Quick Start Guide

Cougar3 VIDEO/AUDIO ROUTER SYSTEM

PESA

Step 1 INSPECT COUGAR3 COMPONENTS

- Your Cougar3 router is shipped as a complete system with all components necessary for full system hook-up.
- Carefully unpack shipping container and verify that all components identified below are included with your shipment.
- Visually inspect each component 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*

VIDEO ROUTER FRAME WITH LOCAL CONTROL PANEL AND SYSTEM CONTROLLER INSTALLED

AUDIO ROUTER FRAME
(NOT INCLUDED WITH VIDEO ONLY ROUTER PACKAGE)

ETHERNET SWITCH

System Hook-Up Cables	Quick Start Guide	Power Cord for Each Router Frame (Usually Pre-Installed)	CATTRAX GUI INSTALLATION CD	USER GUIDE

*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*

Step 2 GET ACQUAINTED

- Cougar3 is available as a video only router, pre-configured as a single level, 32x32 matrix with no audio router frame supplied; or as a video/audio router, pre-configured as a 3-level, 32x32 switch fabric for dual channel audio with separate routing frames for video and audio sources.
- A local control panel on video frame allows full control of entire router.
- Set-up the router on a closed loop Ethernet communication interface between system components that is isolated from the facility network; or fully integrate all router components into the network for greater control capability and installation versatility.

Step 2 GET ACQUAINTED (CONT.)

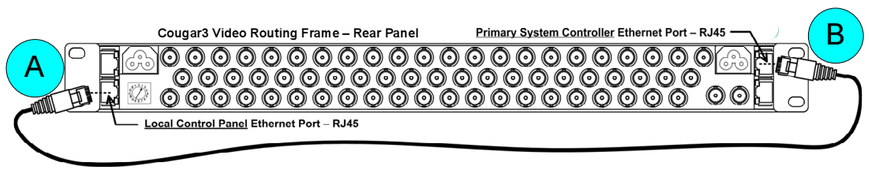
- PESAs Cougar3 system is built around a master system controller device, internal to the video router frame, which coordinates all operations of the video and audio router frames and both local and remote control panels.
- A second system controller may be added to video frame for full system control and frame power redundancy.
- A second frame controller may be added to audio frame for frame control and power redundancy.
- All Cougar3 packages come with a pre-loaded controller configuration file for easy hook-up and operation straight out of the box.
- System set-up, configuration and monitoring is done through PESA's Cattrax, a graphical user interface application installed on a standard Windows® based host computer.

Step 3 QUICK SYSTEM HOOK-UP

- Regardless of which router package you are installing, a Cougar3 system consists of a video router frame with system controller module and a local control panel pre-installed.
- If your system also includes audio routing capability, the audio frame contains a pre-installed frame controller module that communicates with the system controller module in the video router frame
- All communication between system controller, local control panel and audio frame controller is conducted over an Ethernet interface.
- Depending on your requirements, Cougar3 can be used right out of the box with no initial programming or operator input required; all the way up to installation as a multi-switching level system with full integration into the facility Ethernet network.
- This guide covers quick set-up and operation of a basic Cougar3 system.
- Additional installation information such as rack mounting considerations; loading and using Cattrax software control application; purpose, modification and creation of controller configuration files; digital audio processing capabilities; and more can be found in the Cougar3 User Guide.

Video Only Cougar3 Router – Basic Hook-Up

- If you will be using the video only Cougar3 router in a stand-alone configuration, using only the local control panel and you will not be using Cattrax to modify the controller configuration file or monitor the system, it is not necessary to install a host PC to the closed loop Ethernet interface.
- For this basic hook-up it is only necessary to form a closed Ethernet communication loop between the system controller and the local control panel through the rear panel connectors.
- This set-up uses the factory configured IP addresses for both the system controller and the local control panel.
- Follow the illustration and set-up the router as follows:
  - Using a Cat5 Ethernet cable supplied with router, install one end to Local Control Panel Ethernet Port, **A**, on rear panel of video routing frame.
  - Install remaining end of cable to Primary System Controller Ethernet Port, **B**.

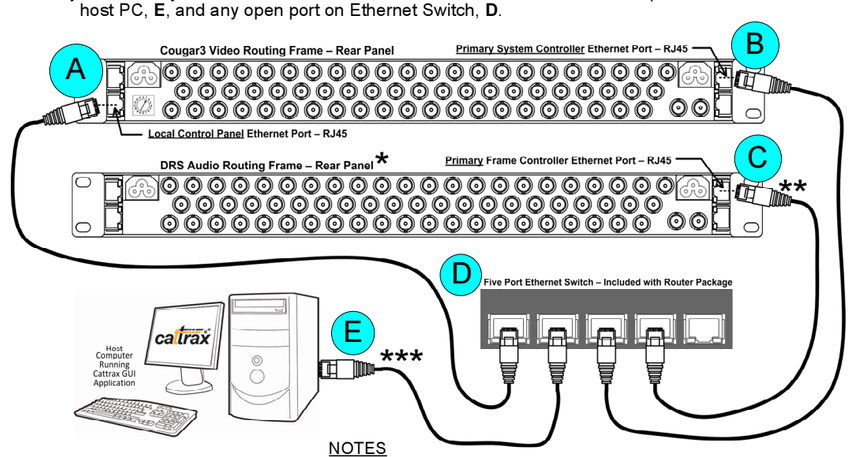


- Proceed to Step 4 of this guide to continue set-up.

Step 3 QUICK SYSTEM HOOK-UP (CONT.)

Cougar3 Router Configurations with Ethernet Switch

- Depending on application, Cougar3 installations may include a dedicated host PC, or add a DRS audio router frame to configure a video/audio router system.
- Installations that include a host PC allow you to use Cattrax installed on the host to modify the controller configuration file, and monitor or control the router system in a closed loop Ethernet arrangement, without adding Cougar3 components to the house network.
- Systems beyond the basic video-only router hook-up shown previously, and that you do not want to include on the facility network, require use of the supplied Ethernet switch device and Cat5 Ethernet cables.
- A closed Ethernet communication loop is formed through the Ethernet switch between the system controller; local control panel; host PC, if used; and the audio frame controller device, if present.
- In order for the host PC to communicate with the router components, its IP address and other network parameters must be set to a value that allows it to "find" the router components with the following **factory configured IP address values:**
  - Primary System Controller – 192.168.1.203 (Video Frame)
  - Primary Frame Controller – 192.168.1.201 (Audio Frame)
  - Local Control Panel – 192.168.1.205
- You may set the host PC address to any unused IP address between 192.168.1.1 and 192.168.1.254, Subnet Mask of 255.255.255.0 and Gateway value of 0.0.0.0. Do not set the host PC to any of the factory assigned address values shown in the previous step.
- Once the router system and host PC are communicating, you may use Cattrax to set the network parameters of the router components, such as IP address, subnet mask and gateway addresses, to any value best suited to your installation.
- Follow the illustration below, and hook-up router components included in your system as follows:
  - Install a Cat5 Ethernet cable supplied with router package between the Local Control Panel Ethernet Port, **A**, on rear panel of video routing frame and any open port on Ethernet Switch, **D**.
  - Install a second Cat5 cable between the Primary System Controller Ethernet Port, **B**, on video frame and any open port on Ethernet Switch, **D**.
  - If installation is a video/audio router and includes a DRS audio frame, use a Cat5 cable to complete connection between the Primary Frame Controller Ethernet Port, **C**, on audio frame and any open port on Ethernet Switch, **D**.
  - If your router system includes a host PC, install a Cat5 cable between the open Ethernet Port on host PC, **E**, and any open port on Ethernet Switch, **D**.



NOTES
* DRS Frame included with video/audio systems only
** This cable used with video/audio systems only
*** This cable used only with system including a host PC

- Proceed to Step 4 of this guide to continue set-up.

For further information, refer to Cougar3 Router User Guide

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Quick Start Guide

Cougar 3 VIDEO/AUDIO ROUTER SYSTEM

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Step 3 QUICK SYSTEM HOOK-UP (CONT.)

Integrate Cougar3 Router with House Network

- Adding Cougar3 components to your facility network greatly increases system flexibility and user access; and also allows you to locate router frames and control panels for maximum convenience and shortest video or audio cable runs.
- Ethernet communication between the system controller, audio frame controller, local control panel and the host PC is conducted over the facility network.
- In order for the Cougar3 components to communicate on the network, the IP address and other network parameters of each router component must be set to a value that is compatible with the network; usually to values assigned by the facility IT administrator.
- Cougar3 router components are preset to the following **factory configured Static IP address values**:

  -Primary System Controller – 192.168.1.203 (Video Frame)
  -Primary Frame Controller – 192.168.1.201 (Audio Frame)
  -Local Control Panel – 192.168.1.205

- Cougar3 does not support DCHP protocol. If the factory assigned network parameters are not compatible with your network application, the static values may be changed through operator menus available through Cattrax. Be sure that you change the network parameters of the router components BEFORE adding the components to the network to avoid communications conflicts. Refer to Cougar3 User Guide for further information.
- The illustration and procedure sequence below installs Cougar3 to the facility network using an Ethernet switch to minimize the number of direct network connections.
- Host PC may be any compatible computer installed on the facility network.
- Using the switch is not a requirement for installation, and it is permissible to directly connect each router component directly to a facility network drop.

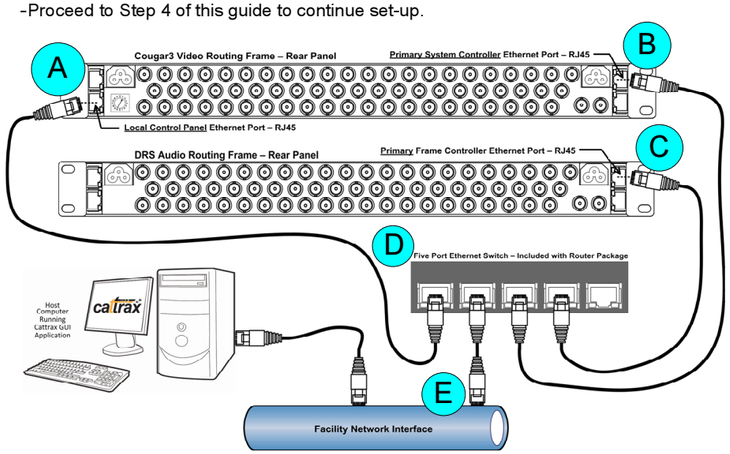
  -Install a supplied Cat5 Ethernet cable between the Local Control Panel Ethernet Port, **A**, on rear panel of video routing frame and any open port on Ethernet Switch, **D**, or directly to an available facility network drop.

  -Install a second Cat5 cable between the Primary System Controller Ethernet Port, **B**, on rear panel of video routing frame and any open port on Ethernet Switch, **D**, or directly to an available facility network drop.

  -Install a third Cat5 cable between the Primary Frame Controller Ethernet Port, **C**, on rear panel of audio routing frame and any open port on Ethernet Switch, **D**, or directly to an available facility network drop.

  -If the Ethernet switch is used, Install a fourth Cat5 cable between any open port on Ethernet Switch, **D**, and an available facility network drop, **E**, to interface the router components with the house network.

  -Proceed to Step 4 of this guide to continue set-up.



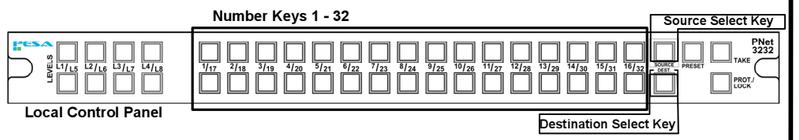
Step 4 SYSTEM POWER-UP

- Connect power cords from video router, audio router and Ethernet switch power supply to a power strip or other convenient source of AC power.
- There are no switches on any of the Cougar3 components and each device is powered-up simply by connecting the main power cord to a source of primary power.
- Apply power to all frames in the system.
- Wait a few seconds for each controller to perform processor boot-up, and observe the local control panel on the front of the video router frame.
- When panel lights are steady, router is ready to use.

Step 5 BASIC ROUTER OPERATION

Basic Control Panel Operation

- With the factory pre-programmed controller configuration file, you may immediately begin using the router through the local control panel with no initial user programming or configuration required.
- Very basic source selection and routing operations are introduced below.
- These procedural steps allow you to verify successful hook-up of the router and to make simple switches on all switching levels of a selected input source to a selected output destination, in audio-follow-video (AFV) mode.
- Use the control panel diagram below as a quick reference guide.



Select the desired output destination:
- Press the ***DESTINATION*** select key on the local control panel, the button will light.
- Press the number key (1 – 32) corresponding to the **destination output** signal you want to select, for example Output 1 would correspond to key 1; now both the DEST key and the selected number key should be lit.

Select the desired input source signal to route to the selected destination:
- Press the ***SOURCE*** button on the local control panel, the source button will light and the number key corresponding to the source *currently* routed to the destination you selected in the previous step will also light.
- Press the number key (1 – 32) of the **source signal** you want to route to the destination selected in the previous step, for example pressing the number 1 key selects video and audio signals attached to router input 1 as the sources for the destination; the button corresponding to the new selection will light and the switch will immediately occur.

- Your Cougar3 control panel is capable of many advanced operations in addition to basic AFV switching that are out of scope of this Quick Start Guide including configuration, control and monitoring functions available through Cattrax.
- Consult the Cougar3 User Guide for information on installing and using Cattrax to modify or create controller configuration files, advanced audio processing functions, and many other features of the router system.

Step 6 EQUIPMENT RACK INSTALLATION

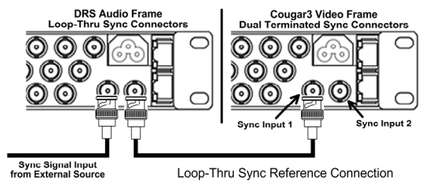
- Cougar3 signal routing frames are designed for installation in a standard 19-inch equipment rack.
- Front cover/local control panel must be detached to gain access to mounting brackets.
- You must install the supplied rack rail kit when mounting either router frame in a rack.
- Refer to Cougar3 User Guide for complete information on proper rack mounting of router compionents.

For further information, refer to Cougar3 Router User Guide

Step 7 SIGNAL CONNECTIONS

Synchronous & Asynchronous Switching

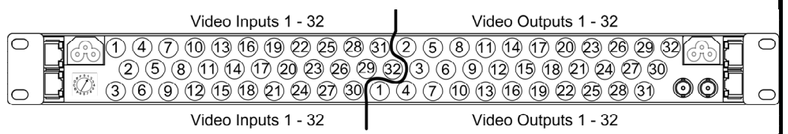
- Asynchronous switching occurs when the router is not synchronized with other video equipment in the facility.
- Your Cougar3 router functions in either mode, but is capable of synchronous, vertical-interval switching by applying a NTSC, PAL or Tri-Level sync source, 0.5V p-p to 2.0V p-p, to the sync reference input.
- To sync both video and audio signals, it is necessary to supply a sync reference to both router frames.



- Cougar3 makes this convenient by providing a pair of loop-thru sync connectors on the audio frame whereby you can easily daisy-chain the sync signal to both frames as shown in the diagram below.
- Sync connectors 1 and 2 on the video frame are terminating connections.
- Sync input 1 is the default sync reference signal for all router outputs.
- The sync hook-up method presented here is for a basic installation, consult the Cougar3 User Guide for other options and use of Sync Input 2 when using mixed signal formats.

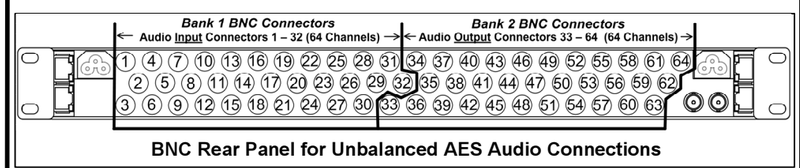
Video Signal Connections

- There are 64 BNC I/O connectors on the Cougar3 rear panel, 32 each for video input and output signals, as shown in the diagram below.
- If you are using the pre-installed configuration file, there is a one-to-one correlation between the input and output connector number and the source and destination signal number through the router.
- As an example, the signal connected to Input BNC 1 is selected as Source 1 through the router; and the signal routed to output channel Destination 3 is available at Output BNC 3.
- Use the diagram as a guide to connect video signals.



Audio Signal Connections

- Audio router frame is available with one of two rear panel layouts, depending on the type of audio signal being connected.
- An example diagram of each frame layout is shown below for reference only.
- Each rear panel type contains 64 connectors, divided into 2 banks of 32 connectors each for audio input channels and output channels as shown in the diagrams below.
- Refer to Cougar3 User Guide for connection tables and pin-out diagrams when installing an audio router frame.



BNC Rear Panel for Unbalanced AES Audio Connections

6-Pin Connector Rear Panel for Balanced AES and Analog Audio Connections

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