

Grizzly Pro Video

r-THREE

Integrated Remote Camera System

Operating Instructions

These instructions cover the **r-THREE** family of products which includes the **r-ONE**, the **r-THREE** and the **r-THREE-LS**. Before operating any of these systems, please read this manual and keep it for future reference.

Thank You & Welcome!

We at Grizzly Pro Video would like to say thanks for choosing our remote camera system. If you have any questions, check <http://www.grizzlypro.com> for contact information or call us toll free at 1-866-remcam1. We truly appreciate any and all feedback!

The **r-THREE** family of products includes the **r-ONE**, the **r-THREE** and the **r-THREE-LS**. Given the scalability of our product design, in most cases the **r-THREE** family of products can be described together. Where differences exist, a note will be given.

The **r-THREE** family of Integrated Remote Camera Systems has been designed for LANC™ cameras (including HD!). You will get the most benefit from this system if you are using such cameras. However, we do support Non-LANC Panasonic cameras, but only with a limited set of features. The following Operating Instructions have been written for LANC cameras; if you are using a Panasonic camera, see Panasonic Support on page 49 for the noted differences.

ENJOY!
Grizzly Pro Staff

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Introduction

With your **r-THREE** system, you will be able to easily setup and remotely control up to three cameras.

The key elements of the **r-THREE** system are:

From a single point (your chair) and a single controller (in your hands), you have the ability to

- dynamically switch to any camera and operate the camera remotely (e.g. start/stop record, zoom, focus, exposure, pan & tilt, etc).
- monitor the view for all camera.
- attach the composite video signal from two or all three cameras to a live switch or purchase the **LS** option.
- monitor the status of your cameras (e.g. record on/off, time codes, battery charge, etc).
- configure the system to your needs (e.g. adjust pan, tilt and zoom speed, configure joystick response, etc.)
- send camera menu commands to your LANC camera as if you were dialing the menus dial from the back of your camera. (e.g. exposure control)

In addition, only a very thin, flexible CAT5 cable from each pan/tilt head to one centralized interface box is needed for each remote camera. This cable powers the pan/tilt head and enables the remote control features for the associated pan/tilt head and camera as well as sending a video feed back to the operator. Except for the cameras, the power for the entire system comes from this one centralized point in the **r-THREE** system.

We recommend that you first read **r-THREE** Cabling, **r-THREE** Components and then **r-THREE** Basic Operations as you practice using the system.

Once you have become familiar running the **r-THREE** system with only the Basic Operations, then read over the features described in the Advanced Operations. Keep in mind that the system, as shipped, is fully configured to control up to three cameras remotely, so none of the features described in the Advanced Operations are required to successfully operate your **r-THREE** system.

Limitations

- ◆ Cameras cannot exceed 6 pounds, as heavier cameras will respond poorly and are not within the specification of the Pan/Tilt Head.
- ◆ The r3a-ptzcable (CAT5) cables can extend up to 600' from each Pan/Tilt Head to the **r-THREE** Interface Box.
- ◆ A 12V power supply is required to run the system. If battery power is used, we strongly recommend using a 12V lead acid battery as the Low Battery indicator will be in-accurate if other types of batteries are used.
- ◆ Not all cameras support the LANC protocol. Not all LANC cameras support all LANC protocols. All LANC cameras support zoom, focus, power on/off, record on/off and time codes. Other features like auto focus control, and some CAM MODE functions (see Table 4) are dependent upon what portions of the LANC protocol the manufacturer of your camera has chosen to implement.
- ◆ Panasonic cameras do not support the rich set of LANC commands that can be found on many others camera. Therefore, you will find that the CAM MODE features are not supported for Panasonic cameras. In a nutshell, if you have a Panasonic camera, you will only be able to control Pan, Tilt, Zoom, Record On and Record Off remotely. See Panasonic Support on page 40.

System Components



r-ONE System:

- 1- r-THREE Control Head
- 2- r-THREE Pan/Tilt Head
- 3- r-ONE Power Supply
- 4- r3a-ptzcam-rca
- 5- r3a-ptzcable-50



r-THREE(-LS) System:

- 1- r-THREE Control Head
- 2- r-THREE Pan/Tilt Head
- 3- r-THREE Power Supply
- 4- r3a-ptzcam-rca
- 5- r3a-ptzcable-100
- 6- r-THREE Interface Box
- 7- r3a-intcable

Options and Accessories

Pan Tilt Head

For additional remote cameras, the following is needed:

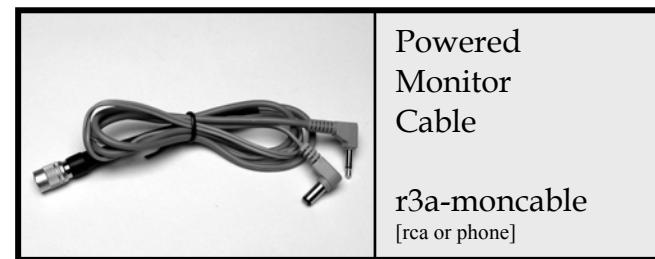


Up to three **r-TREES** Pan Tilt Heads are supported.

Optional Powered Monitor Cable (for **r-TREES** and **r-TREES-LS** only)

If using a monitor with a power specification of 12V at no more than 0.75A, we highly recommend our powered monitor cable. The **r-TREES** Interface Box can provide the needed power for up to two monitors, if such a cable is used.

We recommend the Marshall 5.6 Pro Monitor, though other monitors that draw 12V @ no more than 0.75A and take a composite input should work.



r-ONE Cabling

1. Connect the r3a-ptzcable to the **r-THREE** Control Head. This connector is labeled **Interface**.



2. Connecting the **r-THREE** Pan Tilt Head:

- a. Attach the **r-THREE** Pan Tilt Head to a light stand, tripod or any stable surface.
- b. Attach your camera to the **r-THREE** Pan Tilt Head.
- c. Connect the other end of the r3a-ptzcable to an **r-THREE** Pan Tilt Head. This connector is labeled **Interface Box**.
- d. Connect the camera to its power source.
- e. Set the **LANC PANASONIC** switch on **r-THREE** Pan Tilt to
 - **LANC** for cameras that support the **LANC** protocol (e.g. Sony, Canon).
 - **PANASONIC** for Panasonic cameras



3. Connect the r3a-ptzcam-rca cable to the back of the **r-THREE** Pan Tilt Head. This connector is labeled **Camera**.



4. Connect the other two ends of the r3a-ptzcam-rca to your camera.

a. The small phone plug should connect to the **LANC** connector on your camera (or to the **remote** connector for Panasonic cameras).

b. The remaining plug should connect to the Video plug on your camera. On most cameras this connector is yellow.



5. Connecting the monitor:

a. Connect the monitor cable that came with your monitor to the **Preview** on the **r-THREE** Control Head.

b. Connect the other end of this cable to your monitor.

c. Connect the power cable that came with your monitor to the monitor and power up your monitor.



6. Connect the power supply:

- a. Connect the two pieces of the power supply together.
- b. Connect the end of the power supply to the **24vdc** on the back of the **r-THREE** Control Head.
- c. Then, plug the power supply into the wall and you are ready to start shooting



7. The **r-THREE** Control Head will look like:

See the Basic Operations section once you are ready to start shooting.

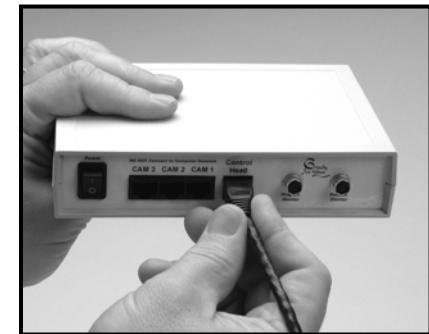


r-THREE Cabling

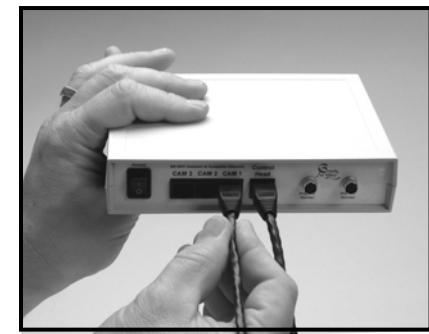
1. Connect the r3a-intcable to the r-THREE Control Head. This connector is labeled **Interface**.



2. Connect the other end of the r3a-intcable to the r-THREE Interface Box. This connector is labeled **Control Head**.



3. Connect the r3a-ptzcable to one of the three **CAM** connections on the front of the r-THREE Interface Box.



4. Connecting the **r-THREE** Pan Tilt Head:

- a. Attach the **r-THREE** Pan Tilt Head to a light stand, tripod or any stable surface.
- b. Attach your camera to the **r-THREE** Pan Tilt Head.
- c. Connect the other end of the r3a-ptzcable to an **r-THREE** Pan Tilt Head. This connector is labeled **Interface Box**.
- d. Connect the camera to its power source.
- e. Set the **LANC PANASONIC** switch on **r-THREE** Pan Tilt to
 - **LANC** for cameras that support the **LANC** protocol (e.g. Sony, Canon).
 - **PANASONIC** for Panasonic cameras.



5. Connect the r3a-ptzcam-rca cable to the back of the **r-THREE** Pan Tilt Head. This connector is labeled **Camera**.

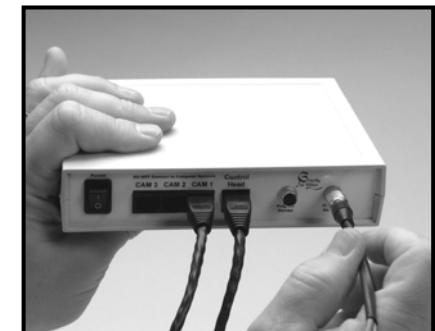


6. Connect the other two ends of the r3a-ptzcam-rca to your camera.
- The small phone plug should connect to the **LANC** connector on your camera (or to the **remote** connector for Panasonic cameras).
 - The remaining plug should connect to the Video plug on your camera. On most cameras this connector is yellow.



7. Repeat steps 4-6 for any additional **r-THREE** Pan Tilt Heads that are to be controlled by the **r-THREE** system.

8. Connect the r3a-moncable to the **Preview Monitor** on front of the **r-THREE** Interface Box or attach your monitor to the Preview BNC on the back of the interface box.

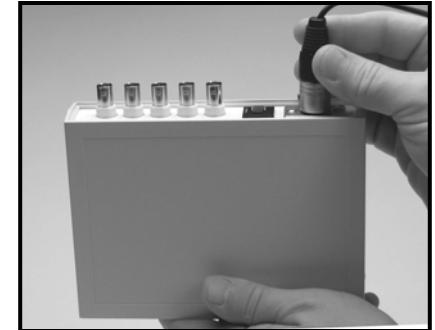


9. Connect the other end of the r3a-moncable to the monitor in two locations - **DC 12V** and **Video In**.

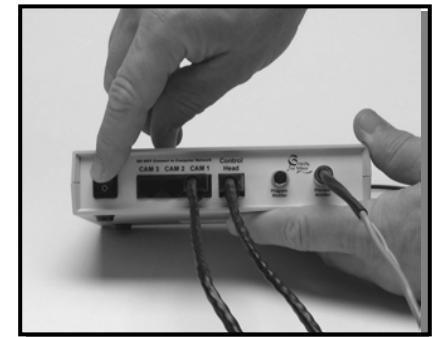
For a second monitor, repeat steps 8 & 9 but plug the r3a-moncable into **Program Monitor** on the **r-THREE** Interface Box.



10. Connect the two pieces of the power supply together. Then connect the end of the power supply to the XLR **12VDC @ 3.5A** on the back of the **r-THREE** Interface Box. Then, plug the power supply into the wall (or power source).



11. Power on the **r-THREE** Interface Box using the **1/0 Power** switch. Powering the system on will also power on the Preview Monitor (and Program Monitor if it is also connected), the **r-THREE** Control Head and the **r-THREE** Pan Tilt Head(s).



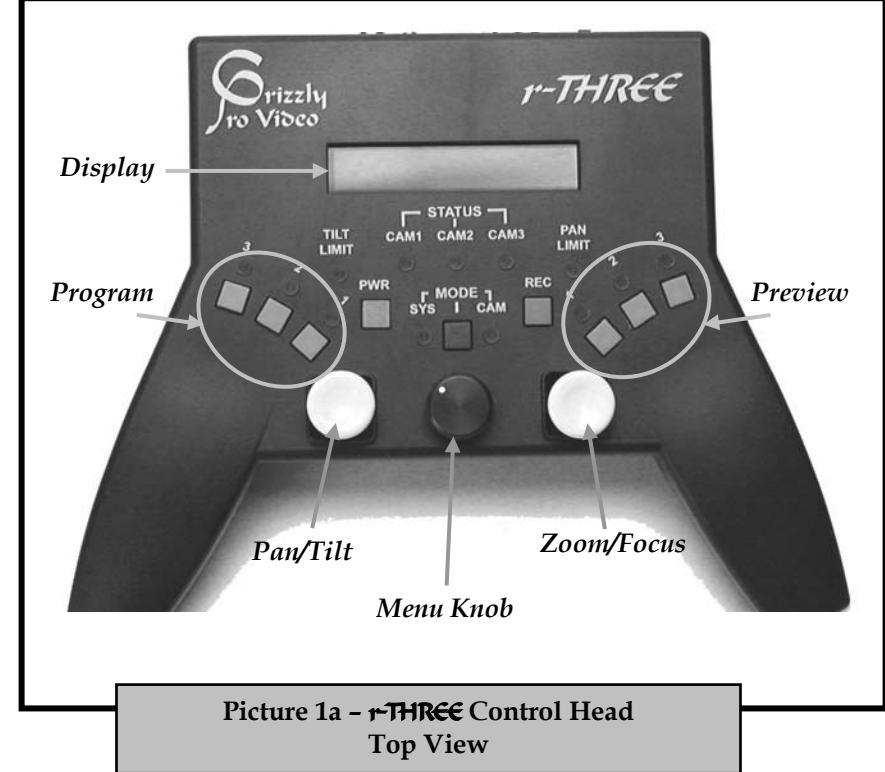
12. If only one pan/tilt head is attached, the **r-THREE** Control Head will look like:

See the Basic Operations section once you are ready to start shooting.



r-THREE Components

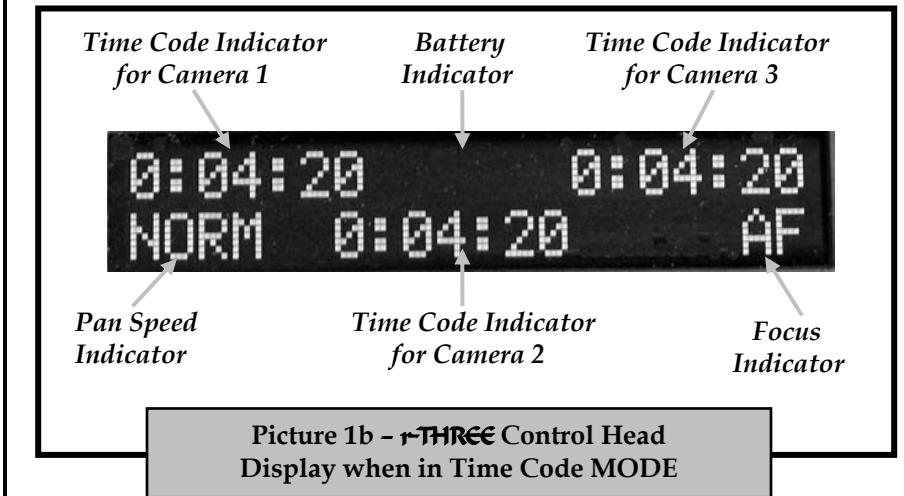
1. r-THREE Control Head



Display

The Display is the area on the r-THREE Control Head that always starts up showing the following four indicators

- time codes for each camera
- pan speed
- focus (manual or auto)
- battery charge indicator



Time Code Indicators :

The three values x:xx:xx displayed on the top left, bottom center and top right which are the time codes for camera 1, camera 2 and camera 3, respectively.

Battery Indicator :

- ❖ **VLOW** on the top center of the Display – your power for the r-THREE system is below 11.5V. This is an early warning and should be monitored for the potential of VCRT.
- ❖ **VCRT** (critical) on the top center of the Display – your power for the r-THREE system is below 10.8V and you should shutdown the system immediately or risk damaging your battery.

The VLOW and VCRT indicators are set to monitor lead-acid batteries. Other battery types are not recommended and may not provide any early warning.

Pan Speed Indicator :

The display will indicate Fast, Norm or Slow in the lower left hand corner. Pressing the Pan/Tilt joystick (left) will cycle the speeds from Norm to Fast to Slow.

Focus Indicator :

The value displayed on the lower right for Focus can be one of two values.

- **AF** indicates that the camera is in auto focus.
- Blank indicates that the camera is in manual focus.

If the camera is in manual focus and you are actively using the Zoom/Focus Joystick to focus your image, the focus indicator will show **F-N** or **F-F** to indicate that the camera is focusing near or focusing far.

Note: Some LANC cameras were not designed to communicate the focus indicator information. Thus, the **AF** indicator may not appear on the Display even when you are set to auto focus.

Preview Buttons

Preview buttons are, by default, the set of three buttons on the right which are labeled 1, 2, 3. **This selects the camera which can now be controlled remotely via the r-THREE Control Head.** You may switch to any camera at any time. In addition, this defines the camera which is currently feeding the composite video signal to the Preview output of the r-THREE Interface Box.

Program Buttons

Program buttons are, by default, the set of three buttons on the left which are labeled 1, 2, 3. This defines the camera which is currently feeding the composite video signal to the Program output of the **r-THREE** Interface Box.

With the **r-THREE-LS** only, when a switch is made from one Program camera to another:

- A synchronized cut will occur when the Program button for the camera that is being switched to is pressed and then released quickly (< 0.5s).
- A synchronized dissolve will occur when the Program button for the camera that is being switched to is pressed and held for at least half a second. The length of this dissolve is configurable in the Video Configuration section of the Sys Menu.

Note: the **r-THREE** system only allows for selecting Preview or Program cameras that are currently connected to the system. If you select a Preview or Program button for a camera and the light does not come on, check to ensure that the r3a-ptzcable cable from the **r-THREE** Pan/Tilt Head to the **r-THREE** Control Head is making a connection.

STATUS Lights (CAM1, CAM2, CAM3)

- ❖ No light - **r-THREE** Interface Box is powered off or the **r-THREE** Pan/Tilt head connected to this camera is not connected to the **r-THREE** Interface Box via the r3a-ptzcable.
- ❖ Solid red - **r-THREE** Pan/Tilt head is connected to the **r-THREE** Interface Box, but the camera is not powered on.

- ❖ Blinking green – camera is powered on but not recording.
- ❖ Solid green – camera is powered on and recording.
- ❖ Blinking red – record protect tab is set, or power is low, or less than 5 minutes of tape remains, or there is no tape in the camera.

TILT or PAN LIMIT Lights

- ❖ No light – you can continue to pan or tilt as you have not yet reached the limit of the Pan/Tilt head.
- ❖ Flashing amber – you have reached the pan or tilt limit of the Pan/Tilt head and thus you can go no further in that direction.

PWR Button

Power on/off the current Preview Camera by pressing PWR. This assumes that the selector switch on the physical camera has been previously set to CAMERA.

If you press and hold the PWR button for greater than 2 seconds, all cameras will power on simultaneously. But, when powering off, each camera must be powered off separately - as described in the above paragraph.

MODE Button

The MODE Button indicates if you are in SYS MODE, CAM MODE or neither (aka Time Code Mode). By pressing the MODE button you will cycle through these modes.

Press the MODE button :

1. once and you will be in SYS MODE and the SYS MODE Light will be on.

2. a second time and you will be in CAM MODE and the CAM MODE Light will be on.
3. a third time, both MODE lights will be off and you will be back to the initial mode - Time Code Mode.

By default the system starts up in Time Code Mode, which is evident by the time codes on the Display.

SYS and CAM MODE are needed for Advanced Operations. For Basic Operation, leave this on Time Code Mode.

REC Button

Start/stop recording on the current Preview Camera by pressing REC. This assumes that the PWR button has been previously pressed. Pressing REC will cause the CAM[1,2,3] STATUS Light to become solid green when the camera is recording and flashing green when the camera is not recording.

If you press and hold the REC button for greater than 2 seconds, all cameras will start recording nearly simultaneously. But when stopping the record, each camera must be stopped separately - as described in the above paragraph.

Menu Knob

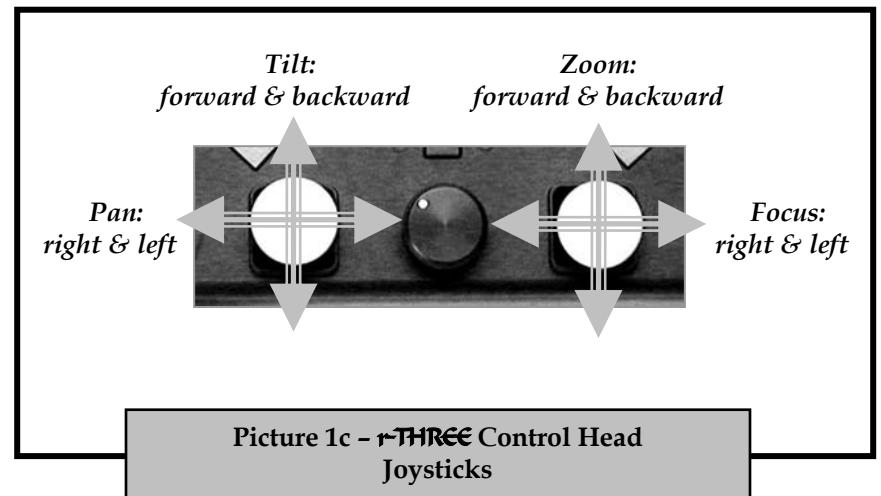
The Menu Knob sits just below the Mode Button. This knob acts as a dial (twist right and left) as well as a button (press).

This knob is used along with the selected MODE (CAM, SYS or Time Code) to do more advanced operations. For basic operation, you will not need to use this knob.

MODE Lights (SYS, CAM)

- ❖ No Light - Time Code MODE is on.
- ❖ SYS Solid green - SYS Mode is on.
- ❖ CAM Solid green - CAM Mode is on.

At most, only one Mode Light can be on at any given time.



Pan/Tilt Joystick

The joystick on the left provides Pan (right & left) as well as Tilt (forward & backward). By default, pushing the joystick forward will cause the camera to tilt down and pulling the joystick backward will cause the camera to tilt up. (If you prefer the joystick to tilt up when the joystick is pushed forward – see the System Configuration options in the SYS MODE section of the Advanced Operations chapter.) Pan and tilt axis movement can be done simultaneously and at independently variable speeds.

In addition, the Pan/Tilt Joystick also acts as a button. Each time it is pressed (you'll hear a click), the Pan Speed Indicator on in the Display will switch the maximum Pan speed from **NORM** (default) to **FAST** to **SLOW**. Pans speed will run from a 0 to this maximum speed such that the more you push the joystick, the faster the pan movement will go.

The pan/tilt joystick defaults are configurable – see the Advanced Operations (**Configure PanTilt** and **System Configuration** in Table 1).

Zoom/Focus Joystick

The joystick on the right provides Focus (right & left) as well as Zoom (forward & backward). If you are moving the joystick up or down to Zoom, this will have priority over any simultaneous left or right movement to Focus. Thus, Zoom has priority over Focus to ensure that you do not inadvertently lose your focus when zooming in.

In addition, the Zoom/Focus Joystick also acts as a button. When pressed (you'll hear a click), the focus indicator on in the Display will change to indicate if the camera is in manual focus or auto focus. The Focus Indicator on the Display will show

- **FN** or **FF** when the camera is in manual focus and you are actively moving the Focus joystick right or left.
- **AF** when the camera is in auto focus. Some cameras may not be able to communicate the state of the auto focus to the **r-THREE** system and yet the camera may well be in auto focus mode. So, if the **AF** indicator does not come on, you will probably

want to make a note to yourself regarding the behavior of this camera.

The zoom joystick is configurable – see the Advanced Operations (**Zoom Speed** and **Configure Zoom** in Table 1).



Picture 1d - **r-THREE** Control Head
Side View

Preview (used for r-ONE only)

The composite video signal from the one remote camera. Generally you will want to connect a monitor to this feed to allow for remote viewing of your camera. A monitor cable with a BNC connector will be needed.

Interface

For the **r-ONE**:

A powered interface which connects to the **r-THREE** Pan/Tilt Head with the r3a-ptzcable.

For the **r-THREE** and **r-THREE-LS**:

A powered interface which connects to the **r-THREE** Interface Box with the r3a-intcable.

24vdc (used for r-ON&E only)

The power which uses a locking 3 pin cable. Power from this will then power the r-ON&E system:

- the Pan/Tilt Heads
- the Control Head

Power for the individual cameras as well as the monitor must be handled separately.

2. r-THREE Interface Box



Picture 2a - r-THREE Interface Box
Front View

CAM3 CAM2 CAM1

Powered connection between the r-THREE Interface Box and each of the r-THREE Pan/Tilt Heads. This defines which camera will be CAM1, CAM2, CAM3 for the entire system. Uses standard CAT5 cable.

WARNING: DO NOT PLUG THESE CONNECTORS INTO A COMPUTER NETWORK AS IT COULD DAMAGE YOUR COMPUTER NETWORK.

Control Head

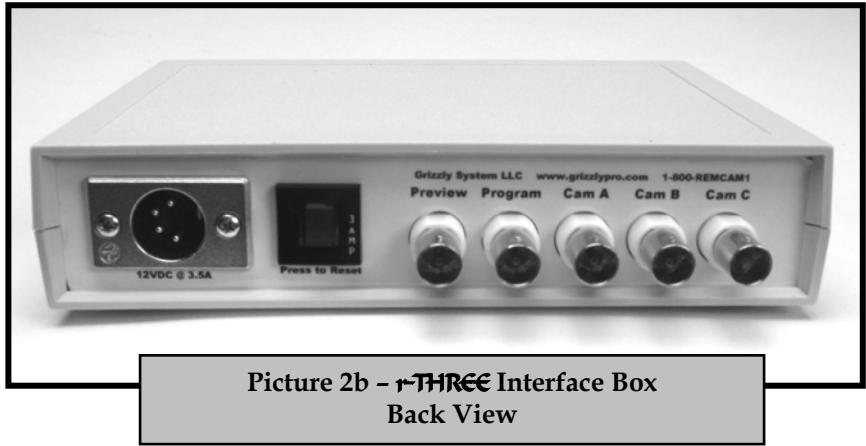
A powered interface which connects to the r-THREE Control Head.

Preview Monitor

A powered composite video signal from the current Preview camera. Generally you will want to connect a monitor to this feed to allow for remote viewing of the Preview camera.

Program Monitor

A powered composite video signal from the current Program camera. You may want to connect a second monitor to this feed which allows you to remotely view up to two cameras at one time, assuming the Preview Monitor is one of the two.



Picture 2b - ~~r-THREE~~ Interface Box
Back View

Preview

The composite video signal from the current Preview camera.

Program

The composite video signal from the current Program camera.

Cam A Cam B Cam C

The un-switched composite video signal coming from each of the cameras that have been plugged into CAM1, CAM2, CAM3, respectively, on the opposite side of this Interface Box. (A Live Switcher may use these outputs.) These outputs may also be configured as Preview or Program outputs.

3 AMP

Circuit breaker.

12VDC @ 3.5A

The power which uses a standard 4 pin XLR cable.
Power from this will then power the whole ~~1-THREE~~ system:

- all the Pan/Tilt Heads
- the Control Head
- the Interface box
- the Preview and Program Monitors that use the Powered Monitor Cable.

Power for the individual cameras must be handled separately.

3. r-THREE Pan/Tilt Head



**Picture 3 - r-THREE Pan/Tilt Head
Back View**

CAMERA

Connects the camera to the Pan/Tilt Head via the r3a-ptzcam-rca cable.

LANC PANASONIC Switch

Selects the type of camera that the Pan/Tilt Head will be driving. Be sure to set this appropriately.

If this is incorrectly set to LANC when a Panasonic camera is attached, CAM MODE will not be available and you will not be able to control the camera.

Interface Box

Connects the Pan/Tilt Head to the ~~r-THREE~~ Interface Box at [CAM1, CAM2 or CAM3]. This defines which camera will be CAM1, CAM2, CAM3 for the entire system.

**WARNING: DO NOT PLUG THESE CONNECTORS
INTO A COMPUTER NETWORK AS IT COULD
DAMAGE YOUR COMPUTER NETWORK.**

Basic Operations

The **r-THREE** Control Head in the most basic mode, offers the ability to remotely power on, power off, start record, stop record, pan, tilt, zoom, and focus a given camera.

We suggest that you first get comfortable with the basic operations. If you need more advanced features, such as camera mode control (exposure, photo capture, etc), configurable tilt direction, zoom configuration, and so on, please refer to the Advanced Operations section.

What follows are quick step-by-step examples for setting up and running a single camera remote system and then a three camera remote system. If at any time you encounter a problem, please refer to the Troubleshooting chapter for what you need to check. If you are unable to resolve your issue, check <http://www.grizzlypro.com> for contact information or call us toll free at 1-866-remcam1.

r-ONE Example

Running a One Remote Camera System:

1. Mount and setup your camera as you normally would for recording.
2. Setup cabling & power as described in the **r-ONE** Cabling section.
3. You should see a static time code on the **r-THREE** Control Head Display for your remote camera.
4. If the CAM2 STATUS Light is not blinking green, then press the Red PWR Button to power on your remote camera.
 - ❖ The CAM2 STATUS Light should now be blinking green.
 - ❖ The Preview Monitor connected to the **r-THREE** Control Head should now display the video signal for your remote camera.
5. Next, press the green REC Button to start recording on your remote camera.
 - ❖ The CAM2 STATUS Light should now be solid green.
 - ❖ The time codes for your remote camera should start to run on the **r-THREE** Control Head Display.

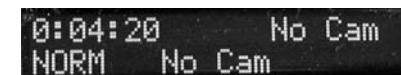


6. Now, you can use the right joystick to Zoom in/out and Focus and the left joystick to Pan/Tilt your remote camera.

r-THREE Examples

Running a One Remote Camera System:

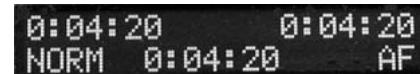
1. Mount and setup your camera as you normally would for recording.
2. Setup cabling & power as described in the **r-THREE** Cabling section. [This example assumes your r3a-ptzcable is connected to CAM1 on the **r-THREE** Interface Box.]
3. You should see a static time code on the **r-THREE** Control Head Display for your remote camera.
4. If the CAM1 STATUS Light is not blinking green, then press the Red PWR Button to power on your remote camera.
 - ❖ The CAM1 STATUS Light should now be blinking green.
 - ❖ The Preview Monitor connected to the **r-THREE** Interface Box should now display the video signal for your remote camera.
5. Next, press the green REC Button to start recording on your remote camera.
 - ❖ The CAM1 STATUS Light should now be solid green.
 - ❖ The time codes for your remote camera should start to run on the **r-THREE** Control Head Display.



6. Now, you can use the right joystick to Zoom in/out and Focus and the left joystick to Pan/Tilt your remote camera.

Running a Multiple Remote Camera System:

1. Mount and setup your cameras as you normally would for recording.
2. Setup cabling & power as described in the **r-TRECE** Cabling section. [This example assumes your camera1 is connected to CAM1, camera2 is connected to CAM2, and camera3 is connected to CAM3 on the **r-TRECE** Interface Box.]
3. You should see a static time code on the **r-TRECE** Control Head Display for each of your remote cameras.
4. If the CAM1, CAM2 or CAM3 STATUS Light is not blinking green, then press and hold (for at least 2 seconds) the Red PWR Button to power on all your remote cameras.
 - ❖ The CAM1, CAM2 and CAM3 STATUS Lights should now all be blinking green.
 - ❖ The Preview Monitor connected to the **r-TRECE** Interface Box should now display the video signal for one of your remote cameras (the camera displayed is based upon which camera is the current Preview camera).
5. Next, press and hold (for at least 2 seconds) the green REC Button to start recording on all your remote cameras.
 - ❖ The CAM1, CAM2 and CAM3 STATUS Light should now be solid green.
 - ❖ The time codes for all your remote cameras should start to run on the **r-TRECE** Control Head Display.



0:04:20 0:04:20
NORM 0:04:20 AF

6. Select Preview Button [1,2,or 3] for the camera you wish to control. Use the right joystick to Zoom in/out and Focus and the left joystick to Pan/Tilt your remote camera [1,2,or 3].

The above examples show that the selected **Preview Button** on the **r-TRECE** Control Head determines which camera can be remotely controlled and viewed on the **Preview Monitor**. In addition, the **Program Buttons** can be

used to view a second camera on the Program Monitor
(assuming you have a Monitor attached to the **Program
Monitor** on the **r-THREE** Interface Box).

r-THREE Advanced Operations

None of the features described in this section are needed to remotely control your cameras with your **r-THREE** System. These features will allow you to configure and run your system to your individual needs.

You may want:

- the Tilt joystick to tilt up when the joystick is pushed forward.
- the camera closer to the subject to pan at a slower speed.
- the exposure on your remote camera to be adjusted when lighting changes.

These are just a few of advanced system features that can be extremely powerful, flexible and invaluable.

The **r-THREE** System's advanced features are built around three modes - Time Code Mode, SYS MODE and CAM Mode. Time Code Mode as shown previously on Picture 1b continuously updates the state of the system with time code information, battery state, current pan speed, and focus state. The SYS MODE (details follow) allows the system to be uniquely configured for a particular shoot or for your particular needs for things like joystick responsiveness, maximum speed for pan or zoom, etc. And finally the CAM MODE (details follow) allows you to still have the camera features but from a remote location for such things as the camera menu, backlight, exposure, etc.

No matter what mode you are in, the status lights on the **r-THREE** Control Head are continuously being updated so that you can monitor the state of each remote camera.

MODES

Select MODE with
MODE Button



SYS
MODE

- Zoom Speed
- Video Configuration
- Configure PanTilt
- Configure Zoom
- System Configuration
- Set Factory Default Values

Find the desired configure option by dialing the Menu Dial. Push the Menu Dial to select and configure.

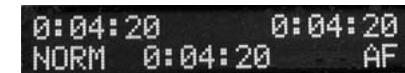
CAM
MODE

- Camera Commands Menu
- Camera Commands Display
- Camera Commands Backlight
- Camera Commands Photo Capture
- Camera Commands Exposure

Find the desired camera command by dialing the Menu Dial. Push the Menu Dial to select and configure.

Time Code MODE

Press the MODE Button until neither MODE Lights are on. This puts the system in Time Code MODE. The Display will look something like (depending on the number of cameras being used):



0:04:20 0:04:20
NORM 0:04:20 AF

When in Time Code MODE, the Menu Knob acts exactly like the menu select dial on your LANC camera. Any function that can be controlled on the camera can also be controlled remotely. This feature can be used, for example, to manually adjust exposure.

SYS MODE

Press the MODE Button until the SYS MODE light is on. This puts the system in SYS MODE. The Display will initially look like:



Zoom Speed

Using the Menu Knob when in SYS MODE:

1. Use the Menu Knob to select the menu item you would like to configure by dialing the Menu Knob right or left. For the list of SYS MODE menu items, see Table 1 – SYS MODE Menu .
2. Press the Menu Knob to select the menu item. (e.g. **Zoom Speed**).
3. Use the Menu Knob to select the desired configuration value by dialing the knob right or left. For example, with the **Zoom Speed** selection you may see **Cam1:(25-100%) 100%**. By dialing the Menu Knob right and left, the max zoom speed can be changed.
4. Press the Menu Knob to make the desired change. Note that changes take effect immediately. The change made can be save indefinitely or just saved until the system is powered down:
 - a. **Save As Default:** Dial the Menu Knob until **Save As Default** appears and then press the Menu Knob to select this option. The changes made to this SYS MODE are now the default for your system. If you ever want to go back to the system defaults, you can easily do so with the SYS MODE **Set Factory Default Values**.
 - b. **Return:** Dial the Menu Knob until **Return** appears and then press the Menu Knob to select this option. The changes made to this SYS MODE are

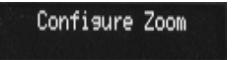
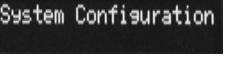
now current, but these changes will be lost when the **r-THREE** Interface Box is powered down.

5. You are now back to the SYS MODE Menu and can configure additional items via Steps 1-4.

You can exit from SYS MODE at any time by pressing the MODE button.

Table 1 - SYS MODE Menu	
Zoom Speed	<p>Maximum zoom speed can be configured to be 25-100% - by default the max zoom speed is set to 100%.</p> <p>Note: you can set the max speed for each camera individually by selecting the camera with the Preview buttons - Cam[1,2,3]).</p> <p>Default zoom speed is 100% (fastest).</p>
Video Configuration (LS option only)	<p>Video configuration you to configure:</p> <ul style="list-style-type: none"> • Color Bars – by default the Color Bars are off. • Dissolve – by default the number of frames used in a dissolve is 30. This value can be adjusted from 1 to 241. • Video Signal – by default the Brightness, Color, Hue and Contrast per camera is set to 0. These values can be independently configured from -50 to +50. • Output Config – by default <ul style="list-style-type: none"> ◦ the Output Format is NTSC. This

	<p>is the only format available at this time.</p> <ul style="list-style-type: none"> ○ the Setup Level is IRE7.5. This can be configured to IRE0.0. ○ the video signals from CamA, CamB, CamC on the r-THREE Interface Box by default are setup to output the composite signal from Cam1, Cam2 and Cam3. These three outputs can be configured to be Preview, Program, Cam1, Cam2 or Cam3. <p>Note: you can set the video signals for each camera individually by selecting the camera with the Preview buttons - Cam[1,2,3]).</p> <p>Default Color Bars are Off. Default Dissolve is 30 frames. Default Video Signal (Brightness, Color, Hue and Contrast) is +0. Default Output Config is NTSC, IRE7.5 and Cam[1,2,3] outputs to Cam[A,B,C].</p>
Configure PanTilt	<p>Pan/Tilt configuration allows you to configure:</p> <ul style="list-style-type: none"> • Responsiveness curve – by default the Pan/Tilt Joystick will respond in an exponential manner such that the more you push the joystick, the faster it will pan & tilt. Fixed Speed, Linear Speed as well as other Exponential Curves 1-9 can be configured. (see Table 2 & 3 below for further details).

	<ul style="list-style-type: none"> • Deadband – by default the Pan/Tilt Joystick is set to have a 5% deadband so that the pan or tilt do not get modified inadvertently. This value can be configured to 1%-25%. <p>Default curve is exponential (8).¹ Default deadband is 5%.</p>
	<p>Zoom configuration allows you to configure:</p> <ul style="list-style-type: none"> • Responsiveness curve – by default the Zoom Joystick will respond in an exponential manner such that the more you push the joystick the faster it will zoom. Fixed Speed, Linear Speed as well as other Exponential Curves 1-9 can be configured. (see Table 2 & 3 below for further details). • Deadband – by default the Zoom Joystick is set to have a 10% deadband so that the zoom does not get modified inadvertently. This value can be configured to 1%-25%. <p>Default curve is exponential (4). Default deadband is 10%.</p>
	<p>System configuration allows you to configure:</p> <ul style="list-style-type: none"> • Tilt Down or Tilt Up on Push Forward – by default when you push the Tilt Joystick forward the camera will tilt down. This is Tilt Dn. If you select Tilt Up, then the camera will tilt up when the Tilt Joystick is
	41 r3a-x2.0

	<p>pushed forward. This one setting effects the Tilt for all cameras.</p> <ul style="list-style-type: none"> • Normal or Reversed Pan - by default the joystick will pan to the right when the Pan Joystick is pushed to the right. This is Normal Pan. If you have your camera facing you, you may prefer to reverse this so that the camera will pan to the right when the Pan Joystick is pushed to the left. This is Reversed Pan. • Normal or Reversed Tilt – by default the camera will tilt down when the Tilt Joystick is pushed forward. This is Normal Tilt. If your preference is such that pushing the Tilt Joystick forward should cause the camera to tilt up or if your camera is mounted upside down, you may prefer to reverse this so that the camera will tilt up when the joystick is pushed forward. This is Reversed Tilt. <p>Default Push Fwd = Tilt Dn. Default CAM[1,2,3]: Pan = Normal. Default CAM[1,2,3]: Tilt = Normal.</p>
Set Factory Default Values	Reset all values to the factory defaults.
blank display	If you press the Menu Knob on this last blank menu item, you will Enter Factory CFG . Please press the Menu Knob again for No, Thank You as this is intended for factory use only.

Pan/Tilt & Zoom Control :

Configuring the response for the Zoom and/or Pan/Tilt control is done via the SYS MODE Menu options **Configure Zoom** and/or **Configure PanTilt** as described in Table 1.

The configuration consists of selecting the *speed vs. percent of joystick range* curve and, if desired, a deadband.

The *speed vs. percent of joystick range* curve can be any of the following:

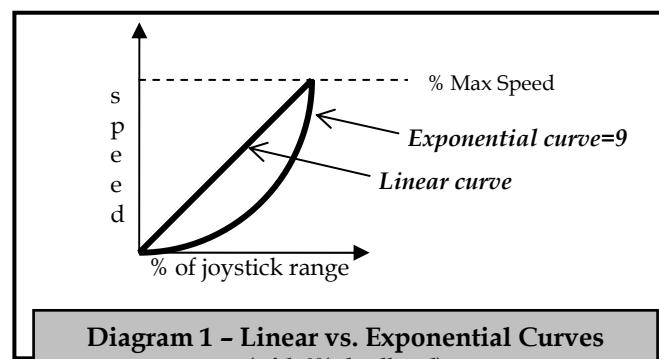
Table 2 - Curve Configuration	
Fixed Speed	With a fixed curve, once you have passed the deadband value, the speed will stay at the fixed speed.
Linear Curve	With a linear curve, the speed increases at a constant rate as the joystick is pushed further.
Exponential Curve	With an exponential curve, the speed starts out slower and ramps up faster as the joystick is pressed further. Curve values can be 1-9, where 1 is close to linear and 9 contains the largest possible ramp.

Table 3 -
Deadband
Configuration

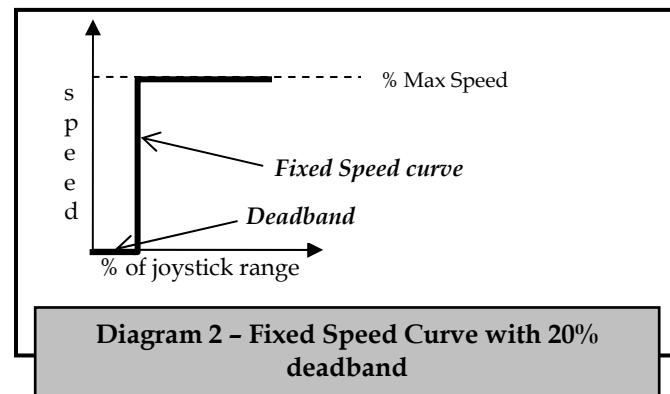
Deadband

Deadband setting can range from 1-25%. The deadband value will let you push your joystick to this percentage of the joystick range without seeing any effect.

The configuration of the Pan/Tilt & Zoom using an exponential curve allows for more precise control at low speeds. Unlike linear, exponential keeps the ramp of the speed slower at the low end of the joystick. As you push the joystick further, the speed accelerates smoothly until you reach the max speed. See **Diagram 1** below. You can also configure the exponential or linear curve to have an initial deadband.



The configuration of the Pan/Tilt & Zoom for fixed speed results in immediate max speed when the joystick is pushed. You can also configure a deadband to provide a dead zone on the joystick. See Diagram 2 below.



CAM MODE

Press the MODE Button until the CAM light is on. This puts the system in CAM MODE. The Display will initially look like:

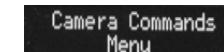


Using the Menu Knob when in CAM MODE:

1. Use the Menu Knob to find the Camera Command that you wish to remotely control on the current Preview camera. See Table 4 - LANC Camera Commands. (e.g. Camera Commands Display)
2. Select the command by pressing the Menu Knob.
3. If the Camera Command Display is on you will likely see some indication that the mode is on or off. See your camera manual for details.

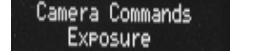
You can exit from CAM MODE at any time by pressing the MODE button.

Table 4 -
LANC Camera
Commands



With Camera Commands Menu selected, you will enable the camera menu on your physical camera. See the CAM MODE Example on page 39 for additional details and usage.

You must also have Camera Commands Display selected to see the camera menu on the Preview Monitor.

	Camera Commands Display will turn on/off all the screen/viewfinder screen indicators on the selected Preview Camera.
	Camera Commands Backlight will turn on/off backlight on the selected Preview Camera.
	Camera Commands Photo Capture will capture a photo from the selected Preview Camera.
	Camera Commands Exposure will turn on/off exposure on the selected Preview Camera.

Be aware that not all cameras support all the Camera Commands. You must determine which ones work for your cameras and then use these commands accordingly.

Keep in mind that the Menu Knob is very useful when in Time Code MODE as it acts just like the control dial on the back of your physical camera. On the Sony PD-150, for instance, if you press the Auto Exposure Shift button on the physical camera, you will be able to control the auto shift remotely by twisting the Menu Knob left and right just as you would do with the control dial on the back of your camera.

CAM MODE Example:

You want to setup your remote camera CAM1 for manual shutter speed and yet you also want to use some camera menu items (Color Bar) that are available using the dial on the back of your physical camera. Here is how you do this all remotely:

1. Physically set up your camera for manual shutter speed. Generally this is a button on the physical camera.
2. Set the Preview Camera to CAM1
3. Check that you are in Time Code MODE (no MODE Lights are on).
4. Use the Menu Knob to dial the shutter speed to the desired value.
5. Set to CAM MODE and select **Camera Commands Menu** by pressing the Menu Knob.
6. Set to Time Code MODE and now you can again use the Menu Knob dial as though you were using the menu select dial on the back of the physical camera to go through and select the camera menu items, such as Color Bar.
7. If you set to CAM MODE again and this time select **Camera Commands Display** and then Time Code MODE, you will no longer see the camera menu items on the Preview Monitor but the Menu Knob dial continues to control the selected camera menu item from step 6.
8. If you set to CAM MODE and select **Camera Commands Menu** and then Time Code MODE, you will have turned off the ability to control the camera menu item selected in step 6 and you will be back to having the Menu Knob dial control the manual shutter that was setup in step 1.

Panasonic Support

Panasonic cameras do not support LANC. The **r-THREE** system will allow for basic operation of such cameras, but many of the advanced features just cannot be supported given this limitation of the camera. Below is a list of limitations that you need to be aware of if you are using a Panasonic camera.

- ◆ Panasonic cameras must be powered on manually. The PWR button on the **r-THREE** Control Head will have no effect and the STATUS Lights will always be off.
- ◆ Panasonic cameras must be set to auto focus on the camera itself. The Zoom/Focus Joystick will only Zoom (up & down); Focus (left & right) will have no effect.
- ◆ Only SYS MODE and Time Code Mode are supported as the CAM MODE feature requires LANC support which Panasonic cameras do not provide. If you attempt to select CAM MODE when using a Panasonic camera, the system will go to the next mode (either SYS MODE or Time Code Mode).
- ◆ When in Time Code MODE, the **r-THREE** Control Head Display will show PANA instead of the Time Code for Panasonic cameras.
- ◆ When a supported Panasonic Camera is attached to the Pan Tilt Head, the **LANC PANASONIC** switch

on the back of the **r-THREE** Pan Tilt Head must be switched to **PANASONIC**.

The **r-THREE** Integrated Remote Camera System supports the following Panasonic cameras:

- AG-DVX100
- AG-DVX100A
- AG-DVX60
- AG-DVC80

All other Panasonic cameras, including

- AG-DVC30
- AG-DVC7
- AG-45x

are not supported.

Helpful Hints

- Mount your camera onto the **r-THREE** Pan/Tilt head such that the camera is balanced. If the camera is not well balanced, you will find that the Pan/Tilt head may move slower tilting up or down.
- The **r-THREE** system is not intended to be used as a Live Switcher as you may find a single torn frame when switching cameras via the Program Buttons. You may, however, connect the three CAM 1-3 output on the back of the **r-THREE** Interface Box into an external Live Switcher or consider our **r-THREE-LS** product.
- The r3a-ptzcable used to connect the **r-THREE** Pan/Tilt Head to the **r-THREE** Control Head is a standard CAT5 cable. The r3a-intcable used to connect the **r-THREE** Interface Box to the Control Head is also standard CAT5 cable. These **r-THREE** cables have been tested for proper function with the system, but you can use any good quality CAT5 or CAT6 cable.

Troubleshooting

- ◆ Unable to select a remote camera as the Preview or Program camera :
 - ✓ Check the r3a-ptzcable from the **r-THREE** Interface Box to the **r-THREE** Pan/Tilt Head as the system does not see the Pan/Tilt Head.
- ◆ Status light starts to blink red :
 - ✓ Check the power to the camera as the battery is low.
 - ✓ Check the tape on the camera as you may have less than 5 minutes of tape left.
 - ✓ Check that your camera has a tape.
 - ✓ Check that the Record Protect Tab is not set on the tape.
 - ✓ Check that your physical camera is ready to record - can you start/stop recording from the physical camera?
- ◆ The **r-THREE** Control Head Display indicates VLOW or VCRT :
 - ✓ Check the battery that is connected to the **r-THREE** Interface Box as it is getting low. VLOW is an early warning and, depending on the battery, may be OK for as little as 5 minutes to as long as 1 hour. But if you reach VCRT you should shutdown the system or risk damaging your battery.

- ◆ The Pan/Tilt Joystick when pushed down, tilts up and I want it to tilt down :
 - ✓ See the Advanced Options SYS MODE System Configuration which will allow you to switch the up/down direction for joystick tilt.
- ◆ The Pan and/or Tilt is not working :
 - ✓ Check that the amber PAN LIMIT or TILT LIMIT lights are not on. If they are, you have reached the limit of the **r-THREE** Pan/Tilt Head.
 - ✓ Check the cabling.
- ◆ The Preview or Program Monitor is black even though the camera is powered on and the PWR Button has been pressed :
 - ✓ Check that the desired camera has been selected on the Preview Buttons and the PWR Button has been pressed.
 - ✓ Check that the lens cap is off on the camera.
 - ✓ Check the cabling.
- ◆ Time Code MODE shows PANA for my LANC camera.
 - ✓ Check that the switch on the **r-THREE** Pan/Tilt Head is set to LANC when a LANC camera is attached.

- ◆ Time Code MODE does not indicate **AF** when Auto Focus is set.
 - ✓ Check that you have pressed the Zoom/Focus Joystick.
 - ✓ Some cameras may not be able to communicate the state of the auto focus to the **r-THREE** system and yet the camera may well be in auto focus mode. So, if the **AF** indicator does not come on, you will probably want to make a note to yourself regarding the behavior of this camera.
- ◆ CAM MODE cannot be selected:
 - ✓ If this is a LANC camera, check that the switch on the **r-THREE** Pan/Tilt Head attached to the LANC camera is set to LANC.
 - ✓ If this is a Panasonic Camera, then see Panasonic Support for the features that are supported.
 - ✓ Check the List of Tested (supported) Cameras on our website at <http://grizzlypro.com..>
- ◆ SYS or CAM MODE command selection only switches to another MODE instead of selecting the displayed command :
 - ✓ Check that you are selecting the command with the Menu Knob and not the MODE button.

- ♦ In CAM MODE Camera Commands Menu, I can see the camera menu on the monitor but I cannot dial through them (using Menu Knob) :
 - ✓ Check that you have selected the Camera Commands Menu by pressing the Menu Knob AND that you have then gone to Time Code MODE by pressing the MODE button - no MODE light should be on. Only when you are in the Time Code MODE will you be able to dial through the camera menu. The Menu Knob will act just as if you are using the dial on the back of the physical camera.

- ◆ CAM MODE Camera Commands Menu does not show any camera menu items on my monitor yet I selected the Camera Commands Menu :
 - ✓ You must have the CAM MODE Camera Commands Display selected for any camera display information to be visible on the Preview Monitor.

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FCC Warning

This equipment has been tested and found to comply with the regulations for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with this user's guide, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

This Class A digital apparatus complies with Canadian ICES-003.

Warranty

Grizzly Pro Video Limited Warranty

Grizzly Pro Vides warrants that if the accompanying product (see "Grizzly Pro Video Warranty Exclusions") proves to be defective in material or workmanship within the following warranty periods, Grizzly Pro Video will, at Grizzly Pro Video's option, either repair or replace same without charge (but no cash refunds will be made).

1.) All items will have 1 year limited warranties from the date of original retail purchase. This limited warranty may be enforced only by the first consumer user, all subsequent purchasers acquire the product "as is" without any benefit of this limited warranty.

Grizzly Pro Video Warranty Exclusions

This warranty does not apply in the following circumstances: When the product has been serviced or repaired by anyone other than Grizzly Pro Video. When the product has been connected, installed, combined, altered, adjusted, or handled in a manner other than according to the instructions furnished with the product. When any serial number has been effaced, altered or removed. When any defect, problem, loss, or damage has resulted from any accident, misuse, negligence, carelessness, or abnormal use.

We reserve the right to make changes or improvements in our products from time to time without incurring the obligation to install such improvements or changes on equipment or items previously manufactured.

Limitations and Exclusion

We disclaim liability for incidental and consequential damages, for breach of any express or implied warranty, including any implied warranty of merchantability, with respect to this product. This writing constitutes the entire agreement of the parties with respect to the subject matter hereof no waiver or amendment shall be valid unless in writing signed by company. Some states do not allow the exclusion or limitation of consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights that vary from state to state.

Warranty Period

After the applicable warranty period, or, if one of the above exclusions applies, Grizzly Pro Video product will be repaired for a charge of parts plus labor. All Factory repairs, after the applicable warranty period, carry a 90-Day Limited Warranty, subject to the stated exclusions and limitations.

You must at your own expense, including postage, shipping charges, insurance costs and other expenses, deliver, mail or ship product, together with proof of purchase, to Grizzly Pro Video. However, if the necessary repairs are covered by the warranty, we will pay the return shipping charges to any destination within the United States.

For all repairs (warranty or non-warranty), contact customers@grizzlypro.com.

notes

notes

notes

"What you can do is often simply a matter of what you *will* do"
"So many things are possible just as long as you don't know they're impossible"
The Phantom Tollbooth

<http://grizzlypro.com>

Grizzly Pro Video

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