



Satellite Link

Version 8.0

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chapter 1

Introduction to Satellite Link

The Digidesign® Satellite Link option lets you link up to 5 Pro Tools® systems (or up to 4 Pro Tools systems and an Avid® Media Composer® or Video Satellite LE system) over an Ethernet network so that you can cue, play, and stop the transports, make play selections, and solo tracks across any of the systems from any linked workstation.

 *Video Satellite LE provides limited Satellite Link features. For more information on using Satellite Link with Video Satellite LE, see the Video Satellite LE Guide.*

From each linked Pro Tools system, Satellite Link lets you link and unlink networked systems and see the link status of other connected systems.

By setting Satellite Link preferences, you can configure those Pro Tools systems for single- or multi-operator workflows.

Satellite Link can be used simultaneously with Digidesign MachineControl™. Satellite Link allows one linked Pro Tools system to go online and drive a 9-pin capable device.

On systems with a D-Control® console, Satellite Link can work in conjunction with D-Control Multi-mode, allowing you to operate the transport of any of the networked Pro Tools systems from the D-Control Transport section.

System Requirements and Compatibility Information

Satellite Link requires a Digidesign-qualified Pro Tools|HD® system running Pro Tools 8.0 or higher.

Each satellite Pro Tools system must have an iLok authorization for the Satellite Link option and have an Ethernet connection to a Local Area Network (LAN). The administrator Pro Tools system does not require an iLok authorization.

In addition, each Pro Tools system in a Satellite Link network must be resolved to a common video reference, or “house sync,” using a Digidesign SYNC HD™ or SYNC I/O™.

To use Media Composer with Satellite Link, Media Composer 3.1 with the Video Satellite option is required.

Compatibility Information

Digidesign can only assure compatibility and provide support for hardware and software it has tested and approved.

For complete system requirements and a list of Digidesign-qualified computers, operating systems, hard drives, and third-party devices, refer to the latest information on the Digidesign website:

www.digidesign.com/compatibility

Digidesign Registration

Review the enclosed Digidesign Registration Information Card and follow the instructions on it to quickly register your purchase online. Registering your purchase is the only way you can be eligible to receive complimentary technical support and future upgrade offers. This is one of the most important steps you can take as a new user.

About This Guide

This guide describes features of the Satellite Link option. For complete instructions on connecting and configuring your Pro Tools|HD system, see the *HD Setup Guide*.

For additional information about using Pro Tools software, see the *Pro Tools Reference Guide*.


Conventions Used in This Guide


Digidesign guides use the following conventions to indicate menu choices and key commands:


Convention	Action
File > Save	Choose Save from the File menu
Control+N	Hold down the Control key and press the <i>N</i> key
Control-click	Hold down the Control key and click the mouse button
Right-click	Click with the right mouse button


The names of Commands, Options, and Settings that appear on-screen are in a different font.

The following symbols are used to highlight important information:

 *User Tips are helpful hints for getting the most from your system.*

 *Important Notices include information that could affect your data or the performance of your system.*

 *Shortcuts show you useful keyboard or mouse shortcuts.*

 *Cross References point to related sections in this guide and other Digidesign guides.*

About www.digidesign.com

The Digidesign website (www.digidesign.com) is your best online source for information to help you get the most out of your Pro Tools system. The following are just a few of the services and features available.

Product Registration Register your purchase online. See the enclosed Digidesign Registration Information Card for instructions.

Support and Downloads Contact Digidesign Technical Support or Customer Service; download software updates and the latest online manuals; browse the Compatibility documents for system requirements; search the online Answerbase; or join the worldwide Pro Tools community on the Digidesign User Conference.

Training and Education Study on your own using courses available online or find out how you can learn in a classroom setting at a certified Pro Tools training center.

Products and Developers Learn about Digidesign products; download demo software or learn about our Development Partners and their plug-ins, applications, and hardware.

News and Events Get the latest news from Digidesign or sign up for a Pro Tools demo.

Pro Tools Accelerated Videos Watch the series of free tutorial videos. Accelerated Videos are designed to help you get up and running with Pro Tools and its plug-ins.

chapter 2

Installing Satellite Link

Network Connections

Satellite Link requires all linked systems to be connected to an Ethernet Local Area Network. All systems should be on the same subnet, and it is recommended that all systems be on the same Ethernet switch, in order to minimize response time over the network.

Installing Satellite Link Software

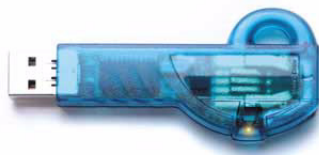
You need to install the Satellite Link option on each system that you want to use as a satellite. You do not need to install Satellite Link on the system that you want to use as the administrator system.

To install Satellite Link software:

- 1 Insert the Satellite Link Installer disc into your computer.
- 2 Double-click the Satellite Link installer application.
- 3 Follow the on-screen instructions to complete the installation.
- 4 When installation is complete, click Finish (Windows) or Close (Mac).

Authorizing Satellite Link

Satellite Link is authorized using the iLok USB Smart Key (iLok), manufactured by PACE Anti-Piracy, Inc.




iLok USB Smart Key

The iLok is similar to a dongle, but unlike a dongle, it is designed to securely authorize multiple software applications from a variety of software developers.

This key can hold over 100 licenses for all of your iLok-enabled software. Once an iLok is authorized for a given piece of software, you can use the iLok to authorize that software on any computer.

▲ *The iLok USB Smart Key is not supplied with your plug-in or software option. You can use the one included with your Pro Tools|HD system, or purchase one separately.*

To authorize Satellite Link:

- 1 If you do not have an iLok.com account, visit www.iLok.com and sign up for an iLok.com account.
 - 2 Transfer the license for Satellite Link to your iLok.com account by doing the following:
 - Visit <http://secure.digidesign.com/activation>.
 - Enter your Activation Code (listed on your Activation Card) and your iLok.com User ID. Your iLok.com User ID is the name you create for your iLok.com account.
 - 3 Transfer the licenses from your iLok.com account to your iLok USB Smart Key by doing the following:
 - Insert the iLok into an available USB port on your computer.
 - Go to www.iLok.com and log in.
 - Follow the on-screen instructions for transferring your licenses to your iLok.
-  For information about iLok technology and licenses, see the *iLok Usage Guide*.
- 4 Launch Pro Tools.
 - 5 If you have any installed unauthorized plug-ins or other software options, you will be prompted to authorize them. Follow the on-screen instructions to complete the authorization process.

Uninstalling Satellite Link

If you need to uninstall the Satellite Link option from your system, follow the instructions below for your computer platform.

Mac OS X

To uninstall an option:

- 1 Open the Pro Tools folder on your Startup drive (Applications/Digidesign).
- 2 Drag the option to the Trash and empty the Trash.

Windows XP

To uninstall an option:

- 1 Choose Start > Control Panel.
- 2 Double-click Add or Remove Programs.
- 3 Select the option from the list of installed applications.
- 4 Click Remove.
- 5 Follow the on-screen instructions to remove the option.

Windows Vista

To uninstall an option:

- 1 Choose Control Panel.
- 2 Under Programs, click Uninstall a Program.
- 3 Select the option from the list of installed applications.
- 4 Click Uninstall.
- 5 Follow the on-screen instructions to remove the option.

chapter 3

Using Satellite Link

Configuring Satellite Link

Configuring Network Settings

Satellite Link systems communicate over Ethernet Local Area Networks. You can configure the network settings on each Pro Tools system to build one or more Satellite Link networks on the same LAN.

Ethernet Interface

On computers with multiple Ethernet interfaces, you can select the interface you want to use for Satellite Link communications.

To select the Ethernet interface for Satellite Link:

- 1 Choose Setup > Peripherals and click Satellites.
- 2 Under Advanced Network Settings, choose the Ethernet interface from the Interface pop-up menu.
- 3 Click OK.

TCP/UDP Port

Systems in a Satellite Link network need to use the same TCP/UDP port to communicate. Available satellite systems will only appear on other satellite systems using the same port.

By default, Satellite Link uses TCP/UDP port 28282.

If the default port is already in use, or if you want to set up separate Satellite Link networks, you can select a different TCP/UDP port for Satellite Link communication.

To select the TCP/UDP port for Satellite Link communication:

- 1 Choose Setup > Peripherals and click Satellites.
- 2 Under Advanced Network Settings, enter the TCP/UDP port number you want the system to use.
- 3 Click OK.

Configuring a Satellite Link Network

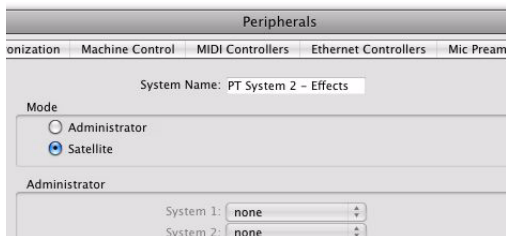
To set up Pro Tools systems or Video Satellite LE for Satellite Link operation, one Pro Tools system on the network must be designated an *administrator* system.

Other systems on the network are set up as *satellite* systems, then they are added to the network from the administrator system.

Configuring Satellite Systems

Do the following for each Pro Tools system you want to configure as a Satellite Link satellite:

- 1 Choose Setup > Peripherals and click Satellites.
- 2 In the System Name text box, enter a name for the system.
- 3 Under Mode, choose Satellite.
- 4 Click OK.



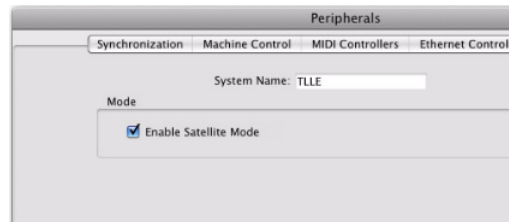
Configuring a satellite in the Satellites page of the Peripherals dialog

To configure a Media Composer system as a Video Satellite:

- 1 In Media Composer, choose Edit > Preferences.
- 2 In the Project window, click the Settings Tab and double-click Video Satellite.
- 3 In the Video Satellite Settings window, select Video Satellite Mode.
- 4 Click OK.

To set up a Video Satellite LE system as a satellite:

- 1 On the Pro Tools LE system, choose Setup > Peripherals and click Satellites.
- 2 In the System Name text box, enter a name for the system.
- 3 Under Mode, choose Enable Satellite Mode.
- 4 Click OK.



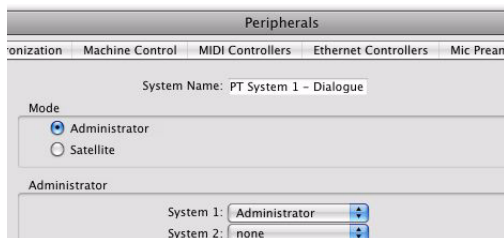
Configuring a Video Satellite LE system in the Satellites page of the Peripherals dialog

Configuring an Administrator System

If a Pro Tools system does not have the Satellite Link option installed, it can only operate as an administrator. You can, however, change a satellite system to an administrator system.

To configure a Pro Tools system as a Satellite Link administrator:

- 1 Choose Setup > Peripherals and click Satellites.
- 2 In the System Name text box, enter a name for the system.
- 3 Under Mode, choose Administrator.
- 4 Under Administrator, choose the current system from the System 1 pop-up menu.
- 5 Click OK.



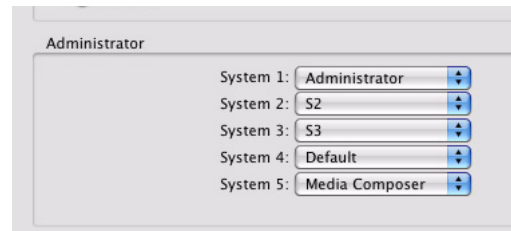
Configuring the Administrator system in the Satellites page of the Peripherals dialog

Adding Satellites to the Network

When systems have been configured as satellites, they become available on the administrator system. The satellite systems are then *declared* from the Administrator system to build the Satellite Link network.

To declare satellite systems:

- 1 On the administrator system, choose Setup > Peripherals and click Satellites.
- 2 Under Administrator, declare the systems you want to use as satellites from the System 2-5 pop-up menus.
- 3 Click OK.



Declared satellites in the in the Satellites page of the Peripherals dialog

Systems 1-5 appear, in order, from left to right, in the Synchronization section of the Transport window.



Declared satellites in the in the Synchronization section of the Transport window

Linking Satellite Systems

When a Pro Tools system has been declared as a satellite, it can then be placed in a linked state from the local machine or from another satellite. When a system is linked, the following features/commands can be controlled across all linked systems:

- Linking and unlinking of the system
- Transport controls (Stop, Play, FF, Rew)
- Play selections
- Scrub/Shuttle location
- Channel solo (including Solo clear)
- Clearing system errors (e.g., DAE errors)

Satellite Link Controls

When a Pro Tools system has been declared as a satellite, the following Satellite Link controls appear in the Transport window:

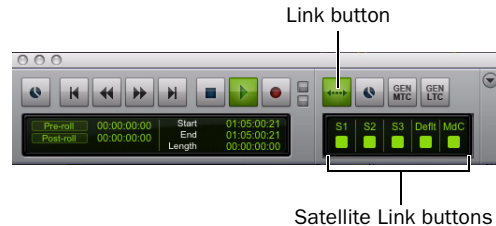
Link Button Controls the link status of the local system.

Satellite Link Buttons Control the link status of the other satellite systems. On every system, one of these buttons corresponds to that system's main Link button.

Link buttons highlight to indicate linked status.

To display Satellite Link controls in the Transport window:

- Choose View > Transport > Synchronization and View > Transport > Expanded.



Satellite Link controls in the Transport window

To link or unlink the local Pro Tools system:

- Click the Link button in the Transport window.

To link or unlink other satellite systems:

- Click the corresponding Satellite Link button in the Transport window.

To link or unlink all declared satellite systems:

- Alt-click (Windows) or Option-click (Mac) the Link button or a Satellite Link button in the Transport window.

Linking Systems During Playback

You can link or unlink a system while it or any other linked system is playing back (“join in play”), and the transports will play in sync. In cases where both systems are playing back, the newly linked system will cue to the location of the system on which the link was initiated.

Linking Play Selections

You can set linked Pro Tools systems to transmit and receive play selections from other satellite systems. This lets you configure your setup to selectively mirror Edit window selections between systems, or to have all systems mirror Edit window selections on all other systems.

◆ If you are working in a multi-user dub stage environment where dialog, FX, and music reside on different systems, it can be useful to set those systems to only transmit play selections, and set the recorder/video Pro Tools system to only receive play selections.

◆ If you are working in a single-user mix environment and are moving between systems, it can be useful to set all systems to transmit and receive play selections, so that you can work with the same selection on any system.

To set satellite Pro Tools systems to mirror play selections on other satellite systems

1 On the systems where you will be making play selections, do the following:

- Choose Setup > Preferences and click Synchronization.
- and –
- In the Satellites section of the Synchronization page, select the Transmit Play Selections option.

2 On the systems that you want to mirror the play selections, do the following:

- Choose Setup > Preferences and click Synchronization.
- and –
- In the Satellites section of the Synchronization page, select the Receive Play Selections option.

3 Make sure the systems are linked.

Solo Linking

You can set linked Pro Tools systems to transmit the solo status of their tracks and receive solo status information from other satellite systems.

◆ If you are working in a multi-user dub stage environment where dialog, FX, and music reside on different systems, it can be useful to set those systems to send and receive solos, and set the recorder/video Pro Tools system so that it does not transmit or receive solos.

◆ If you are working in a single-user mix environment and are moving between systems, it might be useful to set all systems to transmit and receive solos, so that solos propagate across all systems.

Solo Safe When Solo Linking is enabled, tracks on all systems retain their Solo Safe status.

Solo Clear When Solo Linking is enabled, a Solo Clear operation (Option+Solo) clears all solos on systems set to receive solos.

To set satellite Pro Tools systems to transmit or receive solo status:

1 On the systems that you want to solo tracks, do the following:

- Choose Setup > Preferences and click Synchronization.
- and –
- In the Satellites section of the Synchronization page, select the Transmit Solos option.

2 On the systems where you want tracks to follow solo behavior for solos on other systems, do the following:

- Choose Setup > Preferences and click Synchronization.
- and –
- In the Satellites section of the Synchronization page, select the Receive Solos option.

3 Make sure the systems are linked.

Using Solo Link without Linking Transport Controls

If you are synchronizing multiple Pro Tools systems to an external synchronizer, you can still take advantage of the Solo Link feature.

You can set a satellite Pro Tools system to always send its solo status, whether linked or unlinked, so you can solo tracks across systems without linking transport controls.

To set a satellite Pro Tools system to always solo even when it is not linked:

- 1 Choose Setup > Preferences and click Synchronization.
- 2 In the Satellites section of the Synchronization page, select the Solo Independent of Linked State option.

Solo Link Behavior in the Solo Modes

Solo in Place With Solo Link, when using Solo In Place, the mode of solo operation is determined by the system transmitting the solo.

- ◆ If a linked system is in Solo Latch mode, soloing a track on that system adds to the number of tracks in solo, regardless of the solo mode of other systems set to receive solos.
- ◆ If a linked system is in Solo X-OR mode, soloing a track on that system cancels all other system's solos regardless of the solo mode of other systems set to receive solos.

AFL and PFL Modes With Solo Link, AFL and PFL solos on a linked system have no effect on other systems.

An AFL-soloed track on a linked system can be muted by a Solo In Place on another system. To avoid this, use PFL instead of AFL.

Satellite Link Operation

Clearing Errors on Linked Systems

By default, linked systems will continue to operate if one of the systems experiences an error and its transport stops. Any error message on a linked system appears in the tool tip for the corresponding Satellite Link button in the Transport window.

You can set each system to stop playback when it experiences an error.

To clear an error dialog on a linked system:

- In the Transport window on another linked system, Shift-click the Satellite Link button for the affected system.

To set a linked system to stop the transport on all systems when an error occurs:

- Make sure the DAE Errors Stop All Linked Systems option is selected in the Synchronization Preferences.

To set all systems to stop the transport when an error occurs, make sure this option is selected on all linked systems.

Playback and Modal Dialogs

Linked systems will stop playback (or prevent playback from starting) if a modal dialog (such as the I/O Setup, Hardware Setup, or Playback Engine dialog) is opened on any linked system.

- ⚠ *To avoid interrupting playback on another system when opening a modal dialog, unlink the system before opening the dialog.*

Using Satellite Link with MachineControl

MachineControl Deck Control Mode can be used to operate a 9-pin synchronization device (such as a Soundmaster ATOM or a CB Electronics 9-Pin synchronizer), allowing Pro Tools to act as a “code only master” for systems controlled by the synchronizer.

Satellite Link lets you use MachineControl on one linked Pro Tools system at a time.

- ◆ When one linked Pro Tools system is already online and you go online with another linked Pro Tools system, Satellite Link will automatically take the first system offline.
- ◆ Any linked Pro Tools systems set to “Transport=Pro Tools” will follow Satellite Link transport commands.
- ◆ Any linked Pro Tools systems set to “Transport=Machine” cannot transmit Satellite link transport commands, but will follow Satellite Link transport commands if they are offline.

Control Surface Support for Satellite Link

Linking Satellite Systems

(D-Control, D-Command and C|24)

To link or unlink the local Pro Tools system:

- Hold Control (Windows) or Command (Mac) and press the Pro Tools Online switch in the Transport section.

Satellite Link Soft Keys

(D-Control and D-Command)

To link or unlink other satellite systems:

- 1 Hold Control and press the Modes switch in the Automation Soft Keys section.
- 2 Press the Soft Key that corresponds to the name of the system that you want to link or unlink.

The Soft Key lights solid to indicate that the corresponding system is linked, and flashes to indicate that the corresponding system is displaying an error.

To link or unlink all declared satellite systems:

- Hold Alt+Control (Windows) or Option+Command (Mac) and press the Pro Tools Online switch in the Transport section.

To toggle the solo transmit status of the local Pro Tools system:

- 1 Hold Control and press the Modes switch in the Automation Soft Keys section.
- 2 Press the Soft Key that corresponds to “Transmit Solo.”

The Soft Key lights solid to indicate that transmit solo is enabled.



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