



## Operating Notes And Information

### 1. How do I connect multiple Raptor X's together?

The Raptor X uses gigabit (GB) Ethernet to link multiple units together and to connect to external computers such as PC's running Adobe Premiere and Mac's with Final Cut Pro. There is only one Ethernet port on each Raptor X, so a small and inexpensive (\$125) high-speed gigabit router (Linksys RVS4000 for example) is necessary to add more connectivity when an external computer is connected. (Diagram 1). When only two Raptor X's are used in a A and B camera system and there are no other external devices connected, you can connect the Raptors with a single Ethernet cable plugged between the two decks. (Diagram 2). This will, however, extend the boot up time by two to three minutes while the Raptors automatically configure IP addresses. See (#'s 7-11) for details regarding IP addresses.

Diagram 1

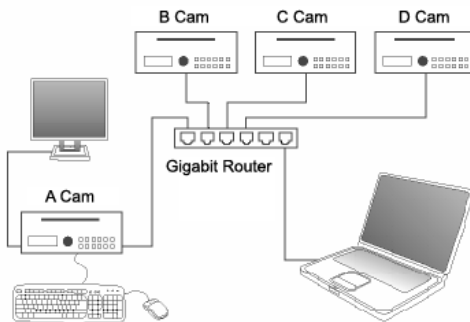
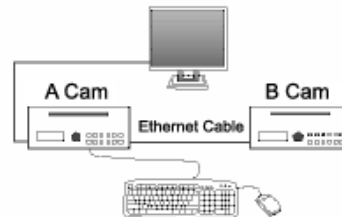


Diagram 2



### 2. What resolution VGA monitor do I need?

The Raptor application software was written to take advantage of today's larger and higher resolution LCD computer monitors. The default resolution is 1280x1024. All 17" and larger LCD monitors support this resolution. If users still need to support older 15" monitors with a resolution of 1024x768, the Raptor software in conjunction with the computer motherboard will automatically configure to the connected monitor's resolution. NOTE: If contrast and brightness are set too high, some of the elegant subtleties of the interface are lost into white clipping. Additionally, features such as bookmarks will be less visible or even seem to "disappear" unless monitor levels are set to display a correct gray scale.

### 3. Can I power the Raptor X from batteries?

No. Please review the next question for details on powering a Raptor X

### 4. What are the power requirements for the Raptor X

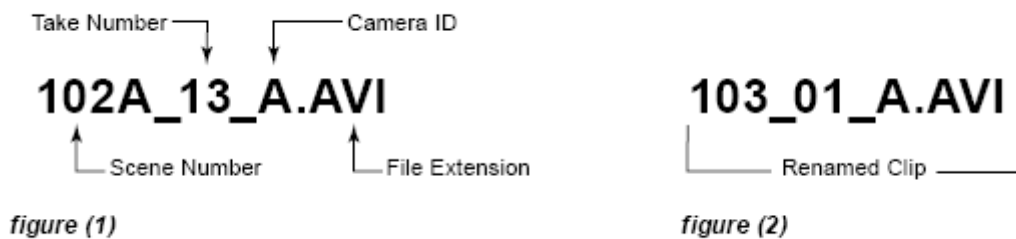
The Raptor X requires *regulated 12vdc* as its input power source. Every Raptor X ships with an AC power supply that supplies up to 8.5 amps at 12vdc. We follow industry wide practice and use a standard 4 pin XLR as the power entry connector. Do not assume this means you can plug a battery directly into the Raptor X. We recommend using the included power supply with a small automotive type DC to AC inverter when you need to operate from a battery system. The normal operating current draw is approximately 4.5 amps. When the system starts up, the two internal 3.5" SATA drives require an additional 2 amps at 12vdc to spin up.

### 5. How do I rename a clip after it's been recorded?

The Raptor X application allows users to access Windows Explorer to perform some disk and media management functions. Launch Windows Explorer from the Tools pull down menu by selecting "Launch Windows Explorer on local disk." The Explorer window will appear over the Raptor X application. You will see all the recorded clips as .avi files along with several .ini files used to store clip attributes.

When renaming a clip, you must maintain the naming protocol used by Raptor X. Figure 1 illustrates this format. You can change the scene and/or take number, but that change must conform to the shown format. Do not leave any spaces, and all the underscores must remain between fields. Be careful not to change the camera identifier or file extension type at the end of the name. After renaming a clip, close the Windows Explorer window (upper left corner button) to return to the Raptor application.

After renaming any clips, it is necessary to refresh the displayed list of clips on the



Raptor X. From the "File" pull down menu select "Re-Read clips on local deck." The displayed list will update and re-sort any renamed clips.

## **6. Does the Raptor X record and playback multiple cameras in sync?**

Yes. By using the high speed gigabit Ethernet connection on each Raptor X, commands are issued simultaneously to all decks. NOTE: Due to normal latency issues in a computer's operating system, an accumulative 1 to 2 frame offset can sometimes occur during playback while controlling multiple decks. This is not of any consequence when watching playback from multiple decks. However, when monitoring audio it is always recommended to listen to the audio from the deck you are watching to avoid the possibility of audio being a couple frames ahead or behind from a slaved deck. If you need to watch a multiple camera playback, listen to the audio from the deck with the closest shot of the actors.

## **7. What is an IP address?**

An IP address (Internet Protocol address) is a unique address that computers and certain electronic devices use in order to identify and communicate with each other on a computer network. An IP address can also be thought of as the equivalent of a street address or a phone number for a computer. Just as each street address and phone number uniquely identifies a building or telephone, an IP address can uniquely identify a specific computer or other electronic device on a network.

## **8. Does the Raptor X use dynamic or static IP addressing?**

The Raptor X uses dynamic IP addressing.

## **9. What is Dynamic IP Addressing?**

A way for computers and other devices on a network to request and obtain an IP address automatically.

## **10. How does the Raptor X acquire an IP address?**

With two Raptor Xs connected directly via their Ethernet ports, the Embedded Windows XP operating system in each Raptor automatically configures a network connection between them every time the system boots-up. No manual network configuration or operator intervention is required. This automatic configuration process adds a couple of minutes to the overall boot time of two Raptors connected as an A and B camera system.

## **11. How can I reduce this additional boot-up time?**

There is a quicker and still automatic way to assign IP addresses to two or more Raptor X's and other computers (a Mac running FCP for example).

DHCP (Dynamic Host Configuration Protocol) is a method computers can use to obtain IP addresses quickly and automatically from a device called a DHCP Router. A DHCP Router ensures that all IP addresses are unique for every device on a network. The Linksys RVS4000 is a good example of a 4 port Gigabit Router. When using this router,

be sure to only connect your Raptors and other computers to the “Ethernet Ports” and not the “Internet Port” also found on this router.

## **12. How do I delete a recorded clip?**

The Raptor X application allows users to use Windows Explorer to perform some disk and media management functions. Launch Windows Explorer from the “Tools” pull down menu by selecting “Launch windows explorer on local disk.” The Explorer window will appear over the Raptor X application. You will see all the recorded clips as .avi files along with several .ini files used to store clip attributes.

Select the clip or series of clips to delete and <RIGHT-MOUSE CLICK> select <DELETE> from the contextual pull down menu. Answer <YES> in the confirming dialog box and close the Explorer window.

After deleting any clips, it is necessary to refresh the displayed list of clips remaining on the Raptor X. From the “File” pull down menu select “Re-read clips on local deck.” The displayed list will now exclude the deleted clips.

## **13. How do I delete all clips?**

From the “File” pull down menu, select “Delete all files from deck.” A dialog box will ask you to confirm the total number of clips to delete. The deleting function will remove any file fragmentation and prepare the Raptor X for starting your next project.

## **14. How do I copy clips to an external drive?**

The Raptor X uses USB 2.0 as an interface to external storage. Connect an external USB 2.0 drive, then launch Windows Explorer from the “Tools” pull down menu by selecting “Launch Windows Explorer on local disk”.

The Explorer window will appear over the Raptor X application. You will see all the recorded clips as .avi files along with several .ini files used to store clip attributes.

Click the “Folders” button at the top of the Explorer window to show all drives currently in use and connected to the Raptor X. The external drive will appear as “Drive F” along with its volume name. Select the files or group of clips to be copied and <RIGHT CLICK/DRAG> them to the external drive icon. Only copy the .avi files - do not copy any other file types. When the contextual menu appears select “Copy Here.”

The Raptor X records DV files that are very large compared to earlier generation video assist compressed codecs. Transfer time from the internal hard drives to your external USB drive is highly dependent on the actual transfer speed of the external drive. We have seen some cheap drives/enclosures transfer rates as slowly as the actual time of the clip.

We recommend choosing 7200 RPM external hard drives from name brand manufacturers, e.g., Seagate, Maxtor, or LaCie.

### **15. How do I set my Raptor X application time and date?**

Launch the standard Windows time and date control panel from the Raptor X “Tools” pull down menu and select “Set date and time.” This will open the “Date and Time Properties” window over the application software. Set your local time using only on the default “Date and Time” tab. After your changes have been made click <OK> to save and close the window.

NOTE: Do not set the time in the “Time Zone” tab. Because the Raptor X uses an Embedded OS, time zone settings will not be saved across power cycles. Only changes made in the “Date and Time” tab are stored in the BIOS. Not being able to set a specific time zone is of no consequence because the Raptor X application does not utilize specific time zone information.

### **16. Configuring an A and B camera system: Some helpful ideas**

The Raptor X has been designed as a master/slave system with the A camera deck defaulting as the master and all other cameras acting as slaves. This design approach requires that the A deck have the computer monitor, mouse and keyboard attached to it. The B deck and all others will be connected to the A deck, preferably through a gigabit Router as described in (#1).

There are times when having a monitor, mouse and keyboard hooked up to the B deck might be helpful. For system troubleshooting and some occasional system management issues we recommend installing a small KVM switch to allow you to “see” the B deck application software directly.

Currently, the Belkin Flip USB is a great simple low cost (\$60) solution for this. We have used this device in our system burn-in and testing and recommend it to our customers.

The Raptor X supports only USB mice and keyboards. There are no PS/2 ports on the Raptor X. Because the Raptor X uses an embedded operating system you cannot connect any device to the deck that requires loading software drivers. Some multi-button track-balls and other shuttle controls require specific drivers and are not supported at this time.

### **17. Using the Scene Find feature**

The Raptor X application software (version 2.0.1.9 and above) allows you to locate the Source List immediately to any previously recorded scene & take number. At the top of the Source List is a Scene Entry field that you can type in the scene and take number. You must type an underscore character between the scene and take number due to the way we name our recorded .avi files. You can also just type the scene number to locate to the top of that scene. The two buttons, “Previous” and “Next,” located next to the scene

entry box, will jump you to the next or previous scene in numeric order if your source list is sorted by scene number. This provides a quick way to navigate to scenes close to the one you're currently shooting.

As you record different scene numbers, a pull down list is also generated that you can access. Mouse click on the <DOWN ARROW> to the right of the Scene Entry field. Click on the <DOWN ARROW> and mouse drag to the scene you want to locate to.

## **18. Changing Sort Order**

The Raptor X application defaults to sorting the list of recorded clips by scene order. This can make finding and navigating scenes easier than sorting by date recorded.

You can tell what column you are sorted by (Scene, Speed, Created, Length etc.) by the two asterisks that will bookend the sorted column name. You can change which column the list is sorted by just single mouse click on the column name. You should now see an asterisk before and after that name.

## **19. Can I record/manage multiple projects on the Raptor X?**

No, not at this time. Software development is underway to allow users this advanced functionality. No release date has been announced yet, but all future software updates are available to all users for the life of the product at no cost.

## **20. How do I record on the "B" deck only**

The Raptor X does not allow the B deck in a two camera system to record without the A deck also recording. A future software upgrade will allow the source list to be "uncombined" and allow for this feature.

## **21. How do I update my application software?**

We will email files that you can burn to a CD. We include simple instructions for loading those files into the Raptor X.

We strongly recommend that users only update between jobs and not while in the middle of a show. There is always a very rare chance that something could happen during an upgrade that might take your system offline.