JLCooper MCS-3000 Series MCS-Panner
Operation Notes

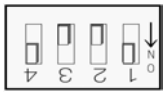
Panasonic WR-DA7 Yamaha 02R Tascam TMD-8000

This document covers operation of the JLCooper MCS-Panner with the Panasonic WR-DA7, Yamaha 02R, and Tascam TMD-8000 digital mixers. The MCS-Panner provides tactile control of the mixer's surround features. In addition, a number of "assignable" switches and encoders are also provided for the 02R and DA-7.

(1) Set the Rear Dip Switches

On the rear of the MCS-Panner is a four position DIP switch which selects the communication protocol for correct operation. The switch should be set when power is disconnected from the Panner. Referring to the illustrations, notice that the switches are numbered and "upside down".

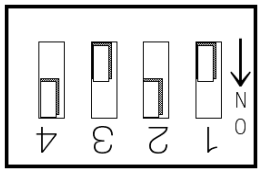
Yamaha 02R Switch Settings
Set switches 4 and 1 to the ON position (away from front panel).
Set switches 2 and 3 to the OFF position (toward front panel).



Panasonic WR-DA7 Switch Settings
Set switch 4 to the ON position (away from front panel).
Set switches 1, 2, and 3 to the OFF position (toward front panel).

Panasonic WR-DA7 with automation software Switch Settings
Set switches 3 and 4 to the ON position (away from front panel).
Set switches 1 and 2 to the OFF position (toward front panel).

Tascam TMD-8000 Switch Settings
Set switches 2 and 4 to the ON position (away from front panel).
Set switches 1 and 3 to the OFF position (toward front panel).



(2) Connections

The MCS-Panner may be connected in different ways depending upon your application.

Without the "MIDI Adapter", the MCS-Panner normally is connected to another MCS-3000 Series Controller using a "modular" cable. For digital mixer control, however, the telephone cable is not used. Use the special MIDI cable provided.

The MCS-Panner special cable has two MIDI connectors.
Notice that one of the MIDI connectors has two cables attached, the other has one cable.

To use the Panner to control the mixer directly, without additional computer software, connect the Panner directly to the MIDI In and Out of the digital mixer.

The MIDI connector with two cables is the Panner's MIDI output.
Connect to the mixer's MIDI In.

The MIDI connector with one cable is the Panner's MIDI input.
Connect to the mixer's MIDI Out.

To use the Panner to control the WR-DA7 with Panasonic automation software, connect the Panner to a MIDI Interface on the unused serial port of the computer.

The MIDI connector with two cables is the Panner's MIDI output.
Connect to the MIDI Interface's MIDI In.

The MIDI connector with one cable is the Panner's MIDI input.
Connect to the MIDI Interface's MIDI Out.

The other end of the special cable connects to the MCS-Panner.

Connect the accompanying power supply to the MCS-Panner also.
(For future reference, the power supply is 9 volts, DC, 500 mA, "Center positive".)

(3) Configuring the Mixer (Direct Mixer Control without Computer)

DA7
Set for MIDI Control operation, referring to Chapter 11 of the DA7 user's manual:

- Port Select TO PC
- Gen.Rx to MIDI
- Gen.Tx to MIDI
- CTRL CHG enabled for both Tx and Rx
- NRPN Enabled
- MIDI Channel 1

02R
To configure the 02R, press the MIDI button until MIDI Page 1/5 is displayed.
Enable Parameter Change and Control Change for Transmit and Receive.

TMD-8000
Press Shift and Automation Setup. Set Communication Speed for MIDI.

(4) Surround Operation
02R Surround Operation is accessed by pressing the Routing button.

For the DA7, the Select buttons are used to select the viewing of a given channel's Surround status. Press the white PAN knob to show the status in the display.

For the TMD-8000, Surround Mode is normally selected by pressing Shift and then Option.
However, you may use the MCS-Panner's S-1 through S-4 buttons to select the Surround Mode.
See section (8) below.

(5) MCS-Panner Operation with Panasonic WR-DA7

SELECT

This button is pressed to put the MCS-Panner into and out of the "Channel Select" mode.
When the green LED is on, the unit will respond to presses of the DA7's SELECT buttons, and will remember the channel selected, and send Surround movements from the Joystick to that channel. Each time there is a change of the channel number, the green LED will flash once to acknowledge. If the green LED is turned OFF, the Panner will continue using the most recently selected channel.

S1 sets the DA7's currently selected channel Surround Mode ON and OFF.
When on, the associated red LED will be on also. When ever a change to the selected channel is made (see above), the red LED will reflect the DA7's current Surround ON/OFF state.

S2 sends MIDI Controller #111. Buttons S2, S3, S4, and S8 send MIDI controller commands which can be assigned ("mapped") to different DA7 functions.
Refer to "User Assignable Functions" below.

S3: This button sends MIDI Controller #112.

S4: This button sends MIDI Controller #113.

S5: Enables/Disables the Surround Link feature of the MCS-Panner.
When this mode is on, movement of the Joystick will send commands to both the normal Selected channel and the next higher channel. In this way, the movement of two channels of audio may be linked together.

S6: Enables/Disables the Left-Right Mirror feature of the MCS-Panner.
When the Surround Link is also enabled, the second channel will receive a "mirror image"
Left-Right control. That is, for example, if the unit is currently set to Channel #1, and the Joystick is moved to the left, Channel #1's position will be moved to the left, and Channel #2's position will be moved right.

S7: Enables/Disables the Front-Rear Mirror feature of the MCS-Panner.
When the Surround Link is also enabled, the second channel will receive a "mirror image"
Front-Rear control. That is, for example, if the unit is currently set to Channel #1, and the Joystick is moved to the rear, Channel #1's position will be moved to the rear, and Channel #2's position will be moved front.

If both the Left-Right and Front-Rear buttons are on, then the second channel will receive movement data mirrored in both ways.

S8: This button sends MIDI Controller #114.

Stick Button

The button on the Joystick may be pressed to disable the sending of movement data while it is held. With this, the user may move the Joystick to a new position and have the controlled channel "pop" there. Upon release of the button, the new position data will be sent.

User-Assignable Functions

The DA7 allows the user to program most of it's internal parameters to be controlled by MIDI Control commands. Chapter 11 of the user's manual covers the programming procedures.

S2, S3, S4, and S8 send MIDI Controllers #111 through #114.
The five encoders send MIDI Controllers #115 thru #119.

When the Panner is first powered on, these encoders start at a MIDI value of 64.
Each click to the right will send a higher value, each click to the left, a lower value.

(6) MCS-Panner Operation with Yamaha 02R

SELECT

This button is pressed to put the MCS-Panner into and out of the "Channel Select" mode.

When the green LED is on, the Panner will respond to Fader Movement on the 02R.
The Panner will “learn” the correct channel by moving a fader on the 02R.
If the green LED is turned OFF, the Panner will continue using the most recently selected channel.

S1: Sets the 02R's Surround Mode to either 2+2 or Off.

S2: Sets the 02R's Surround Mode to either 3+1 or Off.

S3: Sets the 02R's Surround Mode to either 3+2+1 or Off.

S4: This button sends MIDI Controller #0. See below under “Assignable Controls”.

S5: This button Enables/Disables the Surround Link feature of the MCS-Panner. When this mode is on, movement of the Joystick will send commands to both the normal Selected channel and the next higher channel. In this way, the movement of two channels of audio may be linked together.

S6: This button Enables/Disables the Left-Right Mirror feature of the MCS-Panner. When the Surround Link is also enabled, the second channel will receive a "mirror image" Left-Right control. That is, for example, if the unit is currently set to Channel #1, and the Joystick is moved to the left, Channel #1's position will be moved to the left, and Channel #2's position will be moved right.

S7: This button Enables/Disables the Front-Rear Mirror feature of the MCS-Panner. When the Surround Link is also enabled, the second channel will receive a "mirror image" Front-Rear control. That is, for example, if the unit is currently set to Channel #1, and the Joystick is moved to the rear, Channel #1's position will be moved to the rear, and Channel #2's position will be moved front.

If both the Left-Right and Front-Rear buttons are on, then the second channel will receive movement data mirrored in both ways.

S8: This button sends MIDI Controller #32. See below under “Assignable Controls”.

Stick Button: The button on the Joystick may be pressed to disable the sending of movement data while it is held. With this, the user may move the Joystick to a new position and have the controlled channel "pop" there. Upon release of the button, the new position data will be sent.

User-Assignable Controls
The five rotary encoders and Switches 4 and 8 send fixed MIDI Controllers.

To use these controls, press the 02R's MIDI button until MIDI screen 4/5 is displayed.
Use the assignment table to "map" the 02R functions to the Panner controls.
Notice the following Controller Numbers.

Switches
S4 = 0
S8 = 32

Encoders
E1 = 93
E2 = 94
E3 = 95
E4 = 118
E5 = 119

When the Panner is first powered on, these encoders start at a MIDI value of 64.
Each click to the right will send a higher value, each click to the left, a lower value.

(7) MCS-Panner with DA7 and automation software
Regarding Connections, note that if you are using MIDI for Sync, through the Printer Port, you will need to use a MIDI Merger to connect the Panner. If you are using Tandem connection, there is no way at this time to connect the Panner.

In the automation software, "Overwrite Enable" surround panning.

Open the Panning Module, and select the channel using the popup menu.
(Or, select the channel by holding down the Select button on Panner and turning any knob on the Panner, the change will be indicated in Panning module window.)

The Panner's stick button is an enable button.

There is a "Phantom Panner" indicator when time code is running which you can line up (e.g. null). When lined up, press and release stick button to enable writing of Pan moves, when you are in Write mode.

The five knobs otherwise are left, right, center, Ls, Rs respectively, depending on surround mode. For example, in Jog and Fader mode, the joystick is used and the knobs are not.

Function Switches
The LEDs will not light when the switches are pressed.

S1: Turns surround mode off
S2: Selects Send Volume mode
S3: Selects Jog and Fader mode
S4: Selects Pattern mode
S8: Selects the Surround Screen

(8) MCS-Panner Operation with Tascam TMD-8000

SELECT

This button is pressed to put the MCS-Panner into and out of the "Channel Select" mode.

When the green LED is on, the Panner will respond to Fader Movement on the TMD-8000.
The Panner will “learn” the correct channel by moving a fader on the mixer.
If the green LED is turned OFF, the Panner will continue using the most recently selected channel.

S1: Sets the TMD-8000's Surround Mode to Stereo.

S2: Sets the TMD-8000's Surround Mode to 2 + 2.

S3: Sets the TMD-8000's Surround Mode to 3 + 1.

S4: Sets the TMD-8000's Surround Mode to 5 + 1.

S5: This button Enables/Disables the Surround Link feature of the MCS-Panner. When this mode is on, movement of the Joystick will send commands to both the normal Selected channel and the next higher channel. In this way, the movement of two channels of audio may be linked together.

S6: This button Enables/Disables the Left-Right Mirror feature of the MCS-Panner. When the Surround Link is also enabled, the second channel will receive a "mirror image" Left-Right control. That is, for example, if the unit is currently set to Channel #1, and the Joystick is moved to the left, Channel #1's position will be moved to the left, and Channel #2's position will be moved right.

S7: This button Enables/Disables the Front-Rear Mirror feature of the MCS-Panner. When the Surround Link is also enabled, the second channel will receive a "mirror image" Front-Rear control. That is, for example, if the unit is currently set to Channel #1, and the Joystick is moved to the rear, Channel #1's position will be moved to the rear, and Channel #2's position will be moved front.

If both the Left-Right and Front-Rear buttons are on, then the second channel will receive movement data mirrored in both ways.

Stick Button: The button on the Joystick may be pressed to disable the sending of movement data while it is held. With this, the user may move the Joystick to a new position and have the controlled channel "pop" there. Upon release of the button, the new position data will be sent.

Rotary Encoders
E1 controls L-R Pan
E2 controls F-R Pan
E3 controls Sub Level
E4 controls L-R DIV
E5 controls F-R DIV