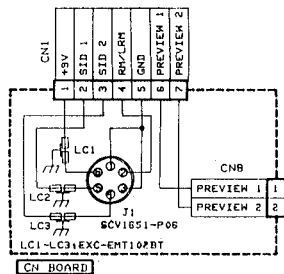
Remote control panel assembly parts list

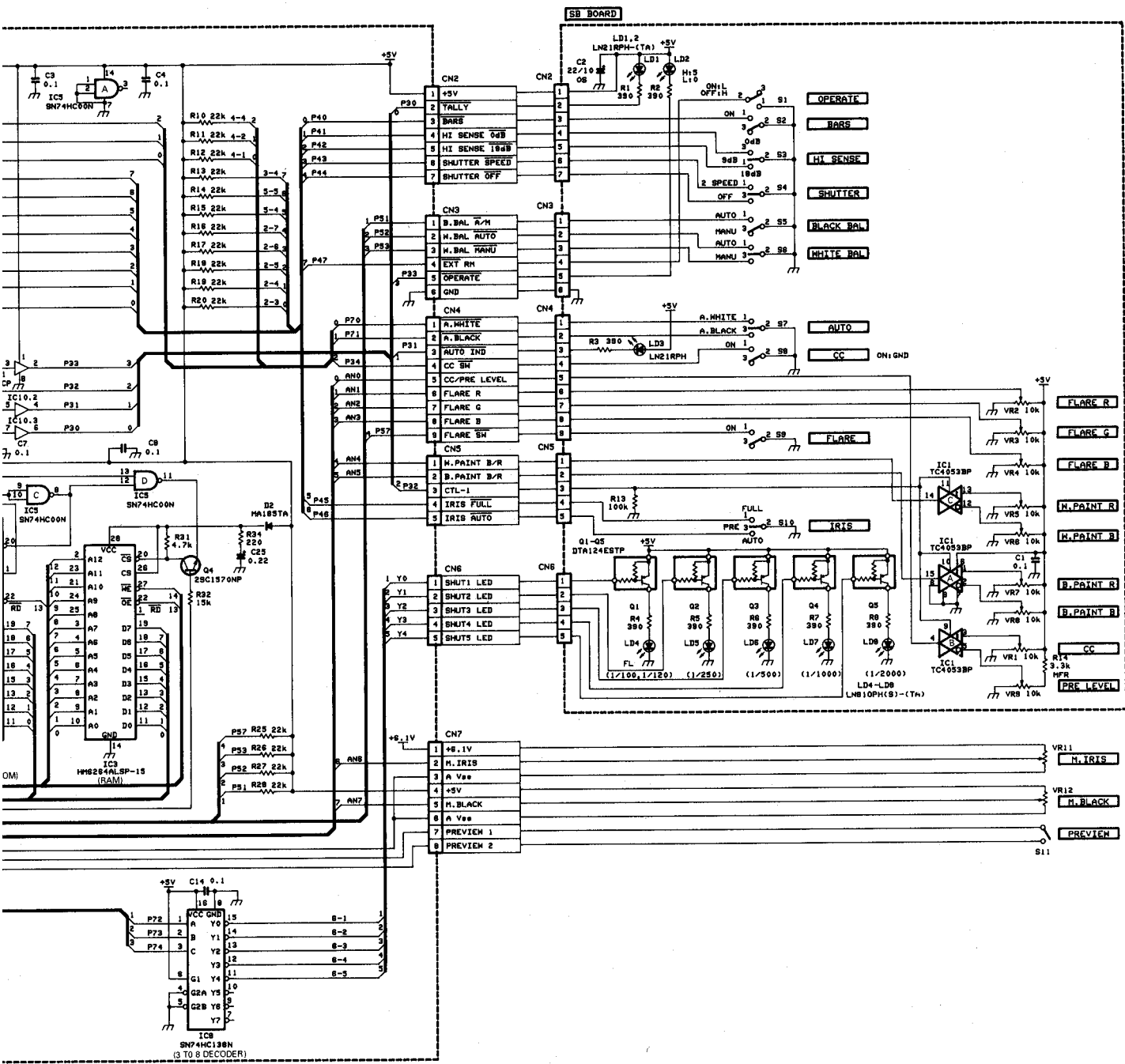
Symbol No.	Part No.	Part Name	Description
1	SC20396-00B	Control Panel	PGD30011-3
2	SS44054	LED Lens	
3	—	Logo MARK	
4	SC42178-001	Sheet	
5	YFS3003F	Set Screw	
6	SC42056-002	Knob	IRIS GRAY RED BLUE GREEN
7	SC40685-021	Knob Cap	
	SC40685-041	Knob Cap	
	SC40685-051	Knob Cap	
	SC40685-071	Knob Cap	
8	SC40683-021	Knob	—
9	SC40724-001	Spacer	
10	—	—	
11	SC42031-002	Stad	M3 x 6
12	DPSP3006Z	Screw	
13	SCV1651-P06	Connector	
14	—	Refer to the "TR board assembly list"	
15	—	Serial Plate	
16	SDSP3006R	Screw	M3 x 10
17	—	—	
18	SDSP3010M	Screw	
19	SC20395-00B	Bottom Case	
20	SC42062-001	VR	
21	SDSP2604M	Screw	M2.6 x 6
22	SC44176-001	Bracket	
23	SC42352-001	Spacer	
24	SC42076-001	Tube	
25	WNS3000N	Washer	
26	WLS3000N	Lock Washer	M3 M3 10 K M3 x 10
27	NNS3000N	Nut	
28	SCV0796-103	VR	
29	DPSP3012Z	Screw	
30	SC40721-001	Bracket	
31	SC40713-001	Gear	— —
32	—	—	
33	—	—	
34	SC42087-001	Shaft	
35	SC42064-001	Collar	
36	SC42063-011	Bracket	M2.6 x 8
37	SC45214-021	Spacer	
38	LPSP2608Z	Screw	
39	SC30682-001	Gear	
40	LPSP2604Z	Screw	
41	SC42060-011	Stopper	with 2 pcs Screws
42	GC44395-011	Switch	
43	SCV0797-001	Actuater	
44	SC30681-011	Wheel	
45	Q03093-837	Washer	
46	SC42058-001	Spring	—
47	SC42057-001	Shaft	
48	SC42059-001	Holder	
49	SC42077-002	Side Bracket	
50	SC45349-001	Plate	
51	YFS3003M	SCREW	HIROSE (HR10A-7P-6S) HIROSE (HR10A-7P-6P) □□□.→. 5M0:5m (standard) /10M:10m
A1	SCV1650-S06	Connector(Socket)	
A2	SCV1650-P06	Connector(Plug)	
A3	SCV1652-□□□	Cable	

4.4 SCHEMATIC DIAGRAM



* CN BOARD CIRCUIT DIAGRAM:
 FOLLOWING CIRCUIT IS PROVIDED FOR
 SERIAL NO. FROM □□□50001 TO □□□50027.





SECTION 5

ELECTRICAL PARTS LIST

SAFETY PRECAUTION

Parts identified by the \triangle symbol are critical for safety. Replace only with specified part numbers. For maximum reliability and performance, all other replacement parts should be identical to those specified.

ABBREVIATIONS IN THIS LIST ARE AS FOLLOWS:

RESISTORS

In the "Description" column:

- All resistance values are in ohms (Ω).
- K expresses kilo-ohm (1 000 ohms, $k\Omega$).
- M expresses mega-ohm (10^6 ohms, $M\Omega$).

In the "Part Name" column:

- COMP. RESISTOR : Composition Resistor
- U. F. RESISTOR : Non-inflammable Resistor
- O. M. F. RESISTOR : Oxide Metalized Film Resistor
- FUSI. RESISTOR : Fusible Resistor
- M. P. RESISTOR : Metal Plate Resistor
- M. G. RESISTOR : Metal Graze Resistor
- M. F. RESISTOR : Metal Film Resistor
- W. W. RESISTOR : Wire Wound Resistor

CAPACITORS

In the "Description" column:

- All capacitance values are in microfarad (μF) unless otherwise indicated.
- P expresses picofarad (10^{-12} farad, pF).

In the "Part Name" column:

- TRIM. CAPACITOR : Trimmer Capacitor
- CER. CAPACITOR : Ceramic Capacitor
- E. CAPACITOR : Electrolytic Capacitor
- TAN. CAPACITOR : Tantalum Capacitor
- MPP CAPACITOR : Metalized Polypropylene Capacitor
- O.F. CAPACITOR : Oil Film Capacitor
- MPF CAPACITOR : Metalized Polyfilm Capacitor
- F. M. CAPACITOR : Film Mica Capacitor
- P. P. CAPACITOR : Polypropylene Capacitor
- P. S. CAPACITOR : Polystyrene Capacitor

5.1 LB board assembly list 0 1

0 1 □ □ □ □ □ □ □ □

Symbol No.	Part No.	Part Name	Description
IC1	MB89T713AP	I.C.(M)	FUJITSU
IC2	PLSC1072-V1-00	I.C.(M)	MN27C256-15FA
IC3	HM6264ALSP-15	I.C.(M)	HITACHI
IC4	SN74HC373N	I.C.(M)	TEXAS
IC5	SN74HC00N	I.C.(M)	TEXAS
IC7	TA78DL05AP	I.C.(M)	TOSHIBA
IC8	SN74HC138N	I.C.(M)	TEXAS
IC10	MC14050BCP	I.C.(M)	MOTOROLA
IC11	MN1280(L)	I.C.(M)	MATSUSHITA
Q1	2SA1309A(RS)	TRANSISTOR	MATSUSHITA
Q2	2SA1309A(RS)	TRANSISTOR	MATSUSHITA
Q3	2SA1309A(RS)	TRANSISTOR	MATSUSHITA
Q4	2SC1570NP(F)	TRANSISTOR	SANYO
D1	HZ6(2C)L	ZENER DIODE	HITACHI
R1	QRD161J-471	CARBON RESISTOR	470 1/6W
R2	QRD161J-104	CARBON RESISTOR	100K 1/6W
R3	QRD161J-222	CARBON RESISTOR	2.2K 1/6W
R4	QRD161J-103	CARBON RESISTOR	10K 1/6W
R5	QRD161J-223	CARBON RESISTOR	22K 1/6W
R7	QRD161J-103	CARBON RESISTOR	10K 1/6W
R9	QRD161J-103	CARBON RESISTOR	10K 1/6W
R10	QRD161J-223	CARBON RESISTOR	22K 1/6W
R11	QRD161J-223	CARBON RESISTOR	22K 1/6W
R12	QRD161J-223	CARBON RESISTOR	22K 1/6W
R13	QRD161J-223	CARBON RESISTOR	22K 1/6W
R14	QRD161J-223	CARBON RESISTOR	22K 1/6W
R15	QRD161J-223	CARBON RESISTOR	22K 1/6W
R16	QRD161J-223	CARBON RESISTOR	22K 1/6W
R17	QRD161J-223	CARBON RESISTOR	22K 1/6W
R18	QRD161J-223	CARBON RESISTOR	22K 1/6W
R19	QRD161J-223	CARBON RESISTOR	22K 1/6W
R20	QRD161J-223	CARBON RESISTOR	22K 1/6W
R25	QRD161J-223	CARBON RESISTOR	22K 1/6W
R26	QRD161J-223	CARBON RESISTOR	22K 1/6W
R27	QRD161J-223	CARBON RESISTOR	22K 1/6W
R28	QRD161J-223	CARBON RESISTOR	22K 1/6W
R29	QRD161J-223	CARBON RESISTOR	22K 1/6W
R30	QRD161J-222	CARBON RESISTOR	2.2K 1/6W
R31	QRD161J-472	CARBON RESISTOR	4.7K 1/6W
R32	QRD161J-153	CARBON RESISTOR	15K 1/6W
C1	QEX41CM-156	E.CAPACITOR	15 16V
C2	QEX41AM-226	E.CAPACITOR	22 10V
C3	QCZ0206-104	CER.CAPACITOR	0.10
C4	QCZ0206-104	CER.CAPACITOR	0.10
C5	QCZ0206-104	CER.CAPACITOR	0.10
C6	QCZ0206-104	CER.CAPACITOR	0.10
C7	QCZ0206-104	CER.CAPACITOR	0.10
C8	QCZ0206-104	CER.CAPACITOR	0.10
C10	QCS11HJ-220	CER.CAPACITOR	22P 50V
C11	QCS11HJ-220	CER.CAPACITOR	22P 50V
C13	QEX41AM-106	E.CAPACITOR	10 10V
C14	QCZ0206-104	CER.CAPACITOR	0.10
C16	QFN41HJ-102	MYLAR CAPACITOR	1000P 50V
C17	QCZ0206-104	CER.CAPACITOR	0.10

Symbol No.	Part No.	Part Name	Description
C18	QCZ0206-104	CER.CAPACITOR	0.10
C19	QCZ0206-104	CER.CAPACITOR	0.10
C20	QFN41HJ-102	MYLAR CAPACITOR	1000P 50V
C21	QFN41HJ-102	MYLAR CAPACITOR	1000P 50V
C22	QCZ0206-104	CER.CAPACITOR	0.10
C23	QCZ0206-104	CER.CAPACITOR	0.10
C24	QCZ0206-104	CER.CAPACITOR	0.10
C25	QEZ0171-224	E.CAPACITOR	0.22
L1	SMV2223	PEAKING COIL	10 μH
LC1	EXC-EMT102BT	LC FILTER	
LC2	EXC-EMT102BT	LC FILTER	
X1	SCV1492-001	CRYSTAL	7.3728 MHz
CN1	SSV1591-S07	CONNECTOR	7 PIN
CN2	SSV1591-S07	CONNECTOR	7 PIN
CN3	SSV1591-S06	CONNECTOR	6 PIN
CN4	SSV1591-S09	CONNECTOR	9 PIN
CN5	SSV1591-S05	CONNECTOR	5 PIN
CN6	SSV1591-S05	CONNECTOR	5 PIN
CN7	SSV1591-S08	CONNECTOR	8 PIN
SO2	SSV0235	IC SOCKET	FOR IC2

5.2 SB board assembly list 02

02

Symbol No.	Part No.	Part Name	Description
IC1	TC4053BP	I.C.(M)	TOSHIBA
Q1	DTA124ES	TRANSISTOR	ROHM
Q2	DTA124ES	TRANSISTOR	ROHM
Q3	DTA124ES	TRANSISTOR	ROHM
Q4	DTA124ES	TRANSISTOR	ROHM
Q5	DTA124ES	TRANSISTOR	ROHM
LD1	LN21RPH	LED	MATSUSHITA
LD2	LN21RPH	LED	MATSUSHITA
LD3	LN21RPH	LED	MATSUSHITA
LD4	LN81OPH(S)	L.E.D.	MATSUSHITA
LD5	LN81OPH(S)	L.E.D.	MATSUSHITA
LD6	LN81OPH(S)	L.E.D.	MATSUSHITA
LD7	LN81OPH(S)	L.E.D.	MATSUSHITA
LD8	LN81OPH(S)	L.E.D.	MATSUSHITA
R1	QRD161J-391	CARBON RESISTOR	390 1/6W
R2	QRD161J-391	CARBON RESISTOR	390 1/6W
R3	QRD161J-391	CARBON RESISTOR	390 1/6W
R4	QRD161J-391	CARBON RESISTOR	390 1/6W
R5	QRD161J-391	CARBON RESISTOR	390 1/6W
R6	QRD161J-391	CARBON RESISTOR	390 1/6W
R7	QRD161J-391	CARBON RESISTOR	390 1/6W
R8	QRD161J-391	CARBON RESISTOR	390 1/6W
R13	QRD161J-104	CARBON RESISTOR	100K 1/6W
R14	QRV141F-3301	M.F.RESISTOR	3.30K 1/4W
VR1	SCV1554-103	VR	10K CC
VR2	SCV1554-103	VR	10K FLARE R
VR3	SCV1554-103	VR	10K FLARE G
VR4	SCV1554-103	VR	10K FLARE B
VR5	SCV1554-103	VR	10K W PAINT R
VR6	SCV1554-103	VR	10K W PAINT B
VR7	SCV1554-103	VR	10K B PAINT R
VR8	SCV1554-103	VR	10K B PAINT B
VR9	SCV1554-103	VR	10K PRE LEVEL
C1	QCZ0206-104	CER.CAPACITOR	0.10
C2	QEX41AM-226	E.CAPACITOR	22 10V
S1	SCV1654-001	TOGGLE SW	OPERATE
S2	SCV1654-001	TOGGLE SW	BARS
S3	SCV1655-001	TOGGLE SW	HI SENSE
S4	SCV2246-001	TOGGLE SW	SHUTTER
S5	SCV1654-001	TOGGLE SW	BLACK BAL
S6	SCV1655-001	TOGGLE SW	WHITE BAL
S7	SCV1656-001	TOGGLE SW	AUTO
S8	SCV1654-001	TOGGLE SW	CC
S9	SCV1654-001	TOGGLE SW	FLARE
S10	SCV1655-001	TOGGLE SW	IRIS
CN2	SSV1591-S07	CONNECTOR	7 PIN
CN3	SSV1591-S06	CONNECTOR	6 PIN
CN4	SSV1591-S09	CONNECTOR	9 PIN
CN5	SSV1591-S05	CONNECTOR	5 PIN
CN6	SSV1591-S05	CONNECTOR	5 PIN

5.3 CN board assembly list 03

03

Symbol No.	Part No.	Part Name	Description
D1	MA165	DIODE	
D2	MA165	DIODE	
D3	MA165	DIODE	
D4	MA165	DIODE	
D5	MA165	DIODE	
D6	MA165	DIODE	
R1	QRD161J-102	CARBON RESISTOR	
R2	QRD161J-102	CARBON RESISTOR	
R3	QRD161J-102	CARBON RESISTOR	
LC1	EXC-EMT102BT	LC FILTER	
LC2	EXC-EMT102BT	LC FILTER	
LC3	EXC-EMT102BT	LC FILTER	
CN1	SSV1591-S07	CONNECTOR	7 PIN
CN8	SSV1591-S02	CONNECTOR	2 PIN

5.4 TR board assembly list 04

04

Symbol No.	Part No.	Part Name	Description
CN8	SSV1591-S02	CONNECTOR	2 PIN
TR1	SCV0976-002	TERMINAL BOARD	PREVIEW

