

AWS 900 MIDI INTERFACE SETUP

INTRODUCTION TO MIDI

MIDI (Musical Instrument Digital Interface) was conceived as a mechanism for transmitting and receiving large amounts of time-sensitive information over a simple send and receive path. Originally conceived for live performance, It has now become one of the most robust standards in use for the interconnection of systems in recording studios, audio and video production and composition environments.

A MIDI data byte is transmitted in 320µs. All AWS control data is transmitted or received as 'Controller Data' which consists of two MIDI data bytes or a transmit/receive time of 640µs per a message. This is orders of magnitude faster than the control update rates used by console automation systems which fall in the frame (40/33.33ms) to 1/4 frame (10/8.33ms) region.

The AWS 900 uses an exclusive MIDI IN/OUT pair for each group of 8 channels. This dedicates the full bandwidth of a 16 channel MIDI interface to carry AWS control and status data to and from the DAW.

The use of MIDI also allows greater cable lengths between the console and the DAW, USB can be used at a maximum length of 5m, whereas MIDI can run up to lengths of 15m.



Figure 1 - AWS 900 at Solid State Logic Headquarters

CONNECTING A MIDI INTERFACE TO YOUR AWS 900 AND DAW

Physical connection between the AWS 900 console and your DAW system is very simple. The console communicates with the DAW via three MIDI ports located on the rear of the console (four if Total Recall installed):

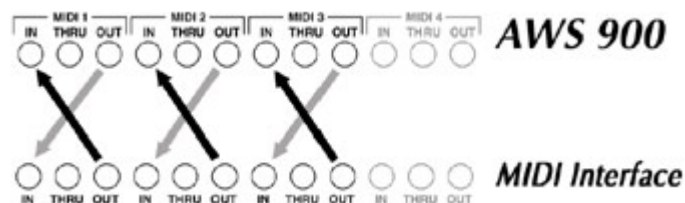


Figure 2 - MIDI connections from the MIDI Interface to the AWS 900

These MIDI ports should be connected to your DAW MIDI interface unit, and require three available ports (where one single port includes an IN and OUT socket). To connect one port, the output of the MIDI interface unit port 1 should connect to the MIDI 1 input port of the AWS 900. Also, the MIDI output of the AWS 900 port 1 should connect to the input of your MIDI interface unit port 1. Repeat this for the other two ports, using the diagram above as a guide. The fourth port is used for Total Recall if installed.



Figure 3 - Emagic AMT8



Figure 4 - Emagic Unitor 8



Figure 5 - MOTU MicroLite



Figure 6 - MOTU MIDI Express 128

We have had a number of instances when MIDI communication has failed or been unreliable when using the DigiDesign MIDI IO unit. This is because the MIDI IO unit only supplies +4.2V on its MIDI OUT connectors, rather than the +5V required by the MIDI hardware specification. For this reason SSL advises against the use of the DigiDesign MIDI IO interface with the AWS 900 unless it has been modified to provide +5V on its MIDI outputs.

SETUP WITH PRO TOOLS

Before MIDI is connected and configured between Pro Tools and the AWS 900 console, the AWS 900 TFT screen will display the following in the top right corner of the screen:



Figure 7 - TFT screen on AWS 900

Now go into the following menus in Pro Tools: *Setups > Edit MIDI studio setup...*

When the MIDI setup is opened in Pro Tools it will scan for MIDI interfaces. When found it will appear with each of its ports numbered.



Figure 8 - MIDI Interface display in Pro Tools

Click on Add Device at the top of the window. Here a default keyboard image will appear which can then be connected to the MIDI interface.



Figure 9 - New External Device display in Pro Tools

Double click on the device to enter the properties of the device.



Figure 10 - Properties of the AWS 900 displayed in Pro Tools

Enter the following:

Name: AWS 900

Manufacturer: Solid State Logic

Model: AWS 900

If you would like to add an image of the AWS 900 please visit <http://www.solid-state-logic.com/midiinterface/midiinterface4.php> and save it in the following place in your Library folder for the system:

/Library/Audio/MIDI Devices/Generic/Images/



Figure 11 - AWS 900 icon for Pro Tools

Next click on the More Properties button and add 3 more ports giving 4 in total (the final port for Total Recall if installed).

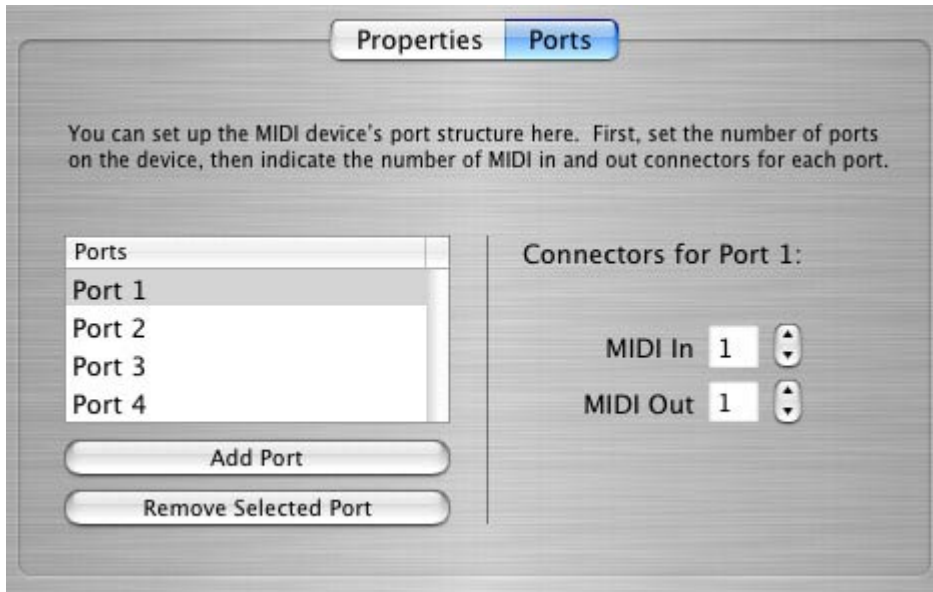


Figure 12 - More Properties displayed in Pro Tools under properties of the device

Connect the device to the MIDI interface using the mouse by clicking on the small arrows and drag to the MIDI interface arrows – continue for all ins and outs for the 4 ports.

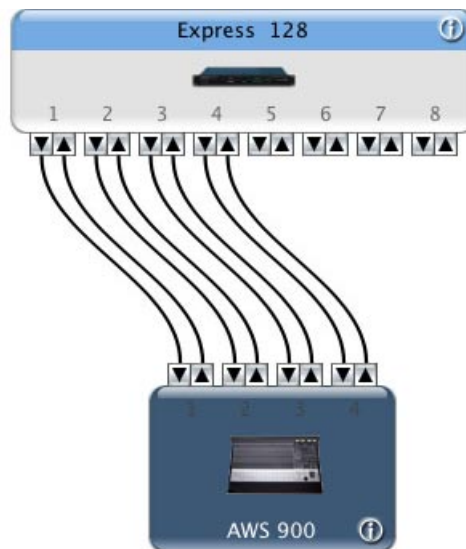


Figure 13 - MIDI connections displayed in Pro Tools

Now go into the following menu: *Setup > Peripherals*

Select the following in the table to enable the MIDI interface:

	Type	Receive From	Send To	# Ch's
#1	HUI	AWS900Prt1	AWS900Prt1	8
#2	HUI	AWS900Prt2	AWS900Prt2	8
#3	HUI	AWS900Prt3	AWS900Prt3	8
#4	none	none	none	

Figure 14 - HUI Setup in Pro Tools

On the AWS 900 desk, the TFT screen will now display the following:



Figure 15 - TFT screen on AWS 900