
 RS-232C Interface Board

Model Name: R-9000RS

 FEATURES

The R-9000RS is a RS-232C interface board for MITSUBISHI TIME LAPSE VCR series.

When R-9000RS is installed, you can remote control these VCRs using the personal computer equipped with the RS-232C connector.

The R-9000RS is applied to MITSUBISHI TIME LAPSE VCR HS-9000 series.

By connecting the VCRs installed R-9000RS in series, you can control up to 255VCRs.

 TECHNICAL SPECIFICATIONS

Power source 5 .1 $\pm$ 0.2 DC (Power is supplied from VCR)

Power consumption 45 mA DC

Data link

Teletype Procedures	
Synchronizing system	Asynchronous system
Transmission rate	1200/ 2400/ 4800/ 9600 bps
Data bit length	8bits/ 7bits
Stop bit length	1bit/ 2bits
Parity bit	Nil/ Even / Odd
X control	Nil
S parameter	Nil
CS-RS hand-shake	With
Delimiter code for send	CR(0DH)/ CR(0DH)+LF(0AH)
Delimiter code for receive	CR(0DH)/ CR(0DH)+LF(0AH)

Operating temperature 5°C to 40°C

Relative humidity 80% MAX.

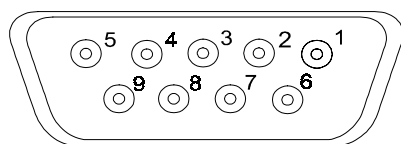
Connectable model HS-9424U, HS-9424E, HS-9424E(B)
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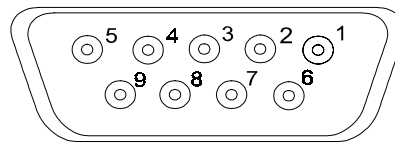
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Physical protocol of RS-232C

RS-232C INPUT and OUTPUT connectors of R-9000RS are D-SUB 9-pin male connector.



RS-IN



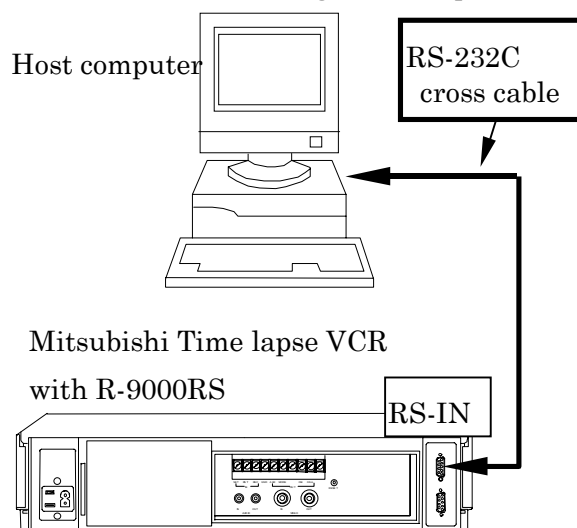
RS-OUT

Pin assign of RS-IN and RS-OUT

Pin No.	Signal line names	Meanings	Directions (from unit side)
2	RD	Received data	Input
3	SD	Transmitted data	Output
4	ER	Data terminal ready	Output
5	SG	Signal ground	-
6	DR	Data set ready	Input
7	RS	Request send	Output
8	CS	Clear to send	Input

Connections

When connecting with the personal computer.



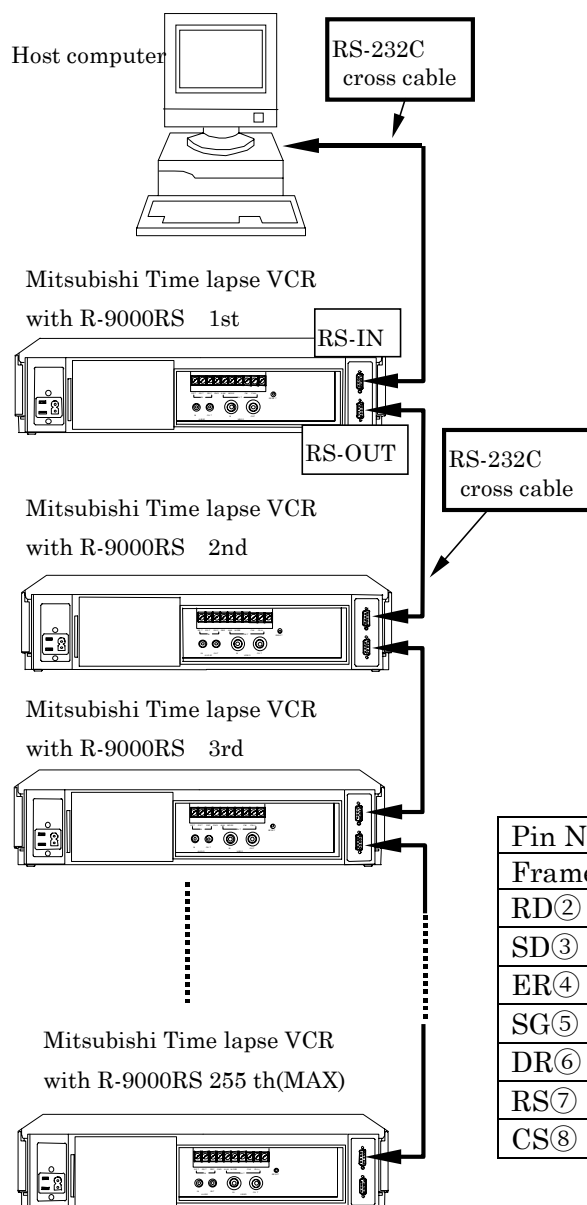
1. Connect the RS-232C cross cable to the RS-232C terminal on the personal computer.

2. Connect the other end of RS-IN terminal on the VCR installed R-9000RS.

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When connecting the personal computer with two or more VCRs.



By connecting the VCRs installed R-9000RS in series, you can remote control up to 255VCRs.

Each VCR has ID number, you can control each one.

1. Connect the RS-232C cross cable to the RS-232C terminal on the personal computer.
2. Connect the other end of RS-IN terminal on the VCR installed R-9000RS.
3. Connect the RS-232C cross cable to the RS-IN terminal and the other end of RS-OUT terminal on the VCR installed R-9000RS.

For connection, use RS-232C cross cable as shown below.

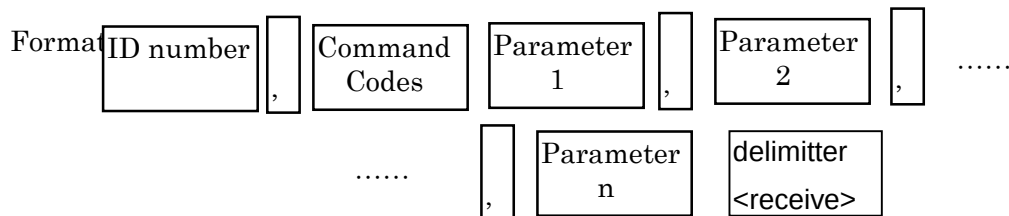
Pin No.	Connection.	Pin No.
Frame		Frame
RD②		②RD
SD③		③SD
ER④		④ER
SG⑤		⑤SG
DR⑥		⑥DR
RS⑦		⑦RS
CS⑧		⑧CS

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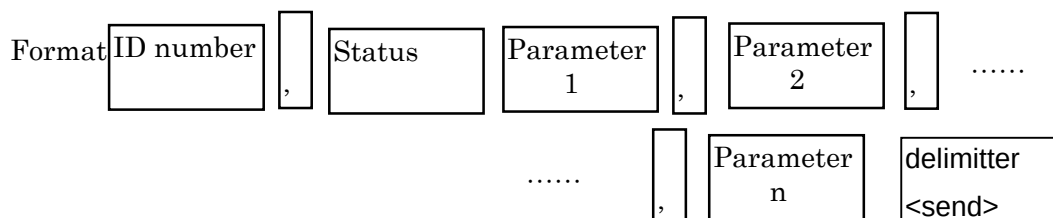
Format of command and status

(1) Command: Commanding codes from outside to the R-9000RS



There are also commanding codes which do not accompany any parameter.

(2) Status: Response codes from the R-9000RS to outside.



There are also statuses which do not accompany any parameter.

[Example 1] Switch ON VCR whose ID number is VCR001.

Command	Status	Meaning
VCR001,PW1*1		Power ON command for VCR001
	VCR001,RC*2	VCR001 received Power on command.
	VCR001,EX*2	VCR001 carried out the command.

*1 means delimeter for send. *2 means delimeter for receive.

[Example 2] Recording was attempted by VCR whose ID number is VCR002, but could not because the tape tab was broken.

Command	Status	Meaning
VCR002,RC*1		Recording command for VCR002
	VCR002,RC*2	VCR002 received Recording command.
	VCR002,ER02*2	Failed recording due to broken tape tab.

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