Formac

studio tvr

Watch, record and edit
TV on your Macintosh



User's Guide

Includes Installation, Setup
and Troubleshooting

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1. Quick Start

1.1. Congratulations

Congratulations on purchasing your Studio TVR, the world's only FireWire TV recording solution based on the high-quality Digital Video (DV) format. With Studio TVR you can:

> Watch up to 125 TV channels in a scalable window or full-screen
> Pause live TV
> Schedule recordings via the free online program guide
> Export your recordings to a regular TV or VCR
> Work creatively with Television

and much more …

1.2. What you need to get started

The Studio TVR requires a Macintosh with:
> G3 processor or higher (800 Mhz or more recommended)
> Built-in FireWire interface
> Mac OS 10.2 or later
> QuickTime 6 or higher

Your Studio TVR includes the following components:
> Studio TVR hardware
> User's Guide
> FireWire cable
> Software CD

Note: There is no power supply included with the Studio TVR as it runs bus-powered with most Macintosh. For details please check the "Troubleshooting" section.

1.3. Setting up Studio TVR

To set up your Studio TVR please follow these easy steps:

Step one: Installing the software

1) Insert the software CD into the CD drive of your computer and double-click on the CD icon that appears on your Macintosh desktop.

2) Double-Click on the "Installer" icon and follow the on-screen instructions.

Note: The software installation may require you to enter a name and password. This password is your standard Administrator password, which you created when installing OSX. If you forgot your password please check with Apple on how to retrieve it.

3) Once you have completed the installation you will find the "Formac Studio TVR" folder in the OSX Application folder. It contains the following items:

> Studio TVR application
> Studio Audiomaster application
> Studio TVR scripts

4) After the installation please restart your computer.

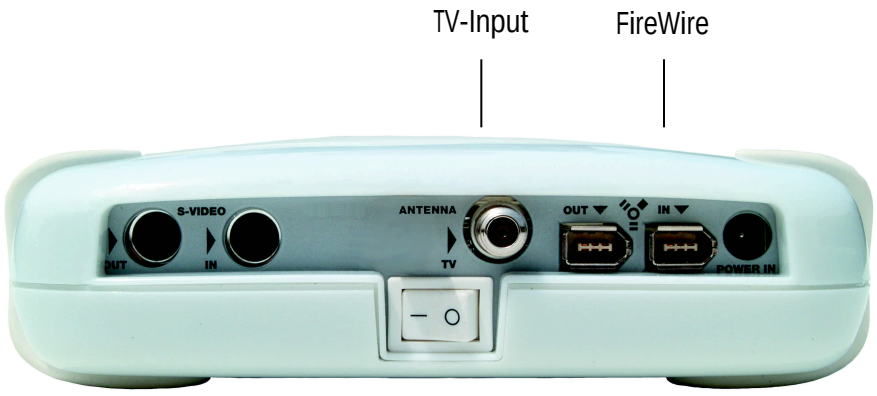
Step two: Connecting the Studio TVR

Connect your studio properly:

1) Make sure your Studio TVR is turned OFF. The power switch on the back panel of the unit must be on the "0" position.

2) Connect the FireWire cable to the FireWire port of your Studio TVR and to your Macintosh. FireWire is bi-directional so it does not matter which port you use.

3) Connect your cable/antenna (Coax) to the TV port on the backside of your Studio TVR. Make sure the cable/antenna provides a clear and strong signal (if in doubt test with a regular TV first).



4) Turn ON your Studio TVR. The green power LED and one of the mode LEDs ("a" or "d") light up.

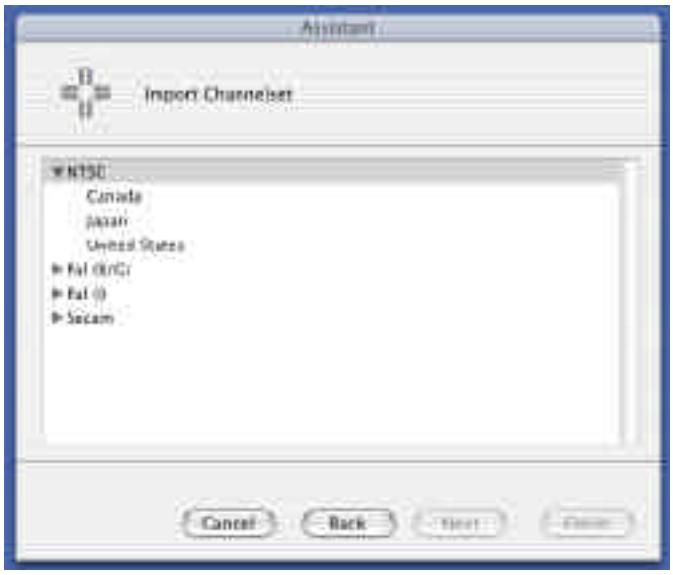
Step three: Setting up the TV functionality

1) Launch the “Studio TVR” software in your applications folder.

2) The first time you start your Studio TVR software the “Assistant” walks you through the channel set-up.

Note: If the “Assistant” does not start automatically, you can launch it from the “Preferences” menu (“Channel Setup”).

3) Choose the “Create New Channel List” option and click “Next”. The next window shows a list of video standards:



Please click on the small triangle next to your video standard and then on your country. All United States and Canadian users choose NTSC.

4) Create your channel list.



Click on the "Scan" button and the software will automatically scan and save all available antenna and cable channels. Channels that are received properly will be check-marked. These channels are later accessible through your channel list.

You can
- Fine-tune each channel by clicking on the “Adjust” button.
- Name each channel by double-clicking in the name field.
- Assign a logo to each channel (JPEG or TIFF). Simply select the channel and drag-and-drop the picture file into the field in the lower left corner of the window (marked with two arrows).
- Assign “hot keys” for up to 10 channels for fast access via the keyboard.

Note: Please make sure that you ONLY connect the FireWire cable and the coaxial cable of the antenna/cable when you scan the channel list for the first time. Once the channel list is saved you may connect other devices via the RCA or S-Video port.

5) Ready. Steady. Go!

Simply close the channel list and the TV window will appear. You are all set.

1.4. Quick reference

The TV window and its functionality:



R = Record / II = Pause Live TV / ♥ = Favorite Channel List
= Watch TV / = Movie Library / = Scheduler /
= Online Program Guide

2. Everything TV

2.1. Watching Television

1) Switching TV channels

There are different ways to switch between TVs channel:
- Use the left and right arrows in the menu bar (or on your keyboard)
- Click on the channel display to access a pull-down menu
- Click on the favorite channel list
- Use the hot keys defined in the channel set-up list

2) Changing the size of the TV window

To select a standard size for your TV window please click on the "Studio TVR Display" menu. The following sizes are available:

- Quarter Size
- Half Size
- Full Size
- DV Size
- TV Modus (full-screen)

You can also scale the window to any size and ratio by grabbing the lower right corner and dragging it diagonally.

Tip: Click on the green "+" icon to optimize the size of the TV window for your display.

Note: The TV modus uses a standard resolution of 640 by 480. To tell your computer to switch to this resolution automatically please go to the "Display options" in the "Preferences" menu and check-mark the "Switch to best screen size" option.

2.2. Pausing live Television

Pausing live TV allows you to interrupt a live broadcast at any point of time and resume watching whenever you are ready. To pause the TV show you are currently watching

1) Click on the "pause" (**II**) button in the menu bar of your TV window. The TimeShift buffer opens and the "pause" button turns into a "play" button.

2) When you are ready to resume watching simply click on the "play" button (▸).



The slider on the TimeShift Buffer shows where you are in the movie since you hit the "pause" button. Moving the slider to the right allows you to forward the movie until you have reached the actual live stream. If you want to exit the pause mode completely click on the TV icon.

Note: Pausing live TV requires your Macintosh to record the video temporarily. As the Studio TVR records in high quality DV (3.5 MB/sec) please make sure you have sufficient disk space available. Please set the TimeShift Buffer accordingly and read Chapter 5.1. "Preferences" (Record Options) for more detail.

2.3. Scheduling & Recording Television

Studio TVR allows you to record instantly or at a scheduled time in the future.

Instant recording

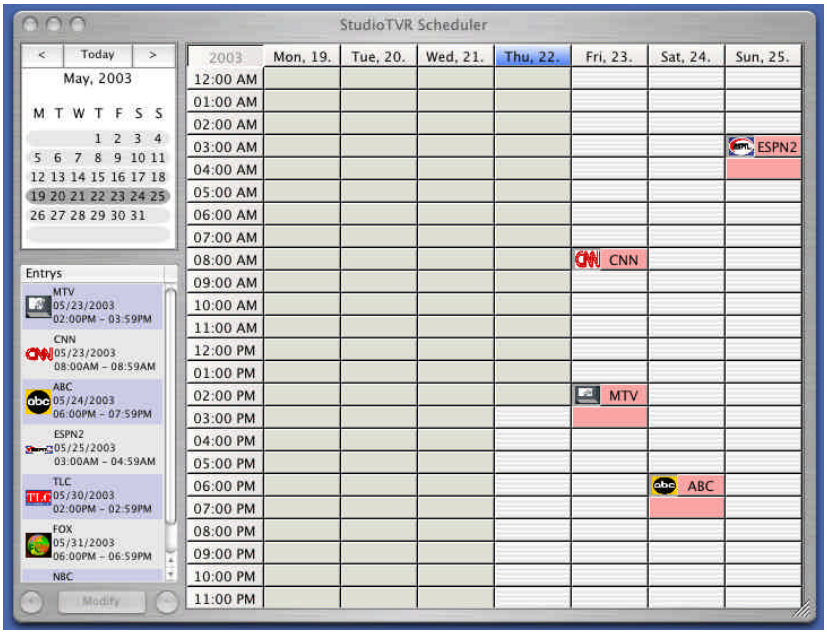
1) Click on the "record" (**R**) button in the menu bar of your TV window. A recording window opens with the time of your recording and the available disk space. The recording button starts pulsing.

2) To stop the recording click on the "record" (**R**) button again. Enter the name of the recording and click on "Save". The movie is automatically added to the movie library.

Tip: You can also record single pictures/frames. Simply click on the picture in the video and drag-and-drop it on your desktop.

Scheduling

You can schedule recordings manually or via the online program guide. Click on the "Scheduler" icon () in the menu bar of your TV window, and a calendar will open.



1) To **schedule manually** click on the day and time of your recording. The scheduling timer opens. Determine the starting & ending time, channel, and name of the recording. The "Add" button activates your schedule.

2) To use the **online program guide** (powered by TitanTV) click on the "Online Program Guide" button ( ) in the menu bar of the TV window, and the software starts your browser to access Formac's installation website. As a new user you first have to register your account with TitanTV, providing them with information such as location of your computer and type of TV service (cable, antenna, or satellite). Once registered TitanTV will provide you with your individual program guide for your region.

Note: Your Macintosh can be in SLEEP mode, but your Studio TVR must be turned on at the time of the scheduled recording. The TVR software will launch automatically.

2.4. Using the Online Program Guide

The online program guide helps you to find and schedule shows fast and efficiently. To schedule a recording

1) Search the show you want to record
2) Click on the red "PVR" button ( ) assigned to the show

The schedule is automatically downloaded into your calendar and your Studio TVR will record the show at the specified time & day.

To watch a show that is currently playing, click on the “Watch Now” Icon ( ). The Studio TVR tunes immediately to the channel you selected.

2.5. The Movie Library

All recorded movies can be accessed via the movie library ( ). Each movie is represented with a thumbnail screenshot. Double-click on the thumbnail picture and the respective movie will appear in the TV window. Click on the “play” button at the bottom of the screen to start the playback of the video. Please refer to the next chapter for the other features like cropping commercials.



3. The creative side of TV

3.1. Cropping commercials

Tired of commercials? The Studio TVR software allows you to delete undesired content conveniently:

1) Select the recording by double-clicking on the thumbnail picture

2) Use the slider and the time bar to navigate to the starting point of the scene that you wish to delete. Click on the “Select Start” button in the edit window underneath the TV window.

4) Navigate with the slider to the end of the movie sequence to be deleted. Click on the “Select End” button.

5) To delete the marked scene click on “Clear”. You can also “Copy” and “Paste” a marked movie sequence.

Note: To finally save the changes made to your recording(s) please switch back to the TV modus. The software will prompt you to confirm or decline the changes made.

3.2. Exporting and converting movies

The Studio TVR provides three exporting options for your recordings:

1) Export to Studio

This feature allows you to export your movie via the RCA (Composite) or S-Video outputs of the Studio TVR to any external device such as a TV or VCR. To export a recording, connect a TV or VCR to the outputs of the Studio TVR and click on the “Export to Studio” button. To start the playback click on the “Start” button in the VideoOut window.



2) Export to QuickTime

All recordings are originally in native DV and can be converted to any QuickTime format to ensure compatibility with other software applications. Please refer to Apple’s information on QuickTime for more details.

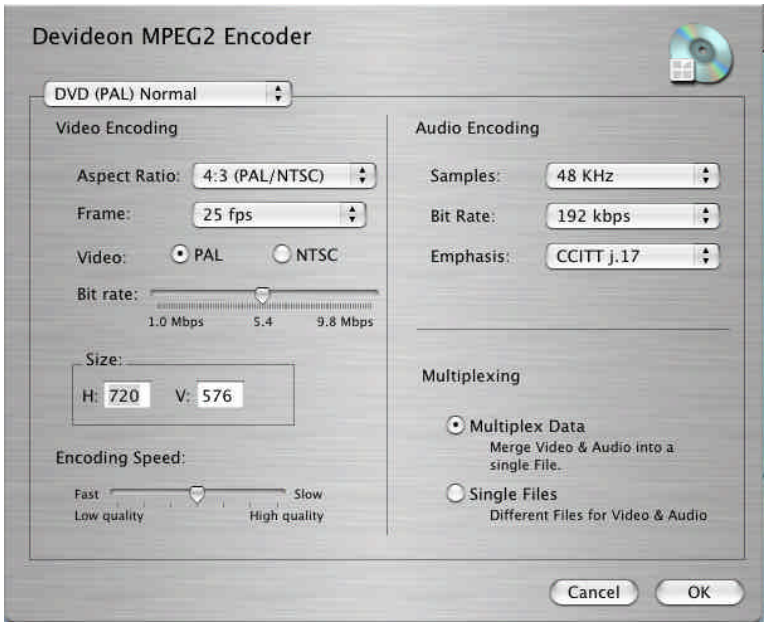
3) Export to MPEG2

The Studio TVR software incorporates Formac’s proprietary MPEG2 software encoder. MPEG2 is the format required for DVD creation. To burn your movies on DVD or CD:

A) Select the movie to be encoded to MPEG 2

B) Click on the “MPEG” Icon

C) Adjust the settings of the MPEG2 Encoder:



Format: US and Canadian customers please choose “DVD (NTSC) Normal”, “DVD (NTSC) High Quality” or “SVCD (NTSC)”.

Aspect Ratio: For recordings with the Studio TVR please choose the 4:3 ratio.

Frame rate: For NTSC recordings please choose 29.97 fps. PAL recordings require 25 fps.

Video: US and Canadian customers please choose NTSC.

Bitrate: The higher the bitrate, the better the encoding quality, and the more time it takes for the encoding. Very high and low bitrates might affect the compatibility of the created DVD.

Size: NTSC recordings should be encoded with 720 by 480.

Encoding speed: The faster the encoding, the lower the encoding quality – and vice versa.

Audio Encoding: To ensure maximum compatibility please choose a 48 Khz sample rate and a bitrate of 192 kbps. The Emphasis should be on “CCITT j.17”.

D) Adjust the settings and click on “OK” to start the encoding. A small time bar next to the thumbnail displays the encoding progress.

E) When the encoding is finished you can burn the video on DVD or SVCD with Formac’s devideon superdrive (optionally available).

3.3. Editing TV: Integration with Apple’s iMovie 3

Studio TVR records in native DV and recordings can be edited in any application that supports the DV format. Due to its popularity Formac provides special settings for Apple’s iMovie 3 (Preferences > iMovie options).



Show Remote Control: Opens software remote control when iMovie is launched. Switch channels and record TV directly in iMovie.

Configure on reconnect: Video and audio settings are optimized for iMovie.

Tip 1: Click on the yellow “-“ icon to make the remote control disappear.

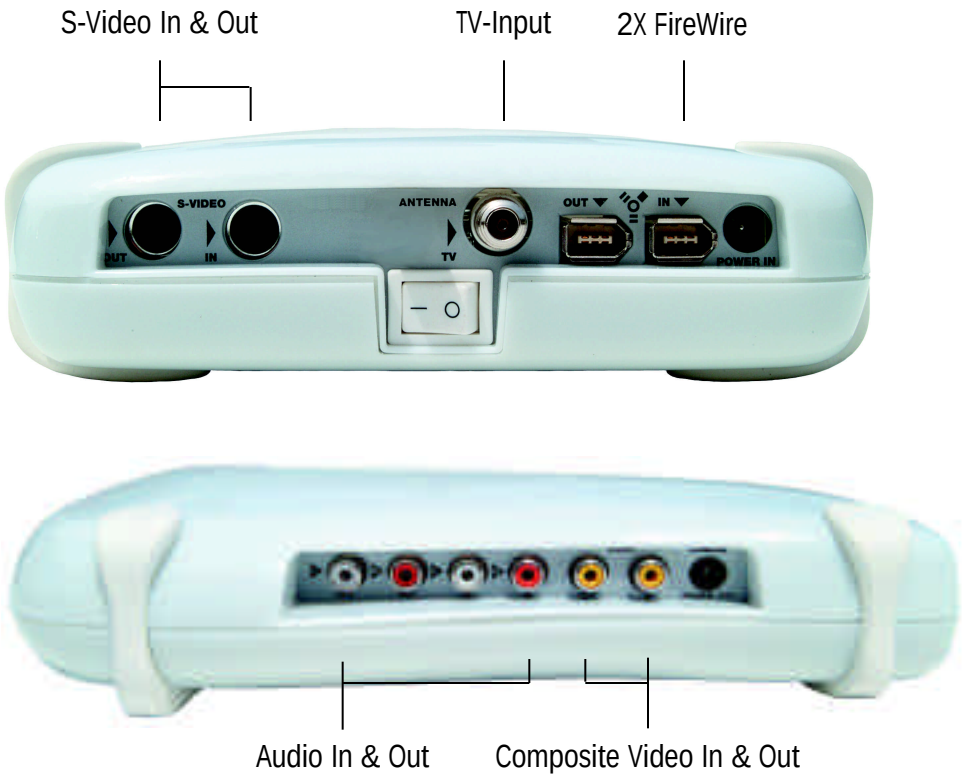
Tip 2: Movies recorded with Studio TVR can be imported directly into iMovie. Make sure the “Record Options” in the “Preferences” are set to “DV Movie”. Open iMovie and drag-and-drop the video files in the movie clip section.

Note: The iMovie 3 features of the Studio TVR are limited to units with a firmware version 1.06 or higher (you can check your firmware under preferences > TV/FM-tuner info).

4. Using Studio TVR as a media converter

4.1. Recording video to and from external devices

The Studio TVR also converts analog media to digital, and vice versa. The following inputs and outputs are available:



The LEDs on the front of the Studio TVR indicate the following:

a = Analog-to-Digital conversion (video input)
d = Digital-to-Analog conversion (video output)

Use the mode button to toggle between the conversion modes.
Use the reset button to reset the device.

Recording from external devices

1) Connect the outputs of your video device (e.g. VCR or DVD Player) to the Composite or S-Video inputs of your Studio TVR. Connect both video and audio cables.

2) Hit “play” on your video device

3) Launch the Studio TVR software

4) Choose the “Composite” or “SVideo” channel

5) You can now watch and record the video directly in your Studio TVR software.

Recording to external devices

1) Connect the inputs of your video device to the Composite or S-Video outputs of your Studio TVR. Connect both video and audio cables.

2) Launch the Studio TVR software

3) Choose the channel that you want to record.

4) Hit “record” on your video device

For instructions on how to export your recorded movies to external resources please refer to chapter 3 “Export to Studio”.

Tip: The Studio TVR simultaneously transfers the input from the coax-antenna/cable to its outputs. Connect a standard TV set to the outputs of your Studio TVR to watch the respective channel on a bigger screen.

Note: To import or export movies with third party editing applications such as Apple’s iMove, Final Cut Pro and Adobe Premier please refer to the manufacturer’s manual.

4.2. Digital audio recording

To import audio from external devices, launch Formac’s Audiomaster software.



1) Connect the outputs of your audio device (Tape or CD) to the audio inputs of your Studio TVR

2) Select the quality of the “Studio Audio CODEC”. The higher the sampling rate, the better the quality.

3) Click on “Start SoundInput”

4) Set the record location

5) Adjust the audio settings. To optimize the audio recording quality set the same sampling rates for the hardware and software encoding.

6) Click on the red record button and push “play” on the audio device.

5. Tips to make Life easier

5.1. Preferences



1) Channel Setup 

Access and modify your channel list. Use the Assistant to create a new channel list.

2) Display Modus 

Switch to **best screen size** sets your display resolution automatically to 640 by 480 when TV modus is selected (full-screen playback).

Choose between three options when **hiding** the application: 1) Just hide Studio TVR 2) Play video in dock (small TV screen in dock appears with live video) 3) Stop playing

Float the display to ensure it is always visible.

3) Record options 

Record location: Set the location for saving your movies.

Movie type: Choose DV movie for compatibility with iMovie and other video applications that support DV. The TimeShift functions are only available if you select "DV movie".

TimeShift: Set the size of the TimeShift Buffer, i.e. how much space (and therefore recording time) the software reserves on your hard disk for pausing TV. For reference: One hour of recorded DV uses approx. 13 GB of disk space. Example: If you set your TimeShift Buffer to 15 minutes, the Studio TVR will record 15 minutes of video when you click on the "pause" button. After 15 minutes the Studio TVR will write over the beginning of your recording, i.e. you have to resume watching not later than 15 minutes after you hit the "pause" button, if you do not wish to miss the beginning of your recording.

High Quality Playback: Disable if you experience dropped frames on a slower Macintosh.

4) Video and Audio Settings 

For maximum performance we recommend to set the **Video Source** to "DV Video" and the compressor to "DV/DVCPRO – NTSC". Set the **Audio source** to "DV Audio" (First 2 channels) and the compressor to "None".

Tip: In case of audio/video synchronization issues we recommend to lower the sampling rate to 44kHz or 32 kHz at 16 bit.

5) Brightness & Contrast 

Adjust Brightness, contrast, saturation and color for the video signal.

6) TV/FM-Tuner info 

Provides information about your firmware and tuner version for software updates and compatibility reference.

7) Formac studio options 

Allows you to choose between Low, Normal or High quality for movie previews. If your Macintosh does not have sufficient processing power you might experience dropped frames in your video playback. We recommend changing the preview quality to normal or low.

8) Scheduler options 

Customize when the Studio TVR application is launched before the start of a scheduled recording, or setup recording notifications.

9) iMovie options 

Please see chapter 3.3. “Integration with iMovie 3”

10) Customize 

Customize the preference toolbar.

5.2. Troubleshooting

Q1: When I try to start the TVR application I get an error message and the application quits.

A1: To use the software, the Studio TVR must be connected properly to your Macintosh (via FireWire) and must be turned on (green Power LED must be lit). To check if the Studio TVR is recognized please go into the Apple System Profiler > Devices and Volumes, and check the FireWire information.

Note: Is your studio connected properly, but not being recognized? Your Macintosh might not supply sufficient power via the FireWire port. Make sure you do not have any other FireWire peripherals that draw power from your FireWire port (e.g. iPod). Please buy an external power supply (check Formac’s website for specifications).

A2: Make sure the software is properly installed and you are running the latest version. Please check our website for updates.

A3: There may be conflicts with other peripherals. Please remove any FireWire, USB or PCI devices and uninstall respective software packages.

Q2: I do not get a video signal!

A1: Make sure your Studio TVR is in the Analog-to-Digital mode. Press the mode button to toggle between the modes or reset the studio.

A2: Make sure your antenna/cable or video device is connected properly and delivers a video stream.

A3: Make sure you have set the video settings correctly (Chapter 5, Video and audio settings).

Q3: I do not receive any TV channels.

A1: Make sure that ONLY the FireWire cable and the antenna/cable is connected to the Studio TVR when you create your channel list.

A2: Make sure your cable/antenna delivers a strong and clear signal (if in doubt test with a standard TV).

Q4: The audio and video is not in sync!

A1: Your Macintosh might not have enough processing power. Please adjust the audio sample rates to 44kHz or 32 kHz at 16 bit. Please also check the answers to Question 5, as they are related.

Q5: I am experiencing dropped frames when playing back video or TV.

A1: Your Macintosh might not have enough processing power. Please make sure you are not running several applications at the same time to free up processing power.

A2: You might have another FireWire peripheral that interferes (e.g. hard disk).

A3: Dropped frames also occur when your Studio TVR does not get enough power. Either your Macintosh does not support

sufficient power through its FireWire bus, or you have another peripheral that draws power from FireWire (e.g. iPod). Please buy an external power supply (check Formac's website for specifications).

A4: Please adjust the preview quality (preferences > studio options) to normal or low quality.

Q6: There is no audio!

A1: Make sure you have set the audio settings correctly (Chapter 5, Video and audio settings).

A2: If recording from external devices make sure the audio output of your device is connected to the audio input of the Studio TVR. Make sure your device is playing.

A3: Press the reset button on your Studio TVR.

Q7: I cannot use TitanTV's website do download schedules into my calendar!

A1: Please make sure you are not using Apple's Safari browser. At the time of printing of this manual there was no support for TitanTV planned from Apple.

6. Learning more, Service, and Support

There is more information about using the Studio TVR on the web at **www.formac.com** . Please **register your product online** to receive access to an interactive online helpdesk and FAQs. Support requests can be issued directly from your online account. You can also write directly to help@formac.com. Please include important product and computer information.

7. Warranty

Hardware Warranty

By breaking the seal on the Formac package, you accept the terms and conditions of the End User License agreement.

Formac, Inc. (Formac) warrants this hardware product against defects in materials and workmanship for a period of one (1) year from the date of original retail purchase. If a defect exists, Formac will, at its option:

(1) Repair the product at no charge, using new or refurbished replacement parts, or
(2) Exchange the product with a product that is new or which has been manufactured from new or serviceable used parts and is at least functionally equivalent to the original product.

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