3500PRO AND 3500PRO LE
SOFTWARE AND SYSTEM CONTROLLER

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About This Manual

This manual provides detailed instructions for the installation, operation, and maintenance of the PESA 3500Pro and 3500Pro LE Software and System Controller hardware.

Warnings, Cautions, and Notes

Warning statements identify conditions or practices that can result in personal injury or loss of life.

Caution statements identify conditions or practices that can result in damage to equipment.

Notes contain information important to the correct installation, operation, or maintenance of the equipment.

FCC Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

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Section I: Getting Started

Welcome to the 3500Pro manual! This section describes the system and explains how to set up both the hardware and software. For more detailed information about the hardware and software, refer to Section II and Section III.

The following topics are included in this section:

- Product Description
- Product Specifications
- Installing the Hardware
- Installing the Software

Chapter 1 – Introduction

1.1 Product Description

The 3500Pro System Controller is a low cost, full-featured microprocessor-based unit designed to interface with various configurations of PESA video and audio routing switchers. The 3500Pro System Controller, working in conjunction with the 3500Pro Control System software, enables users to configure and operate a routing switcher system from a standard IBM compatible PC. Both the 3500Pro System Controller and the 3500Pro Control System software are inherently flexible and easily configured. The 3500Pro LE has a smaller feature set and is designed for customers with smaller systems.

The 3500Pro System Controller utilizes the Motorola 68332 embedded microprocessor. In addition, it is equipped with 4 MB of RAM, 2 MB of FLASH memory, and 8 serial UARTS making the 3500Pro System Controller a high-powered control platform for its size.

The 3500Pro System Controller is capable of controlling up to a 576 input by 576 output, sixteen level routing switcher system. Standard features include independent control of each level, audio-follow-video switching, virtual matrix mapping, and software reentry. Matrix segmentation (breakup) is also a standard feature. Matrix segmentation enables RGB, Y/C, or multiple levels of audio to be configured as smaller matrixes within a larger matrix. Multiple levels of lock priority, 128 salvo capability, full diagnostics, and all-call switching are also included in the 3500Pro Controller's standard features plus the ability to configure 600 sources and destinations.

The controller supports the low-cost RCP control panels manufactured by PESA. The control panels are connected via twisted pair cable and can be remotely located up to 4000 feet from the controller. The control panels communicate with the 3500Pro Controller over a standard RS-485 interface. Two RS422 ports and two RS232 ports are provided for communications interface with the routing switcher system, the control system computer, and additional equipment items.

The 3500Pro System Controller is available as a stand-alone unit (rack mountable) or as a plug-in unit for routing switchers. The 3500Pro Controller is fully compatible with PESA's System 5, Lynx, Cougar, Jaguar, Tiger, and Cheetah lines of audio and video routing switchers.

1.2 Models of the 3500Pro Controller

The six models of the 3500Pro System Controller are described in the following table.

Table 1. 3500Pro System Controller Basic Models

Model	Description
3500Pro	Internal controller. One or two may be installed in any large-scale router (except the TDM3000).
3500Pro-S	Single: One controller in a 1RU chassis.
3500Pro-D	Dual: Two controllers in a 2RU chassis.
3500Pro-SE	Single Expandable: One controller installed in a 2RU chassis. Expand with Model 3500Pro-DE.
3500Pro-LE	Internal controller. One or two may be installed in any large-scale router (except the TDM3000).
3500Pro-LE-S	Single: One controller in a 1RU chassis.
3500Pro-LE-D	Dual: Two controllers in a 2RU chassis.
3500Pro-LE-SE	Single Expandable: One controller installed in a 2RU chassis. Expand with Model 3500Pro-LE-DE.

1.3 Specifications

1.3.1 Operational Environment

Temperature ..... 0-40°C

Operational Humidity ..... 0-90% Non-Condensing

1.3.2 Physical Characteristics

3500Pro-S

Height ..... 1.75 in (45 mm) (1 Rack Unit)
Width ..... 19 in (483 mm)
Depth..... 8 in (203 mm)

3500Pro-D

Height .....3.50 in (89 mm) (2 Rack Units)
Width ..... 19 in (483 mm)
Depth..... 10 in (254 mm)

1.3.3 Power

3500Pro-S

Input ..... 8.5 ±1.5 VDC
Input Connector, 3500-S..... 3-Contact Proprietary

3500Pro-D

Input ..... 8.5 ±1.5 VDC
Input Connector, 3500-D ..... 6-Contact Proprietary

PS130 Internal Power Supply (Optional for 3500Pro-D Only)

Part Number..... 81-9065-2048-0
Input ..... 105-240 VAC, 50-60 Hz
Input Connector IEC 320 Receptacle
Output .....±8.9 VDC at 5.5 A

1.3.4 IEC 320 Line Cords

US
Part Number 81-9028-0403-0
Connectors..... IEC 320-C13 to NEMA 5-15P
UK
Part Number 81-9028-TBD-0
Connectors.....IEC 320-C13 to BS 1363A
Euro
Part Number 81-9028-0411-0
Connectors.....IEC 320-C13 to CEE 7/7 Schuko

1.3.5 Communications

Number of RS-232 Ports..... 2
Number of RS-422 Ports..... 2
Data Rate..... 9600/38400 baud

Chapter 2 – Installing and Setting up the System

To get started with the 3500Pro system, first you need to install and set up the hardware. Next, you need to connect the hardware to the computer that will run the3500Pro software. Finally, you will install the 3500Pro software and establish communication with the hardware. This chapter describes how to perform these steps. This chapter provides basic instructions for setting up your system. For detailed information about the hardware and how to operate it, see Section II. For detailed information about the software and how to work with it, see Section III.

2.1 Shipping Damage Inspection

Immediately upon receipt, all shipping containers should be inspected for damage caused in transit. If any damage is noted, save all packing material and contact both PESA and the carrier as soon as possible.

2.2 Unpacking

This equipment contains static sensitive devices. A grounded wrist strap and mat should be used when handling the 3500Pro System Controller.

Carefully unpack the equipment and compare the parts received against the packing list. If any parts appear to be missing, please contact PESA immediately.

2.3 Installation Location

This equipment is designed to be installed in a standard 19-inch equipment rack located in an environment conforming to the specifications shown in Chapter 1. Each unit should be located as close as possible to its associated equipment to minimize cable runs. Sufficient space must be provided behind the equipment racks to allow for control, signal, and power cables. All panel mounting holes should be utilized and mounting hardware tightened securely.

Consideration should be given to the connection of this equipment to the supply circuit and the effect that possible overloading could have on overcurrent protection circuits and supply wiring. Refer to the nameplate ratings when addressing this concern.

Install the equipment into the rack as follows:

1. Insert the panel assembly into the equipment rack and support the bottom of the panel assembly until all mounting hardware has been installed and properly tightened.
2. Install the bottom two panel mounting screws.
3. Install the top two panel mounting screws.
4. Install any remaining panel mounting screws.
5. Tighten all of the panel mounting screws until they are secure.

2.4 Internal Installation - Model 3500Pro

One or two 3500Pro or 3500Pro LE System Controllers can be installed in a any of the large scale routers except for the TDM3000. For detailed instructions for installing the controller, refer to the related product manual.

2.5 Interface Connections

For reasons of personal safety, and to prevent damage to the equipment or cables, the following guidelines should be followed when connecting cables to this equipment.

1. Install the equipment in the rack before connecting cables.
2. All cables should be carefully strain relieved to prevent connector separation.
3. To the extent possible, separate control, signal, and power cables to minimize crosstalk and interference.
4. The liberal use of nylon cable ties to secure cables to the rack is encouraged. This will minimize the amount of force transmitted to the equipment and help route cables away from hazardous areas.
5. Route cables away from walk areas to avoid creating a safety hazard.

2.5.1 Model 3500-S Connection Guide

The following section shows how to connect the 3500Pro and 3500Pro-S. For detailed information about each available option, refer to Section II.

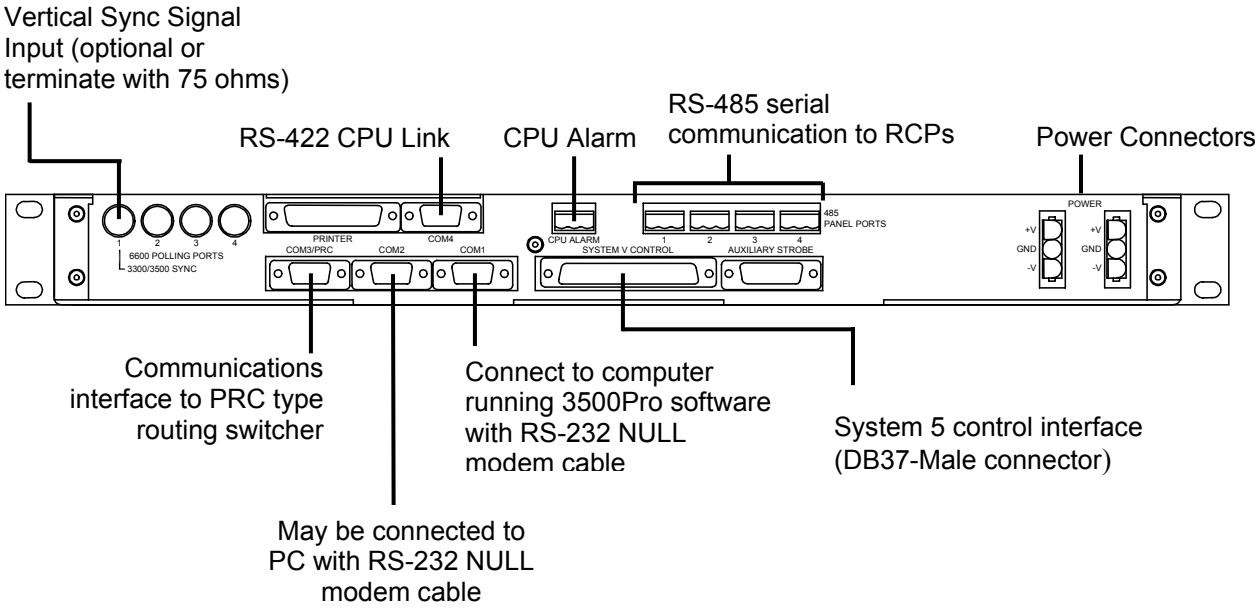


Figure 1. 3500Pro-S Connection Guide

2.5.2 Models 3500Pro-D (and 3500Pro-SE / 3500Pro-DE) Connection Guide

The following section shows how to connect the 3500Pro-D, SE, and DE. For detailed information about each available option, refer to Section II.

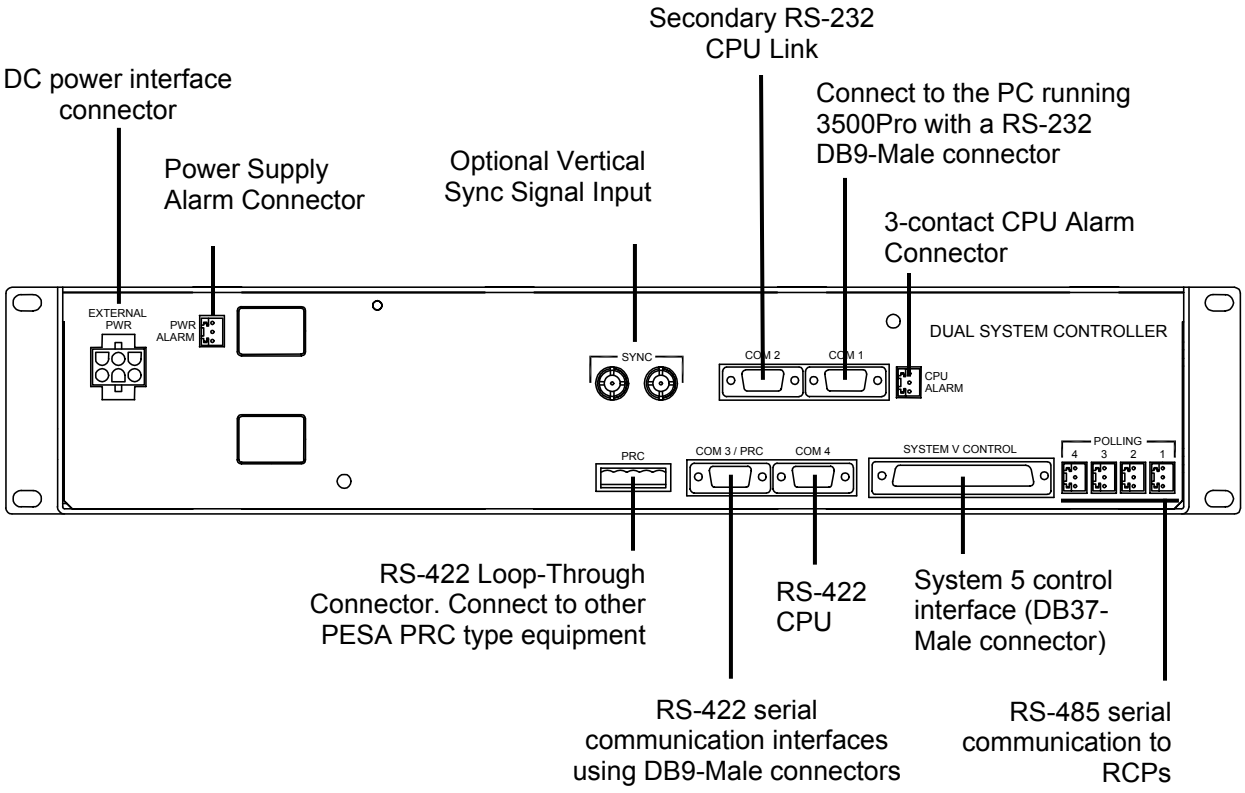


Figure 2. 3500Pro-D (and 3500Pro-SE / 3500Pro-D

2.5.3 Model 3500Pro Connection Guide

Installing internal 3500Pro models are different for each switcher. For detailed information about how to install 3500Pro internal models and how to connect the hardware, refer to the appropriate switcher manual.

However, you will *always* need to establish a connection from the COM1 port or Serial 1 port on the rear of the router switcher to the PC that will run the 3500Pro software.

2.6 Installing the Software

After installing the hardware and establishing a connection with the computer where you will install the software, you need to install the 3500Pro software. Then you can create a basic configuration to communicate with the controller. This chapter describes how to do this.

Before you start this procedure, make sure you have connected the 3500Pro System Controller to the PC where you will install the software (as shown below).

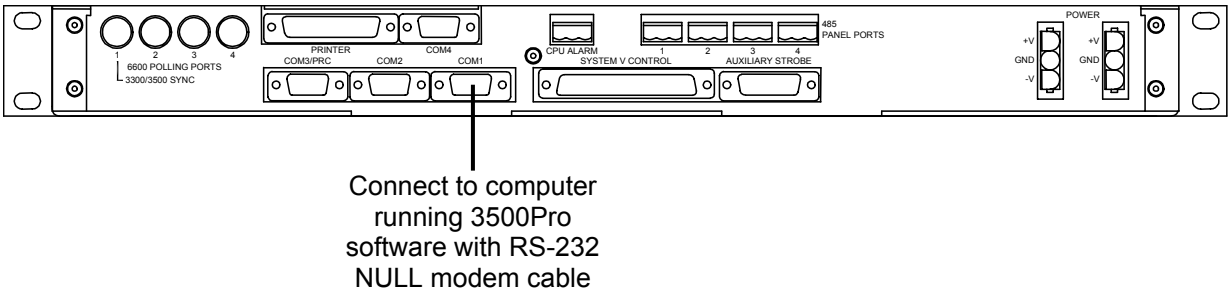


Figure 3. Connecting the 3500Pro-S to the PC

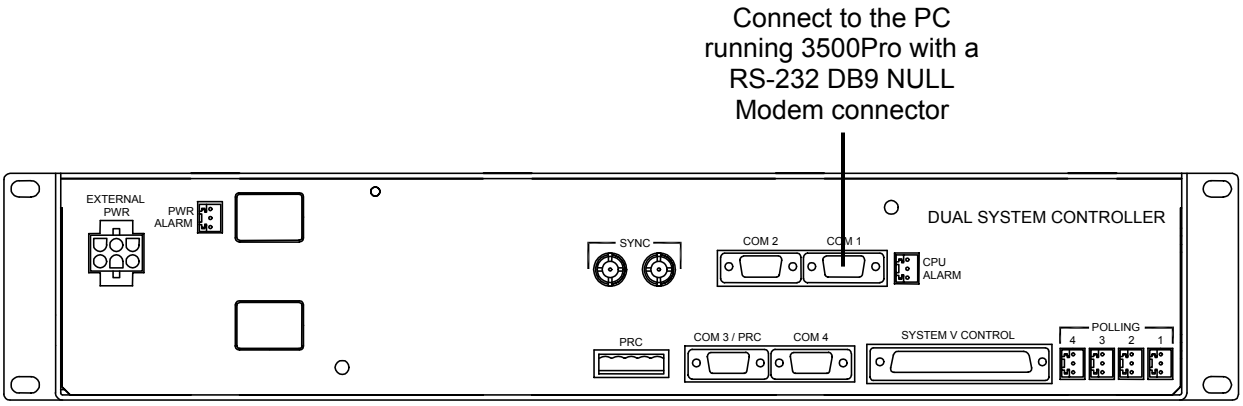


Figure 4. Connecting the 3500Pro-D, DE, and SE to the PC

NOTE

Systems using an internal 3500Pro are different depending on the type of system you purchased. However, you will always need to establish a connection from the COM1 port or the Serial 1 Port to the PC.

2.6.1 Hardware and Software Requirements

The minimum PC requirements to run Win3500Pro are:

- Processor: 500 MHz
- Memory: 128 MB of RAM
- Monitor: 800X600 SVGA
- Serial Port: One serial port available from COM1 through COM4 available for CPU Link use (Minimum of a 16550 UART preferred.)
- Hard Disk: 100 MB of available space
- Operating System: Microsoft® Windows® NT™ 4.0, Microsoft Windows 2000, and Microsoft Windows XP (Home and Pro)

2.6.2 General Specifications Table

	3500Pro	3500Pro LE
Max. Number of Levels	16	8
Max Number of Inputs/Outputs per Level	576	144
Max Number of Components	32	16
Max Number of Tielines	64	0
Max Number of Categories	254	254
Max Number of Sources	600	180
Max Number of Destinations	600	180
Max Number of Reentries	8	0
Max Number of Salvos	128 (1024 switches can be allocated across all 128 salvos)	64
	3500Pro and 3500Pro LE	
Lock Priority Range	0-255 ("0" is Highest Priority)	
Max Number of Control Panels	500	
Panel Address Range	1-1023	
Panel Requestor Code Range	1-65535	
Chop Rate	1-255 Frames	
Component Types	RM5 (System 5)	PRC, XTN, TGR
Offset Range	0-255	0-4094
Strobe Range	1-5	1-63
Address Range	1-255	1-4095

2.6.3 Installing the Software

Follow these steps to install the software.

1. Select **Start > Settings > Control Panel**. The Control Panel window displays.
2. Double-click Add/Remove Programs. The **Add/Remove Programs** window displays.
3. Click the **Add New Programs** icon and the following screen displays.

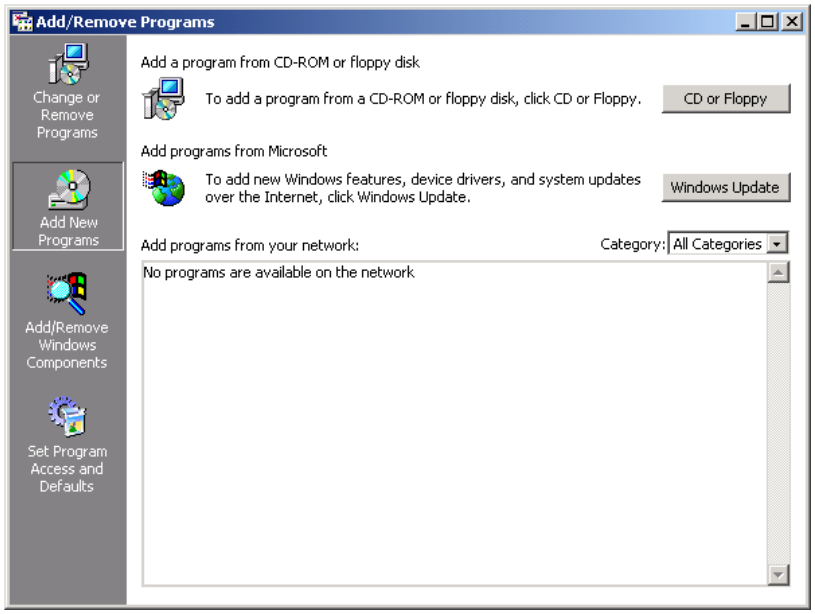


Figure 5. Add/Remove Programs Window

4. Click the **CD or Floppy** button. The following screen displays. Select the **Next >** button.

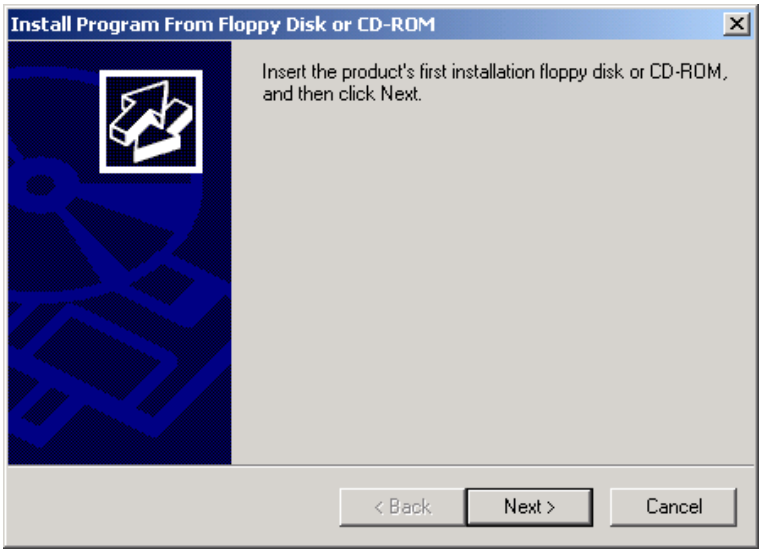


Figure 6. Install Program Window

5. Verify that the correct drive is listed in this window, then select **Finish**. The Setup will now begin.

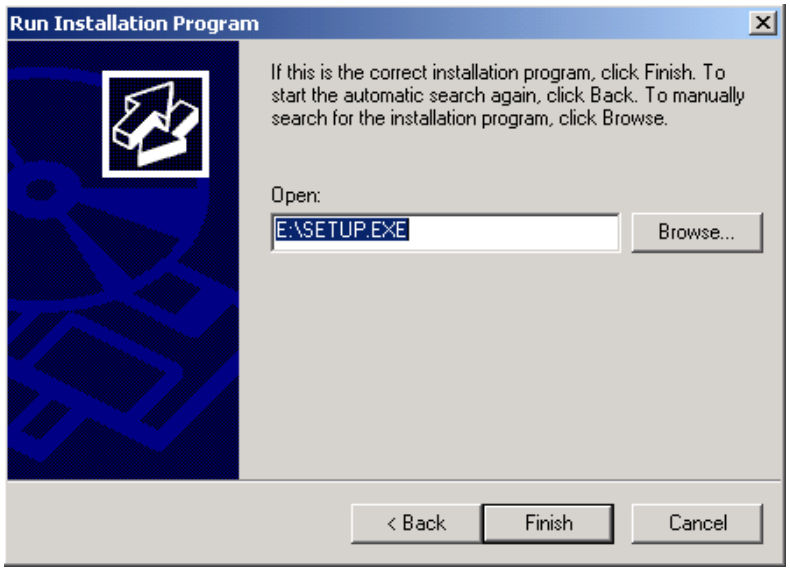


Figure 7. Run Installation Program Window

6. Before the 3500Pro software can be installed, Microsoft Data Access Components (MDAC) must be installed. Select **OK** in the following window.

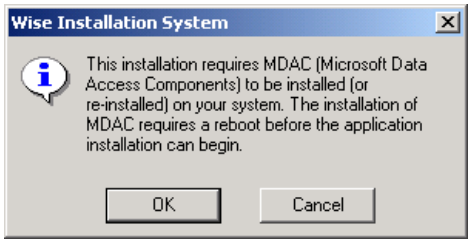


Figure 8. MDAC Installation Notice

NOTE **If your computer already has MDAC installed, this step will simply be skipped and you will instead go directly to step 8 (without a reboot).**

The following prompt displays and MDAC will be installed.

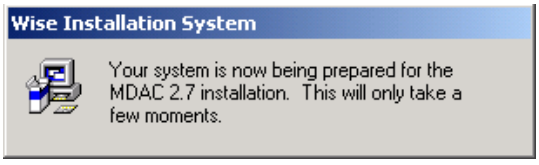


Figure 9. Second MDAC Installation Notice

7. After MDAC is successfully installed, the following prompt displays. You must reboot your machine to proceed with the installation of 3500Pro. Make sure all other applications are closed, then select **OK** in this window.

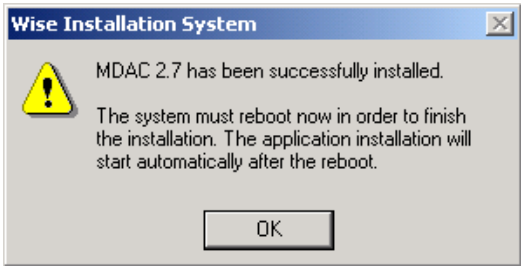


Figure 10. MDAC Successful Installation Notice

8. After you reboot, this window will automatically display. Do not open any other Windows applications while installing 3500Pro. Select **Next** to proceed with the installation.

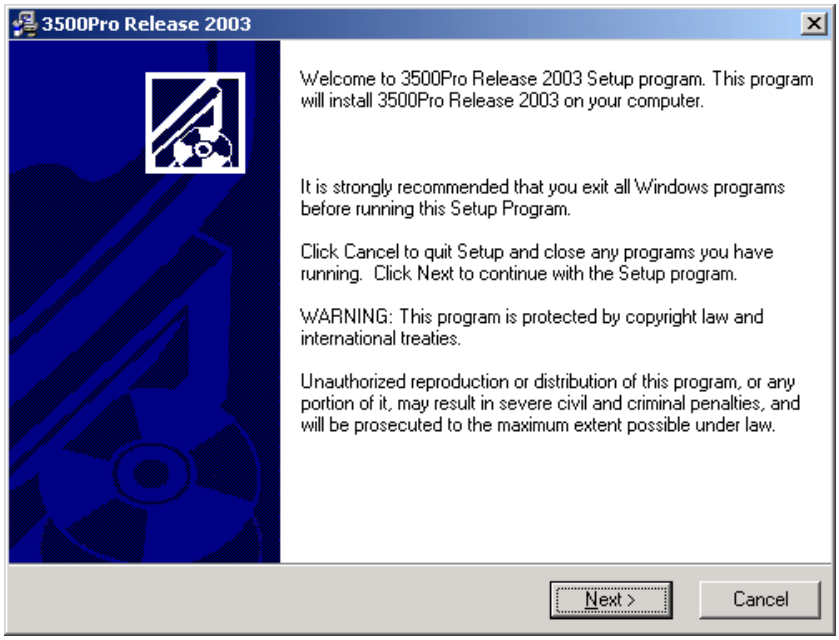


Figure 11. 3500Pro Install Window

9. Use the Browse button to select the installation location for the 3500Pro software. When the correct directory location displays in the following window, select **Next**.

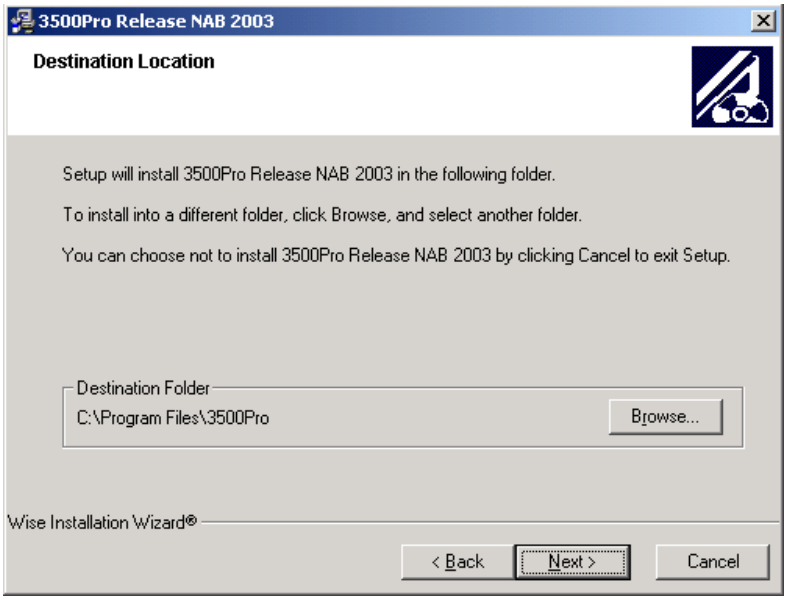


Figure 12. Install Location Window

10. If you select the **Browse** button, this window will display. Select the drive where you want to install the software then select **OK**.

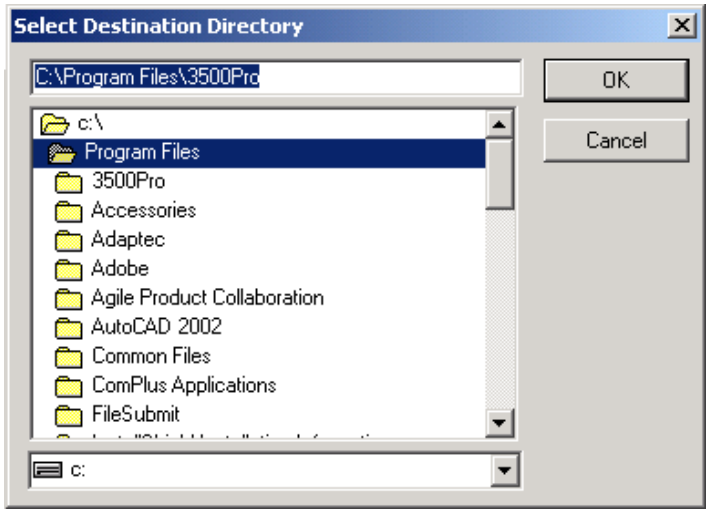


Figure 13. Select Destination Directory Window

11. Next, select the components you want to install. Each item that you want to install should have a check mark displayed. “Configurator” is the Configuration Editor where you set up configuration files. “Status” is the Status module that allows you to monitor the 3500Pro system. “Diagnostics” allows you to troubleshoot the system. Select the options you want to install and select **Next**.

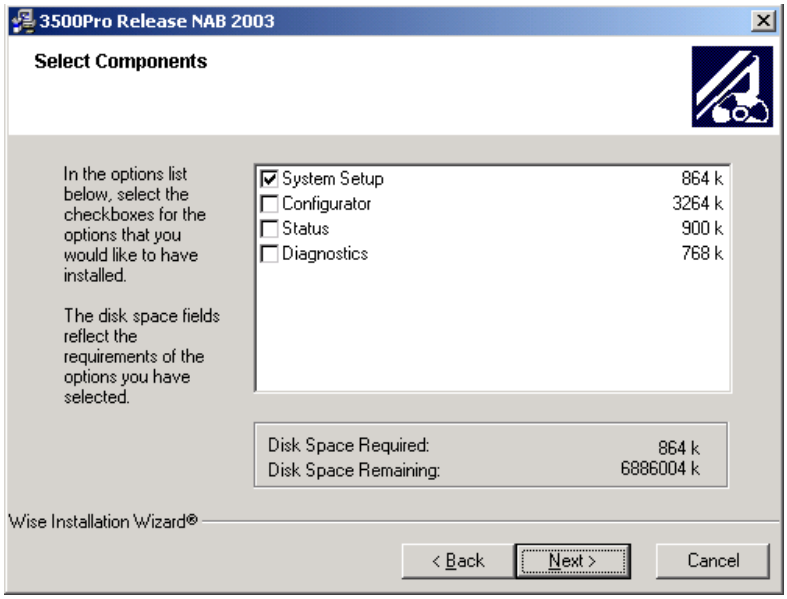


Figure 14. Select Components Window

12. When the following screen displays, select **Next**.

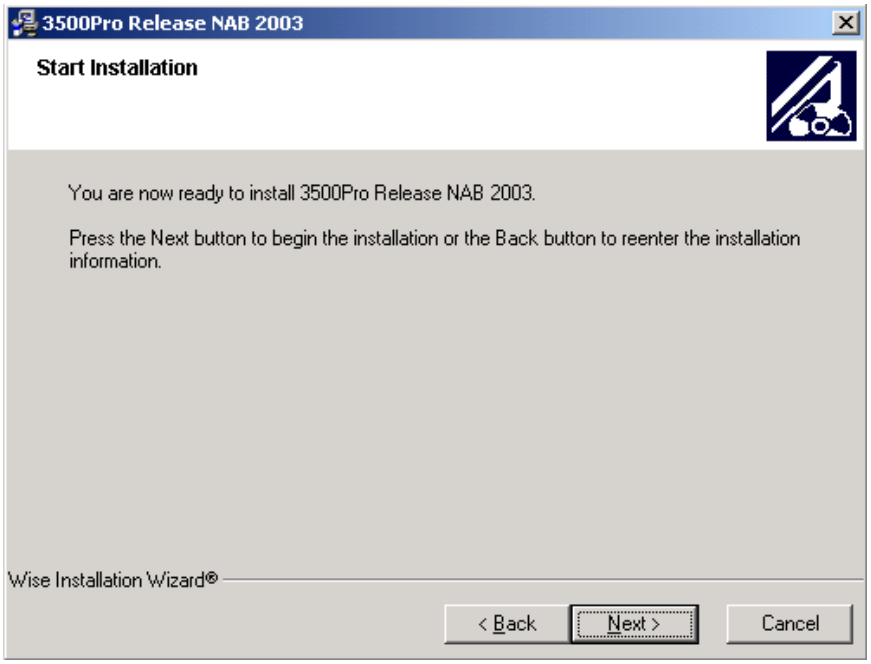


Figure 15. Start Installation Window

13. The software will install, and the following screen will show the progress.

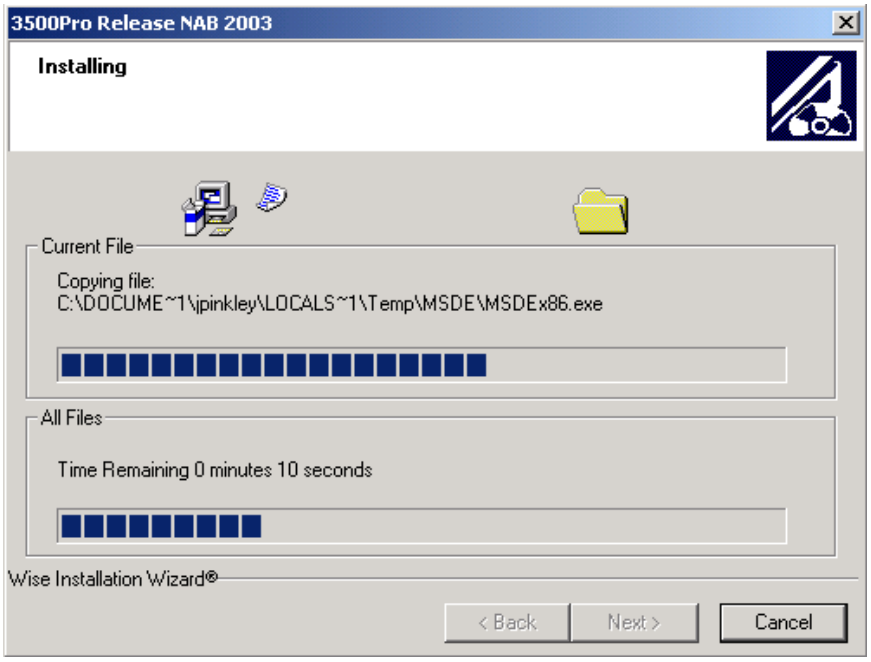


Figure 16. Install Progress Window

14. Then, this window displays.

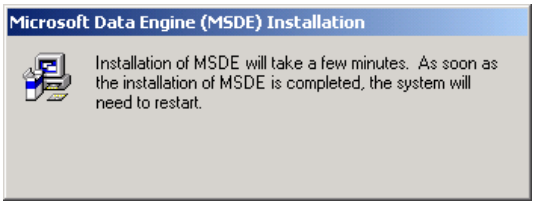


Figure 17. MSDE Install Notice

15. After this process completes, your computer will restart. After it reboots, log back into your computer, and the install process will automatically continue.

    You will see the same screens that displayed during steps 8-13. Select the same options and directory location that you selected during the first part of the install.

    After the process shown in Figure 16 is complete a second time, you will see the following window:

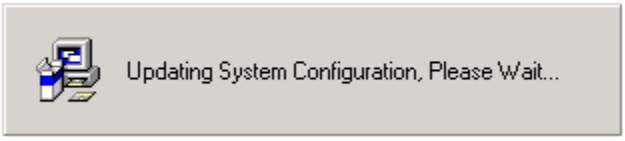


Figure 18. Updating System Configuration

After a few minutes, another window will display. This will show you the status of the actual installation procedure. You do not have to do anything during this process.

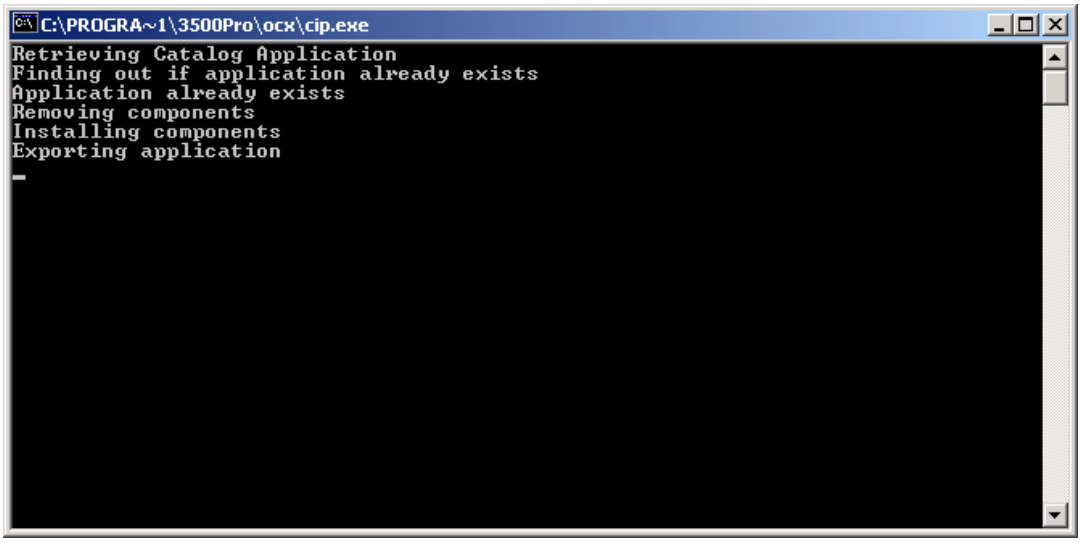


Figure 19. Installation Progress

16. After this process completes, the final window displays. Select **Finish** to complete the software installation process.

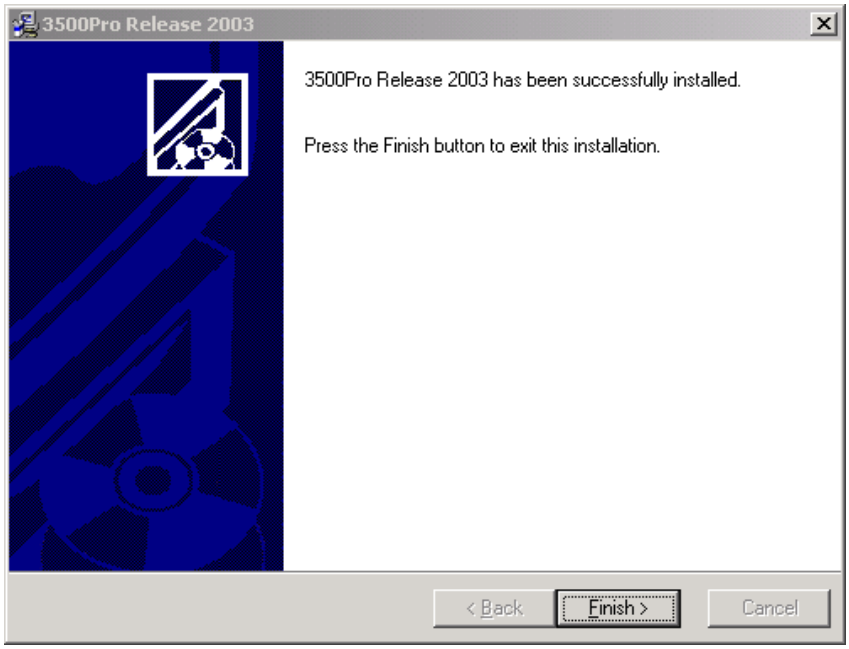


Figure 20. Finish the Installation

2.7 Install the SQL Server Service Pack 3

You also need to install the SQL Server Service Pack 3 software before you can use the 3500Pro.

1. Double-click the `sql70sp3i.exe` program from the install CD directory. The following window displays.

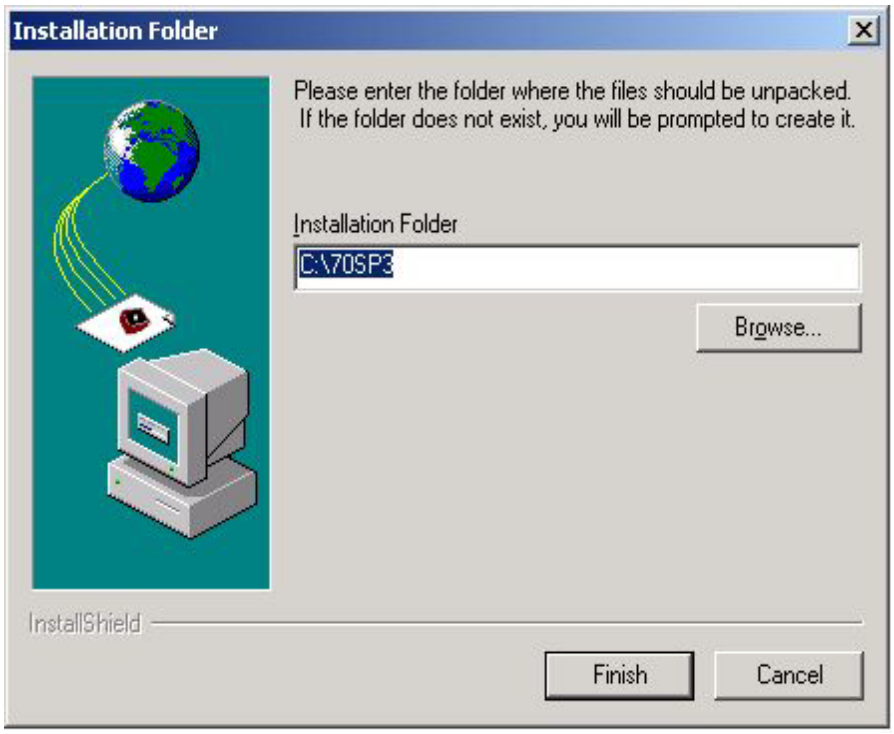
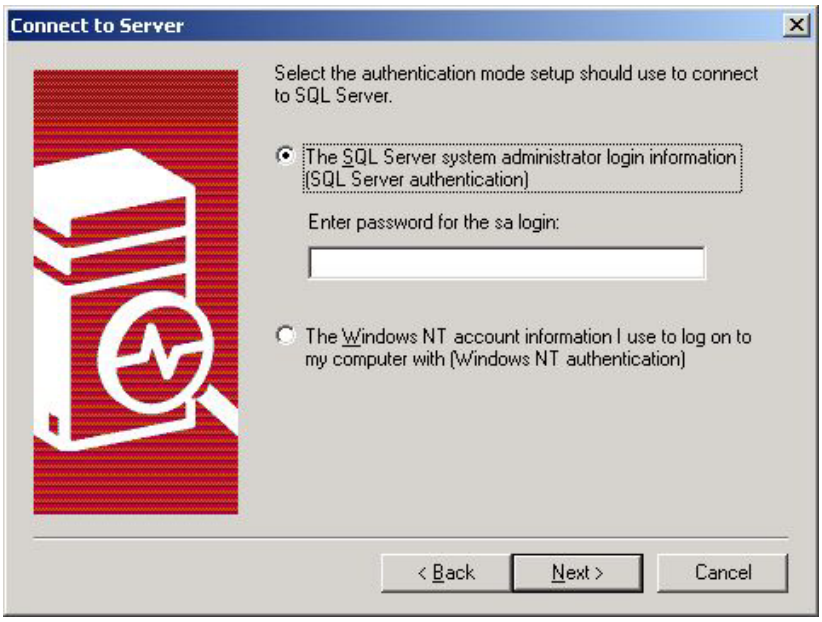


Figure 21. SQL Server Service Pack Install Window

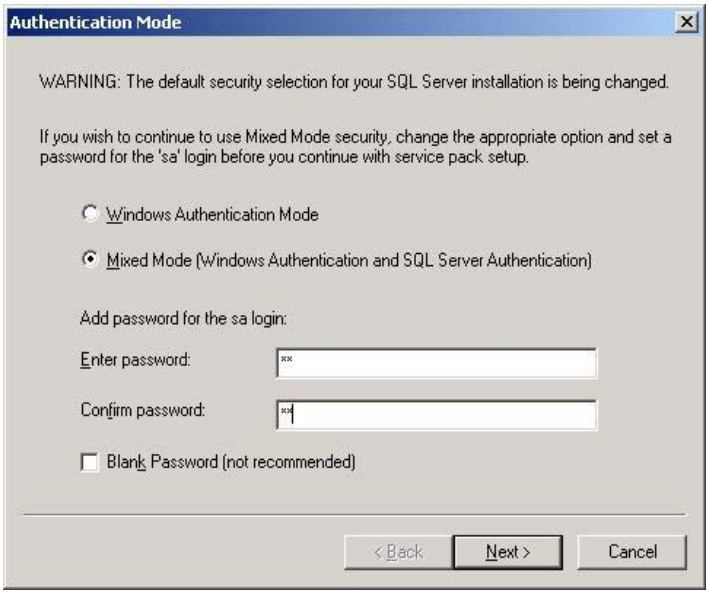
2. Make sure the following directory is listed in this window: `C:\70SP3`

If your computer already has this software installed, a prompt will display. You can choose to either overwrite the existing software or exit the installation.

3. Open your Explorer program and change to the `C:\70SP3` directory.
4. Double-click `SETUP.BAT`. An install window will display. Follow the instructions to proceed.
5. When the following window displays, select the first button. If this is the first time you have installed this software, leave the password field blank. If you have installed this software before, enter the password **sa** in the password field. Select **Next** to continue.



When prompted (toward the end of the process), add the user to “sa” with the password to "sa". (Use the mixed mode option)



The service pack has now been installed. The PC will reset to finish the installation.

2.8 Establishing a Connection to the 3500Pro System Controller Hardware

After you have installed the software, you need to establish a connection to the hardware. After you have established a connection, you can then define the configuration for the hardware, and next add additional components to your system.

2.8.1 Initialize the Database

Before you open the 3500Pro software, you must initialize the database.

1. Select **Start > Programs > PESA 3500Pro > Runtime Database Initialization**. The following window displays:

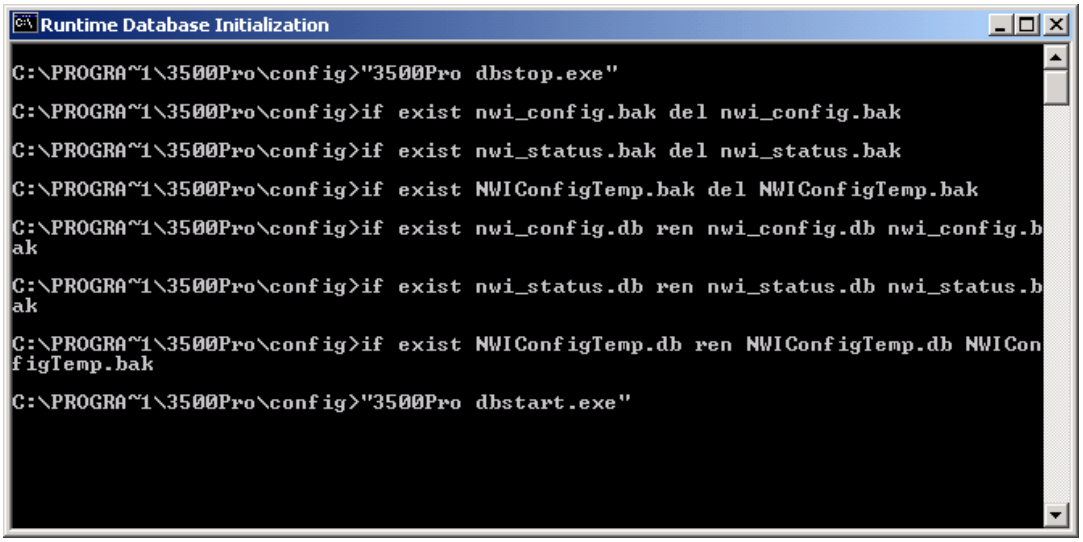


Figure 22. Runtime Database Initialization

2. This batch file will create new empty databases from the master database template. After this process is complete, the window closes and you can move on to the next step.

2.8.2 Downloading a Configuration to the Controller

Select **File > Download Configuration to Controller**. This will send the information in the configuration file you just opened to the controller. You will see:

Exporting the configuration to a file.
Downloading to the Controller.
Configuration Download is complete!

Congratulations! You have established a connection.

Now, you can start to customize the configuration file to suit your requirements. Go on to Section III for detailed instructions for adding to your configuration and customizing it for your applications.

Section II: Hardware Reference Guide

The section provides detailed information about the 3500Pro System Controller hardware. The 3500Pro-S and 3500Pro-D are both described.

Chapter 3 – Hardware Description

This chapter provides descriptions for all of the available features in the 3500Pro-S and 3500Pro-D System Controllers. For details about internal 3500Pro controllers, refer to the appropriate routing switcher manual.

3.1 Model 3500Pro-S

All interface connections are made at the rear of this equipment as shown in the following figure.

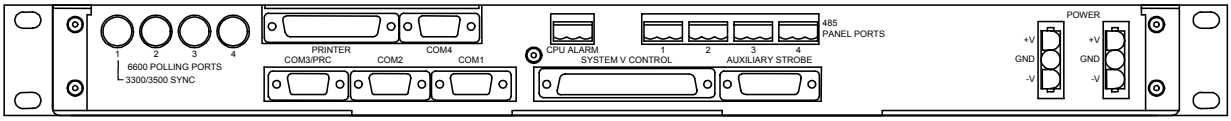


Figure 23. 3500Pro-S Rear View

3.1.1 3300/3500Pro SYNC / 6600 POLLING PORT 1 (J1)

This BNC connector is used for an optional vertical sync signal input. If it will not be used, install a 75 Ohm terminator (Part No. 81-9029-0668-4). This signal allows for switches to be scheduled for vertical interval timing.

3.1.2 6600 POLLING PORTS 2, 3, and 4 (J2, J3, J4)

These BNC connectors are reserved for future use. There is no internal connection and they do not need to be terminated.

3.1.3 PRINTER (J5)

This DB25-Female connector is reserved for future use. See the following figure for an orientation view showing contact locations.

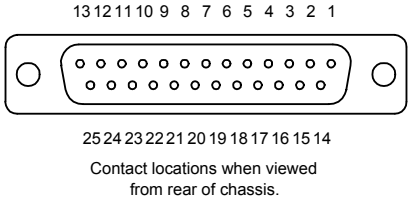


Figure 24. 3500Pro-S J5 (PRINTER) Connector

3.1.4 COM 1 (J14), COM 2 (J13)

These DB9-Male connectors provide RS-232 serial communication interfaces. See Figure 25 for an orientation view showing contact locations.

COM 1 is the primary RS-232 CPU Link and may be connected to the PC running 3500Pro Control System software with a null modem cable (Part No. 81-9028-0393-0). If necessary, a cable up to 50 feet in length may be fabricated in the field as shown in Figure 26. COM 1 may only be used with the P1E protocol, at either 9600 or 38400 baud. The communication rate is selected with switch S1 as described in "S1-3 COM 1 Rate" on page 44.

If necessary, a cable up to 50 feet in length may be fabricated in the field as shown in Figure 27.

COM 2 is a secondary RS-232 CPU Link which may also be connected to a PC or external modem. COM 2 may be used with any of the protocols shown in the following table and may operate at either 9600 or 38400 baud. The communication rate for COM 2 is determined by settings made in the 3500Pro software. The pinout for COM2 is identical to COM1.

Table 2. PESA CPU Link Protocols

Protocol	Document No.
CPU Link Protocol No. 1 (P1)	81-9062-0407-0
CPU Link Protocol No. 1 Extensions (P1E)	81-9062-0408-0
Unsolicited Status Protocol (USP)	81-9062-0409-0
Truck Link Protocol (TRK)	81-9062-0410-0

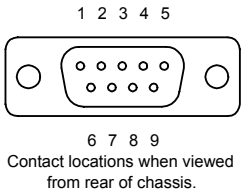


Figure 25. 3500Pro-S J13, J14 (COM 1, COM 2) Connectors

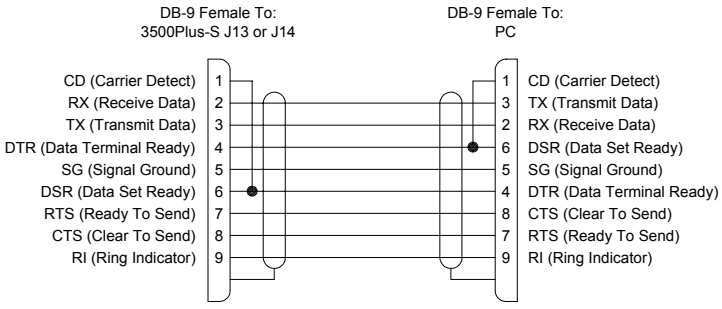


Figure 26. 3500Pro-S RS-232 CPU Link (Null Modem) Cable

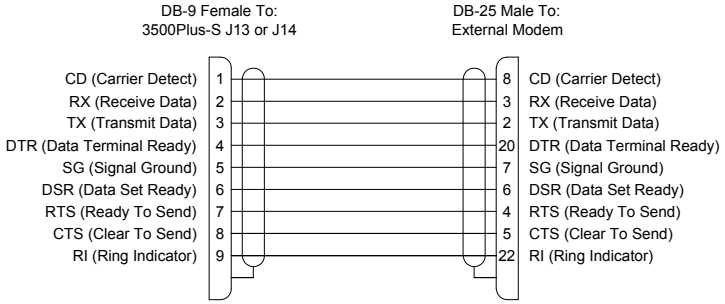


Figure 27. 3500Pro-S RS-232 CPU Link (AT Serial Modem) Cable

3.1.5 COM 3/PRC (J12), COM 4 (J6)

These DB9-Male connectors provide RS-422 serial communication interfaces. See Figure 28 for an orientation view showing contact locations.

- COM 3/PRC is the communications interface to a PRC type routing switcher system and is connected to a routing switcher. If necessary, a cable up to 4000 feet in length may be fabricated in the field as shown in Figure 29.
- COM 4 is an RS-422 CPU Link similar to the RS-232 CPU Link, except the cable may be up to 4000 feet in length and an RS-422 interface card must be installed in the expansion bus. COM 4 may be used with any of the protocols shown in Table 2 on page 27. If necessary, a cable may be fabricated in the field as shown in Figure 30.

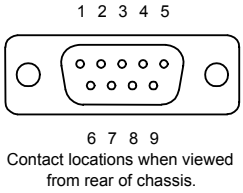


Figure 28. 3500Pro-S J6, J12 (COM 3/PRC, COM 4) Connectors

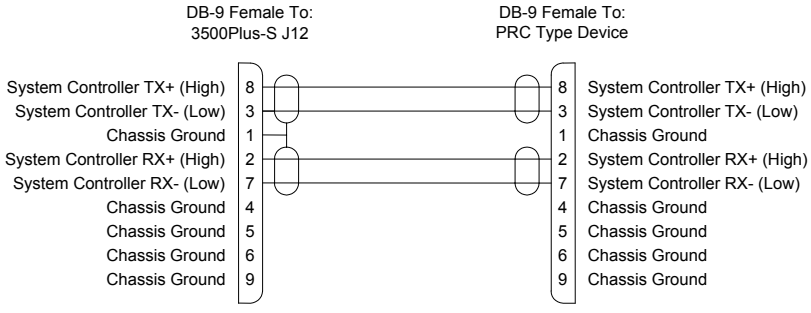


Figure 29. 3500Pro-S RS-422 Serial Cable

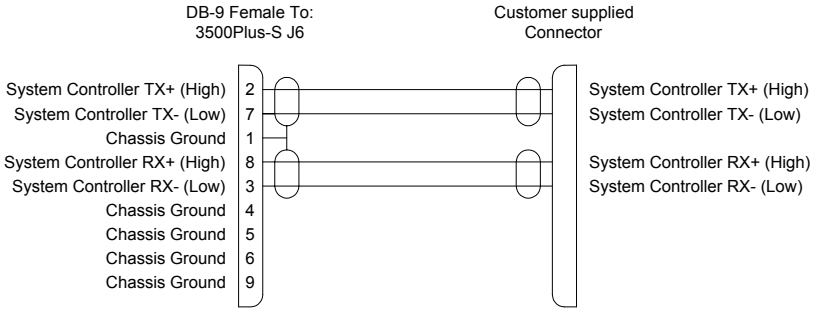


Figure 30. 3500Pro-S RS-422 CPU Link Cable

3.1.6 CPU ALARM (J7)

This 3-contact connector provides the interface for the CPU alarm. See Figure 31 for an orientation view showing contact locations.

The 3500Pro operating software determines when an alarm condition is declared. During an alarm condition, an optically isolated, closed circuit exists between contacts 1 and 3. The customer supplied external alarm circuit is connected with a cable constructed as shown in Figure 32.

The 81-9029-0780-0 connector body has an integral strain relief which requires the use of a nylon cable tie included with the connector. If this is not available, cable tie Part No. 81-9021-0028-8 may be used.

The alarm circuit connected to this connector must not exceed 12VDC or 10mA.

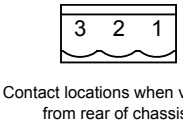


Figure 31. 3500Pro-S J7 (CPU ALARM) Connector

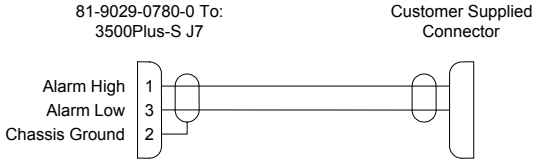


Figure 32. 3500Pro-S CPU Alarm Cable

3.1.7 485 PANEL PORTS 1-4 (J8, J9, J10, J11)

These 3-contact connectors are wired in parallel and provide RS-485 serial communication interfaces using the PESA RCP Protocol (Document No. 81-9062-0300-0). See Figure 33 for an orientation view showing contact locations.

J8, J9, J10, and J11 are connected to PESA Remote Control Panels with daisy-chained cables constructed with 3-contact connectors (Part No. 81-9029-0780-0) and shielded, twisted-pair audio cable (Part No. 81-9028-0043-2, Belden 8451, or equivalent) as shown in Figure 34. The connector body has an integral strain relief which requires the use of a nylon cable tie which is included with the connector. If this cable tie is not available, Part No. 81-9021-0028-8 may be used.

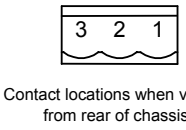


Figure 33. 3500Pro-S J8, J9, J10, J11 (485 PANEL PORTS 1-4) Connectors

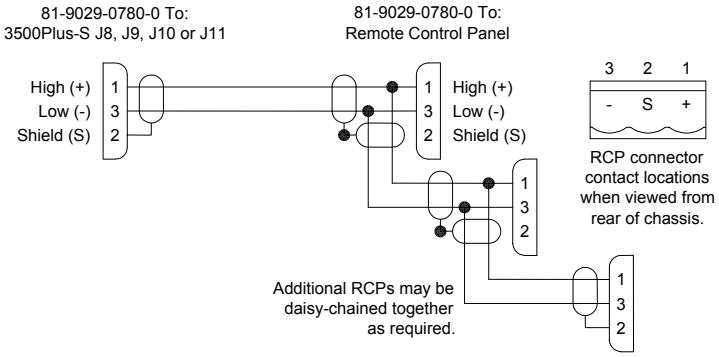


Figure 34. 3500Pro-S RS-485 Serial Cable

3.1.8 SYSTEM V CONTROL (J15)

This DB37-Male connector provides the System 5 control interface and uses the RM5 Protocol (Document No. 81-9062-0155-3). See Figure 35 for an orientation view showing contact locations.

J15 is connected to a Lynx or RM5 type routing switcher with cable assembly Part No. 81-9065-1189-2. If necessary, a cable may be fabricated in the field as shown in Figure 36. If more than one System 5 Routing Switcher will be connected to the System Controller, consult Drawing No. WI50-0262 for information on constructing a bifurcated cable.

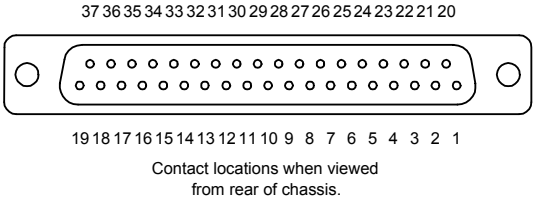


Figure 35. 3500Pro-S J15 (SYSTEM V CONTROL) Connector

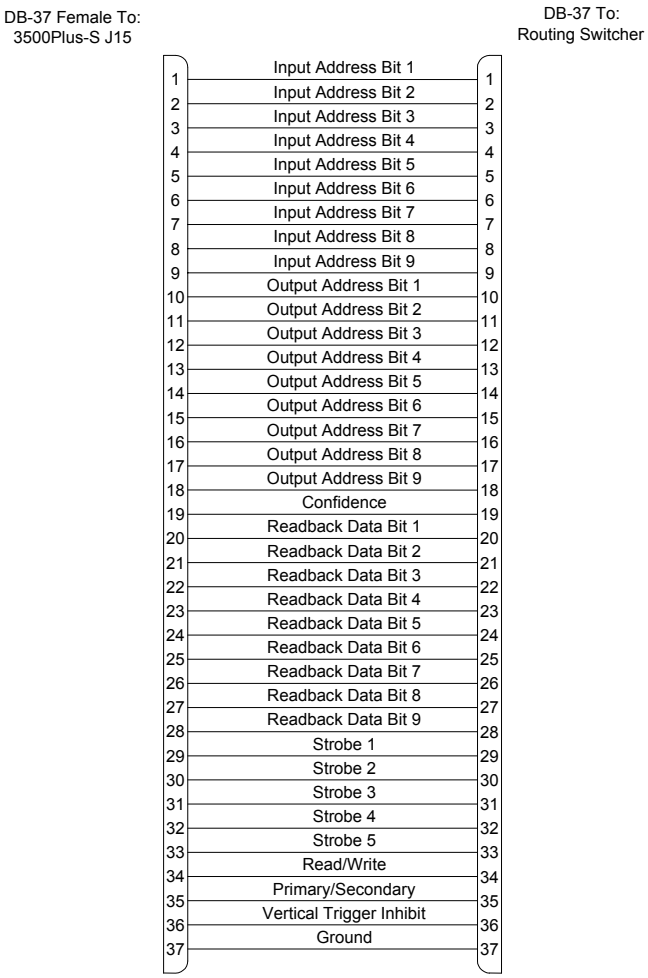


Figure 36. 3500Pro-S RM5 Control Cable

3.1.9 AUXILIARY STROBE (J16)

This DB15-Male connector is reserved for future use. See Figure 37 for an orientation view showing contact locations.

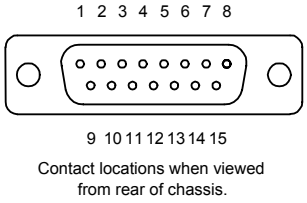


Figure 37. 3500Pro-S J16 (AUXILIARY STROBE) Connector

3.1.10 POWER (J17, J18)

These 3-contact connectors are the power connectors. See Figure 38 for an orientation view showing contact locations.

To avoid damage to the 3500Pro-S System Controller, the power connectors (J17 and J18) must never be connected to any of the following:

- **A Lynx, Cougar or Jaguar audio routing switcher**
- **An external audio power supply (PS140A or PS270A)**
- **An RM5000 video routing switcher or its external power supply (PS270V)**

The Model 3500Pro-S has no internal power supply. J17 and J18 are connected in parallel. One is used for power input and the other may be used as a loop-through connector to provide power to another device. Input power may be drawn from the following sources:

The 3500Pro-S may obtain power from PESA system components having 3-contact power connectors by using a power cable assembly (Part No. 81-9065-1183-7) constructed as shown in Figure 39. If this cable must be constructed in the field, consult Drawing No. WI50-0172 for assembly details.

The 3500Pro-S may obtain power from PESA system components having 6-contact power connectors by using a power cable assembly (Part No. 81-9065-1653-0) constructed as shown in Figure 40. If this cable must be constructed in the field, consult Drawing No. WI50-0238 for assembly details.

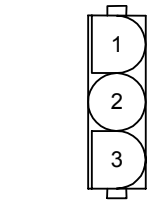


Figure 38. 3500Pro-S J17, J18 (POWER) Connectors

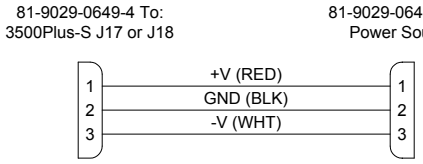


Figure 39. 3500Pro-S Power Cable with 3-Contact Plug

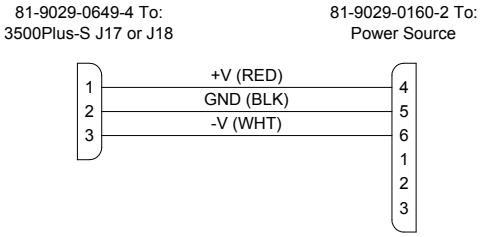


Figure 40. 3500Pro-S Power Cable with 6-Contact Plug

3.2 Models 3500Pro-D (and 3500Pro-SE / 3500Pro-DE)

All interface connections are made at the rear of this equipment as shown in Figure 41.

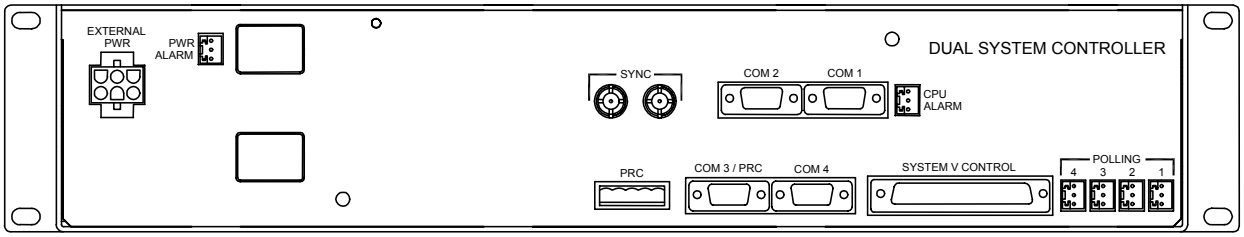


Figure 41. 3500Pro-D Rear View

3.2.1 EXTERNAL POWER (J5)

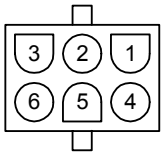
This 6-contact connector is the DC power interface connector. See Figure 42 for an orientation view showing contact locations.

To avoid damage to the 3500Pro-D System Controller, the External Power connector (J5) must never be connected to any of the following:

- **A Lynx, Cougar or Jaguar audio routing switcher**
- **An external audio power supply (PS140A or PS270A)**
- **An RM5000 video routing switcher or its external power supply (PS270V)**

The Model 3500Pro-D may be configured with or without internal power supplies. If either of the internal power supplies are installed, J5 may be used to provide power to other equipment. If neither of the internal power supplies are installed, J5 is used to connect the 3500Pro-D to an external power source. Input power may be drawn from the following sources:

- The 3500Pro-D may obtain power from PESA system components having 3-contact power connectors by using a power cable assembly (Part No. 81-9065-1653-0) constructed as shown in Figure 43. If this cable must be constructed in the field, consult Drawing No. WI50-0238 for assembly details.
- The 3500Pro-D may obtain power from PESA system components having 6-contact power connectors by using a power cable assembly (Part No. 81-9065-TBD-0) constructed as shown in Figure 44. If this cable must be constructed in the field, consult Drawing No. WI50-TBD for assembly details.



Contact locations when viewed
from rear of chassis.

Figure 42. Orientation View - 3500Pro-D J5 (EXTERNAL POWER) Connector

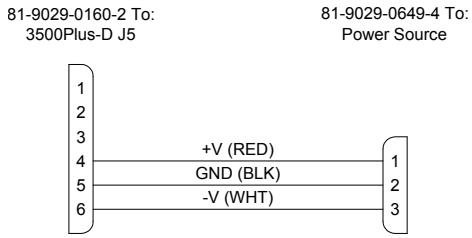


Figure 43. 3500Pro-D Power Cable with 3-Contact Plug

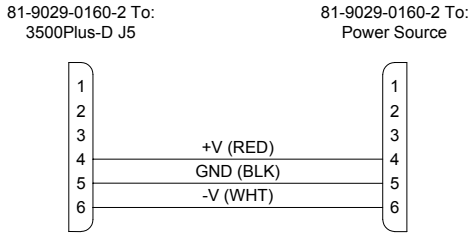


Figure 44. 3500Pro-D Power Cable with 6-Contact Plug

3.2.2 PWR ALARM (J22)

This 3-contact connector provides the interface for the Power Supply alarms. See Figure 45 for an orientation view showing contact locations.

Each of the two PS130 Power Supplies has its own internal low voltage alarm which will be enabled when the output voltage varies from 9VDC by ±12%. During an alarm condition, an optically isolated, closed circuit exists between contacts 3 and 1 for Power Supply A (top), and contacts 2 and 1 for Power Supply B (bottom). The customer supplied external alarm circuit is connected with a cable constructed as shown in Figure 46.

The alarm circuit connected to this connector must not exceed 12VDC or 10mA.

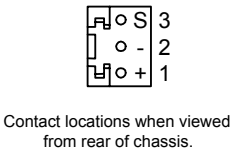


Figure 45. 3500Pro-D J22 (PWR ALARM) Connector

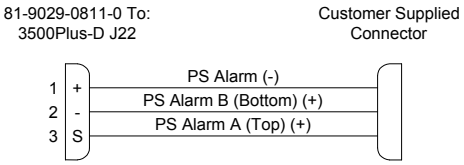


Figure 46. 3500Pro-D PS Alarm Cable

3.2.3 SYNC (J16, J17)

These BNC connectors are wired in parallel and are used for an optional vertical sync signal input. The second connector is to allow the signal to be looped through the 3500Pro-D chassis and routed to other equipment. Unused connectors must be terminated with a 75 Ohm terminator (Part No. 81-9029-0668-4).

3.2.4 COM 1 (J7), COM 2 (J8)

These DB9-Male connectors provide RS-232 serial communication interfaces. See Figure 47 for an orientation view showing contact locations.

- COM 1 is the primary RS-232 CPU Link and may be connected to the PC running 3500Pro Control System software with a null modem cable (Part No. 81-9028-0393-0). If necessary, a cable up to 50 feet in length may be fabricated in the field as shown in Figure 48. COM 1 may only be used with the P1E protocol, at either 9600 or 38400 baud. The communication rate is selected with switch S1 as described in "S1-3 COM 1 Rate" on page 44.
- COM 1 may also be connected to an external modem using an AT Serial Modem cable (Part No. 81-9028-0400-0). If necessary, a cable up to 50 feet in length may be fabricated in the field as shown in Figure 49.
- COM 2 is a secondary RS-232 CPU Link which may also be connected to a PC or external modem. COM 2 may be used with any of the protocols shown in the following table and may operate at either 9600 or 38400 baud. The communication rate for COM 2 is determined by settings made in the 3500Pro software. COM2 has the same pinout as COM1.

Table 3. PESA CPU Link Protocols

Protocol	Document No.
CPU Link Protocol No. 1 (P1)	81-9062-0407-0
CPU Link Protocol No. 1 Extensions (P1E)	81-9062-0408-0
Unsolicited Status Protocol (USP)	81-9062-0409-0
Truck Link Protocol (TRK)	81-9062-0410-0

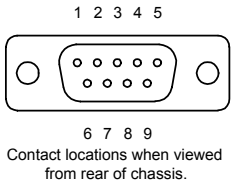


Figure 47. 3500Pro-D J7, J8 (COM 1, COM 2) Connectors

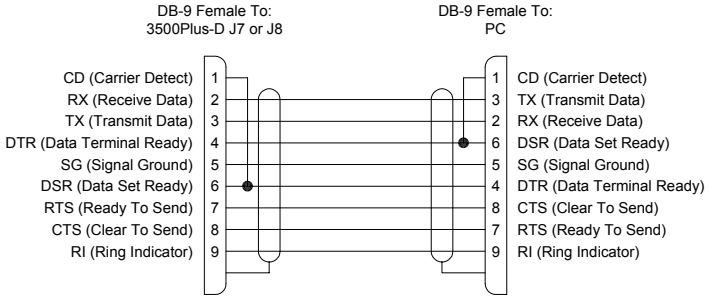


Figure 48. 3500Pro-D RS-232 CPU Link (Null Modem) Cable

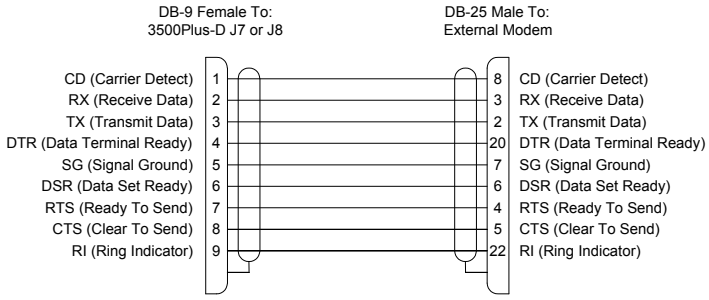


Figure 49. 3500Pro-D RS-232 CPU Link (AT Serial Modem) Cable

3.2.5 COM 3/PRC (J9), COM 4 (J10)

These DB9-Male connectors provide RS-422 serial communication interfaces. See Figure 50 for an orientation view showing contact locations.

- COM 3/PRC is the communications interface to a PRC type routing switcher system and is connected to a routing switcher. If necessary, a cable up to 4000 feet in length may be fabricated in the field as shown in Figure 51. It contains the same physical connections as in 5 pin PRC connector.
- COM 4 is an RS-422 CPU Link similar to the RS-232 CPU Link, except the cable may be up to 4000 feet in length and an RS-422 interface card must be installed in the expansion bus. COM 4 may be used with any of the protocols shown in Table 3 on page 37. If necessary, a cable may be fabricated in the field as shown in Figure 52.

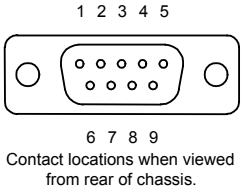


Figure 50. 3500Pro-D J9, J10 (COM 3/PRC, COM 4) Connectors

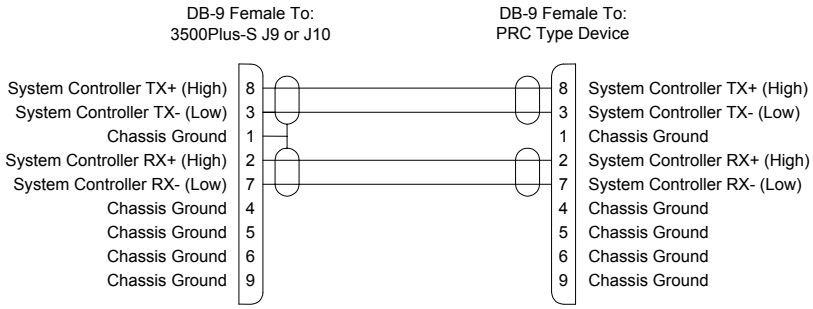


Figure 51. 3500Pro-D RS-422 Serial Cable

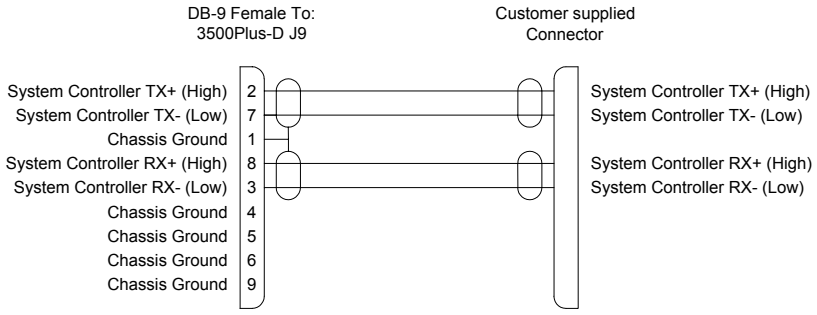


Figure 52. 3500Pro-D RS-422 CPU Link Cable

3.2.6 CPU ALARM (J18)

This 3-contact connector provides the interface for the CPU alarm. See Figure 53 for an orientation view showing contact locations.

The 3500Pro operating software determines when an alarm condition is declared. During an alarm condition, an optically isolated, closed circuit exists between contacts 3 and 1 for Controller A (top), and contacts 2 and 1 for Controller B (bottom). The customer supplied external alarm circuit is connected with a cable constructed as shown Figure 54.

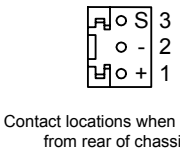


Figure 53. 3500Pro-D J18 (CPU ALARM) Connector

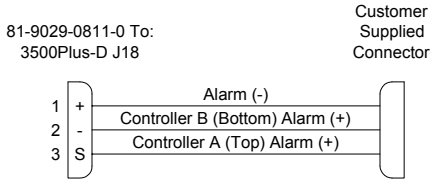


Figure 54. 3500Pro-D CPU Alarm Cable

3.2.7 PRC (J11)

This 5-contact connector is a loop-through connector used to provide an RS-422 serial communication interface using the PESA PRC Protocol (Document No. 81-9062-0316-0). It is wired in parallel with J9 (COM 3/PRC). See Figure 55 for an orientation view showing contact locations.

J11 may be connected to other PESA PRC type equipment with a cable assembly (Part Number 81-9028-0395-0) constructed as shown in Figure 56. If this cable must be constructed in the field, consult Drawing No. WI50-0250 for assembly details.

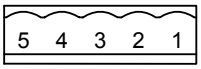


Figure 55. 3500Pro-D J11 (PRC) Connector

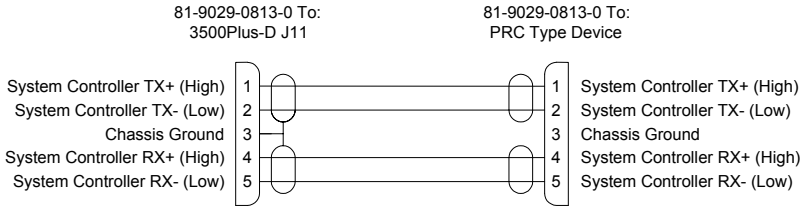


Figure 56. 3500Pro-D RS-422 System Expansion Cable

3.2.8 SYSTEM V CONTROL (J20)

This DB37-Male connector provides the System 5 control interface and uses the RM5 Protocol (Document No. 81-9062-0155-3). See Figure 57 for an orientation view showing contact locations.

J20 is connected to a Lynx or RM5 type routing switcher with cable assembly Part No. 81-9065-1189-2. If necessary, a cable up to 8 feet in length may be fabricated in the field as shown in Figure 58. If more than one System 5 Routing Switcher will be connected to the System Controller, consult Drawing No. WI50-0262 for information on constructing a bifurcated cable.

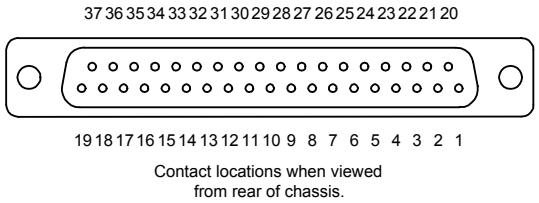


Figure 57. 3500Pro-D J20 (SYSTEM V CONTROL) Connector

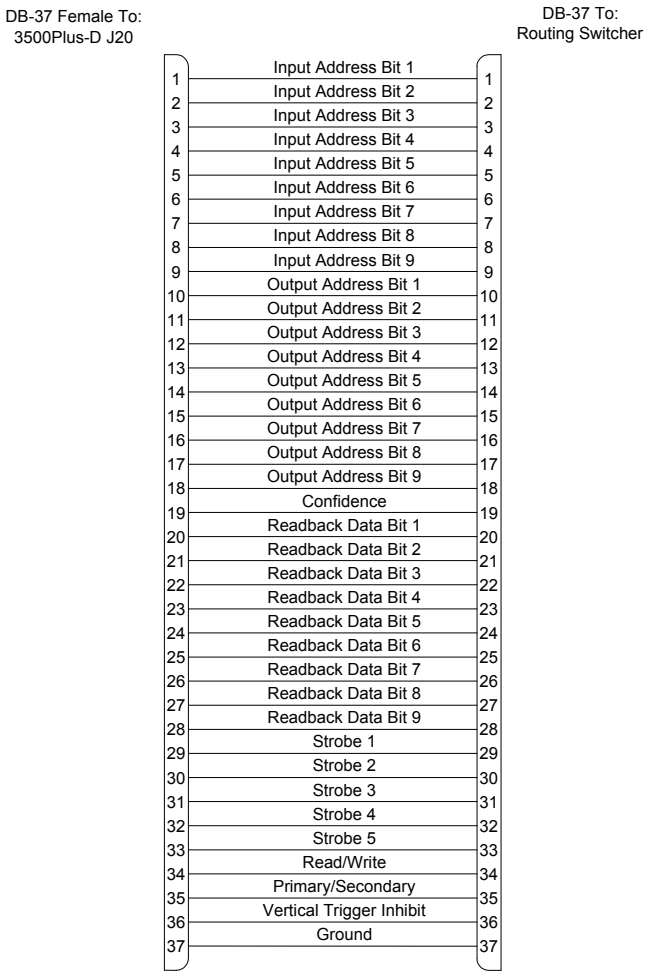
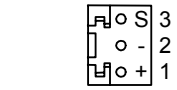


Figure 58. 3500Pro-D RM5 Control Cable

3.2.9 POLLING 1-4 (J12, J13, J14, J15)

These 3-contact connectors are wired in parallel and provide RS-485 serial communication interfaces using the PESA RCP Protocol (Document No. 81-9062-0300-0). See Figure 59 for an orientation view showing contact locations.
J12, J13, J14, and J15 are connected to PESA Remote Control Panels with daisy-chained cables constructed with 3-contact connectors (Part No. 81-9029-0780-0) and shielded, twisted-pair audio cable (Part No. 81-9028-0043-2, Belden 8451, or equivalent) as shown in Figure 60. The connector body has an integral strain relief which requires the use of a nylon cable tie which is included with the connector. If this cable tie is not available, Part No. 81-9021-0028-8 may be used.

NOTE **When connecting RS-485 cables between the dual controller and the actual panels, the ordering of the pins is different. Look closely at the diagrams below.**



Contact locations when viewed from rear of chassis.

Figure 59. 3500Pro-D J12, J13, J14, J15 (POLLING 1-4) Connectors

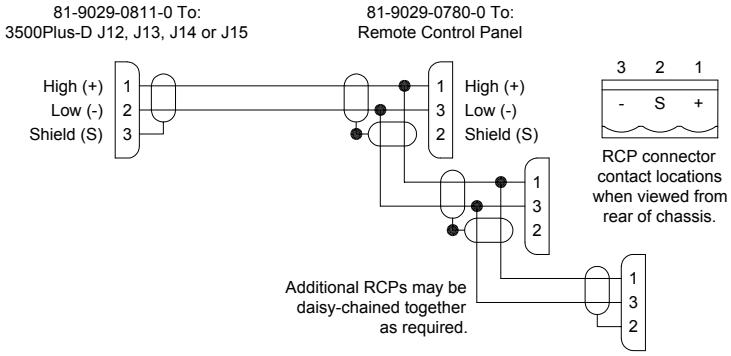


Figure 60. 3500Pro-D RS-485 Serial Cable

3.3 PS130 Power Supply Line Cords

Always use a grounded AC receptacle to avoid a potentially lethal shock hazard in the event of an equipment power line fault.

This equipment will not meet FCC EMI limits unless both AC line cords are plugged into properly grounded AC receptacles.

Each PS130 Power Supply requires a line cord (Part No. 81-9028-0403-0) to connect it to the AC mains.

3.4 PC Board Switch and Jumper Settings

3.4.1 S1 - Operational Mode/Config Bypass/COM 1 Rate

S1 is a four-position, slide-style, DIP switch consisting of four single-pole, single-throw (SPST) switches numbered 1 through 4. Position 1 is used to set the operational mode, position 2 is used to enable/disable configuration bypass, and position 3 is used to select the serial communication rate. Position 4 is reserved for future use. See Table 4 on the next page for switch settings.

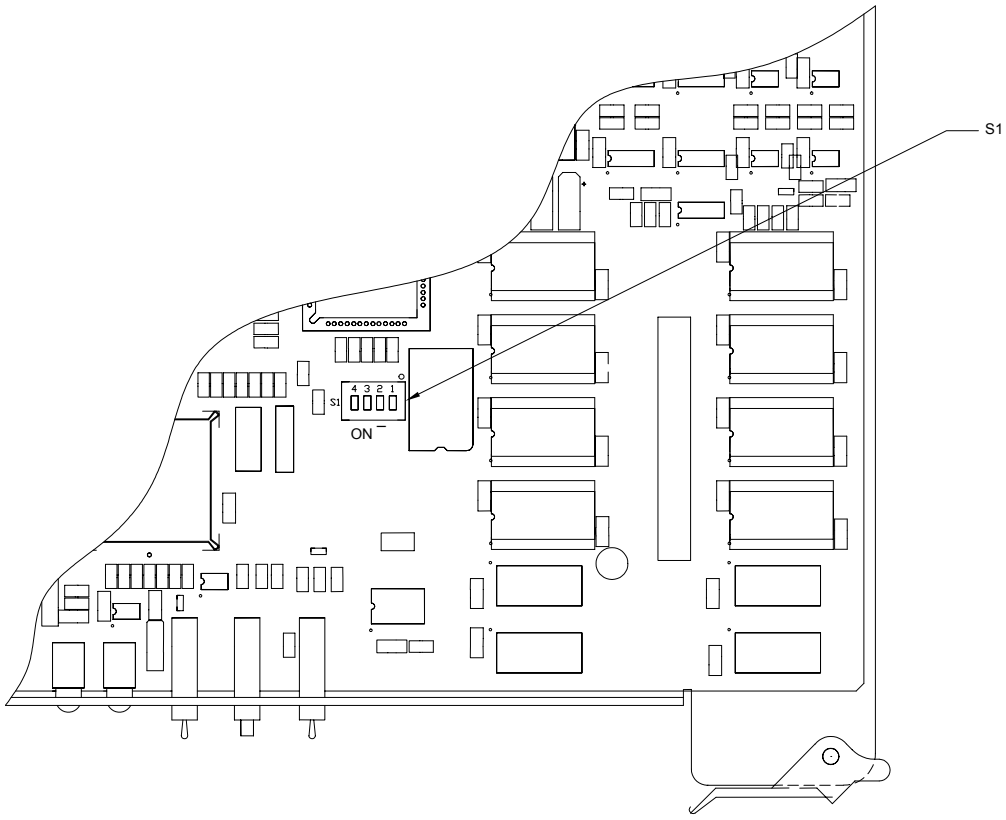


Figure 61. 3500Pro S1 (Operational Mode/Config Bypass/Comm Rate)

Table 4. 3500Pro Switch S1

3500Pro S1 Operational Mode/ Config Bypass/Comm Rate	Switch S1-1	Switch S1-2	Switch S1-3	Switch S1-4
Software Upgrade Mode	ON			
Normal Operation Mode	OFF			
Configuration Bypass Enabled		ON		
Configuration Bypass Disabled		OFF		
COM 1 Rate: 38400 Baud			ON	
COM 1 Rate: 9600 Baud			OFF	
Reserved – Set S1-4 to OFF				OFF

3.4.1.1 S1-1 Operational Mode

This switch is used to place the 3500Pro into software upgrade mode for use with Load3500, the software installation utility. For more information on the use of Load3500, consult the technical bulletin that came with your software upgrade.
For normal operation, this switch should be in the OFF position.

3.4.1.2 S1-2 Configuration Bypass

For normal operation, this switch should be in the OFF position. For information on using the configuration bypass feature, see “Configuration Bypass” on page 49.

3.4.1.3 S1-3 COM 1 Rate

This switch is used to select the communications rate used by COM 1 on the 3500Pro. The communication rate for COM 2 is determined by settings made in the 3500Pro software.

3.4.1.4 S1-4 Reserved

S1-4 is reserved for future use.

3.5 Subassembly Installation

3.5.1 Model 3500Pro-S

The 3500Pro-S consists of an external chassis and a 3500Pro System Controller board. There is no internal power supply.

3.5.1.1 3500Pro System Controller Board Installation

The 3500Pro System Controller board is installed in the chassis as follows:

1. Align the board support tray with the card guides in the chassis.
2. Carefully insert the board into the chassis until the connectors on the board make contact with the connectors on the backplane. If possible, inspect the mating connectors to ensure proper alignment.
3. Firmly push the board into the chassis until the board connectors are fully mated with the backplane connectors. If the contact insertion force seems excessive, gently push up on the bottom of the board with one hand, while pushing on the front of the board with the other.

3.5.2 Model 3500Pro-D, Model 3500Pro-SE, and Model 3500Pro-DE

The 3500Pro-D consists of an external chassis and two 3500Pro System Controller boards and two PS130 Power Supplies. It may also be ordered as the 3500Pro-SE which has only one 3500Pro System Controller board and one PS130 Power Supply installed in the same chassis. The 3500Pro-DE is the expansion kit required to convert a 3500Pro-SE to a 3500Pro-D.

3.5.3 3500Pro System Controller Board Installation

The 3500Pro System Controller boards are installed in the chassis as follows:

1. Align the support tray of the first board with the card guides in the chassis.
2. Carefully insert the board into the chassis until the connectors on the board make contact with the connectors on the backplane. If possible, inspect the mating connectors to ensure proper alignment.
3. Firmly push the board into the chassis until the board connectors are fully mated with the backplane connectors.
4. Repeat the above steps for the second board.

3.5.4 PS130 Power Supply Installation

A fully configured 3500Pro-D contains two PS130 Power Supplies connected in parallel. Either power supply is capable of powering both system controller boards, with the second power supply serving as a backup for the first. One power supply may be removed and replaced while the other is connected to the power source, and the 3500Pro-D is operational.

The PS130 Power Supplies are installed in the chassis as follows:

1. Align the shield plate of the first power supply with the card guides in the chassis.
2. Carefully insert the power supply into the chassis until the connectors on the power supply make contact with the connectors on the backplane. If possible, inspect the mating connectors to ensure proper alignment.
3. Firmly push the power supply into the chassis until the power supply connectors are fully mated with the backplane connectors, and the power supply latch engages the corresponding slot in the chassis.
4. Repeat the above steps for the second power supply.

Chapter 4 - Operating the System Controller Hardware

4.1 General

This equipment is designed to be operated by the 3500Pro Control System software. For detailed operational information, consult Section III.

Figure 62 and Figure 63 show typical views of the 3500Pro System Controller board. The configuration shown is that used in Models 3500Pro, 3500Pro-D, 3500Pro-SE, and 3500Pro-DE. Other models use a different support tray, but are operated in the same way.

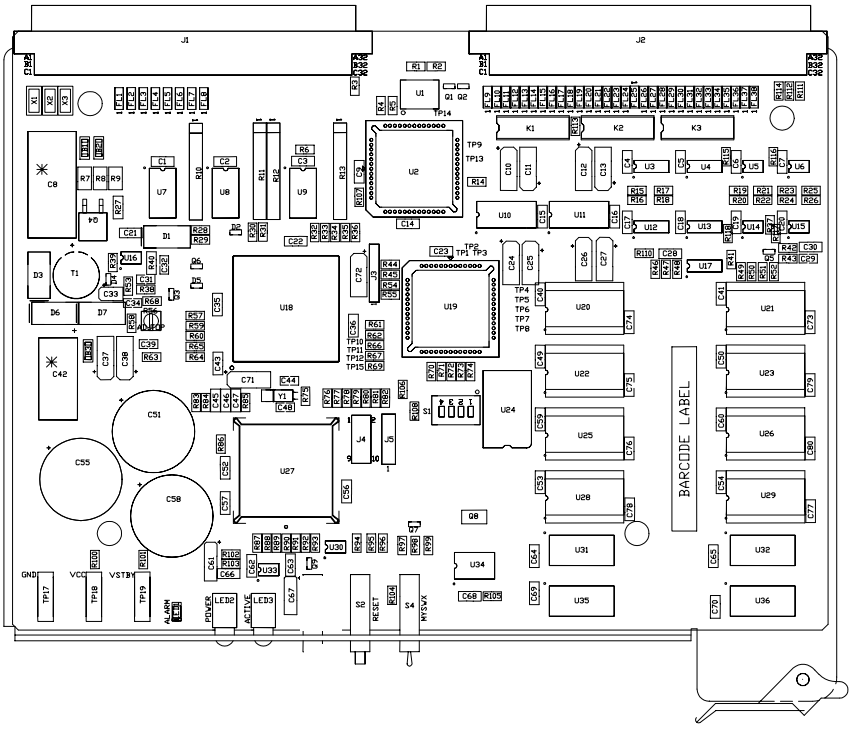


Figure 62. 3500Pro System Controller Board Assembly Top View

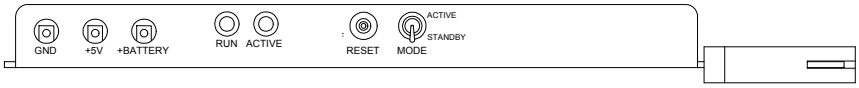


Figure 63. 3500Pro System Controller Board Assembly Front View

4.2 Front Panel Switches

4.2.1 Reset (S2)

This SPDT momentary pushbutton switch is used to manually reset the 3500Pro System Controller in the event of system failure or lockup (similar to a warm boot on a PC). To reset the controller, press and hold this switch for about three seconds.

4.2.2 Mode (S4)

This SPDT toggle switch is used in a dual controller system to designate which controller is the primary controller, and which is the backup controller. Set the Mode switch to ACTIVE on the primary controller, and to STANDBY on the backup controller.

In a single controller system, this switch has no effect.

4.3 Front Panel LEDs

See “LEDs” on page 50.

Chapter 5 – Maintenance and Repair

5.1 Periodic Maintenance

There are no periodic maintenance requirements for this equipment.

5.2 Configuration Bypass

If the configuration being used by the 3500Pro System Controller becomes corrupt, it may be bypassed to allow the loading of another configuration as follows:

1. Remove power from the 3500Pro.
2. Remove the 3500Pro from the chassis to allow access to switch S1 (see Figure 61 on page 43). Set switch S1-2 to the ON position in accordance with Table 4 on page 44.
3. Reinstall the 3500Pro and apply power.
4. Load the new configuration. This will overwrite the corrupted configuration.
5. Remove power from the 3500Pro.
6. Remove the 3500Pro from the chassis and return switch S1-2 to the OFF position.
7. Reinstall the 3500Pro and apply power.

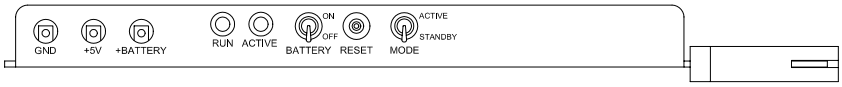


Figure 64. 3500Pro System Controller Board Assembly Front View

5.3 Front Panel Test Points

5.3.1 3500Pro System Controller Board

The 3500Pro System Controller board has three test points accessible from the front panel, GND, +5V, and +BATTERY, as shown in Figure 64.

5.3.2 GND (TP17)

This test point provides a convenient ground when measuring voltages at the other test points.

5.3.3 +5V (TP18)

The voltage measured between this test point and GND (TP1) is the output of the voltage regulation circuit and should be 5 ±0.1 VDC.

5.3.4 +BATTERY (TP19)

The voltage measured between this test point and GND (TP1) is the output voltage of the backup memory power source and should be >2VDC when power has been removed from the board. This voltage is stored in a "super-cap" and has limited capability to retain memory for more than 48 hours.

5.4 LEDs

In the rare event this equipment fails to operate correctly, check the appropriate LEDs listed below for information concerning operational status.

5.4.1 3500Pro System Controller Board

The 3500Pro System Controller board has two front panel LEDs, RUN and ACTIVE, as shown in Figure 64.

LED	Color	Panel Legend	Normal State	Troubleshooting Info
LED1	RED	N/A	OFF	Controller board is in reset state or is in program download mode.
LED2	GRN	RUN	ON	Indicates that input voltage to this board is within design parameters. If LED is OFF: 1. Remove and reinstall board to verify backplane connector is properly seated. 2. Check power supplies for proper operation. 3. Contact PESA Customer Service.
LED3	YEL	ACTIVE	ON	Indicates that the board is currently in active control of a routing switcher system. In a dual controller system, the primary controller ACTIVE LED will be ON and the backup controller ACTIVE LED will be OFF. If the LED is OFF: 1. Remove and reinstall board to verify backplane connector is properly seated. 2. Ensure the board has been configured to be active. 3. Contact PESA Customer Service.

5.4.2 PS130 Power Supply

LED	Color	Panel Legend	Normal State	Troubleshooting Info
D27	GRN	n/a	ON	Indicates that output voltage is within design parameters. If LED is OFF: 1. Check input power connections. 2. Check internal fuse (3.15A 250VAC) 3. Replace the power supply. 4. Contact PESA Customer Service.

5.5 PESA Customer Service

If the troubleshooting information above has not solved your problem, contact the PESA Customer Service Department. Skilled technicians are available to assist you 24 hours per day, seven days per week.

Detailed contact information for the Customer Service Department is located inside the front cover of this document.

5.6 Repair

Before attempting to repair this equipment, please consult your warranty documents and/or the PESA Customer Service Department. Unauthorized repairs may void your warranty.

The PS130 Power Supply assemblies in this equipment are not field/user serviceable. These offline switching power supplies contain internal voltages that are not isolated from the AC power source. They should only be serviced by qualified service personnel using appropriate equipment. Because of this, it is strongly suggested that power supplies be returned to the PESA Customer Service Department for service.

Many of the PC boards in this equipment contain large numbers of SMT (Surface Mount Technology) components. Special tools are required to replace these components without causing damage to adjacent areas. It is strongly recommended that PESA Customer Service be consulted prior to attempting to repair any of the PC boards in this equipment

5.6.1 Replacement Parts

Only parts of the highest quality have been used in the design and manufacture of this equipment. If the inherent stability and reliability are to be maintained, replacement parts must be of the same high quality. For this reason, we suggest that you consult our Customer Service Department before installing any parts not purchased from PESA.

5.6.2 Factory Service

Before returning any equipment to our factory for service or repair, please contact our Customer Service Department for an RMA number.

Detailed contact information for the Customer Service Department is located inside the front cover of this document.

Section III: Software Reference Guide

This section describes the 3500Pro software and how to use the software. The following modules are described:

- **3500Pro Configuration Editor:** Defines the environment under which the control system operates.
- **3500 Pro Diagnostics:** Provides troubleshooting tools.
- **3500 Pro Status:** Provides a way to monitor the status of the systems.
- **3500 Pro User Manager:** Sets up the PC communications and allows you to create and edit users who can access the 3500Pro software.
- **Runtime Database Initialization:** Provides a fresh copy of the runtime databases used for online monitoring of the router.

Chapter 6 – 3500Pro Configuration Editor

This section describes in detail each command available in the software, and how the command is integrated into the overall workflow. This section begins with a broad overview of a typical workflow you might use when just getting started with the 3500Pro software.

The 3500Pro software is aimed at users who require more control levels, components, sources, destinations, and tielines. The 3500Pro expands upon its proven capabilities to bring you the industry's easiest and most comprehensive control solution. The graphic-oriented, point-and-click interface permits error-free, offline/online configuration and editing.

This section describes both the 3500Pro and the 3500Pro LE. The 3500Pro LE has a smaller feature set and is designed for customers with smaller systems.

There are five modules in the software. To access each module, select **Start > Programs > PESA 3500Pro** and then the module you want to open.

- **3500Pro Configuration Editor:** Defines the environment under which the control system operates.
- **3500 Pro Diagnostics:** Provides troubleshooting tools.
- **3500 Pro Status:** Provides a way to monitor the status of the systems.
- **3500 Pro User Manager:** Sets up the PC communications and allows you to create and edit users who can access the 3500Pro software.
- **Runtime Database Initialization:** Provides a fresh copy of the runtime databases used for online monitoring of the router.

6.1 How to Use the 3500Pro

This section describes how to use the 3500Pro to set up configuration files to interface with 3500Pro Controllers. When you are starting your 3500Pro setup, there are five main workflows you will need to follow:

- Setting up your computer
- Initializing the Databases
- Creating 3500Pro Users
- Creating a New Configuration

  OR

  Importing an Existing Configuration
- Downloading the configuration to the controller

Each of these sections provide general information for your workflow. The following sections provide in-depth information about the different steps in the workflow.

6.1.1 Time Saving Tools

The 3500Pro provides many new time-saving options that make it much faster for you to enter repetitive information into your configuration.

Right-click mouse commands

For many fields that require you to enter repetitive information, such as Inputs, Outputs, and so on, there are additional commands available if you click the right mouse button. These commands vary depending on which window you are working with:

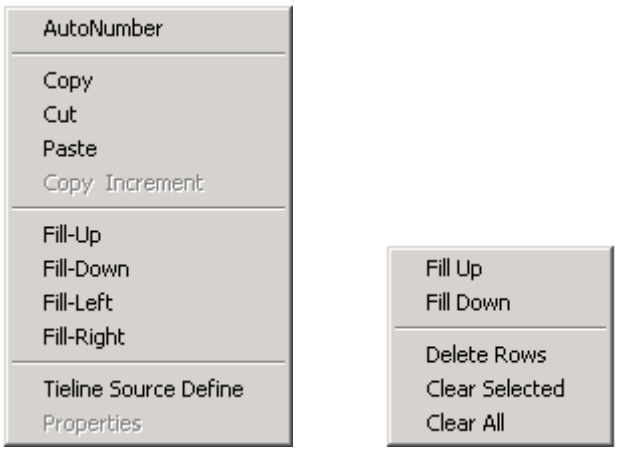


Figure 65. Right-click mouse commands

Autonumber

Automatically numbers selected fields, starting with 1. For example, if you select a range of blank fields, then select this command, they will automatically number:

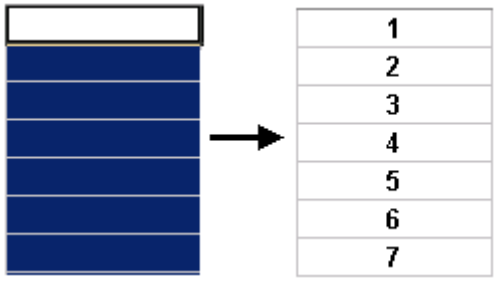


Figure 66. Autonumber

Cut, Copy, Paste

Activates the Cut, Copy, and Paste commands.

Fill-Up

Fills in fields above a selected field with the same information. First select the field with the number you want to duplicate, then select the fields above it. Right-click and select Fill-Up to fill in the fields with the selected information.

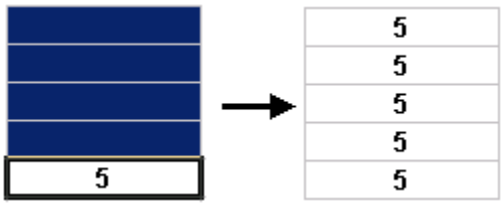


Figure 67. Fill-Up

Fill-Down

Fills in the fields below a selected field with the selected number. First, select the field with the number you want to duplicate, then select the fields below it. Right-click and select Fill-Down to fill in the fields with the selected number.

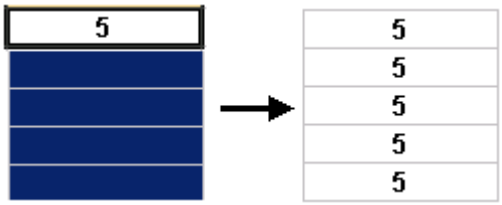


Figure 68. Fill-Down

Fill-Left

Fills in the fields to the left of a selected field with the selected number(s). First, select the fields with the numbers you want to duplicate, then select the fields to the left. Right-click and select Fill-Left to fill in the fields with the selected numbers. You can either select one field or several fields with this option.

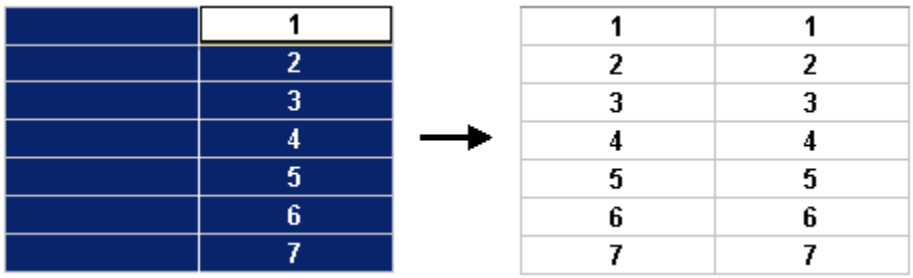


Figure 69. Fill-Left

Fill-Right

Fills in the fields to the right of a selected field with the selected number(s). First, select the fields with the numbers you want to duplicate, then select the fields to the right. Right-click and select Fill-Right to fill in the fields with the selected numbers. You can either select one field or several fields with this option.

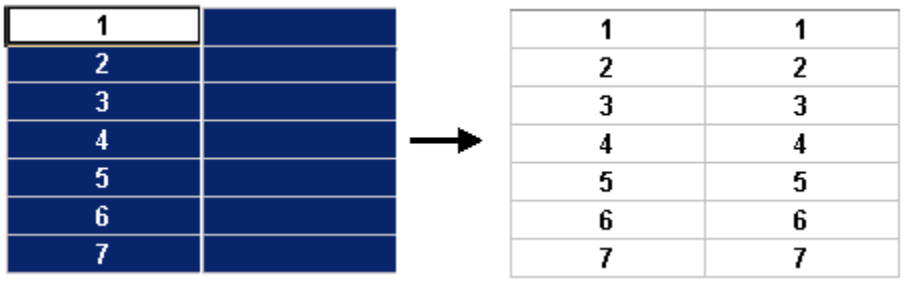


Figure 70. Fill-Right

Delete Rows

Deletes the selected rows. You only have to select one item in a row to delete it.

NOTE **Make sure you really want to delete the row before selecting this command. You cannot "Undo" this action.**

Clear Selected

Removes information from the selected fields (does not delete the row).

Clear All

Removes information from the entire window.

6.2 Getting Started

The first thing you need to do with the 3500Pro software is to define the serial port connection and the baud rate.

1. Connect the primary external computer to the COM1 Connector on the 3500Pro Controller using a 9-pin NULL modem RS232 cable.
2. Select **Start > Programs > 3500Pro > 3500Pro User Manager**. The 3500Pro Connection/User Manager window displays.

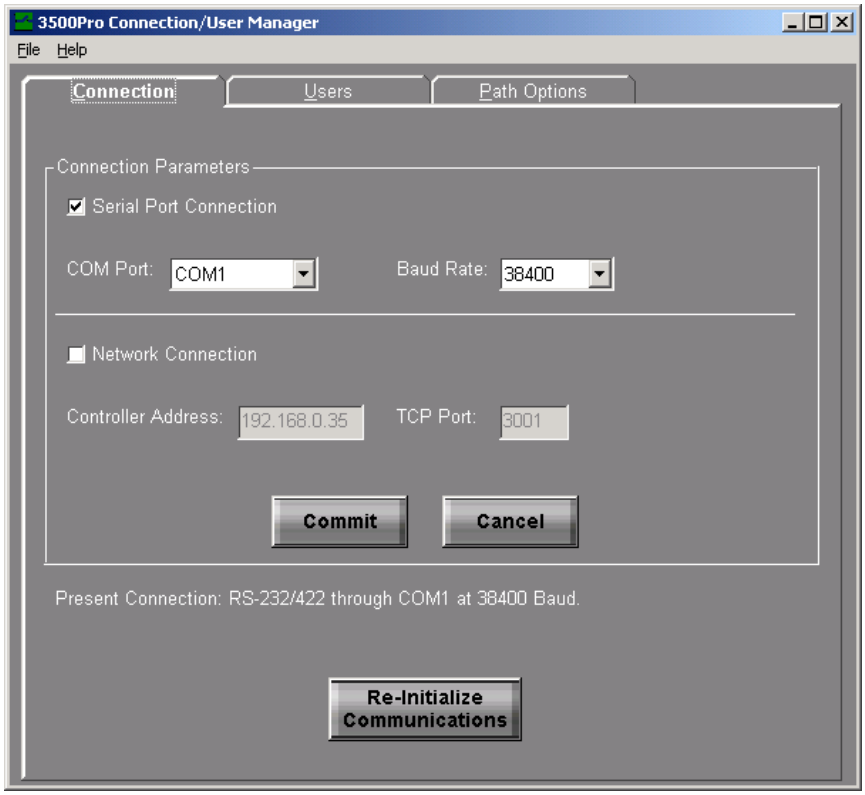


Figure 71. Connections Tab

3. In the **Connection Parameters** section, make sure there is a check mark next to the **Serial Port Connection** option.
4. In the **COM Port** pulldown window, select the COM port you are using to connect to the 3500Pro Controller.
5. In the **Baud Rate** field, select the baud rate you want to use. The baud rate is defined by a DIP switch setting on the Controller board. Refer to the 3500Pro Controller documentation for details.
6. Select **Commit** to save your changes.

6.3 Initializing the Database

After setting up your computer, initialize the configuration and runtime databases. To do this, select **Start > Programs > 3500Pro > Runtime Database Initialization**. This will purge any old runtime databases from your system and makes a new copy of the master database.

6.4 Creating Users

After your computer is properly configured, you can create users for the 3500Pro software.

NOTE **User accounts are optional. If used, at least one user account must be assigned all privileges. If no user accounts are configured, all users have all privileges.**

1. If the 3500Pro Connection/User Manager window is not open, select **Start > Programs > 3500Pro > 3500Pro User Manager**. The 3500Pro Connection/User Manager window displays.
2. Select the **Users** tab.

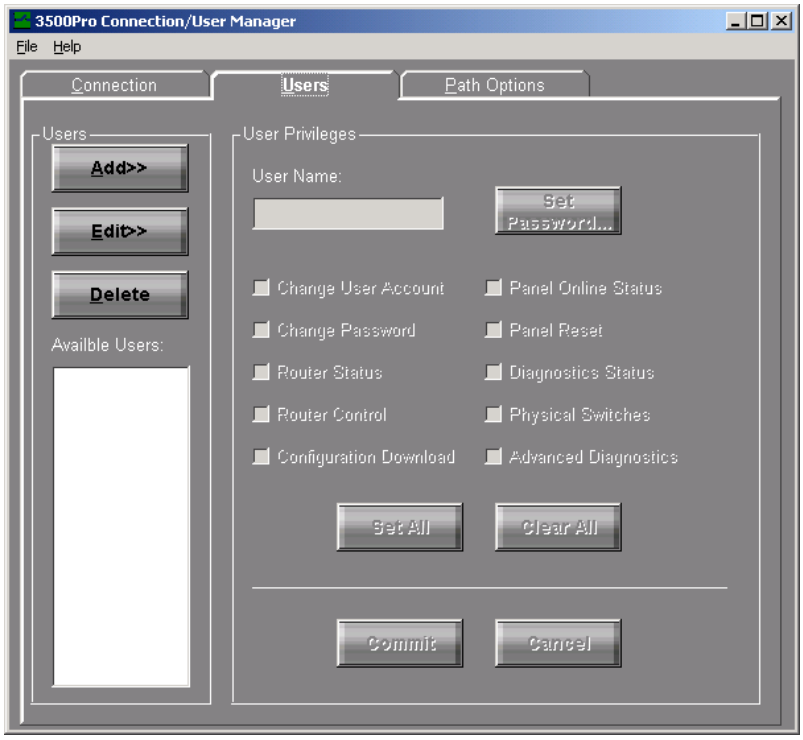


Figure 72. Users Tab

6.4.1 Create a User With Access to Everything

1. First you need to create a user who has access to everything in the system. Select the **Add>>** button to start.
2. In the **User Name** field, type in a name for the user.
3. Select the **Set Password** button to define a password for the user.
4. Type in the password you want to use in the **New Password** field. Re-enter the exact same password in the **Confirm New Password** field.

You must enter the exact same password in both fields!

5. Select **OK** to accept the new password. The password window will close, and you will return to the User Manager window.
6. Now select the **Set All** button and check marks will display next to each field. This means that the user will have access to everything in the 3500Pro software.
7. Select **Commit** and the user will be added to the system and will display in the Available Users box on the left side of the window.

6.4.2 Create the Rest of the Users

1. Now you can create additional users with access to specific sections of the software. Select the **Add>>** button.
2. Enter a **User Name**.
3. Select the **Set Password** button and enter a password. Select **OK** to accept the password and close the password window.
4. Now, select the specific sections of the software you want the user to be able to access. When you are done, select **Commit** and the user will be added to the system and will display in the Available Users section.
5. Repeat this process for as many users as necessary.

6.5 Creating a New Configuration

If you do not have an existing configuration file, you need to create one. You will use the Configuration Editor to do this.

There is a sample configuration file shipped with the 3500Pro that you can look at to become familiar with the different options. To open the file, select File > Open Configuration Database.

6.5.1 Create a New Configuration File

1. Select **Start > Programs > 3500Pro > 3500Pro Configuration Editor**. The Configuration Editor window displays.
2. Select **File > New Configuration Database** to create a new database on your computer. Select the directory location for the file, enter a name, then select **OK**. A new configuration file will be created on your computer. The name of the file will display at the top of the window.

6.5.2 Set up the Configuration File

Each configuration file will be different depending on the specific configuration you are working with. However, there are some basic steps that are common to each configuration file.

1. Select **Configuration > System Configuration > Level/Comp** to set up Levels and Components.
2. Select **Configuration > System Configuration > CPU Link/Port** to set up serial communications link to the controller.
3. Select **Configuration > Matrix Configuration** to define sources and destinations that match the equipment connected to the router.
4. Select **Configuration > Panels** to define the settings for different RCP remote control panels in your system.

6.5.3 Setting Up Optional Features

The remainder of the available Configuration commands are optional depending on how you want to set up your system. If you choose, you can define the following options:

1. Select **Configuration > Salvo** to define salvos.
2. Select **Configuration > Categories** to define categories.
3. Select **Configuration > Tielines** to define tielines.
4. Select **Configuration > Reentry** to define reentries.

6.6 Importing an Existing Configuration

If you have an existing configuration file from an older version of 3500, you can import it into the software.

6.6.1 Importing an ASCII file

Make sure you have the configuration file on your computer and stored in ASCII format (`.txt` or `.dat` extension).

1. Select **Start > Programs > 3500Pro > 3500Pro Configuration Editor**. The **Configuration Editor** window displays.
3. Select **File > Transfer Configuration**.

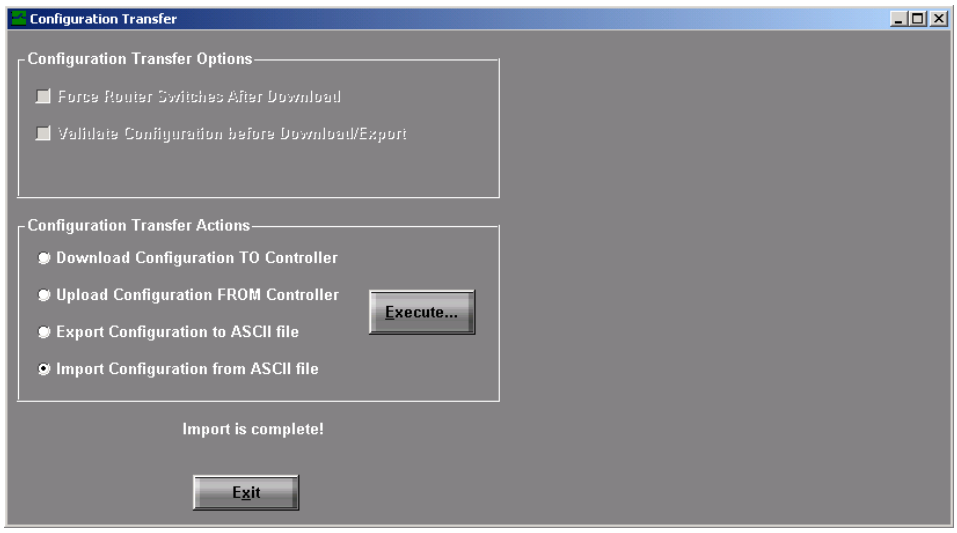


Figure 73. Import a Configuration from an ASCII FIle

4. Select the **Import Configuration From ASCII** file button, then select **Execute**.
5. The **Import** window will display. Change to the directory where the configuration file you want to import is located. Select the file and select the **Open** button.
4. The message Importing Text File displays. When the process is complete, the message "Import is Complete" displays. You can now work with the configuration file.

6.6.2 Uploading the Current Configuration

If you have a system already set up you can just load the existing configuration file from the 3500 Controller to the 3500Pro software.

1. Select **Start > Programs > 3500Pro > 3500Pro Configuration Editor**. The Configuration Editor window displays.
2. Select **File > Upload Configuration From Controller**. If a configuration file is currently open, the following message displays:

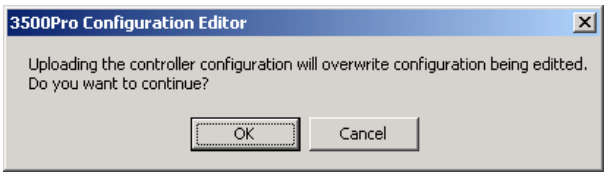


Figure 74. Confirm Configuration File Upload

3. The current configuration will be loaded to the 3500Pro software, and you can then save the configuration to your computer and start working with it.

6.7 Downloading the Configuration to the Controller

After you are done creating your configuration file, you need to download it to the controller.

1. From the Configuration Editor window, select **File > Transfer Configuration**.
2. Select the **Download Configuration TO Controller option**, then select **Execute**. The following prompt displays:

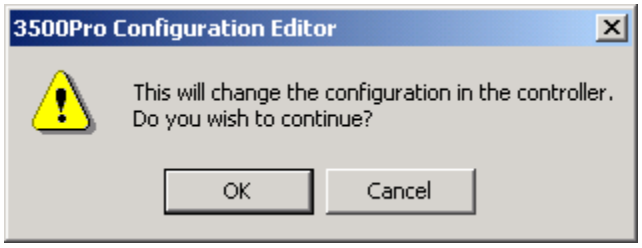


Figure 75. Download Configuration Prompt

2. If you are sure you want to download the configuration file, select **OK**.
3. The following prompts display in the Status Bar at the bottom of the window:

   Exporting the configuration to a file.

   Downloading to the Controller

4. The configuration file will be sent to the controller and you can then use additional 3500Pro tools to monitor the controller and perform diagnostics.

The controller is non-operational while it is loading the new configuration.

You have now established a basic connection with the system controller. Continue to modify and customize your configuration file and upload the configuration file to the controller. The following chapters provide in-depth information about each command available in the Configuration Editor.

6.8 3500Pro Configuration Editor File Menu

The **File** menu provides tools to open, save, close, upload, and download configuration files. In addition, there are tools to import ASCII files and export to a database.

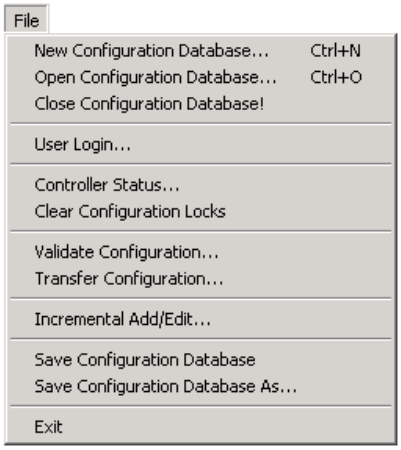


Figure 76. Configuration Editor File Menu

6.8.1 Shortcuts

There are several "shortcuts" available to quickly access commonly-used commands. The following shortcut keys and buttons are available:

Keys:

To use the following shortcuts, press the Control (Ctrl) key and the additional letter at the same time.

Ctrl+N: File > New Configuration Database:

Ctrl+O: File > Open Configuration Database:

Ctrl+X: Edit > Cut:

Ctrl+C: Edit > Copy:

Ctrl+V: Edit > Paste:

Buttons:

 Accesses the **File > New Configuration Database** command

 Accesses the **File > Open Configuration Database** command

 Accesses the **File > Save Configuration Database** command (if you have already save the configuration file) OR the **Save Configuration Database As** command if you have not saved the configuration file.

 Accesses the **Edit > Cut** command

 Accesses the **Edit > Copy** command

 Accesses the **Edit > Paste** command

6.8.2 New Configuration Database 

The **File > New Configuration Database** command creates a new 3500Pro configuration file. Configuration files contain all of the information required to communicate with the 3500Pro Controller.

Before Using This Command

If a configuration file is currently open, close it before creating a new configuration.

Creating a New Configuration Database

When you select this command, the New Config Database window displays. Select a location for the new configuration file, and enter a file name. Select Open, and an empty configuration will be created. The new configuration file is automatically saved to your hard drive to the directory location and file name you entered.

After you set up a configuration file, you can use the File > Download Configuration TO Controller command to load the configuration file to the controller.

6.8.3 Open Configuration Database

The **File > Open Configuration Database** command opens a configuration file.

NOTE **Save your existing configuration before opening another one**.

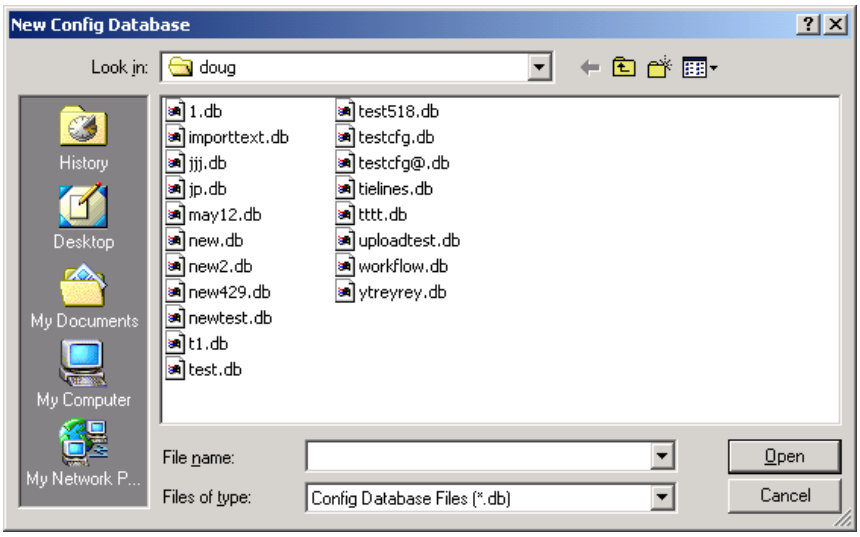


Figure 77. New Configuration Database

Before Using This Command

You must have a valid configuration file available on your computer or computer network.

NOTE **If you need to access a configuration file stored on a controller but is not on your computer, use the File > Configuration Transfer > Upload Configuration FROM Controller command.**

6.8.4 Close Configuration Database!

The **File > Close Configuration Database!** command closes the active configuration file.

Before Using This Command:

- Close all of the open windows.
- Save the configuration file with either the File > Save Configuration or File > Save Configuration Database As commands before closing the file, otherwise you will lose your changes.

6.8.5 Controller Status

The **File > Controller Status** command verifies the communication to the controller. The command displays a window with the name and version number of the controller software. Select **OK** to dismiss the window.

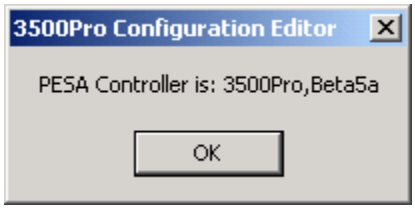


Figure 78. Controller Status Message

If there is a problem with the connection to the controller, the following message will display:

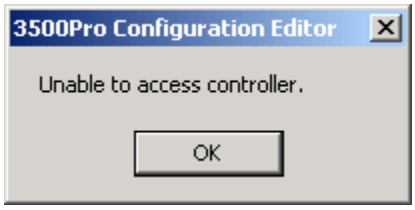


Figure 79. Controller Status Error Message

If you get this error, ensure that the physical connections to the controller are in place. Refer to your 3500Pro Controller Manual for detailed information about hardware setup.

Before Using this Command

Connect the primary external computer to the COM1 Connector on the 3500Pro Controller using a 9-pin NULL Modem RS232 cable.

6.8.6 Clear Configuration Locks

In the rare event that a power failure, hardware malfunction, or other occurrence prevents a configuration upload or download from terminating in a normal manner, the configuration lock may latch in place. To manually clear a configuration lock, select **File > Clear Configuration Locks**.

If the malfunction occurred while downloading a configuration to the controller (sometimes referred to as writer's lock), the controller will also be reset. You will be warned in this event.

6.8.7 Validate Configuration

The **File > Validate Configuration** command checks the currently open configuration file to make sure it does not contain any errors. Use this command before transferring the configuration file to the controller.

You can also validate the configuration before you download or export the configuration with the "Validate" option in the **Transfer Configuration** window.

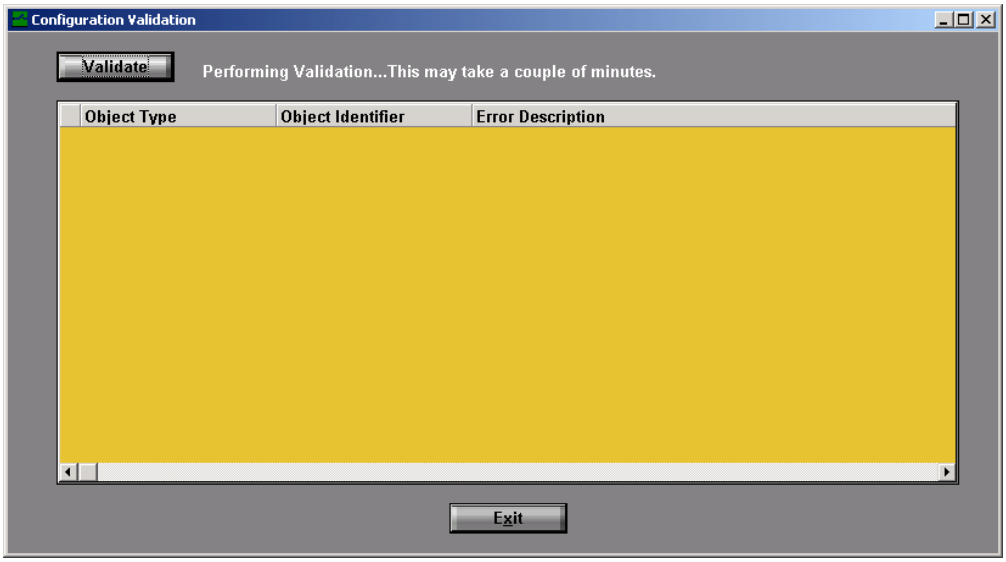


Figure 80. Validate Window

6.8.8 Transfer Configuration

The **File > Transfer Configuration** command provides a way to transfer a configuration file to the controller, upload a configuration file stored on the controller, and to import and export configuration files to and from ASCII files.

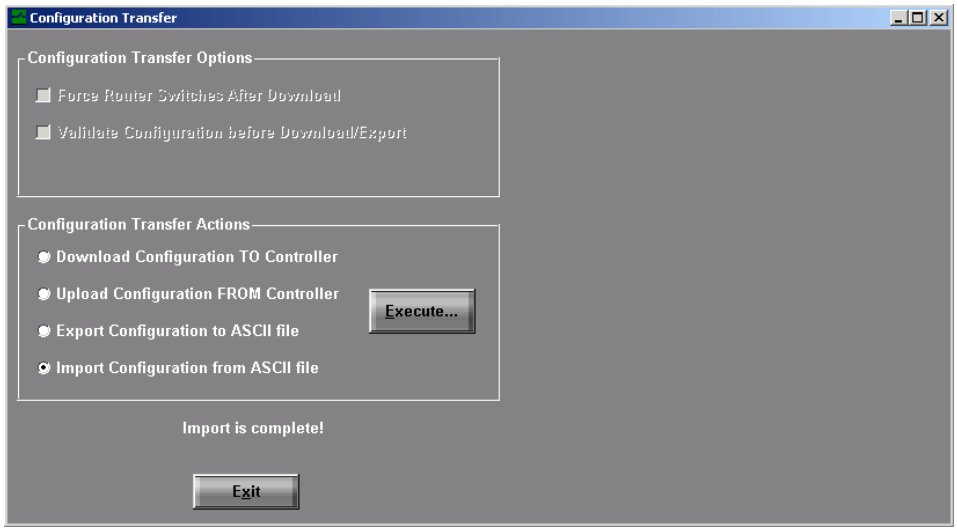


Figure 81. Configuration Transfer Window

Before Using This Command

- If you are uploading a configuration file from the controller, close any configuration files you are currently working on.
- If you are importing a configuration from an ASCII file, make sure the file you want to use is stored in a location you can access.

Configuration Transfer Options:

The following options are available in this window:

Force Router Switches After Download: After downloading a configuration file to the controller, automatically performs switches.

Validate Configuration before Download/Export: Validates the configuration file before you download it to the controller to export it to a file.

Configuration Transfer Actions: For detailed information about each of these options, see the following sections.

- **Download Configuration TO Controller** on page 70
- **Upload Configuration FROM Controller** on page 70
- **Import ASCII File To Database** on page 71
- **Export Database To ASCII File** on page 72

Execute: Performs the action you selected in this window. After you select Execute, messages will display in this window to let you know the progress of the selected action, and when the action is complete.

6.8.9 Upload Configuration FROM Controller

The **File > Upload Configuration FROM Controller** command uploads a configuration from the 3500Pro System Controller to the PC.

Before Using This Command

This command overwrites the configuration information in the 3500Pro Configuration Editor. To avoid data loss, be sure to save and/or close the configuration currently open in 3500Pro before overwriting it with the uploaded configuration.

Uploading a Configuration from the Controller

When you select this command, the following messages display in the Status Bar at the bottom of the 3500Pro window:

Pulling the configuration from the controller

Importing the configuration into the database

Done

If a status bar does not display at the bottom of the window, select View > Status Bar.

After the process is complete, the configuration settings will be available in the Configuration Editor.

6.8.10 Download Configuration TO Controller

The **File > Download Configuration TO Controller** command downloads a configuration file from your computer to the controller.

Before Using This Command

- Create or Open the configuration file you want to use with the controller.
- Save the configuration file before uploading it.
- Save the configuration file on the controller before uploading a new file.

This command causes the controller and switchers to be temporarily unavailable until the download is complete.

Downloading a Configuration to the Controller

When you select this command, the following prompt displays:

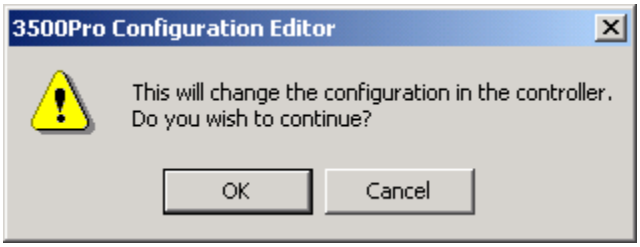


Figure 82. Download Configuration Message

If you are sure you want to download the new configuration, select **OK**. The following prompts display in the **Status Bar** at the bottom of the window:

Exporting the configuration to a file.

Downloading to the Controller

The configuration file will be sent to the controller and you can then use additional 3500Pro tools to monitor the controller and perform diagnostics.

6.8.11 Import ASCII File To Database

The **File > Import ASCII File to Database** option imports an ASCII configuration from the PC into 3500Pro. If you have a configuration file from an older version of 3500, you can import the ASCII .txt file into this version of the software.

A configuration may exist in two different formats:

1. A DB configuration is stored as a .db style database. This is the format that 3500Pro uses when storing a configuration on the PC.
2. An ASCII configuration is stored as an ASCII text file (.txt). 3500Pro converts a configuration from DB to ASCII when it is when uploaded from or downloaded to a 3500Pro System Controller.

Before Using This Command

A configuration file must be open before you can import an ASCII file. Open an existing configuration file or create a new configuration file.

NOTE **If you import the database into an existing configuration file, the current configuration will be overwritten.**

Importing an ASCII File

1. When you select this option, the **Import** window displays.
2. Use the **Look in** drop-down list to select the directory where the configuration file is stored. The available files will display in the middle part of the window.
3. Select the file you want to import, then select **Open**.
4. The configuration settings will be imported into the software and you can review the information with the menus.

6.8.12 Export Database To ASCII File

The **File > Export Database to ASCII File** exports an ASCII configuration from 3500Pro to the PC.

A configuration may exist in two different formats:

1. A DB configuration is a configuration stored as a .db style database. This is the format that 3500Pro uses when storing a configuration on the PC.
2. An ASCII configuration is a configuration stored as an ASCII text file. 3500Pro converts a configuration from DB to ASCII when it is when uploaded from or downloaded to a 3500Pro System Controller.

This option is useful if you need to transfer the database file to another computer, or easily look at the data in the database. You can open the ASCII file in a simple text editor or a word processing program such as Microsoft Word to review the information. If you open the file, just make sure you do not change the file extension (.txt).

Before Using This Command

The configuration file you want to export must be open.

Save the configuration file before you export it.

Exporting a Database File

1. When you select this command, the **Export** window displays.
2. Use the **Save in** drop-down list to select the directory where you want to save the file.
3. Then, type a name in the **File name** field. Select **Save** and the file will be saved to your computer.

6.8.13 Save Configuration Database 

The **File > Save Configuration Database** command saves the configuration file to your hard drive (or network).

If this is the first time you have saved the configuration file, the Save Config Database As window will display. You can then enter a name for the file and select a location to save the file.

Before Using This Command

A configuration file must be open.

6.8.14 Save Configuration Database As

The **File > Save Configuration Database As** command allows you to enter a name and directory location for the configuration file, and then saves the file to the specified location.

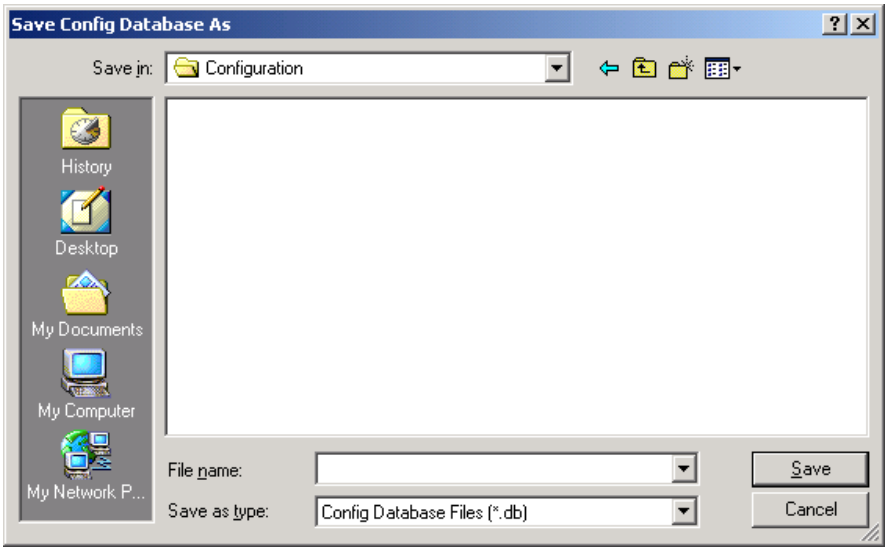


Figure 83. Save Configuration Database As

NOTE **If this is the first time you have saved the configuration file, the Save Config Database As window will automatically display.**

NOTE **Use this command to save an existing configuration file to another file name or directory location.**

Before Using This Command

A configuration file must be open.

6.8.15 Exit

The **File > Exit** command closes the 3500Pro Configuration Editor

Before Using This Command

Save the configuration file you are working with.

6.9 Configuration Editor Edit Menu

The **Edit** commands allow you to cut, copy, and paste information in the 3500Pro workspace. The following commands are available:

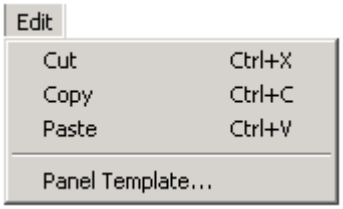


Figure 84. Edit Menu

6.9.1 Cut 

The **Edit > Cut** command removes information from a selected field or fields. To use this option, you must highlight an area that contains information you want to "cut". When the area is highlighted, as shown below, select this command and the information will be removed and placed on the "clipboard" (temporary storage location on your computer).

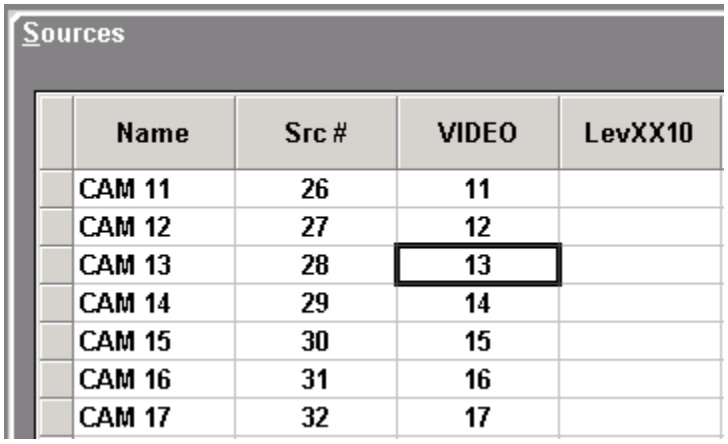


Figure 85. Highlighted Field

TIP: If you need to remove the information from an entire column, highlight the entire column. Select the first field you want to cut, then hold down the left mouse button and move the cursor so all of the fields you want to cut are highlighted. Then, select the Cut command and all of the information will be removed.

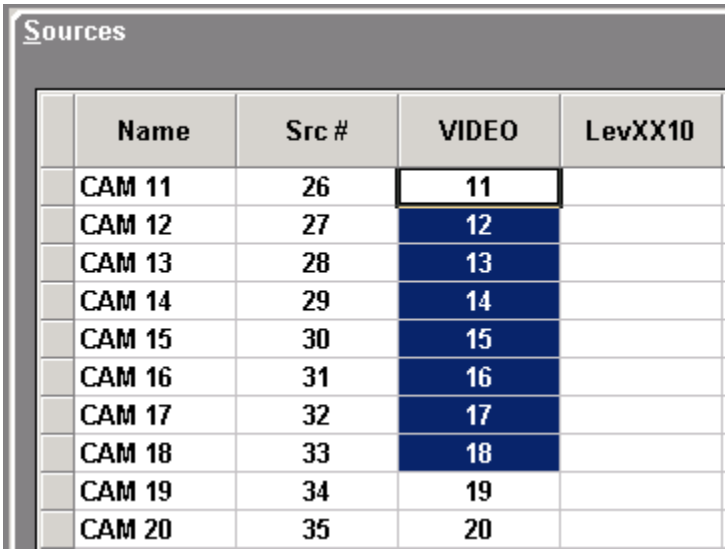


Figure 86. Highlighted Column

Each time you use the "Cut" or "Copy" command, the information stored on the clipboard will be overwritten.

If you Cut information, you cannot "Undo" the action. Make sure you cut the correct information. If you accidentally cut the wrong information, immediately use the Edit > Paste command to replace the cut information.

TIP: In many 3500Pro windows, you can also access this command by clicking the right mouse button. A menu will display, and you can select Cut.

6.9.2 Copy

The **Edit > Copy** command copies highlighted information to the clipboard (a temporary storage location on your computer). Then, you can **Paste** the information into another location. This saves time when you have to type information in several different places.

To copy information, select a field. When it highlights, as shown below, select Copy, and the information will be pasted to your clipboard.

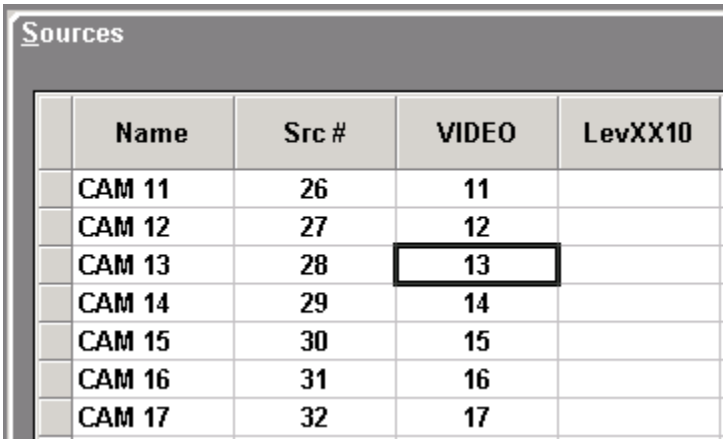


Figure 87. Highlighted Field

NOTE **Each time you use the "Cut" or "Copy" command, the information stored on the clipboard will be overwritten.**

TIP: In many 3500Pro windows, you can also access this command by clicking the right mouse button. A menu will display, and you can select Copy.

6.9.3 Paste

The **Edit > Paste** command places information stored on the clipboard in the selected location. Use this command to place information you either "**Cut**" or "**Copied**" to a different location in the 3500Pro interface.

NOTE **Each time you use the "Cut" or "Copy" command, the information stored on the clipboard will be overwritten. If you want to "Paste" information, make sure you do so before overwriting the information.**

TIP: In many 3500Pro windows, you can also access this command by clicking the right mouse button. A menu will display, and you can select Paste.

6.9.4 Panel Template

The **Edit > Panel Template** command allows you to set up defaults for panel information. These settings will be set as a default each time you create a new panel (with the **Configuration > Panels** option).

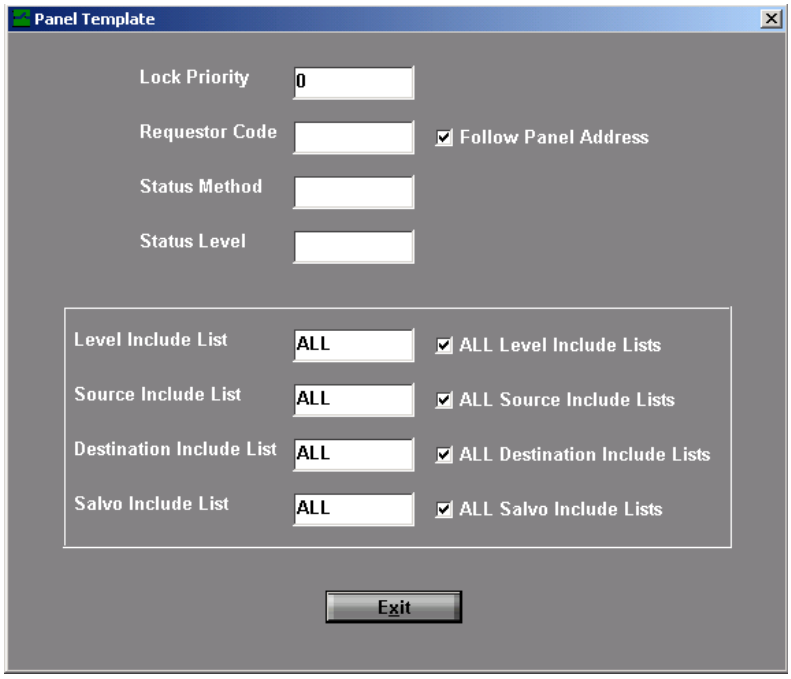


Figure 88. Panel Template Window

Lock Priority

The lock priority is used with the requester code to determine if a lock or protect can be removed. When a lock or protect has been assigned by a panel or port, it can only be removed by another panel or port with a higher lock priority, or with the same lock priority and same requester code. The lower the lock priority number, the higher the priority.

Panel lock priorities not explicitly defined automatically default to "0" which gives absolute authority to clear any lock or protect on the system. The acceptable range of lock priorities is shown in the General Specifications Table.

Requestor Code

The requester code is used with the lock priority to determine if a lock or protect can be removed. When a lock or protect has been assigned by a panel (or serial communications port), it can only be removed by another panel (or port) with a higher lock priority or with the same lock priority and same requester code.

Requestor codes are also used with protects. When a destination is placed into protect, only those panels/users with the same requestor code can switch the destination.

Requester codes not explicitly defined automatically default to the panel address. You can also select the "Follow Panel Address" box to ensure that the Requestor Code is always identical to the Address.

Status Method

When a panel is in all levels mode (ALL LEVS), the status shown will be the source on the Status Level assigned to that panel. If the destination is not defined on the Status Level, Status Method is used to control the resulting display:

- If DEF (Default Method) is selected, NO XXXXX will be displayed where XXXXX is the Status Level assigned to the panel.
- If GRP (Group Method) is selected, the controller will examine every level sequentially, starting with the level designated as Level Order 1. The source switched on the first level found where the destination is defined, will be displayed as the destination status.

Status Level

One function of the LCD display on a panel is to show which source is currently switched to a selected destination. This is known as destination status. Although more than one source can be switched to a single destination (limited to one source per level), the status display can only show one source at a time. When the panel is in all levels mode (ALL LEVS), Status Level is used to designate a default level to be used when displaying status. Only the source on this default level will be displayed. Pushbutton only panels also use the status level. It is used to determine which tally LED to light on a panel in a split/breakaway condition.

For the following items, if you need to find out the names of current lists, select Configuration > Panel. Use the various List pulldown menus on the far right side of the Panel Specific Data tab to review the available lists.

Level Include List

The Levels Include List is a named list of all levels the panel (or remote client) is authorized to control. Enter the name of the list that you want to assign to new panels, or select the ALL Level Include List to assign all of the available lists.

Source Include List

A source include list is a named list of the sources a specific control panel is authorized to control. A source include list may be shared by multiple panels. Enter the name of the list that you want to assign to new panels, or select the ALL Source Include List to assign all of the available lists.

Destination Include List

A destination include list is a named list of the destinations a specific control panel is authorized to control. A destination include list may be shared by multiple panels. Enter the name of the list that you want to assign to new panels, or select the ALL Destination Include List to assign all of the available lists.

Salvo Include List

A salvo include list is a named list of the salvos a specific control panel is authorized to control. A salvo include list may be shared by multiple panels. Enter the name of the list that you want to assign to new panels, or select the ALL Salvo Include List to assign all of the available lists.

6.10 Configuration Editor View Menu

The **View** commands display or hide the toolbar and status bar. The following commands are available:

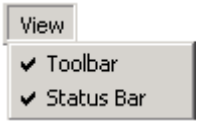


Figure 89. View Menu

6.10.1 Toolbar

The **View > Toolbar** command hides or displays the bar with the shortcut icons. Select this command to display or hide the toolbar.

6.10.2 Status Bar

The **View > Status Bar** command hides or displays the bar with the status information that displays at the bottom of the 3500Pro window. Select this command to display or hide the status bar.

6.11 Configuration Editor Configuration Menu

The **Configuration** commands define all of the settings in the configuration file that allow you to remotely access the controller. Use these commands to set up the configuration file, then download the configuration file to the controller. The following commands are available.

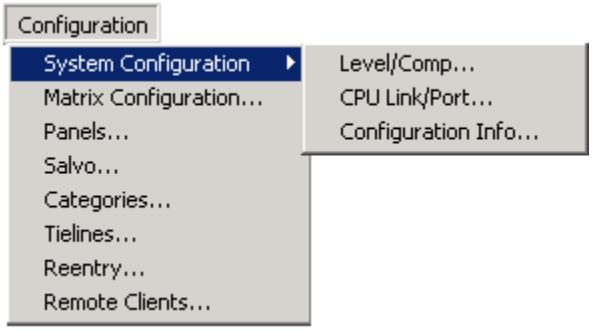


Figure 90. Configuration Menu

6.11.1 Level/Comp

The **Configuration > System Configuration > Level/Comp** provides an interface to work with Levels and Components. The following sections describe what levels and components are and how to work with them.

Before Using This Command

You must have created or opened a configuration file.

6.11.1.1 Levels

The **Levels** section of the window allows you to add, edit, and delete levels.

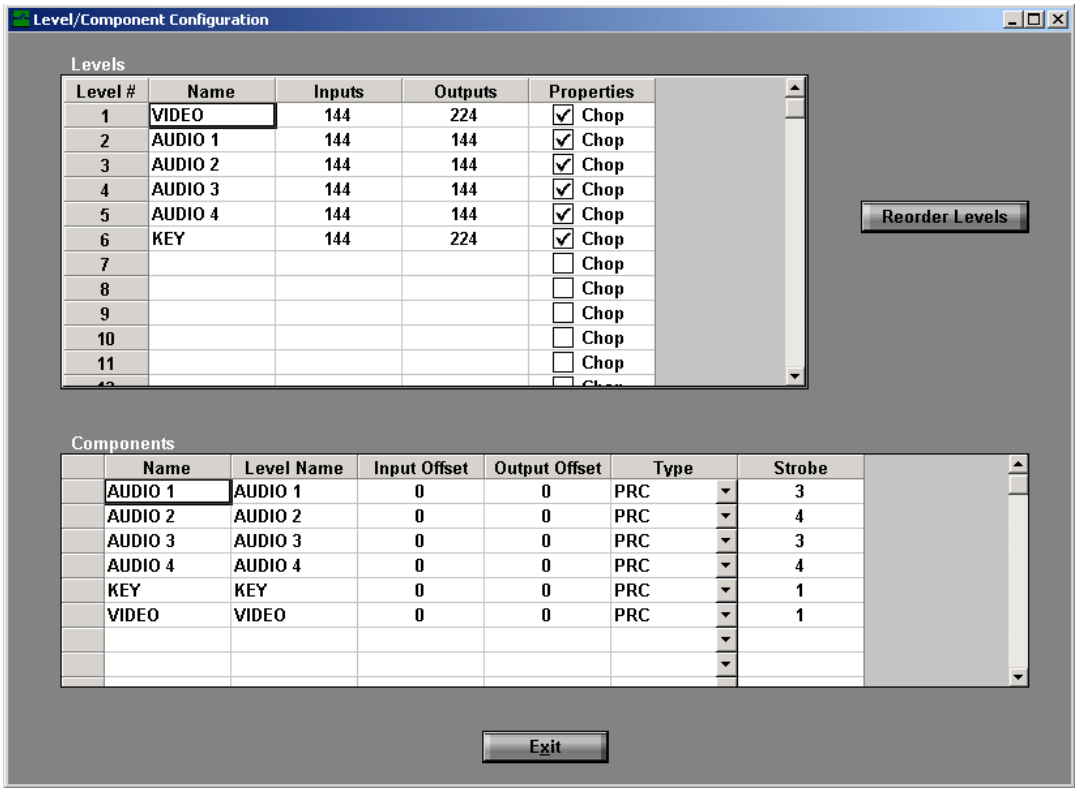


Figure 91. Level/Component Configuration Window

A level is a group of related components that are switched together by 3500Pro. Levels are the lowest element that the user can manipulate in the control system. The maximum number of levels in a configuration is 16 (8 for the 3500Pro LE). The example shown below is a 2x2 RGB video level named VID which is made up of three components named RED, GRN and BLU.

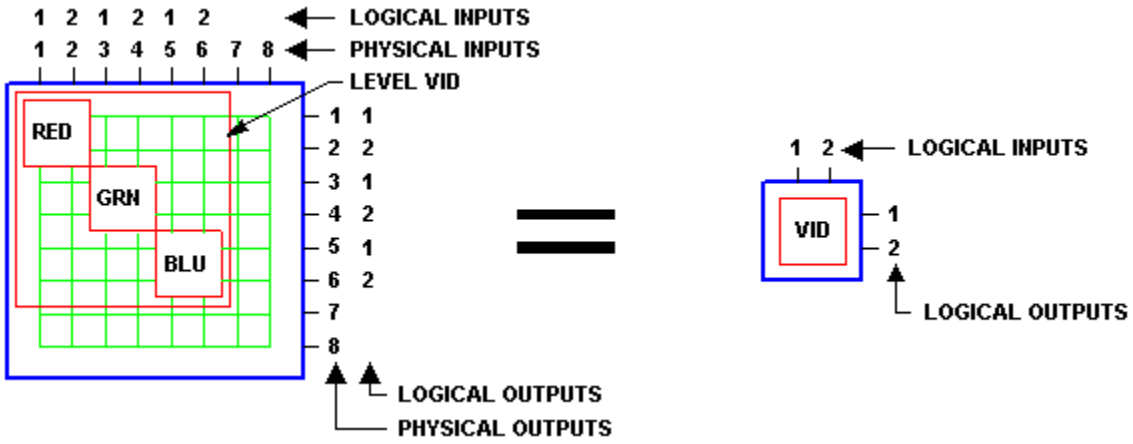


Figure 92. 2x2 RGB Video Level

Before Using This Command

You must have created or opened a configuration file.

Column Descriptions:

Level #: Defines the number for the level. You cannot edit this field. If you want to change the Level #, use the Reorder Levels button. The number implies the order of levels for use on serial commands and panel operation.

Name: Specifies the name of the level. Level names are one to eight characters in length and are constructed using uppercase letters, numbers, and spaces. The first character must be a letter.

Inputs: specifies the number of inputs associated with the level. The maximum number of inputs per level is 576 (144 for the 3500Pro LE).

TIME SAVING TIP: If the Input value is the same for several different levels (for example, 144), type "144" in the first Input field. Then, select the number you just entered, and highlight the rest of the fields below it that have the same value. Click the right-mouse button and select Fill Down. All of the fields will populate with the same Input value.

Example: Enter the first Input.

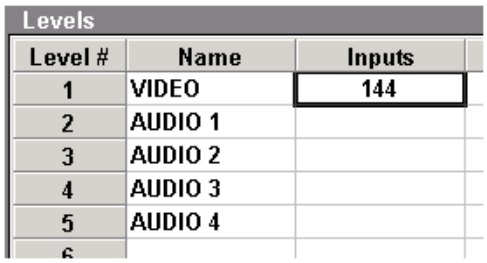


Figure 93. Entering an Input

Select the first input, then highlight the rest of the Input fields with the same value. Click the right mouse button and pick Fill-Down.

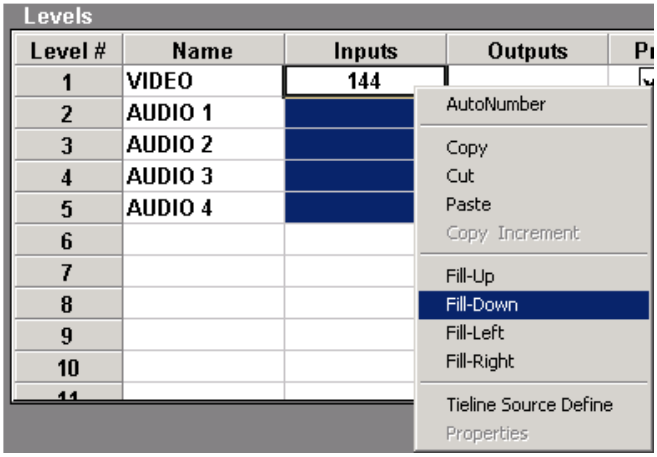


Figure 94. Fill Down

The highlighted fields are populated.

Levels

Level #	Name	Inputs
1	VIDEO	144
2	AUDIO 1	144
3	AUDIO 2	144
4	AUDIO 3	144
5	AUDIO 4	144
6		

Figure 95. Populated Fields

Outputs: Specifies the number of Outputs associated with the level. The maximum number of inputs per level is 576 (144 for the 3500Pro LE).

TIP: Use the same method described in the Inputs section to quickly enter Outputs. Or, if the Outputs values are the same as the Inputs, highlight all of the Inputs, right-click your mouse, then select Fill-Right.

Properties: Determines if the level is "Chop Enabled". Select the gray box to enable or disable "Chop". When a red check mark displays, Chop is Enabled.

Working with Levels:
Adding a Level: You can have a maximum of 16 levels (8 with the 3500Pro LE). To add a level, simply type new level information into a blank row.

Deleting a Level: To delete a level, click on the information you want to remove and press the Delete key. You can delete several entries at one time by highlighting all of the fields you want to delete, then pressing the Delete key. When you are done deleting a level, select **OK**. Be sure to **Save** the configuration file.

Reordering Levels: To change the Level numbers, select the **Reorder Levels** button. The **Change Level Order** window will appear, and you can assign new level numbers to each available level.

6.11.1.2 Change Level Order

You can change the order of levels with the **Reorder Levels** button. (**Configuration > System Configuration > Level/Comp > Reorder Levels**). This window displays all of the defined **Level Names** and the **Level Numbers**.

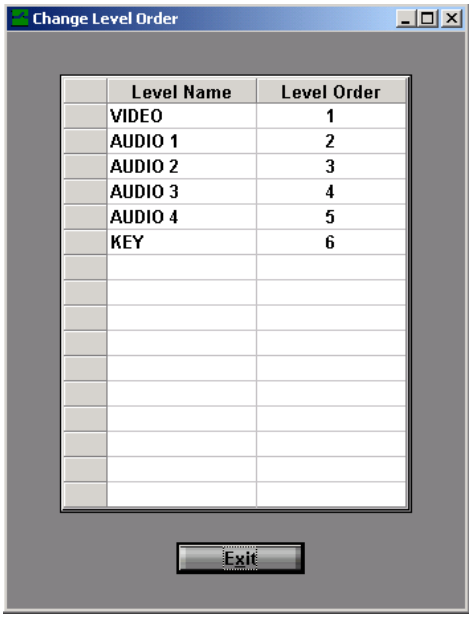


Figure 96. Change Level Order Window

To change the level number, double-click in the field you want to change, and enter a new level number.

NOTE

Make sure the cursor is blinking inside the field before entering a new level number.

The number you enter in this field will be the position in this window. For example, if you enter a "5" in the Level Order field, the Level Name will move to the fifth row in the window. If another level was already assigned "5", it will move down a row to the "6" row.

6.11.1.3 Components

The **Components** section of the window allows you to add, edit, and delete comonents. A component is the most basic signal element that can be switched by a single crosspoint. Components map level inputs/outputs to the actual physical matrix and are collected under a level to be controlled by users. For example, in RGB video, "Red", "Green", and "Blue" are components; in stereo audio, "Left" and "Right" are components. The example shown below is a 2x2 RGB video level named VID which is made up of three components named RED, GRN and BLU.

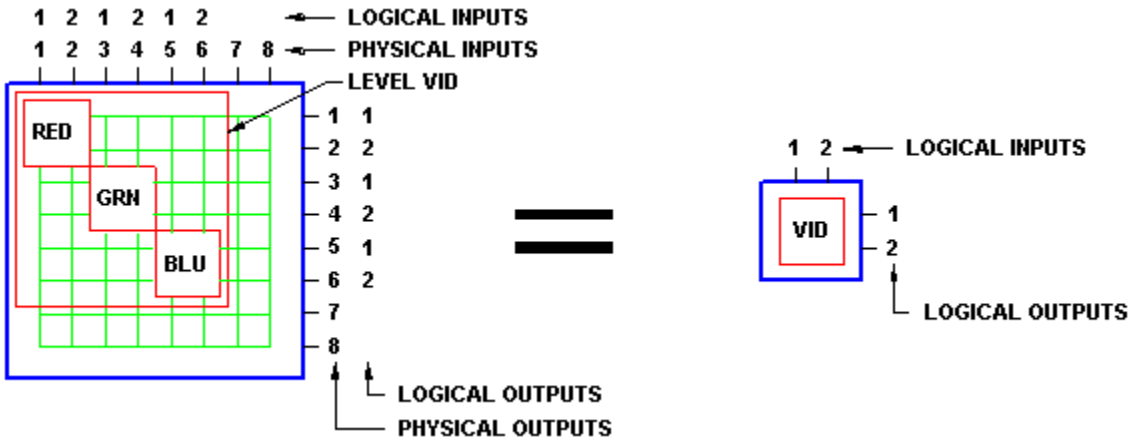


Figure 97. 2x2 RGB Video Level

The maximum number of components in a configuration is 32 (16 for the 3500Pro LE).

Before Using This Command

You must have created or opened a configuration file.

Column Descriptions:

Name: defines the name of the component. Component names are one to eight characters in length and are constructed using uppercase letters, numbers, and spaces. The first character must be a letter. The example shown above is a 2x2 RGB video level named VID which is made up of three components named RED, GRN and BLU. For the example, "RED" would be used for the first component, "GRN" for the second, and "BLU" for the third.

Level Name: specifies the name of the level associated with the component. You must have already created the level you want to use (in the top half on this window) before you enter the value in this field.

Input Offset: Acceptable values for input offsets are shown in the General Specifications Table. For the example shown above, "0" and "0" would be used for the component "RED"; "2" and "2" would be used for the component "GRN"; and "4" and "4" would be used for the component "BLU".

Physical Input = Level Input + Component Input Offset

3500Pro allows components to overlap in matrix space. Care should be taken when entering offsets to ensure that any resulting overlap of components is intentional.

TIP: If the Input value is the same for several different offsets (for example, 0), type "0" in the first Input Offset field. Then, select the number you just entered, and highlight the rest of the fields below it that have the same value. Click the right-mouse button and select Fill-Down. All of the fields will populate with the same Input Offset value.

Output Offset: Acceptable values for input offsets are shown in the General Specifications Table. For the example shown above, "0" and "0" would be used for the component "RED"; "2" and "2" would be used for the component "GRN"; and "4" and "4" would be used for the component "BLU".

Type: PRC, TGR (Tiger), XTN (External Manufacturer or Third Party), or RM5 (System 5). Select the one you want from the pulldown menu.

Strobe: Enter the Strobe assigned to the routing switcher that contains the component.

Every routing switcher in a switching system is assigned a strobe. This is usually accomplished by setting a DIP switch on the back of the routing switcher. Strobes do not have to be unique and, in larger systems, each strobe might be associated with several routing switchers.

In many switching systems, strobes are used to group levels of the same type together. For example, video may be on Strobe 1, audio on Strobe 2, etc.

The following table shows the offset, strobe, and address ranges for the RM5 and PRC component types:

Component Types	RM5 (System 5)	PRC, XTN, TGR
Offset Range	0-255	0-4094
Strobe Range	1-5	1-63
Address Range	1-255	1-4095

RM5 components utilize the System 5 37 pin parallel interface. PRC, TGR, and XTN matrices use the PRC RS-422 based interface. (PRC, TGR, and XTN matrices are all controlled by the same set of commands. The difference between the components is the boundary size used for background checking the matrix health. PRC uses a 8x8 boundary, TGR uses a 48x16 boundary, and the XTN uses a 64x64 boundary.)

Working with Components

Adding a Component: You can have a maximum of 32 components (16 for the 3500Pro LE). To add a component, simply type new component information into a blank row, then select the necessary options described above.

Deleting a Component: To delete a component, click on the information you want to remove and press the Delete key. You can delete several entries at one time by highlighting all of the fields you want to delete, then pressing the Delete key. When you are done deleting a level, select **OK**. Be sure to **Save** the configuration file.

6.11.2 CPU Link/Port

The **Configuration > System Configuration > CPU Link/Port** command allows you to configure the serial ports on the 3500Pro System Controller. This window is broken into two sections. See the following sections for information about the items in each section of the window.

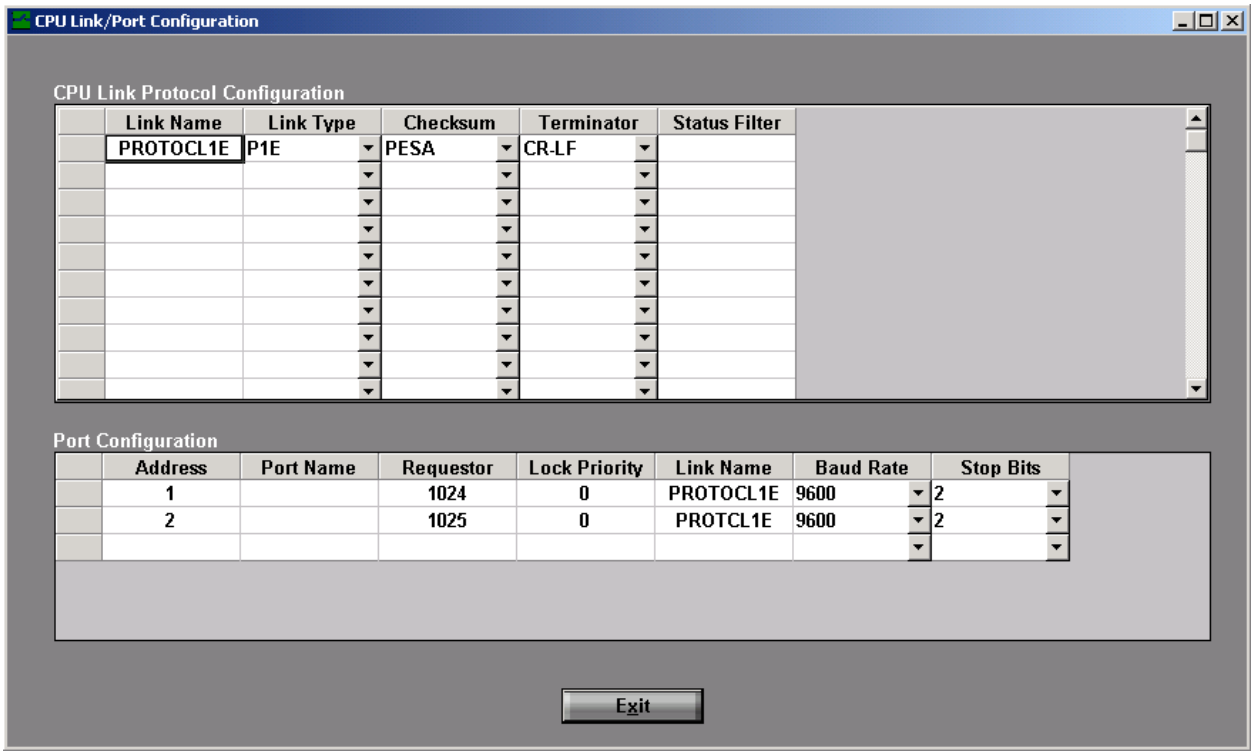


Figure 98. CPU Link/Port Configuration Window

CPU Link Protocol Configuration: This section of the window allows you to define up to 16 CPU Link Protocol Configurations. You can then assign a specific configuration to a port in the lower portion of the window.

Port Configuration: This section of the window defines the actual configuration of the three available ports. You can assign specific CPU Link Protocol Configurations defined in the top portion of this window with each port (in the Link Name field).

Before Using This Command:

Create or open a configuration file.

6.11.2.1 CPU Link Protocol Configuration

The **Configuration > System Configuration > CPU Link/Port** > **CPU Link Protocol Configuration** section determines the format to be used when sending data through the serial ports on the 3500Pro System Controller. You can define up to 16 CPU Link Protocol Configurations. You can then assign a specific configuration to a port in the lower portion of the window.

Link Name

Defines the name of the protocol configuration being defined. It is used when assigning a protocol variation to a serial port. You can define up to 16 configurations. You will associate a defined configuration with a specific port in the lower portion of this window.

Link Type

This is the protocol that determines the format to be used when sending data through the serial ports on the 3500Pro System Controller. Select one from the pulldown menu. There are currently three protocols available for use.

1. CPU Link Protocol 1 with Extensions (P1E) (81-9062-0407-0)
2. Unsolicited Status Protocol (USP) (81-9062-0409-0)
3. Truck Link Protocol (TRK) (81-9062-0410-0) Truck link only works when configured for COM4.

Checksum

A checksum determines how the validity of transmitted data will be confirmed. The three checksum types available are:

NONE: No validity checking.

PESA: Data validity is checked using PESA's standard method. (See Protocol documentation.)

HEX ASCII: Data validity is checked using a standard HEX-ASCII checksum.

Terminator

The terminator is the character(s) to be used to denote the end of a data packet or command string. The three terminators available are:

CR: A carriage return.

LF: A line feed.

CL: A carriage return followed by a line feed.

Status Filter

Status filtering allows the user to filter the data sent through the port using USP. This is only available for Unsolicited Status Protocol (USP). The nine filters available are:

A - All Unsolicited Items

C - Configuration Changes

D - Dual Transition Changes (Dual 3500Pro Control Systems Only)

E - Confidence Errors

G - User Logon/Log Off

L - Lock/Protect Changes

P - Physical Switches

S - Switch Change Requests

U - User Account Changes

They can be specified in any combination. Enter the filter you want to use in the **Status Filter** field.

6.11.2.2 Port Configuration

The **Configuration > System Configuration > CPU Link/Port > Port Configuration** section of the window defines the actual configuration of the three available ports. You can assign specific CPU Link Protocol Configurations defined in the top portion of this window with each port (in the Link Name field).

Before Using This Command

You must have defined the **CPU Link Protocol Configurations** in the top portion of this window.

Address

Defines the port address. There are three ports that you can configure:

Port 1 - The default CPU link port which is pre-configured to be used with 3500Pro. The only items which may be changed on this port are the **Port Name** and the **Requester Code**.

Port 2 - Available for user configuration.

Port 3 - Not available. This port is the PRC Communications Port on the 3500Pro System Controller and may not be used for external control.

Port 4 - Available for user configuration.

Port Name

Because a port is identified by its address, the assignment of a port name is optional. If used, port names are one to eight characters in length and are constructed using uppercase letters, numbers, and spaces. The first character must be a letter.

Requestor

The requester code is used with the lock priority to determine if a lock or protect can be removed. When a lock or protect has been assigned by a port (or panel), it can only be removed by another port (or panel) with a higher lock priority or with the same lock priority and same requester code.

Requester codes not explicitly defined automatically default to 1024, 1025, and 1027 for Ports 1, 2, and 4 respectively.

The acceptable range of requester codes is shown in the General Specifications Table.

Lock Priority

The lock priority is used with the requester code to determine if a lock or protect can be removed. When a lock or protect has been assigned by a port or panel, it can only be removed by another port or panel with a higher lock priority, or with the same lock priority and same requester code. The lower the lock priority number, the higher the priority.

Port lock priorities not explicitly defined automatically default to "0" which gives absolute authority to clear any lock or protect on the system. The Lock Priority assigned to Port 1, which may not be changed, is "0".

The acceptable range of lock priorities is 0-255 ("0" is Highest Priority).

Link Name

Defines the CPU Link Protocol Configuration you want to associate with this port. Each configuration in the top portion of this window is identified by its Link Name. Enter the Link Name you want to use from the top portion of the window in this field to assign the correct configuration.

Baud Rate

Baud rate is the data transfer rate through the serial port measured in Baud (bits per second).

A baud rate of either 9600 or 38400 may be selected for Port 2 and Port 4. Port 1's baud rate is specified by the DIP switch on the controller board and cannot be set via the configuration software. The baud rate is either 9600 or 38400 baud.

Stop Bits

In asynchronous communications, a stop bit is a bit that indicates that a byte of data has just been transmitted. Every byte of data is preceded by a start bit and followed by a stop bit.

Either 1 or 2 stop bits may be selected for Port 2 and Port 4. The number of stop bits assigned to Port 1, which may not be changed, is 2.

6.11.3 Configuration Info

The **Configuration > System Configuration > Configuration Info** window shows information about the configuration currently open in 3500Pro.

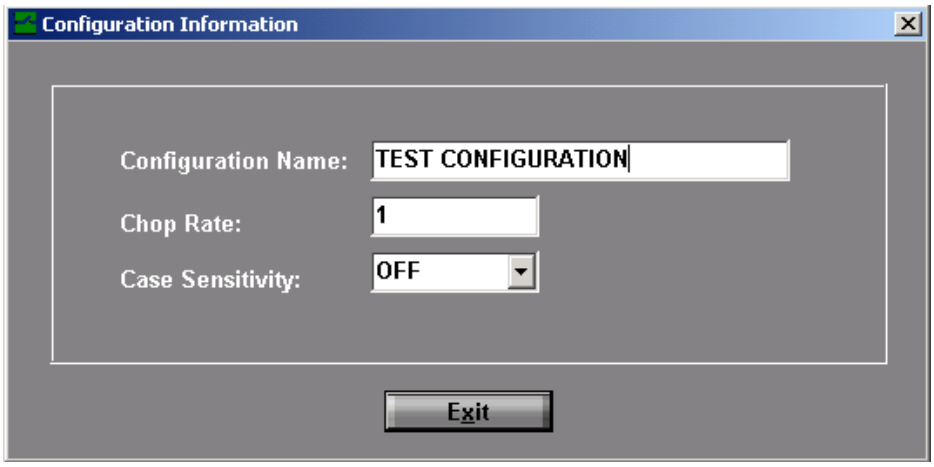


Figure 99. Configuration Information Window

Configuration Name:

This field allows you to name or rename the current configuration. Type the desired name in the **Configuration Name** box. Configuration names may have up to 32 alphanumeric characters. You can query on this name from the 3500Pro System Controller.

NOTE **The Configuration Name may be different from the file name.**

Chop Rate:
The CHOP rate indicates the frames rate of switches used by the Chop mode of operation. To change the chop rate, enter the desired value in the **Chop Rate** box. The range of Chop Rates the 3500Pro Control System can be configured for is between 1 and 255.

Case Sensitivity:
This option specifies whether the 3500Pro software distinguishes between upper and lower case letters when you are entering information in the category, source, destination, and reentry windows. For example, if you have Case Sensitivity turned ON, the software will recognize when you enter information using capital letters. If you have Case Sensitivity turned off, it doesn't matter if you use lower or upper case.
After making changes, click the **OK** button to close the window. Be sure to save the configuration file.

6.11.4 Matrix Configuration

The **Configuration > Matrix Configuration** command allows you to define Sources and Destinations.

The maximum number of sources and destinations is 600 (180 for the 3500Pro LE).

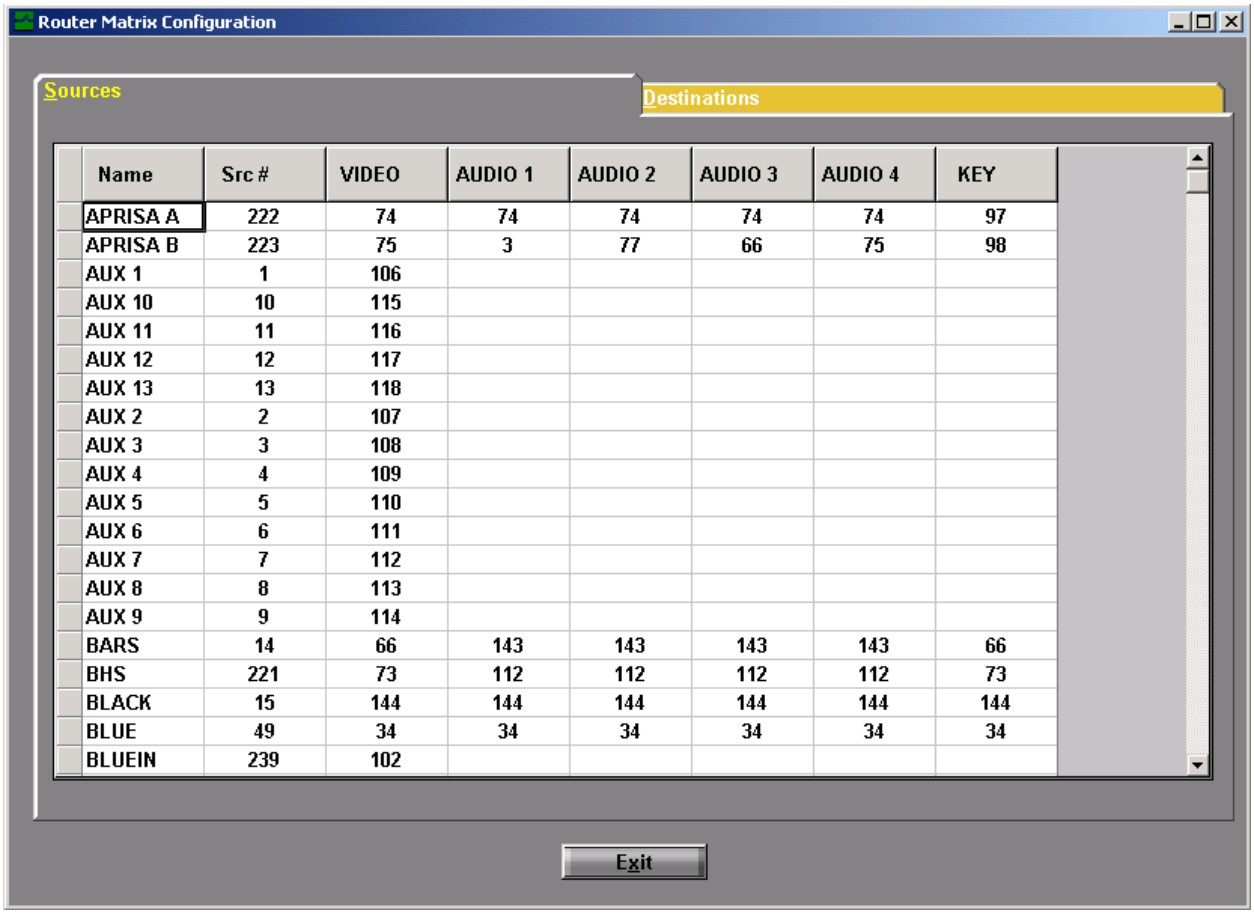
There are 2 tab sheets in this window, one for sources, and the other for destinations. The Destinations tab displays in yellow so you can easily determine which tab sheet you are working with.

Before Using This Command

You must have already used the **Configuration > System Configuration > Level/Comp** command to set up all of the levels.

6.11.4.1 Sources

The **Matrix Configuration > Sources** tab allows you to define all of the sources in the configuration. Only one source per level is allowed. A level may be left undefined on a source. Inputs may be shared between different sources. The maximum number of sources is 600 (180 for the 3500Pro LE).



Name	Src #	VIDEO	AUDIO 1	AUDIO 2	AUDIO 3	AUDIO 4	KEY
APRISA A	222	74	74	74	74	74	97
APRISA B	223	75	3	77	66	75	98
AUX 1	1	106					
AUX 10	10	115					
AUX 11	11	116					
AUX 12	12	117					
AUX 13	13	118					
AUX 2	2	107					
AUX 3	3	108					
AUX 4	4	109					
AUX 5	5	110					
AUX 6	6	111					
AUX 7	7	112					
AUX 8	8	113					
AUX 9	9	114					
BARS	14	66	143	143	143	143	66
BHS	221	73	112	112	112	112	73
BLACK	15	144	144	144	144	144	144
BLUE	49	34	34	34	34	34	34
BLUEIN	239	102					

Figure 100. Matrix Configuration Sources Window

Name

Specifies the name of each source . Type in the name you want to use in this field.

Src

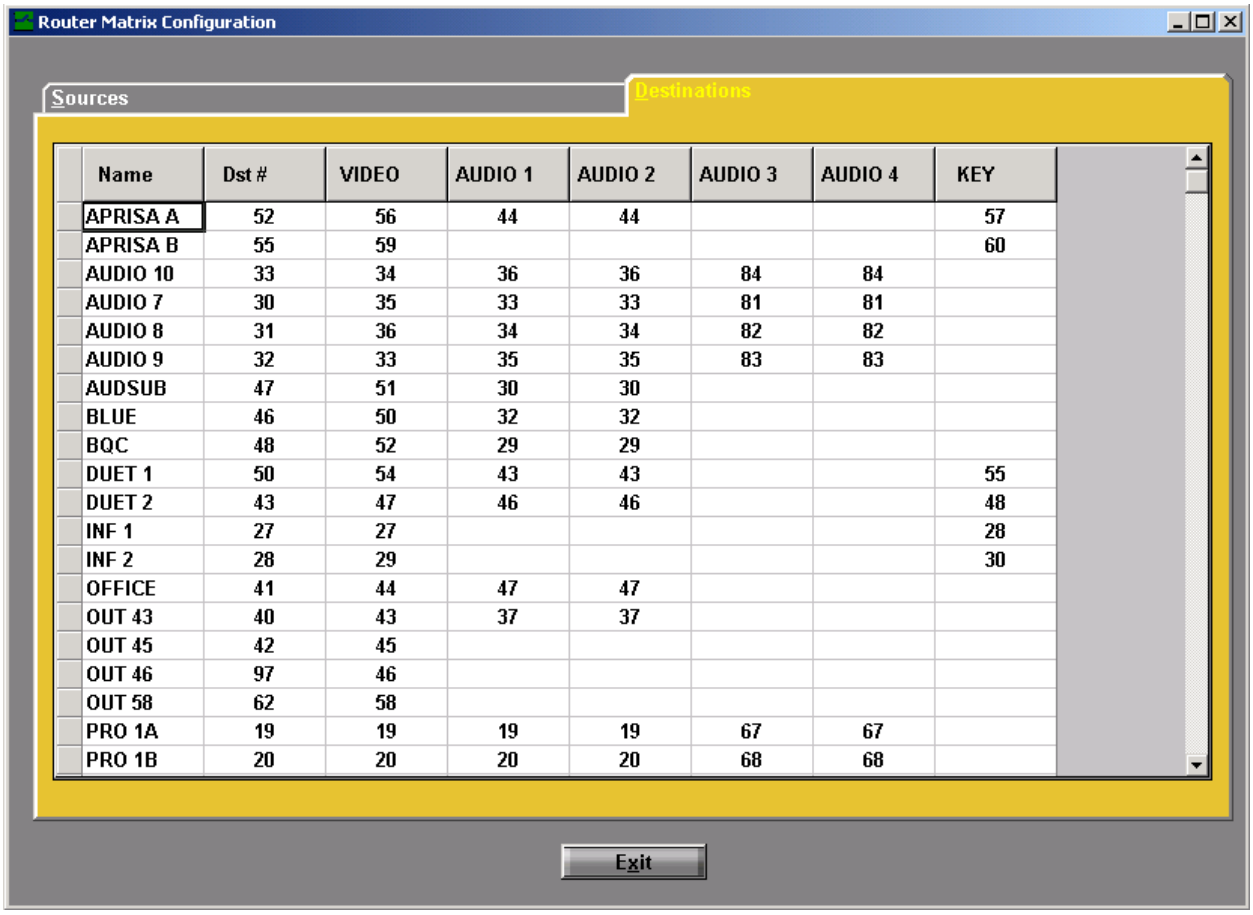
Identifies the source number. As you enter Names, this field will automatically display a number. The source number is a numeric alias that can be used to refer top the source. This is used by the serial protocols and incremental edits.

Levels

The remaining columns identify the input on each level that you defined with the Levels window. For each level, enter the source that corresponds with each Source Name.

6.11.4.2 Destinations

The **Matrix Configuration > Destinations** tab allows you to define all of the sources in the configuration. The maximum number of destinations is 600 (180 for the 3500Pro LE).



Name	Dst #	VIDEO	AUDIO 1	AUDIO 2	AUDIO 3	AUDIO 4	KEY
APRISA A	52	56	44	44			57
APRISA B	55	59					60
AUDIO 10	33	34	36	36	84	84	
AUDIO 7	30	35	33	33	81	81	
AUDIO 8	31	36	34	34	82	82	
AUDIO 9	32	33	35	35	83	83	
AUDSUB	47	51	30	30			
BLUE	46	50	32	32			
BQC	48	52	29	29			
DUET 1	50	54	43	43			55
DUET 2	43	47	46	46			48
INF 1	27	27					28
INF 2	28	29					30
OFFICE	41	44	47	47			
OUT 43	40	43	37	37			
OUT 45	42	45					
OUT 46	97	46					
OUT 58	62	58					
PRO 1A	19	19	19	19	67	67	
PRO 1B	20	20	20	20	68	68	

Figure 101. Matrix Configuration Destinations Window

Name

Specifies the name of each destination . Type in the name you want to use in this field.

Src

Identifies the destination number. As you enter Names, this field will automatically display a number. The destination number is a numeric alias that can be used to refer top the destination. This is used by the serial protocols and incremental edits.

Levels

The remaining columns identify the input on each level that you defined with the Levels window. For each level, enter the destination that corresponds with each Source Name.

6.11.5 Panels

The **Configuration > Panels** command adds new panels to the configuration. At the top of the window, a graphic illustration of the selected panel displays. Below the graphic, there is a list of all the currently defined panels.

The following tabs display in this window:

- **Panel Specific Data**
- **Data Key Definition**
- **Panel Access Lists**
- **List Assignment**
- **Salvo Key Definition**

Before Using This Command

You must have already set up Levels and Components.

You must have already set up the Matrix Configuration.

Adding a New Panel

1. Choose the Specific panel tab
2. Select the New Panel button.
3. Select the panel from the Type list.
4. Enter the Requestor Code.
5. Enter the lock priority
6. Enter the status method.

6.11.5.1 Panel Specific Data

The **Panel Specific Data** tab allows you to add new panels, edit existing panels, and delete panels. This tab also allows you to define information about the panel, such as name, address, and so on. The following fields are available in this panel:

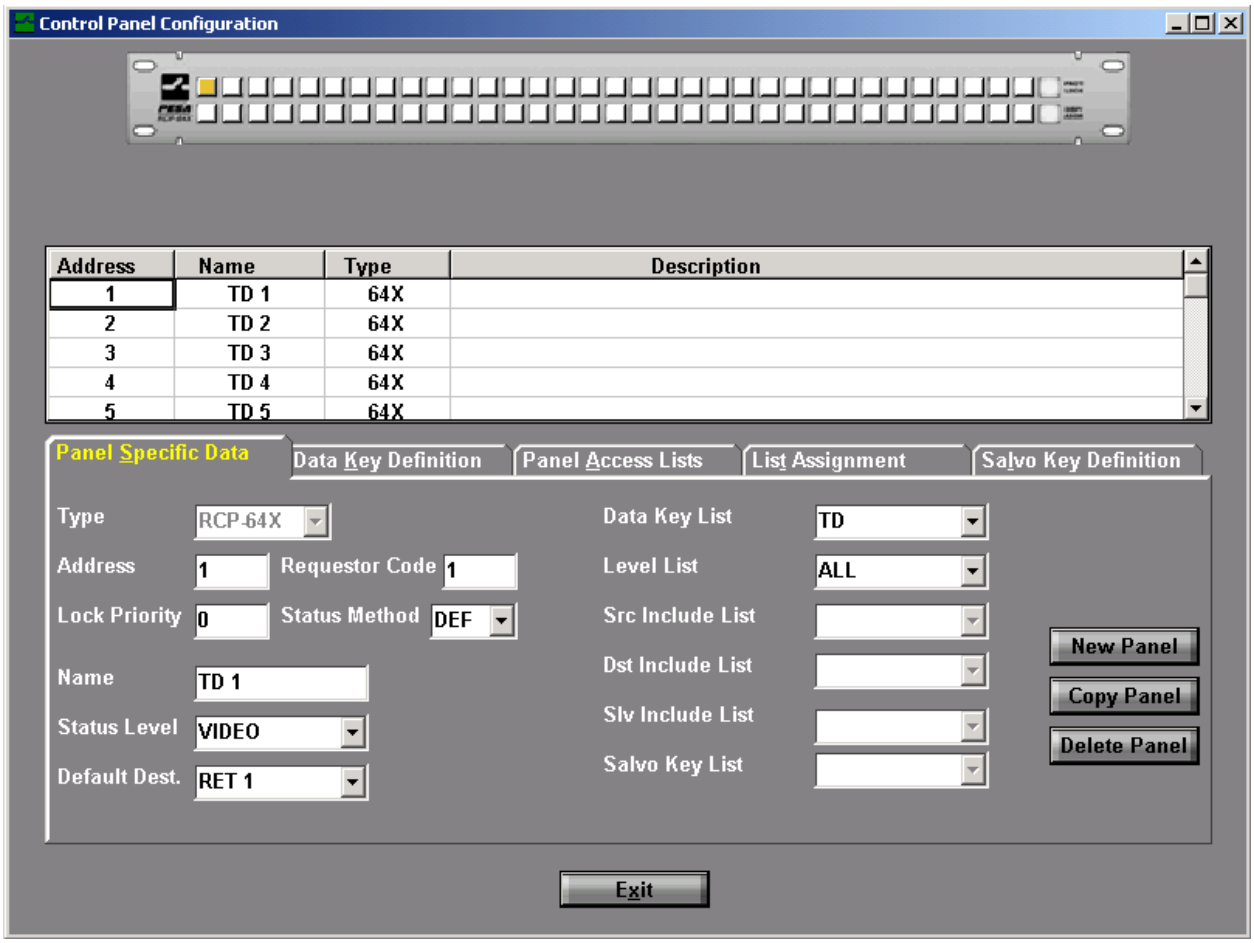


Figure 102. Panel Configuration Window, Panel Specific Data Tab

Type

This field identifies the type of panel. This field is read-only unless you select the **New Panel** button. The panel you select here displays in the middle section of the window in the Type field.

Address

This indicates the physical address of the control panel. Every control panel has DIP switches on the back. These switches are used to set a unique address for each panel in a switching system. Find out what the address is, and enter it here. The address you enter here displays in the middle section of the window in the Address field.

Requestor Code

The requester code is used with the lock priority to determine if a lock or protect can be removed. When a lock or protect has been assigned by a panel (or serial communications port), it can only be removed by another panel (or port) with a higher lock priority or with the same lock priority and same requester code.

Requestor codes are also used with protects. When a destination is placed into protect, only those panels/users with the same requestor code can switch the destination.

Requester codes not explicitly defined automatically default to the panel address.

Lock Priority

The lock priority is used with the requester code to determine if a lock or protect can be removed. When a lock or protect has been assigned by a panel or port, it can only be removed by another panel or port with a higher lock priority, or with the same lock priority and same requester code. The lower the lock priority number, the higher the priority.

Panel lock priorities not explicitly defined automatically default to "0" which gives absolute authority to clear any lock or protect on the system. The acceptable range of lock priorities is shown in.the General Specifications Table.

Status Method

When a panel is in all levels mode (ALL LEVS), the status shown will be the source on the Status Level assigned to that panel. If the destination is not defined on the Status Level, **Status Method** is used to control the resulting display:

If **DEF** (Default Method) is selected, NO XXXXX will be displayed where XXXXX is the Status Level assigned to the panel.

If **GRP** (Group Method) is selected, the controller will examine every level sequentially, starting with the level designated as Level Order 1. The source switched on the first level found where the destination is defined, will be displayed as the destination status.

Name

Because a panel is identified by its address, the assignment of a panel name is optional. If used, panel names are one to eight characters in length and are constructed using uppercase letters, numbers, and spaces. The first character must be a letter. The name you enter here will display in the middle portion of the window as the "Name" of the panel.

Status Level

One function of the LCD display on a panel is to show which source is currently switched to a selected destination. This is known as destination status. Although more than one source can be switched to a single destination (limited to one source per level), the status display can only show one source at a time. When the panel is in all levels mode (ALL LEVS), Status Level is used to designate a default level to be used when displaying status. Only the source on this default level will be displayed. Pushbutton only panels also use the status level. It is used to determine which tally LED to light on a panel in a split/breakaway condition.

Default Dest

Select the default destination for which status will be displayed when power is applied to a panel, or when a new configuration is downloaded to the controller.

The panel will have control over the destination selected here, even if it is not included in the associated destination include list.

Data Key List

A data key is a user configurable control panel key, whose assigned function is used when the panel is in any mode except Salvo Select Mode.

A data key list is a named list of the functions assigned to each data key on a panel. A data key list may be shared by multiple panels as long as they are the same type of panel. Different panel types may not use the same data key list.

Define new Data Key Lists with the Data Key Definition tab.

Level List

The Levels of Control List is a named list of all levels the panel (or remote client) is authorized to control. Two special lists come pre-configured: ALL and NONE. Define new items that should appear in this list with the Panel Access Lists tab (in the Include List Type section, select Level).

Src Include List

A source include list is a named list of the sources a specific control panel is authorized to control. A source include list may be shared by multiple panels.

The Source Include List is a named list of all sources the panel is authorized to control. It functions the same as the LEVELS OF CONTROL LIST window. Define new items that should appear in this list with the Panel Access Lists tab (in the Include List Type section, select Source).

Dst Include List

A destination include list is a named list of the destinations a specific control panel is authorized to control. A destination include list may be shared by multiple panels. The default destination assigned to a panel may be controlled even if it is not on the destination include list. Define new items that should appear in this list with the Panel Access Lists tab (in the Include List Type section, select Destination).

Slv Include List

A salvo include list is a named list of the salvos a specific control panel is authorized to control. A salvo include list may be shared by multiple panels. Define new items that should appear in this list with the Panel Access Lists tab (in the Include List Type section, select Salvo).

Salvo Key List

A salvo key is a user configurable control panel key, whose assigned function is used when the panel is in salvo select mode. A salvo key list is a named list of the functions assigned to each salvo key on a panel. A salvo key list may be shared by multiple panels as long as they are the same type of panel. Different panel types may not use the same salvo key list. Define new items that should appear in this list with the Salvo Key Definition window.

New Panel

The **New Panel** button adds a new panel to the list in the center of the screen. You need to select the Type of panel to add, and define all of the other information about the panel (on all five tab sheets).

Copy Panel

Copies all of the information about the currently selected panel and creates a new panel with identical information. The new panel will automatically display in the list in the middle of the window with a new panel address. You can then enter a name and description for the new panel.

Delete Panel

Deletes the currently selected panel.

Make sure you really want to delete the panel before selecting this command. You cannot "Undo" this action.

6.11.5.2 Data Key Definition

The **Data Key Definition** tab sheet defines the settings for each configurable control panel key, whose assigned function is used when the panel is in any mode except Salvo Select Mode. At the top of the window, a picture of the currently selected panel displays. Click on the buttons on the control panel to see the Data Key that is assigned to the button. You can change which panel you are reviewing by selecting another panel from the middle part of the window (with Address, Name, and Type listed). Also, the List Names that are defined in this tab sheet are the items that display in the Data Key List in the Panel Specific Data tab.

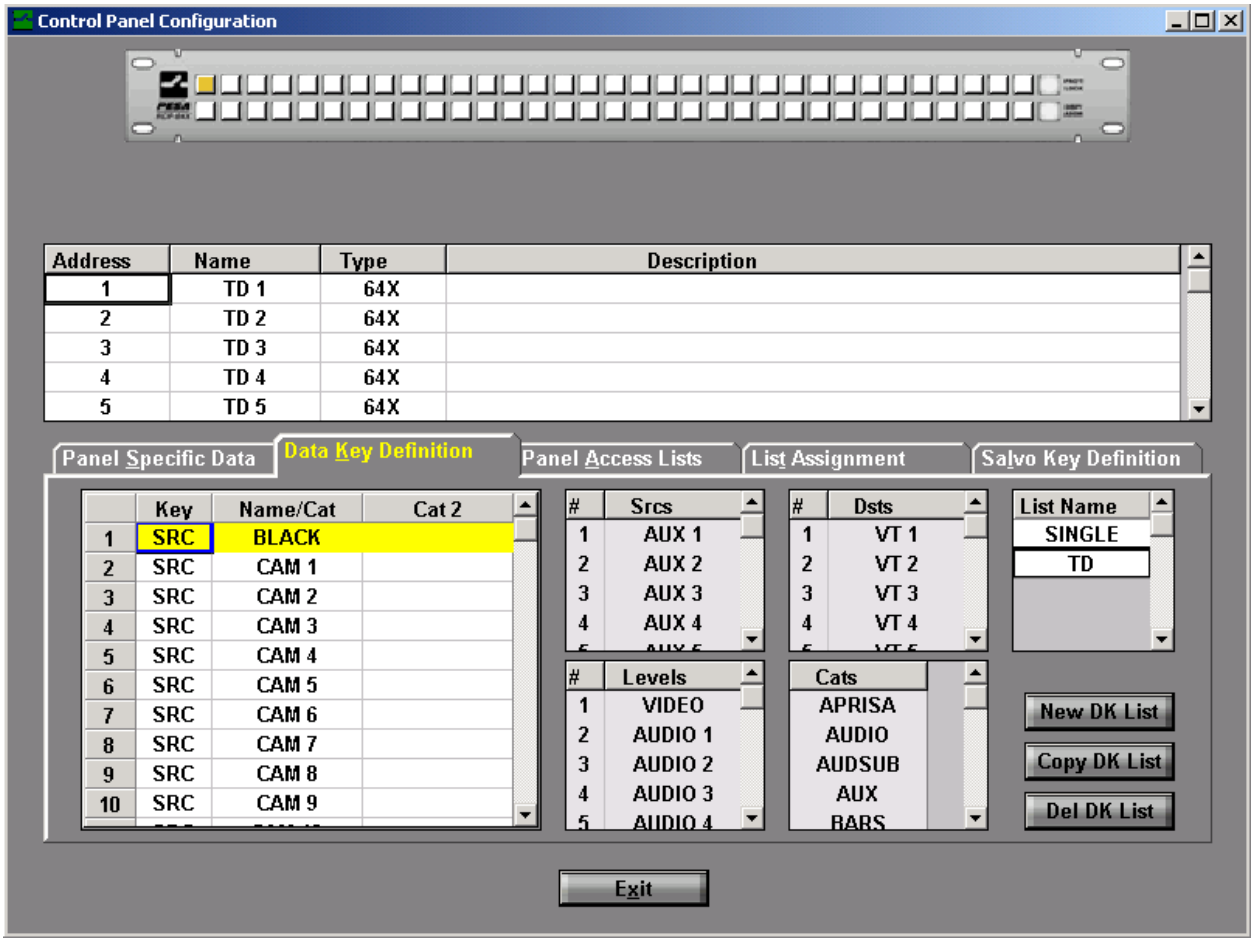


Figure 103. Data Key Definition Tab

Definition List

This identifies the Key Type and Name/Category associated with a specific button on the panel. When you select an item from this list, the graphic at the top of the screen will highlight the button you selected. To change the definition, double-click items in the Sources, Destinations, Levels, or Categories lists.

Sources

Lists all of the available sources for the panel. Double-click any item in this field to assign it to the currently selected key. You can also copy and paste.

Destinations

Lists all of the available destinations for the panel. Double-click any item in this field to assign it to the currently selected key.

Levels

Lists all of the available levels. Double-click any item in this field to assign it to the currently selected key.

Categories

Lists all of the available categories. Double-click any item in this field to assign it to the currently selected key.

Soft Sources/Soft Destinations

Typing SSRC or SDST sets the data key type to a soft key. A soft key can be programmed by the user at a panel.

List Name

Shows the existing Data Keys. These items display in the Data Key List pulldown in the Panel Specific Data tab. When you select the New DK List button, a new line displays in this section. You can double-click any name in this list, and type in a new name.

New DK List

Adds a new Data Key List to the List Name field. Type in the name for the new list.

Copy DK List

Copies the information in the currently selected Data Key List and creates a new Data Key List with identical information. The new Data Key List will display in the List Name field and you can specify a new name for the list.

Del DK List

Deletes the Data Key List that is selected in the List Name field.

Make sure you really want to delete the list before selecting this command. You cannot "Undo" this action.

6.11.5.3 Soft Key Definition

Soft Keys can be configured locally at the panel using Store Mode, or with 3500Pro.

NOTE **Soft Keys cannot be configured until at least one soft key has been defined in the Data Key List assigned to the panel.**

6.11.5.4 Panel Access Lists

The **Panel Access Lists** window shows the include lists for Levels, Sources, Destinations, and Salvos. Include lists are named lists of the Levels, Sources, Destinations, and Salvos a specific control panel is authorized to control. A source include list may be shared by multiple panels.

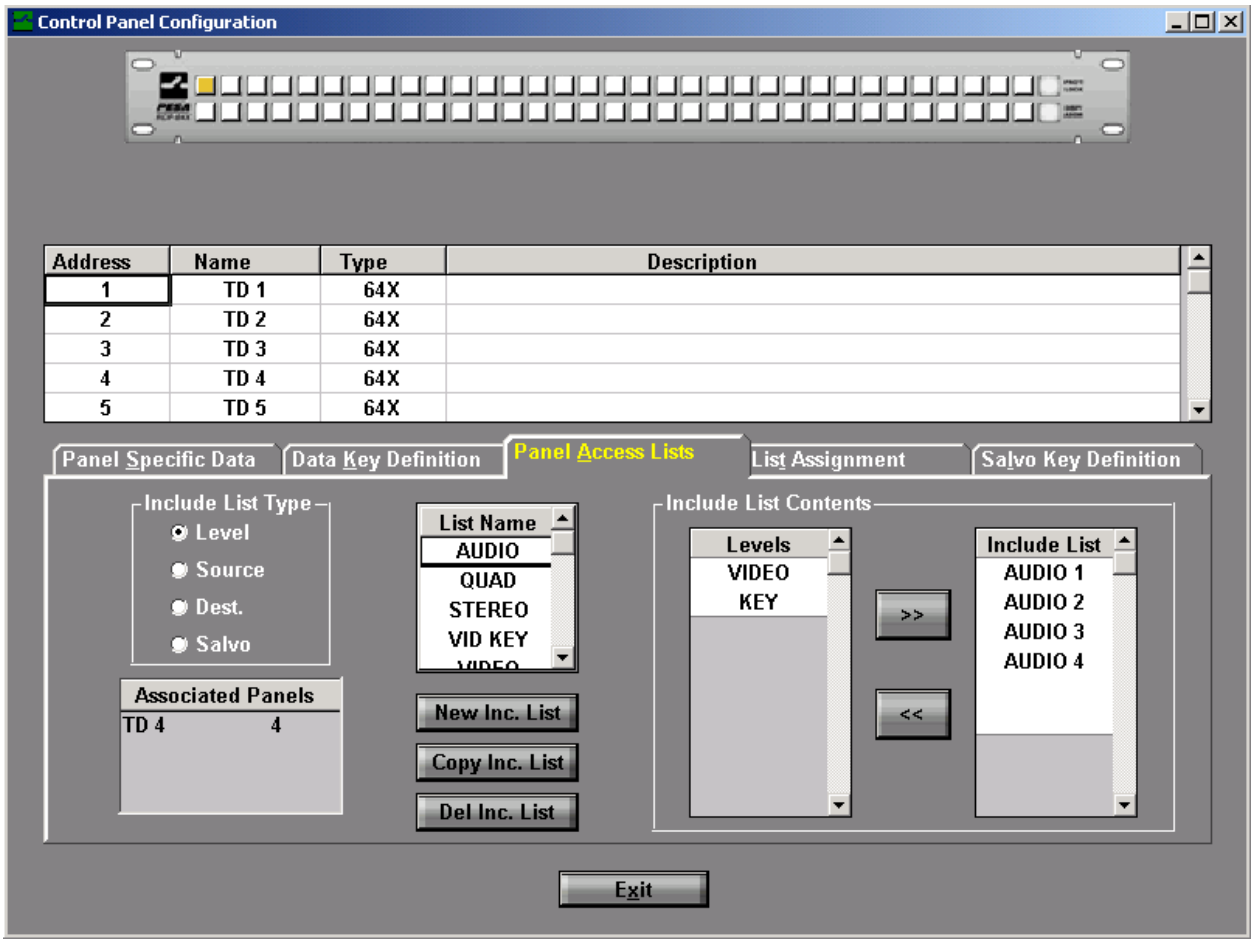


Figure 104. Panel Access List Tab

Include List Type

Lists the types of include lists you can review or edit. Click on the button to the left of the list.

List Name

Lists the names of the lists associated with each list type. Click on each item in this list to review its contents.

Associated Panels

Shows the panels associated with each list you select in the List Name field. To associate a list with a panel, go to the Panel Specific Data tab. Select an item from the Level List, Src Include List, Dst Include List, or Slv Include List. After you select a list to associate with the panel, the panel name and number will display in this field.

New Inc. List

Create a new Include list in the List Name field. Be sure to first select the type of list you want to create in the Include List Type Field. After you select this button, type in a name for the new list.

Copy Inc. List

Copies the Level and Include List settings for the selected List Name and creates a new item in the List Name field. You can then enter a different name for the new list item.

Del Inc. List

Deletes the selected list from the List Name field.

Make sure you really want to delete the list before selecting this command. You cannot "Undo" this action.

Include List Contents

Levels/Sources/Destinations/Salvos

The title and contents of this section will change depending on which item you select in the Include List Type field:

Level: This section will show all of the available levels.

Source: This section will show all of the available sources.

Dest: This section will show all of the available destinations.

Salvo: This section will show all of the available salvos.

Include List

Shows all of the items in the include list. To add an item to the include list, select it from the left portion of the window, then select the >> button. The items will move from the left column to the right column.

6.11.5.5 List Assignment

The List Assignment tab shows all of the panel lists that are currently defined, the panels that are actually available, and the panels that are associated with each different list.

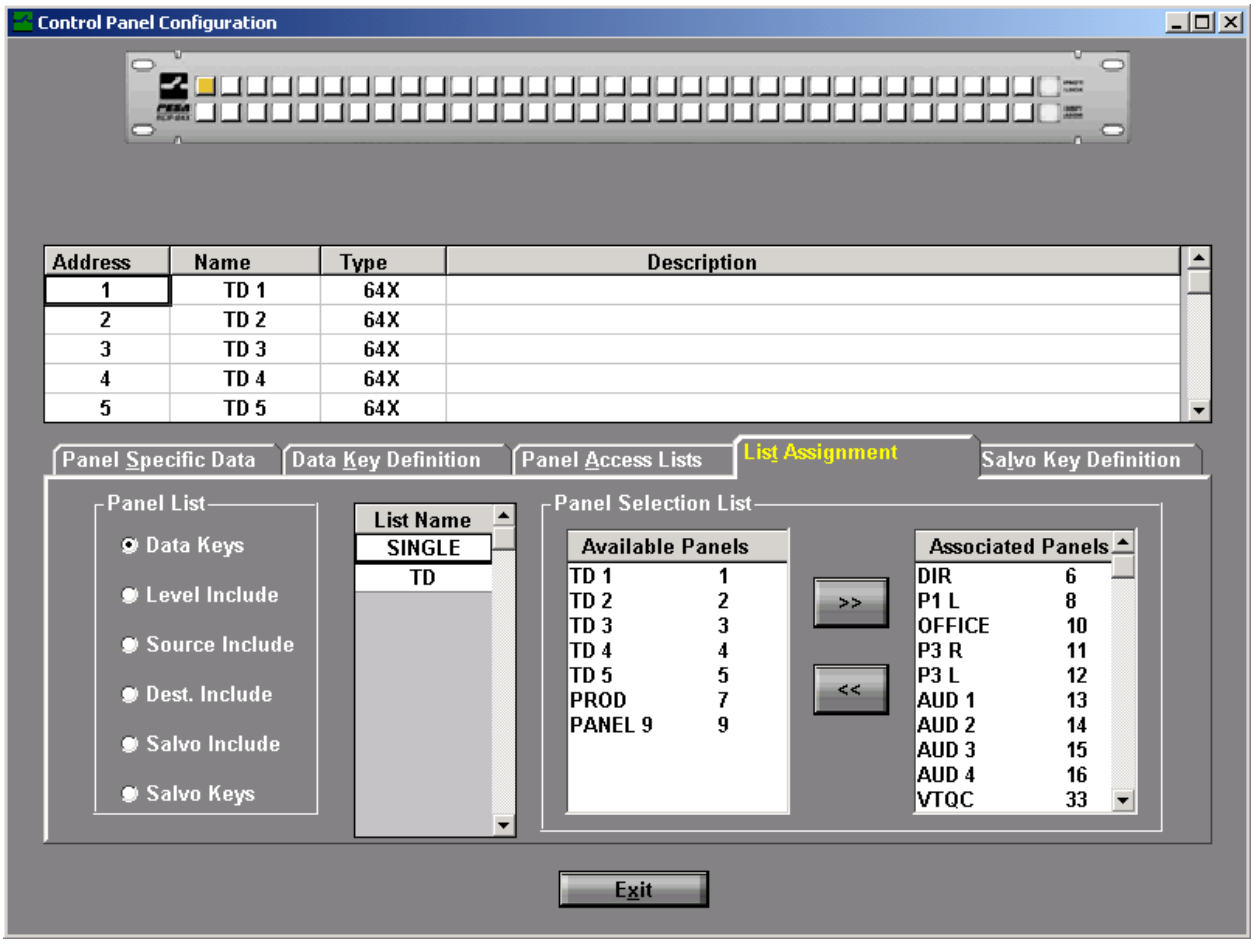


Figure 105. List Assignment Tab

Panel List:

This section lists each of the different types of panel lists. Select each button to review the lists available.

List Name:

Shows the lists available for the type of panel list you select in the Panel List section. Select each individual list to review the panels that are currently available, and the panels that are currently associated with the list.

Available Panels:

This section shows all of the panels that are currently available to associate with the selected List Name. To associate an available panel with the selected list, select the panel then select the >> button. The panel will move from the Available Panels to Associated Panels column.

Associated Panels:

Shows the panels actually associated with the selected List Name. To disassociate a panel from the list, select the panel name then select the << button. The panel will move from the Associated Panels column to the Available Panels column.

6.11.5.6 Salvo Key Definition

A salvo key is a user configurable control panel key, whose assigned function is used when the panel is in salvo select mode.

A salvo key list is a named list of the functions assigned to each salvo key on a panel. A salvo key list may be shared by multiple panels as long as they are the same type of panel. Different panel types may not use the same salvo key list.

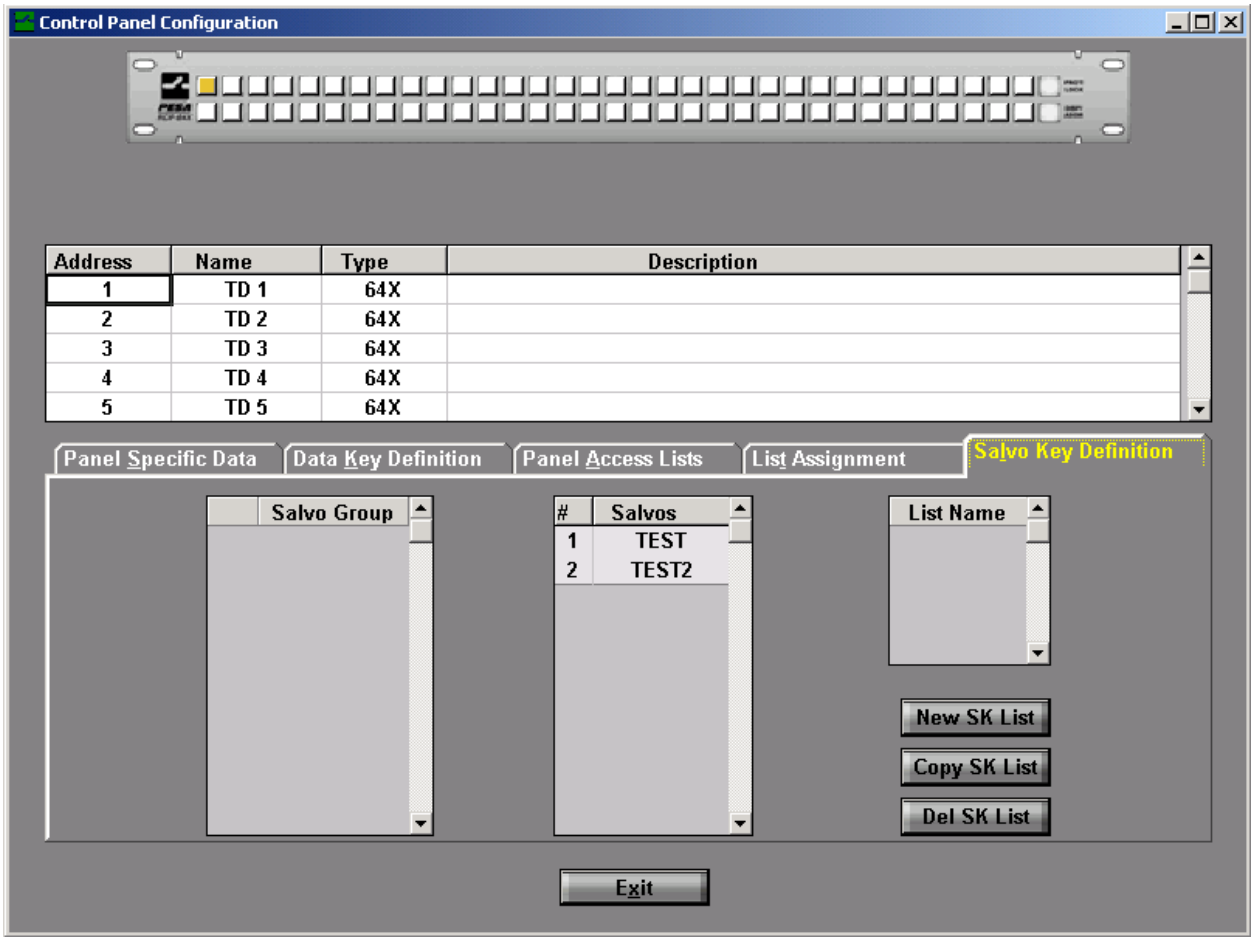


Figure 106. Salvo Key Definition Tab

NOTE **A Salvo Key List cannot be created until at least one salvo has been configured.**

Salvo Group

This field shows the salvo group associated with each individual button on the panel. You can click on the button on the panel at the top of the window to see that salvo group associated with it. Or, you can select the row to highlight the associated panel button.

List Name

Shows the names of the defined salvo lists. This window shows the salvo groups associated with the list.

Salvo Grps

The Salvo Grps shows the currently defined Salvos (using the Configuration > Salvo command).

New SK List

Adds a new Salvo list to the List Name field. Type in a new name for the lists, then select the salvos to associate with it from the Salvo Grps field.

Copy SK List

Copies the information in the currently selected Salvo List and creates a new List with identical information. You can then change the name of the new Salvo List.

Delete SK List

Deletes the selected List Name.

Make sure you really want to delete the list before selecting this command. You cannot "Undo" this action.

6.11.6 Salvo

The **Configuration > Salvo** command allows you to add, edit, and delete Salvos. A salvo is a group of predefined logical switches taken at the same time. All switches in a salvo are taken within the same vertical interval. The maximum number of salvos is 128 (64 for the 3500Pro LE).

Before Using This Command

- You must have already set up Levels and Components (with the Configuration > System Configuration Level/Comp command).
- You must have already set up Sources and Destinations (with the Configuration > Matrix Configuration command).

Adding a New Salvo:

1. Select **Configuration > Salvo** to open the Salvo Configuration window.
2. In the Salvo Groups section, enter a name for the salvo. The number field will be automatically populated.
3. Make sure you do not highlight another row in the Salvo Groups field, then click in the Destination field in the top row of the Salvo Entries section.
4. Scroll through the Destinations list at the top of the window. When you find the Destination you want to assign to the Salvo, double-click it. The Destination name displays in the Salvo Entries list.
5. Follow the same procedures for the Sources. In the Salvo Entries section, highlight the Source field you want to define. Scroll through the Sources list, then double-click the source you want to use.

   If you want to fill in several levels all at once, you can click **Fill All Levels**. This will assign one Source to all levels. Or, you can select specific levels you want to automatically populate by select items from the **Fill Level** section. Each level that is highlighted will be automatically assigned a source that you double-click.
6. After completing one salvo, you can go back to the Salvo Groups section, click on the second row, and repeat this process.
7. When you are finished entering salvos, click **OK** to save your changes and to close the window.

Editing a Salvo

1. Select **Configuration > Salvo** to open the Salvo Configuration window.
2. In the Salvo Groups section, select the salvo you want to edit.
3. Change any of the Destination and Source information following the procedures outlined for adding a new salvo.
4. When you are finished editing one salvo, you can select another from the Salvo Groups list, and edit it.
5. When you are finished editing, select the **OK** button to save your changes and close the window.

Deleting a Salvo

1. Select Configuration > Salvo to open the Salvo Configuration window.
2. In the Salvo Groups section, select the Name of the salvo you want to delete.
3. Select the Delete button, and the salvo will be deleted.
4. When you are finished deleting one salvo, you can select another from the Salvo Groups list, and delete it.
5. When you are finished, select the OK button to save your changes and close the window.

6.11.7 Categories

The **Configuration > Category** option defines categories. A category is an optional entity assigned to a panel key that may be used alone, or with other categories, to select a source, destination, or reentry. Categories, if used, are simply sub strings used to build names (source, destination, and reentry) by concatenation. When the user presses a category button on a panel, the category is concatenated onto the right side of the name in the preset. If necessary, the left side of the name will be trimmed to bring its length to a maximum of eight characters.

Figure 107. Category Configuration Window

Functionally, categories only affect panel operations where panels have been defined to have categories assigned to their data keys.

Panels can have one or two categories assigned to a data key. When the user presses a category button, the panel concatenates the category to the source or destination name on the panel.

When two categories are assigned to a button, the panel uses the first category if the preset is blank. Otherwise, the panel concatenates the second category. This requires the user to use the CLEAR button to clear out the preset name before accessing the first category assigned to a key.

When there is only one category assigned to a button, it is always concatenated to the name in the preset.

For example, given a panel with the following definitions:

Button 1 Cat1: VTR Cat2: 0	Button 2 Cat1: CAM Cat2: 1	Button 3 Cat1: CG Cat2: 2	Button 4 Cat1: 3 Cat2:	Button 5 Cat1: 4 Cat2:

To access VTR13 and take it online, the user would press:

CLEAR (Clears out the name in the preset display)

Button 1 (**VTR** in the preset display)

Button 2 (**VTR1** in the preset display)

Button 4 (**VTR13** in the preset display)

TAKE (Causes **VTR13** to be taken to the active destination.)

You can assign up to 254 categories. To enter a category, click in the field and type the category name.

6.11.8 Tielines

The **Configuration > Tielines** command defines tielines, which are special types of logical switches that allow a logical input on one level to be switched to a logical output on a different level.

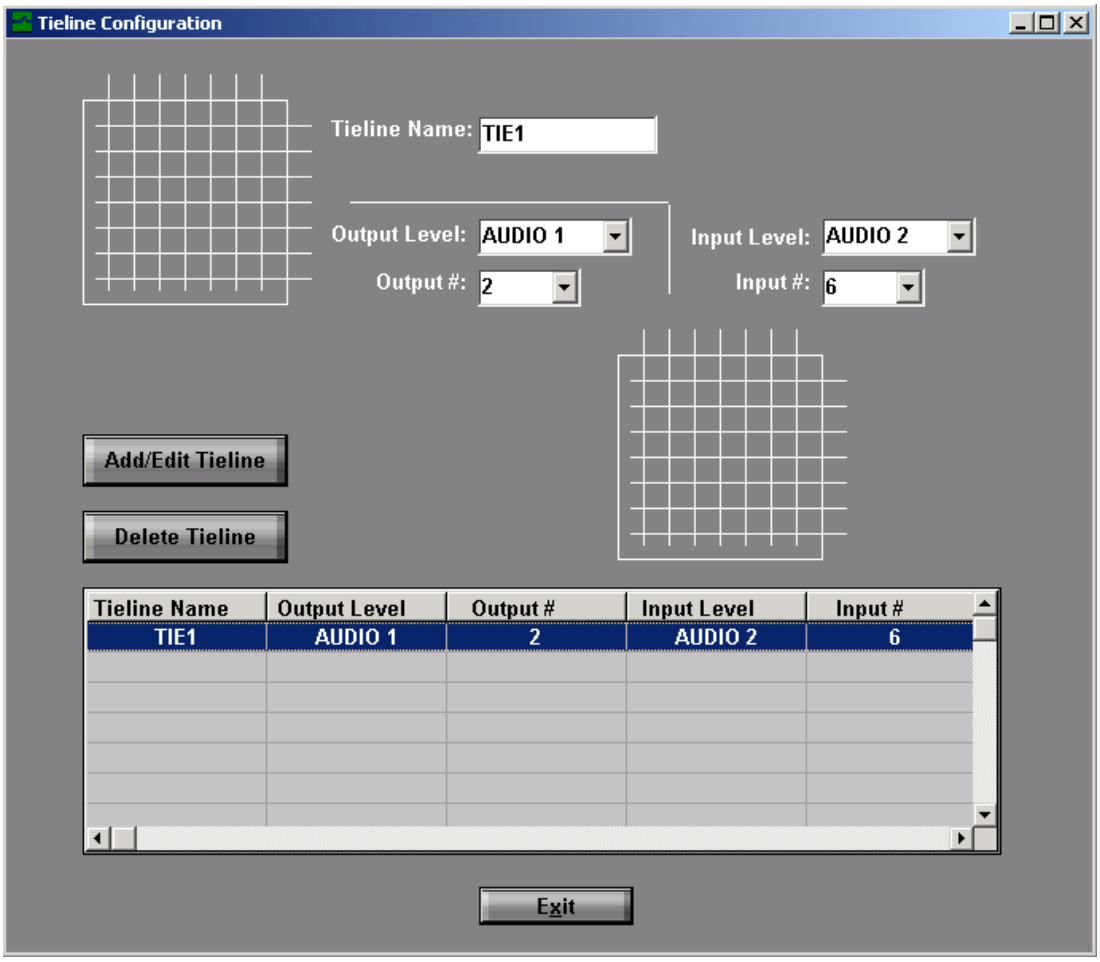


Figure 108. Tieline Configuration Window

Tielines are not available with the 3500Pro LE.

The maximum number of tielines is 64.

The example shown demonstrates a tieline being used to route a video signal from an analog camera, through an external analog-to-digital converter, to a digital VTR.

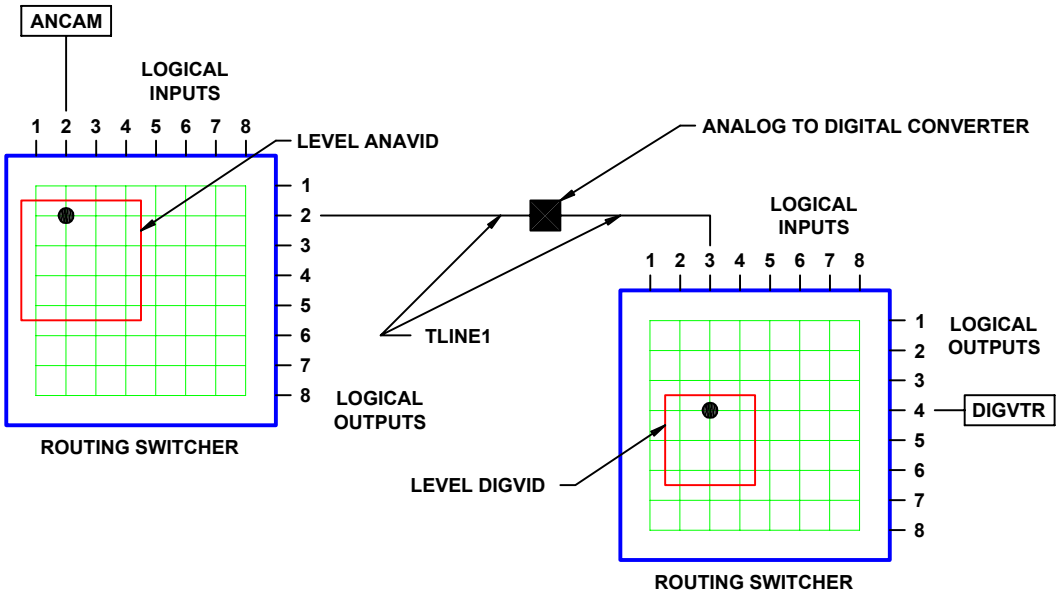


Figure 109. Tieline Example

NOTE

Once a Tieline has been configured, it may then be used by a source.

Adding a Tieline

1. To add a tieline, follow these steps.
2. Click in a blank field at the bottom of the screen. If you do not select a blank field, an existing tieline will be overwritten. A blank row will highlight.
3. At the top of the window, enter a name in the Tieline Name field.
4. Select the Output Level and Output # for the tieline. The output cannot be used by any other tieline or destination.
5. Next, select the Input Level and Input # for the tieline.
6. Select Add/Edit Tieline. The tieline displays in the list at the bottom of the window.

Editing a Tieline

To edit a tieline, follow these steps.

1. Select the tieline you want to edit.
2. Enter the new information in the upper portion of the window.

After you are done editing information, select the **Add/Edit Tieline** button. The new information will display in the tieline.

Deleting a Tieline

To delete a tieline, follow these steps.

1. Select the tieline you want to delete.
2. When the row highlights, select the **Delete Tieline** button. The tieline will be removed from the list.

6.11.9 Reentry

The **Configuration > Reentry** command adds reentries, entities which exist as both a source and destination at the same time. The function of Reentries is to facilitate switching a single source to multiple destinations, with a single logical switch.

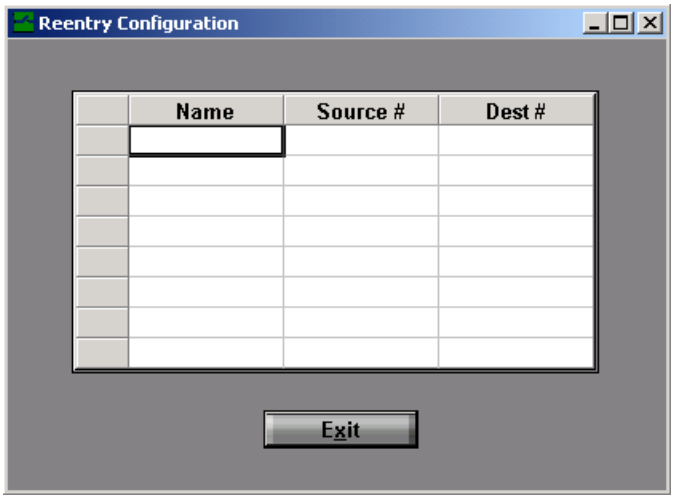


Figure 110. Reentry Configuration Window

Reentries are not available with the 3500Pro LE.

Example (see below): Assume there exists source SRC1 and destinations DST1, DST2, and DST3. Reentry REENT1 is created and switched to the three destinations. With a single logical switch, SRC1 can now be switched to REENT1 and the signal will arrive at all three destinations at the same time.

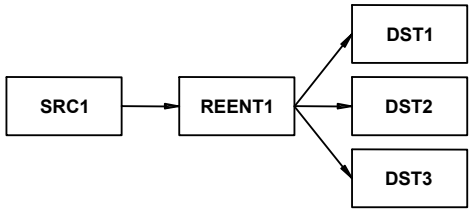


Figure 111. Reentry Example

The maximum number of reentries is 8.

Once a Tieline has been configured, it may then be used by a source.

Adding a Reentry

1. Select Configuration > Reentry to open the Reentry Configuration window.
2. In the Name field, type the name of the Reentry.
3. In the Source # field, type the source number. Tielines can be used as sources.
4. In the Dest # field, type the destination number.
5. Select OK to close the window.

Editing a Reentry

1. Select **Configuration > Reentry** to open the Reentry Configuration window.
2. Change any of the information in the window.
3. Select **OK** to close the window.

Deleting a Reentry

1. Select **Configuration > Reentry** to open the Reentry Configuration window.
2. Highlight name of the Reentry you want to delete.
3. Press the Delete button. The reentry is deleted.
4. Select **OK** to close the window.

6.11.10 Remote Client

The **Configuration > Remote Clients** command allows you to add, edit, and remove remote clients from the 3500Pro system. This window defines the part of the matrix that remote clients can see and control. The e-Route Controller uses remote clients to provide names, passwords and privileges for its users.

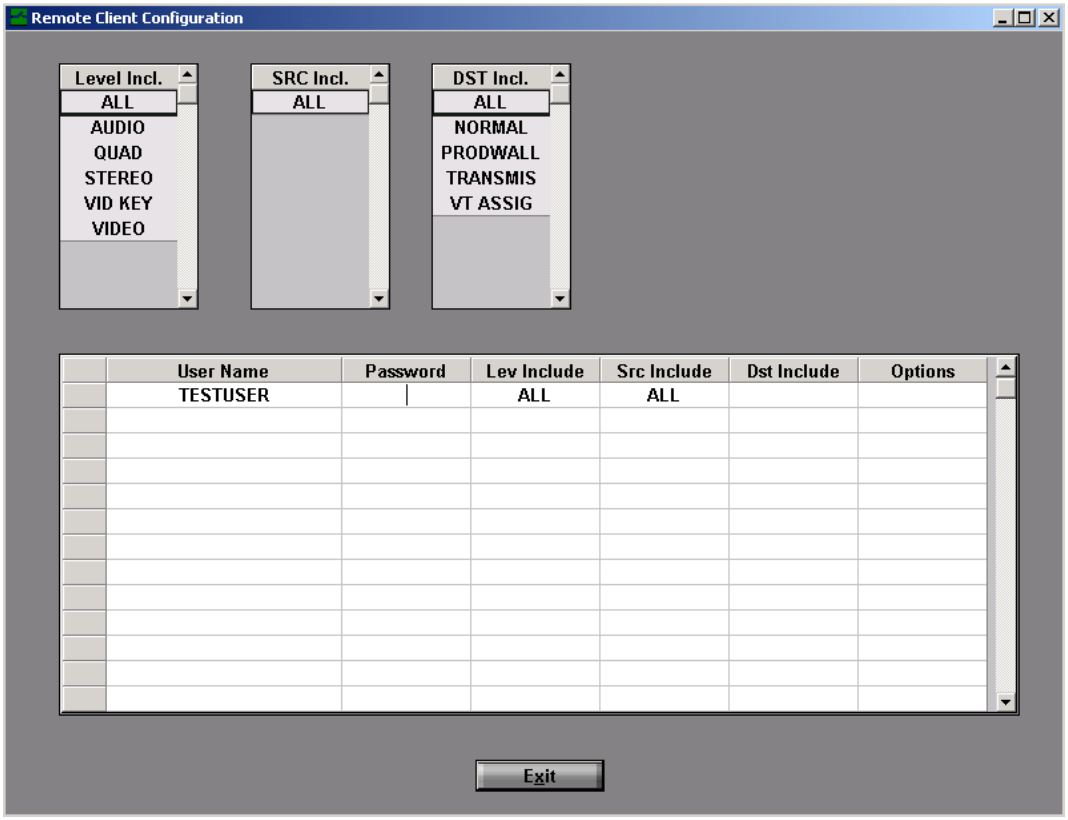


Figure 112. Remote Client Configuration

NOTE **Remote Client settings are associated with the configuration file. You must enter remote clients for each individual configuration file.**

Before Using This Command

Remote clients must have the eRoute Controller and software.

Adding a New Remote Client

1. Select **Configuration > Remote Client** to open the Remote Client Configuration window.
2. In the **User Name** field, type in the user's name.
3. In the **Password** field, type in a password for the user. As you type the password, it will display in the field. As you select the next field, however, the password will be encrypted and you will no longer be able to tell what the password is. Be sure the remote user knows his or her user name and password.
4. Select the **Lev Include** field for the user, then from the **Level Incl**. field select the levels you want the user to access. If they should have access to all levels, select All. The options that display in the Level Incl. field are defined in the **Configuration > Panels** window in the **List Assignment** tab as Level Include Lists.
5. Select the **Src Include** field for the user. In the **Src Incl** box at the top of the window, select the sources the user should be able to access. If they should have access to all sources, select All. The options that display in the Level Incl. field are defined in the **Configuration > Panels** window in the **List Assignment** tab as Source Include Lists.
6. Select the **Dst Include** field for the user. In the **Dst Incl** box at the top of the window, select the destinations the user should be able to access. If they should have access to all destinations, select All. The options that display in the Level Incl. field are defined in the **Configuration > Panels** window in the **List Assignment** tab as Destination Include Lists.
7. The Options field provides a place to enter additional information about the user. You can enter a text string here.
8. Now you can add additional users if necessary.
9. When you are finished, select **OK** to save your changes and to close the window.

Editing a Remote Client

1. Select **Configuration > Remote Client** to open the Remote Client Configuration window.
2. In the lower part of the window, select the user you want to edit. The user name field highlights.
3. Make changes to any of the information for the user.
4. When you are finished, you can either add, edit, or delete other users, or select **OK** to save your changes and close the window.

Deleting a Remote Client

1. Select **Configuration > Remote Client** to open the Remote Client Configuration window.
2. In the lower part of the window, select the user you want to delete. The user name field highlights.
3. Select Delete, then press Enter. The user will be deleted.

You can now add, edit, or delete additional users, or select **OK** to save your changes and close the window.

6.12 Window Menu

The **Window** menus arrange the windows that display in the 3500Pro interface. The following commands are available:

- **New Window**
- **Cascade**
- **Tile Horizontal**
- **Tile Vertical**
- **Arrange Icons**

6.12.1 New Window

The **Window > New Window** command opens a second window that displays the same information as the currently active window.

6.12.2 Cascade

The **Window > Cascade** command arranges all of the open windows so that they slightly overlap one another.

6.12.3 Tile Horizontal

The **Window > Tile Horizontal** command arranges all of the open windows so that they all appear on the screen in a horizontal row.

6.12.4 Tile Vertical

The **Window > Tile Vertical** command arranges all of the open windows so that they all appear on the screen in a vertical row.

6.12.5 Arrange Icons

The **Window > Arrange Icons** command lines up icons of collapsed window in a row along the bottom of the screen.

6.12.6 Open Windows

The currently open windows are listed at the bottom of the **Window** menu. The currently active menu has a check mark next to it. To quickly switch to another open window, select another window from this list, and it will become active and display.

6.13 Help Menu

The **Help** menu displays the 3500Pro help file and also the current version number of the 3500Pro software. The following commands are available:

- Contents
- Search for Help On
- About

6.13.1 Contents

The **Help > Contents** option opens the contents tab of the help file. From there, you can browse for the topic you want to review.

6.13.2 Search for Help On

The **Help > Search for Help On** option opens the Index tab of the help file. Type in a word you need help on, and matching items will highlight in the window. Double-click an item to open the help topic.

You can also use the Find tab to search on any word in the help file. Try this option if the topic you are looking for is not listed in the index.

6.13.3 About

The **Help > About** option displays the version of the 3500Pro software. In addition, if you select the System Info button, detailed information about your computer hardware and software displays. This information is useful to review if you need to call Technical Support.

Chapter 7 - 3500Pro Diagnostics

The **3500Pro Diagnostics** module allows you to perform diagnostic procedures on the 3500Pro software and controller.

NOTE

Prior to performing any diagnostic or reset function that affects the configuration or operation of the 3500Pro System Controller, you must be logged on to the controller and have the appropriate privileges assigned to your user account (if user accounts are used).

The following menu items are available:

- File Menu
- View Menu
- Tools Menu
- Panel Menu
- Readback Menu
- Window Menu
- Help Menu

7.1 File Menu

The **File** menu option allow you to login to the module, close the active window, and exit the application. The following commands are available:

Figure 113. File Menu

7.1.1 Login

The **File > Login** command allows you to log into the application. Enter your user name and password, then select **OK**.

NOTE

If you did not create Users with the 3500 Pro User Manager module, the Login option will not be available.

7.1.2 Close

The **File > Close** command closes the currently active window.

7.1.3 Exit

The **File > Exit** command closes the 3500Pro Diagnostics window.

7.2 View Menu

The **View** commands display or hide the toolbar and status bar. The following commands are available:

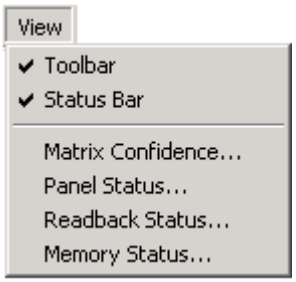


Figure 114. View Menu

7.2.1 Diagnostics Toolbar

The **View > Toolbar** command hides or displays the bar with the shortcut icons. Select this command to display or hide the toolbar.

7.2.2 Diagnostics Status Bar

The **View > Status Bar** command hides or displays the bar with the status information that displays at the bottom of the 3500Pro window. Select this command to display or hide the status bar.

7.2.3 Matrix Confidence

The **View > Matrix Confidence** command displays information about the matrix status. You cannot edit any of the information in this window. If the matrix confidence charts display in green, there is high confidence that the controller can communicate with the matrix. If the chart displays in red, there is not confidence in the matrix.

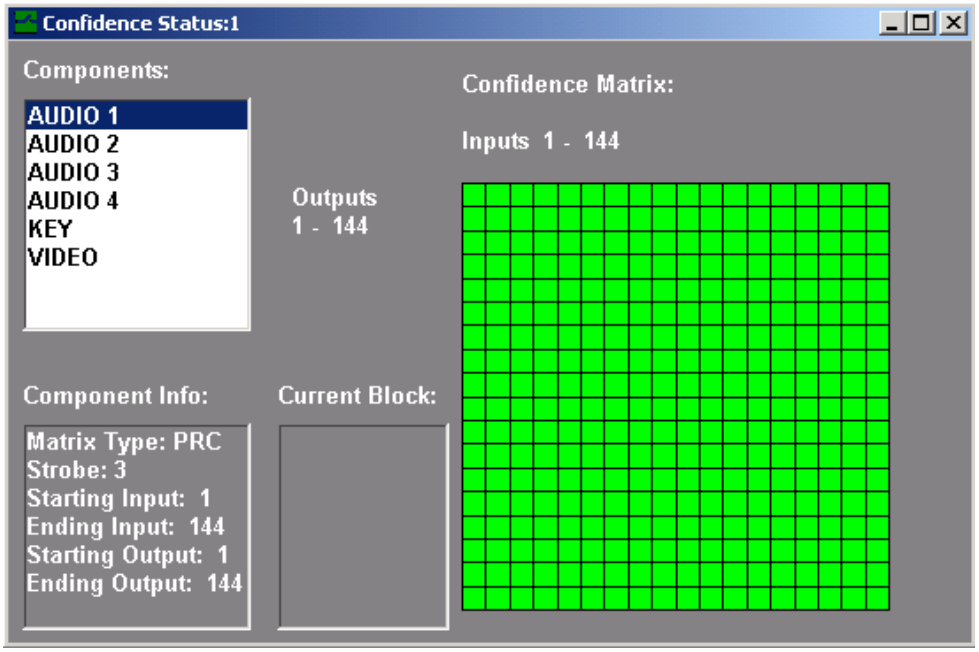


Figure 115. Matrix Confidence Window

Before Using This Command

You must have set up the configuration for each component with the 3500Pro Configuration Editor module with the **Configuration > System Configuration > Level/Comp** command (in the Configuration module).

The configuration files you are working with are valid.

Components:

At the top of the window, the available components display. You can click on each component to view the matrix status.

Component Info:

When you click on each component in the top portion of the window, information about the component displays in this area. The information includes Matrix Type, Strobe, Starting Input, Ending Input, Starting Output, and Ending Output.

Confidence Matrix:

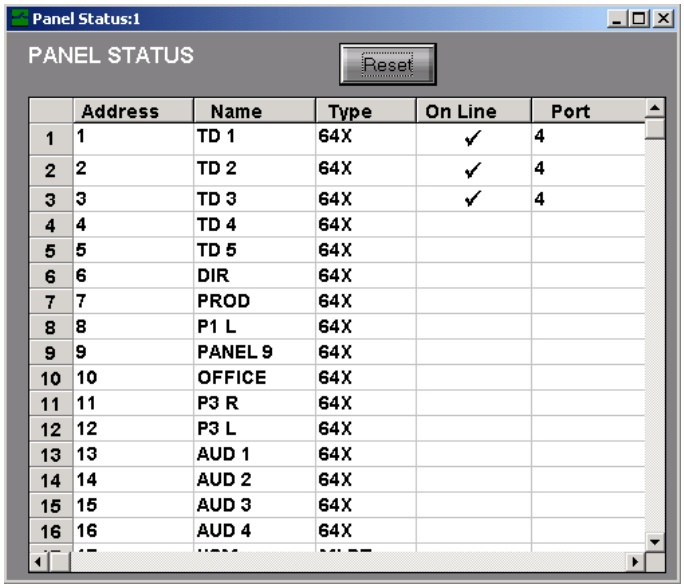
This window is a map of the physical inputs and physical outputs of the selected component. Each small square represents one physical switch. If the confidence is good, the block displays in green. Physical switches in blocks having a confidence error will be display in red. Move your cursor over the different blocks to review information about it in the Current Block section.

Current Block:

Displays the Inputs and Outputs for the block you are highlighting in the Confidence Matrix graphic.

7.2.4 Panel Status

The **View > Panel Status** command displays information about the available panels. You cannot edit any of this information. To change configuration information for the panels, use the Configuration Editor module or On-Line Panel Editor modules. See Panels or 3500 Pro On-Line Panel Editor for details.



	Address	Name	Type	On Line	Port
1	1	TD 1	64X	✓	4
2	2	TD 2	64X	✓	4
3	3	TD 3	64X	✓	4
4	4	TD 4	64X		
5	5	TD 5	64X		
6	6	DIR	64X		
7	7	PROD	64X		
8	8	P1 L	64X		
9	9	PANEL 9	64X		
10	10	OFFICE	64X		
11	11	P3 R	64X		
12	12	P3 L	64X		
13	13	AUD 1	64X		
14	14	AUD 2	64X		
15	15	AUD 3	64X		
16	16	AUD 4	64X		

Figure 116. Panel Status Window

The following information displays for each panel:

Address: Displays the address for the panel.

Name: Displays the name of the panel.

Type: Displays the type of panel.

Online: Displays whether or not the panel is currently online.

Port: Displays the port number of the panel.

TIP: Double-click the column title to sort the column in ascending or descending order.

Select the Reset button to Reset the panel.

The panel will be offline until the reset procedure is complete!

7.2.5 Readback Status

The **View > Readback Status** command displays which physical switches are currently active as reported by the routing switcher.

NOTE **You cannot edit any of the information in this window.**

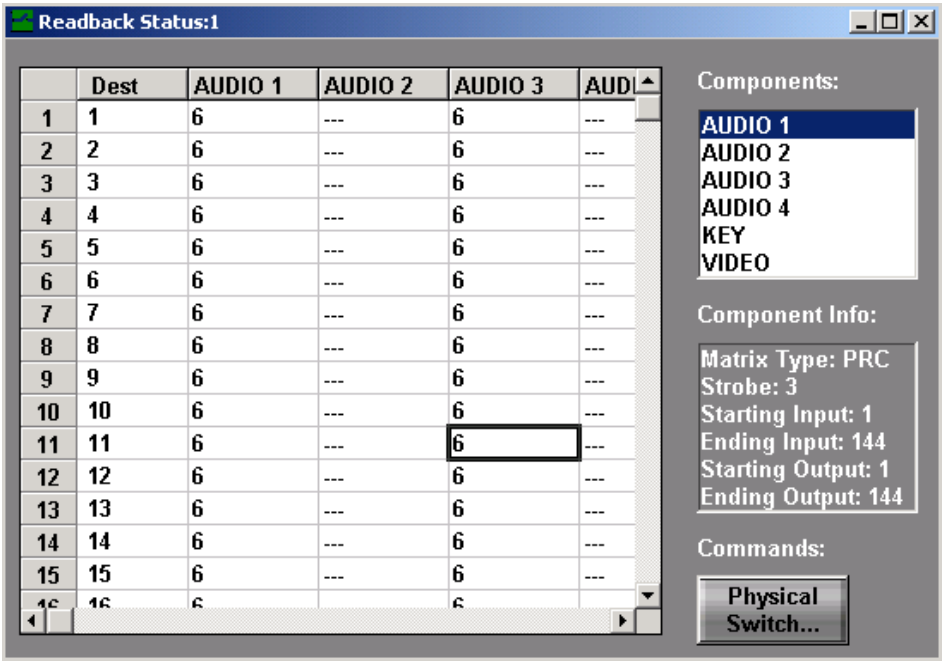


Figure 117. Readback Status Window

Components

Displays the currently active components. Click on each component to review information about it in other parts of the window.

Dest

Displays the physical outputs defined for the component selected in the Components section. The first column displays the Destination names, and the second column displays physical outputs.

Component Info

Displays the following information about the component that is selected in the Components section: Matrix Type, Strobe, Starting Input, Ending Input, Starting Output, Ending Output.

Commands

Provides the Physical Switch button. This opens a second window that allows you to perform simple takes, and all call/diagonal diagnostic procedures.

7.2.6 Memory Status

The **View > Memory Status** command displays memory information about the controller. The Reset Controller button resets the controller. You cannot edit any of the information in this window.

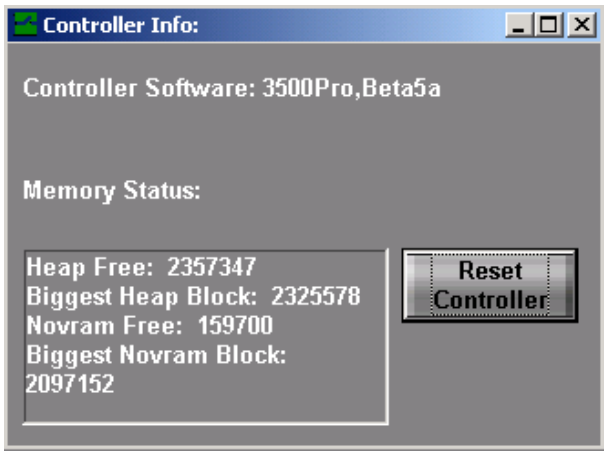


Figure 118. Memory Status Window

The following information displays:

Controller Software: Displays the name and current version of the controller software.

Memory Status: Displays general information about the memory status, including Help Free, Biggest Heap Free, Novram Free, and Biggest Novram Block.

Reset Controller: Causes the controller to reset.

This will take the controller off line during the reset period and will reset all user panels. Only select this option if you are sure this is what you want!

7.3 Tools Menu

7.3.1 Controller Status

The **Tools > Controller Status** command displays the current status of the controller. The information that displays is:

Controller is: Displays the name and current version number of the controller software.

Block Status: Indicates if the block status is valid.

Panel Status: Indicates if the panel status is valid.

Press **Continue** to close the window and return to the main **Diagnostics** window.

7.3.2 Offline Warning

The **Tools > Offline Warning** command, if selected, displays a message when the controller is offline. Select this command to turn this option on and off.

7.3.3 Restore Router

The **Tools > Restore Router** command refreshes the matrices with the logical switches stored in the configuration. When you select this command, a window displays that notifies you of what will occur. Select **OK** to continue to restore the matrices, or select **Cancel** to return to the main window.

You can use this command if you changed any of the switcher settings with a the Physical Switch command.

7.3.4 Block Check Disable!

The **Tools > Block Check Disable!** command turns block checking off. This can be useful when troubleshooting system problems. This will cause the current state to be reported and allow it to be toggled if desired.

7.3.5 Block Check Enable!

The **Tools > Block Check Enable!** command turns block checking on. If you used the **Tools > Block Checking Disable!** command to turn block checking off, use this command to turn block checking back on.

7.3.6 Switcher Disable!

When troubleshooting system problems, it may occasionally be useful to disable all routing switchers in the system. To do so, select **Tools > Switcher Disable!**.

This mode causes the controller to simulate the matrix function. No switches are actually taken on the physical matrix.

7.3.7 Switcher Enable!

The **Tools > Switcher Enable!** command enables all routing switchers in the system. If you used the **Tools > Switcher Disable!** command to disable all switchers, this command will enable them again.

7.3.8 Background Update Disable

The **Tools > Background Update Disable!** turns off standard background activity that occurs during the readback status screen.

7.3.9 Background Update Enable

The **Tools > Background Update Enable!** turns on standard background activity the 3500Pro performs in displaying the readback window. At times, this background activity could cause the computer to run slower, so you can turn off the background checking to increase CPU performance. If you use the **Tools > Background Update Disable!** command to turn off background activity, use this command to enable it.

7.4 Panel Menu

The **Panel** menu sorts information in the **View > Panel Status** window.

NOTE **You cannot access these commands until you select View > Panel Status and the Panel Status window displays.**

The following commands are available:

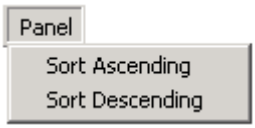


Figure 119. Panel Menu

7.4.1 Sort Ascending

The **Panel > Sort Ascending** command sorts information in the **Panel Status** window in ascending order.

7.4.2 Sort Descending

The **Panel > Sort Descending** command sorts information in the **Panel Status** window in descending order.

7.5 Readback Menu

The **Readback** menu sorts information in the **View > Readback Status** window.

NOTE **You cannot access these commands until you select View > Readback Status and the Readback Status window displays.**

The following commands are available:

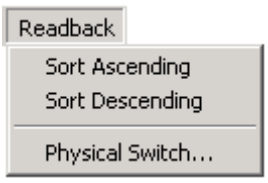


Figure 120. Readback Menu

7.5.1 Sort Ascending

The **Readback > Sort Ascending** command sorts information in the **Readback Status** window in ascending order.

7.5.2 Sort Descending

The **Readback > Sort Descending** command sorts information in the **Readback Status** window in descending order.

7.5.3 Physical Switch

The **Readback > Physical Switch** command allows you to perform simple takes, all call, and diagonal diagnostic procedures.

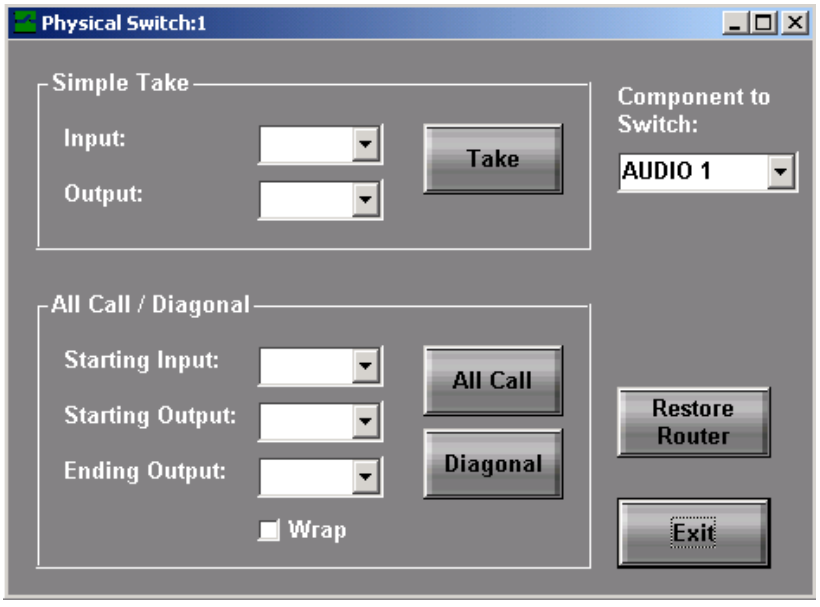


Figure 121. Physical Switch

Components to Switch

Before working with the window, first select the component you want to switch. The available components display in this drop-down list.

Simple Take

The Simple Take section switches a specific physical switch.

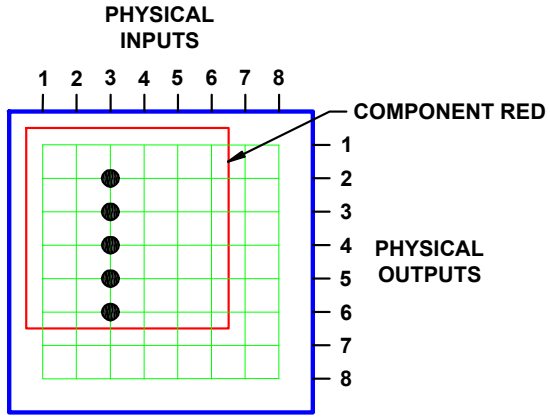
Performing a Simple Take:

1. Select the **Input** and **Output** to switch.
2. Select the **Take** button.

All Call

An all call is a diagnostic procedure that causes a single physical input to be switched to a range of physical outputs, for a specified component, with a single command.

Example (see below): Assume the existence of component RED spanning physical inputs 1 through 6 and physical outputs 1 through 6. All call can be used to switch physical input 3, to physical outputs 2 through 6, with a single command.



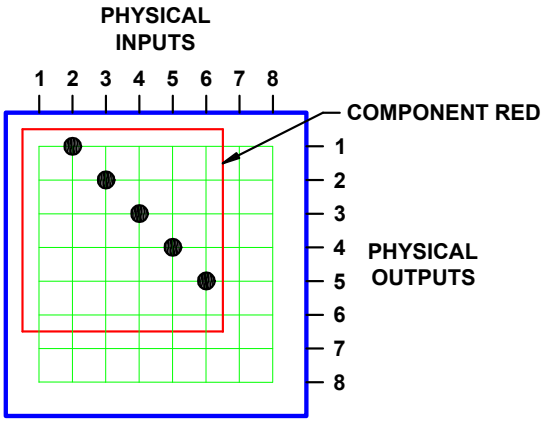
Performing an All Call:

1. Select the Starting Input
2. Select the Starting Output.
3. Select the Ending Output.
4. Select the All call button.

Diagonal:

A diagonal is a diagnostic procedure that causes a range of physical inputs to be switched to a range of physical outputs, in a diagonal pattern starting from a specified coordinate and continuing until the either the inputs or outputs are exhausted, for a specified component, with a single command.

Example (see below): Assume the existence of component RED spanning physical inputs 1 through 6 and physical outputs 1 through 6. A diagonal with a starting input of 2 and a starting output of 1 would cause the following physical switches to be taken: (2,1), (3,2), (4,3), (5,4), and (6,5).



Performing a Diagonal:

1. Select the Starting Input
2. Select the Starting Output.
3. Select the Ending Output.
4. Select the Wrap option to ensure that all of the inputs and outputs are processed.
5. Select the Diagonal button.

Restore Router

Select the Restore Router button to return the routing switcher to the original state before you performed takes, all calls, or diagonal diagnostic procedures.

Exit

Closes the Physical Switch window.

Chapter 8 - 3500Pro Status

The 3500Pro Status module shows the status of different parts of the 3500Pro system. The following menu items are available:

- File Menu
- View Menu
- Tools Menu
- Window Menu
- Help Menu

8.1 File Menu

The **File** menu logs you into the 3500Pro Status module, closes open windows, and exits the module. The following commands are available:

Figure 122. File Menu

8.1.1 Login

The **File > Login** menu logs you into the Status module.

Before Using This Command

You must have a User name and password. See 3500Pro User Manager for information on creating and editing users.

8.1.2 Close

The **File > Close** command closes the currently active window.

Before Using This Command

Make sure the window you want to close is active (the top border is highlighted).

8.1.3 Exit

The **File > Exit** command closes the 3500Pro Status window.

8.2 View Menu

8.2.1 View Menu

The **View** menu displays and hides the toolbar and status bar, and open different status windows. The following commands are available:

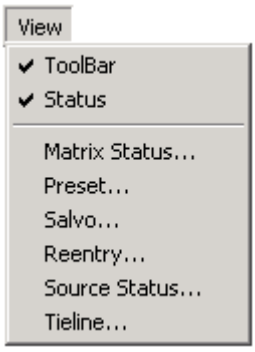


Figure 123. View Menu

8.2.2 Toolbar

The **View > Toolbar** command hides or displays the bar with the shortcut icons. Select this command to display or hide the toolbar.

8.2.3 Status

The **View > Status Bar** command hides or displays the bar with the status information that displays at the bottom of the 3500Pro window. Select this command to display or hide the status bar.

8.2.4 Matrix Status

The **View > Matrix Status** command displays the status of the available destinations. The information shown in this window automatically updates as changes occur. Three columns display in this window:

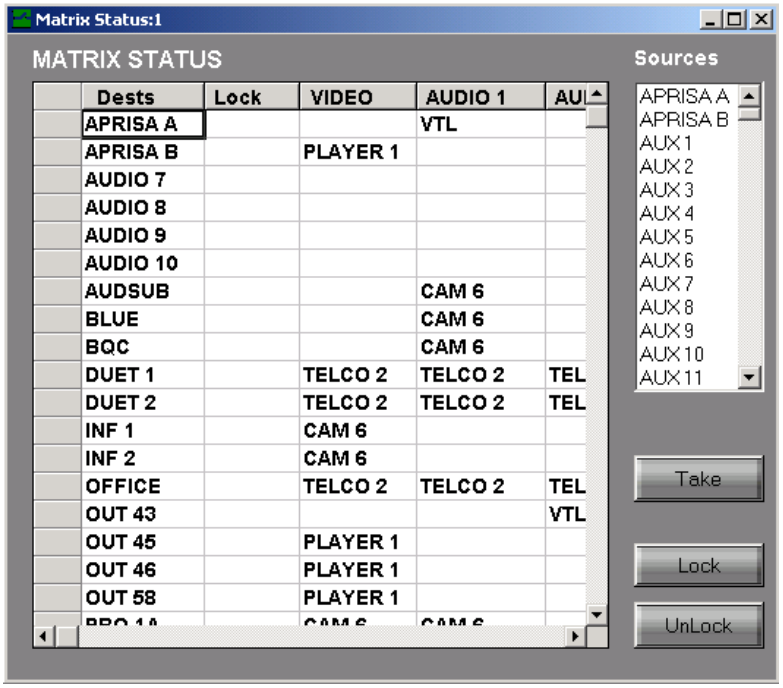


Figure 124. Matrix Status Window

Dests

Displays all of the destinations.

Lock

Indicates whether or not the destination is locked. If it is locked, a "lock" icon displays in the field. Click on the **Lock** field next to the destination to Lock or Unlock the destination.

Levels

The remainder of the columns in this section display all of the levels that are defined for the configuration. For each destination, the source displays on the Destination's row.

Sources

Displays the available sources.

Take

The Take button switches a specific physical switch. You can perform a Take on single or multiple destinations.

1. Select the fields for the routers on which you want to perform a take. When you select a field, the border of the field highlights. You can select multiple fields:

2. Select the first field, press the Shift key, then select the last field. All fields in between highlight.

3. Select the first field, then press the Ctrl key. Keep the Ctrl key pressed down while you select additional fields. Each one you select highlights.

4. After you select all of the fields, select the Source.

5. Select Take, and the source you selected displayed in the highlighted fields.

You cannot perform a take on a locked destination.

Lock

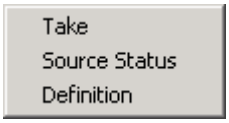
The Lock button locks the selected destination.

Unlock

The Unlock button unlocks the selected destination.

Right-click menu options:

If you right-click your mouse, three menu options display:



Take: performs a take. Select the Destinations, then the Sources, then right click and select this button.

Source Status: Displays matrix status information for the selected Source.

Definition: Displays the Level number and Input/Output number for the selected destination or source. You can edit the information in this field. Enter new information and select OK.

8.2.5 Preset

The **View > Preset** window allows you to build complex combination of switches and to take them simultaneously on the router. . To take a switch in Preset mode:

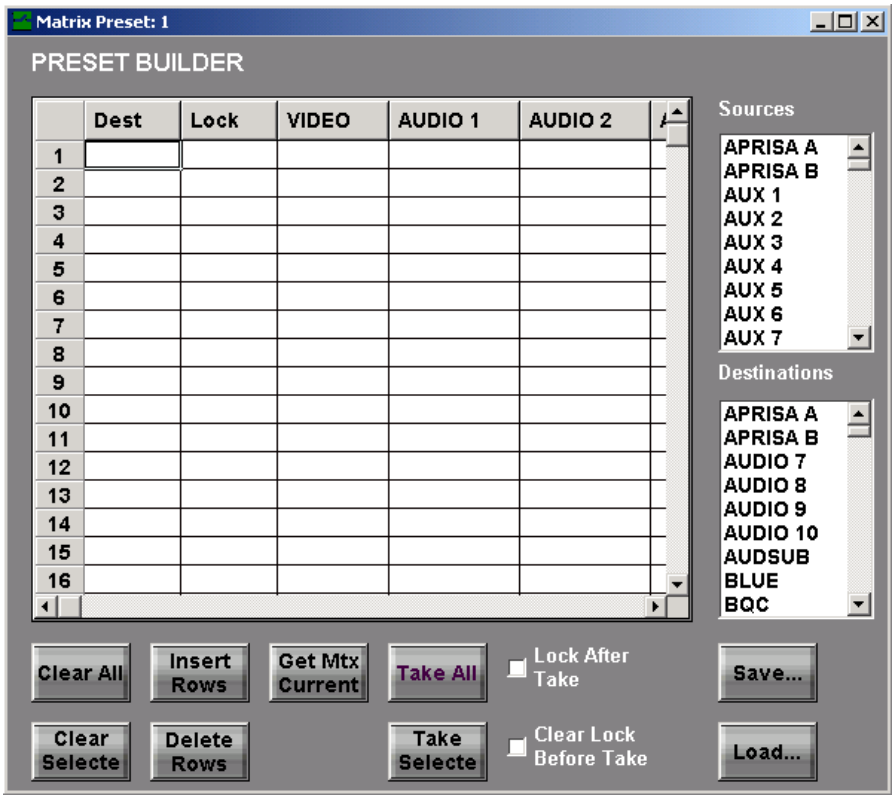


Figure 125. Preset Builder Window

Dest: Displays the destinations. Double-click an item in the Destinations field on the right side of the window to assign it to this field.

Lock: Indicates if the Destination is locked. If it is locked, a "lock" icon displays in the field. Click on the **Lock** field next to the destination to Lock or Unlock the destination.

Router: Displays the sources for the router. Double-click an item in the Sources field on the right side of the window to assign it to this field.

Sources: Displays the available sources.

Destinations: Displays the available destinations.

Clear All: Removes all of the information from the Preset Builder.

Clear Selected: Removes the information from the selected rows in the Preset Builder. To select multiple rows, select the first field, press the Shift key, then select the last field. All fields in between highlight.

Insert Rows: Adds a new row above the currently selected row.

Delete Rows: Removes the currently selected row.

Get Mtx Current: Loads the current matrix that is configured with the **View > Matrix Status** option.

Take All: Performs a Take on all of the destinations.

Take Selected: Performs a Take on only the selected destinations. To select multiple destinations:

Select the first field, press the Shift key, then select the last field. All fields in between highlight.

Select the first field, then press the Ctrl key. Keep the Ctrl key pressed down while you select additional fields. Each one you select highlights.

Lock After Take: Locks the destinations after performing a Take. (Locks are set per destination on the preset grid.)

Clear Lock Before Take: Clears all locked Destinations before performing a Take.

Save: Saves the Preset settings in this window. The file will have a .preset extension.

Load: Loads Preset settings into the Preset Builder. You must have used the Save button in this window to save your settings before you will be able to load information with this button.

8.2.6 Salvo

The **View > Salvo** option displays information about the salvos that are defined in the configuration. A salvo is a group of predefined logical switches taken at the same time. All switches in a salvo are taken within the same vertical interval.

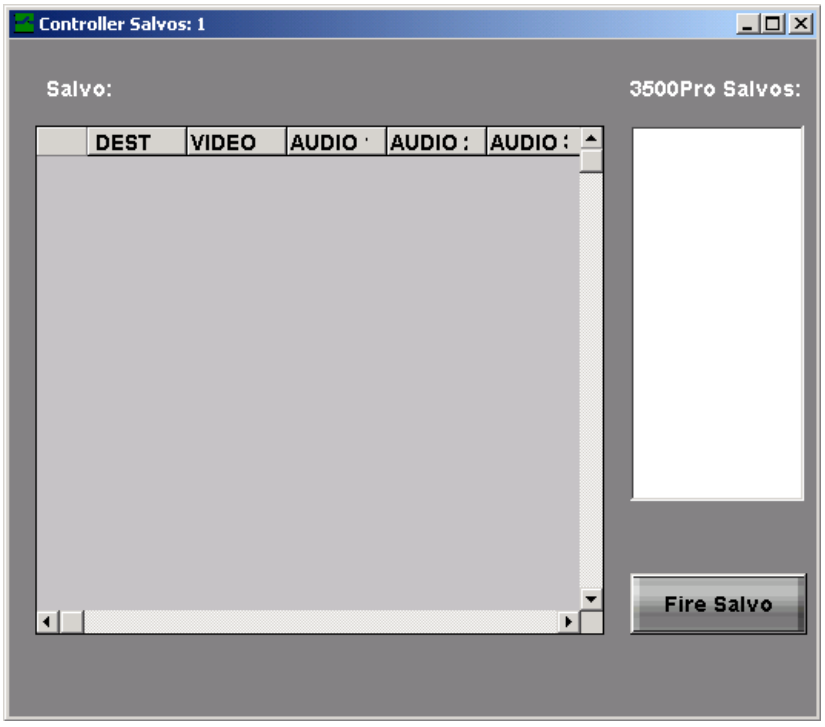


Figure 126. Salvo Status Window

Salvo

Shows specific information about the salvo that is selected in the 3500Pro Salvos section.

3500Pro Salvos

Shows a list of the salvos currently defined in the configuration file. Select each salvo to review information about it in the Salvo section.

Fire Salvo

Executes the selected salvo.

8.2.7 Reentry

The **View > Reentry** option displays direct source-to-destination status for every configured reentry.

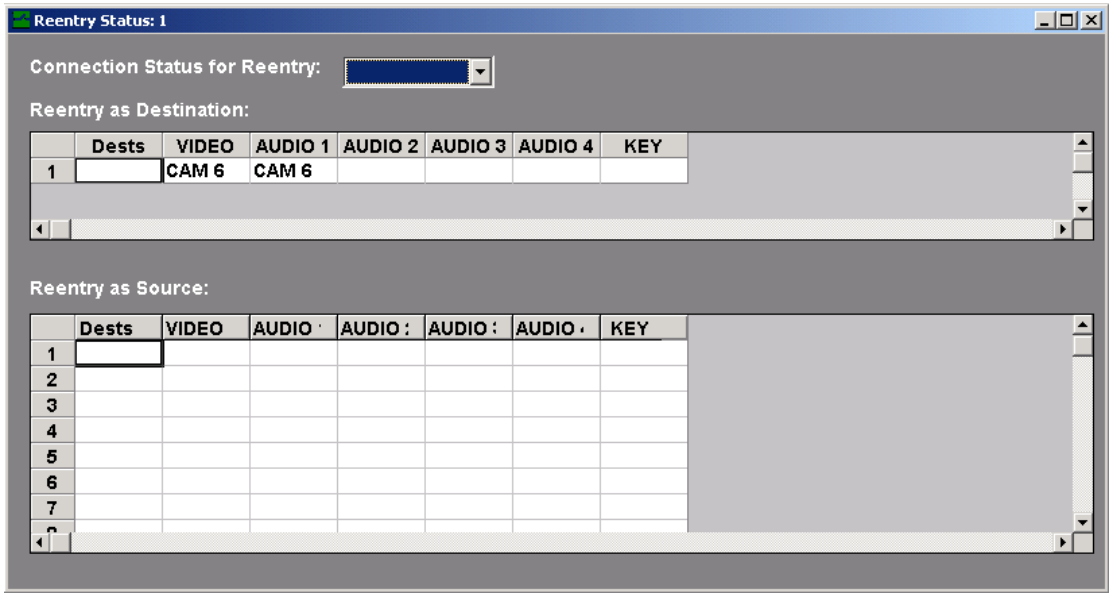


Figure 127. Reentry Status Window

Connection Status for Reentry

Displays the reentries that are currently available. To define reentires, use the Configuration > Reentry command in the Configuration Editor module.

Reentry as Destinations

Shows the destination status of the selected reentry.

Reentry as Source

Shows the source status of the selected reentry.

8.2.8 Source Status

The **View > Source Status** command shows the destinations (by level) that are currently switched to the specified source.

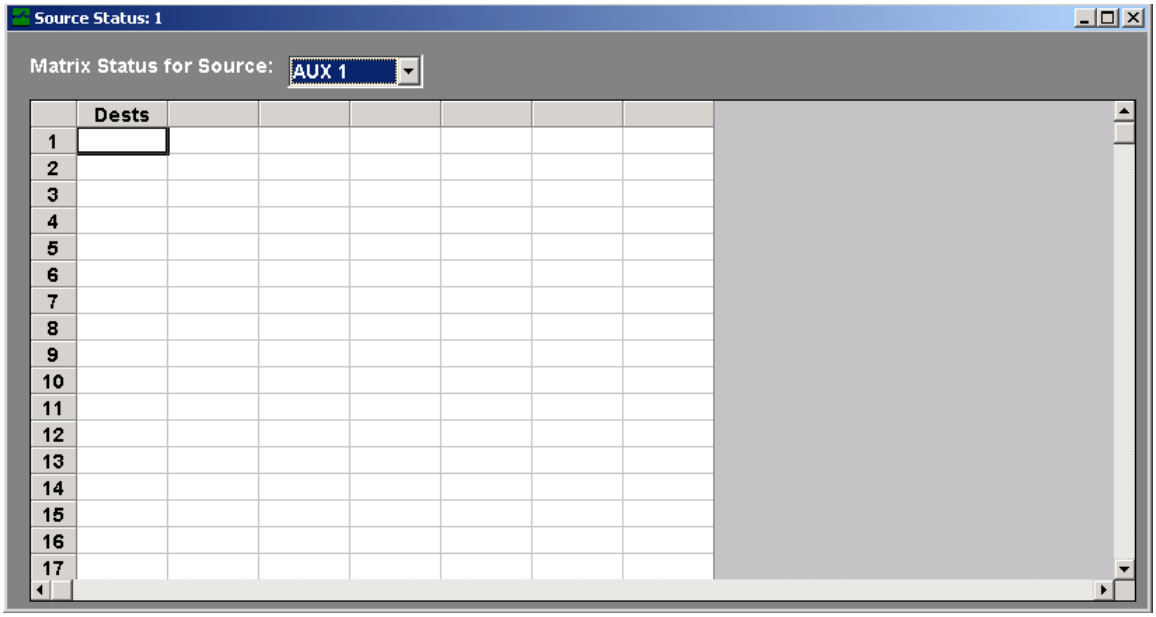


Figure 128. Source Status Window

8.2.9 Tieline

The **View > Tielines** window shows all of the defined tielines and allows you to "free up" existing tielines. Tielines are special types of logical switches that allow a logical input on one level to be switched to a logical output on a different level. The example shown below demonstrates a tieline being used to route a video signal from an analog camera, through an external analog-to-digital converter, to a digital VTR.

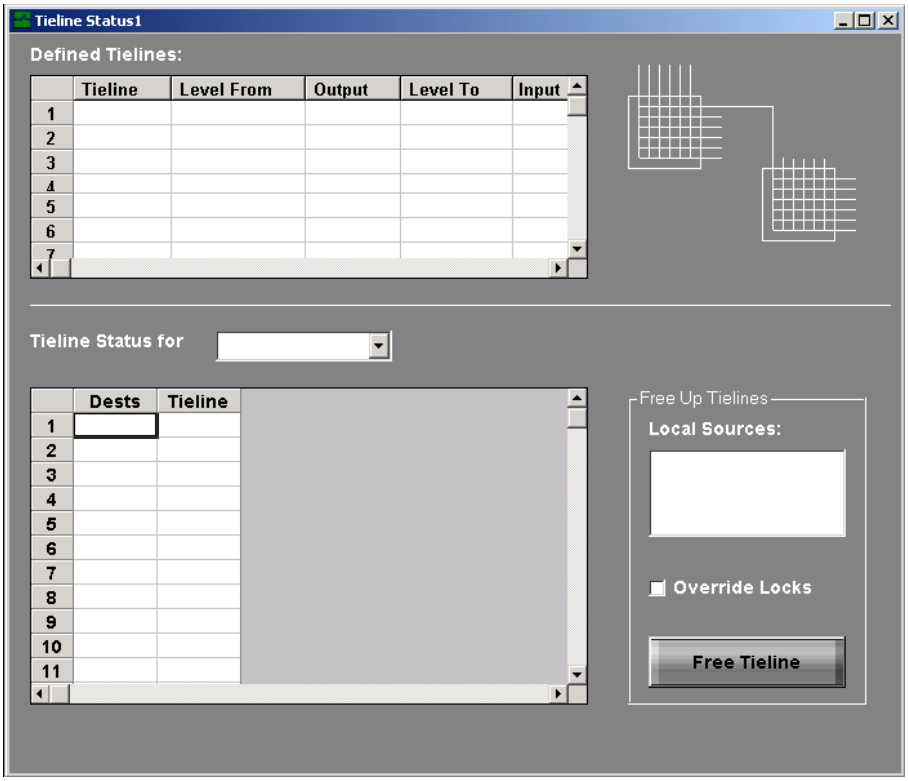


Figure 129. Tieline Status Window

Before Using This Command

You must define tielines before they will display in this window. To define tielines, use the **Configuration > Tielines** command in the Configuration Editor module.

Options:

Defined Tielines: shows all of the currently defined tielines.

Tieline Status For: Displays the status of a specific tieline. Select a tieline from the drop-down list.

Free Up Tielines: remove tieline definitions you created in the Configuration Editor (Configuration > Tieline command). Select the source containing the tieline, and select Free Tieline.

Local Sources: Displays the sources that have assigned tielines

Override Locks: Overrides locked sources.

Free Tieline: Frees tieline associations.

8.3 Tools Menu

The **Tools** menu provides options to refresh the currently open window, enable and disable the switcher, and view the current controller status.

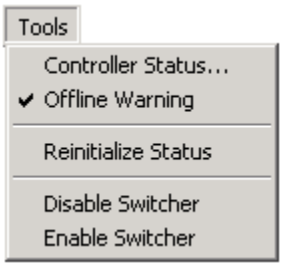


Figure 130. Tools Menu

8.3.1 Controller Status

The **Tools > Controller Status** command displays status information about the controller.

8.3.2 Offline Warning

The **Tools > Offline Warning** command, if selected, displays a message when the controller is offline. Select this command to turn this option on and off.

8.3.3 Reinitialize Status

The **Tools > Reinitialize Status** command updates the display in the selected window. This ensures that the information that displays in up to date.

8.3.4 Disable Switcher

The **Tools > Disable Switcher** command disables the switcher. To enable the switcher again, select **Tools > Enable Switcher**.

8.3.5 Enable Switcher

The **Tools > Enable Switcher** enables a switcher.

8.3.6 Controller Status

The **Tools > Controller Status** command displays status information about the controller.

8.4 Status Menu

The **Status Menu** options define how items in the Matrix Status window display. This menu will not be available until you select **View > Matrix Status** and the Matrix Status window is active.

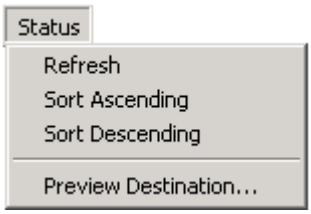


Figure 131. Status Menu

8.4.1 Refresh

The **Status > Refresh** option updates the information in the Matrix Status window. This option ensures that the information that display is up to date.

Before Using This Command

You must have selected View > Matrix Status to open the Matrix Status window, and the Matrix Status window must be active. To make the Matrix Status window active, select Window > Matrix Status.

8.4.2 Sort Ascending

The **Status > Sort Ascending** option displays information in the Matrix Status window in numeric ascending order (smaller numbers display at the top of the window).

Before Using This Command

You must have selected **View > Matrix Status** to open the **Matrix Status** window, and the Matrix Status window must be active. To make the Matrix Status window active, select **Window > Matrix Status**.

8.4.3 Sort Descending

The **Status > Sort Descending** option displays information in the Matrix Status window in numeric descending order (larger numbers display at the top of the window).

Before Using This Command

You must have selected **View > Matrix Status** to open the **Matrix Status** window, and the Matrix Status window must be active. To make the Matrix Status window active, select **Window > Matrix Status**.

8.4.4 Preview Destination

The **Status > Preview Destination** command allows you to preview what is occurring in the status window.

Click on a cell in the status window and the preview destination is switched to the same status as the destination corresponding to the active cell.

Before Using This Command

You must have selected **View > Matrix Status** to open the **Matrix Status** window, and the Matrix Status window must be active. To make the Matrix Status window active, select **Window**

8.5 Preset Menu

The **Preset** menu provides options for working with the Preset window. The following options are available:

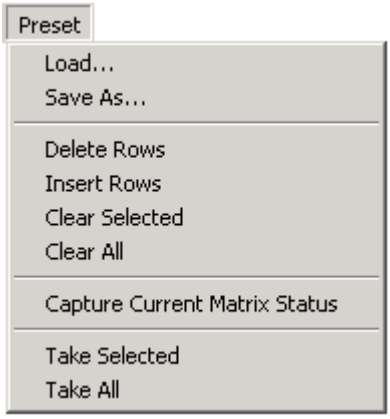


Figure 132. Preset Menu

8.5.1 Load

The **Preset > Load** command opens a Preset Configuration (`.preset` file). You can save preset configurations with the Save button on the Preset window.

Before Using This Command

You must have used the Save button in the Preset window to save preset settings.

Loading a Preset File

1. Select this option, and the Open window displays
2. Change to the directory that contains the preset file you want to load.
3. Select the file you want to load. You can select files with either `.preset` or `.txt` extensions.
4. Select Open and the file will load into the Preset window.

8.5.2 Save As

The **Preset > Save As** command saves the information in the Preset window to a file name and directory location that you select. The files will be saved as a .preset file.

Before Using This Command

Use the Preset window to build your preset settings.

Saving the Preset Builder Settings

1. Set up the Preset window.
2. Select the **Preset > Save As** command. The **Save As** window displays.
3. Select the directory location to store the file.
4. Type in a file name. The file will automatically have a `.preset` extension.
5. Select **Save** and the file will be saved to your computer. You can now open the file later with

8.5.3 Delete Rows

The **Preset > Delete Rows** command deletes the selected row in the Preset window. This option is the same as selecting the **Delete Rows** button in the Preset window.

8.5.4 Insert Rows

The **Preset > Insert Rows** command adds a new row above the selected row in the Preset window. This option is the same as selecting the **Insert Rows** button in the Preset window.

8.5.5 Cleared Selected

The **Preset > Clear Selected** option removes the information from the selected rows in the Preset window. To select multiple rows, select the first field, press the Shift key, then select the last field. All fields in between highlight. This option is the same as selecting the **Clear Selected** button in the Preset window.

8.5.6 Clear All

The **Preset > Clear All** option removes all of the information from the Preset Builder. This option is the same as selecting the **Clear All** button in the Preset window.

8.5.7 Capture Current Matrix Status

The **Preset > Capture Current Matrix Status** option loads the current matrix that is configured with the **View > Matrix Status** option into the Preset Builder window. This option is the same as selecting the **Get Mtx Current** button in the Preset Builder.

8.5.8 Take Selected

The **Preset > Take Selected** option performs a take on only the selected destinations. To select multiple destinations:

Select the first field, press the Shift key, then select the last field. All fields in between highlight.

Select the first field, then press the Ctrl key. Keep the Ctrl key pressed down while you select additional fields. Each one you select highlights.

This option is the same as selecting the **Take Selected** button in the Preset Builder window.

8.5.9 Take All

The **Preset > Take All** button performs a take on all of the destinations. This option is the same as selecting the **Take All** button in the Preset Builder window.

8.5.10 Tieline Menu

The **Tieline** menu provides options for working with the Tieline window. You cannot access this menu until you select **View > Tieline** to display the tieline window and the tieline window is active (the border of the window will highlight).

8.5.11 Sort Ascending

The **Tieline > Sort Ascending** command sorts the tielines in ascending order.

Before Using This Command

You must have selected **View > Tieline** to open the **Tieline** window, and the Tieline window must be active. To make the Tieline window active, select **Window > Tieline Status**.

8.5.12 Sort Descending

The **Tieline > Sort Descending** command sorts the tielines in descending order.

Before Using This Command

You must have selected **View > Tieline** to open the Tieline window, and the Tieline window must be active. To make the Tieline window active, select **Window > Tieline Status**.

Chapter 9 - 3500Pro User Manager

The 3500Pro User Manager module allows you to configure your computer connections and to add and edit users who can access the 3500Pro software.

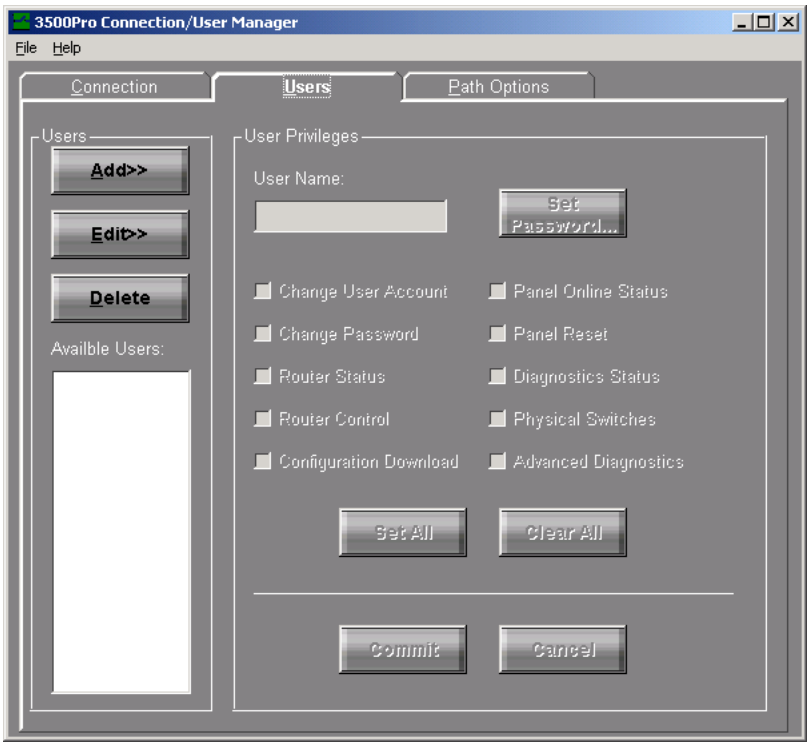


Figure 133. User Manager Window

9.1 Connection Tab

The **Connection** tab defines connection parameters used to connect the PC to the actual controller.

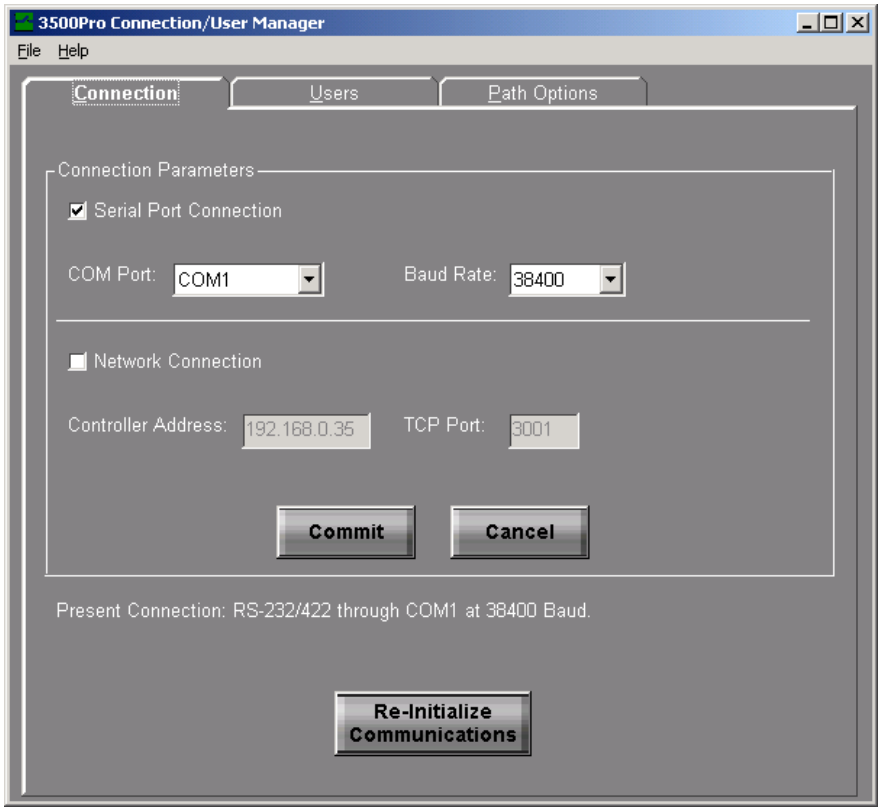


Figure 134. Connection Tab

Serial Port Connection

Select this check box if you will connect to the controller through a serial port.

COM Port

Select the COM Port you are using to connect to the controller if you are using a serial port connection.

Baud Rate:

Select the baud rate for the connection if you are using a serial port connection.

Network Connection

Select this check box if you will connect to the controller through the network.

Controller Address

Enter the TCP/IP address of the controller.

Commit

Applies your connection settings. The settings you selected will display at the bottom of the window.

Present Connection

Displays the current method you are connecting to the controller, such as "RS-232/422 through COM1 at 38400 baud".

Reinitialize Communications

Reinitialize serial communications based on what is stored in registry.

9.2 Users Tab

The **Users** tab allows you to add, edit, and delete users.

NOTE **User accounts are optional. If used, at least one user account must be assigned all privileges. If no user accounts are configured, all users have all privileges.**

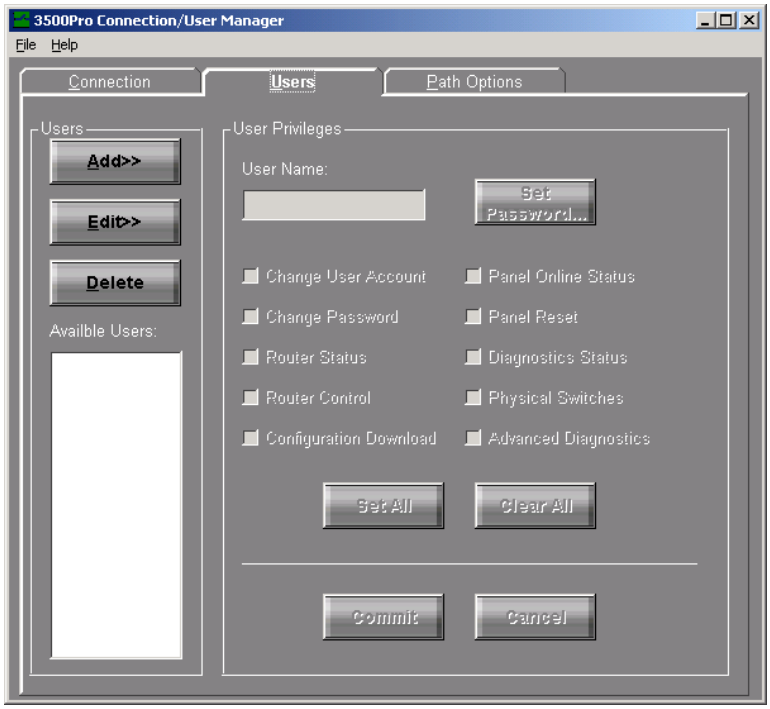


Figure 135. Users Tab

Adding a User

1. Select the **Add>>** button.
2. Enter a name for the user.
3. Select the **Set Password** button, and enter a password for the user.

NOTE **Make sure each user knows his or her initial username and password.**

4. Select the privileges the user should have. Just select each check box, and a check mark will display. If the user needs access to everything, select the **Set All** button. At least one user must be assigned all privileges.

5. When you are done, select **Commit**. The user will be added to the Available Users section in the left portion of the screen, and the user will now have access to the software.

Editing a User

1. Select the user you want to edit from the Available Users list.
2. Select the **Edit>>** button.
3. Change any of the settings. To change the password, select the **Set Password** button and enter the new password.
4. Select the **Commit** button, and you changes will be saved.

Deleting a User

1. Select the user you want to delete from the Available Users list.
2. Select the **Delete** button. The user is removed from the Available Users list.

9.3 Path Options Tab

The **Path Options** tab displays information about the directory location of items in the 3500Pro configuration. You cannot edit any of this information.

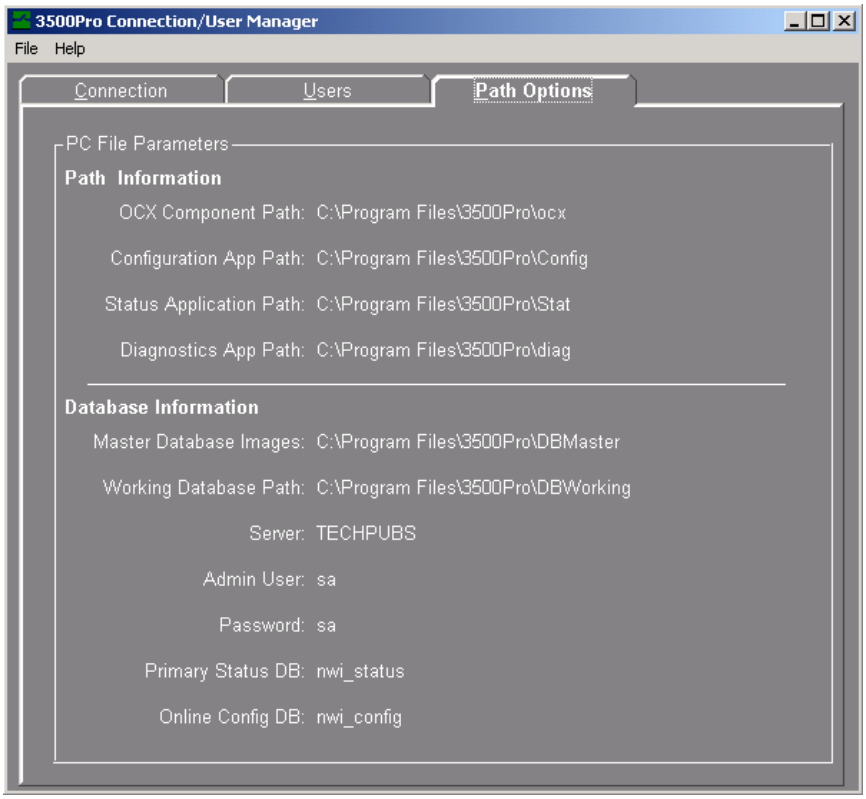


Figure 136. Path Options Tab

Chapter 10 - Runtime Database Initialization

The **Runtime Database Initialization** module makes copies of the configuration and runtime databases (from the master copies). Then, old versions of the databases are purged. Use this option when you first install the software. Also, you can use this option if you are having problems with modules correctly reading current controller information. For example, if you download a configuration to the controller, but the Status module is not recognizing the current setting, use this command. This command will ensure that the databases the software is reading contain the most current information.

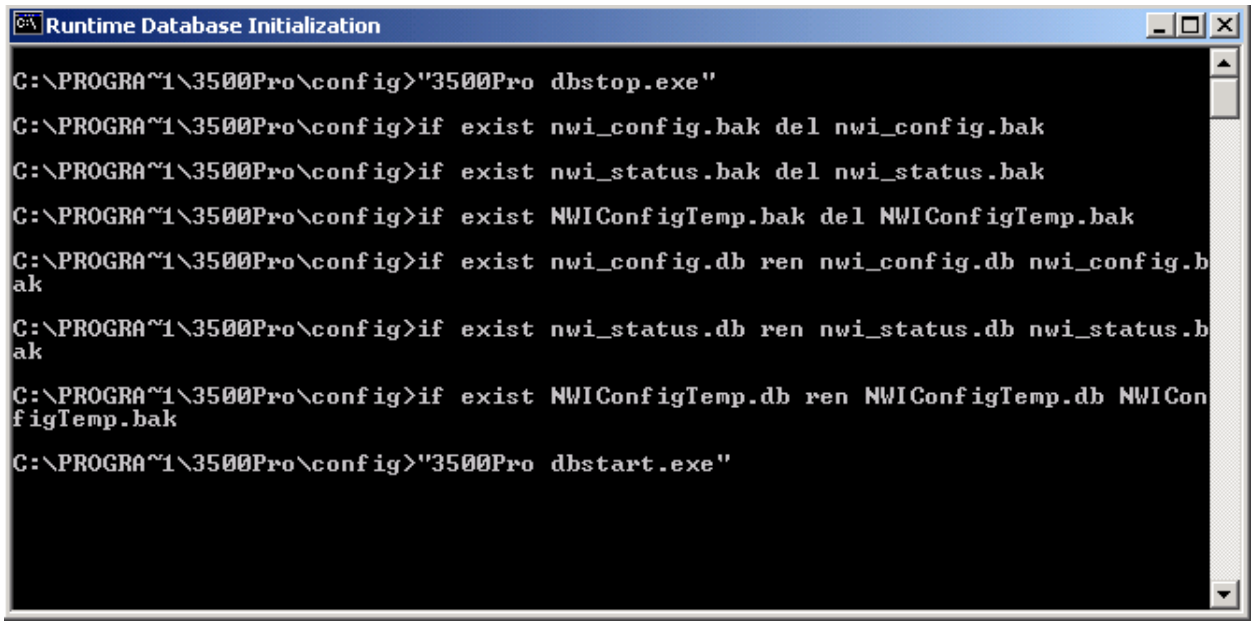
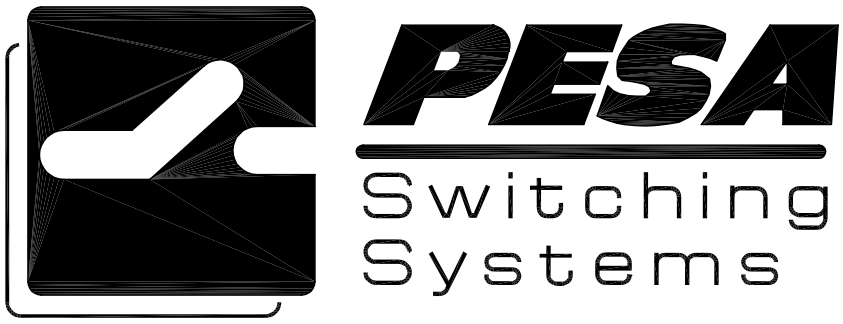


Figure 137. Runtime Database Initialization Window


PESA
Switching
Systems