



## Some Tips and Suggestions for CPC CaptionMaker Software

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## General Information

This is not a manual. The topics described here do not go into details. Please consult the complete manual: <http://www.cpcweb.com/TechSupport/CapMaker/CaptionMakerManual.pdf>

### Software Updates & Tech Support

For the most up-to-date manual, please check the software downloads page:

<http://www.cpcweb.com/download>. Also check <http://www.cpcweb.com/TechSupport/CapMaker> for CPC knowledge based documents for different topics.

### Transcribing Video

If you do not have a script of the video, you can get the script in many ways, such as:

- If you use a digital video, you can use a foot pedal control like [yPedal](#) to transcribe the video. It costs less than \$90. Details can be found at: [http://www.cpcweb.com/caption\\_common/VPedal-AllAbout.pdf](http://www.cpcweb.com/caption_common/VPedal-AllAbout.pdf).
- Train speech recognition software such as [ViaVoice](#) for a few hours. Then listen to the videotape and repeat the dialogue into the microphone. At the beginning, you are going to get lot of errors. But you can teach the software to fix the errors and down the road you can expect to get about 90% to 95% accuracy.
- ◆ Dubbing the audio onto a tape, and then use a traditional Dictaphone® type machine (tape recorder you control with you foot, so you can keep two hands on the keyboard) can speed up the transcription process.
- ◆ Use a professional transcription service. This is the most expensive way to generate the script.

Even though it is not advisablable to transcribe a video within CaptionMaker, if you must do it, there is transcription mode, which can be found inside the *File* menu. You can switch between *Transcription mode* and *Edit mode* by clicking on *Edit* on the bottom status bar.

### HASP Key (Dongle)

If CaptionMaker does not recognize the CPC Protection Key (CPK), please download the software for the HASP driver <http://www.cpcweb.com/download/haspinstall.exe> from [http://www.cpcweb.com/download/cmplete\\_downloads\\_new.htm#Utilities](http://www.cpcweb.com/download/cmplete_downloads_new.htm#Utilities) which will perform un-installation and re-installation of the HASP driver for the CPC HASP Protection Key (dongle).

### Upgrading CPC Software

(This will only work if your received the software key after 1/1/2002)

You can upgrade your CPC software from any level to a higher level (i.e., CPC-700 to CPC-700NLE) over the internet. You do not need to send the USB or the parallel hardware key via mail to be replaced. We will upgrade the key via the internet.

2. Run the CPC software. Go to the Help menu and click on Upgrade License (If you do not find the menu item Upgrade License, follow the step below to install the most recent version of your level of software. Now you will see the Upgrade License Screen under the Help menu.)
3. Now click on Display License ID.
4. Copy and paste the string of characters and send to [info@cpcweb.com](mailto:info@cpcweb.com)

CPC will email you a \*.dat file.

Now you need to follow step 3 inside the Upgrade License screen to Upgrade your software to a higher level.

### **Install most recent version of software**

You can download the most recent version of the software from the software downloads page:

[http://www.cpcweb.com/download/cmplte\\_downloads\\_new.htm](http://www.cpcweb.com/download/cmplte_downloads_new.htm)

Now follow the steps:

1. Uninstall the old version of the software. (Keep note of your caption and Time Code devices)
2. Disconnect the USB or Parallel hardware key from the computer.
3. Install the new upgraded version of the software. You will need a password, which we will be provided to you.
4. Connect the USB or Parallel hardware key to the computer.

### **Accented Characters: Multiple Keystroke Method**

If you do not know how to use your keyboard to type characters used in a particular foreign language, you can install them into your keyboard so you can type those characters with multiple keystrokes.

1. To install the keyboard to type accented characters, go to Start > Settings > Control Panel > Keyboard, and click on the Language/Input Locales tab.
2. Click on the Properties button. On a Standard United States version of Windows, a pull-down box will appear containing many keyboard layouts.
3. Select the keyboard layout United States - International. Then click OK.

This keyboard will allow you to type accented English characters used in most European languages, including French, German, Spanish, Danish, Italian, Dutch, Finnish, Portuguese, Norwegian and Swedish.

<b>Character</b>	<b>First Key</b>	<b>Second Key</b>
á	' (under the ")	a
à	`(under the ~)	a

### **Available Captioning Characters**

The languages supported by the closed caption decoder technology includes following languages:

- ◆ Dutch
- ◆ English
- ◆ French
- ◆ German
- ◆ Portuguese
- ◆ Spanish

### **Captioning Process (Outline)**

Please read the document <http://www.cpcweb.com/Captioning/CaptionSoftwareOverview.pdf> to get a overview of how captions are created using CaptionMaker.



# Time Code Related

## Drop Frame vs. Non-Drop Frame Time Code

There is no time code track on the A/V file. CPC keeps track of the video frames starting with 00:00:00:00 time code for the first frame of the video, and keeps a frame counter that counts 29.97 frames per second (on average). The exact counting mechanism is bit more complex. This is exactly the same way drop frame time code is used for videotape format. That's why the time code from the Video Playback acts in the same way as the drop frame time code does for a videotape format. If you have a video file on the hard drive that is exactly one hour long according to the clock on your wall, the very first time code of the first frame of the video is 00:00:00:00 and the time code of the very last frame of the video is exactly 01:00:00:00. On the other hand, the time code of the very last frame will be 00:59:56:12 for Non-Drop frame. There is difference of 00:0:03:18 frames.

## Drop Frame/Non-Drop Frame & NTSC/PAL

If the time code formats on your work tape and master tape are different, you may convert them between NTSC and PAL and also between drop frame and non-drop frame. See Convert Time Code in "Chapter 8: Menus" for details. To convert time codes from one to another (PAL and NTSC or drop to non-drop) highlight the time codes you would like to convert and use this option to convert them from one to another.

## Stretch/Shrink Time Code

This option might be very useful when you work with a digital video or a tape (work copy) and do all the time coding, and then need to match the time coded file with another copy of the video (master copy), which may have a slightly different code at the end of the video. One reason this could happen is due to a drop frame/no drop frame issue. To match the time code of the caption file with the video, make sure the first time code of the caption file matches with the master copy. Then choose this option and enter the last time code from the master copy. This option will stretch or shrink all the time codes in the caption file to match the master copy.

In most situations, you should have the box for "Master time code is drop frame" checked.

## Fine tuning of time codes: Ctrl + & -

If you need to change a time code by small amount, click the cursor on the time code cell and press Ctrl+ or Ctrl-. This operation will change the time code value by 1 frame.

## Calculate send time for Pop-On (Captioning commercials)

This feature is very important when you caption a short commercial. In a commercial, if you add a Pop-On caption at the very beginning of the video, you may lose the caption. Since Pop-On captions need build-up time in order to be displayed on a particular frame of the video, you have to make sure that the onset of the caption is within the first frame of the video. Right click on the first time code under the Start Time column and make sure the send time of the first caption is well inside the beginning of the video.

## Fine-Tuning AutoSync with PC System Timer

If you are using the PC System Timer to Auto Sync the caption file, you might find captions appear little too early or too late as time progresses. If the captions appear too early, press [Alt] + [-] to slow them by one-third of a second. Press it again to slow the display of captions by another third, and so on. If captions appear too late, speed them up with the [Alt] + [+] key; the same rates apply. The only sure way to synchronize the time code and program is to use time codes on the tape along with the CPC-700 series.

## Adjusting Time Cue to Compensate for Human Reaction Time

When you press the [+] key to record the time stamp, there is always a possibility of an error of few frames. The source of the error is the reaction time from the time you hear the first word spoken until the time you press the [+] key. Assuming it is always a consistent error, you can change the time stamp of all

the rows by a few frames using the Ripple time code option. Left-click on the Start column header to highlight all the time cues, and then right-click on the time code cell of the very first row and choose Ripple time code. Now you can enter the new time cue (a few frames more or less than the time cue of the first row) to replace the time cue of the first row and ripple the time cues for the whole file.

## Caption Related (General)

### Reformatting Captions

After you import a file and work on it for the Pop-on or Roll-up display modes, if you change your mind, you may use 3 reformat functions from the Format menu to change the file for Pop-On or Roll-Up modes. See the section on Reformat Rows in Chapter 8: Menus for details.

### Reformat Caption(s) to Roll-up

If you have a block of captions or the entire file created for Pop-on or Paint-on captions with more than one line of text in each cell, you can convert the block or the entire file to Roll-up captions containing only one line of text in each cell. This option will maintain the existing time codes assigned to the file, distributing the allocated time for a pop-on/paint-on caption to multiple lines broken up for Roll-up captions. Just highlight the block of caption or the entire file and invoke the option.

### Reformat Caption(s) to Pop-on

If you have a block of captions or the entire file created for Roll-up captions, you can convert the block or the entire file to Pop-on or Paint-on captions. This option will maintain the existing time codes assigned to the file distributing the allocated time to multiple lines combined for Pop-on or Paint-on captions. Just highlight the block of caption or the entire file and invoke the option.

### Commercials with existing Captions

If your device is a CC encoder, when you invoke this option, it will free up the encoder. If a video with pre-recorded captions passes through the encoder, when the device is closed, the captions will pass through. This might be very helpful when you are captioning a live broadcast and the TV station airs some commercials with existing captions. If the device is not closed, the existing captions from the video will be stripped off.

### Flashing Captions

If you are see captions are flashing and you really do not want to have them flashing, make sure the caption text is not bold. Bolding makes captions to flash.


### Two Captions Appearing Simultaneously


You may wish to have two or more captions appear on the screen at once, but in different positions (the top and bottom of the screen, for example). The need for this may arise in a program where two people say different things at the same time. If you have two captions with the same Start Times, both will appear on the screen simultaneously. The easiest way to do this is to skip over one of the rows while assigning time code, and later cut and paste the Start Time from the row where you did assign time code to the row that you did not assign a time code to. Of course, you should assign different positions to these captions so they will both be visible. You may also use the function Same Start Time to assign same time code to multiple rows. Highlight multiple rows with time code, right-click on any highlighted row and then click on Same Start Time.

### Encoder Communication Error

If you do not have a device attached to the computer, choose "Virtual Encoder" as your device. The CaptionMaker will not send any data to the encoder via the serial port and you would not get any communication errors.

### AutoSync/AutoPreviewSync

After you have associated a time stamp with each row, AutoSync  will automatically output the text on each and every row according to the time stamp to the caption/subtitle device.

After you have associated a time stamp with each row, AutoPreviewSync  will automatically output the text in each and every row according to the time stamp only on the computer screen. You should use this option when you do not have a caption/subtitle device attached to the computer.

## Captioning Two Languages on the Same Video

CaptionMaker can be used to caption two languages on the same video in a limited way.

### With ITV-Injector/DV-2000/DV-3000

The CPC distribution CD contains a utility software called CaptionMerge. First create two CaptionMaker .cap files for two languages. Then export two files to Ultech DV2000/ DV3000/ITVInjector (\*.ult) file format.

Now run CaptionMerge software and do the following:

- ◆ Choose the first file for CC1 and
- ◆ Choose the second file for CC2 to CC3
- ◆ Choose CC2 or CC3 for the second language
- ◆ Choose the final Destination (merge) ULT file
- ◆ Finally, click on the Merge File button

Use this final .ult with the DV2000/ItvInjector.

*Make sure you have DV2000/ItvInjector software version 3.5 or higher.*

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**Note:** Channel 1 and Channel 2 occupy the same space inside the Field 1. The same is true for Channel 3 and Channel 4. When you caption two channels in the same field, there is always a fight with the space between CC1 and CC2. CC1 has the first priority. Whatever space is left, is used by CC2. It is a good idea to paraphrase the text and make it short in both languages when you do CC1 and CC2 caption simultaneously.

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## With Other Encoders

### Using one computer

You can caption in CC1 or CC2 (Field 1) in one pass and then run the captioned video through the encoder and caption CC3 or CC4 (Field 2) in the second pass. Make sure the option *Allow existing filed 1 data pass through untouched* under the *Caption > Caption Properties > Control* menu is checked.

### Using two computers

You can caption a video in CC1 or CC2 (Field 1) and CC3 or CC4 (Field 2) at the same time.

The encoder must be connected to two computers via

1. a serial cable or a modem,
2. 2 serial cables, or
3. 2 modems

Invoke the *Caption → Device → Properties* option. You will see the following screen.

You have to make sure that you set the following items properly.

1. Channel (C1, C2, C3 or C4)
2. Allow existing field 1 (or 2) data to pass through untouched.
3. *Send caption data if available* box is checked.
4. *Caption 2 or more channels – send init code for each line* box is checked.

In the previous dialog box, CPC is set to caption in Channel 3 (field 2) under one of the following two situations:

1. caption data is sent to the encoder in channel 1 simultaneously via a modem or a serial cable or,
2. the video is already captioned in channel 1

A few important points to note:

You can have either of the following situations:

1. Both computers running CaptionMaker software or
2. One computer running CaptionMaker and the other computer running another captioning software.

You may mix and match any of the two methods of captioning:

1. Live or Realtime or,
2. Live Display or,
3. Post Caption.

In *Live Realtime* method, you can use either a steno machine or Speech Recognition software to send the caption live.

In *Live Display* method, you have to have the text prepared already. Then you can send the captions by pressing the (+) key in real time by listening to the dialog.

If you have access to the time code of the video, you may use the *Post Caption* method. You must have a already prepared time stamped file. Then you can invoke the AutoSync function and captions will go automatically synchronized with the video.


# Error Checking

## AutoSync Error Checking

If this option *Caption > AutoSync Error Checking* is checked, CaptionMaker will go through the whole file and make sure there is no missing time codes, or the time codes not in ascending order before starting AutoSync. It is a good idea to have this option checked. That way, for a long video you do not have to wait for long time until the error is caught – at which point AutoSync will stop.

## Final Checking

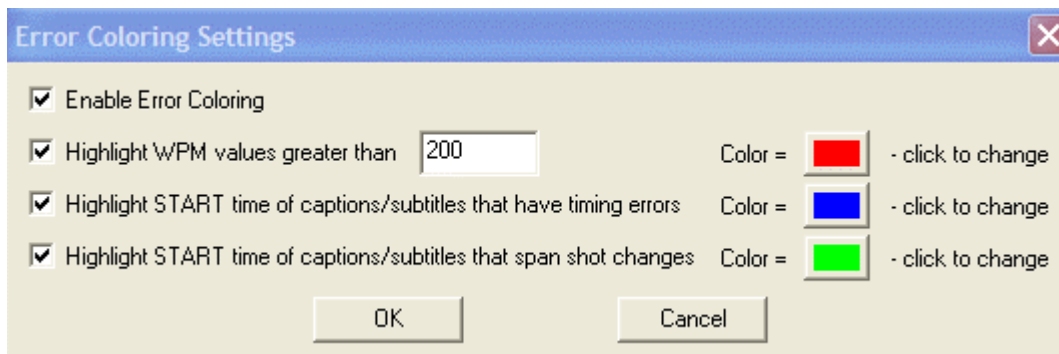
It is a very important to check all timing and formatting errors before you do the final encoding. This option is available under *Caption > Final Checking* menu, and also can be accessed by clicking on the

 icon at the top left corner of the screen. You can set your favorite parameters on the following window, and check for errors after preparing a caption file and before using that file for encoding or any other purposes.

When you invoke this option you will see a dialog box below where you may choose options related to time code tolerance, reading speed of captions, maximum characters per line, unacceptable characters for captioning, etc.

## Timing Error Settings

When you caption a video, it is very important that you conform to maximum WPM for captions, depending on your audience. Similarly, it is customary not to have a Pop-on caption covering a shot change. And finally, if you do not give enough time for a Pop-on caption to build-up, the caption will not appear at the desired time you assigned. For Pop-on captions, for every 50 characters of text, it takes about a second for these 50 captions to build up in a buffer prior to being displayed on the screen. If the difference of time codes of the previous caption and this caption is less than 1 second for a caption of 50 characters, the caption will appear little later than the assigned time code. To check all these errors on the fly, you can invoke the option under *Caption > Timing Error Settings* menu. You can check any one of the following items and assign different colors for each error in the following dialog box.





## Find Shot Changes

You can find the shot changes in any video (wmv, avi, mov, mpeg, m2v etc.). It is a good idea not to have a shot change inside the duration of any caption in the Pop-on mode. Try to place the caption after a shot change or finish displaying a caption before a shot change occurs. This is for esthetic purposes.

After you open a caption file with the appropriate video file, to find the shot changes, click on *Tool > Find Shot Changes*.

It will take a while depending on the length of the video to find the locations of all the shot changes. When you save the caption file, the shot change information will be saved in the .cap file. So when you open the .cap file again later, you do not need to find shot changes again.

After finding the shot changes, when you play the video, the next shot change indicator appears right below the Time code display in HH:MM:SS:FF format. The next shot change display color becomes RED when it is less than 10 seconds from the next shot change.

You can also click the two buttons (   ) next to the time code display area to move to the previous and next shot change locations.

# Digital Video Related

## Real and QuickTime video

CaptionMaker relies on the Windows engine to play all video files. At the time of the writing of this manual, WMP does not play rm files. As a result, CaptionMaker can't play RM, or *Real Media* files. To open a rm file, you may install a third party software which allows WMP play rm videos. As a result you can open a RM file in CPC. You may download the software from [www.free-codecs.com/download/Real\\_Alternative.htm](http://www.free-codecs.com/download/Real_Alternative.htm). CaptionMaker made a special effort to play QuickTime mov even though WMP can't play MOV files. You have to check the box for QuickTime files when you open the video.

## Video Codecs

When you play video in the CaptionMaker, you need to have some idea about different video codes. Usually software like Windows Media player, QuickTime Player, and DVD Player installs appropriate Codecs to your computer. You need to get involved with Codecs only when you can't play a particular video. Most probably the video was created with non-standard Codecs. Below are a few relevant software and codec sources:

### Play Real Video and QuickTime on Windows Media Player

You may download the free software to play RM and QT files in WMP and CPC from:  
[http://www.free-codecs.com/download/Real\\_Alternative.htm](http://www.free-codecs.com/download/Real_Alternative.htm)

### Video Codecs for Mpeg/DV etc.

<http://www.mainconcept.com/products.shtml> is a good source of Mpeg2 and DV Codec. You may download the software install the Codecs.

# Captioning Digital Videos

## Print to Tape a Captioned DV video

When you caption a DV25 or DV50 digital video, you can use "Print to Video" function from the NLE menu of CPC-700NLE software to copy the DV video to a tape.

A list of compatible DV deck and media converters are at: <http://www.cpcweb.com/dv/dv-hardware.htm>

## Print to Tape a Captioned NLE video

<http://www.cpcweb.com/nle/nle-printtotape.htm>

## Known NLE presets

You need these preset values for your NLE system when you export 720x486 black video.

NLE System	Primary Row	Starting Column
AJA Io, AJA Io LA	1	24
AJA KONA LS	1	24
Avid Express Pro	1	26
Avid ABVB	0	35
Avid DS Equinox	1	26
Avid Meridien	1	26
Avid Adrenaline	1	35
Blackmagic DeckLink Extreme	0	26
Leitch DPS Velocity	1	26
Matrox DigiSuite	1	30
Media 100	1	26
NewTek Video Toaster 3 & 4	1	19
Sony XPRI	1	26
TARGA 1000-3000	1	26

For more recent updated list, check the document <http://www.cpcweb.com/nle/nle-hardware.htm>

## Primary Row and Starting Column

If your system is not listed, you need to know the primary Row and Starting Column numbers for your NLE system. If you know those values from the test described earlier in this chapter in the actual manual, please enter those numbers here. Note: Secondary Row information is not important unless you are using Alpha Channel.

## Alpha Channel

If you can't use Crop-in effect to add the black video to your video, you can use black as Alpha channel.

You can select either AVI file output or QuickTime file output if QuickTime is installed. The selection of "Millions of Colors+" in the QuickTime codec dialog box will generate a 32-bit output file containing an alpha channel. Other output selections generate 24 bit movies.

**Note:** If you generate an alpha channel, you should set the Secondary Row equal to the Primary Row in the Preferences dialog, to prevent a second occurrence of closed caption data from being inserted into your video program.

# Tools

## Customize Key Strokes

Most of the menu items and commands can also be accessed via keyboard. We encourage you to customize the keyboard. CPC has some default keyboard settings, but those may not be your choice. You can use the software much more effectively with a proper combination of mouse use and keyboard shortcuts.

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**Keypad Keys** To assign any key on the keypad, you must have NumLock On.

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**Tip** If you are running CaptionMaker on more than one computer, and you want to copy the Customize Keystrokes from one computer to another, you need to copy the file *CapKeyMap.dat* from the folder *C:\ProgramFiles\CPC\CaptionMaker* from your computer to the same folder in the other computer.

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## Dictionaries

If you uninstall CaptionMaker software you will lose any new dictionary entries. Before uninstalling the software, you may copy the files *ssceam.tlx* and *ssceam2.clx* (for English dictionary) from *C:\ProgramFiles\CPC\CaptionMaker* to a different folder. If you reinstall the CaptionMaker software again, you may copy these two files back to the same folder. For other languages there are corresponding files ending with the two character abbreviation of the language (e.g. sp: Spanish, etc.)

## Automatic Match Text with Audio

CaptionMaker software can now automatically break and accurately time closed captions at the click of button. There is a service fee for this function. This automates the labor-intensive job of having a captioner listen to the audio, manually break the text into captions, and then synchronize the captions with the dialogue.

With CaptionSync automated captioning software from Automatic Sync Technologies, the captioner connects to the internet and uploads the script and the corresponding audio file to a file server. Within minutes, a time stamped script file can be downloaded on the computer.

This service starts at \$65 per one hour file. You can buy this service by contacting Automatic Sync Technologies directly at 510-582-3437 or [kevin@automaticsync.com](mailto:kevin@automaticsync.com). For more information please check [www.automaticsync.com](http://www.automaticsync.com)

To automatically synchronize caption dialog with the audio portion of a video choose *Auto Match Text with Audio* from the MacCaption *Special* Pull Down menu. You will be presented with a window that controls the uploading of your caption dialog and an audio file of that dialog to a remote host for processing. This window also controls the downloading the synchronized text file.

To upload files for automatic synchronization you must prepare a dialog file and an audio MP3 file. The text file should be a plain text file that ends with the “.txt” suffix. The text file should consist of the entire spoken dialog in the video that is being synchronized.

The audio file needs to be an MP3 audio file that is 16 bit 44.1 KHz and 32 Kbps.

# Live Captioning

The CaptionMaker is designed for live realtime captioning using a steno machine.

Additionally, it can also be used for:

1. Budget realtime captioning using optional speed typing software.
2. Budget realtime captioning using optional speech recognition software.

## Speech Recognition Software

Speech Recognition software as it is available in the market at this moment, can't just recognize anyone voice without any training. If you spend an hour or so to do the training with your voice, you will get about 85% accuracy. If you keep on working with the software and teach the software your voice by correcting the wrong words, the software do have the capability to learn and you can easily get to 95% accuracy after working on it for several hours.

With the speech recognition software, you can listen to a live program, and repeat the words that are being said into the microphone. CPC CaptionMaker software will automatically send the words to an encoder and the live program will be captioned. We have and many of our customers have had a lot of success using this software

## Accuracy & delay

Naturally Speaking software analyzes a complete sentence or a phrase until you pause talking and gives better accuracy compared to ViaVoice. Since Naturally Speaking analyzes the text before showing it on the screen, if you use it for live captioning, the captions might be delayed by a few seconds. For transcription purposes, the delay does not matter. So Naturally speaking is better than ViaVoice from the accuracy point of view.

## Lanugage supported

Naturally Speaking is available in multiple languages such as, English, Spanish, French, German. ViaVoice is available only in English

## Dragon Naturally Speaking

Dragon Naturally Speaking To use Dragon Naturally Speaking versions 7 and up with Captionmaker, it is necessary to execute a utility software called DnsIniFix. This utility will find the Naturally Speaking ini files on your computer and add an entry to them for CaptionMaker. The utility software DnsIniFix.exe is available from [http://www.cpcweb.com/download/cmplete\\_downloads\\_new.htm#Utilities](http://www.cpcweb.com/download/cmplete_downloads_new.htm#Utilities).