



# FS-5 2.0

## User Guide Addendum





# LEGAL NOTICES

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## Symbols

### Power Supply Only



This symbol indicates the presence of an un-insulated Dangerous Voltage within the product's enclosure that may constitute a risk of electric shock to persons.

### In the FS-5 Documentation



#### Caution Title

This symbol indicates important operating or maintenance (servicing) information that the user should read and understand.



#### Note Title

This symbol indicates supplementary information about features, functions, or operations that may be of interest to the user.

## Documentation

### Read, Retain, and Follow Instructions

All the safety and operating instructions should be read before the product is operated.

- **Retain Documentation**  
Place documentation in a secure place for future reference on operating and safety instructions.
- **Follow All Operating and Safety Instructions**
- **Pay Attention to All Warnings**  
Warnings are provided to protect the operator, the equipment, and content.

LEGAL NOTICES

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# Introduction

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This addendum provides information about the FS-5 2.0 DTE Disk Recorder's features.

## 2.0 Features

- **Proxy Video Files**

The FS-5 can generate proxy video files from stored original video files. Proxy files are smaller than their original video clips and easier to share over the network or internet.

- **LCD Video Playback**

Playback recorded content on the FS-5 LCD. Original DV/HDV recordings play back at a reduced frame rate on the FS-5's LCD. Monitor audio using an USB audio device: headset or speaker system.

- **Single Frame Thumbnails**

Single frame thumbnails are created for each recording. These thumbnails appear on the FS-5 LCD as well as via the web interface. Clip details are also listed including the clip name and the file wrapper type. The thumbnail format depends on the format used during recording.

- **Additional NLE Metadata Support**

Metadata can now be logged in an AVID compatible format. This requires Avid Media Composer version 3.5 for use.

- **Multi-unit Metadata**

Log the same metadata to multiple FS-5 units simultaneously using a single web interface.

- **Multi-unit Control**

- a. Control multiple units from a single web interface.
- b. Sync clocks of multiple units for matching timecode via WiFi using an optional USB WiFi or wired Ethernet adapter.

## Overview of this Addendum

This addendum is divided into similar chapters as found in the FS-5 User Guide.

Quick Start page 3

This chapter describes how to setup and use the FS-5 2.0. It includes a description of the new features LCD Video Playback, Single Frame Thumbnail, and how to create Proxy Video Files.

Metadata page 29

This chapter covers 2.0 enhancements to metadata functions and the addition of Avid Media Composer capability.

FS-5 2.0 Functions page 43

This chapter provides detailed information about each of the 2.0 FS-5 functions. It also provides important updates about networking.

FS-5 with Other Devices page 67

2.0 provides the ability use the web server of one FS-5 2.0 unit to control recording functions of multiple other FS-5 2.0 units. In addition, it is possible to synchronize the clocks of multiple FS-5 2.0 units.

Non-Linear Editors (NLEs) page 71

This chapter provides information about integrating the FS-5 metadata capabilities with Avid Media Composer 3.5.

Technical Specifications page 75

# Quick Start

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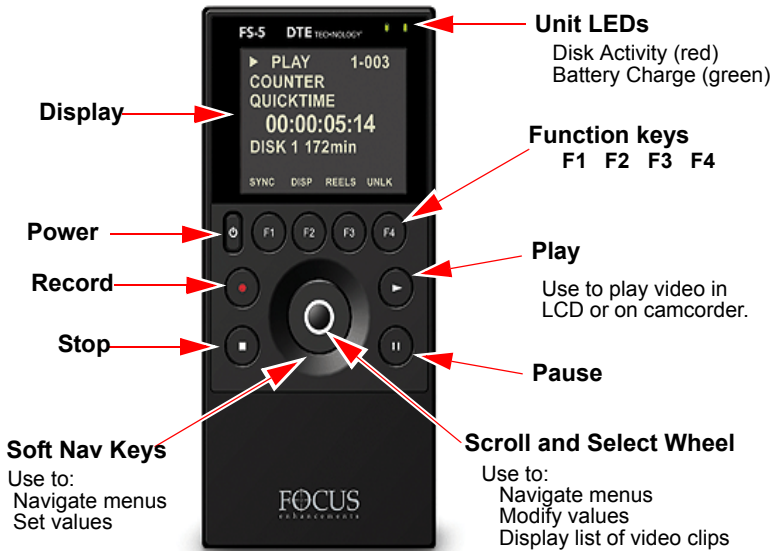
Quick Start provides additional information necessary for using the FS-5 2.0 DTE recorder as quickly as possible. For Information about FS-5 1.0 functions and features not described in this addendum, refer to the FS-5 User Guide.

This chapter covers the topics:

Physical Description and Controls	
Front View - Controls	page 4
FS-5 2.0 User Interface	page 5
Record and Playback	page 10
Power On FS-5	page 11
Select Record/Play Mode	page 14
Select the Recording Format (REC FORMAT)	page 15
Set Date and Time	page 11
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SYNCRO Recording	page 22
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Creating A Proxy File	page 27
Proxy Audio Playback	page 26

# Physical Description and Controls

## Front View - Controls



### Play ▶

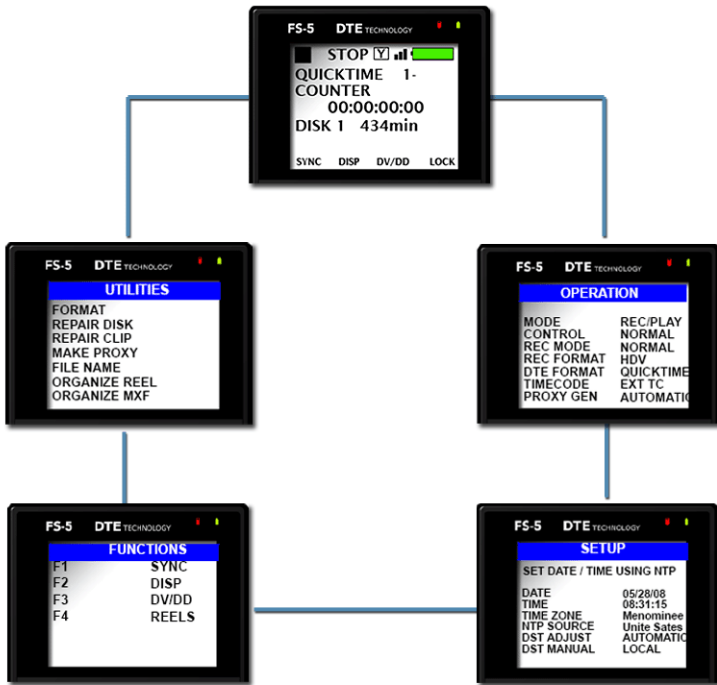
Press this key to start playback of the selected clip.

### **i**Note

#### **Some HD Camcorders Require a Moment to Synchronize**

Some HD camcorders require a moment to synchronize the video from an external source. Typically during this period, they display a solid blue or black video until synchronized.

## FS-5 2.0 User Interface



The FS-5 menu system provides access to all the functions available in the unit. Each of the displays below (except the Welcome and Home menus which come up automatically when the unit starts) are accessed by pressing the left or right soft buttons on the Scroll Wheel. For more information on each function, go to the chapter **FS-5 2.0 Functions**.

### **i**Note

#### Returning to the Top of the Menu or to Home menu

To get to the top of any menu, press the **Left** soft button.

To get back to the Home menu:

- Highlight the menu title at the top of the display.
- Press the Select soft button.

Main Menu	Feature	Option	Selection
<b>WELCOME</b>	Only appears for a few seconds on power up.		
<b>HOME</b>	Gateway menu for all functions, it displays disk and operational status.		
<b>OPERATION</b>	For more information see <b>OPERATION Menus on page 45.</b>		
	<b>MODE</b>	REC/PLAYER HDD (mount to computer function)	
	<b>CONTROL</b>	NORMAL EXTERNAL SYNCRO	
	<b>REC MODE</b>	NORMAL RETRO CACHE RETRO DISK SNAP REC (DV mode only) TIMELAPSE (DV mode only)	
	<b>REC FORMAT</b>	DV HDV	
	<b>DTE FORMAT</b>	Depends on REC FORMAT setting.	
		DV	Raw DV AVI Type1 AVI Type2 Canopus AVI Matrox AVI Quicktime MXF
		HDV	M2T QUICKTIME MXF
	<b>TIMECODE</b>	EXT TC FREE RUN REC RUN REGEN	
	<b>PROXY GEN</b>	OFF MANUAL AUTOMATIC	
<b>SETUP</b>	For more information see <b>SETUP Menus on page 47.</b>		
	<b>SET DATE AND TIME USING NTP</b>		
	DATE		
	TIME		
	<b>TIME ZONE</b>	Select from a list containing UTC, continental, and ocean time zone ranges.	Select a specific country, state, or city within the timecode range.



Main Menu	Feature	Option	Selection
	<b>AUTO TIME</b>	Select a specific global region.	Select a specific nation within the region.
	<b>DST ADJUST</b>	AUTOMATIC MANUAL	
	<b>DST MANUAL</b>	LOCAL STANDARD	
	LCD	ON OFF AUTO	
	LCD BRIGHT	1 through 16	
	KEY BRIGHT	1 through 16 (Does not include Scroll Wheel)	
	ALARM	ON OFF	
	STOP	FRAME GRAY NO VIDEO	
	EXTL CTL	OFF PAUSE FRAME FILE	
	TC SET		
	UB SET		
	TC MODE	DROP NON-DROP	(If FS-5 in EXT TC, TC Mode has no effect.)
	RETRO CACHE	0 to 10 seconds	
	RETRO DISK	0 to 392 minutes (Based on 100GB drive, other models may vary.)	
	TIMELAPSE	Set duration between single frame captures. (DV mode only)	
	PLAY MODE	PLAY CLIP LOOP CLIP PLAY ALL LOOP ALL	
	PLAY FROM	TRACK REEL	
	PLAY PREF	ORIGINAL PROXY	
	UDF FS PERM	READ-ONLY READ-WRITE	
	NETWORK	DHCP MANUAL (When DHCP is set, IP ADDR, IP MASK, BROADCAST, and GATEWAY are assigned by the host router.)	
	IP ADDR	Manual or DHCP.	

Main Menu	Feature	Option	Selection
	IP MASK	Manual or DHCP.	
	BROADCAST	Manual or DHCP.	
	GATEWAY	Manual or DHCP.	
	ESSID	Set manually.	
	KEY	Set manually (WEP encryption only.)	
	WIFI MODE	MANAGED ADHOC (P2P)	
	FTP	DISABLED ENABLED	Default ftp:// FS:FS@ipaddress
	FTP PASS	Sets FTP password for FTP function.	Default is FS.
	WEB	DISABLED ENABLED	
	AUTO ORG	DISABLED ENABLED	
	AUTO MARK	DISABLED ENABLED	
	REELS PREF	FOLDER TEMPLATE	
<b>FUNCTIONS</b>	<p><b>Contains user definable function key selections. Changing a setting with a Function key is identical to changing the setting in its corresponding menu. Refer to FUNCTIONS Menus on page 58 for more information.</b></p>		
	<b>F1</b>	SYNC EXTERNAL LCD SET <b>PROXY</b> REELS R1-1 etc., see REELS PREF on page 135. BLANK	
	<b>F2</b>	DISP ALARM FILE REELS R1-1 etc., see REELS PREF on page 135. BLANK	
	<b>F3</b>	DV/DD REELS R1-1 etc., see REELS PREF on page 135 BLANK	
	<b>F4</b>	LOCK REELS R1-1 etc., see REELS PREF on page 135 BLANK	

Main Menu	Feature	Option	Selection
<b>UTILITIES</b>	<b>For more information see UTILITIES Menus on page 61.</b>		
	FORMAT		
	REPAIR DISK		
	REPAIR CLIP		
	<b>MAKE PROXY</b>		
	FILE NAME		
	ORGANIZE REEL		
	ORGANIZE MXF		
	UPGRADE		
	DELETE CLIP		
	SYSTEM RESET		
	DIAGNOSTIC		
	STATUS		
	VERSION		
	<b>CALIBRATE CLOCK</b>		

## Record and Playback

Before using the FS-5, set up the unit as outlined in the following sections:

Set Up the FS-5	page 11
Power On FS-5	page 11
Set Date and Time	page 11
Select Record/Play Mode	page 14
Select the Control Mode	page 15
Select the Recording Format (REC FORMAT)	page 15
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EXTERNAL Recording	page 21
SYNCRO Recording	page 22
Playback from FS-5 to Camcorder Viewer	page 30
Playback on FS-5 2.0	page 24
Creating A Proxy File	page 27

The values set in these procedures are fixed and persist through power cycles. To change them, repeat the steps outlined above.

## Set Up the FS-5

### Power On FS-5

1. Press the **Power** key and release it.
2. The **Welcome** display appears while the FS-5 initializes.



### Set Date and Time

#### **i** Note

##### **Date and Time Must Be Set**

The date and time must be set because they are used in the FS-5 file naming function.

1. Press the **Right** soft button several times until the **SETUP** menu appears.



2. Use the **Down** soft button to highlight the date and press the **Select** key to access the **Set Date** menu.



3. Use the **Right** and **Left** soft buttons to highlight the Month, Day, and Year. Use the **Scroll Wheel** to change the value.
4. When complete, press the **Select** key.  
The display returns to the **SETUP** menu which displays the new date.
5. Use the **Down** soft button to select the **TIME** setup menu and press the **Right** soft button. The following menu appears:

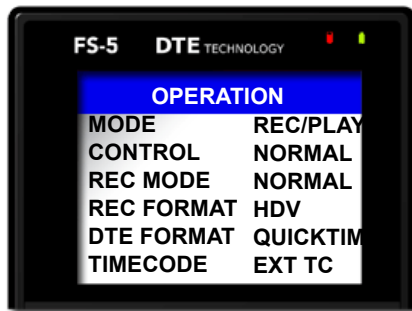


6. Use the **Right** and **Left** navigation keys to highlight the Hour, Minute, and Second. (Time is indicated in 24hr. mode.) Use the **Scroll Wheel** to change the value.
7. Press the **Select** key.  
The display returns to the **SETUP** menu which displays the new date.

8. Return to the **Home** menu.



9. Press the **Right** soft button on the **Scroll Wheel** once to display the **OPERATION** menu.



By default, the FS-5 is setup for the most typical recording situations. The Operation defaults are:

OPERATION	FUNCTION	Reference
MODE	REC/PLAY	
CONTROL	NORMAL	
REC MODE	NORMAL	
REC FORMAT	HDV	
DTE FORMAT	QUICKTIME	
TIMECODE	EXT TC	
PROXY GEN	AUTOMATIC	See PROXY GEN on page 46.

If it is necessary to change any of these settings, refer to the following few pages.

## Select Record/Play Mode



1. Use the **Up** or **Down** soft buttons to select **MODE**.
2. Press the Select key in the center of the **Scroll Wheel**.  
A list of operation modes appears: **REC/PLAY** or **HDD**.
3. Pick **REC/PLAY** and press the **Select** key.  
The display returns to the **OPERATION** menu.



## Select the Control Mode



This determines which controls, the FS-5's or the camera's, are used during recording, see **CONTROL** on page 95. Select the mode to use and the display returns to the **OPERATION** menu.

**EXTERNAL** control mode controls the FS-5 from the camera and works with most modern DV and HDV camcorders, whether using tape or no tape.

### Note

Playback of Videos Is Controlled Only by the FS-5

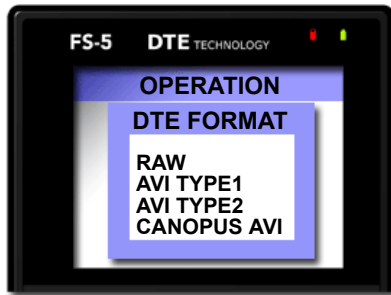
## Select the Recording Format (REC FORMAT)



This determines which recording format, **DV** or **HDV**, the FS-5 uses. The camera must support the recording format selected.

Select the format type and the display returns to the **OPERATIONS** menu.

## Select the DTE Format



This determines which NLE compatible format the FS-5 uses when recording. The DTE formats displayed depend on the **REC FORMAT** selected in the last step.

Select the DTE format and the display returns to the **OPERATION** menu.

### Note

#### **DTE Formats That Support Recordings Longer than 2GB**

DTE formats that support recordings than 2GB in size are:

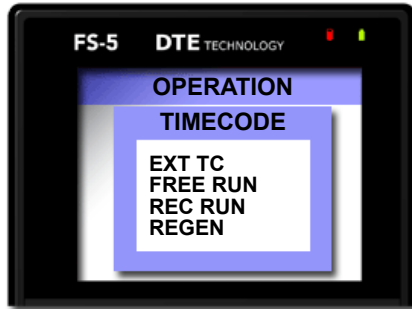
- M2T (HDV)
- QuickTime (DV and HDV)
- MXF (DV and HDV).

Files larger than 2GB require UDF file system.

#### **DV24p and PAL 25p Modes**

- 24p modes are only for use with camcorder's that are capable of DV-24p Advanced mode.
- 24p is comparable to DV QuickTime and AVI Type 2.
- PAL 25p camcorders require no special 25p DV format
- There are different FS-5 models for NTSC and PAL recording

## Select the Timecode



This determines the source of the timecode to be embedded in the recording.

Selecting the timecode returns the display to the **OPERATION** menu.

With the **OPERATION** menu title highlighted, press the **Right** key once and advance to the **SYSTEM** menu.

### **i**Note

#### **SETUP Menu Overridden by EXT TC Settings**

When EXT TC is selected, the FS-5 follows the timecode mode of the camera, **Drop Frame** or **Non Drop Frame**, regardless of the setting in the SETUP menu.

## Record with the FS-5



### **Do Not Disconnect Power or FireWire Cable**

Never disconnect the power or the FireWire cable during a recording. This will cause file corruption.

### **Loss of Power During Recording**

If power is lost during recording it is possible to repair the damaged file or files, refer to REPAIR DISK and REPAIR CLIP in the user guide.

There are two modes of recording with the FS-5.

- **NORMAL Recording**

Control with the FS-5 transport keys.

- **EXTERNAL Recording**

Control FS-5 recording with the video camera record trigger, whether using tape or tapeless.

With most modern HDV and DV cameras, **EXTERNAL** mode is the preferred control method. Check the latest camera compatibility matrix on the Focus website: [www.focusinfo.com](http://www.focusinfo.com).

- **SYNCRO Recording**

SYNCRO is used most often with older camcorders that require the presence of a tape in the camcorder's tape deck.

Before beginning recording, verify that:

1. Time and date are set.
2. Recording format is set.
3. DTE Format is set.
4. The FS-5 is connected to the video camera according to the explanation in **Connecting FS-5 to DV/HDV Camcorder** on page 22.
5. Camera and FS-5 are powered on.
6. Tape is loaded in the camera, if:
  - Camera requires a tape in its transport before it triggers FS-5 record.
  - User wants to record to both tape and disk, see the following note.

 **Note****EXTERNAL Operation**

Tape does not need to be loaded if the camera supports external operation, refer to, **CONTROL** on page 95.

**Troubleshooting: Counter Not Incrementing**

If the Counter does not increment while recording the camera, it is an indication that there is no active connection between the FS-5 and the camera.

- Verify that the FS-5 1394 DV I/O and the camera connections are secure. It may be necessary to unplug and then reconnect them.  
When a good connection is made, the Counter will increment and recording will start.
- Verify that FS-5 and camera settings are correct.

**Verify Record Mode Matches Source Video Content and Format**

If in DV Recorder mode, HD content will not record properly. A NTSC or PAL DV source records only on a matching NTSC or PAL unit.

## NORMAL Recording

1. Set the video camera to **Camera** or **Cam** mode.
2. Verify that an image appears in the viewfinder.
3. On the FS-5, press **Record ●**.

The FS-5 begins to record. The timecode value shows on the display.



4. Press **Pause II** once to put the FS-5 to **Rec-Pause** mode.
5. Press **Pause II** again and the FS-5 begins to **Record** again in the same clip.
6. Press **Stop ■** to stop the recording.
7. Press **Record ●** to begin recording a new clip.

## Creating a New File without Dropping Frames

When in record mode, it is possible to break the recording into a separate, new file without dropping frames.

While recording, press **Record ●** again and the FS-5 automatically creates a new clip.

## EXTERNAL Recording

External control allows the camcorder to control the FS-5 record function via the camcorder trigger.

1. Verify that the FS-5 is in **Stop** mode.
2. From the FS-5 Home menu, press the **Right** soft button once and the **OPERATION** menu appears:



3. Use the **Down** soft button to select **Control**.  
The default value is **NORMAL**
4. Use the **Down** soft button to select **EXTERNAL**.
5. Press the Scroll Wheel **Select** key.  
The Operations menu appears.
6. Press the Left soft button twice to return to Home menu.  
The menu returns and a **STOP** indicator appears in the upper left-hand corner. Next to it is an **E** indicating that FS-5 record function is now under the external control of the camcorder.

Proceed with recording using the camcorder trigger.

1. On the camera, press the **Record ●** trigger.  
The FS-5 begins to record video from camera. The timecode value appears on the LCD display and the image appears in the camera's display.
2. On the camcorder, press **Pause II** once to put the FS-5 in **STOP** mode.
3. Press **Pause II** again and the FS-5 begins to **Record** again in the same clip.
4. On the camcorder, press **Stop ■** to stop the recording.
5. On the camcorder, press **Record ●** to begin a new clip.

## SYNCRO Recording

Syncro recording allows the FS-5 to mimic camcorder operations by monitoring the state of the camcorder's tape recorder controls.

### Note

#### **Syncro: For Camcorders Without External Trigger Control**

Syncro mode should only be used with older camcorders that do not have external trigger controls. Check the latest camera compatibility matrix on the Focus website.

1. Verify that the FS-5 is in **Stop** mode.
2. From the FS-5 Home menu, press the **Right** soft button once and the **OPERATION** menu appears:

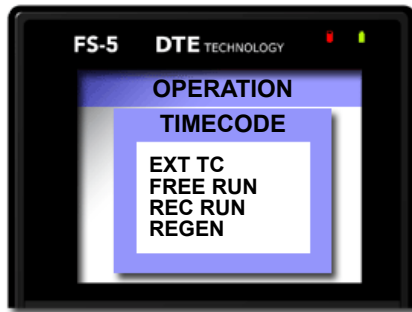


3. Use the **Down** soft button to select **Control**.  
The default value is **NORMAL**
4. Use the **Down** soft button to select **SYNCRO**.
5. Press the Scroll Wheel **Select** key.  
The Operations menu appears.
6. Press the Left soft button twice to return to the Home menu.  
The Home menu returns and a **Pause** indicator appears in the upper left-hand corner. Next to it is a **Y** indicating that FS-5 is following the state of the camcorder's tape controls, i.e. record when the camcorder records and pause when it pauses.



- Now the FS-5 will respond to the camcorder's tape controls. The recording signal goes both to the tape in the camera and to the FS-5.

## Recording Timecode in the File



- Press the **Right** soft button once and **OPERATION** menu appears.
- Press the **Down** soft button several times to locate the **TIMECODE** option.
- Select **EXT TC** in the SETUP menu.

This option records the video camera timecode in the file. For other available timecode options refer to **TIMECODE** on page 102.

To view the source timecode (TC) from the camera, press the **DISP** key, **F2** default, until the format type appears, e.g. 1080/60i TC.

### **i**Note

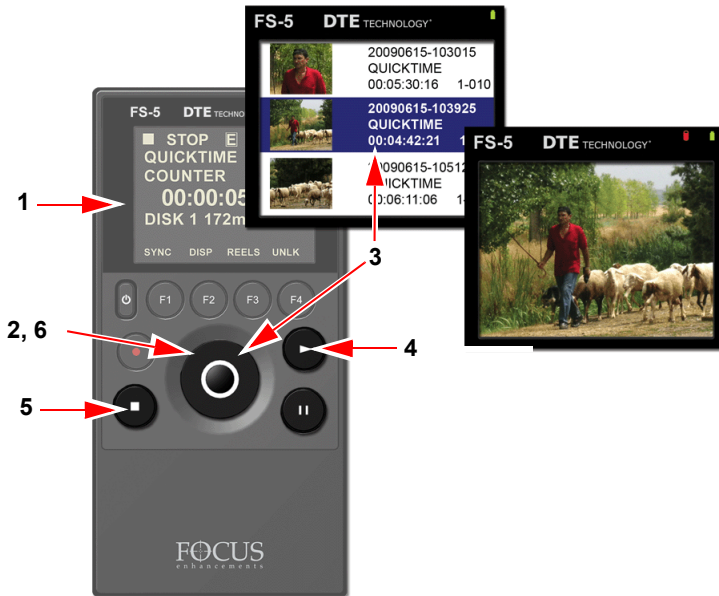
#### **EXT TC**

When in EXT TC mode the FS-5 follows the camera's timecode, and the Drop/Non-Drop Frame in SETUP menu has no effect on the recorded video's timecode.

#### **Function keys**

The tasks discussed above are available for programming into the function keys. For information on setting up function keys, refer to the section, **FUNCTIONS** Menus in the user guide.

## Playback on FS-5 2.0



The FS-5 provides the user the ability to playback video clips, DV or HDV, and proxy files on its color LCD. Each clip has a thumbnail still image which is displayed along with clip data in list. In addition, the clip's proxy video file, clip data, and metadata information are viewable through the FS-5's web interface.

To view a video or proxy file on the FS-5:

1. Go to the **Home** menu.
2. Press the **Select** key.

A list of the video clips with thumbnails and clip information appears.

If there are no video clips, the viewer will not open and the **Home** menu remains displayed.

### **i**Note

#### **Setting Playback Preference**

The FS-5 offers the ability for the User to determine which file, the original DTE format or its proxy, displays when Play is selected. Refer to **PLAY PREF** on page 54.

3. Locate the file to view using the **Scroll Wheel** or the **Up** and **Down** soft buttons.
4. Press the **Play** key to start playback.  
The original DV or HDV recording plays back at a reduced frame rate, between 10 and 15 frames per second depending on the video type, such as HDV or DV, 1080i or 720p, etc.  
Use the **Play** and **Pause** keys to control playback.
5. Press **Stop** to end playback and return to the video clip list.
6. Press the **Select** key to return to the **Home** menu.

## Thumbnails

A single frame thumbnail image is automatically created for each recording. These thumbnails and accompanying video clip information are viewable as a list on the FS-5 2.0 LCD. In addition, the thumbnails, clip information, and clip metadata are available via the FS-5 2.0 web interface.

The thumbnail screen lists the filename, file type wrapper type (MXF, QuickTime, etc.), the duration, and track number. To exit the thumbnail screen, simply press the center button on the scroll wheel.

## Viewing Thumbnails on the Web

1. Log on to the FS-5 web server.  
Use the standard procedure to log into FS-5 via WiFi or an USB to Ethernet adapter: see **Logging Onto the FS-5 Web Server**, in the **Metadata** chapter of the user guide.
2. On the **Entry** web page, select the **Review** tab.  
Thumbnails for all clips on the FS-5 along with their track names appears on the web interface.
3. Clicking on a thumbnail image displays a larger thumbnail image and additional clip information such as metadata. In addition, metadata can be added or modified.

For more information, see **Review** on page 35 of this addendum.

## Proxy Audio Playback

To listen to proxy file audio, attach an USB headset to the FS-5 and playback proxy files.

Volume is controlled through the USB headset.



**Do Not Unplug USB Headset During Proxy Playback**

## Creating A Proxy File

The FS-5 provides the videographer the ability to create smaller proxy files to accompany the native format video clips. These proxy files are easy to share over networks or the internet and provide visual records for evaluating the larger native format clips.

This procedure is for generating a proxy file or a selected video clip:

1. From the Home menu, press the **Left** soft button once to go to the **UTILITIES** menu.



2. Select **MAKE PROXY**.



3. Enter the video clip number using the **Scroll Wheel**.
4. Press **F3/YES** to start proxy generation.  
A status display appears, indicating the file is being generated. When done the **COMPLETED** system message appears.
5. Press **F4/BACK** to return to the **Utilities** menu.

For information about proxy file settings, see **PROXY GEN** on page 46.

## Proxy File Formats

The format of the proxy file depends on the format of the parent video clip.

Original File Format	Proxy File Format
QuickTime DV/HDV	QuickTime (.mov)
MXF (DV/HDV)	AVI (.avi)
M2T (HDV)	MP4
AVI (DV All variants)	AVI (.avi)
RawDV (DV)	MP4

For technical information about proxy files, see **Proxy Videos** on page 78.

# Metadata

---

This chapter covers the 2.0 additions to the FS-5's metadata capabilities.

The FS-5 2.0 supports Avid Media Composer 3.5 NLE.

This chapter contains:

Overview	page 30
Default Template	page 48
Custom Templates	page 30
Video Production	page 30
Logging Onto the FS-5 Web Server	page 31
Metadata Pages and Functions	page 32
Entry	page 33
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Export	page 36
Entering Metadata	page 38
Logging Metadata to Multiple 2.0 FS-5s	page 38
Saving Metadata	page 39
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TC Depend and Input Style In AXIF and Final Cut Pro	page 40
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## Overview

### Default Template

The default AVID MXF template is functionally similar to the other FS-5 metadata templates. The User can select which metadata tags to use, determine the type of input they receive, or assign predefined values. In addition, the User can create Custom templates that are compatible with AVID MXF.

When the FS-5 prepares video clips using templates based on the APPLE XML Interchange Format, for importing into a nle like FCP, the FS-5 records the metadata in xml documents that accompany the video files. There are two files to export: a video clip and its companion xml document.

When the FS-5 prepares Avid MXF files for importing into the Avid Media Composer, it embeds the metadata in the MXF wrapper. There is only one file to import into the nle.

### Custom Templates

The FS-5 provides the capability for the User to create custom templates by modifying Avid and FCP templates or entering unique fields into an empty template.

## Video Production

### Post-production

FS-5 2.0 metadata is viewable and searchable and includes links to the video content in the NLE or ProxSys media management system.



## Logging Onto the FS-5 Web Server

Logging onto the FS-5 web server provides access to the metadata settings and logging functions. The pages and functions available depend on the type of device accessing the FS-5. Refer to user guide for more information.

When the FS-5 web server opens, the **ENTRY** page appears. The first time the web server opens the **ENTRY** page is empty until a metadata template is selected.

The screenshot shows the 'ENTRY' page of the FS-5 Portable DTE Recorder. The interface includes a navigation bar with 'Entry', 'Review', 'Export', and 'Admin' tabs. The main content area displays a form for adding a new entry, with fields for Description, Scene, Shottake, Lognote, Good (set to TRUE), Master Comment 1-4, Comment A, and Comment B. A 'Control' dropdown is set to 'Rec' and 'Delayed Start in Sec' is set to '2'. An 'ADD' button with a plus sign is visible on the left side of the form.

This is the first page that a PDA displays. The appearance of this page varies depending on the device used to view it.

The first time that the Entry page appears it displays the default template.

## Metadata Pages and Functions

FS-5 Metadata has five pages representing specific functions that are divided into two groups: **User** and **Admin**. The User/Admin tab acts as a toggle to switch between the two groups. To display the other group, click on the **User** or **Admin** tab.

- **Admin** group includes the pages:
  - Template** - for creating and managing templates,
  - Settings** - template export/import and reel matching parameters, for more information, refer to the user guide.
- **User** group includes the pages:
  - Entry** - for entering and setting metadata values in a template,
  - Review** - for reviewing the thumbnails and logged metadata of recorded video clips.
  - Export** - for specifying the export of metadata based on template type,

## Entry

Use the **Entry** page to enter metadata to video clips.

- **STATUS**

Indicates the mode the FS-5 is currently in: **Rec**, **Stop**.

- **Counter**

Displays timecode during recording.

- **Track**

Displays current track (clip) number.

- **Default Template**

Initially the Entry page displays the metadata template selected as the default. Its name appears in the **Default Template** field.

To use a different template, select it from the **Default Template** dropdown menu. The new template appears and is active once the FS-5 is in Record, Pause or Playback mode.

A template must be selected before recording or playback begins.

- **Control**

Use the **Rec/Stop** button to start and stop recording from the Entry page, rather than the FS-5 or the camcorder.

**Delayed Start in Sec**

This sets the time between when **Rec** is pressed and actual recording begins: range, 0 - 999 seconds.

- **Update Button and Metadata Fields**

During record or playback information can be entered in the metadata fields. Press **Update** to log the metadata for the video clip.

For information about logging metadata, see **Entering Metadata** on page 38.

- **ADD**

Clicking on ADD displays the **Link Units** workspace.

Use Link Units to connect to one or more secondary FS-5s and:

- **Copy** a metadata template to the secondary FS-5s.

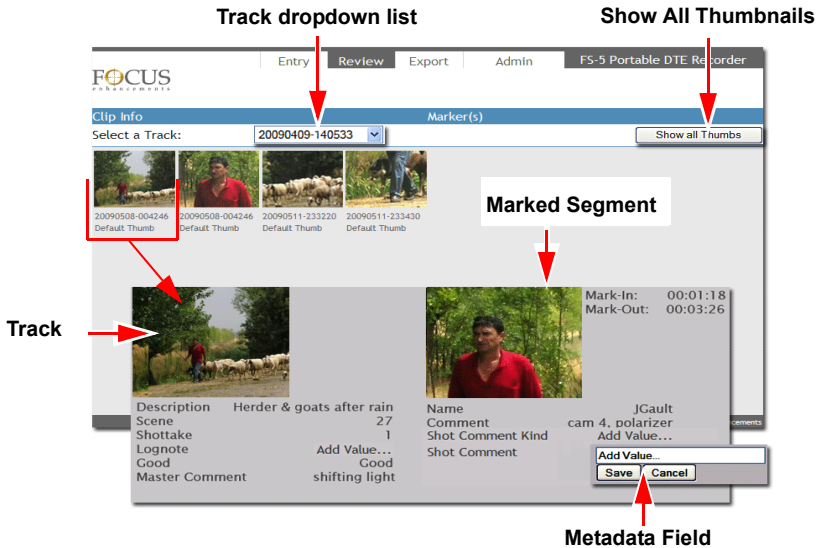
- **Log** metadata on to multiple FS-5s: primary and secondary.

- **Control** synchronized recording operations of multiple FS-5s using the primary.

For information about logging metadata on multiple FS-5s, see **Logging Metadata to Multiple 2.0 FS-5s** on page 38.

For information about simultaneously controlling recording on multiple FS-5s, see **Controlling Multiple FS-5s At Once** on page 68.

## Review



Use **Review** to examine video clip thumbnails, metadata, timecode, and in/out markers.

When the Review page first appears, it is empty.

To view information about a video clip the user can either select a track to view by either:

- Picking a track (clip) from the **Track** dropdown list.
- Click on **Show All Thumbnails** to display a set of video clip thumbnails with filenames and video format.

Click on a thumbnail to display a larger thumbnail and all information about the video clip. If a segment has been marked, its thumbnail is enlarged too.

### Marked Segment Thumbnail and Data

If In/Out Markers have been set in the video clip, an additional thumbnail appears in the display. It has the same file name as the parent clip.

### Add or Change Metadata

Click on a metadata field to add or change metadata data.



### Troubleshooting Tip - Missing Templates Thumbnails

If while working on the **Entry**, **Review**, or **Template** pages, thumbnails or metadata templates are missing it is necessary to run the **Format** utility, see **FORMAT** on page 63.

Be certain that the **Templates** option is set to **Clear**.

Save all video clips before formatting.

## Export

Use **Export** to manually export video clip metadata files from the FS-5 database to User accessible xml files. The file name of the xml file identifies it as belonging to a specific video clip.

### Specific NLE Editors

Export provides Final Cut Pro and Avid Media Composer workspaces for creating xml metadata files specific to those NLEs.

## Avid Media Composer

Before importing MXF files into Avid Media Composer from the FS-5, it is first necessary to run the FS-5 **Utility, Organize MXF**. This utility creates the Avid MXF directory structure and embeds the metadata in the MXF files.

The video files are then ready to import into Avid Media Composer.

In Avid Media Composer, use the Media Tool to import the MXF files into a specified bin. Because Avid incorporates metadata into the MXF wrapper, both the video content and metadata are imported together.

A video clip's metadata appears in the **bin column selection** window.

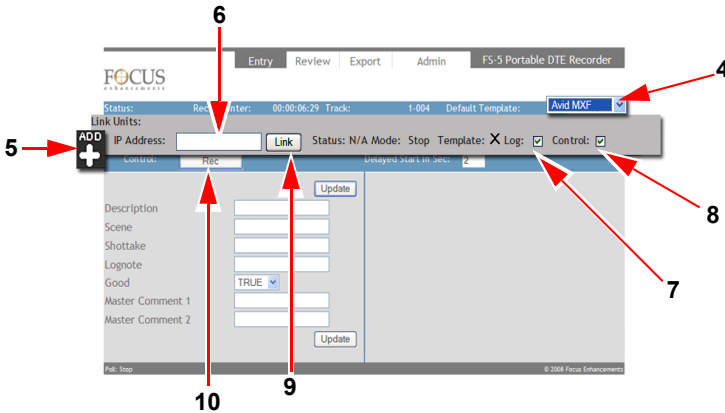
For more information see **Importing Video and Metadata Into Avid** on page 74.

## Entering Metadata

Metadata may be entered into a single FS-5 or simultaneously into multiple FS-5s.

These procedures assume that there is a ready to use template, such as the **FCP Example** or **AVID MXF** that are supplied with the FS-5. And that it is not necessary to modify or create a new template.

### Logging Metadata to Multiple 2.0 FS-5s



The FS-5 provides the ability to simultaneously log the same metadata to multiple FS-5s located on the same network.

To log metadata onto multiple FS-5s:

1. Begin by mounting at least two FS-5 2.0 units on a network.
2. Select one of the FS-5s to be the host.
3. Log on to the host and go to its **Entry** page.
4. Select the metadata template to use from the **Default Template** dropdown list.
5. Click the **ADD** button.

The Link Units workspace expands to show link parameters for the first client FS-5.

Notice that the **Template** option is permanently check-marked. Any time the host FS-5 links to another unit, it transfers the currently selected template to the client, regardless if the other link options are selected or not.

6. Enter the **IP address** for the client FS-5.



7. Check-mark **Log** if the host unit is to log metadata on the client unit. Then any metadata entered on the host appears on the client too.
8. Check-mark **Control** if the host unit is to control the **Record**, **Playback**, and **Pause** operations on the client unit.
9. Click **Link** to connect to the client unit.  
The Status and Mode messages will change indicating that the connection is made.  
Repeat steps 5 through 9 for each client unit.  
The linked FS-5s are now ready. Enter metadata as described in the FS-5 User Guide.
10. To start recording on multiple units, press the **Record** button on the **Entry** page.

## Saving Metadata

There is no distinct Save step.

Clicking on the **Update** or **Mark** buttons writes the metadata to the FS-5 database and into a specific record assigned to the video clip. Changing the metadata in the template changes the video clip's record in the database in real time.

## Creating A Template

### **TC Depend and Input Style In AXIF and Final Cut Pro**

In Apple XML Interchange Format (AXIF) templates the settings for the TC Depend and Input Style fields are grayed out because their settings are fixed and can not be changed.

- By default, most but not all of the metadata fields are set as not timecode dependent.
- All the metadata fields have their Input Style set as Mixed Input which permits the use of both predefined and variable, user entered, values.

Avid Media Composer and Final Cut Pro support these settings because they are template defaults.

Creating a Custom Template allows the user to set TC Depend and Input Style defaults to other values which Avid and Final Cut Pro will then support.

# Export

The screenshot shows the 'Export' menu in the FS-5 Portable DTE Recorder software. The interface is divided into several sections:

- Final Cut Pro Export:** Includes a checked 'Export By Track' dropdown set to '20090407-123551', an unchecked 'Export All' checkbox, and an 'Export' button.
- Avid Media Composer Export:** Includes a checked 'Export By Track' dropdown set to '20090408-141717', an unchecked 'Export All' checkbox, and an 'Export' button.
- Generic Export:** Includes a checked 'Export By Track' dropdown set to '20090407-123551', an unchecked 'Export All' checkbox, and an 'Export' button.
- Export Matching:** A section for adding custom export matching. It includes a 'Template:' label, a 'Type:' dropdown set to 'Final Cut Pro', and a 'Template:' dropdown set to 'Scotland AVID MXF'. An 'Add Export Matching' button is present.
- Edit Export Matching:** A section for editing existing matching. It includes an 'Edit Export Matching for Template:' label and a dropdown set to 'Avid Media Composer'. An 'Edit Export Matching' button is present.

The software title bar shows 'FOCUS PORTABLE' and 'FS-5 Portable DTE Recorder'. The bottom right corner contains the copyright notice '© 2009 Focus Enhancements'.

## Export to NLE XML Document

There are three NLE export options:

- **Final Cut Pro Export**

Use this function to create metadata xml documents for Final Cut Pro, using the Final Cut Pro XML Interchange Format.

- **AVID Media Composer**

Use this function to create metadata xml documents for Avid Media Composer.

- **Generic Export**

This option creates a metadata xml document based on the Custom template created.



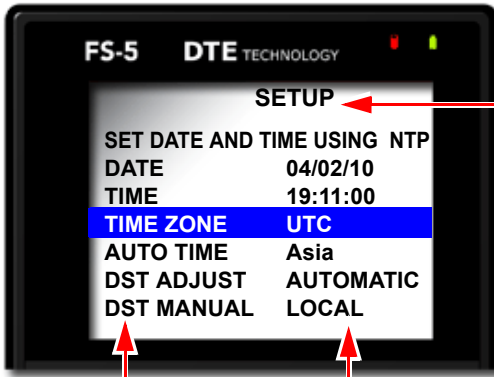
# FS-5 2.0 Functions

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This chapter covers the 2.0 additions to FS-5 functions.:

General Menu Information	page 44
Welcome	page 44
OPERATION Menus	page 45
PROXY GEN	page 46
SETUP Menus	page 47
SET DATE AND TIME USING NTP	page 49
TIME ZONE	page 50
NPT SOURCE	page 51
DST ADJUST	page 52
DST MANUAL	page 53
PLAY PREF	page 54
PROXIES	page 54
NETWORK	page 55
IP MASK	page 56
BROADCAST	page 57
GATEWAY	page 57
FUNCTIONS Menus	page 58
UTILITIES Menus	page 61
FORMAT	page 63
MAKE PROXY	page 64
Organize MXF	page 65
CALIBRATE CLOCK	page 66

## General Menu Information



### Menu Title

Appears at the top of the display and identifies its topic or function.

Use the Left or Right soft navigation buttons to move between the previous or next menu.

### Menu Items

Use the Up and Down soft navigation buttons to move between the items in the menu. Pressing Select when an item is highlighted, displays its options.

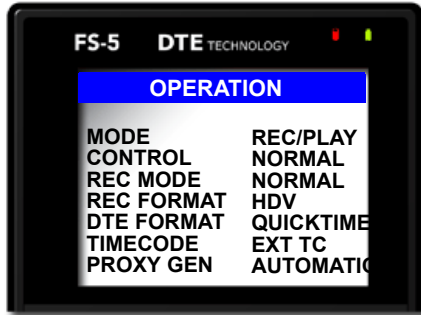
### Current Settings

Opposite the menu item is its current setting.

## Welcome



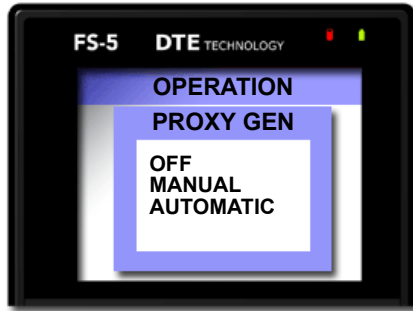
## OPERATION Menus



The Operation menu provides access to settings that control various recording features, functions, and information:

Item	Default	Options
MODE	REC /PLAY	REC /PLAY HDD
CONTROL	NORMAL	NORMAL EXTERNAL SYNCRO
REC MODE	NORMAL	NORMAL RETRO CACHE RETRO DISK SNAP <b>REC DV REC Mode only</b> TIMELAPSE DV REC Mode only
REC FORMAT	HDV	DV
DTE FORMAT	QUICKTIME	DV RAW DV AVI TYPE 1 AVI TYPE 2 CANOPUS AVI MATROX AVI QUICKTIME MXF HDV M2T QUICKTIME MXF
TIMECODE	EXT TC	EXT TC FREE RUN REC RUN REGEN
PROXY GEN	<b>AUTOMATIC</b>	<b>OFF</b> <b>MANUAL</b> <b>AUTOMATIC</b>

## PROXY GEN



This operation controls how video proxy files are created.

The DTE format of the parent video clip determines the proxy file wrapper (AVI, MP4, QuickTime) of the proxy file.

- **OFF**  
Disables/enables the **PROXY GEN** function.
- **MANUAL**  
Allows the videographer to select specific video clips for proxy files creation.
- **AUTOMATIC**  
Automatically generates proxy files for all video clips during the recording session.

### Note

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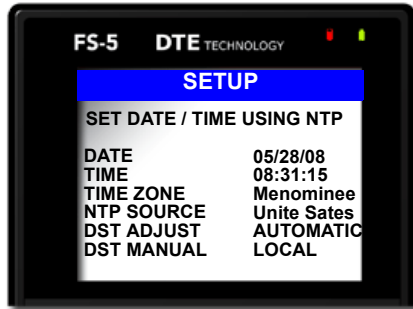
#### **Proxy Files**

Proxy files are significantly smaller in size than the native format video files size they are generated from and can be shared quickly via the internet or network. This provides directors, editors, and others fast access video rushes.

For more information about proxy file settings, see: **PLAY PREF** on page 54 and **PROXIES** on page 54.



## SETUP Menus



The items in the Setup menu are grouped by function. Within the function the items act like radio buttons, i.e. when one is active the others are not.

In some cases, such as the **Date**, a new display appears with parameters to set. To return from a parameters display, use the **BACK** function button.

The Setup menu items include:

Item	Default	Options / Comments
<b>SET DATE AND TIME USING NTP (2.0)</b>		
DATE	06/15/08	Displayed in Home menu.
TIME	08:00	Displayed in Home menu.
<b>TIME ZONE (2.0)</b>	UTC	Select time for specific time zone by selecting geographical region and city.
<b>NTP SOURCE (2.0)</b>	Global	Use this list to locate the NTP pool to sync for date and time info.
<b>DST TIME (2.0)</b>	AUTOMATIC	Daylight Savings Time
<b>DST MANUAL (2.0)</b>	LOCAL	Daylight Savings Time
LCD	ON	ON OFF AUTO
LCD BRIGHT	16	1 -16
KEY BRIGHT	16	1 -16
ALARM	ON	ON/OFF

# FS-5 Functions

Item	Default	Options / Comments
STOP	NO VIDEO	NO VIDEO
EXT CTL	OFF	OFF PAUSE FRAME FILE
TC SET	00:00:00:00	
UB SET	00:00:00:00	
TC MODE	NON-DROP	DROP NON-DROP
RETRO CACHE	5 seconds	
RETRO DISK	1 minute	
TIMELAPSE	00:00:00:00	
PLAY MODE	PLAY CLIP	PLAY CLIP LOOP CLIP PLAY ALL LOOP ALL
PLAY FROM MODE	TRACK	TRACK REEL
PLAY PREF (2.0)	ORIGINAL	ORIGINAL PROXY
<b>PROXIES</b>	SPEED	SPEED QUALITY
UDF FS PERM	READ-ONLY	READ-ONLY READ-WRITE
NETWORK	DHCP	MANUAL DHCP
IP ADDR	0.0.0.0	When set to DHCP, 0.0.0.0. When set to MANUAL, 192.168.10.25
IP MASK	0.0.0.0	When set to DHCP, 0.0.0.0. When set to MANUAL, 255.255.255.0
BROADCAST	0.0.0.0	When set to DHCP, 0.0.0.0. When set to MANUAL, 192.168.10.255
GATEWAY	0.0.0.0	When set to DHCP, 0.0.0.0. When set to MANUAL, 192.168.10.1
ESSID	FS5	
KEY		
WIFI MODE	MANAGED	MANAGED ADHOC PEER-TO-PEER (P2P)
FTP	DISABLED	

Item	Default	Options / Comments
FTP PASS	FS	
WEB	ENABLED	
AUTO ORG	ENABLED	
AUTO MARK	ENABLED	
REELS PREF	FOLDER	FOLDER TEMPLATE

## SET DATE AND TIME USING NTP



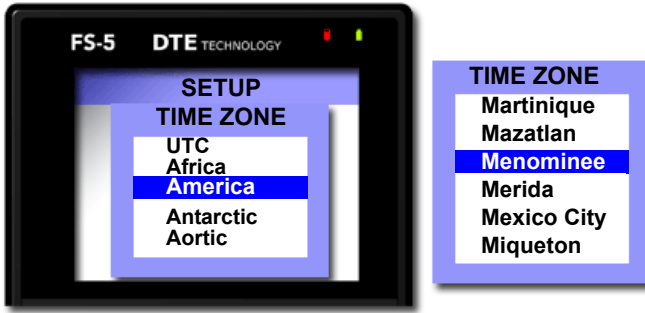
This function uses the Network Time Protocol (NTP) to synchronize the FS-5 system clock to an internet time server. Before running this function, it is necessary to first set:

- **TIME ZONE** on page 50
- **NPT SOURCE** on page 51

The FS-5 must be connected to the internet or an NTP enabled network for this function to work, see **FS-5 with Other Devices** on page 67.

Selecting the function **SET DATE AND TIME USING NTP** automatically initiates the process.

## TIME ZONE



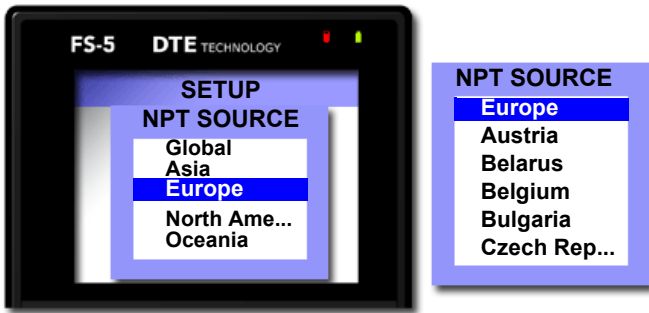
For FS-5 time features to accurately display local time, it is necessary to select the time zone where the FS-5 is to operate. This setting is necessary for the function, **SET DATE AND TIME USING NTP** on page 49 to accurately set the FS-5 clock.

In addition, **DST ADJUST** on page 52 depends on this setting.

Default is **UTC**, Universal Timecode.

1. Select a **TIME ZONE** geographical region.
2. Press the **Left** soft button to advance to the TIME ZONE City list.
3. Use the **Scroll Wheel** to locate a city located in the same time zone as the recording session.
4. Press the **Select** key.  
The display returns to the **SETUP** menu.

## NPT SOURCE



For FS-5 time features to accurately display local time, it is necessary to select the NTP source that the function **SET DATE AND TIME USING NTP** employs to set the FS-5 clock.

Default is **Global**.

1. Select an **NPT SOURCE** continent/geographical region.
2. Press the **Left** soft button to advance to the country list.
3. Use the **Scroll Wheel** to locate a nation located in the same time zone as the recording session.
4. Press the **Select** key.

The display returns to the **SETUP** menu.

## DST ADJUST



Use this function to set Daylight Savings Time for the locale where the FS-5 is operating. There are two setting:

- **AUTOMATIC** Default  
The FS-5 adjusts to daylight savings time changes. TIME ZONE must be set to location of operation.
- **MANUAL**  
Selecting MANUAL instructs the FS-5 to check its clock to see if it must adjust for daylight savings time. It is also necessary to set **DST MANUAL** on page 53.

This function requires that **SET DATE AND TIME USING NTP** on page 49 be set.

## DST MANUAL



Use this function when manually setting Daylight Savings Time.

If **DST ADJUST** is set to **MANUAL**, verify that this function is set apriority.

- **LOCAL** Default
- **STANDARD**

## PLAY PREF



This setting determines which version of the selected video clip plays back:

- **Original** Default
- **Proxy**

## PROXIES

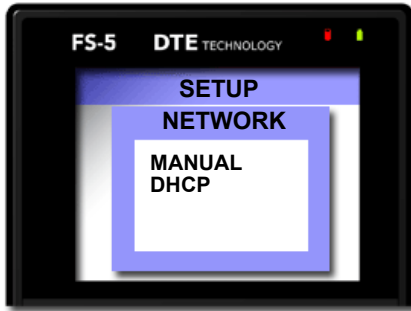


This setting determines the type of proxy file to be created:

- **SPEED** Default  
This proxy has a lower resolution and smallest file size.
- **QUALITY**  
This proxy is higher resolution and largest proxy file size.



## NETWORK



Select the method to use to assign a network IP address to the FS-5.

- **MANUAL**

When MANUAL IP is selected, the FS-5 automatically fills in a default value for:

**IP ADDR:** 192.168.10.251

**IP MASK:** 255.255.255.0

**BROADCAST:** 192.168.10.255

**GATEWAY:** 192.168.10.1

**ESSID:** FS5

- **DHCP Default**

Select, if IP address is automatically assigned by the network DHCP server.

## IP ADDR



When set to DHCP, the address is 0.0.0.0.  
Manual default is 192.168.10.25.

## IP MASK



When set to DHCP, the address is 0.0.0.0.  
Manual default is 255.255.255.0.

## BROADCAST



When set to DHCP, the address is 0.0.0.0.

Manual default is 192.168.10.255.

## GATEWAY



When set to DHCP, the address is 0.0.0.0.

Manual default is 192.168.10.1.

# FUNCTIONS Menu

## Functions List

A list of the Function button menu is below. In each group, the default selection is listed first.

MENU	Appears on LCD as...
F1 SYNC	SYNC Toggles between SYNCRO and LOCAL record control.
F1 EXTERNAL	EXT (Toggles between external TRIGGER and LOCAL control) Default
LCD SET	Sets the LCD display to A = AUTO, 1 = ON, 0 = OFF, see LCD on page 113.
<b>PROXY</b>	<b>Sets FS-5 to Proxy mode, using current settings.</b>
F1 REELS	REEL Increments current reel number,
F1 R0-0	R0 Marks Current Clip to Reel 0,
F1 R1-1	R1 Marks Current Clip to Reel 1,
F1 R2-2	R2 Marks Current Clip to Reel 2,
F1 R3-3	R3 Marks Current Clip to Reel 3,
F1 R4-4	R4 Marks Current Clip to Reel 4,
F1 R5-5	R5 Marks Current Clip to Reel 5,
F1 R6-6	R6 Marks Current Clip to Reel 6,
F1 R7-7	R7 Marks Current Clip to Reel 7,
F1 R8-8	R8 Marks Current Clip to Reel 8,
F1 R9-9	R9 Marks Current Clip to Reel 9,
F1 BLANK	No Function.
F2 DISP	DISP (Toggles the different TC display modes) (Default)
F2 ALARM	ALRM/MUTE Turns the FS-C alarm on or off.
F2 FILE	FILE (Toggles display between normal and the file name.
F2 REELS	REEL Increments current reel number,
F2 R0-0	R0 Marks Current Clip to Reel 0,

MENU	Appears on LCD as...
F2 R1-1	R1 Marks Current Clip to Reel 1,
F2 R2-2	R2 Marks Current Clip to Reel 2,
F2 R3-3	R3 Marks Current Clip to Reel 3,
F2 R4-4	R4 Marks Current Clip to Reel 4,
F2 R5-5	R5 Marks Current Clip to Reel 5,
F2 R6-6	R6 Marks Current Clip to Reel 6,
F2 R7-7	R7 Marks Current Clip to Reel 7,
F2 R8-8	R8 Marks Current Clip to Reel 8,
F2 R9-9	R9 Marks Current Clip to Reel 9,
F2 BLANK	No Function.
F3 LOCK	LOCK/UNLK Locks the buttonpad (Default) - toggles between LOCK and UNLK <Unlock>
F3 REELS	REEL Increments current reel number,
F3 R0-0	R0 Marks Current Clip to Reel 0,
F3 R1-1	R1 Marks Current Clip to Reel 1,
F3 R2-2	R2 Marks Current Clip to Reel 2,
F3R3-3	R3 Marks Current Clip to Reel 3,
F3 R4-4	R4 Marks Current Clip to Reel 4,
F3 R5-5	R5 Marks Current Clip to Reel 5,
F3 R6-6	R6 Marks Current Clip to Reel 6,
F3 R7-7	R7 Marks Current Clip to Reel 7,
F3 R8-8	R8 Marks Current Clip to Reel 8,
F3 R9-9	R9 Marks Current Clip to Reel 9,
F3 BLANK	No Function.
F4 LOCK	LOCK/UNLK Locks the buttonpad - toggles between LOCK (Default) and UNLK <Unlock>

MENU	Appears on LCD as...
F4 REELS	REEL Increments current reel number,
F4 R0-0	R0 Marks Current Clip to Reel 0,
F4 R1-1	R1 Marks Current Clip to Reel 1,
F4 R2-2	R2 Marks Current Clip to Reel 2,
F4 R3-3	R3 Marks Current Clip to Reel 3,
F4 R4-4	R4 Marks Current Clip to Reel 4,
F4 R5-5	R5 Marks Current Clip to Reel 5,
F4 R6-6	R6 Marks Current Clip to Reel 6,
F4 R7-7	R7 Marks Current Clip to Reel 7,
F4 R8-8	R8 Marks Current Clip to Reel 8,
F4 R9-9	R9 Marks Current Clip to Reel 9,
F4 BLANK	No Function.

For information about how to assign clips to reels, see **Assigning Clips to Reels**, in the **Functions** chapter, of the user guide.

## UTILITIES Menu

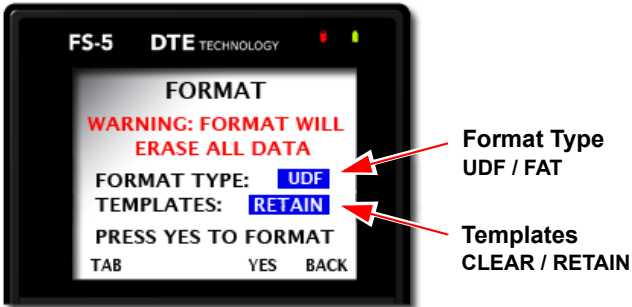


Item	Default	Comment
FORMAT	UDF	Backup data before using. No Undo.
REPAIR DISK	Not Applicable	Use to repair the file structure of hard drive.
REPAIR CLIP	Not Applicable	Use to repair the end of a damaged video clip.
<b>MAKE PROXY</b>	Not Applicable	Creates proxy file for selected video clip.
FILE NAME	Not Applicable	Displays the number assigned to the video clip.
ORGANIZE REEL	Not Applicable	Places all Assigned To Reels video clips into proper folders.
ORGANIZE MXF	Not Applicable	
UPGRADE	Not Applicable	Upgrades the unit software.
DELETE CLIP	Not Applicable	Deletes and removes selected clip from unit. <b>No Undo.</b>
SYSTEM RESET	Not Applicable	Resets unit to factory defaults.
DIAGNOSTIC	Not Applicable	Use to assist Focus Technical Support in diagnosing issues.
STATUS	Not Applicable	Provides details of power state and internal temperature of unit.

Item	Default	Comment
VERSION	Not Applicable	Displays the current software version for the unit.
<b>CALIBRATE CLOCK</b>	Not Applicable	Tunes the FS-5 clock's crystal. Important when synchronizing multiple FS-5s.



## FORMAT



### Troubleshooting Tip - Missing Templates Thumbnails

If while working on the **Entry**, **Review**, or **Template** pages, thumbnails or metadata templates are missing it is necessary to run Format.

Be certain that the **Templates** option is set to **Clear**.

## MAKE PROXY



Use this utility to create proxy files from selected original DTE formatted video clips.

1. From the Utilities menu, go to **MAKE POXY**.
2. Enter the video clip number using the **Scroll Wheel**.
3. Press the **F3/YES** to start generating the proxy file.  
A progress screen displays while the file is created. When it is done the **COMPLETE** message appears.
4. Press the **F4/BACK**, to return to the main Utilities menu.

## Organize MXF



When utilizing MXF OPAtom with some NLEs, such as AVID Xpress Pro, it is necessary to do run **ORGANIZE MXF** before importing the clips.

### **iNote**

#### **Disable AUTO ORG Before Recording MXF**

After recording MXF clips, run ORGANIZE MXF before mounting FS-5 to computer.

The Organize MXF utility:

1. Moves all MXF video files into the /contents/video directory.
2. Moves all MXF audio files into the /contents/audio directory.
3. Updates and moves the xml files from the log directory into the /contents/clip directory.

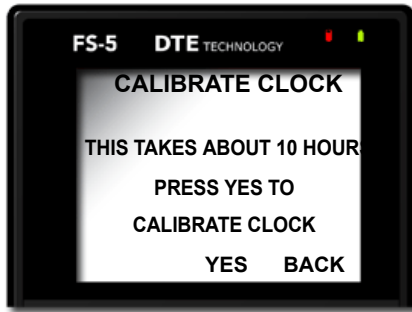
### **iNote**

#### **Metadata Embedded In Avid MXF File Wrapper**

In the case of Avid MXF, the metadata is incorporated into the MXF wrapper and not maintained as a separate xml document.

4. Generates thumbnails of the clips in /contents/icon directory.

## CALIBRATE CLOCK



Use this utility if precise synchronization of multiple FS-5s is required, see **Synchronizing Clocks on Multiple FS-5s** on page 70.

This utility calibrates the FS-5's internal clock. It requires access to a NPT network or internet time server.



### **Calibrate Clock Takes 10 Hours**

The FS-5 is can not be used while this utility is running.

Plan to calibrate the clock at a time when the FS-5 is not needed.

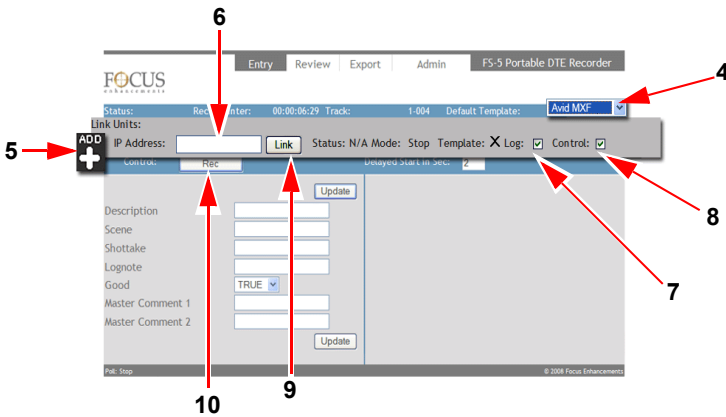
# FS-5 with Other Devices

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This chapter contains information about FS-5 2.0 as it applies to operations with other devices. This chapter contains:

Controlling Multiple FS-5s At Once	page 68
Synchronizing Clocks on Multiple FS-5s	page 70

## Controlling Multiple FS-5s At Once



The FS-5 provides the ability to simultaneously control the **Record** and **Stop** functions of multiple FS-5s located on the same network.

Begin by linking the host FS-5 to the client units:

1. Begin by mounting at least two FS-5 2.0 units on a network.
2. Select one of the FS-5s to be the host.
3. Log on to the host and go to its **Entry** page.
4. Select the metadata template to use from the **Default Template** dropdown list.
5. Click the **ADD** button.

The **Link Units** workspace expands to show the link parameters for the first client FS-5.

Notice that the **Template** option is permanently check-marked. Any time the host FS-5 links to another unit, it transfers the currently selected template to the client, regardless if the other link options are selected or not.

For information about **Template** and **Log** functions, see **Logging Metadata to Multiple 2.0 FS-5s** on page 38.

6. Enter the **IP address** for the client FS-5.
7. Check-mark **Log** if the host unit is to log metadata on the client unit. Then any metadata entered on the host appears on the client too.
8. Check-mark **Control**.

The host unit can control the **Record** and **Pause** operations on the client unit.

9. Click **Link** to connect to the client unit.  
The Status and Mode messages change indicating that the connection is made.
10. Repeat steps 5 through 9 for each client unit.  
The linked FS-5s are now ready.  
Enter metadata as described in the FS-5 User Guide.
11. Click on the **Record** button on the **Entry** page start recording on multiple units.

## Synchronizing Clocks on Multiple FS-5s

It is possible to synchronize multiple FS-5s' system clocks by running **SET DATE AND TIME USING NTP** on each unit within a few minutes of each other. Then the all the FS-5s will have similar timecode stamps.

This feature is useful when using a host FS-5 to control client FS-5s during a recording session, see **Controlling Multiple FS-5s At Once** on page 68.

Before synchronizing, verify that all the FS-5 have the same setting for:

- TIME ZONE** on page 50,
- NPT SOURCE** on page 51,
- DST ADJUST** on page 52,
- DST MANUAL** on page 53,

Once calibrated, the FS-5s stay calibrated through power cycling, although, over a period of days their timecode stamps will slowly drift apart.

To determine that the clocks are synchronized, observe the blinking light on the FS-5's **Select** button. All of the FS-5s' **Select** buttons blink in unison. In addition, go to the FS-5s' **SETUP** menus and compare the times in the **TIME** row. They will be the same.

### Greater Accuracy

For greater accuracy and a longer synchronization period, multiple run the **Utility > CALIBRATE CLOCK** simultaneously on all FS-5s in the set.

This takes about 10 hours to complete and the FS-5s are not available for use until calibration completes.

### Calibration Schedule

New units should be calibrated as required to maintain synchronization within a set of FS-5s. However, after about a year, calibration should not be necessary more than once a year.



# Non-Linear Editors (NLEs)

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This section provides information specific to FS-5, 2.0 features as they relate to non-linear editors.

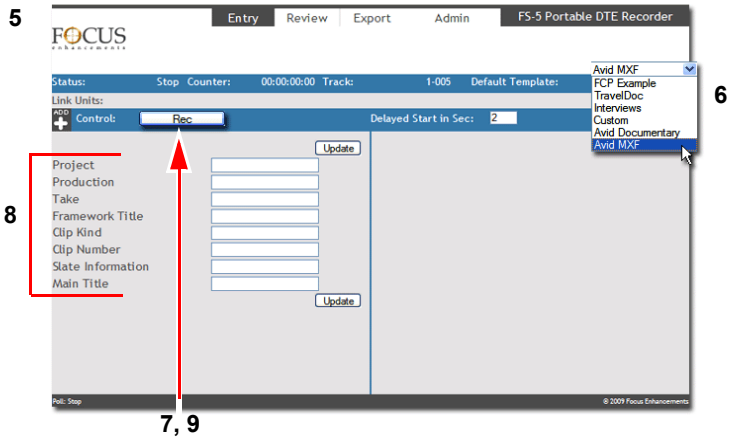
In this section:

Avid Media Composer	page 72
Logging Avid Metadata During Recording	page 72
Importing Video and Metadata Into Avid	page 74

The FS-5 2.0 supports Avid Media Composer and Final Cut Pro metadata capabilities.

# Avid Media Composer

## Logging Avid Metadata During Recording



To log Avid metadata during a recording:

1. Open the FS-5's web server using the standard connection method.
2. Navigate to the **Admin > Template** page.
3. Select **Avid MXF** Format from the **Template Type** menu.  
A set of Avid MXF metadata values appears.  
Currently, only the first three values (**Project, Production, and Take (number only)**) can be viewed in the Avid bin. However, all fields are populated in the Avid MXF file.
4. Setup the metadata using the standard procedure described in the FS-5 user guide.
5. Navigate to the **Entry** page.
6. Select the Avid XMF template from the **Default Template** menu.
7. Begin recording by pressing the Record button on the **Entry** page.  
The **Record** button switches to the **Stop** button.
8. Log metadata, using the standard procedure described in the FS-5 user guide.
9. Click on the **Stop** button to cease recording.

10. Once recording is done, navigate to the **Utilities** menu.



11. Select **Organize MXF**.

This is necessary to create the Avid MXF directory structure and then insert the metadata into the Avid MXF file.

### **i** Note

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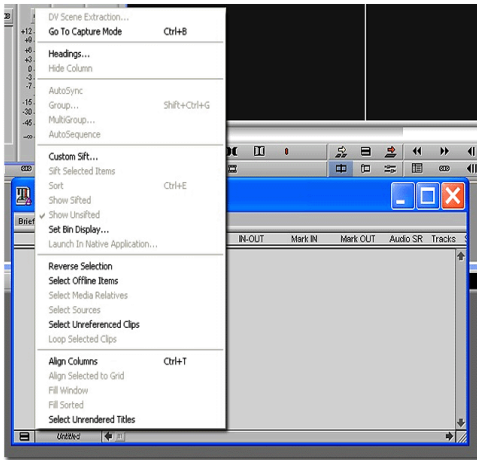
#### **ORGANIZE MXF Embeds Metadata in the MXF File**

Unlike the Apple XML Interchange Format used in Final Cut Pro metadata logging, the metadata for Avid is actually embedded in the MXF file, not set as a separate XML file.

#### **Disable AUTO ORG Before Recording MXF**

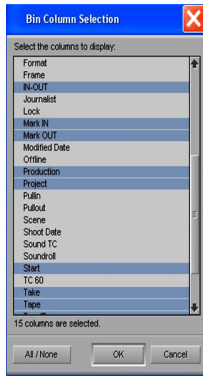
After recording MXF clips, run ORGANIZE MXF before mounting FS-5 to computer.

## Importing Video and Metadata Into Avid



To import clips into Avid Media Composer, use the standard Media Tool import method.

1. Select the bin to receive the clips.
2. Left click the bin settings button in the lower left hand corner of the bin and select **Headings**.
3. From the Headings Menu, make sure that the columns **Project**, **Production**, and **Take** are selected.



These columns appear in the Avid bin. Logged metadata for these fields appears for each clip in the Avid bin.

# Technical Specifications

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This chapter contains those specifications that relate to FS-5 2.0 functions.

## DTE File Formats Supported

### SD

### DV25

- Frame Rates
  - 480i @ 30 fps.
  - 480p @ 24 and 30 fps.
  - 576i/p @ 25fps.
- DTE Formats
  - AVI 2
  - AVI 2 - 24p
  - Canopus AVI
  - Matrox AVI
  - QuickTime - supports recordings larger than 2GB
  - QuickTime 24p - supports recordings larger than 2GB
  - OP Atom
  - MXF P2 - supports recordings larger than 2GB

## HDV

- Frame Rates
  - 720p @ 24\*, 25\*, 50\* and 60\* fps
  - 1080i @ 24F\*, 30F\*, 25F\*, 50 and 60 fps
  - \* Supported in the M2T file format only.
- DTE Formats
  - M2T - supports recordings larger than 2GB
  - QuickTime - supports recordings larger than 2GB
  - MXF - supports recordings larger than 2GB

## Proxy Videos

- Frame Rates
  - 12fps 1080 hq
  - 20fps 1080 speed
- Codec: MPEG4
  - Video bit rate: 320kb/s
  - Audio bit rate: 64kb/s
  - Frame rate: 12fps (50Hz) or 15fps (60Hz)
- Wrapper Table

Original File Format	Proxy File Format
QuickTime DV/HDV	QuickTime (.mov)
MXF (DV/HDV)	AVI (.avi)
M2T (HDV)	MP4
AVI (DV All variants)	AVI (.avi)
RawDV (DV)	MP4



