



# **DQ-TimeCoder™**

for **Adobe Premiere™** and **Silicon Graphics O2™**

## **Installation Manual and User Guide**

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# **DQ-TimeCoder™**

for **Adobe Premiere™** and **Silicon Graphics O2™**

## **INTRODUCTION**

Diaquest **DQ-TimeCoder™** is a plug-in product for Adobe Premiere™. This version of **DQ-TimeCoder** works with Silicon Graphics O2™ computer platforms.

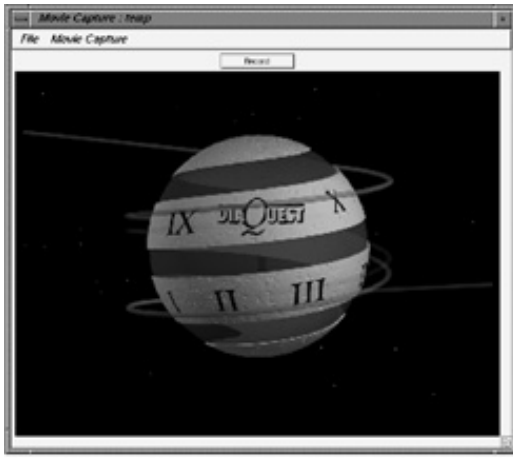
**DQ-TimeCoder** is ideal for Adobe Premiere customers with access to professional video equipment. **DQ-TimeCoder** provides the essential time code link which enables frame accurate video work within Premiere.

At its simplest, **DQ-TimeCoder** adds enormous functionality to Premiere by providing basic machine control (Play, Stop, Fast, Step, etc.) over the video source machine from directly inside Premiere. It also provides the exact time code of the video source media to Premiere.

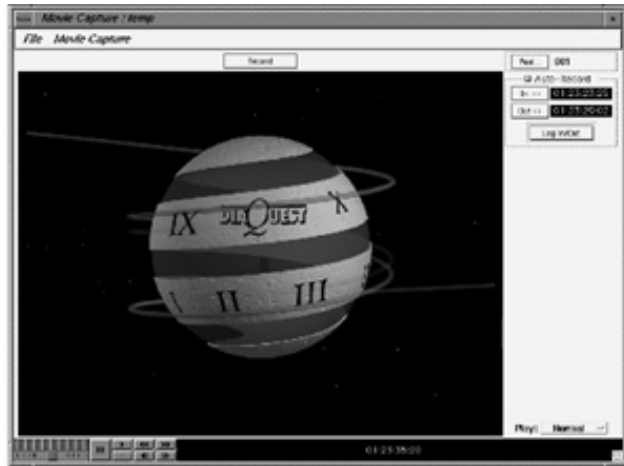
**DQ-TimeCoder** allows the user to capture frame accurate, time coded Premiere clips, and to generate frame accurate edit decision lists (EDLs) from these clips. **DQ-TimeCoder** provides the ability to log tapes, create batch capture lists, perform batch captures and automatically recapture clips at higher data rates (consult your Premiere manual for details). These functions require both time code and machine control, and are not available without **DQ-TimeCoder**.

The Premiere **Movie Capture** module looks totally different when **DQ-TimeCoder** is installed.

Without **DQ-TimeCoder**



With **DQ-TimeCoder**



As the above pictures show, machine transport control buttons, tape location, **In** and **Out** point registers, **Reel** and **Log In/Out** buttons only exist when **DQ-TimeCoder** is installed.

## **VIDEO MACHINES SUPPORTED BY DQ-TIMECODER**

**DQ-TimeCoder** controls most professional and broadcast RS-422 serial protocol video recorders and source machines. **DQ-TimeCoder** works with a full range of video formats including S-VHS, Hi-8, U-matic, Betacam, MII, 1" Type C, D-1, D-2, D-3, DVCAM and DVC-PRO recorders in NTSC or PAL standards.

To use **DQ-TimeCoder**, your video machine must have a 9-pin RS-422 remote control port as well as an internal time code reader. **DQ-TimeCoder** reads time code through the video machine's serial port. If no time code reader is present in the video machine, no time code will be passed through the serial port and no time code will be passed from **DQ-TimeCoder** to Premiere.

A time base corrector (TBC) is also recommended for high quality digitizing.

The most common machines controlled by **DQ-TimeCoder** include:

Manufacturer/Format/Model		Internal Time Code Reader	Internal TBC
<b>Sony</b>			
Betacam:	BVW-40/60/65/70/75	standard	standard
	PVW-2600/2650/2800	standard	standard
	UVW-1600/1700/1800	standard	standard
3/4" U-Matic:	BVU-800/850/870/900/920/950	option	option
	VO-9800/9850	option	no
Hi-8:	EVO-9800/9850	option	no/standard
D1/D2:	DVR series machines	standard	standard
1" Type C:	BVH series machines	standard	standard
DVCAM:	DSR-60/80/85	standard	standard
<b>Panasonic</b>			
S-VHS:	AG-7650/7750	standard	standard
	AG-DS840/850/550	standard	standard
MII:	AU-32/35/62/63/65/66	standard	standard
D-3	AJ-D350	standard	standard
<b>JVC</b>			
S-VHS:	BRS-522/622/822	option	option
	BR-S500/800	option	option
<b>Ampex</b>			
Betacam:	CVR-40/60/65/70/75	standard	standard

NTSC and PAL versions of the above video machines are supported. Contact Diaquest for information and support status concerning other machines which may not be listed above. See the Appendix for specific video machine switch and menu settings.

**Note: About time code readers and TBCs:**

Internal time code readers are circuit boards which plug into the video machine. The time code reader reads time code data from the tape and communicates this data through the remote control port. Time code readers are standard equipment on some machines and available as options for other equipment. **DQ-TimeCoder** requires an internal time code board to be present in the video machine.

TBCs stabilize the video signal coming out of the video machine before being captured into the computer. TBCs are standard equipment on some machines and available as options for other equipment. TBCs are also available as stand alone units. A TBC is recommended but not required for use with **DQ-TimeCoder**.

## SETTING UP DQ-TIMECODER

### System Requirements

This version of **DQ-TimeCoder** requires a **Silicon Graphics O2** computer platform, **Adobe Premiere version 4.2** software and a suitable **RS-422 controlled video machine** (see previous section for a more detailed discussion of video machines).

In addition, a special RS-422 control **Cable** and RS-232 to RS-422 **Adapter** is required for connecting the RS-232 O2 serial port to the RS-422 video machine serial remote control port. This **Cable** and **Adapter** comes with the **DQ-TimeCoder** package.

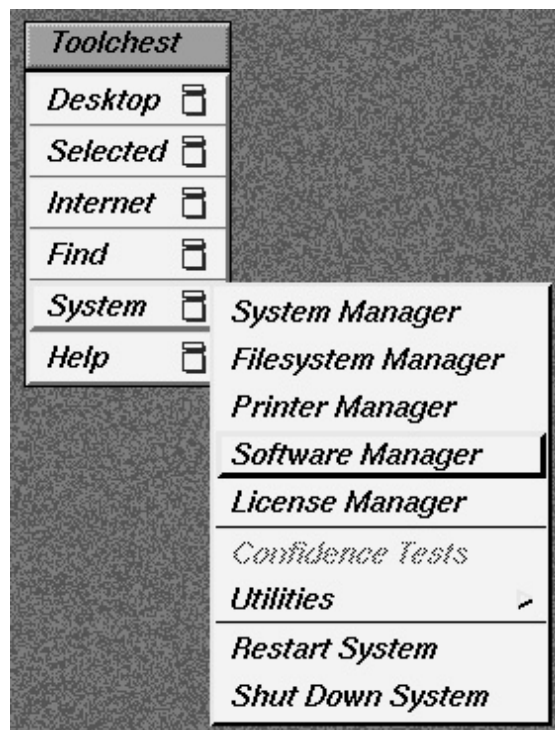
### DQ-TimeCoder Software Installation

Find and insert the **DQ-TimeCoder** Installation CD-ROM.

Use the O2 **Software Manager** to install **DQ-TimeCoder** from the Diaquest **DQ-TimeCoder** Installation CD-ROM. Conceptually, this installation will put a **DQ\_TimeCoder** file in the Premiere **Plug-ins** directory (usually **/usr/adobe/Premiere\_4.2/AdobePremiere\_4.2/Plug-ins**); and a **DQ\_TimeCoder.pdf** manual file in the Premiere **docs** directory (usually **/usr/adobe/Premiere\_4.2/docs**).

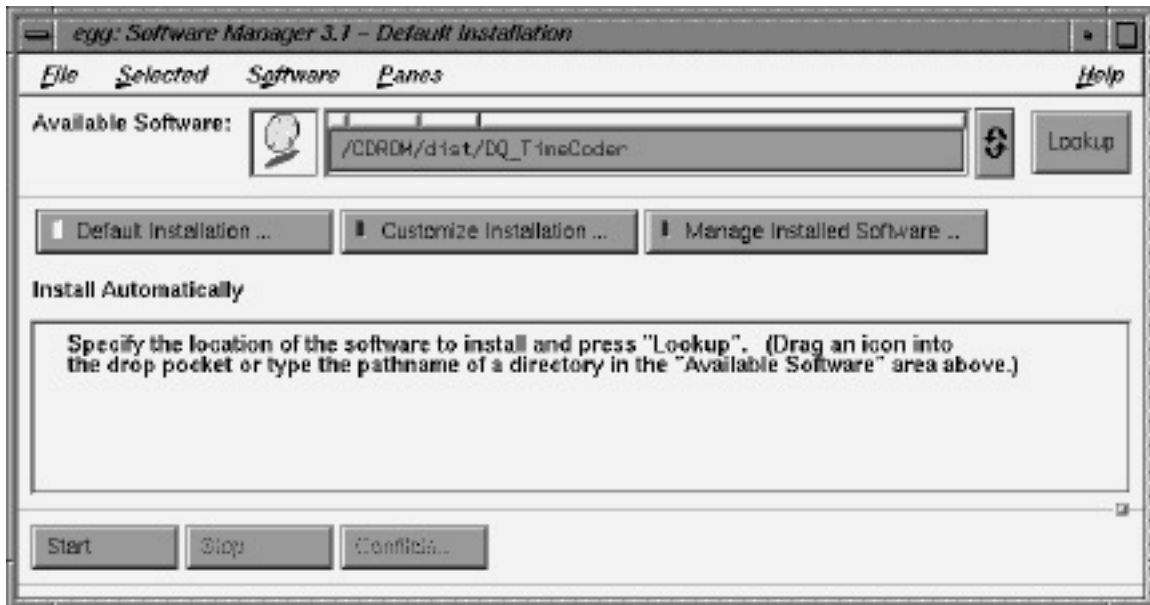
**Note:** Adobe Premiere must be fully installed first, before attempting the **DQ-TimeCoder** installation!

Start the **Software Manager** by selecting it under **System**.



The **Software Manager** window will open.

**Note:** If a dialog box asks you for the root password, enter it and press the **OK** button. If you do not know the root password, consult your system administrator.



Type **/CDROM/dist/DQ\_TimeCoder** exactly as it appears above into the **Available Software:** register and press the **Enter** key. This line is case sensitive.

Be sure the **Default Installation ...** button is ON, as shown in the **Software Manager** window above.

Press the **Start** button in the **Software Manager** window to begin installation.

When installation is complete, select **Exit** under the **File** menu to exit the **Software Manager** and finish the installation.

## Configuring Adobe Premiere to Recognize the DQ-TimeCoder Plug-in

If Premiere has been previously run by a user, then that user must perform the following steps to ensure that the newly installed **DQ-TimeCoder** plug-in will be seen inside Premiere. Premiere caches plug-in locations, and the **DQ-TimeCoder** installation program cannot update each individual user's Premiere preferences file. For each user, this is a one-time only operation.

**Note:** If **DQ-TimeCoder** is installed after Premiere is installed but before Premiere is run for the first time by a user, or if **DQ-TimeCoder** is installed as part of the Premiere installation itself, then the user can skip these steps.

Login as your individual user name. Then type in the following commands:

```
cd
cd AdobePremiere4.2/Plug-ins
ln -s /usr/adobe/Premiere_4.2/AdobePremiere_4.2/Plug-ins/DQ_TimeCoder DQ_TimeCoder
```

**Important:** Make sure there are spaces between:  
ln and -s  
-s and /usr  
DQ\_TimeCoder and DQ\_TimeCoder

**Important:** These commands ARE case sensitive.  
Underscores and hyphens are also important!

The first line of this command sequence will ensure you are in your user home directory.

The second line will change directories to your individual Premiere preferences directory location.

Finally the third line will add a symbolic link from the **DQ\_TimeCoder** file in the user's home directory to the **DQ\_TimeCoder** file in the Premiere **Plug-ins** directory.

**Note:** For convenience, the precise text of the line **ln -s ...** is contained in the file **UserPref.txt** on the CD-ROM. The user can cut and paste the text from this file (or from the on-line manual) if desired.

**Important:** The above procedure must be separately followed by each Premiere user!

## Tape Formatting for use with DQ-TimeCoder

Videotapes, like computer disks and drives, must be formatted or “striped” with proper SMPTE (NTSC) or EBU (PAL) time code. **DQ-TimeCoder** cannot read time code that is not present on the tape media! In some cases, non-striped previously recorded tape can be “post-striped” with time code. Consult your video machine manual for further information.

**Note:** **DQ-TimeCoder** cannot be used to stripe or post-stripe your tape.

## DQ-TimeCoder Cable Installation

**Important:** Only use the special **Cable** and **Adapter** which come with the Diaquest package. Diaquest cannot guarantee proper operation of the product when other cables or adapters are used.

Connect the angular end (with numbers on the connector hood) of the **DQ-TimeCoder RS-422 Control Cable** to the special RS-232 to RS-422 **Adapter** end labeled "**RS-422**". Connect the other end (more rounded hood) of the **Cable** to the 9-pin Remote port on your video machine. Connect the other end of the **Adapter** (labeled "**RS-232**") to either O2 serial port 1 or 2.

The 2 serial ports on the O2 are the two 9-pin male D-connectors on the rear of the unit. They are clearly labeled with a "1" and a "2". **Diaquest strongly recommends using O2 serial port 2 whenever possible with DQ-TimeCoder.** Additional software configuration of the O2 is necessary when serial port 1 is used.

If serial port 1 is used, the user *must* disable the **getty** running by default on this serial port. This is done by editing the `/etc/inittab` file. You must be logged in as "**root**" to edit this file. Open `/etc/inittab` in your favorite editor (e.g. **vi** or **jot**), and search for the line:

```
t1:23:respawn:/sbin/getty ttyd1 co_9600      # alt console
```

Copy this line to archive it, and paste a duplicate of the line above or below it. Comment one line out by adding a "#" at the beginning. Change the other (active) line to read:

```
t1:23:off:/sbin/getty ttyd1 -N co_9600  # alt console
```

Note that "**respawn**" is changed to "**off**", and a "-N" is added. Reboot the O2 to make these changes active.

## Video Cable Hookup

Proper video cabling is important for ensuring proper frame accurate results. Also be sure that the switch settings on your video equipment are correct (see the Appendix for recommended settings for various popular machines). The cabling setup is generally as follows.

For capturing from the video source machine into the computer: connect the video and audio outputs of the video source machine to the appropriate video and audio inputs on the O2; and connect the video and audio outputs of the O2 to a monitor.

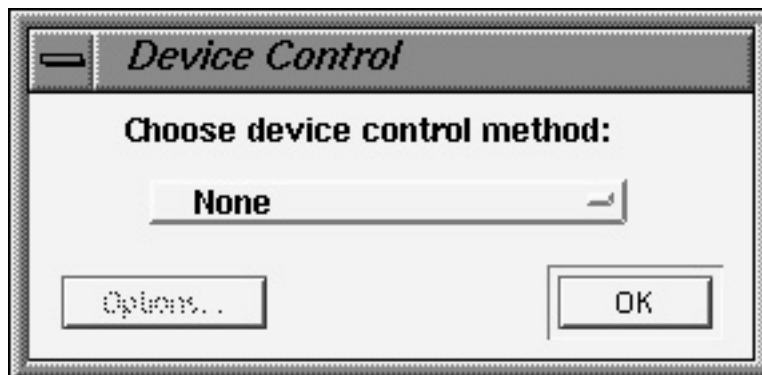
For recording from the computer out to a video recorder: connect the video and audio outputs of the O2 to the appropriate video and audio inputs on the video recorder; and connect the composite video output of the O2 to the Reference Video Input on the video recorder.

## CREATING MOVIES WITH DQ-TIMECODER FROM WITHIN PREMIERE

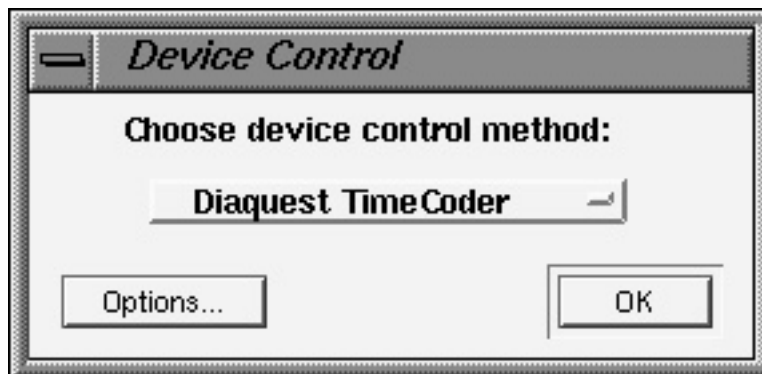
Follow the instructions in your Adobe Premiere manual. In particular, see the section *Capturing with device control*.. The basics are as follows:

### Configuring Premiere for DQ-TimeCoder

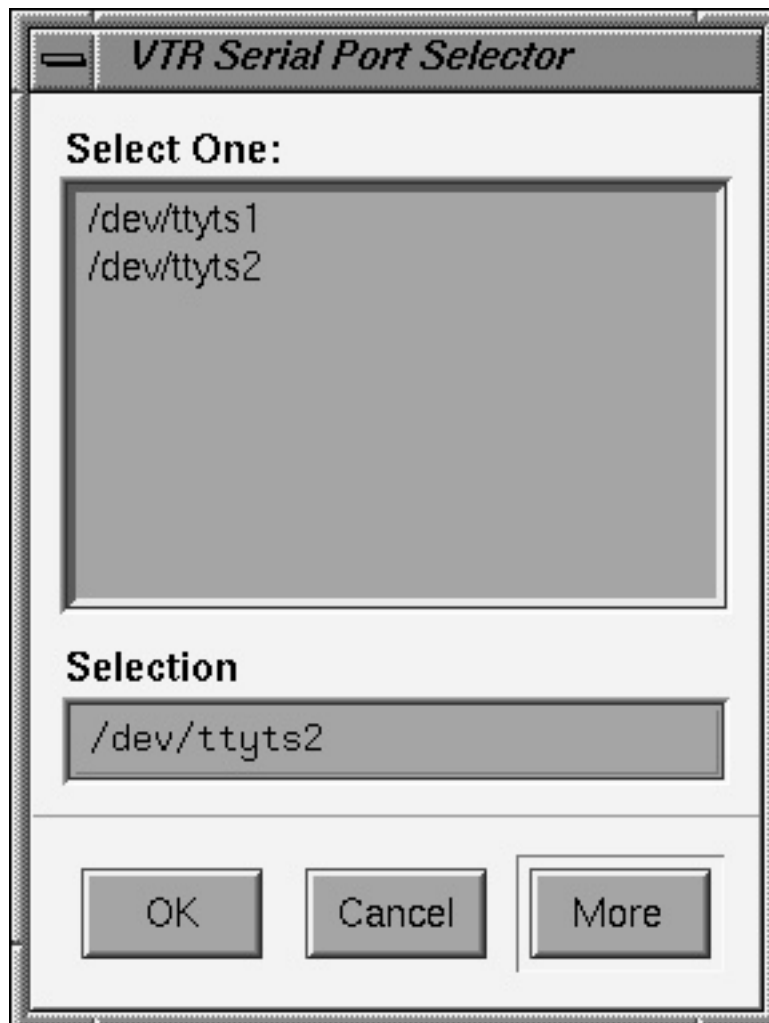
To initially configure Premiere to use **DQ-TimeCoder** device control, select **File/Preferences/Device Control...** inside Premiere. A *Device Control* window will open.



Click in the selector box in this window and choose **Diaquest TimeCoder** from the list.



Click the **Options...** button to open the **VTR Serial Port Selector** window.



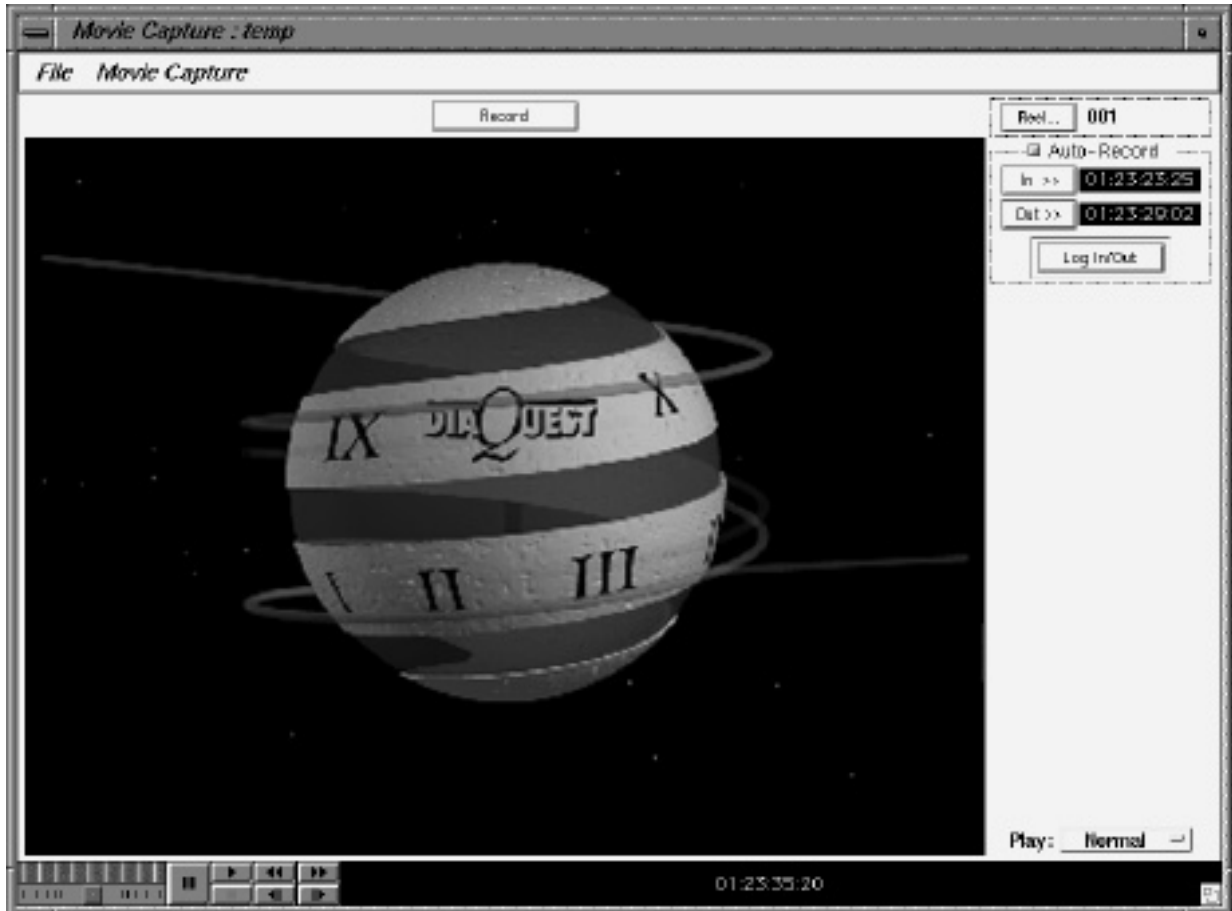
Choose **/dev/ttyts1** (serial port 1) or **/dev/ttyts2** (serial port 2) from the list. This is the O2 serial port which will be used for video machine communications with **DQ-TimeCoder**.

**Note:** For reasons explained above, Diaquest recommends using serial port 2, i.e. **/dev/ttyts2**.

Before *clicking* the **OK** button in the **VTR Serial Port Selector** window, make certain the **DQ-TimeCoder Cable** is properly connected to the selected serial port, the video machine is turned ON and in remote control mode, and a time coded tape is in the video machine. Otherwise, **DQ-TimeCoder** will report an error when attempting to connect with the video machine.

## Frame Accurate Movie Capture

Once Premiere is configured to use **DQ-TimeCoder**, select **Movie Capture** under the **File** menu. A **Movie Capture** window appears on your screen as does a **Movie Capture** menu bar item.



**Note:** If **DQ-TimeCoder** is not selected properly, only the **Record** button and the video image are displayed in the **Movie Capture** window (see the **Introduction**). The machine control buttons, time code location register, **In** and **Out** point registers, the **Reel**, and **Log In/Out** buttons only appear when **DQ-TimeCoder** is used for device control.

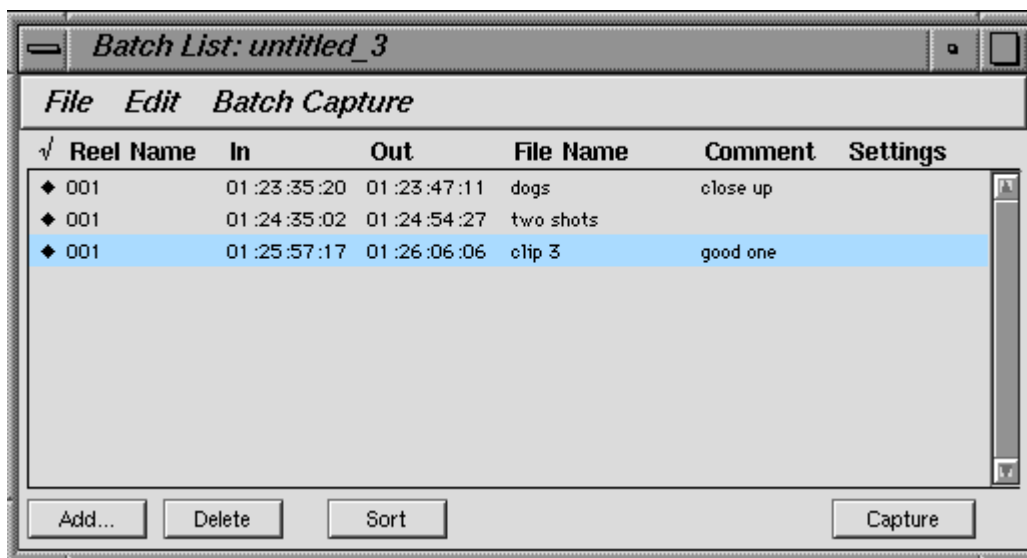
To record a movie, set the desired **In** and **Out** points, check **Auto-Record**, and *click* the **Record** button. The **In** and **Out** points can be set manually, or by placing the machine in play mode and *clicking* the **In** and **Out** buttons at the desired locations.

**Note:** Premiere uses the word **Record** to refer to the process of image capture or image digitizing. This manual generally uses that same terminology.

## Logging and Batch Capture

Premiere also provides the capability to log individual clips, create a batch capture list, and then batch capture the list at a later time.

To batch capture, select the desired **In** and **Out** points for a clip, and then *click* the **Log In/Out** button rather than the **Record** button. This generates a batch capture list, and loads the current clip points into it. Continue adding clips to this list until complete.



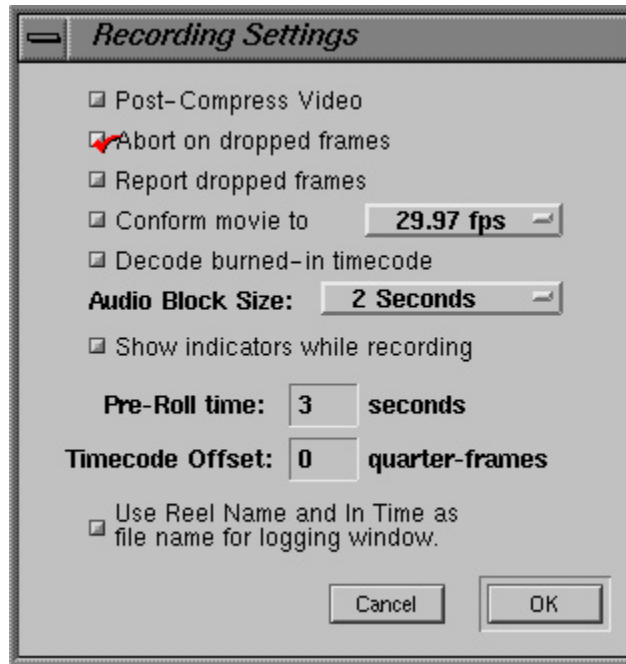
This list can be sorted by reel name and time code numbers to make batch capturing more efficient. *Click* **Capture** in the **Batch List** window to start the batch capture process.

## Capture Settings

Before attempting either a single or a batch capture, use the **Recording Settings...** and **Video Input...** items under the **Movie Capture** menu bar inside the **Movie Capture** window to properly set the video input, video format, compression and other relevant options.

Use the **Video Settings...** menu to set your video source, video input settings and compression.

Use the **Recording Settings...** menu for setting tape pre-roll times and for calibrating your Premiere setup for use with **DQ-TimeCoder** (see below).



## CALIBRATING YOUR SETUP

Videotape recorders and players (VTRs) need to roll tape for a certain amount of time before a stable recording or playback can be produced. This is called videotape **preroll**. Virtually all tape based video edit or source machines use preroll. You can experiment with the length of acceptable preroll times by adjusting the **Pre-Roll time:** register in the **Recording Settings** window. Some video machines can produce reliable results with 1 or 2 second prerolls, while other machines require much longer prerolls for accurate results. We recommend a minimum preroll of 3 seconds.

In addition, before doing any time code accurate recording, make sure that the Premiere time code clock and the **DQ-TimeCoder** time code readings are in agreement. This calibration is necessary because of variations in the time it takes to initiate the recording process from one configuration to another.

To calibrate the capture accuracy of your system, connect the "super" or "monitor" output of your video machine to your capture card input. Enable "on-screen display" on the video machine. Time code from the video machine will then be superimposed over the video.

**Note:** If your video machine does not have this feature, use a tape that has a time code "window dub" recorded on the tape.

Now record a short (e.g., 3 second) segment. Compare the time code reported by Premiere with the time code reported by the superimposed time code or the window dub.

To calibrate Auto Record accuracy, adjust the **Timecode offset:** register in the **Recording Settings** window until the two sets of numbers are the same. For example, start with the **Timecode offset:** register set to **0** (default). Record a short segment. A clip window will open for the newly captured clip. Click the right arrow key or step forward key a few times to advance the clip. Compare the time code reported on the tape as measured by the time code superimposition or window dub with the time code reported by Premiere.

**Note:** You may find that the first two *clicks* increment the green Premiere time code numbers, but not the movie clip. If so, ignore the first two time code increments and start the time code comparison once the movie clip starts to advance. Repeated video frames at first frame of a clip may occur in Premiere.

Assume that the time code reported by the tape is 2 frames less (earlier) than the time code reported by Premiere. In this case, adjust the **Timecode offset:** settings by +8 quarter-frames (i.e., 2 frames is 8 quarter frames). This newly adjusted setting will provide frame accurate results most of the time.

For greater precision, you need to do additional calibration. This is necessary because there are actually four or five quarter-frame settings which may report the correct time code. For best results, you should select the *midpoint* of these settings. If your setting is on the edge, the reported time code may at times be accurate and at times one frame off. This is a Premiere issue and not related to **DQ-TimeCoder**. To find the exact midpoint, increment the **Timecode offset:** setting until there is a one frame discrepancy between the tape time code and the Premiere time code display. Then, decrement the **Timecode offset:** setting until there is a one frame discrepancy in the other direction. Place a value in the **Timecode offset:** register that is midway between these two settings. This will always provide frame accurate results.

Premiere can also capture without **Auto Record** checked ON in the **Movie Capture** window. In this case, the user will be responsible for starting and stopping the capture manually, or "On-Fly". Obviously, this kind of capture will not be able to start and stop frame accurately. However, the time code of the source tape will still be captured into Premiere along with the video. This kind of non-Auto Record capture requires a different kind of calibration.

To calibrate non-Auto Record captures, click the **Options...** button in the initial **Device Control** configuration window (**File/Preferences/Device Control...**). The **On-Fly Record Calibration** window will open.



Unlike the **Timecode offset** register in the **Recording Settings** window (which is in quarter-frame increments), the register in the **On-Fly Record Calibration** window is adjusted in full frame increments.

In a procedure similar to that described above for Auto Record captures, adjust the register in the **On-Fly Record Calibration** window until the time code of captured and source video matches.

Note: On-Fly video captures cannot always ensure 100% frame accurate corresponding time code captures in this version of Premiere. Diaquest therefore recommends using Auto Record captures to precisely correlate time code with video at this time.

## TIME CODE TUTORIAL

Time code is a recordable stream of electronic data that provides a unique number or address for every frame of video on a tape. Time code is expressed in the format HH:MM:SS:FF, where H=hours, M=minutes, S=seconds and F=frames. Time code uses a standard 24 hour clock format, with the addition of the Frames field.

The industry standard for NTSC video (used in the U.S., Japan, and others) is SMPTE time code; for PAL video (used in Europe, S. America and others), it is EBU time code. NTSC and SMPTE time code use a frame rate of approximately 30 video frames per second; PAL and EBU time code use 25 video frames per second.

NTSC video is conventionally thought of as running at 30 frames per second. However, in actuality it runs at 29.97 frames per second. This one frame per thousand average difference may cause some confusion for Premiere users. For video professionals, the discrepancy has led to the use of two types of SMPTE time code: *Drop Frame* and *Non-Drop Frame*.

Drop Frame (DF) is used in some broadcast and related applications where precise control over program length is desirable. Drop frame uses a scheme where certain time code numbers are skipped or "dropped" (2 frames per minute, except tens of minutes) to keep elapsed SMPTE and clock time fairly equal.

Non-Drop Frame (NDF) SMPTE time code is more commonly used. The advantage is that all time code locations actually exist and time code numbering is continuous. There are no nonexistent or "dropped" frames as with DF time code. The disadvantage is that it actually takes a fraction longer than one second to play 30 frames of video, so over the course of a long program, clock time and SMPTE time code time will diverge.

**Note:** This is not an issue in PAL, which runs at precisely 25 frames per second.

## **TROUBLESHOOTING AND TECHNICAL SUPPORT**

**DQ-TimeCoder** has extensive error checking reports to prompt you to correct various setup errors (e.g., if your machine is set to local rather than remote control, **DQ-TimeCoder** will report an error indicating this problem). If you receive a **DQ-TimeCoder** error message dealing with your serial port, video machine or time code, believe it and attempt to correct the problem!

Assuming you have followed the instructions in this manual, most other problems or questions deal with using Premiere or your SGI O2 and are discussed more thoroughly in their manuals.

If you are unable to find an answer to your **DQ-TimeCoder** related question, or unable to solve a problem, e-mail **support@diaquest.com** or fax (510) 526-7073. Diaquest Technical Support. Office hours are Monday through Friday from 8:30 a.m. to 5:30 p.m. Pacific Time. Support charges may apply.

## Appendix

# Video Machine Settings

Below are details of front and rear panel settings, internal switch settings and menu setups for the principal video machines presently supported by DQ-TimeCoder.

Please contact Diaquest for information on your particular machine if it is not discussed below.

### RS-422 Controlled Video Recorders (or Players)

#### **U-Matic / U-matic SP**

Sony BVU-800, BVU-820, BVU-850 & BVU-870	A-2
Sony BVU-950 (BVU-900, BVU-920)	A-3
Sony VO-9850 (VO-9800)	A-3

#### **Betacam / Betacam SP**

Sony BVW-40, Ampex CVR-40 (BVW-35)	A-4
Sony BVW-75, BVW-70, Ampex CVR-70, CVR-75 (BVW-65, BVW-60)	A-5
Sony PVW-2800 (PVW-2650, PVW-2600)	A-5
Sony UVW-1800 (UVW-1600)	A-6

#### **Sony 1"**

Sony BVH-2000 & BVH-2500	A-6
Sony BVH-3000 & BVH3100	A-8

#### **Digital**

Sony DVR-1000	A-9
Sony DVR-10	A-9

#### **M II**

Panasonic AU-60	A-10
Panasonic AU-650	A-10
JVC KR-M 860	A-10
Panasonic AU-65 (AU-63, AU-62)	A-11
Panasonic AU-35 (AU-33, AU-32)	A-11

#### **SVHS**

Panasonic AG-7750 (AG-7650)	A-12
Panasonic AG-DS850 (AG-DS840)	A-13
JVC BR-S822 (BR-S622)	A-14
JVC BR-S800 (BR-S500)	A-14
Sony SVO-5800 (SVO-5600)	A-15
Sony SVO-9600	A-16

#### **Hi-8**

Sony EVO-9850 (EVO-9800)	A-16
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## U-MATIC / U-MATIC SP RECORDERS (PLAYERS)

### **SONY BVU-800, BVU-820, BVU-850 & BVU-870**

The BVU-800 series must have a BK-806 time code generator/reader board installed. This is a TC-20 board and it displays time code on the front panel.

#### **FRONT PANEL SETTINGS**

TBC/Norm/Edit	Norm (without external TBC); or TBC (with external TBC)
PB/PB/EE	PB/EE
Remote 1(9P)/Remote 2(36p) (9P)	Remote 1(9P)
Remote/Local	Remote

#### **REAR PANEL SETTINGS**

Servo Lock Ext/Auto	Auto
Framing Servo <i>off/on</i>	<i>on</i> (for NTSC)
Color Framing <i>off/on</i>	<i>off</i> (for PAL)

#### **UNDER FRONT PANEL SETTINGS**

Remove the **SY-37** board under the front panel, and check the settings.

#### **SY-37 board**

Dip switch S5 should have 1 *off* and all others *on* for NTSC. All should be *on* for PAL.

Dip switch S2 should have 1 *off* and all others *on*.

The number above IC7 label should be 2-6 or 2-8 for BVU-800 and 2-2 or 2-4 for BVU-820.

Tape should be blacked using the internal time code board. It is important that time code be properly phased to video. It is preferable to use non-drop frame time code, but drop frame code is acceptable.

#### **TC20**

SW 1 - 1	<i>on</i>	NDF
SW 1 - 2	<i>off</i>	
SW 1 - 3	<i>on</i>	Error bypass
SW 1 - 4	<i>off</i>	
SW 2		TC
SW 3		INT TC

## SONY BVU-950 (BVU-900, BVU-920)

The BVU-900 series must have a BKU-901 time code generator/reader board installed. The TBC-5 internal TBC board is recommended.

### FRONT PANEL SETTINGS

Remote/Local	Remote
CTL/TC/Dial	TC
Framing light	light <i>on</i>
Time code light	<i>on</i> in play mode
Tracking control	<i>center</i> position

Set the switch to TC, then select Local, then select Remote.

**Note:** TC must be selected in Local mode to be effective

### UNDER FRONT PANEL SETTINGS

Int TBC Off/On/Auto	On
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### REAR PANEL SETTINGS

Framing Off/On	On (NTSC)
Color Framing Off/On	Off (PAL)

**Note:** PAL color framing on can cause flashes.

Servo Lock Ext Sync/Auto	Auto
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### INTERNAL FUNCTIONS

#### BKU-901 TBC-5 Board

Set S402 switch to 0H to allow software controlled TBC bypass when recording when the TBC switch is *on*.

## SONY VO-9850 (VO-9800)

The VO-9800 series must have a BKU-705 or BKU-703 time code board installed.

### FRONT PANEL SETTINGS

Mode Select TBC/Normal/Edit	Normal (without external TBC); or TBC (with external TBC)
CTL/TC/Dial	TC
Memory On/Off	Off
Skew	Center
Remote/Local	Remote

## **BETACAM / BETACAM SP RECORDERS (PLAYERS)**

**Note:** All the following Betacam component recorders/players require an RS-170A (or PAL broadcast) sync generator for reliable color framing and color playback.

### **SONY BVW-40, AMPEX CVR-40 (BVW-35)**

#### **FRONT PANEL SETTINGS**

Mode Select Norm/Edit	Norm
Rem1 (9P)/Norm/Rem2	Rem 1 (9P)
PB/PB/EE	PB/EE

#### **REAR PANEL SETTINGS**

Ref Auto/Ext	Ext
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**Note:** There should be black burst at the Ext Ref connector. Sync at the Ext Ref causes loss of color in NTSC play.

#### **SY-4 board switches**

These settings are for reference; they were taken from a machine that works.

<b>S1</b> ON	<b>S2</b> OFF:NTSC ON: CCIR (PAL)	<b>S6</b> OFF
<b>S3</b> 1 on 2 off 3 off 4 off 5 on 6 off 7 off 8 off	<b>S4</b> 1 off 2 off 3 off 4 off 5 off 6 off* 7 off 8 off	<b>S5</b> 1 off 2 off 3 on 4 off 5 off 6 off 7 off 8 off

\* should be off for frame accuracy

**SONY BVW-75, BVW-70, AMPEX CVR-70, CVR-75  
(BVW-65, BVW-60, CVR-65, CVR-60)**

**FRONT PANEL SETTINGS**

Rem1 (9P)/Norm/Rem2	Rem 1 (9P)
PB/PB/EE	PB/EE
CTL/TC/U-BIT	TC

**INSIDE FRONT PANEL SETTINGS**

CAPSTAN LOCK 2/2-4/4	2FD
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**UNDER FRONT PANEL SETTINGS**

VITC/AUTO/LTC	LTC (or AUTO)
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**REAR PANEL SETTINGS**

Ext Ref Auto/Ext	Auto
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**SONY PVW-2800 (PVW-2650, PVW-2600)**

**FRONT PANEL SETTINGS**

Remote/Local	Remote
PB/ PB/EE	PB/EE
CTL/TC/U-BIT	TC

**UNDER FRONT PANEL**

VITC/AUTO/LTC	LTC (or AUTO)
TC EXT/INT	INT
CAPSTAN LOCK	2FD *

**SYSTEM SETUP MENUS**

106 CAPSTAN LOCK	0 - USE FRONT PANEL SWITCH * or 1 - ALWAYS USE 2FD
305 SYNC GRADE	0 - EDIT WITH EXACT PRECISION
309 SERVO REF SELECT	0 - AUTO
501 STILL TIMER	14 - 1 MINUTE (or greater)
701 TBC DELAY	1 - VIDEO

## **SONY UVW-1800, UVW-1700 (UVW-1600)**

### **UNDER FRONT PANEL**

REMOTE/LOCAL	REMOTE
CTL/LTC/UB	LTC
TC INT/EXT	INT

### **SYSTEM SETUP MENUS**

OPERATION	
PLAY START	5 FRAME DELAY
VIDEO CONTROL	
TBC DELAY	VIDEO

## **SONY 1" RECORDERS**

### **SONY BVH-2000, BVH-2500**

#### **FRONT PANEL SETTINGS**

CF Lock green lamp *on* when playing tape

TIME CODE/TIMER1/TIMER2	TIME CODE
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Servo Ref Ext/Auto/Video	Video
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This is important for color framing. You can use ext reference, but color framing then becomes harder to maintain reliably.

#### **INTERNAL SETTINGS**

##### ***SR-15 board***

Check and adjust SC phase if necessary at start of each session.

##### ***CD-17 board***

CAP LOCK 2F/4F	4F
S3-4 TIMER COMP ON/OFF	ON

##### ***TC-14 board***

TC/AUTO/VITC	TC (Important!)
REC/FREE/RUN	RUN
TC/UB	TC
PRESET/REGEN	REGEN
TC/TCUB/UB	TC
CHAR ON/OFF	OFF



## **SONY BVH-3000, BVH-3100**

The general outlines on previous pages for the BVH-2000 also apply for the BVH-3000/3100.

Use the front panel to setup linear time code T\*R (not VITC) as the displayed time code. This is not software selectable in the 3000 series. This must be checked before each edit session as no warnings or error messages are generated.

Be sure to check both the Ref and Tape SCH phase indicators before each session.

When using Setup, use the jog dial to select the desired parameter.

### **To select remote use the Setup sequence:**

SETUP toggle CUE SEL off

SETUP toggle Auto on

SETUP C jog to Select Set Set

jog to S01 Set to RM2A or RM2B Set

SETUP C jog to Select Set Set

jog to S41 Set jog to 4F for NTSC, 8f for pal

Setup C jog to Select Set Set

jog to S53 Set jog to TC Setup

### **To find out the ROM version:**

SETUP C jog to Test Set jog to T17

Set jog to Version Set

Defaults work for the other settings.

## **DIGITAL TAPE RECORDERS**

### **SONY DVR-1000**

The SONY DVR-1000 uses menu keys on the front panel.

Press **HOME** to get the **HOME** menu.

The following sequences are initiated from this menu.

#### **HOME**

CONTROL=REMOTE (do this last)

SETUP -> INTERFACE -> 422A

REMOTE=SONY MODE 3

use REMOTE 3 IN/OUT connector

SETUP -> SERVO

EXT REF=ANALOG 4FLD RELOCK

SETUP -> EDIT

TIMING=FLD1 PREROLL=5SEC POSTROLL=2SEC REACTN=0 DLYSTART=0

TC&CHR

SOURCE=INT TC TC REGEN=ON ASTC=ON TCR=AUTO

Use AUTO EDIT from HOME to monitor editing progress.

If VDLY COMP is locked off in LOCAL mode, go back to remote control and send a "stop" command from the Diaquest controller.

### **SONY DVR-10**

The SONY DVR-10 setup is similar to the DVR-1000.

#### **HOME**

CONTROL=REMOTE (do this last)

SETUP -> 422A

REMOTE=SONY MODE 3

use REMOTE 3 IN/OUT connector

SETUP -> **HOME**

CPRS=NORMAL color processor

CAP LOCK=4F LOCK

SETUP -> AUTOED

W/PLYR=OFF PREROLL=5SEC POSTROLL=2SEC TIMING=F1 CAPLOCK=4F

## **MII RECORDERS (PLAYERS)**

**Note:** All the following MII component recoders/players require an RS-170A (or PAL broadcast) sync generator for reliable color framing and color playback.

### **PANASONIC AU-650 MII**

#### **JVC KR-M 860**

#### **PANASONIC AU-60**

The Panasonic MII works like a BVU-800. Be sure to pay close attention to color framing.

On the front panel, set the HEAD switch to R/P, the LTC/VITC to LTC (preferred).

Under the front panel set LTC UB switch to OFF. Set REGEN/PRESET to PRESET.

On the L6 board set SW3-5 to ON. Remove the top cover to expose the L6 board. The SW3 is at the top to the front. The switch can be set with a pencil without removing the board. The switch has 8 positions, so push the fourth position down from the top toward the rear of the machine. This sets the machine ID from BVU-800 to AU-650. This change of switch setting is recommended.

**JVC KR-M 860U Note** Reports indicate that the JVC KR-M 860U has the same interface as the PANASONIC AU-650; and therefore, the same information applies.

**AU 60 Note** The set-up for the AU-60 is the same as for the AU-650 (see above). Note, however that the user should be careful when striping their tapes with time code. The user should make sure that time code is properly applied to the tapes. It may be necessary to disconnect the RS-422 connection during the tape striping process.

Contact Diaquest if you encounter problems.

**PANASONIC AU-65, AU-66 (AU-62, AU-63)**

**PANASONIC AU-35 (AU-32, AU-33)**

**Note:** These machines are all quite similar, and are treated together here.

**FRONT PANEL SETTINGS**

TIMECODE INT/EXT	INT
TC/UB	TC
LTC/VITC	LTC
DF/NDF	NDF

**UNDER FRONT PANEL**

SYNC INT/EXT/AUTO	AUTO
CF 2FD/4FD	2FD
VIDEO IN-OUT STD/AUTO	AUTO
REMOTE 50P/9P	9P
REC INHIBIT ON/OFF	OFF
PLAY DELAY	0

**SYSTEM SETUP MENUS**

1001 STILL TIME SELECT	04 1 MINUTE (OR GREATER)
1011 STD/NON STD SELECT	01 NON STD (OR FRONT SWITCH)
3004 9P DEVICE TYPE SELECT	02 M2 ID

There should be black burst or video at the Ref Video In connector. Sync at the Ref Video In connector causes loss of color in Composite playback.

## **S-VHS RECORDERS (PLAYERS)**

### **PANASONIC AG-7750 (AG-7650)**

The AG-7750/7650 requires the optional AG-F700 time code reader/generator to be installed.

#### **FRONT PANEL**

CONTROL LOCAL/REMOTE	REMOTE
CTL/TC/UB	TC
LTC/AUTO/VITC	LTC (or AUTO)
MEMORY Auto Stop/Off/Auto Cut Out	OFF
TBC MODE	LOCAL
MODE EDIT/PLAY	PLAY *very important

#### **UNDER DOOR IN FRONT PANEL**

AUDIO CH2/LTC	LTC
EE or PB/EE	PB/EE
SYNC SELECT NORM/EXT	NORM
INT / EXT	INT

#### **DIAL MENU**

3003 REMOTE OPERATION	00 9P
3002 9P DEVICE TYPE	01 S-VHS ID
5002 TC SOURCE	01 LTC (recommended)

SERVO LOCK light & FRAME LOCK light MUST BE ON when playing.

We recommend the use of audio channel 2 for time code (LTC).

**PANASONIC AG-DS850, AG-DS550 (AG-DS840)**

**FRONT PANEL SETTINGS**

DIAL MODE	SEARCH
MEMORY	OFF
CONTROL	REMOTE
CTL/TC/UB	TC
LTC/AUTO/VITC	LTC (recommended)

**SYSTEM SETUP MENUS**

1001 SYNC	00- NORMAL
1002 STILL TIME	1 MINUTE (or greater)
2004 PB/EE SELECT	00- PB/EE
2015 TBC REMOTE	00- LOCAL (if you do not have Panasonic Remote Control Unit)
3006 AUDIO CH2	01- LTC
5002 9P DEVICE TYPE SELECT	01- S-VHS ID
6005 FRAME SERVO	01- ON
7001 TC INT/EXT SELECT	00- INT

## **JVC BR-S822 (BR-S622, BR-S522)**

The optional JVC SA-R22 time code reader/generator must be installed in the BR-S822 for proper RS-422 serial operation.

### **FRONT PANEL SETTINGS**

REMOTE SELECT	9-PIN
COUNTER SELECT	TC

### **UNDER FRONT PANEL**

TBC ON/OFF	ON
SYNC SELECT	VIDEO
VIDEO OUT	NORM
INT/EXT	INT
AUTO/LTC/VITC	LTC (recommended)

### **SYSTEM SETUP MENUS**

000 FRAME SERVO	01 ON
001 AUTO H PHASE	00 OFF
206 AUD-2/LTC-2	01 LTC
306 LONG PAUSE	01 ENABLE
307 LONG PAUSE TIME	03 1 MIN (OR GREATER)
313 PB•PB/EE	00 PB/EE
317 9 PIN DEVICE TYPE ID	00 JVC SVHS-1
353 SYNC GRADE	00 ACCURATE

The optional JVC SA-T22 Time Base Corrector Board is recommended.

Diaquest has tested the BR-S822 with the following JVC ROM levels:

900 SYSCON ROM	ver. 08 (or 91)
901 MECHACON ROM	ver. 13
902 OPERATION ROM	ver. 06
903 SLOT ROM	ver. 00 NO CONNECT
AVM/OS ROM	ver. 07

## **JVC BR-S800 (BR-S500)**

The optional JVC SA-K26 RS-422 serial interface is required. The optional JVC SA-N50 Time Base Stabilizer is recommended.

The BR-S800 has a special proprietary JVC time code system. While **DQ-TimeCoder** will work with or without the optional JVC SA-R50 time code board installed, it is recommended for compatibility and consistency.

### **FRONT PANEL SETTINGS**

COUNTER	TC
REMOTE	REMOTE

### **REAR PANEL SETTINGS**

TIMER	OFF
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### **SYSTEM SETUP MENUS**

000: FRAME SERVO	ON
003: SYNC SELECT	VIDEO (no TBC); or AUTO (with TBC)
004: AUTO H. PHASE	OFF
100: S-VHS SELECT	AUTO
101: EDIT SELECT	OFF
206: AUD-2/LTC	LTC (recommended)
302: AUTO REC. PREROLL	ENABLE
305: REPEAT REC.	DISABLE
317: 9PIN DEVICE ID	JVC S-VHS 1

## **SONY SVO-5800 (SVO-5600)**

### **FRONT PANEL SETTINGS**

REMOTE/LOCAL	REMOTE
CTL/TC/U-BIT	TC
LTC/AUTO/VITC	LTC (or AUTO)
EXT/INT	INT
TBC CONTROL	LOCAL

### **SYSTEM SETUP MENUS**

OPERATION FUNCTION (1000) PLAY START (1004)	05 FRAME DELAY (05)
SERVO CONTROL (4000)	

## **SONY SVO-9600**

The SVBK-140 RS-422 Interface Board with the SVBK-160 Time Code Board must be installed in the SVO-9600.

### **FRONT PANEL SETTINGS**

TIMER	OFF
CTL/MENU	CTL
PROGRAMMED OPERATION	OFF

### **UNDER FRONT PANEL**

EDIT	ON
FRAMING	ON
U-BIT/TIME	TIME
EXT/INT	INT
MODE SELECT	EDIT
REMOTE/LOCAL	REMOTE
AUDIO CH2 SELECT	TIME CODE

### **SYSTEM SETUP MENUS**

SEn	SENSOR RECORDING	OFF
Stt	STILL TIME	5

## **HI-8 RECORDERS (PLAYERS)**

### **SONY EVO-9850 (EVO-9800)**

#### **FRONT PANEL**

MODE SELECT	NORMAL
REMOTE/LOCAL	REMOTE

#### **UNDER FRONT PANEL**

TIME CODE SWITCHES	INT
TBC CONTROL	LOCAL