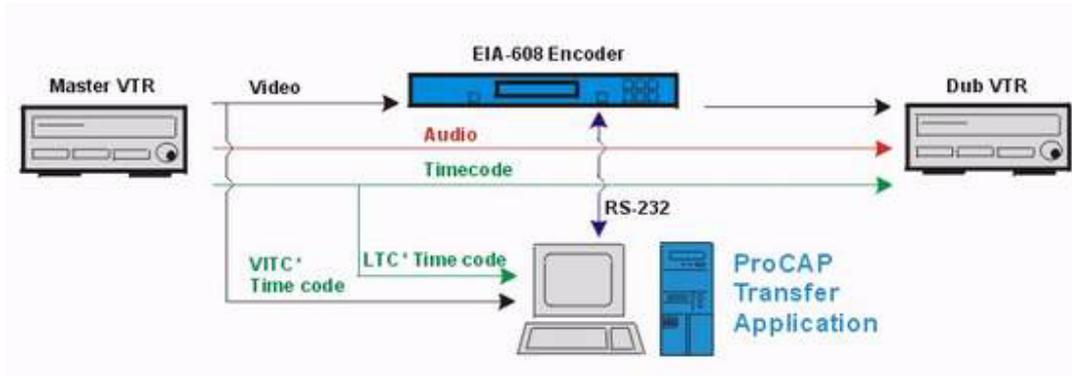


# **Transfer Utility**

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# Transfer Overview

The **ProCAP Transfer Application** ensures accurate and consistent encoding of captions to video.



Transfer files generated from the ProCAP Authoring System can be sent to the Transfer Application over a network or on floppy for encoding to video.

Transfer files are a series of events, with each event having caption data to be sent to the encoder at a specified time code.

The Transfer Utility is time code driven from the Master source, and sends the event data to the Encoder appropriately, according to the current input time code. This allows the Transfer Utility to track the Master source even when it is paused, jogged, or shuttled. Once the Master source returns to normal play forward, the Transfer Utility prepares for the next complete event that it can send out. Partial events or events for time codes that have been skipped are all skipped by the Transfer Utility.

No caption processing is done during transfer.

The Transfer Utility can communicate with any encoder that supports the NCI Control-A, or EEG Smart III, compatible protocol.

The Transfer Utility supports the following caption file formats:

- ProCAP Transfer files
- NCI caption files
- WGBH TDS caption files
- Cheetah .CAP version 2 binary caption files

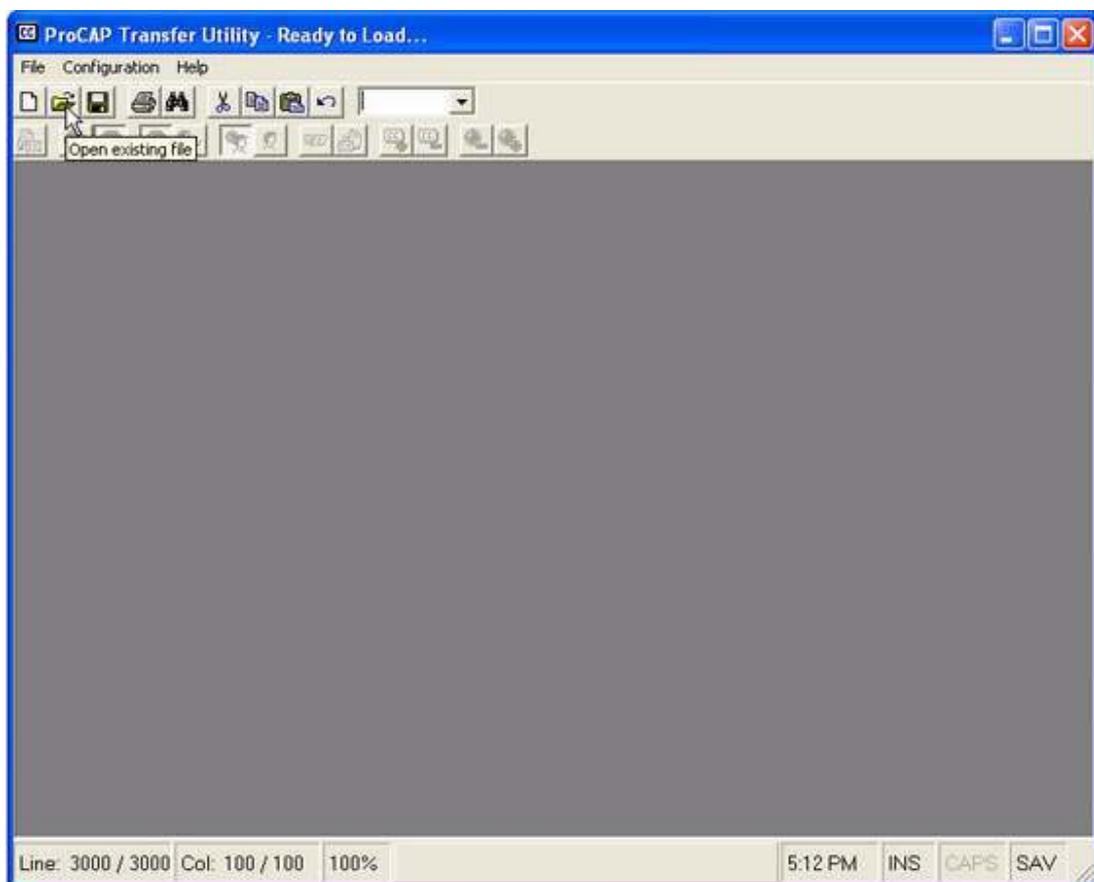
In order to import NCI and/or Cheetah files, Microsoft Office and ProCAP must also be installed into the Transfer system.

## Transfer Utility

Before using the Transfer application, the Encoder and Time Code Reader configuration section should be reviewed.

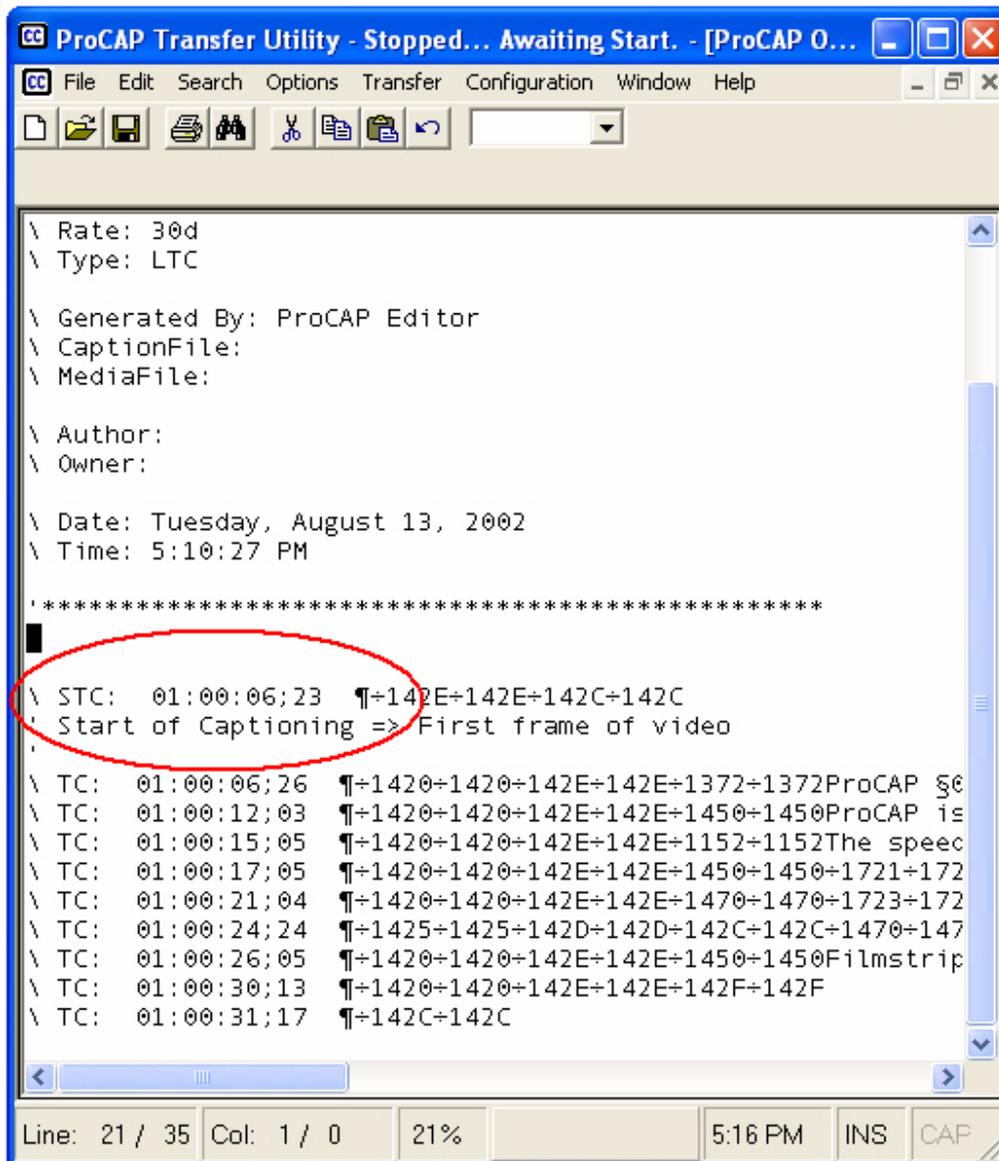
To start the Transfer Application, from the Windows Start Menu choose **Programs** → **ProCAP** → **ProCAP Transfer Utility**.

Open the transfer file from the Transfer Application menu **File** → **Open**, or by using the **Open existing file**  command button on the command bar.



Locate the transfer file that was created, highlight the file and press **Open**.

An example of a transfer file loaded:



At this point, the user should verify that the starting time code (STC) in the transfer file is the same as the master video. If the times differ, there are several options:

1. Go back to the Source Caption File in the ProCAP Editor, and verify the time codes of the Source Video File with the Master File
2. Move the time code in the ProCAP Editor
3. Change the time code in the Transfer file

Once the time code is verified, then the transfer file is loaded into the queue.

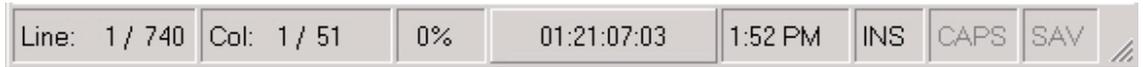
Loading the transfer file can be done:

- from the Transfer Application menu execute **Transfer** → **Load**
- by pressing the **Load**  command button

- by executing **Ctrl+L**

### To start encoding

1. **Cue** and **Play** the Master VTR. Now, the source time code will appear on the bottom status bar in the Transfer Utility.



 If there is no time code on the Transfer Utility bottom status bar, then there is a problem with either the time code reader card, or the time code source is not connected properly or there is an issue with the master dub. See Time Code Reader Problems for more information.

2. Start the Transfer Utility encoding by:
  - executing **Transfer** → **Start Encoding** from the Transfer Utility menu
  - pressing the **Go**  command button
  - executing **Ctrl+E**
3. Press **Record** on the Dub VTR.

Once the transfer operation is complete, stop the encoding process by either:

- executing **Transfer** → **Stop Encoding**
- pressing the **Stop**  command button
- executing **Ctrl+D**

Before starting another transfer unload the current transfer file. This is done by either:

- executing **Transfer** → **Unload**
- pressing the **Unload**  command button
- executing **Ctrl+U**

# Setup

## **Introduction**

The set up section of this manual, explains how to set up and install the ProCAP Transfer Utility system on a personal computer.

If the ProCAP Transfer Utility was pre-installed on a system, then this section titled Setup, is not relevant. Proceed to a Tour of the Transfer Utility.

## **Minimum Requirements**

In order to guarantee reliable performance of the transfer application, a PC Compatible system with the following specifications is recommended:

- Pentium III 450+Mhz
- One free ISA slot for the time code reader card
- One free serial port for encoder communications
- One parallel port for the ProCAP authorization key
- 128+MB RAM
- CD-ROM or DVD-ROM drive
- Windows 2000 SP1
- A minimum of 5MB of hard drive space for the transfer application
- Microsoft Office 2000 SR1 Small Business Edition if NCI and Cheetah file import capability is required

## **Installation**

There are three steps to be followed when installing the Transfer Utility.

1. Hardware Setup to install the Time Code Reader Card and the ProCAP Authorization Dongle.
2. Transfer Setup to install the Transfer Utility
3. System Configuration to install the support software for NCI and Cheetah import

# Hardware Setup

Prior to installing the Transfer Utility:

1. Install the Time Code Reader Card. For installation software and detailed instruction, refer to the accompanying manual.

 The computer bios must be updated to reserve the UMB address range occupied by the Time Code Reader Card.

2. Install the ProCAP Authorization Dongle:
  - Identify the parallel port. This port can be identified as the DB-25 (25 pin female connector)
  - If a printer is connected to the computer, disconnect the printer
  - Secure the Dongle to the parallel port
  - Re-connect the printer cable to the Dongle
3. Connect the Encoder to the serial port on the computer:
  - Identify the free serial port. This port can be identified as a DB-9 (9 pin male connector)
  - Connect the serial cable of the encoder to the serial port.

## **Transfer Setup**

To install the Transfer Utility, run the Setup Program from the ProCAP CD.

- Insert the ProCAP CD into the CD-ROM or DVD-ROM drive
- From the Windows toolbar, select Start → Programs → Windows Explorer
- In the Latest ProCAP directory, open the Transfer folder
- Execute the Setup Program
- Follow the prompts that are given during installation and accept the defaults
- Complete the installation

Once the Setup program is complete, you will have a program group called ProCAP Transfer Utility.

## System Configuration

For NCI and/or Cheetah file import support, additional system software must be installed.

 Microsoft Office 2000 SR1 must be installed and run prior to installing the ProCAP Authoring Application.

To install the ProCAP Authoring Application:

- Insert the ProCAP CD into the CD-ROM or DVD-ROM drive
- From the Windows toolbar, select Start → Programs → Windows Explorer
- In the Latest ProCAP directory, open the ProCAP folder
- Execute the Setup Program
- Follow the prompts that are given during installation and accept the defaults
- Complete the installation

This completes the system configuration.

## **Encoding Transfer Files**

## Loading Transfer Files

In order to load a transfer file into the transfer utility, you will first have to transfer the ProCAP caption file to a transfer file. If not done previously, the Creating a Transfer File section should be reviewed.

To load in the transfer file:

- execute **File → Load**
- press the **Open File**  command button and browse to the file you want to open and click the Load button.

An Editor window will open with the loaded transfer file.

If the master dub and the recorded video are not of the same time code, you may have to change the time code in the transfer file. This can be easily accomplished with the Set New Time code command.

The transfer events can now be loaded by:

- executing **Transfer → Load**
- executing **Ctrl + L**
- pressing the Load  command button

At this point all events are queued into the transfer process.

## Start Encoding

Once the transfer file has been loaded and the events are queued, you are ready to start the actual transfer.

Before you commence with the transfer, the dub operation should be ready to go. You can proceed by setting up the VTRs for the dub.

Once the VTRs are ready to dub, start the transfer by:

- executing **Transfer** → **Start**
- pressing the **Go**  command button

If a start of captioning marker is present, the encoder will not start encoding until the time on the marker. If the marker does not exist, the encoder will start encoding once you start the transfer.

At this point, you should ensure that the dub is proceeding properly.

If the VTR is shuttled forward or in reverse, the transfer application will drop any captions that it could not send and requeue itself to the next caption with the current time code.

## Stop Encoding

Once the master dub is complete, to stop the transfer:

- execute **Transfer** → **Stop**
- press the **Stop**  command button

Stopping the transfer guarantees that the encoder is no longer encoding to video.

If you have an End of Captioning Marker in the transfer file, the encoder will be disabled at this time. However, if the VTR is the reversed, the encoder can start encoding again.

## Unloading Caption Files

Once the transfer operation is stopped, the file can be unloaded from the queue by:

- executing **Transfer** → **Unload**
- pressing the **Unload**  command button

Once the file has been unloaded, the file can be closed, saved and the Transfer Utility is closed.

## Closing the Transfer Utility

To close the transfer application, first stop encoding and then unload the transfer file by:

- executing **File** → **Exit**
- pressing the **Close Application**  command button on the top right of the window to close the Transfer Utility.

# Importing

## Cheetah Import

To import a Cheetah .CAP caption file, execute **File** → **Import** from the Transfer application main menu. Use the Open dialog box to browse to and select the Cheetah .CAP file you wish to import. Press the Open button to start the import operation.

 Currently, ProCAP only supports import of the Cheetah Version 2 .CAP binary files.

The progress of the Cheetah .CAP import process is displayed. The import process uses the ProCAP Authoring application to convert the Cheetah captions into a ProCAP caption file, before generating a standard ProCAP transfer file.

Once the import process has completed, the imported Cheetah file is loaded and ready for regular transfer operations to be started.

 Cheetah import is only supported if the ProCAP Transfer dongle, ProCAP Authoring application, and Office 2000 or later, are installed and operational. To install these components, please go to the System Configuration section in the Setup section.

## NCI Import

To import a NCI caption file, execute **File** → **Import** from the Transfer application main menu. Use the Open dialog box to browse to and select the NCI file you wish to import. Press the Open button to start the import operation.

The progress of the NCI import process is displayed. The import process uses the ProCAP Authoring application to convert the NCI captions into a ProCAP caption file, before generating a standard ProCAP transfer file.

Once the import process has completed, the imported NCI file is loaded and ready for regular transfer operations to be started.

 NCI import is only supported if the ProCAP dongle, ProCAP Authoring application, and Office 2000 or later, are installed and operational. To install these components, please go to the System Configuration section in the Setup section.

## TDS Import

To import a WGBH (The Caption Center) TDS caption file, execute **File** → **Import** from the Transfer application main menu. Use the Open dialog box to browse to and select the TDS file you wish to import. Press the Open button to start the import operation.

Once the import process has completed, the imported TDS file is loaded and ready for regular transfer operations to be started.

## Changing Time Code

If the transfer file has a different time code than that of the master video, changing the time code is very easy to do.



It is recommended that a start of video marker is placed at the beginning of the caption file to ensure that the time code offset is accurate.

## Changing the Entire File

To change the offset of the entire transfer file, make sure that there is no selection in the file.

Choose Edit → Set New Timecode or press CTRL-T to open the time code dialog box.

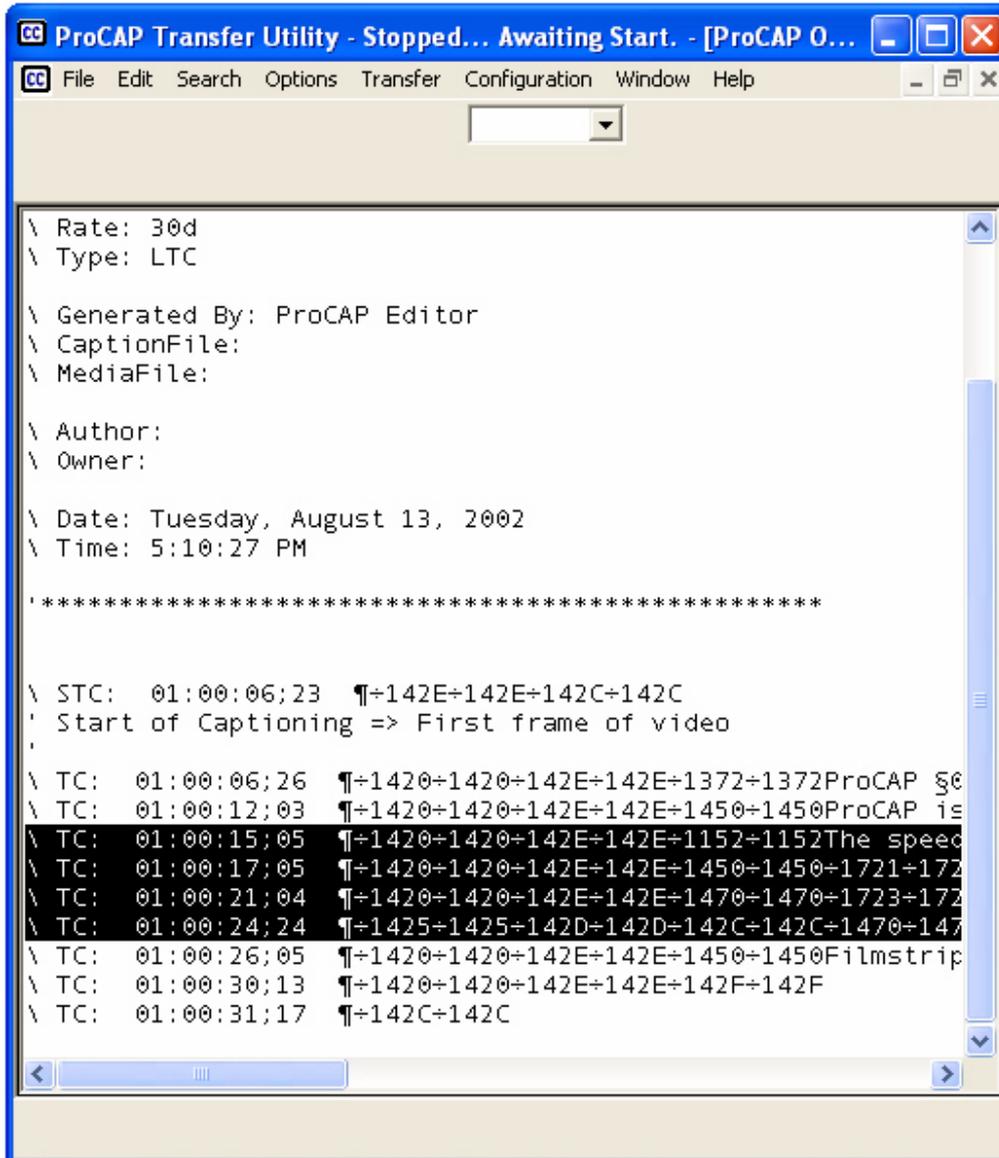


Enter the new time code to change the transfer file to. Click OK to continue.

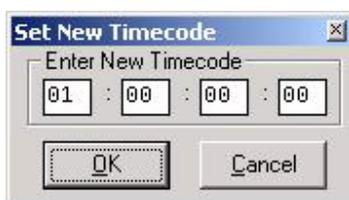
The transfer file will now be parsed and all of the time code will be updated.

## Changing Blocks of Time Code

To change only sections of time code, simply highlight the block of captions:



Choose Edit → Set New Timecode or press CTRL-T to open the time code dialog box.



Enter the new time code to change the transfer file to. Click OK to continue.

The block will now be parsed and the time code will be updated.



# Configuration

## Timecode Reader

Configure the time code reader rate to reflect that of the time code source. If a standard VITC or LTC signal is used, the default settings should be used.

The Time code cards combo box will list any time code reader cards that are installed into the system.

Press the Test button to ensure that the reader is being detected and that the time code is being read.

The screenshot shows the 'Transfer Configuration - Default' dialog box with the 'Timecode Reader' tab selected. The dialog is divided into several sections:

- Timecode Reader Source:** Contains three radio buttons: 'Auto Source Selection' (selected), 'LTC Only', and 'VITC Only'.
- VITC:** Contains a checked checkbox for 'Auto Detect VITC Lines' and two input fields: 'VITC Video Line 1' with the value '12' and 'VITC Video Line 2' with the value '14'.
- Status:** A section containing several fields and a button:
  - 'Timecode:' followed by an empty text input field.
  - 'Source:' with a dropdown menu set to 'Auto'.
  - 'DLL Version:' with a dropdown menu set to 'C2'.
  - 'Direction:' with a dropdown menu set to 'Forward'.
  - 'Drop Frame:' with a dropdown menu set to 'Off'.
  - 'Speed:' followed by an empty text input field.
  - 'VITC Line:' followed by an empty text input field.
  - A 'Test' button.
- Timecode Rate:** A dropdown menu set to '30 Non-Dropframe'.
- Timecode Cards:** An empty dropdown menu.
- A 'Save' button.
- At the bottom, 'OK' and 'Cancel' buttons.
- Footer text: 'ProCAP Transfer Application Copyright(c) 1999-2001. All Rights Reserved.' and 'Version: 1.3.349'.

If any changes are made, press the **Save** button to save the new configuration.



## Encoder

The default encoder initialization settings and control settings should be kept as the default settings. These are the common configuration strings for a Control-A protocol, or EEG Smart III, compatible encoder.

The screenshot shows the 'Transfer Configuration - Default' dialog box with the 'Encoder' tab selected. The dialog is divided into several sections:

- Encoder:** Initialization: `^F^F^A?^M^A7F1^M^A7F`; Internal Encoder Delay (in video frames): 2.
- Encoder Start Caption Encoding Control Strings:**

Field1:	<code>^A3 2 F1^M</code>	Field2:	<code>^A3 2 F2^M</code>
CC1:	<code>^A3 2 C1^M</code>	CC1:	<code>^A3 2 C3^M</code>
CC2:	<code>^A3 2 C2^M</code>	CC2:	<code>^A3 2 C4^M</code>
Text1:	<code>^A3 2 T1^M</code>	Text1:	<code>^A3 2 T3^M</code>
Text2:	<code>^A3 2 T2^M</code>	Text2:	<code>^A3 2 T4^M</code>
- Encoder End Caption Encoding Control Strings:**

Field1:	<code>^C^M^A7 F1^M</code>	Field2:	<code>^C^M^A7 F2^M</code>
CC1:	<code>^C^M^A7 F1^M</code>	CC1:	<code>^C^M^A7 F2^M</code>
CC2:	<code>^C^M^A7 F1^M</code>	CC2:	<code>^C^M^A7 F2^M</code>
Text1:	<code>^C^M^A7 F1^M</code>	Text1:	<code>^C^M^A7 F2^M</code>
Text2:	<code>^C^M^A7 F1^M</code>	Text2:	<code>^C^M^A7 F2^M</code>
- Encoder ^A? Return:** `<Communications Timed Out>`

Note: These settings are saved with each Computer Communications Profile.

Buttons: OK, Cancel

ProCAP Transfer Application  
Copyright(c) 1999-2001. All Rights Reserved. Version: 1.3.349

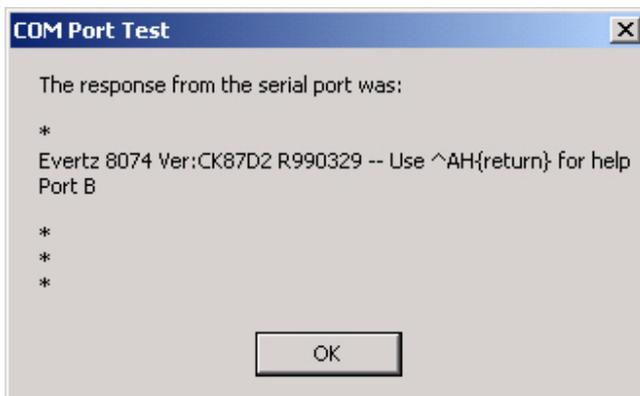
To ensure that the settings are correct, press the Test button. A dialog box should display with an asterisk (\*) as the encoder response.



If the encoder is not properly connected, the dialog box will state that the serial port has timed out. This error can also display if the proper bit setting and parity is not set correctly.



You can perform an extended test by copying the initialization string from the Init box and pasting it into the test box. The following is an example result using an Evertz Encoder.



The encoder delay is the delay, in fields, that the encoder introduces to the stream. Consult the user manual or the vendor for the proper setting of this field.

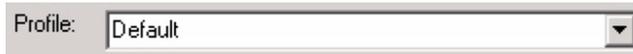
## Saving Changes

 Once the encoder configuration has been set, you can save the changes into your own profile by typing in a profile name in the profile box and clicking on the Save button. Changes can be saved to the default profile, but these may be over-written by software updates.

Click on the OK button to close the configuration menu.

## Loading A Different Profile

If you have more than one encoder, you can switch between profiles by pulling down the profile combo box by clicking on the down arrow.

A screenshot of a software interface showing a dropdown menu. The label 'Profile:' is on the left. The dropdown box contains the text 'Default' and a small downward-pointing arrow on the right side.

This will display the all of the saved profiles. Highlight the profile you wish to load and click the load button.

## Deleting Profiles

If you have more than one profile and wish to delete the unneeded profiles, pull down the profile combo box by clicking on the down arrow and choose the profile you wish to delete. Click on the delete button to delete this profile.



If you have deleted all of the profiles, the next time you start ProCAP a new default profile will be created.

## Computer Communications

Configure the COM Port Settings to reflect that of the encoder serial communication settings. Refer to the encoder manual for details on the communication settings.

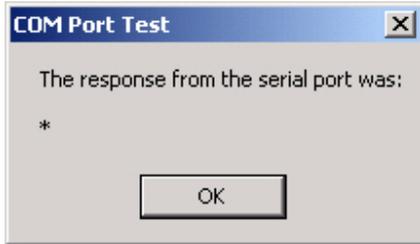
The screenshot shows a dialog box titled "Transfer Configuration - Default" with a close button in the top right corner. It has three tabs: "Timecode Reader", "Encoder", and "Computer Communications", with the latter being the active tab. The "Computer COM Port Settings" section contains the following controls:

- Port: COM2 (dropdown)
- Baud Rate: 19200 (dropdown)
- Stop: 1 (dropdown)
- Bits: 7 (dropdown)
- Parity: Even (dropdown)
- Test String: ^F^A?^M (text input)
- Test button

Below these settings is a "Profile:" dropdown menu set to "Default". At the bottom of this section are three buttons: "Load", "Save", and "Delete".

At the very bottom of the dialog box are "OK" and "Cancel" buttons. The footer text reads: "ProCAP Transfer Application Copyright(c) 1999-2001. All Rights Reserved. Version: 1.3.349".

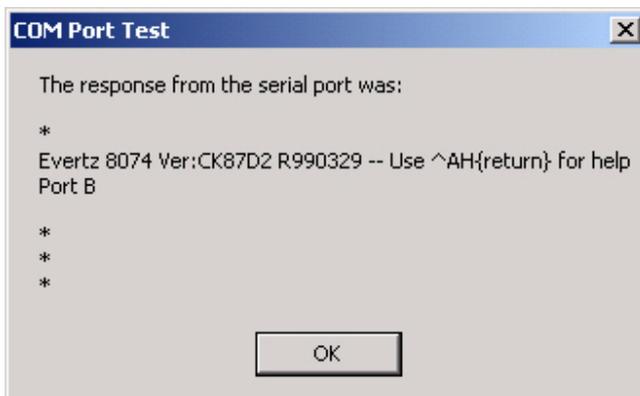
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The encoder delay is the delay, in fields, that the encoder introduces to the stream. Consult the user manual or the vendor for the proper setting of this field.

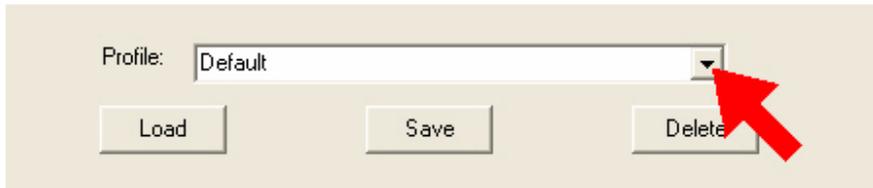
## Saving Changes

 Once the encoder configuration has been set, you can save the changes into your own profile by typing in a profile name in the profile box and clicking on the Save button. Changes can be saved to the default profile, but these may be over-written by software updates.

Click on the OK button to close the configuration menu.

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If you have more than one encoder, you can switch between profiles by pulling down the profile combo box by clicking on the down arrow.



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If you have more than one profile and wish to delete the unneeded profiles, pull down the profile combo box by clicking on the down arrow and choose the profile you wish to delete. Click on the delete button to delete this profile.

 If you have deleted all of the profiles, the next time you start ProCAP a new default profile will be created.

# Menus

## File Menu

Choose the following commands in the File Menu:

Name		Description
New		Opens a new transfer editor
Open...		Displays the open dialog box
Save		Saves the current file
Save As...		Prompts for new name to save the current file
Print...		Prints the current edit file
Page Setup...		Sets up the page for printing
Recent File		Displays the latest 5 files that were opened
Close		Closes the current edit window
Exit		Exits the transfer application

.

## Edit Menu

Choose the following commands in the Edit Menu:

Name		Description
Undo		Undoes the last change made in the edit window on the transfer file.
Cut		Cut the highlighted section into the clipboard.
Copy		Copy the highlighted section into the clipboard.
Paste		Paste the contents from the clipboard into the current location.
Delete		Delete the selected section.
Select All		Select the entire transfer file.
Date/Time		Enter the current date/time into the current location.
Set New Time code		Set a new time code for the highlighted section or the entire document.
Set Captioning Channel/Field		Over ride the current captioning channel/field.

## Search Menu

Choose the following commands in the Search Menu:

Name		Description
Find...		Search for a string within the transfer file.
Find Next		Find the next occurrence of the string within the file.
Find Previous		Find the previous occurrence of the string within the file.
Replace		Perform a search and replace of the given string.
Replace Next		Replace the next occurrence of the given string.

## Options Menu

Choose the following commands in the Options Menu:

Name		Description
Font		Change the font of the specified selection of text
Selection Font		
Background Color		Change the background color of the transfer file
Text Color		Change the text color of the specified selection of text
Rich Text		Toggle rich text view.

## Transfer Menu

Choose the following commands in the Transfer Menu:

Name		Description
Load		Load the current transfer file into queue
Unload		Unload the current transfer file from the queue
Capture		Perform a capture of the video stream*
Start Encoding		Start the encoding process.
Stop Encoding		Stop the encoding process.

\*Only available with the Transfer Hardware key. Must have a closed caption decoder in order to capture.

## **Configuration Menu**

The Configuration menu configures the encoder or time code reader card. For details of these operations see the configuration section.

## Window Menu

Choose the following commands in the Window Menu:

Name		Description
Tile Horizontally		Tiles all open file windows horizontally
Tile Vertically		Tiles all open file windows vertically
Cascade		Cascade all open windows
Arrange Icons		Arrange any minimized file icons
Window List		Lists all current file windows. The checkmarked window is the current window.

## Help Menu

Choose the following commands in the Help Menu:

Name		Description
Contents		Displays the help file table of contents
Index		Displays the help file index
Search		Displays the help file search dialog box
About		Displays information about the Transfer application

# Transfer Problems

## Time Code Reader

### No Time Code Reader Found

If no Time Code Reader is listed in the **Timecode Cards** drop-down dialog box on the Time Code Configuration window, the low-level driver for the Time Code Reader is not installed or not configured correctly.

Confirm the settings of the Time Code Reader card during initial power-on of the system. The default address of the Time Code Reader card is **DE00**.

Follow the instructions for the Time Code Reader card manual and installation software to reinstall the low-level driver and registry entries.

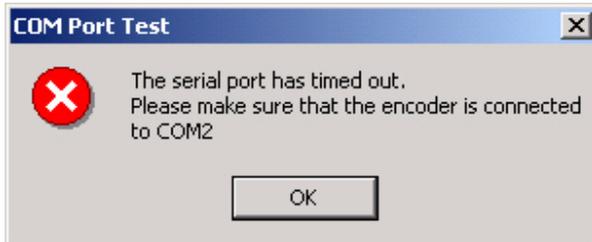
### No Time Code Present

If no time code is present after pressing **Test** on the Time Code Configuration window, verify the time code source is present and that it is connected to the corresponding Time Code Reader input.

The Time Code Reader typically has two RCA connectors for unbalanced analog LTC and analog NTSC composite VITC inputs. The VITC input is closest to the DB-9 connector on the Time Code Reader card.

## Encoder Communication

If your encoder is connected properly and the transfer application complains that the serial port has timed out, you may have the serial port settings set incorrectly. Review the section on configuring the encoder to ensure proper communication.



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