U

JVC®

CONTROLS, CONNECTORS AND INDICATORS

SYSTEM CONFIGURATION, CONNECTIONS

INSTALLATION

SWITCH THE SETTINGS OF THE D9 DEVICE

PRECAUTIONS FOR USE OF DV INPUT/OUTPUT

SPECIFICATIONS

CAUTION

This section of instruction manual is specially edited for service purpose with modified contents.
It is not recommended to use, this section for the substitution of the original book in the merchandise.

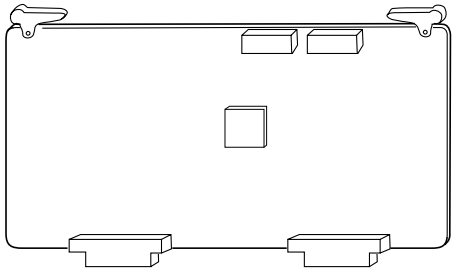
NOTE

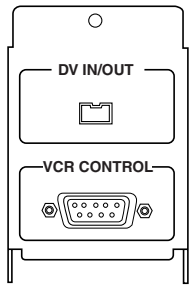
Some of the pages are common to both U and E models, and some are located on the right section.
Follow the pages indicated (U-**) when reading through.

DV INTERFACE BOARD

SA-DV60U

INSTRUCTIONS





For Customer Use:
Enter below the Serial No. on the board in the space below. Retain this information for future reference.

Model No. **SA-DV60U**

Serial No.

This instruction manual has been manufactured from 100% recycled paper.

E

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DV INTERFACE BOARD

SA-DV60E

INSTRUCTIONS
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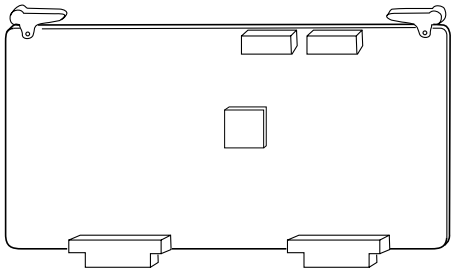
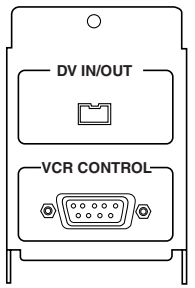




This instruction manual has been manufactured from 100% recycled paper.

— MEMO —

Supplement (SA-DV60E)

This equipment is in conformity with the provisions and protection requirements of the corresponding European Directives, This equipment is designed for professional video appliances and can be used in the following environments:

- Controlled EMC environment (for example purpose built broadcasting or recording studio), and the rural outdoors environment (far away from railways, transmitters, overhead power lines, etc.) In order to keep the best performance and furthermore for electromagnetic compatibility we recommend to use cables not exceeding the following length:

Port	Cable	Length
DV IN/OUT	Shielded Twist Pair Cable	4.5 meters
VCR CONTROL	Twist Pair Cable	5 meters

U

Thank you for purchasing the JVC SA-DV60U DV Interface Board.

This unit is a DV interface board designed to be installed in the BR-D80U, BR-D85U or BR-D750U video cassette recorder models or in the BR-D50U, BR-D350U or BR-D51U video cassette player models to enable the input and output (only output in the case of the player) of DV signals.

Applications: This unit makes possible the following digital editing/dubbing operations.

❶DV → D9 ..... Linear editing system
❷D9 ↔ DV nonlinear editing system ··· Capture, writing back
❸DV ↔ D9 ..... Dubbing system

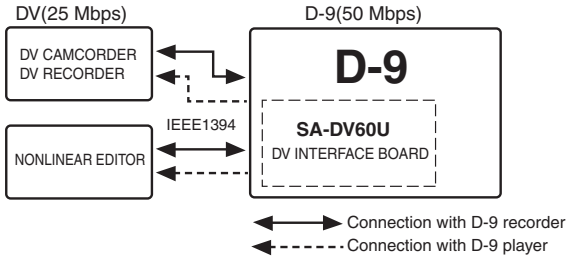


Image of DV ↔ D-9 Interface

CAUTION

With the D9 devices carrying the following or previous serial numbers, a malfunction described below is observed when each device is connected to a nonlinear editor.

- With certain nonlinear editors, the time code at the edit-out point may be disturbed as a result of writing back from the nonlinear editor to the D9 device.

  BR-D85U: No. xxxx0508 or before

  BR-D80U: No. xxxx0466 or before

E

Thank you for purchasing the JVC SA-DV60E DV Interface Board.

This unit is a DV interface board designed to be installed in the BR-D80E, BR-D85E, BR-D85EC or BR-D750E video cassette recorder models or in the BR-D50E, BR-D50EC, BR-D350E or BR-D51E video cassette player models to enable the input and output (only output in the case of the player) of DV signals.

Applications: This unit makes possible the following digital editing/dubbing operations.

❶DV → D9 ..... Linear editing system
❷D9 ↔ DV nonlinear editing system ··· Capture, writing back
❸DV ↔ D9 ..... Dubbing system

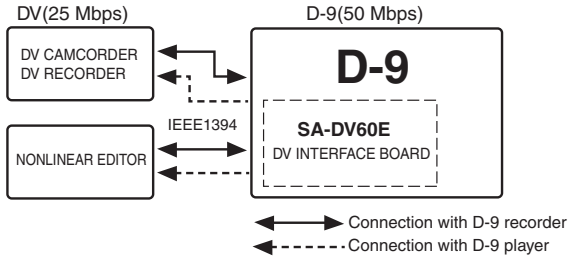


Image of DV ↔ D-9 Interface

CAUTION

With the D9 devices carrying the following or previous serial numbers, a malfunction described below is observed when each device is connected to a nonlinear editor.

- With certain nonlinear editors, the time code at the edit-out point may be disturbed as a result of writing back from the nonlinear editor to the D9 device.

  BR-D85E: No. xxxx0673 or before

  BR-D85EC: No. xxxx0370 or before

  BR-D80E: No. xxxx0362 or before

1. Controls, Connectors and Indicators

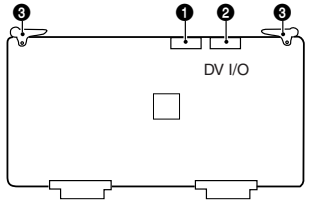
Components This unit is composed of a circuit board and connector panel.
Circuit board ..... x 1
Connector panel ..... x 1 (with connection wires)

Accessories

1. RS-422 cable ..... x 1 (Both millimeter screws and inch screws are provided in the package.)
2. Ferrite core ..... x 1 (To be attached when using headphones) ☞See page 8 **(E-10)**

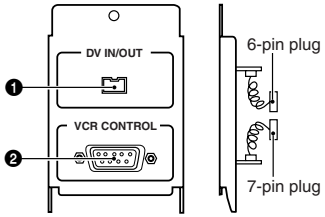
Circuit Board

(DV I/O Board)



❶[CN302] Connect to the 7-pin plug of the connector panel.
❷[CN202] Connect to the 6-pin plug of the connector panel.
❸Ejector Used to eject the board.
Push this part in when inserting the board.

Connector Panel



❶DV IN/OUT connector
Input and output of IEEE1394 standard digital signals. In addition to the digital video and digital audio signals, this connector can also be used to exchange timecode signals and control signal input from a DV (i.Link)-compatible PC.

❷VCR CONTROL (RS-422 interface) connector
Connect to the REMOTE (9-pin) connector on the D9 main body in order to exchange commands between the D9 and DV devices through the DV I/O board. During playback of a D9 device, this connector sends the timecode signal of the D9 device to the DV device through the DV I/O board.

2. System Configuration, Connections

System Configuration and Connection Examples for different Applications

A system for digital editing and/or dubbing can be configured and connected by referring to the following examples according to the available units and the required function.

■ Operate the connected units correctly by referring to their instruction manuals.
■ Cables for connection between units are not provided.
Please purchase the applicable connector cables as required.
■ DV connection target models
GY-DV500E *1, *3
GY-DV550E
GY-DV700WE *1
BR-DV600E *3
BR-DV600EA
DV nonlinear editor *2

*1. The GY-DV500E and GY-DV700WE models are not capable of DV input recording through the DV input. Refer to their instruction manuals for details.
*2. For the DV nonlinear editors, please consult your nearest JVC dealer.
*3. Precautions for connection of the GY-DV500E or BR-DV600E
(1) Time codes cannot be dubbed.
(2) When the DV device is switched from the Still mode to the Play mode, audio may be interrupted momentarily. This is not a malfunction.
(3) Sets having serial numbers other than those shown below cannot be connected to this unit. For information concerning their upgrade versions, please consult your local JVC-authorized service agent.

Model Name	Last 5 digits of S/No.	Model Name	Last 5 digits of S/No.
GY-DV500E	xxx14590 and after	GY-DV500ECK	xxx30251 and after
	xxx54590 and after	BR-DV600E	xxx11535 and after
	xxx30401 and after		xxx51535 and after
GY-DV500EC	xxx10281 and after	BR-DV600EC	xxx10001 and after
	xxx50281 and after		xxx50001 and after

2. System Configuration, Connections

System Configuration and Connection Examples for different Applications

A system for digital editing and/or dubbing can be configured and connected by referring to the following examples according to the available units and the required function.

■ Operate the connected units correctly by referring to their instruction manuals.

■ Cables for connection between units are not provided.
Please purchase the applicable connector cables as required.

■ DV connection target models

GY-DV500U *2	GY-DV550U
GY-DV700WU	BR-DV600U *2
BR-DV600UA	DV nonlinear editor *1

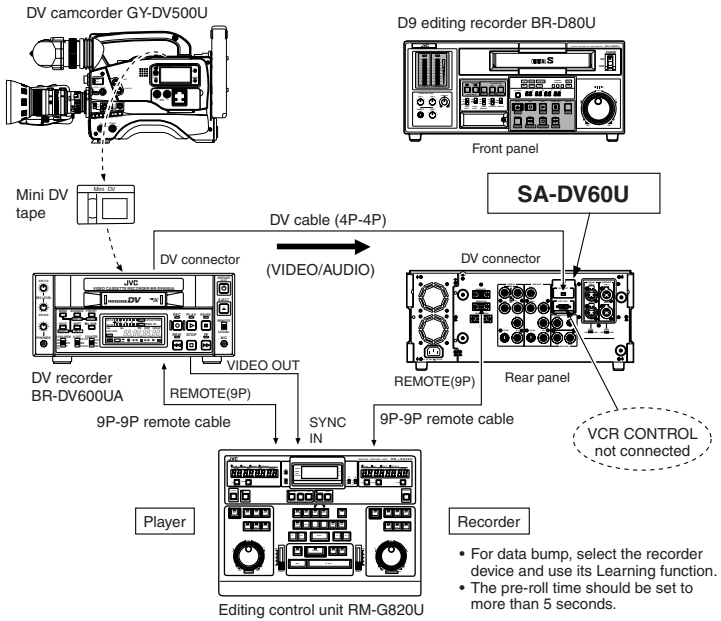
*1. For the DV nonlinear editors, please consult your nearest JVC dealer.

*2. Precautions for connection of the GY-DV500U or BR-DV600U
(1) Time codes cannot be dubbed.
(2) When the DV device is switched from the Still mode to the Play mode, audio may be interrupted momentarily. This is not a malfunction.
(3) Sets having serial numbers other than those shown below cannot be connected to this unit. For information concerning their upgrade versions, please consult your local JVC-authorized service agent.

Model Name	Last 5 digits of S/No.	Model Name	Last 5 digits of S/No.
GY-DV500U	xxx16552 and after xxx56552 and after xxx31501 and after	BR-DV600U	xxx12040 and after xxx52040 and after

(1) DV ⟶ D9 linear editing system

The editing precision of the player device of the system described below is +1($^{+1}_{-0}$) frame.

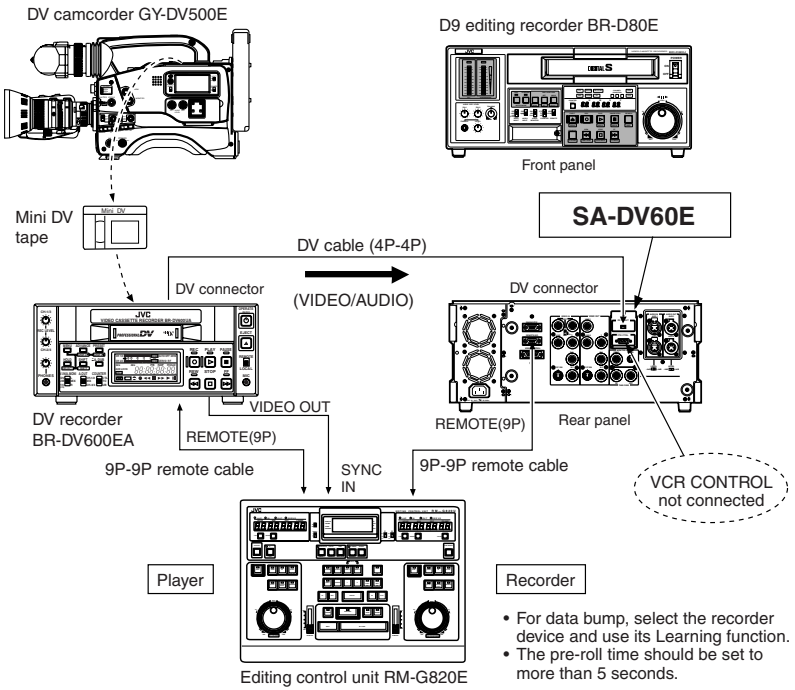


- For data bump, select the recorder device and use its Learning function.
- The pre-roll time should be set to more than 5 seconds.

2. System Configuration, Connections (continued)

(1) DV ⟶ D9 linear editing system

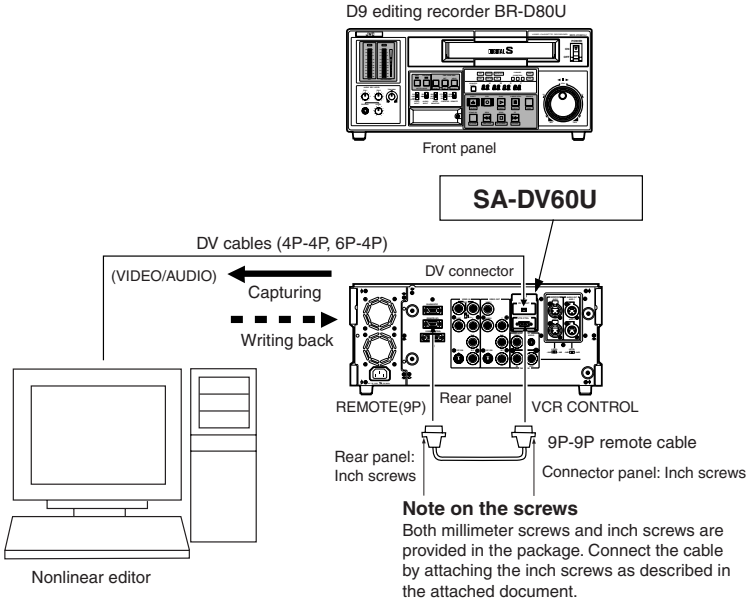
The editing precision of the player device of the system described below is +1($^{+1}_{-0}$) frame.



- For data bump, select the recorder device and use its Learning function.
- The pre-roll time should be set to more than 5 seconds.

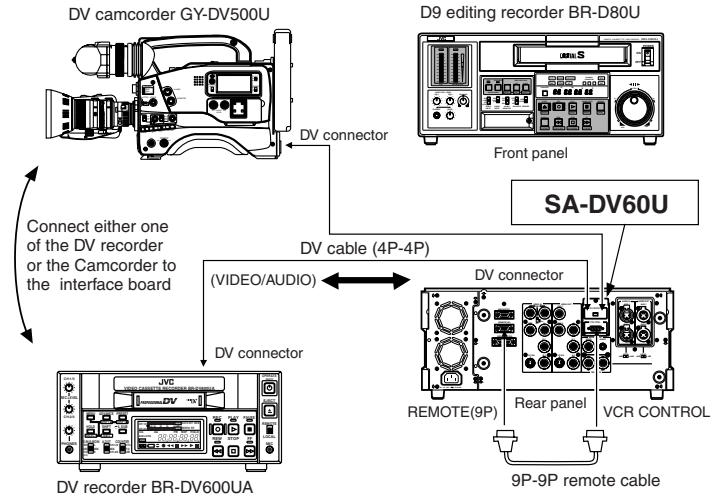
2. System Configuration, Connections (continued)

(2) D9 ◄—► DV nonlinear editing system



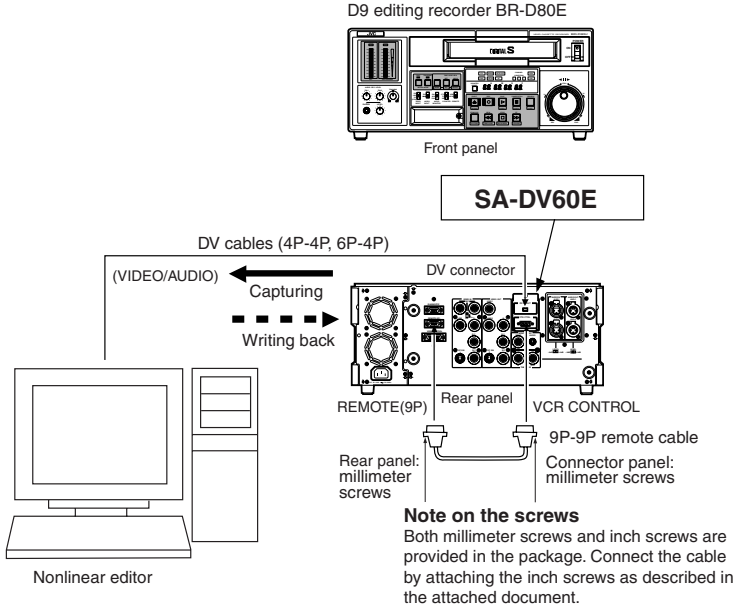
Note on the screws
Both millimeter screws and inch screws are provided in the package. Connect the cable by attaching the inch screws as described in the attached document.

(3) DV ◄—► D9 dubbing system



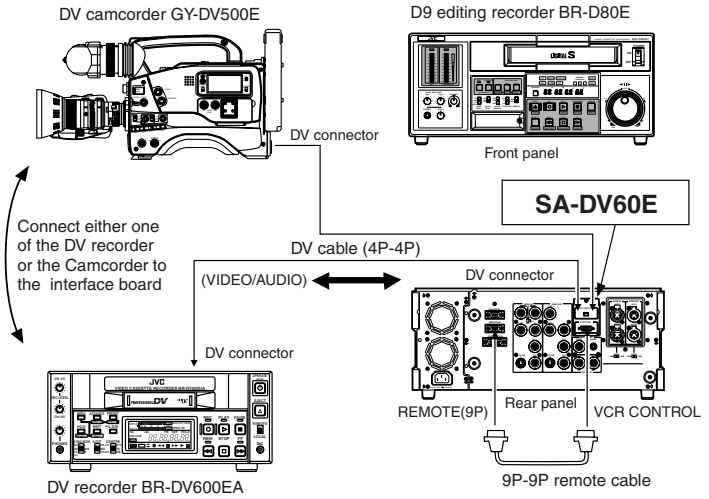
2. System Configuration, Connections (continued)

(2) D9 ◄—► DV nonlinear editing system



Note on the screws
Both millimeter screws and inch screws are provided in the package. Connect the cable by attaching the inch screws as described in the attached document.

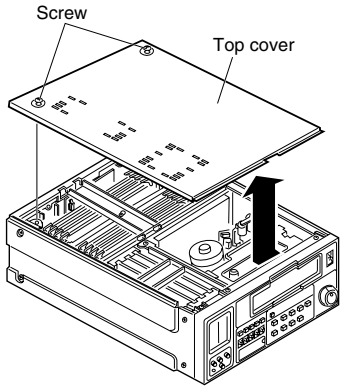
(3) DV ◄—► D9 dubbing system

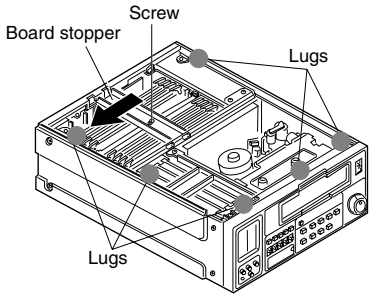


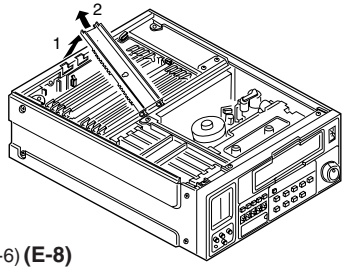
3. Installation

CAUTION
Although installation is possible by adopting the following procedures, such work is accompanied with a risk of electric shock or injury and special tools are required. It is therefore recommended to have any installation work performed by a JVC-authorized agent. Please note that there will be a fee for any installation work.

WARNING
Make sure that the VCR is OFF and its power cord unplugged from the power outlet before proceeding with the installation. Otherwise, a fire or electric shock hazard may result.







Installation procedures

1. Loosen two screws on the upper surface of the VCR as shown on the left and remove the top cover. The screws cannot be pulled out.

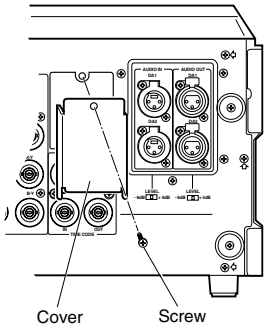
Handle with care. The sharp edges of the top cover and VCR chassis may hurt your hands.

Six lugs are installed in the chassis in areas in contact with the top cover. When removing the top cover, be careful not to remove these lugs as well.

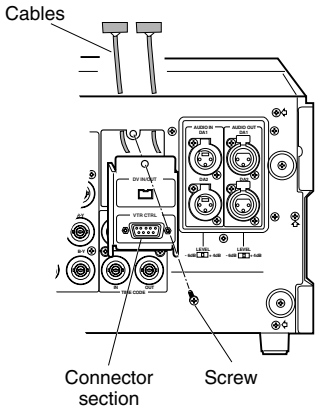
2. Remove the board stopper.
   1) Loosen the screw slightly.
   2) Move the board stopper in the direction shown by the arrow.

3. Lift up the rear side of the board stopper and remove it.

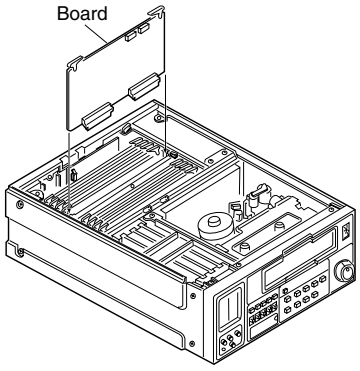
3. Installation (continued)



4. Remove one screw on the rear panel of the VCR and remove the cover for installation of options. Use the removed screw to install the connector section.



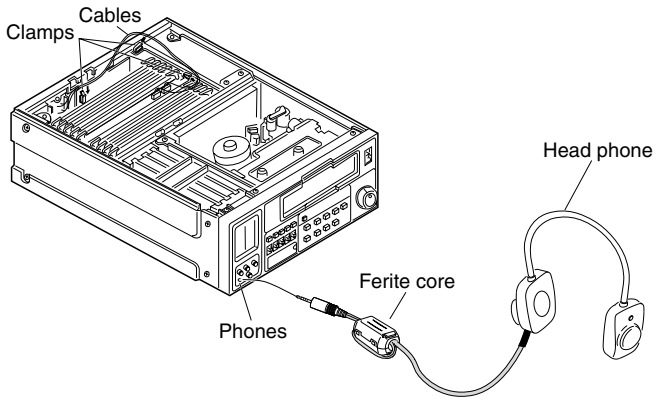
5. Pass the cables connected to the connector section through the inside of the VCR, install the unit as shown and secure it with the screw removed in procedure 4.



6. Insert the board in the slot with the correct board orientation. Insert the board in the 5th slot counted from the rear side. If the SA-D80U or SA-D50U has already been installed in that slot, replace it with this board.

3. Installation (continued)

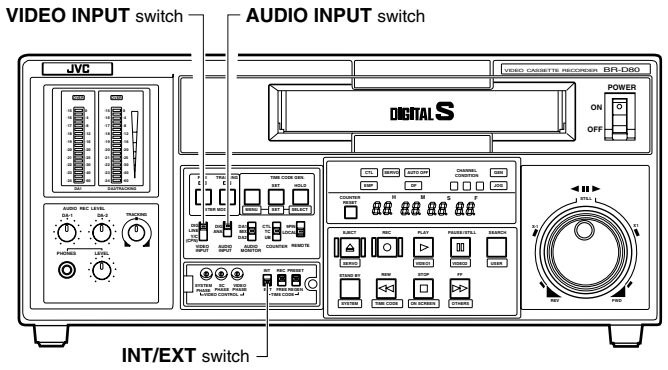
7. Connect the cables to the connection pins CN302 (for 7-pin plug) and CN202 (for 6-pin plug) on the DV I/O board section.



8. Fix the connected cables with clamps (3 points) as shown in the figure.
9. Re-install the board stopper and secure it.
10. Replace the top cover on the VCR and tighten the screws loosened in procedure 1 to secure it.
11. Attach the ferrite core.
    If you use headphones, attach the ferrite core, provided in the package, as shown above.

— MEMO —

4. Switch Settings and Connection of a D9 or DV Device



Connection

- To perform timecode dubbing from a D9 device to a DV device, be sure to connect the REMOTE (9-pin) connector on the D9 main body and the VCR CONTROL connector on the SA-DV60U using the provided 9-pin cable.
- Timecode dubbing from a DV device to a D9 device does not need the 9-pin cable.

Settings

■ When using a D9 device as the recorder:
Set the switches on the D9 device as follows. Always set the VIDEO INPUT and AUDIO INPUT switches as shown below. The use of other settings may lead to a malfunction. Be sure to turn the unit OFF before changing the positions of the VIDEO INPUT and AUDIO INPUT switches. Otherwise, noise may be produced during output.

1. Settings for recording a DV input signal on the D9 device
- Front panel
  VIDEO INPUT switch: Set to DIG.
  AUDIO INPUT switch: Set to DIG.

2. Settings for timecode dubbing from the BR-DV600UA to the D9 device
- Front panel
  VIDEO INPUT switch: Set to DIG.
  AUDIO INPUT switch: Set to DIG.
- Time code switch:
  INT/EXT switch: Set to EXT.
- Menu switch
  No. 409 EXT REGEN TC: Set to VITC.

3. Settings for recording timecodes from the BR-DV600UA as sub-timecodes
- Menu switch
  No. 450 SUB TC (VITC) REC: Set to ON.
  No. 451 VITC OUT SELECT: Set to SUB TC.

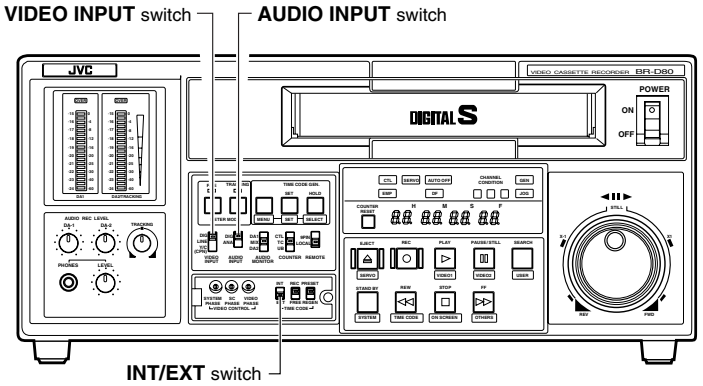
■ When using a DV device as the recorder:
Set the switches on the DV device as follows.

1. Settings for recording DV input signals on a DV device
Set the input of the DV device to IEEE1394 (digital).

2. Settings for timecode dubbing from a D9 device to the BR-DV600UA
- Menu switches
  No. 460 TC DUPLICATE (1394): Set to ON.
  No. 416 NON DROP/DROP:
  Set according to the recording mode of the D9 device.

— MEMO —
- Timecode dubbing is not available with the BR-DV600U.

4. Switch Settings and Connection of a D9 or DV Device



Connection

- To perform timecode dubbing from a D9 device to a DV device, be sure to connect the REMOTE (9-pin) connector on the D9 main body and the VCR CONTROL connector on the SA-DV60E using the provided 9-pin cable.
- Timecode dubbing from a DV device to a D9 device does not need the 9-pin cable.

Settings

■ When using a D9 device as the recorder:
Set the switches on the D9 device as follows. Always set the VIDEO INPUT and AUDIO INPUT switches as shown below. The use of other settings may lead to a malfunction. Be sure to turn the unit OFF before changing the positions of the VIDEO INPUT and AUDIO INPUT switches. Otherwise, noise may be produced during output.

1. Settings for recording a DV input signal on the D9 device
- Front panel
  VIDEO INPUT switch: Set to DIG.
  AUDIO INPUT switch: Set to DIG.

2. Settings for timecode dubbing from the BR-DV600EA to the D9 device
- Front panel
  VIDEO INPUT switch: Set to DIG.
  AUDIO INPUT switch: Set to DIG.
- Time code switch:
  INT/EXT switch: Set to EXT.
- Menu switch
  No. 409 EXT REGEN TC: Set to VITC.

3. Settings for recording timecodes from the BR-DV600EA as sub-timecodes
- Menu switch
  No. 450 SUB TC (VITC) REC: Set to ON.
  No. 451 VITC OUT SELECT: Set to SUB TC.

■ When using a DV device as the recorder:
Set the switches on the DV device as follows.

1. Settings for recording DV input signals on a DV device
Set the input of the DV device to IEEE1394 (digital).

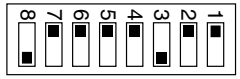
2. Settings for timecode dubbing from a D9 device to the BR-DV600EA
- Menu switches
  No. 460 TC DUPLICATE (1394): Set to ON.

— MEMO —
- Timecode dubbing is not available with the BR-DV600E.
- The GY-DV500E and G-DY700WE models are not capable of DV input recording.

5. Precautions for Use of DV Input/Output

1. When a signal recorded in WIDE mode is dubbed from a D9 device to a DV device, the WIDE ID signal will be lost.
   When viewing a dubbed tape on a widescreen monitor, set the monitor to the WIDE mode manually.
2. A copy-guarded signal cannot be dubbed because both the video and audio are muted.
3. With certain DV devices, when the audio output of the D9 device is high, the OVER indicator on the DV device may light up while the signal meter on the D9 device does not indicate an OVER level. This is due to an error in the accuracy of the meter of the DV device or a difference in the dynamic range between the devices, and not to a malfunction of the SA-DV60U.
4. When the audio input is a 4-channel signal with a 32k sampling frequency, the audio will be recorded only in channels 1 and 2, and not in channels 3 and 4.
5. When a D9 device is supplied with DV input and the connected DV device is in Still or Search mode, the audio signal of the DV input is muted.
6. The DIP switch (S301) on the SA-DV60U has been preset at the factory as shown below. Do not alter the setting of this switch.

SA-DV60U



S301

Switch bits 3 & 8 at low positions.
All other switch bits at high positions.

7. Although with certain DV devices the audio EE output from the DV device may be out of phase, recording is performed normally.
8. It is not possible to perform editing between D9 devices.

5. Precautions for Use of DV Input/Output

1. When a signal recorded in WIDE mode is dubbed from a D9 device to a DV device, the WIDE ID signal will be lost.
   When viewing a dubbed tape on a widescreen monitor, set the monitor to the WIDE mode manually.
2. A copy-guarded signal cannot be dubbed because both the video and audio are muted.
3. With certain DV devices, when the audio output of the D9 device is high, the OVER indicator on the DV device may light up while the signal meter on the D9 device does not indicate an OVER level. This is due to an error in the accuracy of the meter of the DV device or a difference in the dynamic range between the devices, and not to a malfunction of the SA-DV60E.
4. When the audio input is a 4-channel signal with a 32k sampling frequency, the audio will be recorded only in channels 1 and 2, and not in channels 3 and 4.
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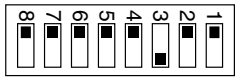
6. The DIP switch (S301) on the SA-DV60E has been preset at the factory as shown below. Do not alter the setting of this switch.

SA-DV60E



S301

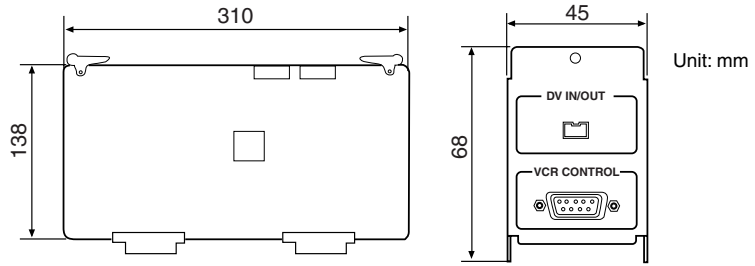
Switch bit 3 at low position.
All other switch bits at high positions.

7. Although with certain DV devices the audio EE output from the DV device may be out of phase, recording is performed normally.
8. It is not possible to perform editing between D9 devices.

6. Specifications

Power supply		3 V DC, 5 V DC, 8 V DC (Supplied from the installed VCR)
Power consumption		Approx. 6 W
Allowable operating temperatures		5°C to 40°C
Allowable storage temperatures		-20°C to +60°C
Allowable operating humidity		30% to 80%RH
Weight		Approx. 550 g
Dimensions	Board	310 mm x 138 mm (WxH)
	Connector panel	45 mm x 68 mm
DV interface input/output		IEEE1394
Audio input sampling frequencies		48 kHz, 44.1 kHz, 32 kHz
Audio output sampling frequency		48 kHz
Number of audio channels		2
RS-422 interface		D-SUB 9-pin
Provided accessories		RS-422 cable x 1 (including screws) Ferrite core x 1

Dimension Diagram



— MEMO —

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SA-DV60U DV INTERFACE BOARD

JVC®

VICTOR COMPANY OF JAPAN, LIMITED

Printed in Japan
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E

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