ORDER NO. VRD9101M101

Service Manual

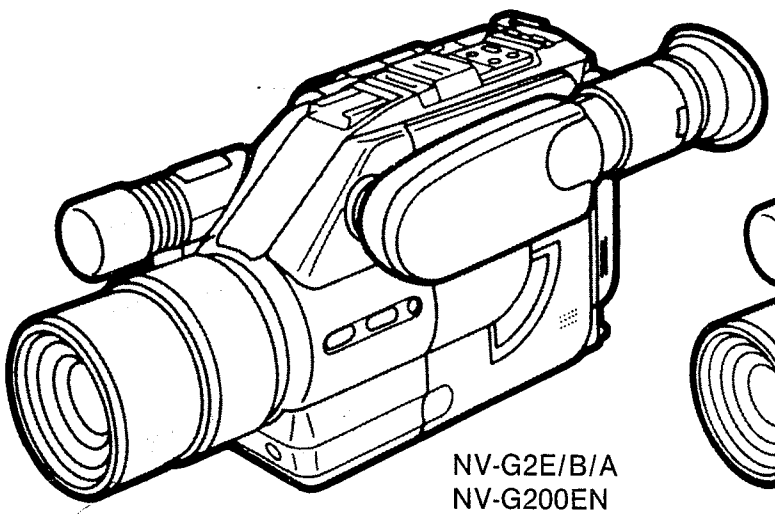
General Description
Adjustment Procedures
Block / Schematic Diagrams
Exploded Views / Parts List

Panasonic VHS C VHS PAL 625

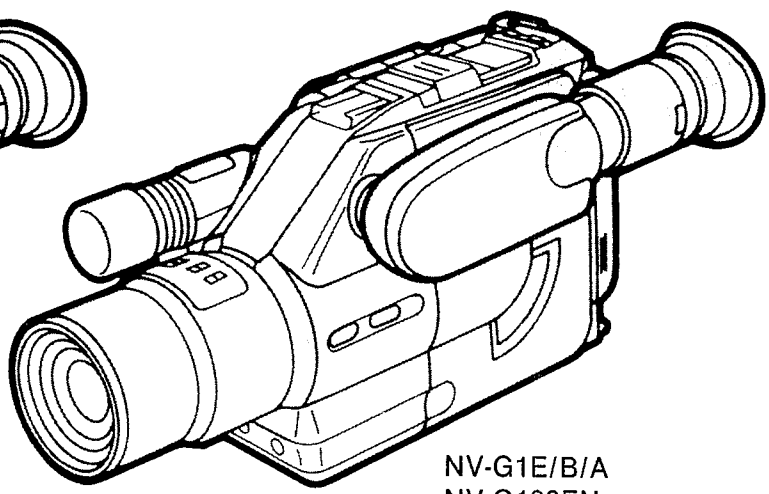
HQ

VHS-C Movie

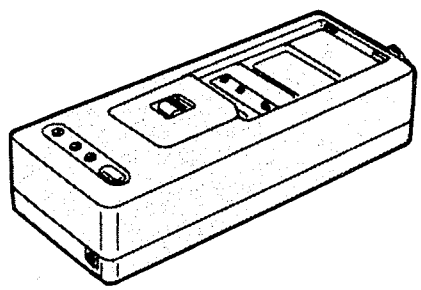
NV-G2E/B/A
NV-G200EN
NV-G1E/B/A
NV-G100EN



NV-G2E/B/A
NV-G200EN



NV-G1E/B/A
NV-G100EN



VW-AS1

Panasonic

INTRODUCTION

This service manual contains technical information which will allow service personnels to understand and service this model.

Section 1 presents you with some general information of features and controls, enabling you to become familiar with each function.

Section 2 contributes to your mechanical and electrical adjustment as well disassembly and replacement procedures.

In the case of very common information relating to other models like mechanical adjustments, please refer to each service manual.

Section 3 contains block diagrams which offers you information for checking and understanding each circuit. Schematic diagrams which give you detailed information such as waveforms, voltage data, function e.t.c. ...

Section 4 contains exploded views and parts list.

Please place orders using the parts list and not the drawing reference numbers.

If the circuit is changed or modified, this information will be followed by supplementary service manual to be filed with original service manual.

Technical Information

Service caution

1. Adjustment the Camera Section.

In the camera section EEPROM(Electric Programmable Read Only Memory) is adopted as adjustment element instead of conventional variable resistor.
EEPROM memorize the adjustment value as digital data and data to D/A (Digital to Analogue) converter to be changed DC voltage which is supplied to adjustment point as shown in Fig.T1.
Thus, when adjusting the camera process it is necessary to change the adjustment data which is stored in EEPROM. For this prupose, EVR(Electric Variable Resistor) Fixture enables to communicate with EEPROM, D/A converter directly and can change its stored adjustment data.

The EVR Fixture is connect with camera as shown below and is used. (For more details, Please refer to Camera adjustment section.)

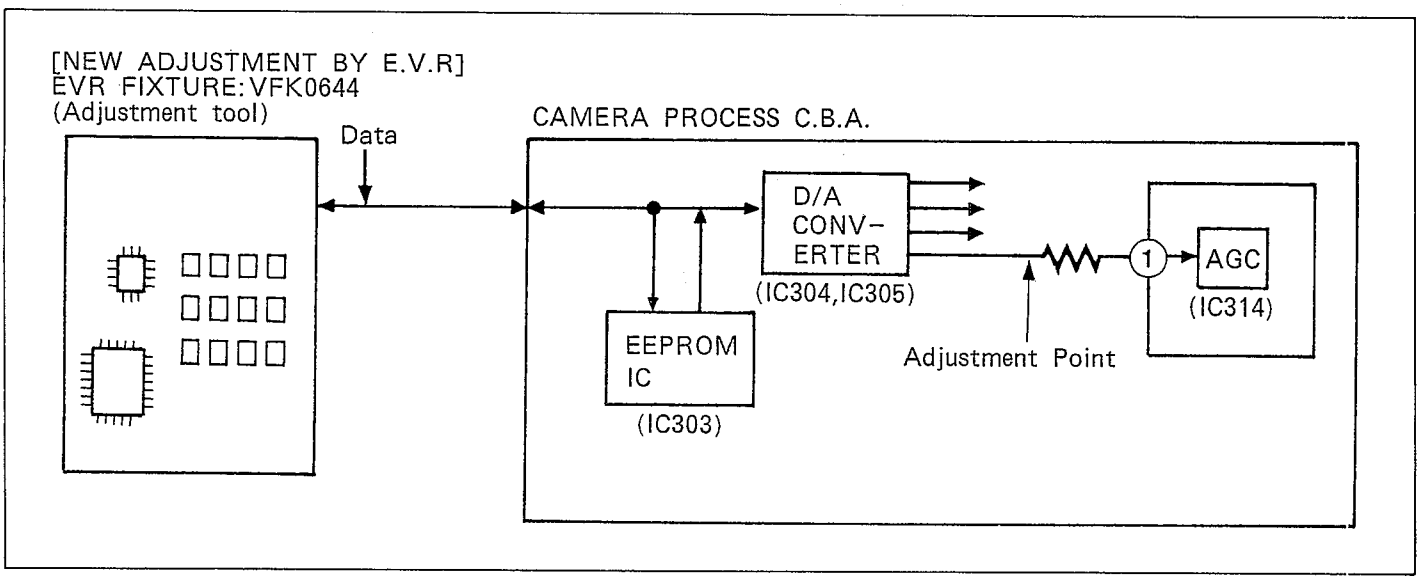


Fig. T1

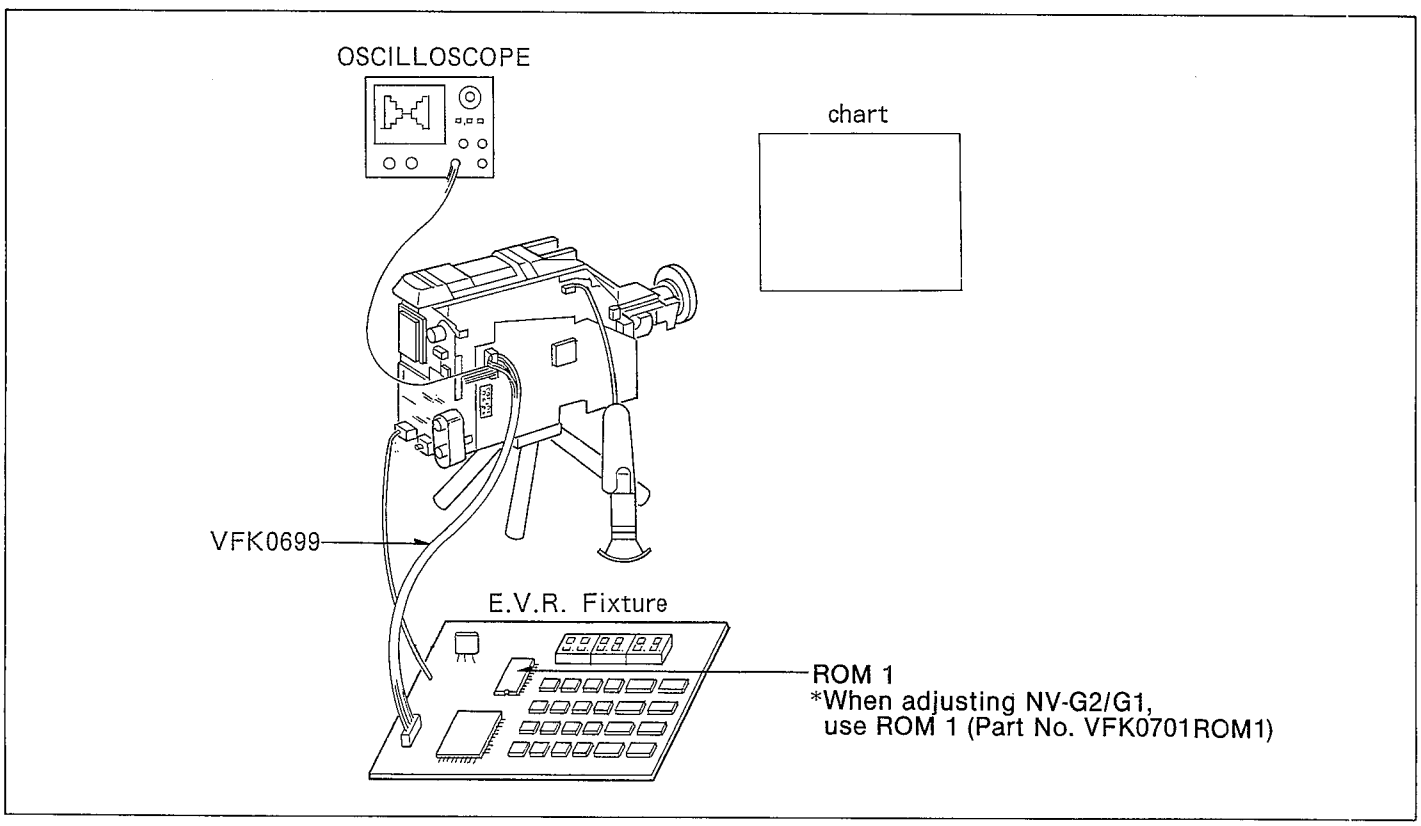


Fig. T2

2. Service Extension Cable.

Use following Extension Cable when checking or adjusting the individual circuit board assembly (C.B.A.) of video part or camera part.

NO.	PART NO.	Q'TY	PART NAME	CONNECTION
1	VFK0698	1	18 PIN EXTENSION CABLE	B702(CAMERA MAIN C.B.A.) TO B6005(MAIN C.B.A.)
2	VFK0698	1	18 PIN EXTENSION CABLE	B302(CAMERA MAIN C.B.A.) TO B8001(MAIN C.B.A.)
3	VFK0667	1	30 PIN EXTENSION CABLE	B301(CAMERA MAIN C.B.A.) TO B201(SENSOR C.B.A.)
4	VFK0670	1	18 PIN FLAT CABLE	FP6001(MAIN C.B.A.) TO MECHANISM FLEXIBLE CABLE C.B.A.
5	VFK0668	1	24 PIN EXTENSION CABLE	B6003(MAIN C.B.A.) TO P2101(DRIVE C.B.A.)
6	VFK0672	1	13 PIN EXTENSION CABLE	B4001(MAIN C.B.A.) TO B4301(MIC INTERFACE C.B.A.)
7	VFK0699	1	22 PIN E.V.R CONNECTION CABLE	E.V.R. FIXTURE TO B303(CAMERA MAIN C.B A)

3. How To Use Extension Cables.

(1) Connection between Camera Main C.B.A. and Main C.B.A.

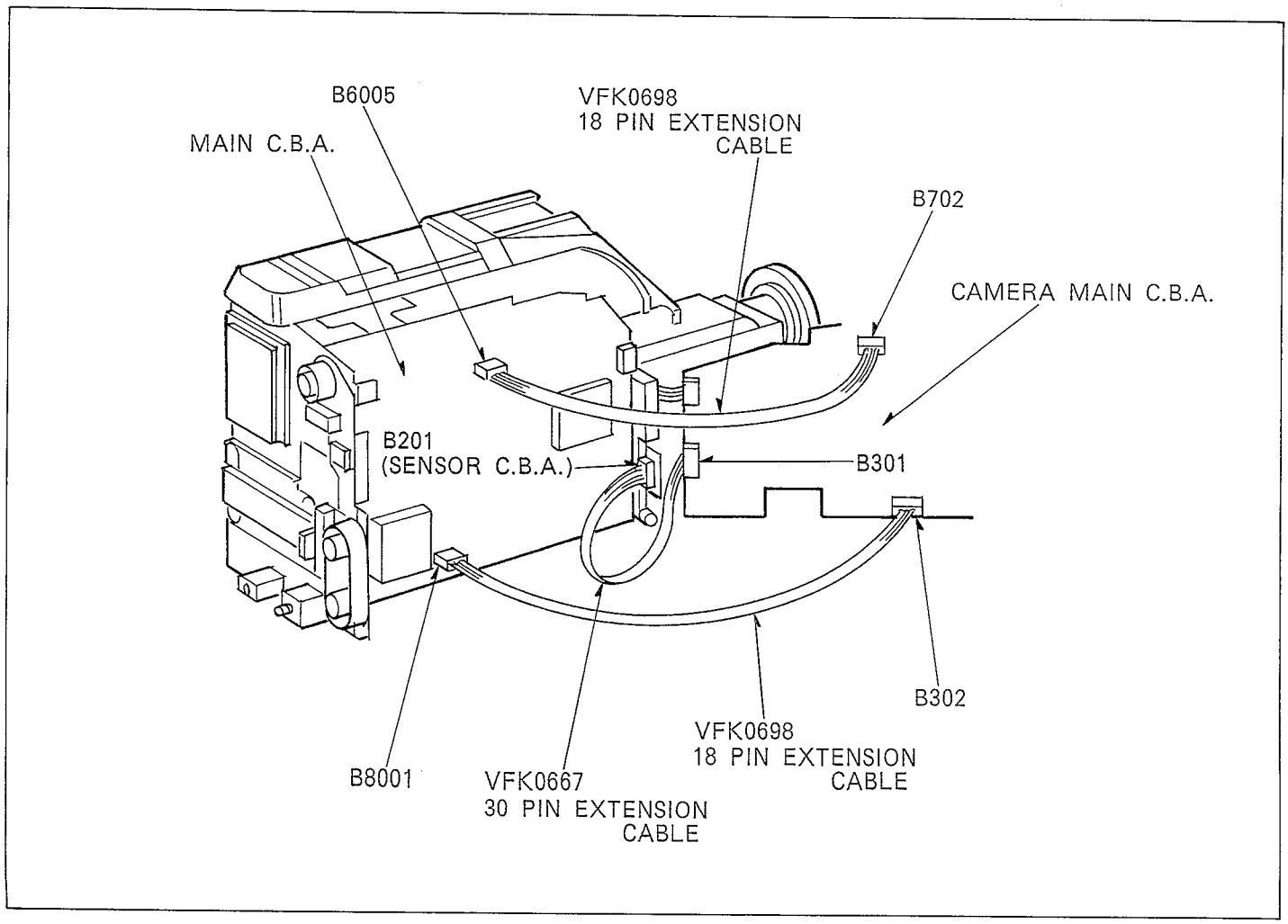


Fig. T3

(2) Connection between Main C.B.A. and Mechanism Flexible Cable C.B.A.

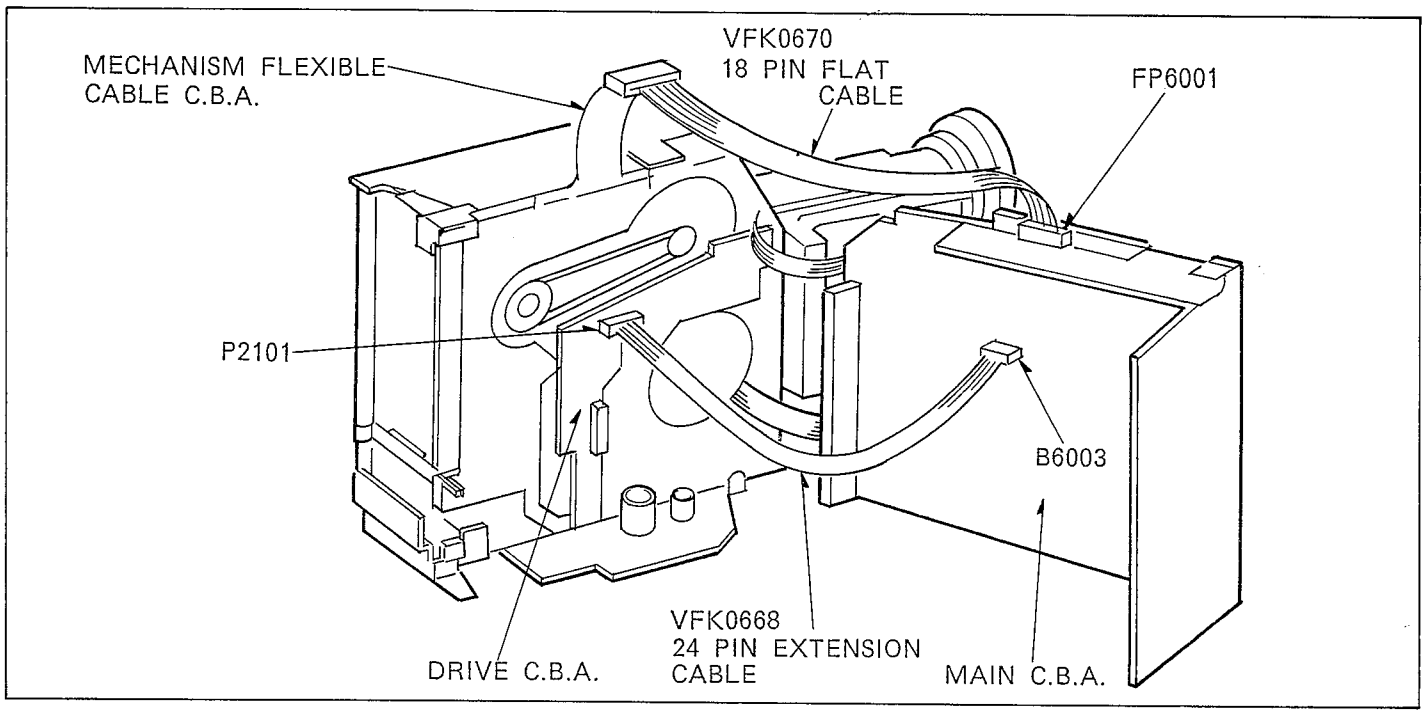


Fig. T4

(3) Connection between Camera Main C.B.A. and Sensor C.B.A.

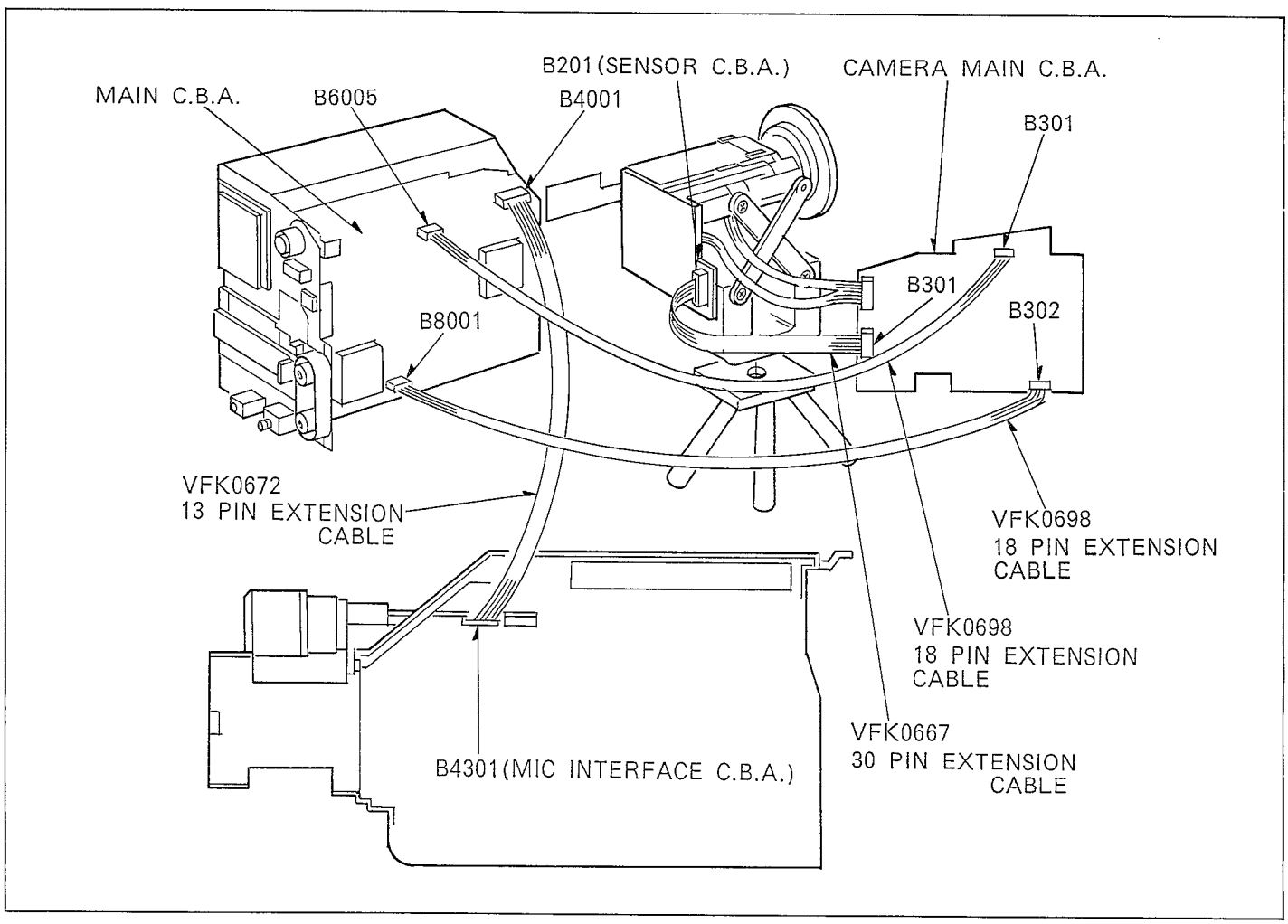


Fig. T5

4. How To Replace 0.5mm pitch IC.

(Required tools)
* Spot Heater: (HS-600,etc) or cordless soldering - iron: (80AEX,etc) (HOT Blowing type)
* Blower Nozzle for spot Heater: (HS-611.614 615.618,etc)
* Tweezers
* Paper tape (Non-flammable Type)
* Glue (paper glue,etc, to fix IC momentary)
* Soldering sucker. (De-solder braid)
* 0.3mm diameter solder
* Solder flux
* Special soldering iron (HS-11,etc) (sharp tip pencil type) (Removal)

(1) Stick the paper tape around the IC for protection of chip components when hot air is blowed.
(2) Blow the hot air from upright position to the legs of IC using spot heater (attaching suitable nozzle).

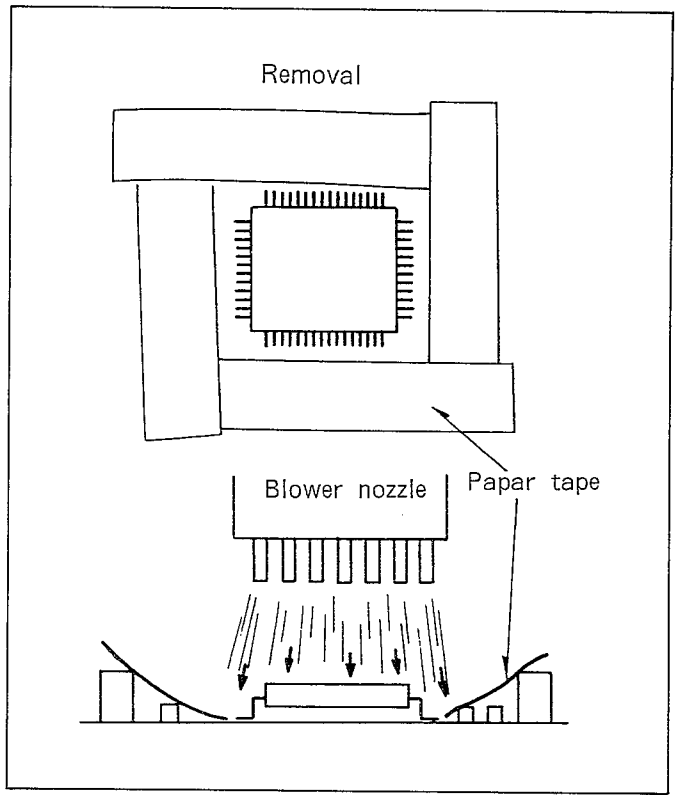


Fig. T6 Removal of IC

(3) When solder is melting, pick up the IC using tweezers.
(4) Take paper tape out from C.B.A.

(Assemble)

1) Remove the solder which is remained on the round of IC using solder sucker. (De-Solder braid).
2) Attach the glue little bit on the centre of IC round.
3) Put the new IC on to round and align the position of each pins with round.
4) Solder the 2 pins of opposite angle of IC with 0.3mm solder and confirm the position.
5) Solder the all pins of IC with 0.3mm solder and 0.3mm tip solder iron.
6) Confirm if all pins are connected.
7) If solder becomes bridge as shown in Fig.T9 correct the solder using solder sucker (De-solder braid).

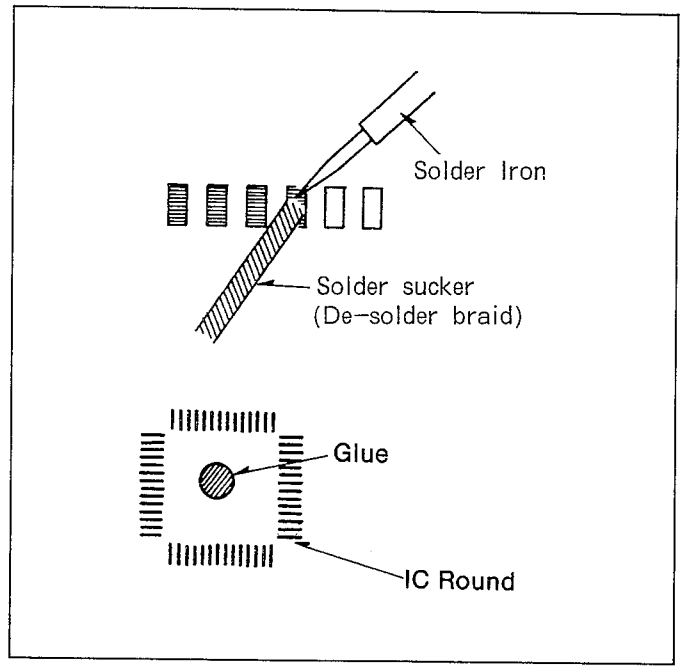


Fig. T7 Cleaning the remained solder

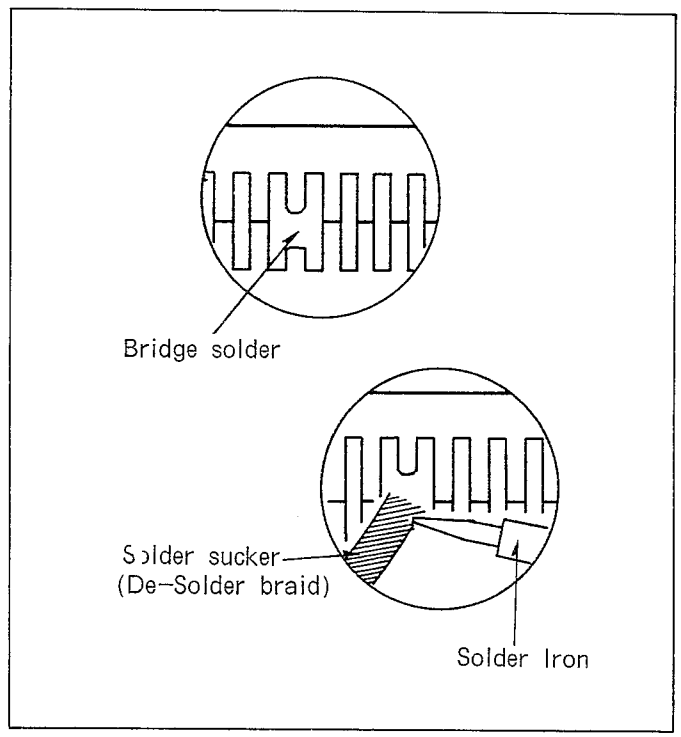


Fig. T8 Correcting bridge solder

5. How To Replace Capacitor.(New)

1) Heat the one side of capacitor with solder Iron. and push its one side up by finger.
2) Remove one side of leg.
3) Heat the opposite side of capacitor and remove it.
4) When replacing new capacitor put the capacitory and solder it as conventional.

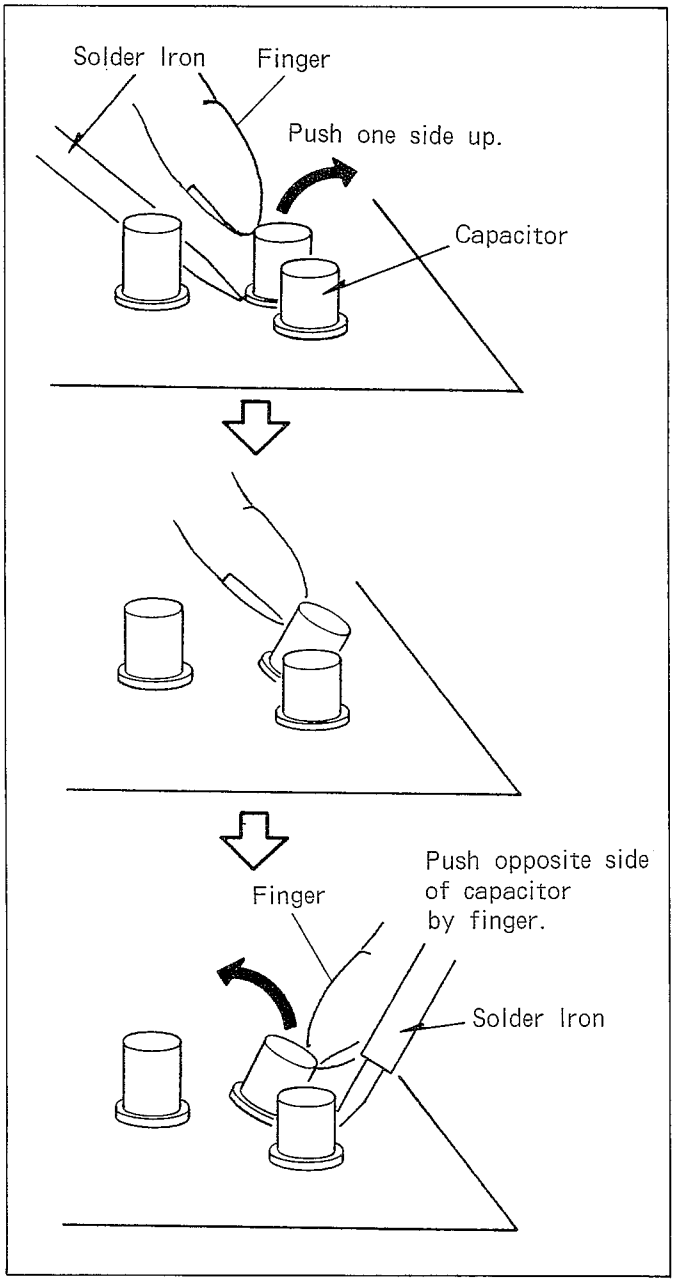


Fig. T9

6 How To Eject Manually.

(1) In Case that Tape is fully unloaded.

* Remove the cassette cover and push the "A" position as shown in Fig.T10.

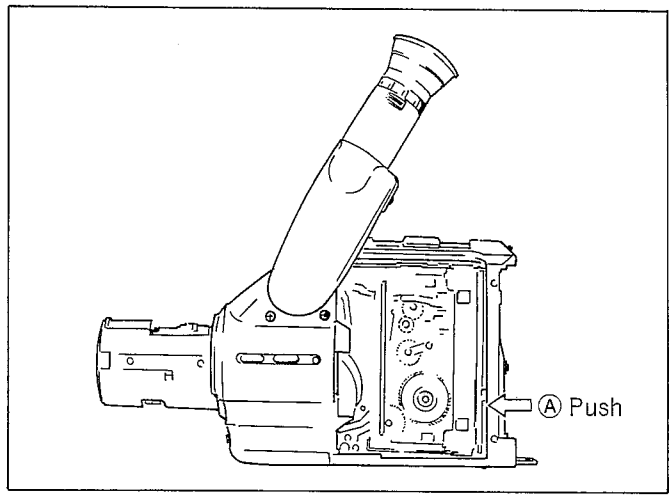


Fig. T10

(2) In Case that Tape is not rewound Completely but mechanism is fully unloaded.

* Remove the case as shown in Fig.T11.
* Rotate the capstan Rotor until tape is rewound completely.
* Eject it as procedure (1).

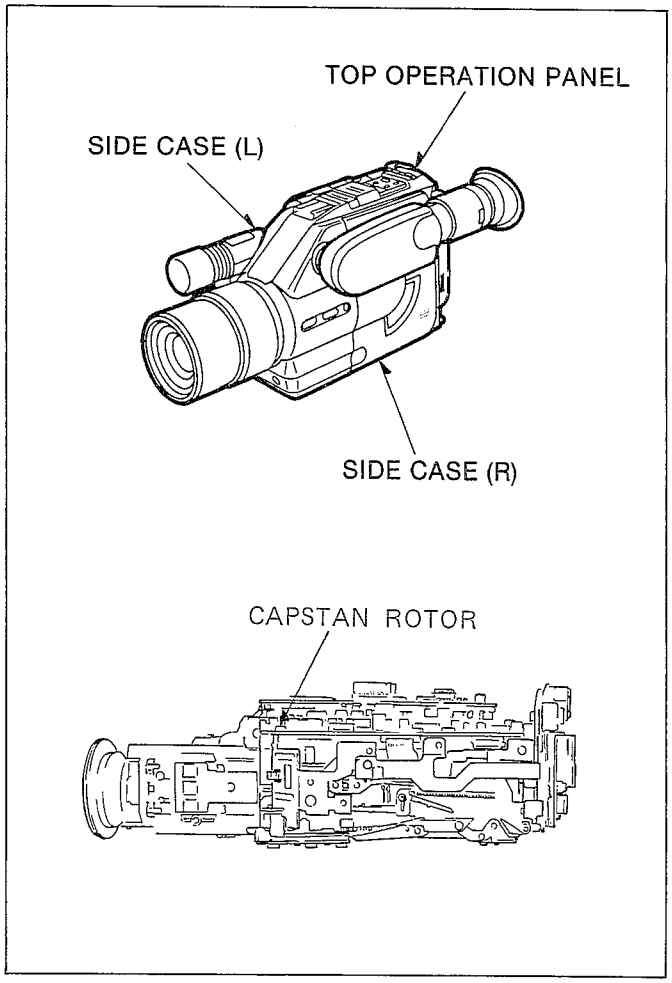


Fig. T11

(3) In Case that Tape and mechanism are still loading condition.

* Remove the cabinet parts.
* Remove Camera Main C.B.A. and Main C.B.A.
* De-solder the soldering between loading motor and Mechanism flexible C.B.A.
* Supply DC voltage (3V) to loading motor terminal and make it unloading.

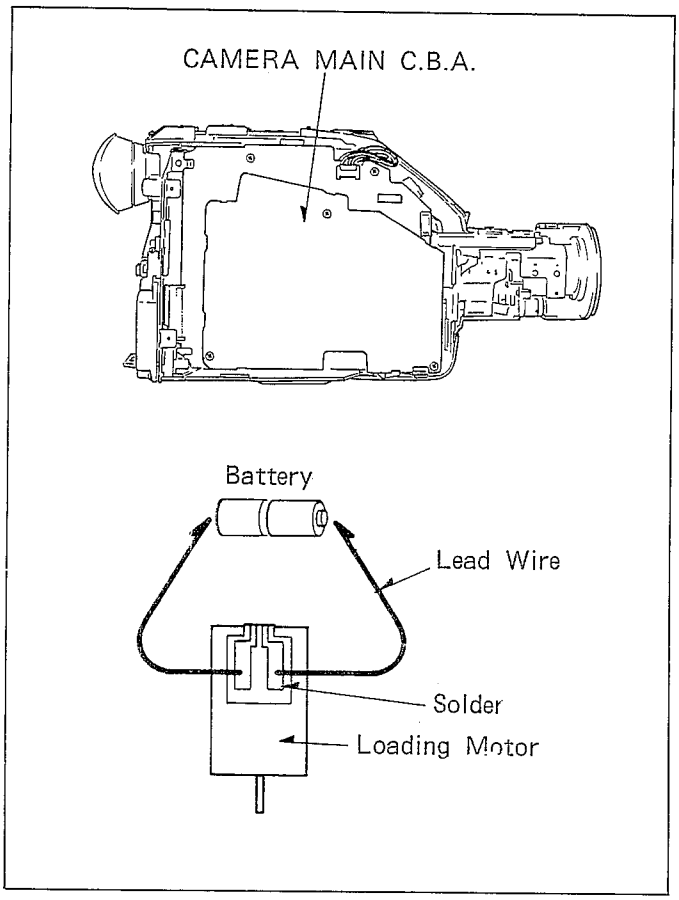
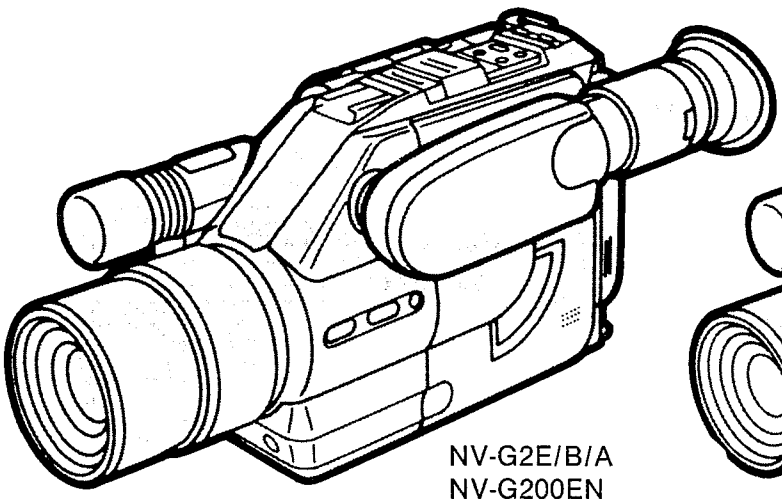


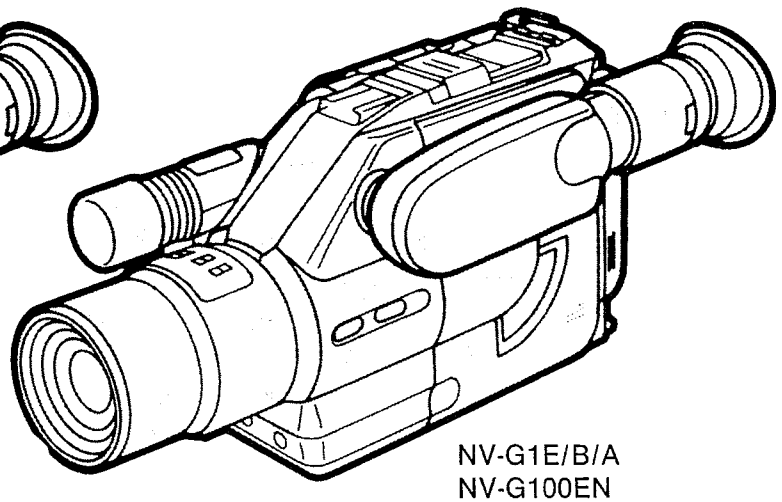
Fig. T12

VHS-C Movie

NV-G2E/B/A
NV-G200EN
NV-G1E/B/A
NV-G100EN



NV-G2E/B/A
NV-G200EN



NV-G1E/B/A
NV-G100EN

SPECIFICATIONS

ITEM	SPECIFICATION	ITEM	SPECIFICATION
POWER	Source: BATTERY; DC 6.0V Consumption; Recording mode; 6.4W (Battery operation)	AUDIO	HEAD: 1 Stationary head (Normal Audio)
			INPUT: MIC IN (M3); −70dB, 4.7kΩ unbalanced
VIDEO RECORDING SYSTEM	4 rotary heads, helical scanning system PAL		OUTPUT: PHONO CONNECTOR; −8dB, 600Ω unbalanced EARPHONE JACK; −28.5dB, 8Ω unbalanced
TAPE FORMAT	VHS-C Cassette Tape (Tape width 12.7mm)		
TAPE SPEED	SP mode: 23.39mm/s LP mode: 11.7mm/s (NV-G2E/B/A, G200EN) Record/Playback Time SP mode: 45min. with NV-EC45EHG LP mode: 90min. with NV-EC45EHG (NV-G2E/B/A, G200EN) FF/REW Time less than 5min. with NV-EC45EHG	WEIGHT	Approx. 880g (without Battery Pack) (NV-G2E/B/A, G200EN) 870g (without Battery Pack) (NV-G1E/B/A, G100EN)
		DIMENSIONS	142.1(W)×119.7(H)×263.4(D)mm
CAMERA	PICK-UP ELEMENT: CCD (Charge Coupled Device)	STANDARD ACCESSORIES	1 pc. AC Adaptor 1 pc. Battery Pack 1 pc. Cassette Adaptor 1 pc. Shoulder Strap 1 pc. AV Output Cable 1 pc. DC Input Cable 1 pc. Battery for Cassette Adaptor Operation 1 pc. Battery for Clock Operation 1 pc. RF Adaptor (NV-G2B/A, G200EN, G1A) 1 pc. Video Light (NV-G2E/B/A, G200EN) 1 pc. Soft Case (NV-G2B, G1B) 1 pc. BNC/Phono Adaptor Plug (NV-G2B, G1B)
	STANDARD ILLUMINATION: 1,400 lux		
	MINIMUM REQUIRED ILLUMINATION: 3 lux		
	LENS: Built-in 8 : 1 Power Zoom Lens with Digital AI Auto Focus, Auto Iris, Auto Focus System, F1.4 (6~48mm), Filter Diameter 43mm		
	IMAGE SENSOR: 1/3 inch CCD Image Sensor		
	VIEW FINDER: 2/3″ Electric View Finder		
VIDEO	HEADS: 4 rotary heads, 1 flging erase head		
	OUTPUT: PHONO CONNECTOR; 1.0Vp-p 75Ω unbalanced		

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

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