

Technical Bulletin

No: 303 – Automation Operation of RS-DAT

1. Utilizing the Automation Port and the Remote Port

1.1 Remote Port control pins required and their function

Pin #	Function
8	START momentary pull to ground
17	START LAMP open collector active low pulls to ground when machine is playing. Change cut number when this line is active.
5	GROUND
12	+5 Volts
10	CUE1 RELAY normally opens contact. Closes during CUE1. Automation system will typically start the next source when the relay first closes.
23	CUE1 RELAY normally open contact. See Pin 10

1.2 Automation Port pins required and their function

Pin #	Function
11	GROUND
15	TENS – A
7	TENS – B
14	TENS – C
6	TENS – D
13	ONES – A
5	ONES – B
12	ONES – C
4	ONES – D
2	STOP READY LAMP open collective active low. Does not flash.
9	CUE1 LAMP open collector active low. Maybe used instead of CUE1 relay on remote port.

1.3 Entering a cut number

A cut number must be between 1 and 99 inclusive and must be latched by the automation system. The data format is presented from the automation system to RS-DAT on eight lines as follow:

TENS
D C B A
8 4 2 1

ONES
D C B A
8 4 2 1



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If cut number 6 is requested the data lines must be latched as follows:

TENS

D C B A
L L L L equals 0

ONES

D C B A
L H H L equals 6

This is positive bcd.

1.4 When latched cut data may be changed.

The latched cut data may be changed at any time. If the machine is topped and ready (pin 2 on automation connector is low), the machine will immediately advance to the requested cut. If the requested cut is changed while the machine is playing, the machine will continue to play until the end of the CUE1 of the current cut. The machine will then rapidly advance to the currently requested cut.

It is recommended that the currently requested cut be latched at the automation port until the RS-DAT is started. At that time the next cut should be latched to the automation port.

2. Serial Port

2.1 Serial Port control pins required and their functions

Pin #	Function
1	TXD data from RS-DAT to terminal
5	GROUND
8	RXD data from terminal to RS-DAT

2.2 Data Type

Eight data bits, one stop bit, no parity. Baud rate is 9600.

2.3 Commands

The following commands are shown between “ ” for clarity.

“ST” START the machine will enter the play mode and respond with “PG” which is the standard play mode. If the machine is not recording and a second “ST” command is sent, the machine will respond with “PF”. In this play mode, the machine will output CUE1 information but will not automatically cue to the next



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cut. The machine will remain in the START mode, and play the entire tape. Additional “ST” commands will toggle between the two play functions.

“SP” STOP the machine will respond “SC”, stop and respond “NQ” NOT CUED.

“XXxx” RECORD cut number xx. xx is between 01 and 99 inclusive. The machine will respond with “RCxx” and enter the record mode only if the machine is stopped. This must be followed with “ST” to begin tape motion in the record mode. “SP” will cancel the record mode. Note: All cuts must be numbered sequentially for proper cueing so “XXxx” is preferred over “RE” below. In addition, the machine will only enter this mode if the cassette record enable window is closed.

“RE” RECORD (not preferred see “XXxx” above) the machine will respond with “RG” and enter the cord mode only if the machine is stopped. This must be followed with “ST” to begin tape motion in the record mode. “SP” will cancel the record mode. Note: The machine will only enter the RECORD mode if the cassette record enable window is closed.

“EW” WRITE CUE1 the machine will respond with “SE” at the beginning of the CUE1 and with “FE” at the end of CUE1. Note: The machine will only record CUE1 if the cassette record enable window is closed. In addition if the machine is in the record mode, a CUE1 may not be recorded during the first 10 seconds of recording (while the Start Id is being recorded). A CUE1 may be recorded during the first 1- seconds of the message by recuing the tape to the beginning of the message, entering START (without RECORD) and sending “EW”.

“OP” OPEN DRAWER the machine will open/close the drawer and cue to the previous cut on the tape. The machine will respond “RDxx” xx is the cut number. The machine will not respond if it is already cueing to a cut.

“CTxx” CUE TO specific cut. Xx is between 01 and 99 inclusive. If the machine is in the stop mode and is not already cued to the requested cut, the machine will respond with “CCxx” and will cue to the requested cut. Upon completion, the machine will respond “RDx”. If the machine is playing the end of the CUE1 will result in a response of “CCxx” and the cueing sequence will being. Do not use if the machine is in the record mode.

“NC” NEXT CUT. If the machine is stopped at the beginning of a cut, it will respond “NF”, recue to the same cut and respond “RDxx”. If the machine is stopped but not cued at the beginning of a cut, it will respond “NF” and advance to the next cut, and respond “RDxx”. If the machine is in motion a “NC”



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command will advance to the next cut and respond “RDxx”. However, if a “CTxx” command has been given but not yet enacted on, a “NC” command will cause the machine to respond “CCxx”, cue to the requested cut and respond “RDxx”.

“RW” REWIND. The machine will respond “BW”.

“FF” FAST FORWARD. The machine will respond “WD”.

“Z” RESET SERIAL PORT. May be sent before any command to reset serial software pointers. Useful at power up incase data terminal or automation system sends false characters at power up.

2.4 Miscellaneous

At the end of the tape the machine will respond “ET01” and cue to cut 1. The machine will then respond “RD01”.

At the end of CUE1 the machine will see if a “CTxx” command was given and not previously acted on. If this is the case and if the record enable window is open, the machine will mute, respond “CCxx” and cue to the requested cut. The machine will then respond “RDxx”. If a “CTxx” command was not given the machine will mute, respond “CU” and cue to the next cut. If the record enable window on the cassette is closed (allowing recording), the cueing sequence will not occur until the machine has reached the beginning of the next cut. It is important to note that a momentary burst of audio will be output from the machine if it is allowed to reach the beginning of the next cut before cueing. It is suggested that if it is desired to have the cassette record enable window closed that after the DAT machine responds “EE” (end of CUE1) that the automation system respond with “NC” NEXT CUT.



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