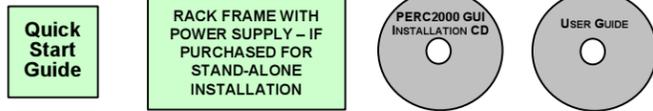


## Step 1 INSPECT PERC2000 COMPONENTS

- In most applications, your PERC2000 controller card is shipped pre-installed either in a 1RU stand-alone chassis, or mounted internal to a Cheetah video matrix router, as shown in Step 2 of this guide.
- In the rare instance that your controller card is received as an individual component always observe proper ESD handling precautions when installing card.
- Regardless of mounting option, verify that all components identified below are included with your shipment.
- Visually inspect for any signs of damage in shipment or transit.
- If any components are missing or damaged, contact PESA Customer Service.

VERIFY ITEMS SHOWN BELOW ARE INCLUDED WITH SHIPMENT\*



\*If any components are missing or damaged, contact PESA Customer Service by phone or e-mail.

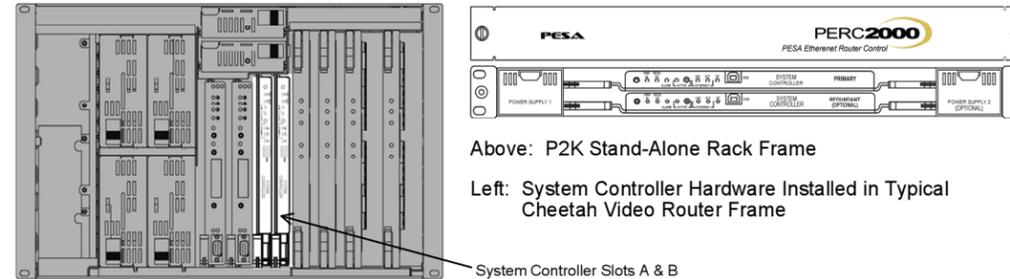
Customer Service: (256) 726-9222  
 Toll Free: (800) 323-7372  
 Fax: (256) 726-9268  
 Email: [service@PESA.com](mailto:service@PESA.com)

## Step 2 GET ACQUAINTED

- PERC2000 (P2K) can interface with system components over either an Ethernet connection or the PESA proprietary PRC bus; and also with a host PC running the PERC2000 software application using a network connection.
- P2K also interfaces and communicates with a wide variety of PESA remote control panels used to operate switcher frames within the system.
- P2K controller must be programmed by downloading a configuration file to it using the host PC and configuration software application.
- Configuration files, written by user, tailor all operational aspects of router system.
- Files may be named and saved for easy retrieval.
- Regardless of number of system components or number of frame controllers, PESA router installations typically function under a single System Controller to coordinate and oversee operation of entire system.
- When used in an installation containing one or more Cheetah video matrix routers, controller hardware is usually mounted in one of the video router frames.
- All Cheetah video routers offer mounting slots for up to two controller cards, serving as primary and redundant controllers, and power is derived from router power distribution.
- All system controller connection ports, such as remote control panel buses and the PRC bus for system expansion, are available on rear panel of router frame.
- If installation does not include a Cheetah video router, or if it is desirable to have controller located external to router frame, P2K controller hardware is mounted in a 1RU frame with internal power supply.

## Step 2 GET ACQUAINTED (CONT.)

- Following illustrations show a typical example of each installation method:

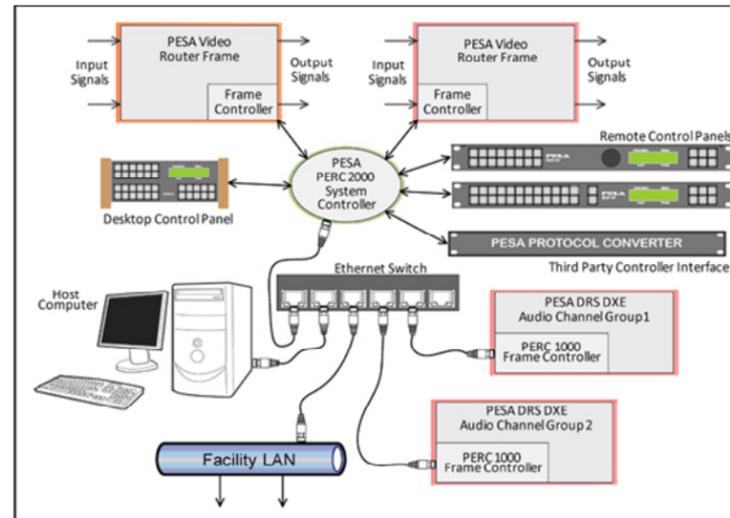


Above: P2K Stand-Alone Rack Frame

Left: System Controller Hardware Installed in Typical Cheetah Video Router Frame

System Controller Slots A & B

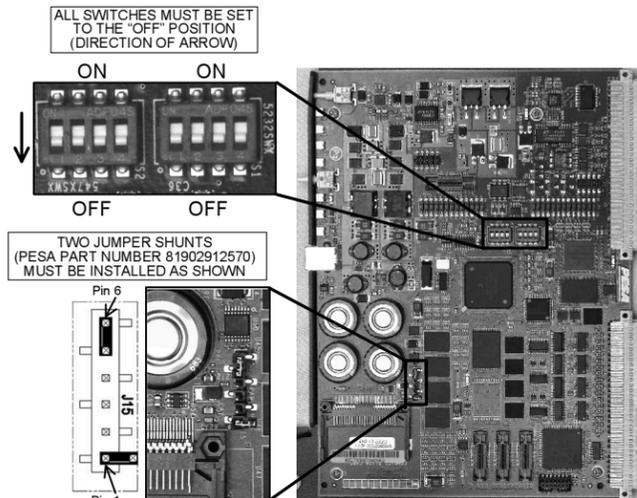
- A Typical PERC2000 controller installation with mix of PRC-based devices, Ethernet control devices and remote control panels using PESA's proprietary RCP control bus is shown pictorially at right:



For further information, refer to Chapter 2 in the PERC2000 User Guide

### PERC2000 SYSTEM CONTROLLER CIRCUIT CARD ASSEMBLY

- In all applications and in normal operation, there is no user interface required with the PERC2000 circuit card assembly.
- An illustration of controller card is shown in the next column with exploded areas showing detail of DIP switch devices and 6-pin header connector for jumper shunts.
- For ALL normal applications of PERC2000, switches and jumpers must be in positions shown here:
  - All switch elements for DIP switch devices S1 and S2 must be in the OFF position as shown.
  - Install one end of a jumper shunt to J15 pin 1 and leave the other end open - this jumper is not connected to any other pin during normal operation, but should be available for use if directed by PESA Customer Service.
  - J15 pins 2, 3, and 4 should all be left open.
  - J15 pins 5 and 6 must be jumpered as shown.



## Step 2 GET ACQUAINTED (CONT.)

### CARD EDGE CONTROLS AND INDICATORS

- Indicators and controls located along front edge of controller circuit card assembly are shown in illustration below:



### RESET

- As viewed from front of card, there is an unlabeled, recessed push button Reset switch on left-hand side, behind metal panel.
- This switch is used during factory testing and configuration, and should not be used in the field unless directed by a PESA service technician.

### POWER (PWR) IN

- When lit, indicates that system controller is receiving input power from frame power supply.

### REGULATORS (REGS) OK

- When lit, indicates that on-board power regulators are functioning correctly and operating voltage rails are present.

### ALARM

- When lit, indicates a fault condition within system controller card; or, if redundant controller card is present, a fault with communication activity between controllers.

### ACTIVE

- Panel section labeled ACTIVE contains a pushbutton switch and an LED indicator.
- In systems with dual controllers, the Active LED indicates which controller is active (LED lit) and which is backup (LED not lit).
- Pressing pushbutton switch on standby controller card swaps active and backup controllers.
- In single controller system, LED is lit when controller hardware is functioning - pushbutton switch has no effect.

### ETHERNET LEDs

- Provide visual status of Ethernet activity as follows:
  - Link (LNK) – When lit, indicates an Ethernet link is established
  - Activity (ACT) – flashes as Ethernet data traffic is exchanged over link

### SP LED

- This LED is for factory testing and configuration only and is not used during normal operation of controller.

### USB CONNECTOR

- Connector is for future product use, and not used in current PERC2000 applications.

For further information, refer to Chapter 6 in the PERC2000 User Guide

## Step 3 INSTALL PERC2000 HARDWARE

- Configuring a P2K control system requires you to install and set up hardware, install P2K software and then establish communication between controller hardware, host PC and PESA routing equipment.
- Whether installed in a video router frame or stand-alone chassis, P2K hardware is functionally identical.
- When installed in 1RU stand-alone chassis, controller hardware is attached to extender tray to allow it to fit chassis card guides and midplane connectors.

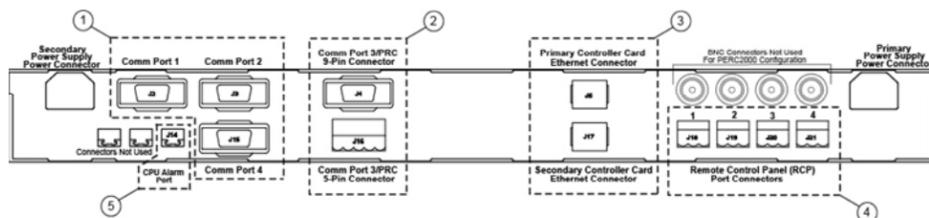
### Step 3 INSTALL PERC2000 HARDWARE (CONT.)

#### INSTALLING STAND-ALONE PERC2K-S OR PERC2K-D CONTROLLER

- Rack mount models of PERC2000 controller are designed for installation in a standard 19-inch equipment rack.
- Sufficient space must be provided behind equipment racks to allow for control and power cables.
- All panel mounting holes should be utilized and mounting hardware tightened securely.
- Install equipment into rack as follows:

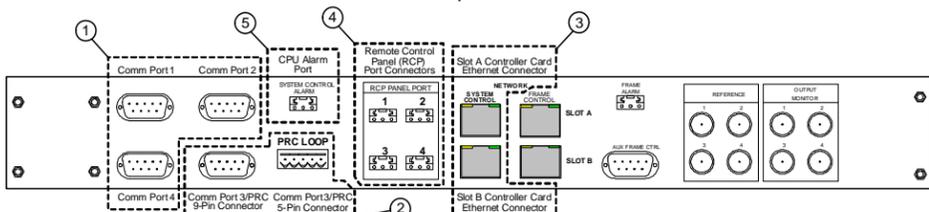
1. Insert panel assembly into equipment rack and support bottom of panel assembly until all mounting hardware has been installed and properly tightened.
2. Install bottom two panel-mounting screws.
3. Install top two screws.
4. Install any remaining screws.
5. Tighten all panel-mounting screws until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

- If only one controller card is installed, it will be located in upper card slot.
- If chassis is equipped with only one power supply it will be installed in module slot located on left side of chassis – as viewed from front.
- Rear panel power connectors and network connectors are chassis-slot specific as shown in the rear panel diagram below.
- Connectors are grouped by function and numerically indexed to identify the group.
- Connector functions are discussed in Step 4.



#### PERC2000 INSTALLATION WITHIN A CHEETAH VIDEO MATRIX SWITCHER

- PESA's Cheetah Series Video Matrix Switcher frames provide slots for up to two system controller cards.
- All outboard equipment is interconnected to installed PERC2000 through connectors on router chassis rear panel.
- System Controller card locations vary depending on Cheetah router frame type.
- Power for controller is derived through video frame power distribution system.
- If only one controller card is installed, it may be installed in either slot (A or B) – but remember that rear panel *System Controller* connectors for Ethernet connection are card-slot specific as shown in the rear panel diagram below.
- Diagram shows system connector panel from Cheetah 864XR video frame for example only, actual layout may vary with different frames.
- Not all connectors shown in this example are present on all system connector panels; however, all connectors of like-nomenclature on any system connector panel are functionally identical.
- Connectors are grouped by function and numerically indexed to identify the group.
- Connector functions are discussed in Step 4.



For further information, refer to Chapter 3 in the PERC2000 User Guide

### Step 4 CONNECT I/O SIGNALS TO PERC2000

#### PERC2000 EXTERNAL I/O CONNECTIONS

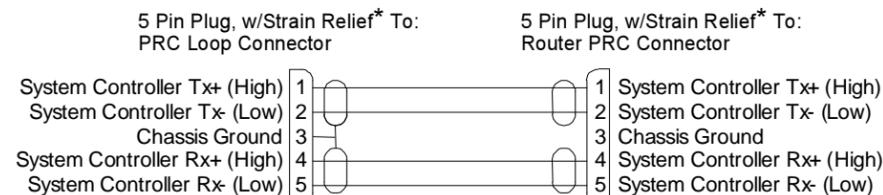
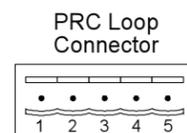
- Whether mounted in a router chassis or stand-alone chassis, I/O connections to interface controller with external equipment are the same.
- Step 3 identifies rear panel connections for a stand-alone chassis and for a typical Cheetah router connector panel.
- External I/O connections for a PERC2000 installation are introduced in the following paragraphs; the index number in each paragraph header identifies connector location.

#### SERIAL PORTS COM 1, COM 2 AND COM 4 (INDEX 1)

- Connectors COM1, COM2 and COM4 are serial communication ports for interfacing P2K with external devices through a user-selectable choice of PESA CPU Link protocols, at a selectable baud rate of either 9600 or 38400.
- Each port may also be assigned as RS-232 or RS-422 compatible through a GUI set-up screen.

#### COM 3/PRC Bus (INDEX 2)

- Serial port COM 3 is a dedicated RS-422 port using the PESA Router Control (PRC) protocol.
- Five-pin PRC Loop Connector, shown at right, is wired in parallel with DB-9 PRC Loop connector.
- Pin-out for constructing an interconnect cable using 5-pin connector to connect to PRC bus devices is shown below.
- Cable may be daisy-chained between PRC bus devices.



\*PESA PN 81902908130 (Phoenix 1776142, or Equivalent)

#### NETWORK CONNECTORS (INDEX 3)

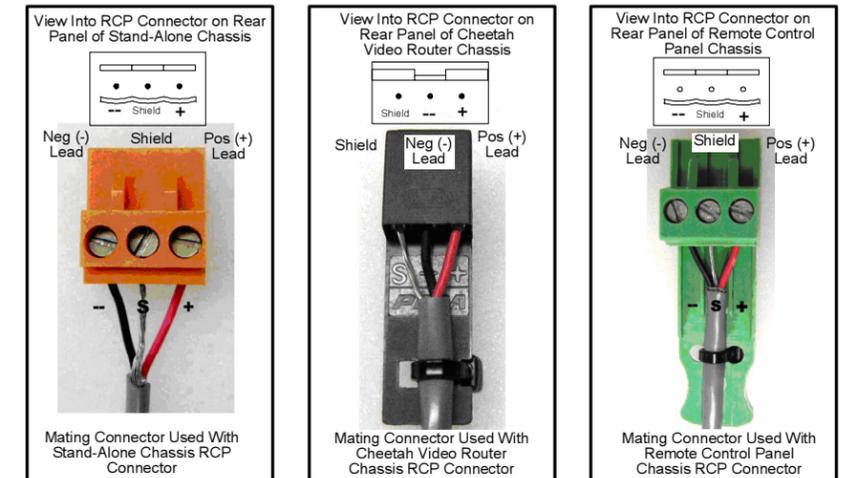
- Each rear panel RJ-45 Ethernet connector is card-slot specific and interfaces its associated controller card slot to a 10/100 Ethernet connection.
- Using a standard RJ-45 Ethernet cable, connect controller card(s) to a 10/100 hub or switch on TCP/IP network.
- Set the IP address, Subnet mask and Gateway address to values assigned or approved by your network administrator in accordance with procedures in Step 5 of this Guide and Chapter 5 of the User Guide.

#### REMOTE CONTROL PANEL PORTS RCP 1- RCP 4 (INDEX 4)

- These 3-contact connectors provide a RS-485 serial communication port for the PESA Remote Control Panel (RCP) bus.
- **Connector styles and pin-outs for RCP connectors used on stand-alone chassis and Cheetah video router frame are different!!**
- **Pay very close attention to use proper pin-outs, as shown by illustrations in next column, for type of chassis in which your controller card is mounted!!**
- Use shielded audio cable for the RCP bus run.
- Any connector may be used to originate an RCP bus allowing system controller to communicate with RCP protocol compatible PESA Remote Control Panels.
- Remote control panel connectors may be daisy-chained from the originating connector to the last panel in the chain.
- It is not necessary to terminate the last connector in the chain.

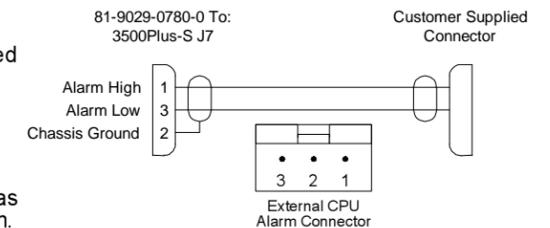
### Step 4 CONNECT I/O SIGNALS TO PERC2000 (CONT.)

- Pin-out connections for the various RCP connector styles and controller hardware mounting options are shown by the illustrations below.
- When installing remote control panels using the RCP bus be sure and follow these diagrams for proper connector wiring.



#### CPU ALARM (INDEX 5)

- This 3-contact connector, illustrated at right, provides rear panel interface with controller's CPU alarm.
- During an alarm condition, an optically isolated, closed circuit exists between contacts 1 and 3, as shown by the cable wiring diagram.
- **External alarm circuit connected to this connector must not exceed 12VDC or 10mA.**



For further information, refer to Chapter 3 in the PERC2000 User Guide

### Step 5 SYSTEM SET-UP AND CONFIGURATION

- Set-up, configuration and monitoring functions are performed through menu screens of PERC2000 GUI control application installed on a host PC running Microsoft Windows® 2000, XP, Vista or Windows 7 operating system.
- Host PC must have active Ethernet connection in order to communicate with system controller hardware over facility network.
- PERC2000 is shipped from factory with an auto-run CD that loads control application onto host PC.

#### Install P2K control application as follows:

- Insert software installation CD into drive of host PC.
- If installation program does not automatically start, navigate to directory of install CD and double-click **PERC2000Vx.xInstall.exe** file.
- Follow screen prompts to install control application.
- Prompt is displayed when software installation is complete.

For further information, refer to Chapter 4 in the PERC2000 User Guide

## Step 5 SYSTEM SET-UP AND CONFIGURATION (CONT.)

### NETWORK ADDRESSING

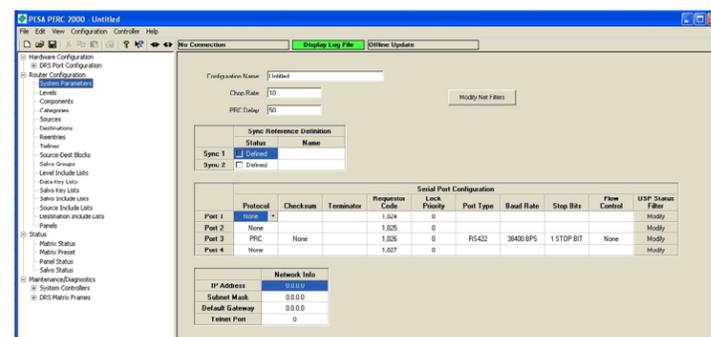
- PERC2000 GUI application communicates via Ethernet through host PC using IP address of PC.
- In order for host PC and P2K controller hardware to communicate, IP address of controller card must be set to a subnet and address value allowing software to “discover” controller.
- This may require changing IP address of system controller.
- With any new installation, controller card is set to an initial *base IP address*.
- If two cards are installed for redundant control system, both cards must be initially set to same base IP address.
- All PERC2000 System Controllers are shipped from the factory with a programmed IP address of 192.168.1.220 and subnet mask of 255.255.255.0.**
- On system start-up each controller card performs a boot-up procedure on its processor circuitry, and during the process determines a number of individual operating parameters.
- Based on these parameters, an individual controller can identify whether it is installed and initialized as the primary or secondary system controller, and also determines and assumes its own *unique* IP address by adding an offset value, defined by its identity in the system, to its programmed base IP address.
- Address offset value is applied as follows:
  - Primary card slot or card slot A in a router frame – Offset value is 0 (zero), and the primary controller retains its set base IP address.
  - Secondary card slot – or card slot B in a router frame – Offset value is 1, and the secondary controller assumes the IP address of base IP address + 1.
- On completion of boot-up, each system controller assumes an individual identity based on the following characteristics:
  - Its unique IP address on the network
  - Whether it is installed in the primary or secondary card slot of the chassis or router frame
  - Whether it is functioning as the primary or redundant system controller

### CHANGING INITIAL NETWORK PARAMETERS

- If factory programmed base IP address causes a conflict, or host PC can not communicate with card due to different subnet settings, it will be necessary to create a direct Ethernet connection between a PC that has been isolated from the network and the controller card.
- Set isolated PC to an IP address that will allow it to communicate using default base IP address of controller card and use Windows configuration function to change base IP address of controller to an address that will allow it to be discovered on facility Ethernet.
- If installing two controller cards for redundancy, use this process to set **both** controller cards to **same** base IP address.

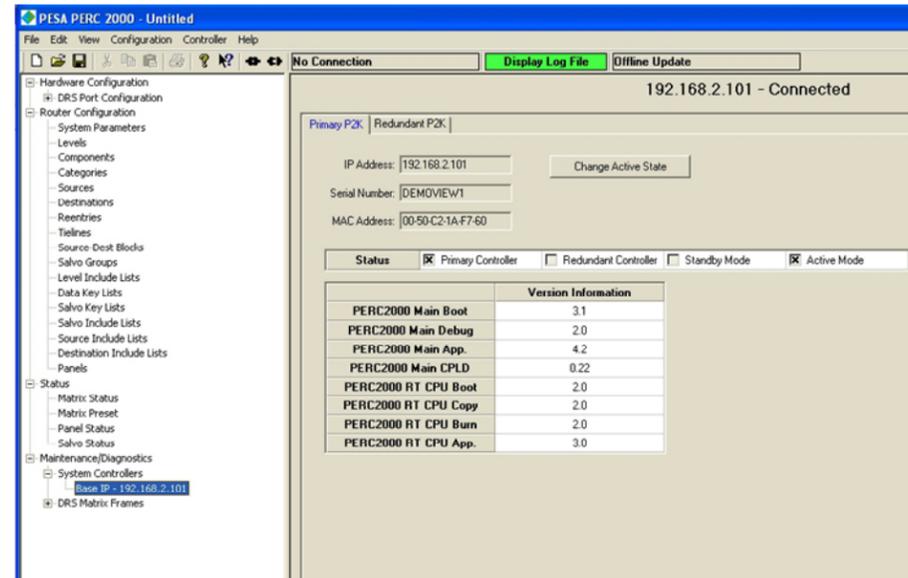
### NETWORKED HOST PC AND SYSTEM CONTROLLER

- Once you have control software loaded and system controller hardware configured to communicate via Ethernet, start the application by double-clicking on desktop PERC2000 icon.
- Main screen, as shown at right, is displayed.



## Step 5 SYSTEM SET-UP AND CONFIGURATION (CONT.)

- Software immediately begins discovery process to locate PESA controller devices on network. Discovered devices are listed by category under Maintenance/Diagnostics Menu entry as shown below.



- Locate and expand **Maintenance/Diagnostics** tree in left pane of GUI display, then expand **System Controllers** tree; this action expands tree to display a listing of controllers discovered on network, identified by *base IP address* of controller device(s).
- In most installations, there is only one controller for entire PESA routing system, therefore there will only be one entry under System Controllers menu.
- Click on list entry to select and highlight system controller.
- Main display screen shows real-time status and setup information for selected controller, as shown above for controller residing at base IP address 192.168.2.101.
- Base IP address of controller is displayed at top of pane, along with a notation that the GUI is **connected** to and communicating with the controller hardware.

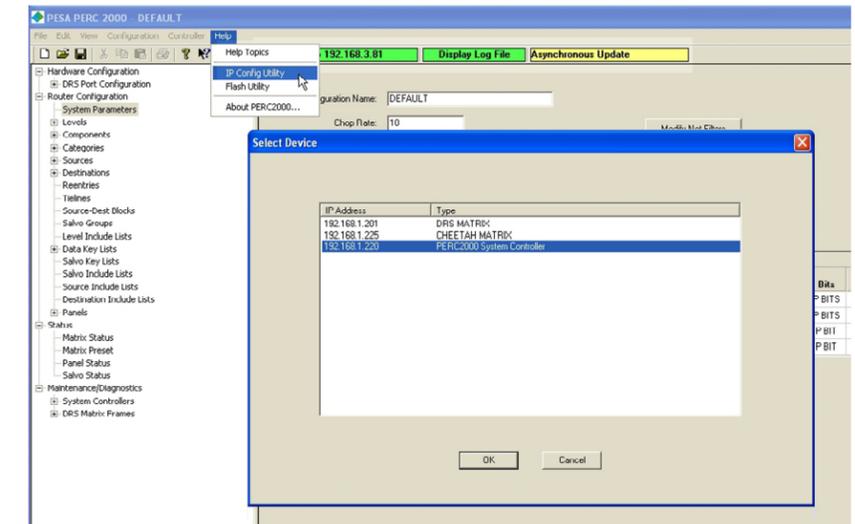
### CHANGING BASE IP ADDRESS OF A PERC2000 SYSTEM CONTROLLER MODULE

- Base IP address is address initially programmed into P2K system controller(s) – either from the factory or, if factory address is totally out of range, through a Windows IP configuration operation - and it becomes the nomenclature used to identify system controller on network.
- In some applications it may be necessary to change base IP address of controller to accommodate your particular installation; this is easily accomplished through the P2K GUI.
- Assume you are installing a new PERC2000 system, with a redundant controller card, and wish to use IP addresses 192.168.5.101 and 192.168.5.102 for controllers, rather than factory default values.
- When “new” address is saved, it is simultaneously written to both primary and redundant controllers, if redundant controller is present.
- Saving new address causes system controllers to re-boot and assume their “new” unique address derived from changed base address.
- Base IP address of system controllers may be set to virtually any value that best suits your network, with a few caveats:
  - You may set first three octets of IP address to any values needed for your installation.
  - You may assign any valid value (1 thru 254) to fourth octet, keeping in mind numbers 0 (zero) and 255 are not valid for use.
  - When determining value for fourth octet you must dedicate a block of 2 consecutive numbers, if a secondary controller is used.

## Step 5 SYSTEM SET-UP AND CONFIGURATION (CONT.)

### CHANGING BASE IP ADDRESS OF A PERC2000 SYSTEM CONTROLLER MODULE (CONT.)

- The following steps guide you through procedure to enter a new base IP address value:
  - Launch P2K GUI application from desktop icon or browse to PERC2000.exe file and double click to open application.
  - Click on *Help* menu in Windows™ menu bar and select *IP Config Utility* option from menu as shown below.



- This brings up *Select Device* window as shown above.
- Select P2K system controller, by its current base IP address shown in listing and click entry to select device.
- With entry highlighted, click **OK** to continue.
- Select Device box will clear and *IP Parameters Config* box, as shown at right, is displayed.
- When box initially appears, IP address listed is current base IP address of system.
- Click in **IP Address** block, remove currently listed IP address and enter “new” IP address you have selected as base IP address for system controller.
- Remember that numbers 0 (zero) and 255 are not valid for fourth octet of IP address.
- If you also need to assign a “new” subnet mask or default gateway setting, enter desired values in **Netmask** and **Default Gateway** boxes.
- Default values for these settings are:
  - Netmask: 255.255.255.0
  - Gateway: 0.0.0.0
- Click **Save Changes** to write new address data simultaneously to all P2K system controllers.
- Clicking **OK** closes the IP Parameters Config box, but **DOES NOT** save data changes you make to the controllers.



### DUAL (REDUNDANT) P2K SYSTEM CONTROLLERS

- When a router system is equipped with dual P2K controllers, one is always functioning as the active controller and the other is the standby controller.
- Installation position in the frame is not an indicator of which is the active controller.
- During operation, the standby controller monitors the health of the active controller and will automatically become active and take over control of the system if it detects a problem.

## Step 5 SYSTEM SET-UP AND CONFIGURATION (CONT.)

### DUAL (REDUNDANT) P2K SYSTEM CONTROLLERS (CONT.)

- A standby controller can become active for any of the following reasons:
  - User presses the **Active** button on the front edge of the circuit board in the frame.
  - User requests the standby P2K become active by a command from the GUI.
  - Standby P2K loses serial communication with the active P2K.
  - Active P2K controller is removed from its frame slot.

For further information, refer to Chapters 4 and 5 in the PERC2000 User Guide

## Step 6 PERC2000 OPERATING SOFTWARE

- Graphical User Interface (GUI) software application is a major component of P2K System Controller.
- Application must be installed on a Windows™ based PC that serves as a “host” computer for router installation.
- All control aspects of P2K system are executed through GUI software application.
- Tools and routines provided allow you to build and upload controller configuration files, perform system status polling and also perform certain maintenance and diagnostics routines.
- Designing and configuring a routing switcher system requires working knowledge of hardware components and router operational modes and functions.
- Mistakes or erroneous entries made in many of the configuration steps can cause serious problems ranging from incorrect sources being switched to total shutdown of the entire system.
- Be sure you know exactly what you want to do before you make changes to system configuration!!**

### HARDWARE CONFIGURATION AND ROUTER CONFIGURATION

- Configuration files are created through user screens and menus of the P2K GUI.
- Once created, a configuration file can be stored, edited or downloaded to a hardware controller device.
- Router system is essentially non-functional until a configuration file is created and downloaded to the PERC2000 controller hardware.
- During installation of a PESA routing system containing DRS audio routing components, there are two distinct sets of data that must be defined when creating a system configuration file – hardware configuration and router configuration data:
  - Hardware** configuration defines the DRS system hardware components attached to each channel group DXE frame in a DRS audio router system. It is performed through operator screens and menus of the P2K GUI, and the resulting configuration file is downloaded to the PERC1000 Frame Controllers.
  - Router** configuration is where the actual signal switching functions for the entire router system, such as signal input/output assignments, signal names and aliases, switching levels, components and other special router functions are defined in the system configuration file and downloaded to the PERC2000 System Controller.
- These are two very distinct data entry operations when creating a system configuration file for a router installation, although both are performed through screens of the P2K GUI application.
- Since hardware configuration pertains **only** to DRS audio router installations, the procedure for generating hardware data for a system configuration file is presented in the DRS Technical Manual.
- If your system does not contain a DRS audio router, you will not use the Hardware Configuration menu items when creating a configuration file.
- Once created, a system configuration file containing both hardware and router configuration data may be named and saved allowing it to be retrieved to the host PC for future modification or use.
- Remember that the act of generating or saving a file **does not** download configuration data to the system controller.

## Step 6 PERC2000 OPERATING SOFTWARE (CONT.)

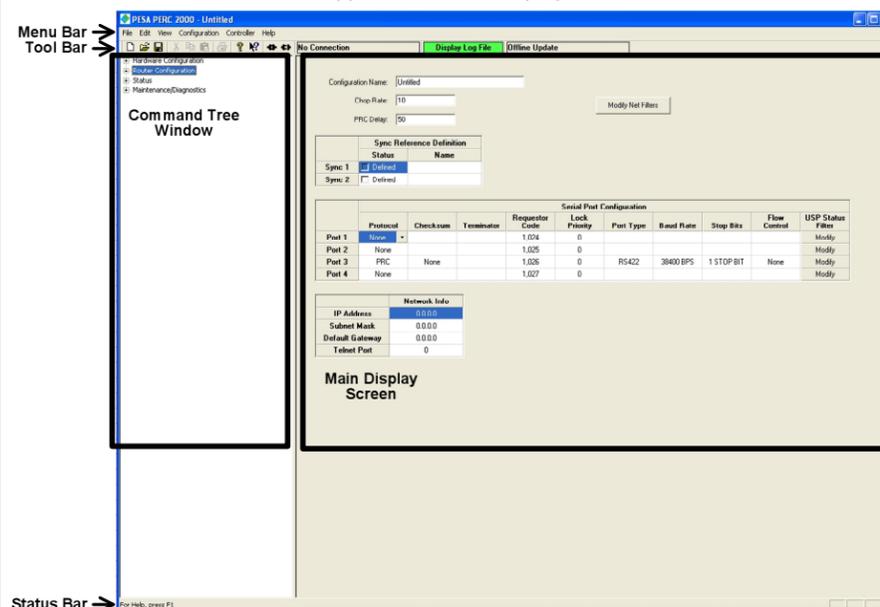
### HARDWARE CONFIGURATION AND ROUTER CONFIGURATION (CONT.)

#### NOTE

Anytime configuration data of *either* type is written or modified using P2K GUI and saved to storage media, *both* hardware and router configuration data is always stored with file. If your router system contains DRS audio routing components, you must either upload from system controller or retrieve a stored config file with valid hardware and router config data entries on which to make desired modifications. If you start with “clean slate” configuration screens and only make data entries for a hardware or router configuration and save the file, it *will not* contain a full set of configuration data; and, if downloaded to controllers, *will not* allow DRS to function properly.

### NAVIGATING PERC2000 SYSTEM SCREEN

- Launch GUI software from Windows® Start Button or desktop icon.
- Main Screen, as illustrated below, should be on PC display.
- Screen is displayed in a familiar Windows format, divided into five major functional areas: Menu Bar, Tool Bar, Status Bar, Command Tree Window and Main Display Screen.
- The Menu Bar, Tool Bar and Status Bar all function in a similar manner to other Windows® based software applications.
- Some pull-down menus in menu bar contain application specific commands.
- Commands for system configuration, monitoring and diagnostics are contained in command tree located on left side of screen in Command Tree Window.
- There are four top-level (parent) command headers: Hardware Configuration, Router Configuration, Status and Maintenance/Diagnostics.
- As in most Windows® applications each parent header may be expanded to reveal sub-headers and commands by clicking the + box next to the item.
- When a command is selected from command tree, data entry or status screen associated with command appears in Main Display Screen window.



### GETTING STARTED

- When P2K GUI application is started on host PC there is no configuration file loaded.
- You have three options from which to choose when the GUI application is first started:
  - Treat screens as a “clean slate” and generate a new configuration file by entering configuration data for download to controller, or save “new” file to a storage media such as a hard drive of host PC or other memory device.
  - Load an existing configuration file from a previously saved and stored file.
  - Upload currently active configuration file stored in flash memory on system controller card.

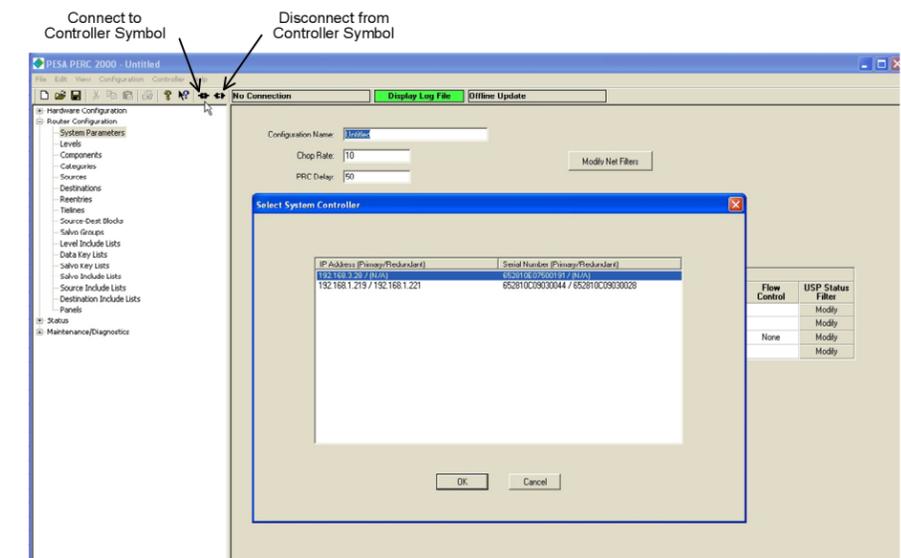
## Step 6 PERC2000 OPERATING SOFTWARE (CONT.)

### GETTING STARTED (CONT.)

- Either of last two options allow you to view or modify an existing configuration file.
- Regardless of which option is chosen, as configuration data is entered or modified on the GUI screen, it is stored by the GUI application on the host PC – and only on the host PC.
- Changes entered do not get saved to a file, written to system controller, or become active, until operator issues a command from GUI to either save or download configuration data.
- It is not necessary to have an active connection between host computer and P2K hardware to create and save a configuration file.
- In order to download a configuration, upload current configuration file from controller or to perform any status monitoring or maintenance/diagnostics procedures, host PC and System Controller hardware must have a viable communication link.

### ESTABLISH COMMUNICATION WITH THE SYSTEM CONTROLLER CARD

- Once GUI application is launched you may establish a communication connection between GUI and P2K Hardware System Controller Card as follows:
  - Click on “Connect to Controller Symbol,” see illustration below, to bring up a box with all P2K controllers listed by IP address.
  - In most applications there will only be one controller listed.
  - Select P2K controlling router system from list, by IP address, and click to activate connection between GUI and controller.
  - Once activated, and communication is established, IP address of P2K appears in box to right of connection symbols and box is highlighted green to indicate connection is functional.
  - In order to disconnect GUI from P2K, click on “Disconnect from Controller Symbol.”
- Display box returns to a non-highlighted background and message “No Connection” is displayed.



### PERC2000 SYSTEM CONTROLLER CONFIGURATION FILES

- Carefully plan your system or particular application before building a configuration file.
- Once a file is generated, use the “**Download to Controller**” command in the File menu to download the file to the system controller hardware.
- Use the “**Upload from Controller**” command (File menu) to upload the configuration file currently loaded into controller memory.

For further information, refer to Chapter 8 in the PERC2000 User Guide

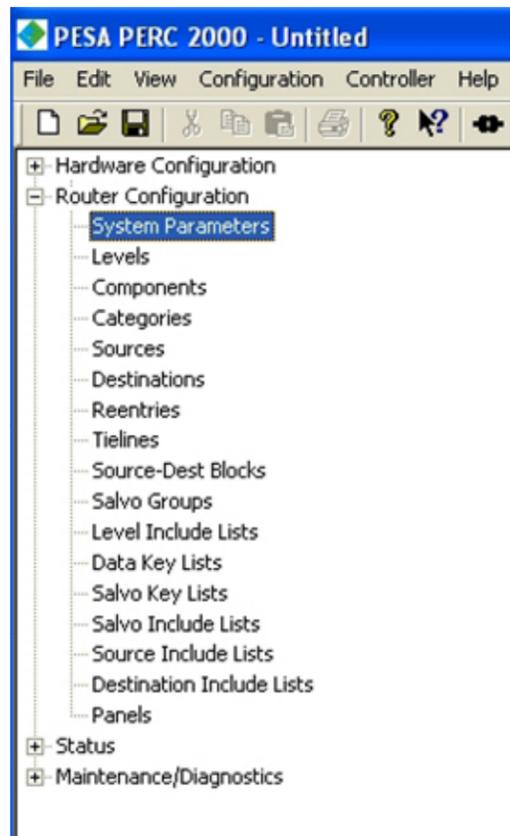
## Step 6 PERC2000 OPERATING SOFTWARE (CONT.)

### PERC2000 SYSTEM CONTROLLER CONFIGURATION FILES (CONT.)

- Each configuration file will be different to satisfy a specific system requirement.
- The following are some basic steps that are common to building each router configuration file:
  1. Assign System Operating Parameters to configure serial port and Ethernet network properties.
  2. Set up Levels and Components for the application.
  3. Define and assign Sources and Destinations for each level that correspond to external equipment connected to the router.
  4. Define special application functions such as Reentries or Tie-Lines, Source-to-Destination Blocks and Salvo Groups.
  5. Define and assign lists of Levels, Salvos, Sources and Destinations available to various control panels.
  6. Configure system Remote Control Panels and define specific application functions to configurable control panel keys.

### ROUTER CONFIGURATION COMMANDS

- Commands and screens contained under **Router Configuration** parent header in Command Tree Window allow you to create a router configuration that can be saved or downloaded to PERC2000 Controller Card.
- Illustration below identifies command headers contained under Router Configuration parent.



For further information, refer to Chapter 8 in the PERC2000 User Guide

## Step 6 PERC2000 OPERATING SOFTWARE (CONT.)

### SYSTEM PARAMETERS

- System Parameters is the top-level default screen of the Configuration Command Tree.
- From the System Parameters Screen, you configure serial ports and other operational parameters of controller configuration.

### LEVELS

- A level is a group of related components that are switched together by controller.
- Levels are lowest element that you can manipulate in the control system.
- Maximum number of levels in a configuration is 16.
- From the Levels configuration screen you can assign and enter operational parameters for the various system switching levels.

### COMPONENTS

- A component is the most basic signal element that can be switched by a system controller.
- Components map level inputs/outputs of actual physical matrix and are collected under a level name that can be controlled by users.
- For example, in RGB video signals of "Red", "Green", and "Blue" may be components; in stereo audio, "Left" and "Right" audio signals may be components.
- Maximum number of components in a configuration is 64.
- From the Components configuration screen you can assign and enter operational parameters for the various system components.

### CATEGORIES

- Categories are alphanumeric strings (up to 8 characters) used as labels when indexing sources and destinations from a remote control panel.
- Any combination of letters and numbers may be used as a category label.
- Categories are entered from Categories Configuration Screen.
- Up to 1024 categories are allowed in a configuration.

### SOURCES

- Sources configuration screen allows you to define all sources in router configuration.
- Source entries essentially map each physical source (input) to router to its logical input in level and panel designator nomenclature.

### DESTINATIONS

- Destinations configuration screen allows you to define all destinations in router configuration.
- Source entries essentially map each physical destination (output) from the router to its logical output in level and panel designator nomenclature.

### REENTRIES

- Reentries allow routing a single source to multiple destinations with a single switch.
- Maximum number of reentries is 256.
- Reentry functions are assigned through the Reentry Configuration Screen.

### TIELINES

- Tie-line is a physical connection between two switching levels – one level being the signal output, or tie-line source; and the other being a signal input, or tie-line destination.
- Tie-Lines are assigned through the Tie-Line configuration screen.

### SOURCE-DESTINATION BLOCKS

- The Source-Dest Block Configuration Screen allows you to selectively block any source from being switched to a designated destination.
- Selecting the Source-Dest Blocks parent entry in Command Screen Window brings up a clean copy of working screen.

### SALVO GROUPS

- A salvo is a group of predefined switches made simultaneously with a single "take" command.
- Salvos groups are defined on the Salvo Groups configuration screen.

## Step 6 PERC2000 OPERATING SOFTWARE (CONT.)

### LEVEL INCLUDE LISTS

- The Level Include Lists screen allows you to selectively build a named list of switching levels which, when assigned to a specific remote control panel, designates levels that panel is authorized to control.
- Multiple panels may share a Level Include List.
- Selecting the Level Include Lists parent entry in the Command Screen Window brings up a clean copy of working screen.

### DATA KEY LISTS

- The Data Key Lists screen allows you to generate one or more named lists which assign specific functions to each configurable key on a remote control panel.
- Multiple panels may share a data key list as long as they are the same type panel.
- Selecting the Data Key Lists parent entry in Command Screen Window brings up a clean copy of the configuration screen.

### SALVO KEY LISTS

- The Salvo Key Lists screen allows you to generate one or more named lists which assign salvo groups to each configurable key on a remote control panel.
- Multiple panels may share a salvo key list as long as they are the same type panel.
- Selecting the Salvo Key Lists parent entry in Command Screen Window brings up a clean copy of the configuration screen.

### SALVO INCLUDE LISTS

- The Salvo Include Lists screen allows you to selectively build a named list of salvo groups which, when assigned to a specific remote control panel, designates the salvo groups that panel is authorized to control.
- Multiple panels may share a salvo include list.
- Selecting the Salvo Include Lists parent entry in Command Screen Window brings up a clean copy of the configuration screen.

### SOURCE INCLUDE LISTS

- The Source Include Lists screen allows you to selectively build a named list of sources which, when assigned to a specific remote control panel, designates the sources that panel is authorized to control.
- Multiple panels may share a source include list.
- Selecting the Source Include Lists parent entry in Command Screen Window brings up a clean copy of the configuration screen.

### DESTINATION INCLUDE LISTS

- The Destination Include Lists screen allows you to selectively build a named list of destinations which, when assigned to a specific remote control panel, designates the destinations that panel is authorized to control.
- Multiple panels may share a destination include list.
- Selecting the Destination Include Lists parent entry in Command Screen Window brings up a clean copy of the configuration screen.

### PANELS

- The Panels configuration screen allows you to add remote control panels to the system, program the functionality of each panel, and review the configuration of existing panels.

### STATUS COMMANDS

- Commands and screens contained in the Status tree header allow real-time status monitoring of the router system.
- Certain of these screens also allow you to perform on the fly switches directly from the status screen.
- Since all Status functions are polled in real-time, the software application must have an active (on-line) connection to P2K Controller.

For further information, refer to Chapter 8 in the PERC2000 User Guide