



# IZ Technical Appendix:

## MIDI Machine Control Implementation for RADAR 24

Contact iZ Support: (800) 776-1356

Memo Date: November 20, 2000

### MIDI Machine Control:

The initial implementation of MIDI Machine Control provides a basic set of functions as detailed below. Communications will be in “open loop” mode – i.e. RADAR 24 will receive commands but will not transmit commands (although it will output MIDI time code).

The **SYSTEM** menu already has a **MACHINE CONTROL** selection, which is used to enable and disable control via the 9-pin RS422 port. A new prompt will be added to this menu tree to allow the user to enable and disable both 9-pin and MIDI machine control:

**MACHINE CONTROL:**  
**9-PIN MIDI**

The default will be 9-pin control. To activate MIDI Machine Control, the user would move the cursor to **MIDI** and then press the enter key. The following message will be displayed briefly to indicate that MIDI Machine Control is now in effect.

**MIDI CONTROL:**  
**MODE ENABLED**

If the user subsequently wishes to turn off MIDI Machine Control, they would navigate to the **MACHINE CONTROL** menu as above. This time, upon pressing the enter key, the following message will be displayed briefly:

**MIDI CONTROL:**  
**MODE DISABLED**

While MIDI control is disabled, all commands received through the MIDI port will be discarded.



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When MIDI machine control is in effect, the following subset of commands will be recognized. Refer to the *MIDI Specification* published by the MIDI Manufacturers Association for details about the contents and format of the commands.

- **STOP**

Stop the transport.

- **PLAY**

Put the transport in forward play mode. Recording tracks do not automatically exit from record upon receipt of the PLAY command. If that action is desired, transmit 'RECORD EXIT' then 'PLAY',

- **DEFERRED PLAY**

Since RADAR does not "ramp up" when entering play mode, this is identical to the 'PLAY' command above.

- **FAST FORWARD**

Put the transport in fast forward mode. Recording tracks will exit record mode.

- **REWIND**

Put the transport in rewind mode. Recording tracks will exit record mode.

- **WRITE**

Load data into the specified information fields. Two options are available:

- 1) **TRACK RECORD READY:** Load a standard track bitmap into the **track arm** mask. If RADAR is currently recording, this action will be deferred until the 'RECORD STROBE' command is sent.
- 2) **LOCATE POINT:** Load the specified time code value into RADAR's **SYNC** marker.



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- **MOVE**

Transfer the contents of the Source Information field to the Destination Information field. One option is available:

- 1) Load the current transport location into the SYNC marker. This is equivalent to RADAR's **'MARK SYNC'** command.

- **LOCATE**

Move the transport to the specified location. Two options are available:

- 1) **LOCATE TO INFORMATION FIELD:** Locate to the SYNC mark. This format assumes that the SYNC marker was previously set via either a 'WRITE' or 'MOVE' command.
- 2) **LOCATE TO TARGET:** Locate to the time code value supplied.

- **RECORD STROBE**

Update the track arm mask if a deferred 'WRITE TRACK RECORD READY' command was received, enter record on tracks that are now armed, and exit record on tracks that are no longer armed. Start the transport if it is not already in motion.

- **RECORD EXIT**

Exit record on all tracks without stopping the transport.