



Using ProTools as a device (RM-6, SR-4 or PD-1)

Device

ProTools should be configured as a device when used as the record machine or Dubber with a controller (RM-6, SR-4, PD-1).

Equipment List

From Digidesign:

At least one Pro Tools HD card
At least one 192 Interface
A SYNC I/O
Machine Control option
Pro Tools HD 7.2 or higher

From CB Electronics:

A USB-422 with appropriate 9-pin cable
The driver for the USB-422 can be downloaded here:
<http://www.colinbroad.com/cbsoft/usbdriver.html>

From Other Suppliers

Video Sync Pulse Generator

A note on using Windows XP

If your Pro Tools HD system is running on Windows XP, you will need to renumber the COM ports as Pro Tools can only connect to Comm1 and Comm2. More information on how to do this can be found in Appendix C of the USB-422 manual, which can be downloaded here:

<http://www.colinbroad.com/cbsoft/usbdriver.html>

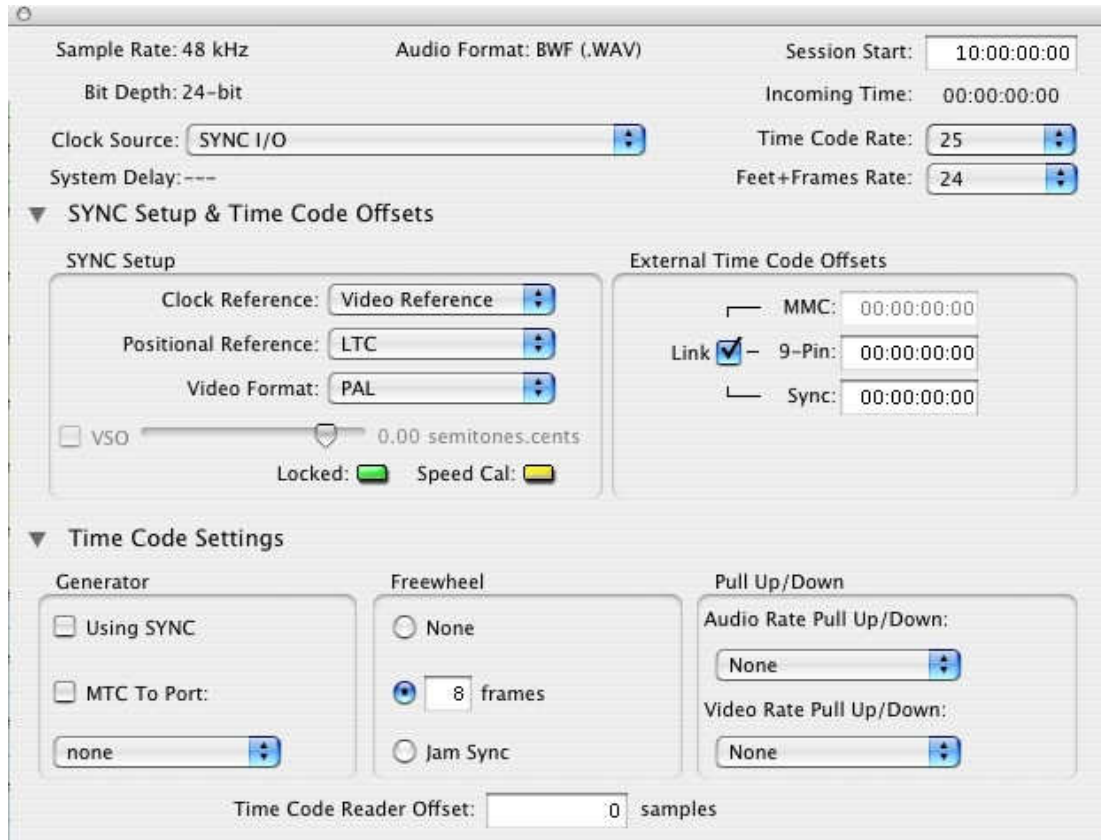
Connections

Connect the *Output* port of the rm=6/sr-4/PD-1 to *Port A* of the USB-422 using a standard 1:1 9-pin cable.

Configuring Protocols

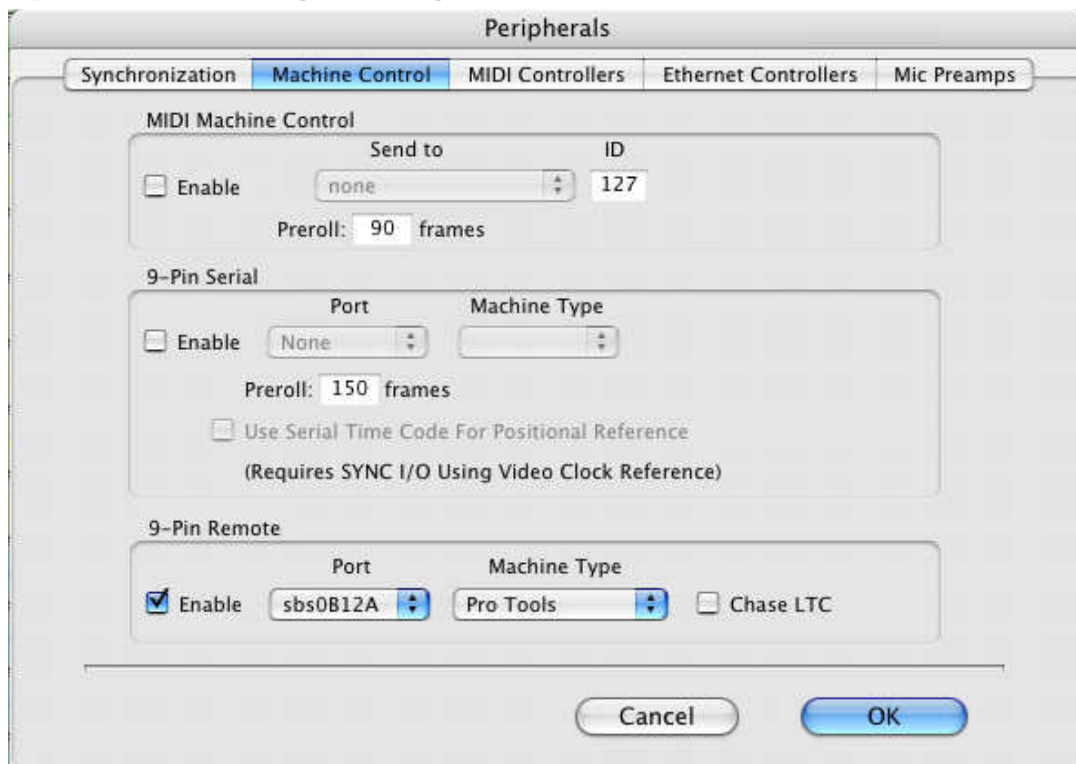
1) Load Session

2) Open the *Setup > Session Setup* dialogue box.



- Ensure that *SYNC I/O* is chosen as the *Clock Source*.
- Choose either *PAL* or *NTSC* as the *Video Format*.
- Choose *Video Reference* as your *Clock Reference*.
- Choose the appropriate *Time Code Rate*.
- Close the dialogue box.

3) Open the *Setup > Peripherals* dialogue box.



Select the *Machine Control* tab.

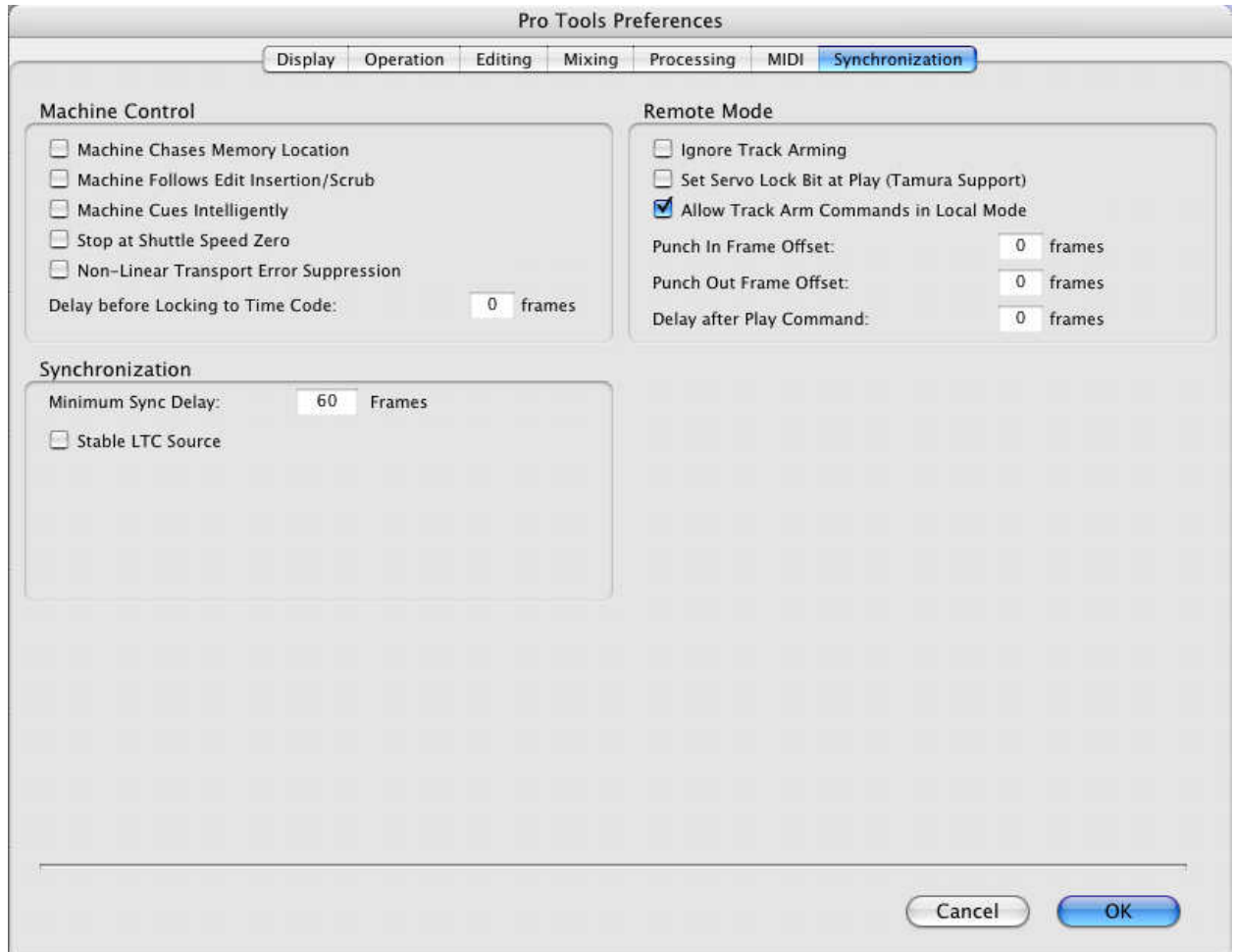
- In the *9-Pin Remote* section, check the *Enable* box.
- Choose Port A of the USB-422 in the *Port* drop-down menu.
- Choose *Pro Tools* in the *Machine Type* drop-down menu.
- Click *OK*.

4) Open the *Setup > Preferences* dialogue box.

Select the Synchronization tab.

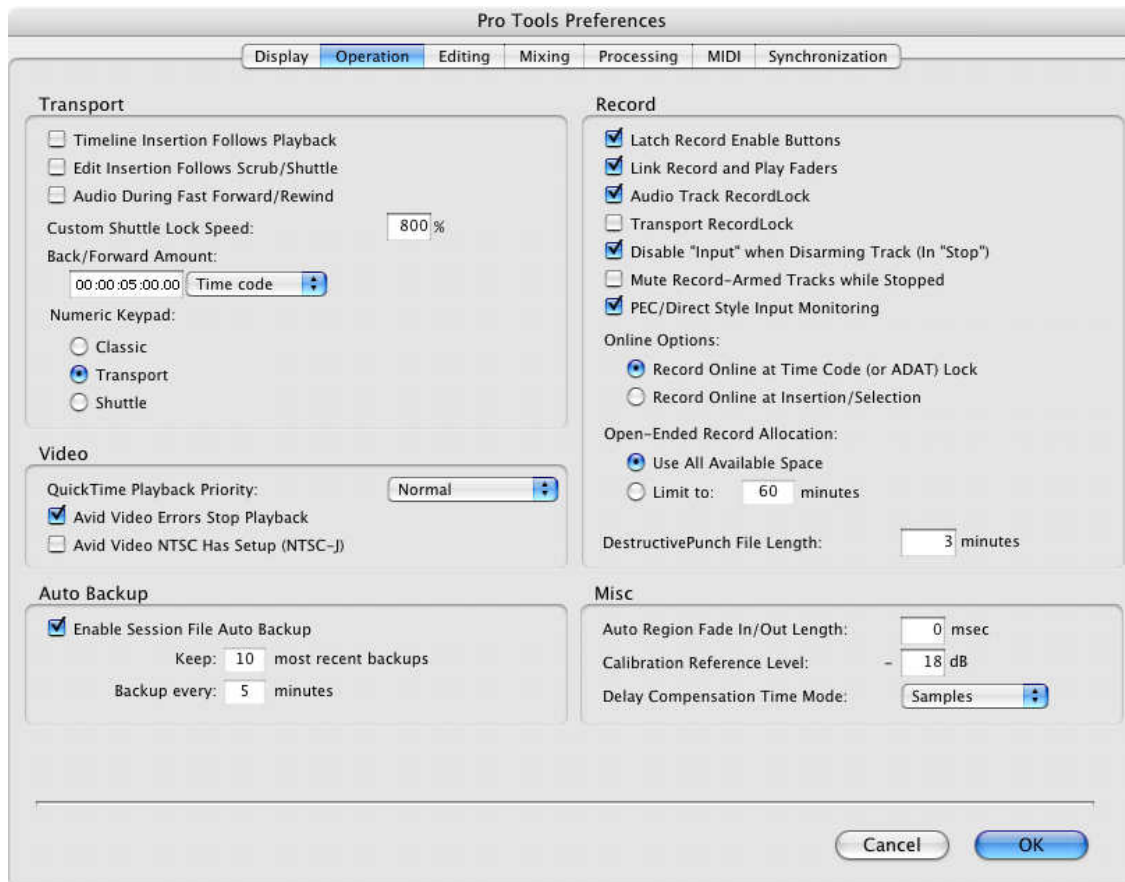
- Check the Allow Track Arm Commands in Local Mode checkbox.

This allows track arming even when using LTC chase



Select the *Operation* tab.

- Check that the *DestructivePunch File Length* is appropriate.
- Click *OK*.



Destructive Punch

You can use Destructive Punch or Quick punch, this is how to enable Destructive Punch.

- 1) Enable *Options > Destructive Punch*, and check that the *Record* key on the transport bar shows '*dp*'.
- 2) Select all record tracks.
- 3) Option-click (Mac) or Alt-click (Windows) on one of the stem tracks' *R* buttons to enable destructive punch recording. Ensure that all *R* buttons on selected tracks are blue.
- 3) Format the stem tracks by clicking on *Options > Prepare DPE Tracks*.

Appendix A: RS422 1:1 (Sony 9 pin) CABLE			
Function (Controller)	9 pin 'D' Male on cable (Both Ends)	Cable Colour	Function (Controlled Device)
	1		
Rx-	2	Red	Tx-
Tx+	3	Yellow	Rx+
Ground	4	Screen	Ground
	5		
	6		
Rx+	7	Blue	Tx+
Tx-	8	White	Rx-
	9		

Appendix B : Tx-Rx Invert Sony 9 pin CABLE			
Function	9 pin 'D' Male on Cable	9 pin 'D' Male on cable	Cable Colour
	1	1	
Tx-	2	8	Red
Rx+	3	7	Yellow
Ground	4	4	Screen
	5	5	
	6	6	
Tx+	7	3	Blue
Rx-	8	2	White
	9	9	

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Connecting Icon and/or Pro Tools as a Controller (RM-6,SR-4)

Controller

When using the Icon machine control surface with the RM-6 or SR-4 for multi-machine control Pro Tools is setup as a controller. The Icon/Pro Tools operate in the same way as they would with a single machine. The Pro Tools controls the Selected Master, all other machines controlled by the RM-6 slave to the selected master.

Figure 1: Pro Tools Connected to a Single Machine

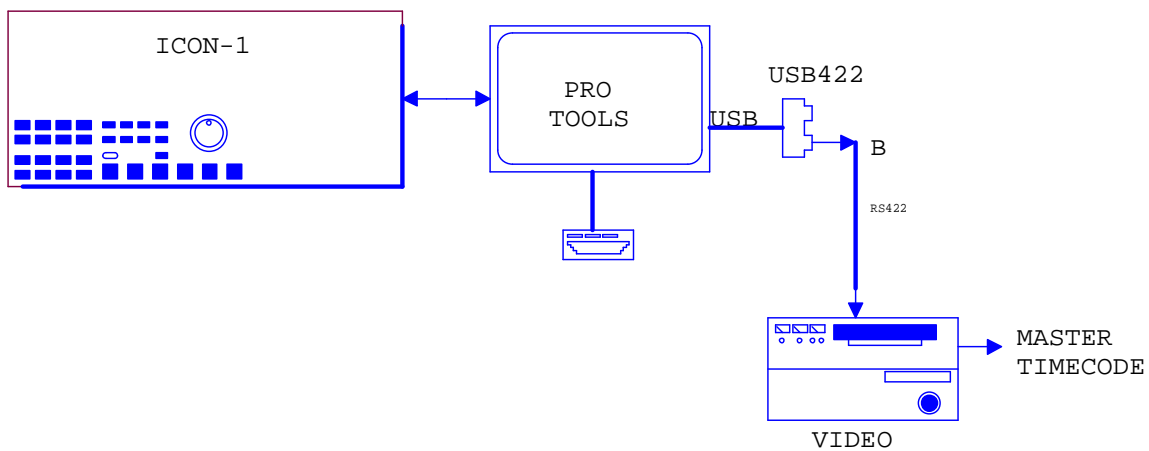
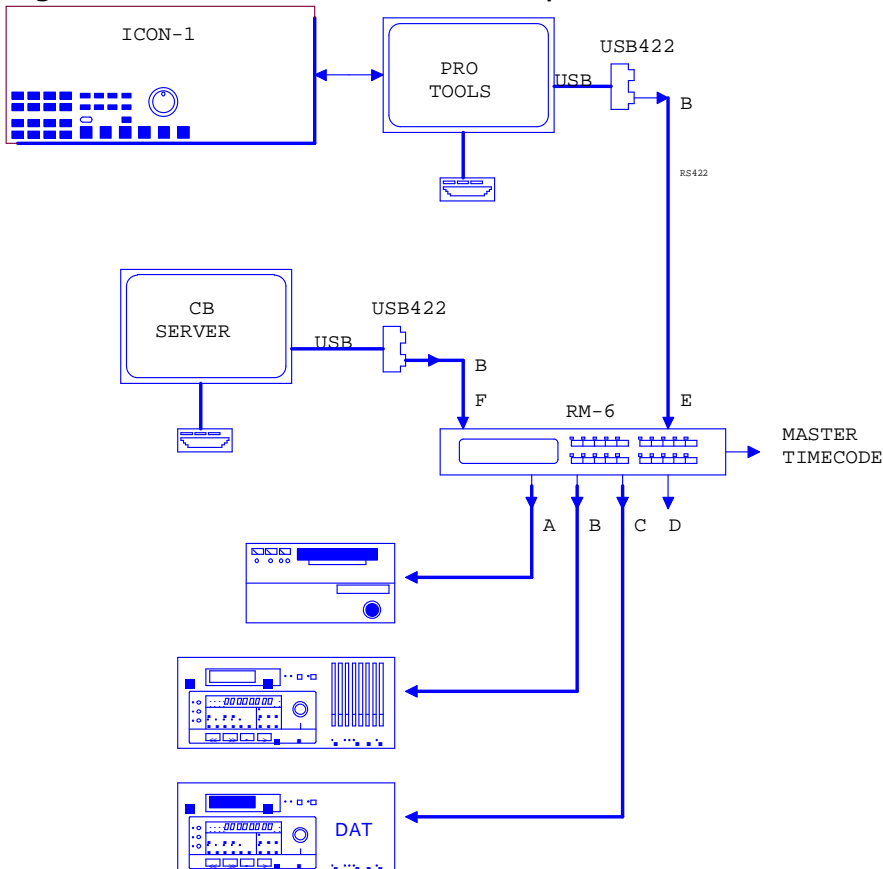


Figure 2 Pro Tools Connected to multiple machines via the RM-6



Equipment List

To setup the system you will need:

From Digidesign:

At least one Pro Tools HD card
At least one 192 Interface
A SYNC I/O
Machine Control option
Pro Tools HD 7.2 or higher

From CB Electronics:

A RM-6 or SR-4 Controller
A USB-422 with appropriate 9-pin cable
The driver for the USB-422 can be downloaded here:
<http://www.colinbroad.com/cbsoft/usbdriver.html>

From Other Suppliers

Video Sync Pulse Generator

A note on using Windows XP

If your Pro Tools HD system is running on Windows XP, you will need to renumber the COM ports as Pro Tools can only connect to Comm1 and Comm2. More information on how to do this can be found in Appendix C of the USB-422 manual, which can be downloaded here:

<http://www.colinbroad.com/cbsoft/usbdriver.html>

CBServer and Pro Tools Connections to the RM-6

CBServer -> RM-6

Connect the *Output* port (B) of the USB-422 to Port F on the RM-6 using a standard 1:1 9-pin cable.

Pro Tools -> RM-6

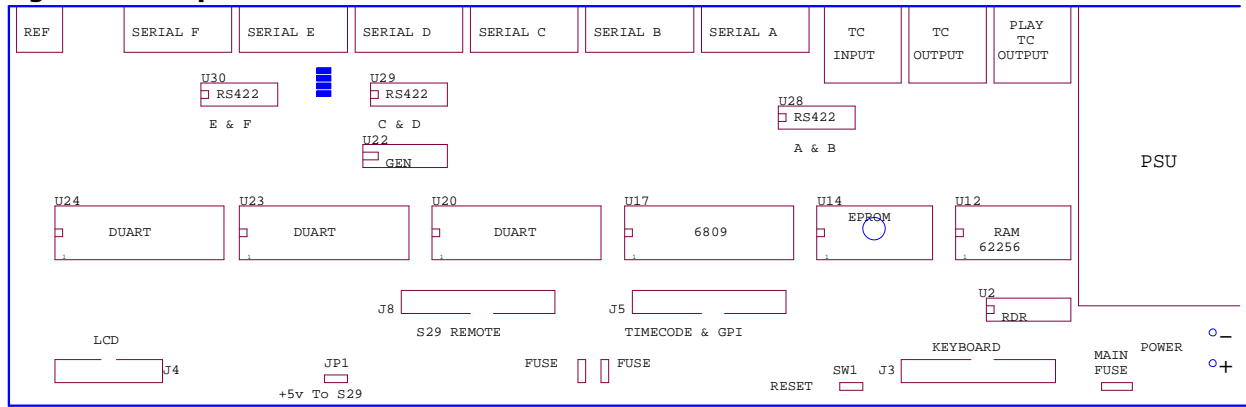
First setup the Links on the RM-6 so that Port E is connected as an Input (Device) See Figure 3 below.

Connect the *Output* port (B) of the USB-422 to Port E on the RM-6 using a standard 1:1 9-pin cable (Appendix A).

Note 1: The RM-6 is supplied with Port E configured as an Output (Controller)

Note 2: When Ports B,C or D are used as inputs a Tx-Rx Invert cable must be used (Appendix B)

Figure 3: Link positions for RM-6 Port E



LINK POSITIONS FOR SERIAL E AS OUTPUT

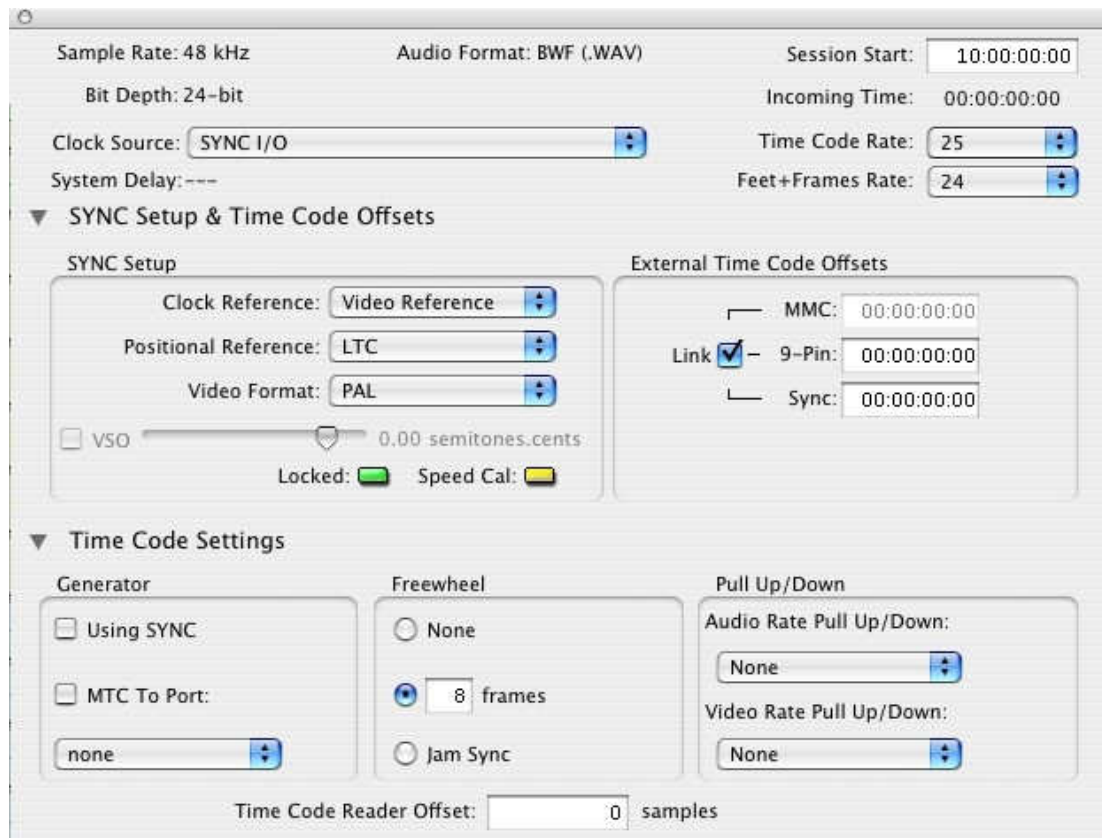
LINK POSITIONS FOR SERIAL E AS INPUT



Configuring Protocols

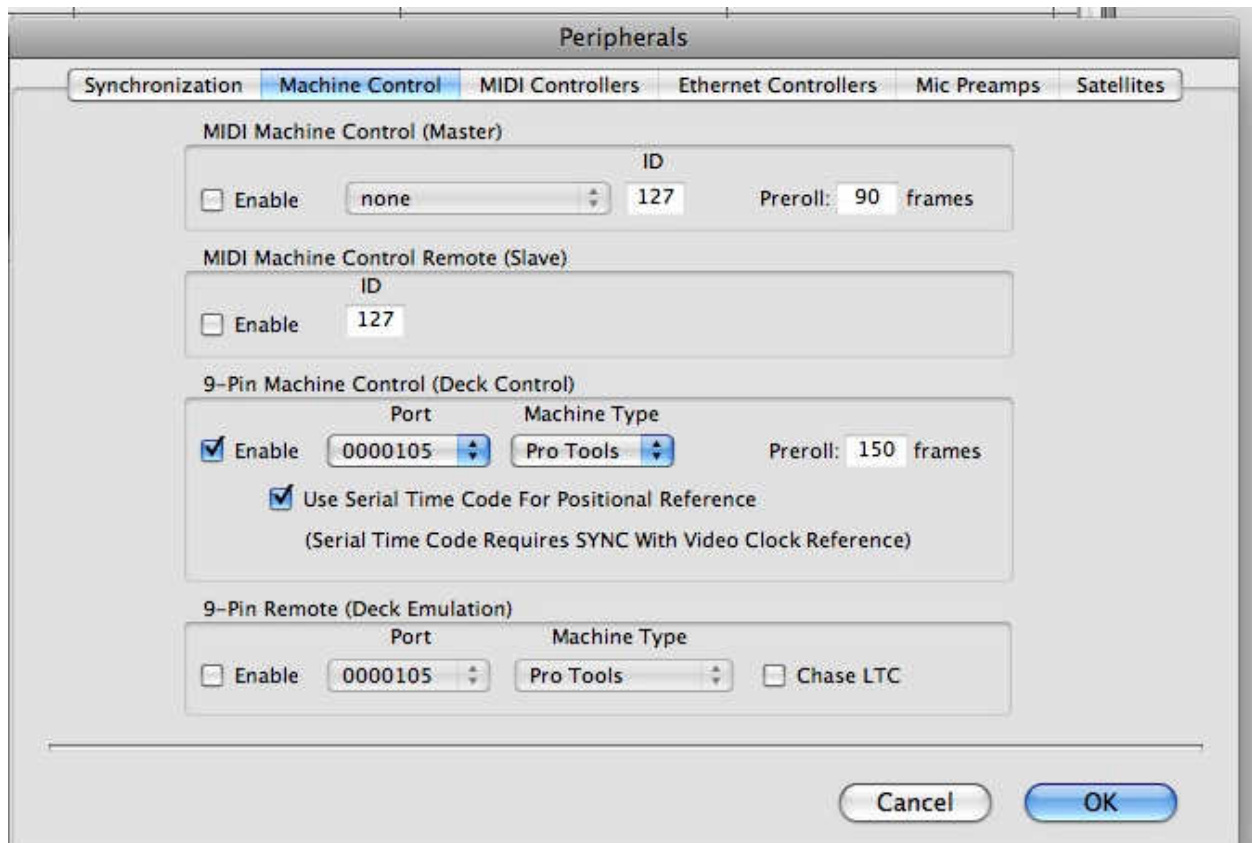
1) Load Session

2) Open the *Setup > Session Setup* dialogue box.



- Ensure that *SYNC I/O* is chosen as the *Clock Source*.
- Choose either *PAL* or *NTSC* as the *Video Format*.
- Choose *Video Reference* as your *Clock Reference*.
- Choose the appropriate *Time Code Rate*.
- Close the dialogue box.

3) Open the *Setup > Peripherals* dialogue box.



Select the *Machine Control* tab.

- In the *9-Pin Serial* section, check the *Enable* box.
- Choose Port B of the USB-422 in the *Port* drop-down menu.
- Choose an appropriate machine type in the *Machine Type* drop-down menu.
- Check the *Use Serial Time Code For Positional Reference* Box
- Click *OK*.

Machine Control



Select transport = Pro Tools or transport = Machine and ensure that you are Online

RM-6 Setup

To use Port E as a Controller input on the RM-6 you must tell the RM-6 to use Ports E and F as Inputs. You can do this on the RM-6 or CBServer.

On The RM-6 select
Setup>Unit>Generic> Menu 032- Input Ports
1=E,F

On CBServer open the Unit 1 Generic page as shown in Figure 4 and set the number of input ports required.

Figure 4 CB Server Input port configuration



Appendix A: 1:1 RS422 (Sony 9 pin) CABLE			
Function (Controller)	9 pin 'D' Male on cable (Both Ends)	Cable Colour	Function (Controlled Device)
	1		
Rx-	2	Red	Tx-
Tx+	3	Yellow	Rx+
Ground	4	Screen	Ground
	5		
	6		
Rx+	7	Blue	Tx+
Tx-	8	White	Rx-
	9		

Appendix B: Tx-Rx Invert Sony 9 pin CABLE			
Function: Controlled Device	9 pin 'D' Male on Cable	9 pin 'D' Male on cable	Cable Colour
	1	1	
Tx-	2	8	Red
Rx+	3	7	Yellow
Ground	4	4	Screen
	5	5	
	6	6	
Tx+	7	3	Blue
Rx-	8	2	White
	9	9	

Appendix C: Eavesdrop Sony 9 pin CABLE				
Function: Controller	Eavesdrop Controller 9 pin 'D' Female on Cable	Controller 9 pin 'D' Female on Cable	Device 9 pin 'D' Male on cable	Function: Controlled Device
Rx-	2	2	2	Tx-
Tx+		3	3	Rx+
Ground	4	4	4	Ground
Rx+	7	7	7	Tx+
Tx-		8	8	Rx-

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