

JVC

SERVICE MANUAL

STEREO MICROPHONE

MV-P602



MV-P602 STEREO MICROPHONE INSTRUCTIONS

Thank you for purchasing the JVC MV-P602 stereo microphone. To gain maximum benefit from the use of the MV-P602, read this leaflet carefully.

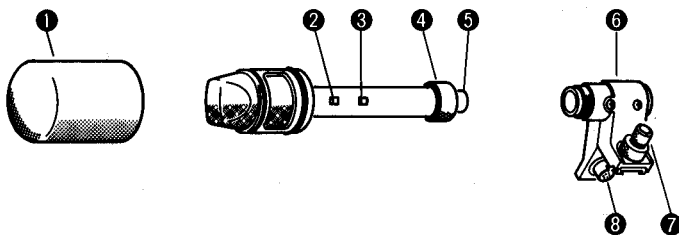
FEATURES

- Being a hot shoe type (cable-less) stereo microphone, the MV-P602 can be readily connected to JVC color video cameras.
- MS stereo system with three microphone units. The MV-P602 covers a wider frequency response to obtain a high-fidelity recording.
- The MV-P602 can be available as a monaural microphone by selecting the MODE switch.
- Windscreen (an accessory) and M/V switch keeps cut wind noise in capturing sound outdoors.

PRECAUTIONS

- Do not strike or drop the microphone; a shock could result in the microphone's characteristics being degraded.
- There are precision parts inside the microphone which have been accurately adjusted before the microphone leaves the factory; do not disassemble or the original performance may not be able to be reproduced.
- Do not use or store the microphone in a hot or humid place (in direct sunlight, near a heater or in a closed automobile in summer.)
The performance of the microphone could be degraded.

CONTROLS AND CONNECTORS



- ① Windscreen
Very effective in keeping out pop noise and wind noise.
- ② MODE Switch
STEREO : For stereo recording
MONO : For monaural recording
- ③ TONE Switch
M: Set to this position for the standard frequency response with strong low frequencies.
V: Set to this position to decrease ambient noise and to improve the clarity of the human voice.
- ④ Camera adapter fixing ring
For fixing the microphone to the camera mounting adapter ⑥.
- ⑤ Connector
6-pins connector for connection to the camera mounting adapter ⑥.
- ⑥ Camera mounting adapter
For mounting the microphone on the JVC compatible video camera.
- ⑦ Camera fixing screw
Double screw for mounting in the microphone shoe of the JVC compatible video camera.
- ⑧ Camera connector
6-pins connector for connection to the MIC INPUT socket of the JVC compatible video camera.

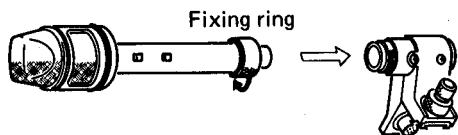
CONNECTION

The MV-P602 can be mounted directly on the JVC compatible video cameras.

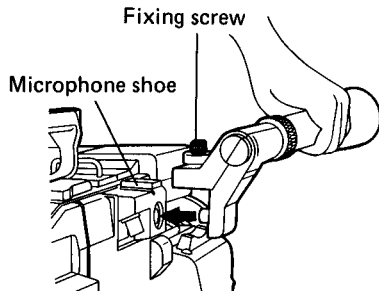
The method follows:

1. Attach the camera mounting adapter to the microphone body.

Align the slots so that the connector can be inserted, then turn fixing ring in the direction of the arrow.



2. Insert the camera mounting adapter into the camera's microphone shoe.



3. Fasten the camera mount adapter to the camera by tightening its fixing screw correctly, making sure the adapter is fitted snugly to the shoe.
Lock the screw by tightening its lock knob; turning this knob clockwise (↻).

4. Use of the windscreen both indoors and outdoors is recommended.
Be sure to turn the POWER switch off whenever windscreen is to be installed.

OPERATION

■ Selecting between two frequency characteristics (TONE switch)

The two selective characteristics, M and V, are illustrated in the below figure. Set the TONE switch in "V" position to pick voice sound more clearly by suppressing ambient noise including wind noise.

■ Selecting between two output modes (MODE switch)

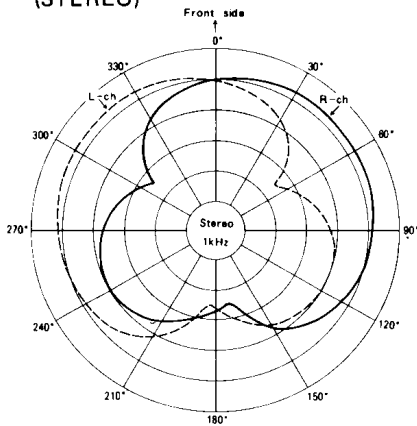
"STEREO" position is for stereo recording, and "MONO" for monaural recording. If using camera and VTR have no stereo facility, be sure to set this switch in "MONO".

■ Notes for operation

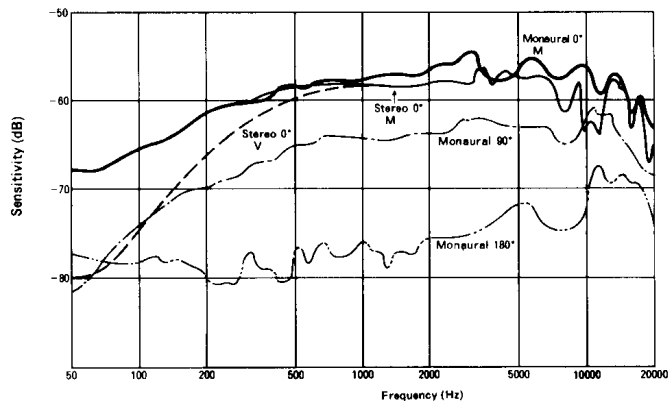
- The MV-P602 is a high-sensitivity microphone designed to give best performance at some distance from the sound source. Don't bring the microphone too close to the source or its tone balance will be spoiled by the proximity effect.
- High-intensity sound occurring near microphone can cause the built-in microphone amplifier of the camera to distort the sound signal and, at the same time, the VTR's AGC circuit might swing its output level up and down to result in an unpleasant sound output.
*Be sure of monitor the sound being recorded by headphone etc.

MICROPHONE CHARACTERISTICS

Directionality characteristic (STEREO)



Frequency characteristics



SPECIFICATIONS

Sound reception : MS system (M for mid, S for side), with STEREO/MONO selector switch

Type : Back-electret condenser type

Directionality : Uni-directional

Sensitivity : -58 dB (0 dB = 1 V/ μ bar, at 1 kHz)

Frequency response : 70 – 16,000 Hz

Selective acoustic quality : M (for normal use)/V (for low-cut use)

Impedance matching: 600 ohms minimum, unbalanced

Max. input SPL : 120 dB SPL or more (1 kHz, 1% distortion, microphone itself)

S/N ratio : More than 45 dB

Intrinsic noise level : Less than 28 dB SPL

Wind noise : Less than 40 dB SPL (with windscreen), by JIS C5502 test method

Operating voltage : 9 – 10 volts, external power supply

Compatible video camera : KY-R20 for stereo recording
KY-950/-320/-210; BY-110;
KY-20/-H20 for monaural recording only
(Included in the above are "B" and "BS" types.)

Dimensions : Microphone;
216(L) x 48(D) mm
Camera mounting adapter;
68(L) x 80(H) x 63(W) mm

Weight : 310 g (include adapter)

Accessory : Windscreen (SCV1345-109)

* Design and specifications subject to change without notice.

SECTION 1 DISASSEMBLY

1.1 REPLACEMENT OF THE MICROPHONE UNIT

In order to maintain the characteristics of this mike, it is necessary to use a printed circuit board and mike units with the correct characteristics and sensitivity. Therefore, be sure to replace it with a mike units/PCB assembly (three mike units and one PCB).

Part No.: SCV1345-102

Take care not to turn the VRs (R2, R19) shown in Fig. 1-3-2. Those VRs are factory adjusted.

1. Remove three screws ① fixing the mic-cover ④, then take out it.

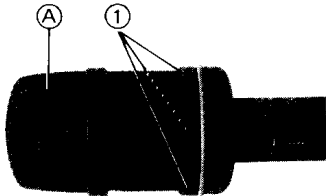


Fig. 1-1

When attaching the mic-cover, match the direction of microphone unit and direction of mic-cover shown in below.

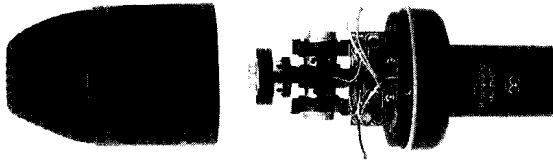


Fig. 1-2

2. Peel the cushion ⑤.
3. Remove four wires A, B, C and D shown in Fig. 1-3-2 from MIC board of the microphone unit.

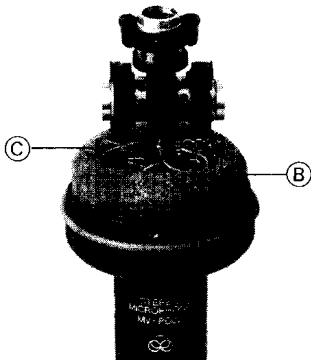


Fig. 1-3-1

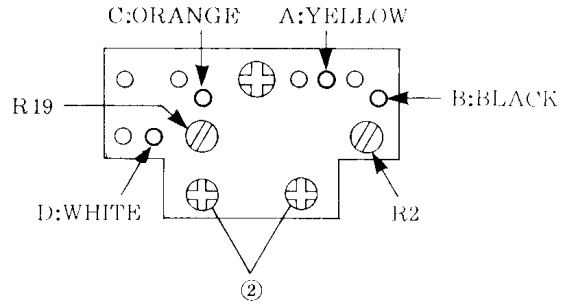


Fig. 1-3-2

4. Remove the screws ② shown in the Fig. 1-3-2, then take out the microphone unit.
5. When attaching the microphone unit, refer to the Fig. 1-3-2 to take care of the color of wires

1.2 REMOVAL OF THE MAIN BOARD

1. Remove the microphone unit according to the section 1.1.
2. Turn the lock ring ⑥ clockwise (↻) and remove the camera attachment ⑦.
3. Remove three set screws ③, and pull out the MAIN board backward.

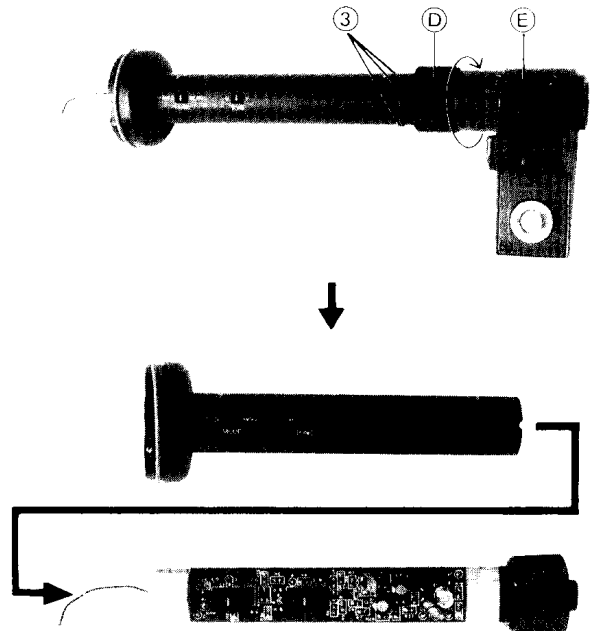


Fig. 1-4

SECTION 2 REPACKING

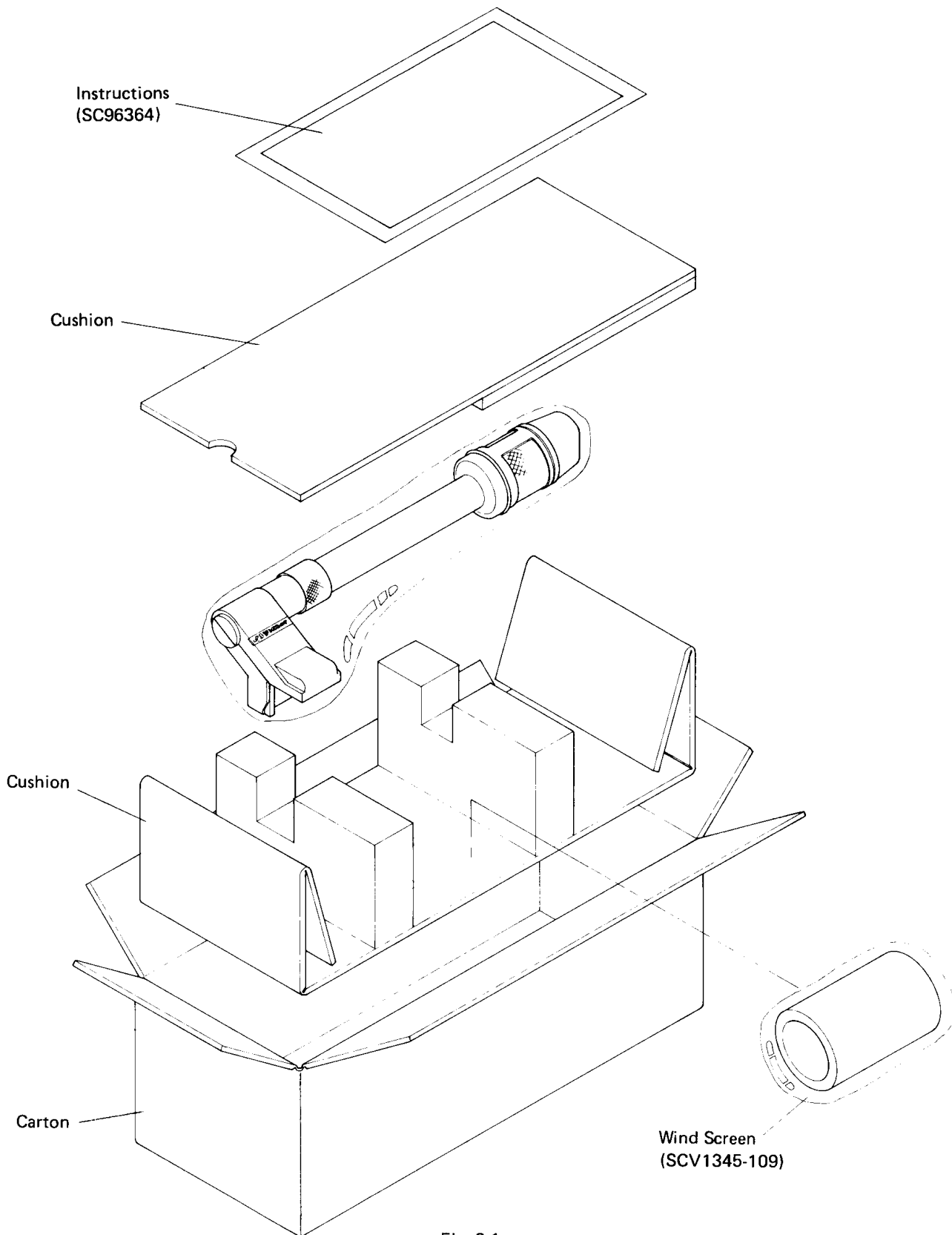
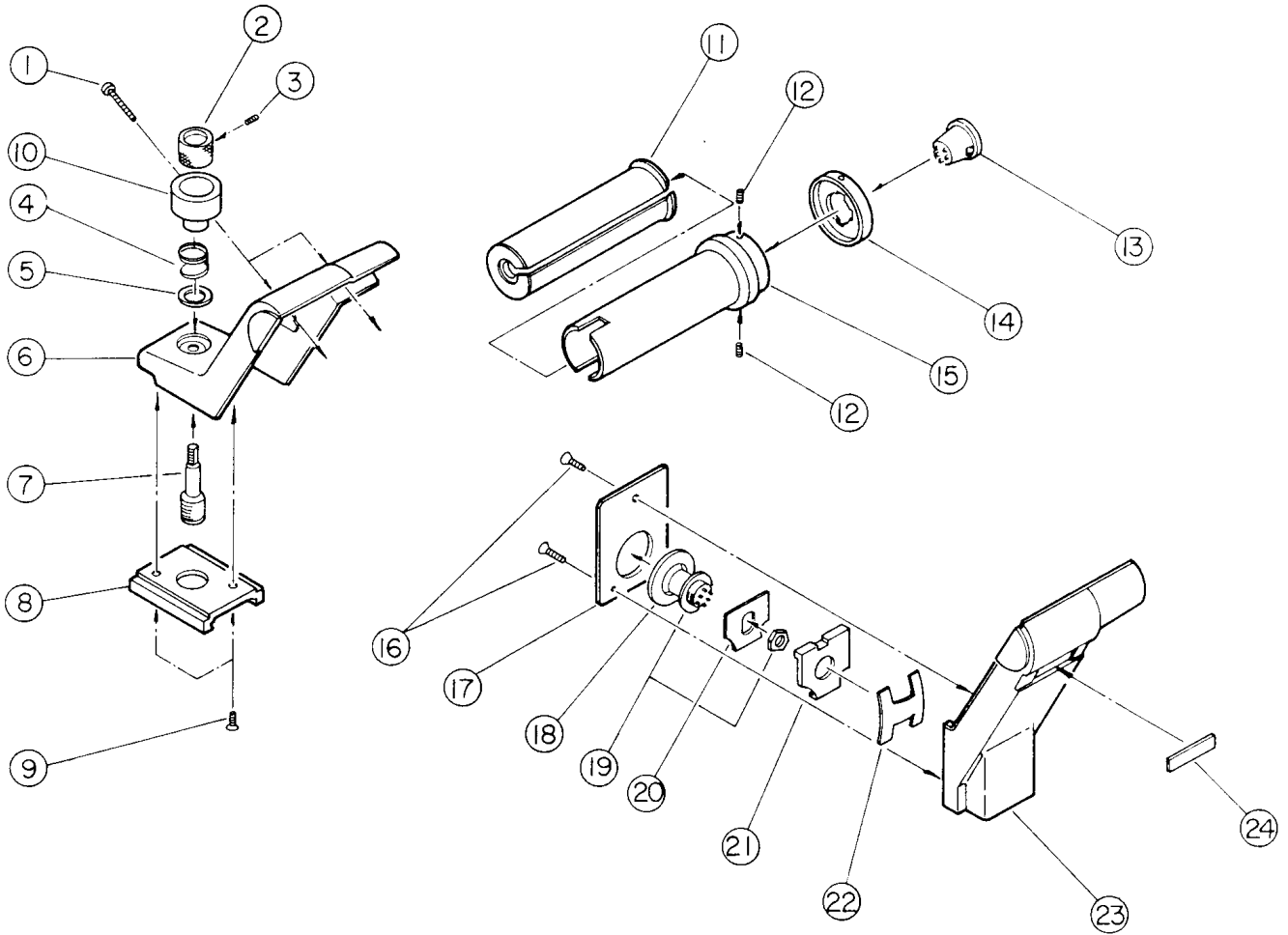







Fig. 2-1

3.2 CAMERA ATTACHMENT ASSEMBLY  



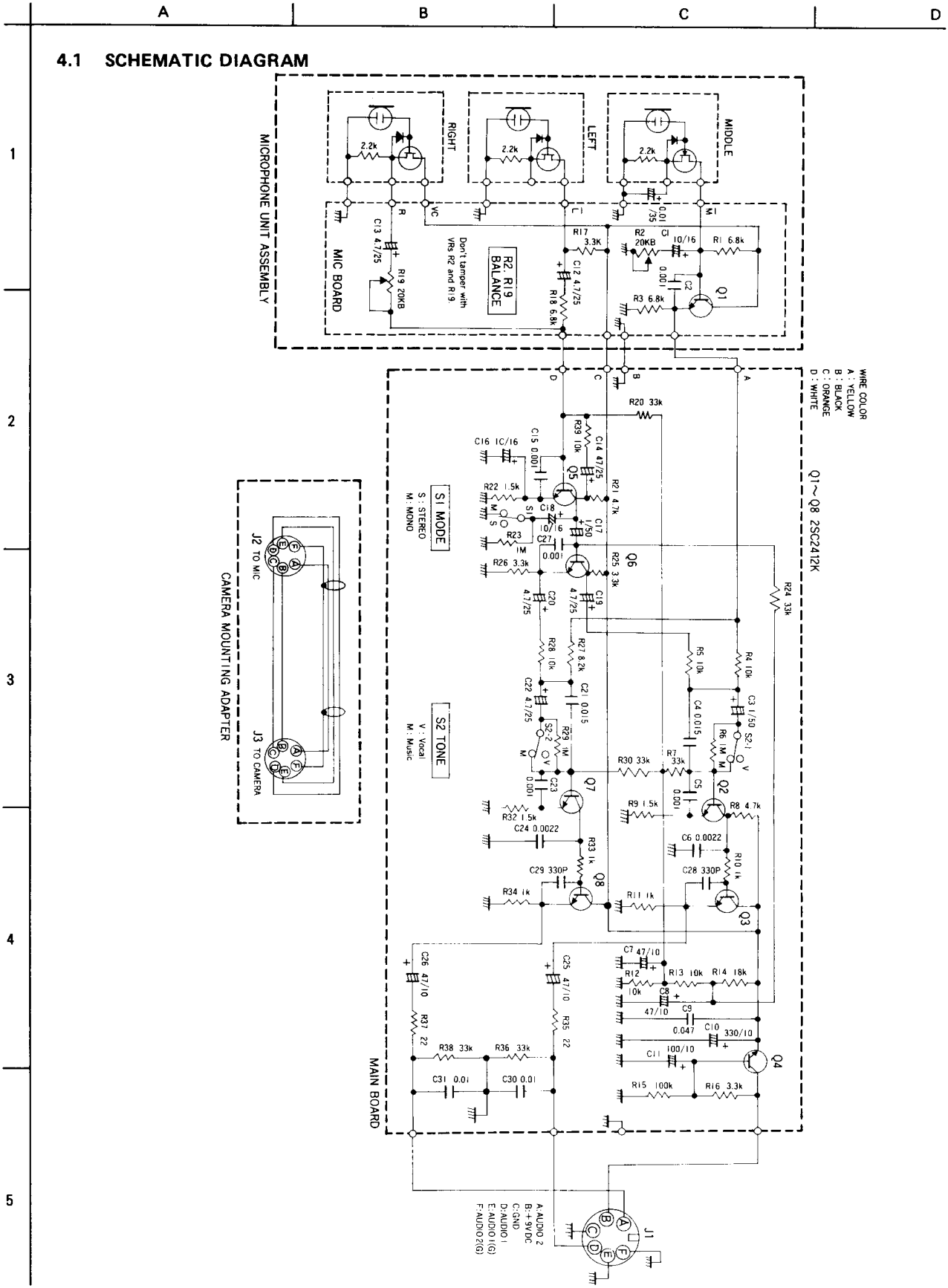
– Camera attachment parts list –

Symbol No.	Parts No.	Parts Name	Description
1	SDSP3014M	Screw	M3 x 14
2	SC41007-001	Knob	
3	YFS2604	Set Screw	M2.6 x 4
4	SC41134-001	Spring	
5	SC41133-001	Spacer	
6	SC30412-001	Cover	
7	SC41009-002	Screw	
8	SC30373-031	Guide	
9	SSSP3006M	Screw	M3 x 6
10	SC41190-001	Nut	
11	SC41145-001	Insulator	
12	YCS2603M	Set Screw	M2.6 x 3
13	SCV0238-06S	Connector	Microphone
14	SC41161-001	Bulk Cap	
15	SC41143-001	Pipe	
16	SSSP2606M	Screw	M2.6 x 6
17	SC41136-001	Plate	
18	SC41137-001	Spacer	
19	SCV0537-06P	Connector	Camera
20	SC41138-001	Plate	
21	SC41139-001	Guide	
22	SC41140-001	Spring	
23	SC30414-001	Cover	
24	Not Available	JVC Logo	40907

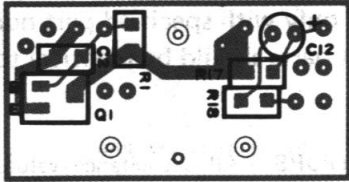
SECTION 4 DIAGRAM AND CIRCUIT BOARDS

4.1 SCHEMATIC DIAGRAM

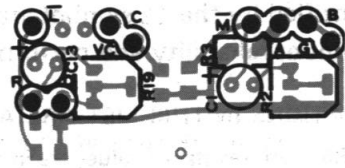


4.2 CIRCUIT BOARDS

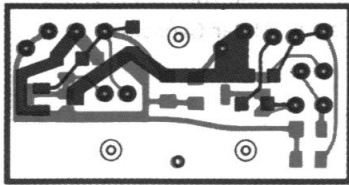
4.2.1 MIC CIRCUIT BOARD



Parts layout (soldered side)

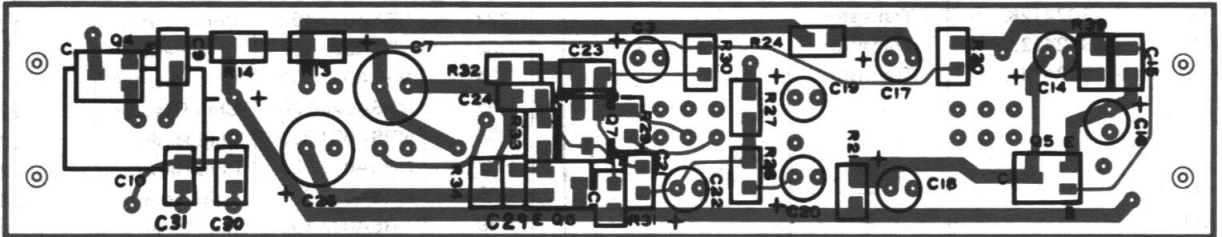


Parts layout (parts insertion side)

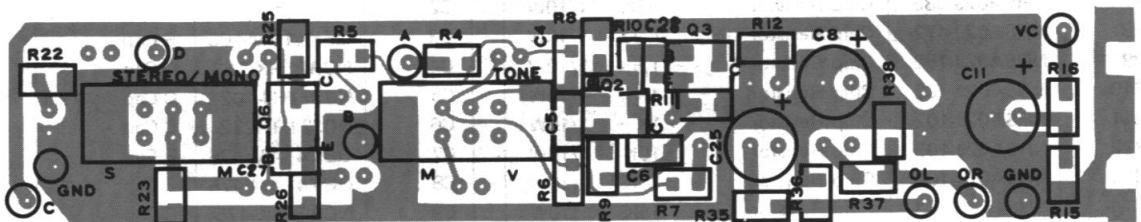


Pattern (from soldered side)

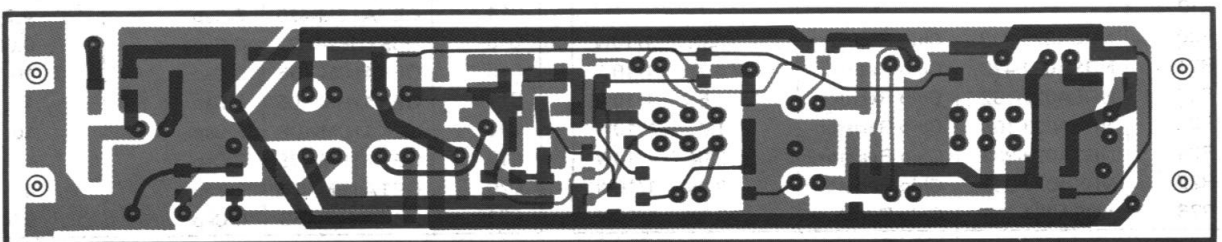
4.2.2 MAIN CIRCUIT BOARD



Parts layout (soldered side)



Parts layout (parts insertion side)



Pattern (from soldered side)

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 – All resistance values are in ohms (Ω).

- K : 1 000
- CR : Carbon Resistor
- VR : Variable Resistor (Potentiometer)
- FR : Fusible Resistor

CAPACITORS – All capacitance values are in μ F, unless otherwise indicated.

- P : μ F
- C Cap : Ceramic Capacitor
- E Cap : Electrolytic Capacitor
- MY Cap : Mylar Capacitor

5.1 STEREO MICROPHONE ELECTRICAL PARTS LIST 01

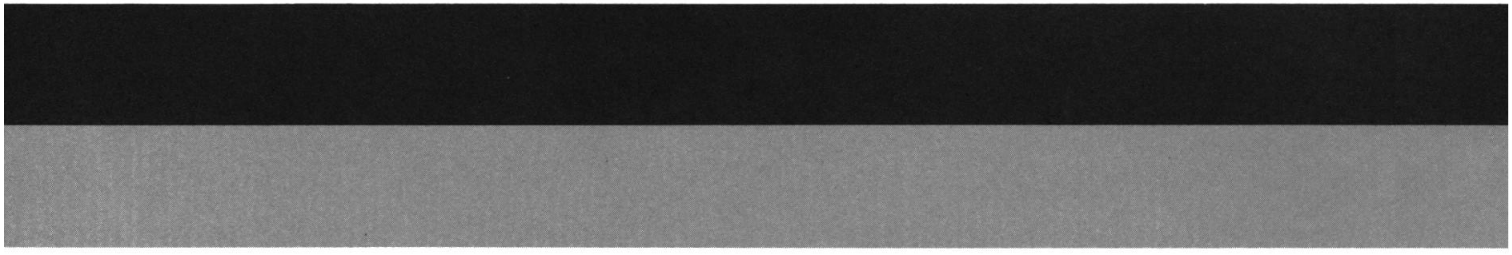
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Symbol No.	Part No.	Part Name	Description
Q1	—	—	
Q2	2SC2412K	Transistor	
Q3	2SC2412K	Transistor	
Q4	2SC2412K	Transistor	
Q5	2SC2412K	Transistor	
Q6	2SC2412K	Transistor	
Q7	2SC2412K	Transistor	
Q8	2SC2412K	Transistor	
R1	—	—	
R2	—	—	
R3	—	—	
R4	NRSA02J-103	Chip Resistor	10K 1/10W
R5	NRSA02J-103	Chip Resistor	10K 1/10W
R6	NRSA02J-105	Chip Resistor	1M 1/10W
R7	NRSA02J-333	Chip Resistor	33K 1/10W
R8	NRSA02J-472	Chip Resistor	4.7K 1/10W
R9	NRSA02J-152	Chip Resistor	1.5K 1/10W
R10	NRSA02J-102	Chip Resistor	1K 1/10W
R11	NRSA02J-102	Chip Resistor	1K 1/10W
R12	NRSA02J-103	Chip Resistor	10K 1/10W
R13	NRSA02J-103	Chip Resistor	10K 1/10W
R14	NRSA02J-183	Chip Resistor	18K 1/10W
R15	NRSA02J-104	Chip Resistor	100K 1/10W
R16	NRSA02J-332	Chip Resistor	3.3K 1/10W
R17	—	—	
R18	—	—	
R19	—	—	
R20	NRSA02J-333	Chip Resistor	33K 1/10W
R21	NRSA02J-472	Chip Resistor	4.7K 1/10W
R22	NRSA02J-152	Chip Resistor	1.5K 1/10W
R23	NRSA02J-105	Chip Resistor	1M 1/10W
R24	NRSA02J-333	Chip Resistor	33K 1/10W
R25	NRSA02J-332	Chip Resistor	3.3K 1/10W
R26	NRSA02J-332	Chip Resistor	3.3K 1/10W

Symbol No.	Part No.	Part Name	Description
R27	NRSA02J-822	Chip Resistor	8.2K 1/10W
R28	NRSA02J-103	Chip Resistor	10K 1/10W
R29	NRSA02J-105	Chip Resistor	1M 1/10W
R30	NRSA02J-333	Chip Resistor	33K 1/10W
R31	NRSA02J-472	Chip Resistor	4.7K 1/10W
R32	NRSA02J-152	Chip Resistor	1.5K 1/10W
R33	NRSA02J-102	Chip Resistor	1K 1/10W
R34	NRSA02J-102	Chip Resistor	1K 1/10W
R35	NRSA02J-220	Chip Resistor	22 1/10W
R36	NRSA02J-333	Chip Resistor	33K 1/10W
R37	NRSA02J-220	Chip Resistor	22 1/10W
R38	NRSA02J-333	Chip Resistor	33K 1/10W
R39	NRSA02J-103	Chip Resistor	10K 1/10W
C1	—	—	
C2	—	—	
C3	QEK41HM-105	E Cap	1 50V
C4	NCB21HK-153	C Cap	0.015 50V
C5	NCS21HJ-102	C Cap	0.001 50V
C6	NCS21HJ-222	C Cap	0.0022 50V
C7	QEK41AM-476	E Cap	47 10V
C8	QEK41AM-476	E Cap	47 10V
C9	NCB21EK-475	C Cap	4.7 25V
C10	QETA1AM-337	E Cap	330 10V
C11	QETA1AM-107	E Cap	100 10V
C12	—	—	
C13	—	—	
C14	QETA1EM-475	E Cap	4.7 25V
C15	NCS21HJ-102	C Cap	0.001 50V
C16	QEK41CM-106	E Cap	10 16V
C17	QEK41HM-105	E Cap	1 50V
C18	QEK41CM-106	E Cap	10 16V
C19	QETA1EM-475	E Cap	4.7 25V
C20	QETA1EM-475	E Cap	4.7 25V
C21	NCB21HK-153	C Cap	0.015 50V

01□□□□□

Symbol No.	Part No.	Part Name	Description
C22	QETA1EM-475	E Cap	4.7 25V
C23	NCS21HJ-102	C Cap	0.001 50V
C24	NCS21HJ-222	C Cap	0.0022 50V
C25	QEK41AM-476	E Cap	47 10V
C26	QEK41AM-476	E Cap	47 10V
C27	NCS21HJ-103	C Cap	0.01 50V
C28	NCT03CH-331	C Cap	330P 16V
C29	NCT03CH-331	C Cap	330P 16V
C30	NCB21HK-103	C Cap	0.01 50V
C31	NCB21HK-103	C Cap	0.01 50V
S1	SCV1308-001	Slide Switch	STEREO/MONO
S2	SCV1308-001	Slide Switch	M/V



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