

JVC

SERVICE MANUAL

STEREO/SUPER DIRECTIONAL MICROPHONE

MV-P612

(With mic cable : VC-P740)



● MICROPHONE MV-P612

● MIC CABLE : VC-P740

- MV-P612 is a microphone for the color video camera of KY-90/KY-35 and GY-X1 series.
A microphone cable VC-P740 is provided with the MV-P612 microphone.
- VC-P740 which is individually sold is compatible with M-K50 and MV-P602 microphones when they are used with the above-mentioned color video cameras.

SPECIFICATIONS

● **MV-P612**

Dimensions : 223 (L) x ϕ 35 mm
Weight : 130 g (without mic cable)

● **VC-P740**

Cable length : 350 mm

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MV-P612 STEREO/SUPER DIRECTIONAL MICROPHONE INSTRUCTIONS

Thank you for purchasing the MV-P612 STEREO/SUPER DIRECTIONAL MICROPHONE. To gain maximum benefit from its use, it is suggested that you read this instructions carefully. After reading, retain this instructions for future reference.

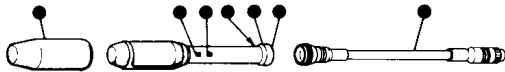
FEATURES

- Switching of Stereo/Super directional (monaural recording) allows you versatile recordings
- Provided windscreen and M/V switch can reduce wind noise, thus enables you effective outdoor recordings

PRECAUTIONS

- MV-P612 is designed for COLOR VIDEO CAMERA KY-90/35 and COLOR VIDEO CAMERA with S-VHS-C RECORDER GY-X1 series, microphone holder (KA-A10) is necessary.
- Do not drop or strike the microphone, a strong shock may degrade the characteristics of microphone
- Do not disassemble the microphone, the original performance may not be obtained
- Be careful not to use or leave long time the microphone in a hot or humid place (direct sunlight, near a heater, closed automobile in summer)

CONTROLS AND CONNECTORS

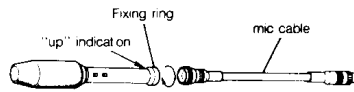


- Windscreen**
Prevents from pop noise and wind noise effectively
- MODE switch**
STEREO for stereo recording
SUPER DIRECTIONAL for super directional (monaural) recording
- TONE switch**
M: Standard frequency response with boosted low sound
V: Reduces ambient noise or wind noise to enhance the clarity of the source sound.

- UP indication**
Mount the microphone so that the "UP" indication faces up
- Mic cable fixing ring**
- Mic cable connector**
- Mic cable**
Connect the camera and the microphone

CONNECTION

- Connect the microphone with the mic cable.
Fit the connector of mic cable matching the positioning groove. Turn the fixing ring in the direction of the arrow.

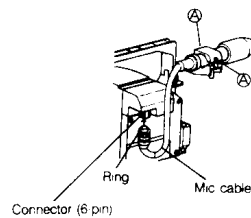


- Mount the mic holder to video camera.
KY-90/35 is provided with a mic holder. In case your camera is GY-X1 series, a mic holder (KA-A10) is necessary. (refer to each instructions)
- Set the mic holder to the microphone and secure it with two screws (A).

Note:

- Be sure to mount the microphone so that the "UP" indication faces up. Otherwise proper characteristics cannot be achieved.

Example: Connecting to KY-90/35



OPERATION

- TONE switch**
The two selective characteristics, M and V, are shown below. Set this switch to V position to reduce ambient/wind noise or to enhance the clarity of source sound.
- MODE switch**
Selects stereo or super directional (monaural) recording.

Note:

- Stereo recording is possible only when your VCR corresponds to stereo recording and your camera and VCR is an integrated unit. Otherwise, be sure to set this switch to "SUPER DIRECTIONAL" (monaural).

Notes for operation

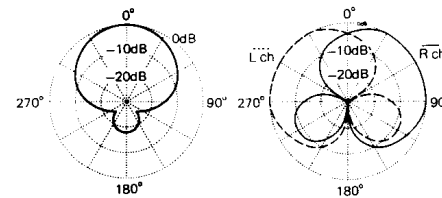
- The MV-P612 is a high-sensitivity microphone designed to give best performance at a certain distance from the source. Do not locate your microphone too close to the source. Otherwise the tone balance is disordered due to the proximity effect.
- Loud sound near the microphone may cause the built-in mic amp of the camera to distort the sound signal. In addition, the sound level may fluctuate due to AGC of VCR.

Note:

- When recording, always monitor the sound with headphone etc.

MICROPHONE CHARACTERISTICS

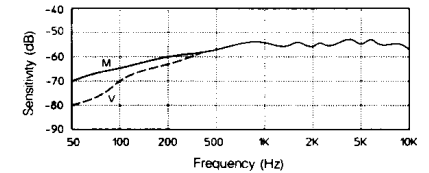
Directional Characteristics



SUPER DIRECTIONAL mode

STEREO mode

Frequency Response



SPECIFICATIONS

Reception	Super-directional, 3 mic narrow angle uni-directional
Type	Stereo, MS system uni-directional
Sensitivity	Back-electret condenser type -55 dB (0 db = 1 V _{rms} /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 min., unbalanced
Max. input SPL	120 dB SPL or more (1 kHz, 1% distortion, microphone itself)
S/N ratio	More than 50 dB
Intrinsic noise level	Less than 24 dB SPL

Operating voltage	8 V — 10 V DC (15 mA), Supplied from camera
Ambient temperature	-5°C to 45°C
Compatible video camera	KY-90/35, GY-X1 series
Dimensions	Microphone: 223 (L) x 35 mm (D) Microphone cable length: 350 mm
Weight	130 g (without mic cable)
Accessory	Windscreen Cable (VC-P740)

*Design and specification subject to change without notice

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SECTION 1 DISASSEMBLY

1.1 MIC UNIT REPLACEMENT

In order to assure the capacity of the microphones, the microphone unit must be replaced in an assembled unit whose component parts are the same in the characteristic and the sensitivity together with the MIC board.

(The service part is supplied in a set of three microphones and a MIC board assembly.)

- Parts number of MIC unit : SCV1945-002

Do not disturb all VRs of the MIC board since they have precisely been adjusted at shipment.

Under those circumstances, all electrical parts except VRs can be replaced in case of a fault in electrical components of the board. When any VR is faulty, replace the whole MIC unit assembly.

1. Remove three screws ① retaining the mic cover ④ and take off the mic cover.
When fitting the mic cover again, face it to the mic unit in the correct orientation as shown in Fig. 1-1.

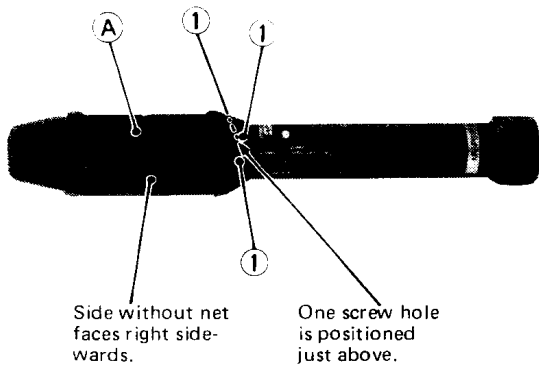


Fig. 1-1 Orientation of mic cover and mic unit

2. Disconnect the connector ⑤.
When reconnecting, be careful of colors of wires (see Fig. 1-3).

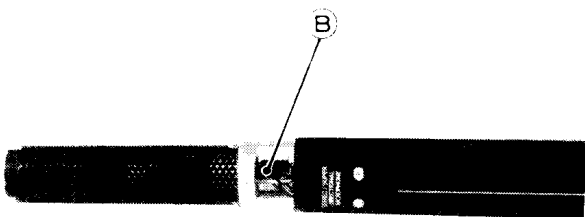


Fig. 1-2

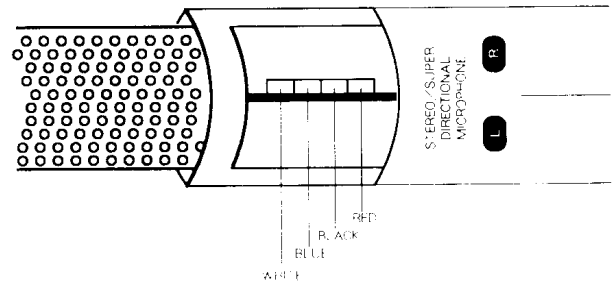


Fig. 1-3

3. Remove one screw ② and gently draw out the mic unit to this side.

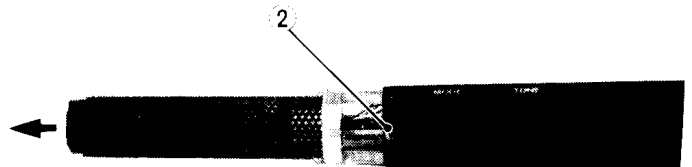


Fig. 1-4

4. The switch knob and two cushions ③ of the switch are not included in the service part of the mic unit assembly. Make sure to keep and fit them to a new mic unit assembly at replacement.

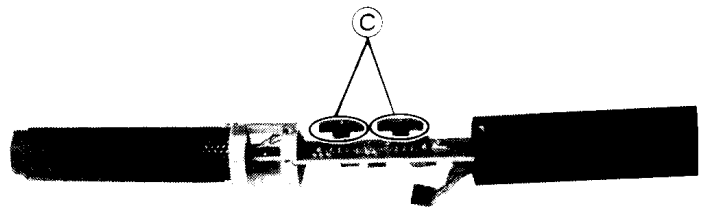


Fig. 1-5

5. When setting the mic unit assembly into the main body of the microphone, carefully insert the board of the mic unit assembly into the board retainer located in the connector side.

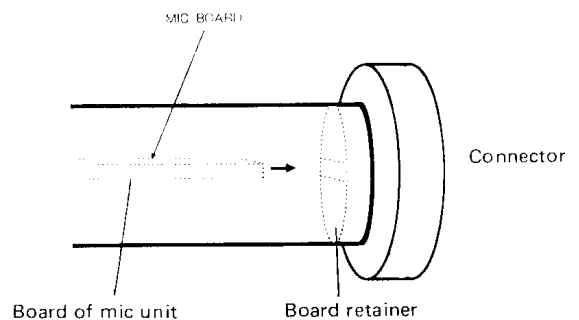
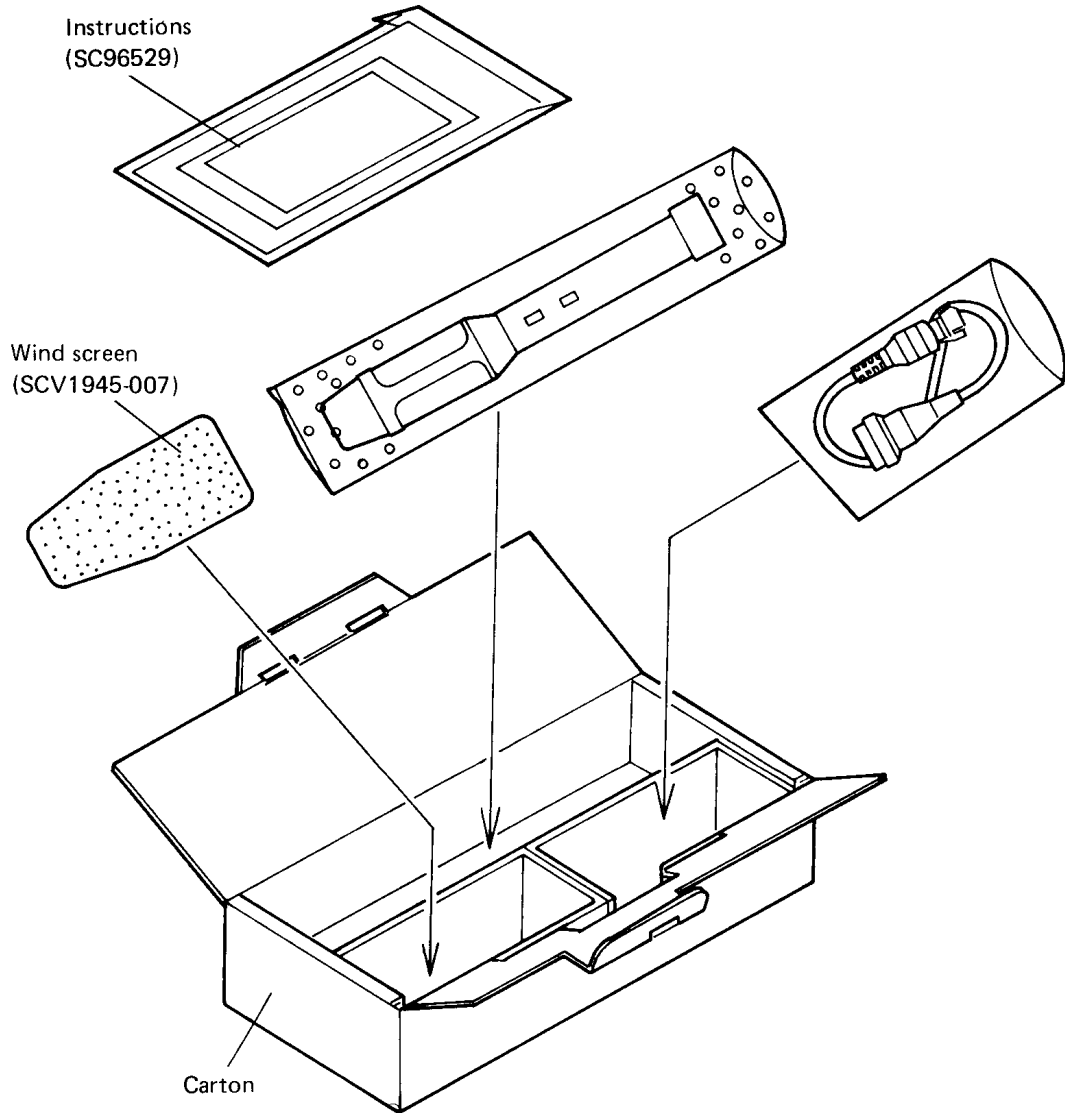


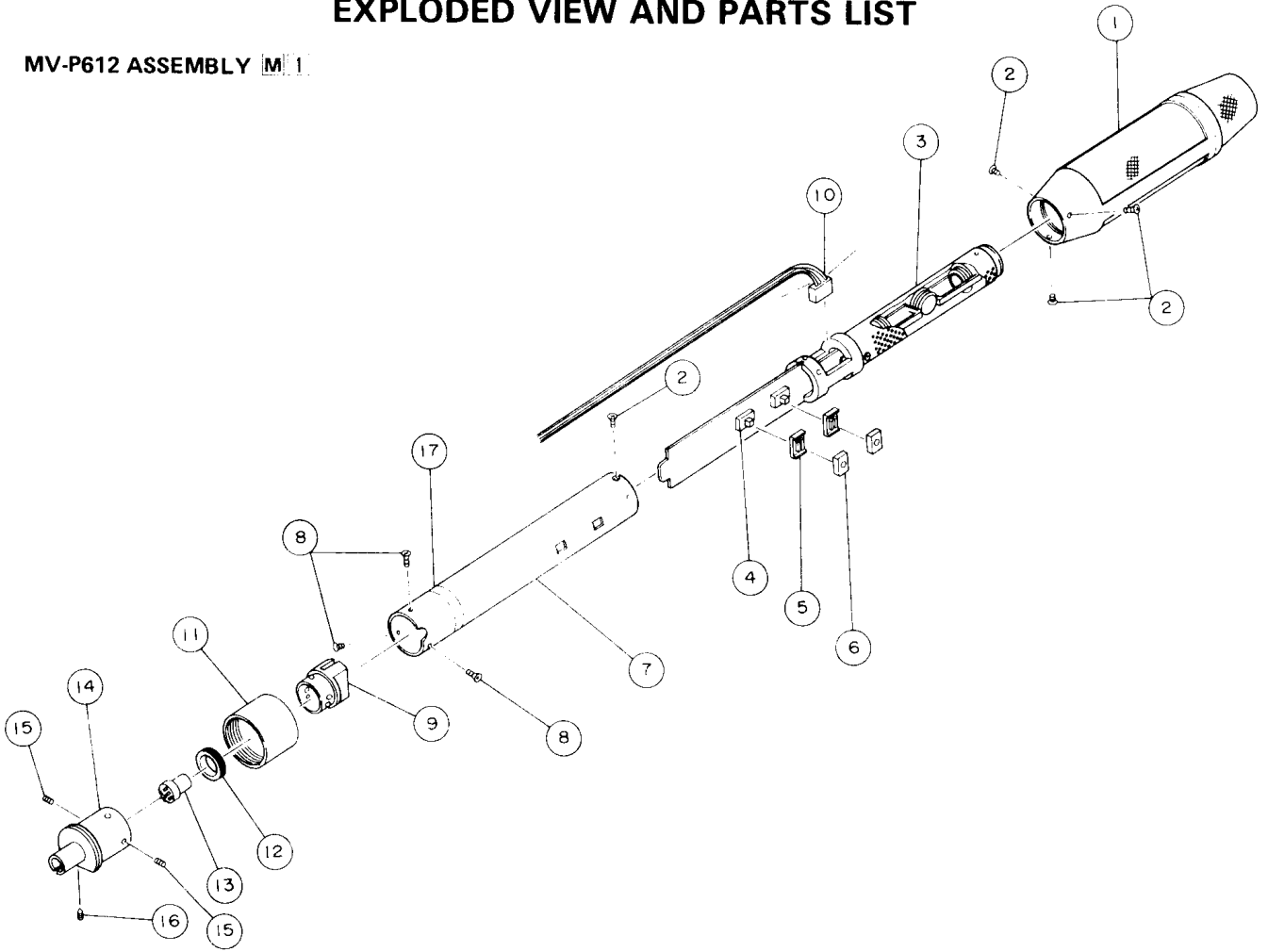
Fig. 1-6

SECTION 2 REPACKING



SECTION 3 EXPLODED VIEW AND PARTS LIST

3.1 MV-P612 ASSEMBLY M 1



● MV-P612 Assembly list M 1

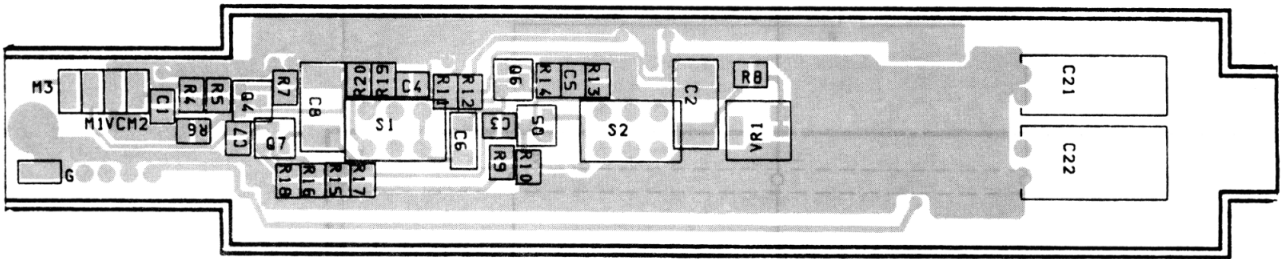
M 1 M M

Symbol No.	Part No.	Part Name	Description
1	SCV1945-001	Head Cover Assembly	M2 × 4
2	SDSK2040M	Screw	
3	SCV1945-002	Mic Unit Assembly	
4	SCV1308-001	Slide Switch	
5	SC41165-001	Switch Knob	
6	SCV1345-106	Cushion	M2 × 5
7	SCV1945-003	Grip	
8	SDSK2050M	Screw	
9	SCV1945-004	Coupler	
10	SCV1945-005	Socket Assembly	
11	SC41144-001	Ring	M3 × 4
12	SC41047-001	Nut	
13	SCV0536-06P	Connector	
14	SC41048-001	Cap	
15	YFS3004F	Screw	
16	TCS2004N	Screw	M2 × 4
17	SCV1945-006	Label	

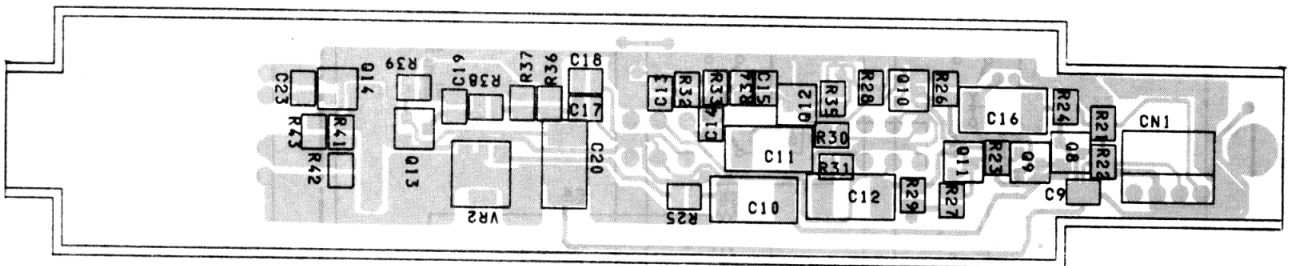
4.2 CIRCUIT BOARDS

4.2.1 MIC circuit board

- Parts insertion side



- 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).

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

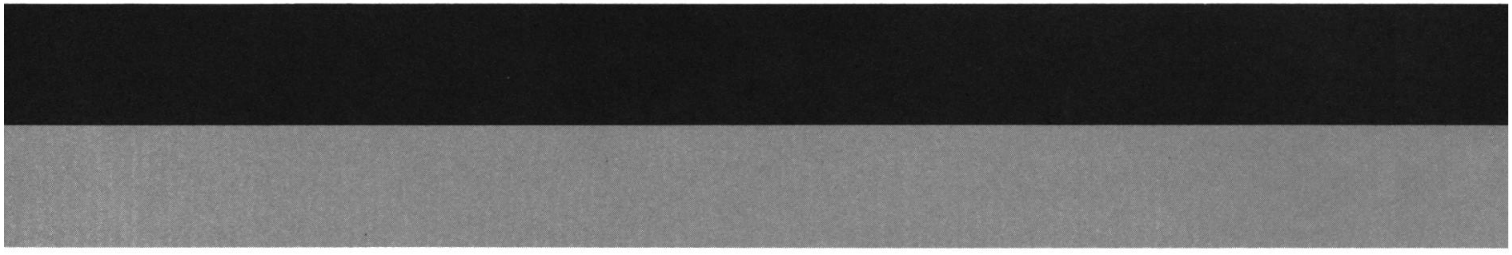
K : 1 000
CR : Carbon Resistor
VR : Variable Resistor (Potentiometer)
FR : Fusible Resistor

P : μF
C Cap : Ceramic Capacitor
E Cap : Electrolytic Capacitor
MY Cap : Mylar Capacitor

5.1 MIC board assembly 0 1

Symbol No.	Part No.	Part Name	Description
Q4	2SK209Y	FET	TOSHIBA
Q5	2SK209Y	FET	TOSHIBA
Q6	2SJ106(Y)	FET	TOSHIBA
Q7	2SK209Y	FET	TOSHIBA
Q8	2SK209Y	FET	TOSHIBA
Q9	2SJ106(Y)	FET	TOSHIBA
Q10	2SJ106(Y)	FET	TOSHIBA
Q11	2SK209Y	FET	TOSHIBA
Q12	2SK209BL	FET	TOSHIBA
Q13	2SK209BL	FET	TOSHIBA
Q14	2SC2712GR	TRANSISTOR	TOSHIBA
R4	NRVA02D-564	MFR	560K 1/10W
R5	NRVA02D-514	MFR	510K 1/10W
R6	NRVA02D-392	MFR	3.9K 1/10W
R7	NRVA02D-103	MFR	10K 1/10W
R8	NRVA02D-561	MFR	560K 1/10W
R9	NRVA02D-334	MFR	330K 1/10W
R10	NRVA02D-105	MFR	1M 1/10W
R11	NRVA02D-434	MFR	430K 1/10W
R12	NRVA02D-624	MFR	620K 1/10W
R13	NRVA02D-362	MFR	3.6K 1/10W
R14	NRVA02D-392	MFR	3.9K 1/10W
R15	NRVA02D-105	MFR	1M 1/10W
R16	NRVA02D-154	MFR	150K 1/10W
R17	NRVA02D-392	MFR	3.9K 1/10W
R18	NRVA02D-103	MFR	10K 1/10W
R19	NRVA02D-103	MFR	10K 1/10W
R20	NRVA02D-103	MFR	10K 1/10W
R21	NRVA02D-564	MFR	560K 1/10W
R22	NRVA02D-514	MFR	510K 1/10W
R23	NRVA02D-392	MFR	3.9K 1/10W
R24	NRVA02D-103	MFR	10K 1/10W
R25	NRVA02D-561	MFR	560 1/10W
R26	NRVA02D-392	MFR	3.9K 1/10W
R27	NRVA02D-392	MFR	3.9K 1/10W
R28	NRVA02D-392	MFR	3.9K 1/10W
R29	NRVA02D-392	MFR	3.9K 1/10W
R30	NRVA02D-103	MFR	10K 1/10W
R31	NRVA02D-103	MFR	10K 1/10W
R32	NRVA02D-104	MFR	100K 1/10W
R33	NRVA02D-244	MFR	240K 1/10W
R34	NRVA02D-471	MFR	470 1/10W
R35	NRVA02D-122	MFR	1.2K 1/10W
R36	NRVA02D-104	MFR	100K 1/10W
R37	NRVA02D-244	MFR	240K 1/10W
R38	NRVA02D-471	MFR	470 1/10W

Symbol No.	Part No.	Part Name	Description
R39	NRVA02D-122	MFR	1.2K 1/10W
R41	NRVA02D-332	MFR	3.3K 1/10W
R42	NRVA02D-104	MFR	100K 1/10W
R43	NRVA02D-101	MFR	100 1/10W
VR1	—	VR	Cannot be replaced separately. Replace in a mic unit assembly. Refer to section 3.1 "MV-P612 Assembly".
VR2	—	VR	
C1	NCF21EZ-104	C CAPACITOR	0.1 25V
C2	NEF11CM-106	T CAPACITOR	10 16V
C3	NCF21EZ-104	C CAPACITOR	0.1 25V
C4	NCB21HK-332	C CAPACITOR	0.0033 50V
C5	NCB21HK-153	C CAPACITOR	0.015 50V
C6	NEF11DM-474	T CAPACITOR	0.47 20V
C7	NCF21EZ-104	C CAPACITOR	0.1 25V
C8	NEF11CM-475	T CAPACITOR	4.7 16V
C9	NCF21EZ-104	C CAPACITOR	0.1 25V
C10	NEF11CM-106	T CAPACITOR	10 16V
C11	NEF11CM-475	T CAPACITOR	4.7 16V
C12	NEF11CM-475	T CAPACITOR	4.7 16V
C13	NCB21HK-103	C CAPACITOR	0.01 50V
C14	NCF21EZ-104	C CAPACITOR	0.1 25V
C15	NCT03CH-101	C CAPACITOR	100P 50V
C16	NEF11CM-106	T CAPACITOR	10 16V
C17	NCB21HK-103	C CAPACITOR	0.01 50V
C18	NCF21EZ-104	C CAPACITOR	0.1 25V
C19	NCT03CH-101	C CAPACITOR	100P 50V
C20	NEF11CM-106	T CAPACITOR	10 16V
C21	QETA1CM-227	E CAPACITOR	220 16V
C22	QETA1CM-107	E CAPACITOR	100 16V
C23	NCF21EZ-104	C CAPACITOR	0.1 25V
S1	—	SLIDE SWITCH	Refer to section 3 "Disassembly."
S2	—	SLIDE SWITCH	Refer to section 3 "Disassembly."



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