

MTN
Basic
Analog
Edit
Class
Handout

The DV Cuts System

This edit system allows you to do traditional "Cuts" or "Linear" editing with digital video decks. You will find that Cuts editing is useful for longer programs that will not need extensive editing. It is called "Linear" editing because you must edit your first scene first, your next scene next, and so on. If you make a mistake you cannot go back and put another shot in between two that you have already edit. But the advantage of this system is that you do not have to load you video into a computer before you can begin



working with it.



The edit system is composed of the following parts: a source deck (the bottom deck 1) and a Record/Master deck (the top deck 2). Each of these decks has its affiliated TV Monitor. The Monitor for the Source deck is on the left (3) and the Monitor for the Record deck is on the right (4).

On the top of the desk is a piece of equipment called the Edit Controller (5). You

will be using this to do your editing. The left side of the Edit Controller has buttons and wheels to move the Source Deck (a). The right side of the Controller has controls for the Master/Record deck (b). Use the Shuttle/Jog wheel (c) to move quickly or slowly through your tape. Turning the wheel to the right moves the tape forward. Turning it to the left moves the tape backwards. Moving the wheel into the middle notched position freezes your tape on a single frame.

On top of the monitors you will see a CD player (6) and an audio mixer (7). These allow you to add supplemental audio to your Master tape. To the far right you will see an Amiga computer that allows you to add titles to your video (8).

Some edit terms

Recorded on any videotape are video and audio information, and a time code track that allows a tape to play properly in the deck. If you have a break in the time code, you have a break in the integrity of your video signal. This may result in video noise (static), or a jump in the signal. In order to have a playable video signal, you need to make sure that your tape has an

even Time Code track.

In order to do traditional linear video editing, you need a **Source** tape, most likely the tape you shot in the camera, and a **Master** tape, the tape onto which you will be editing your finished program.

There are two types of editing you can do on this linear edit system: **Assemble Editing** and **Insert Editing**.

Assemble editing is the process of recording a combination of video, audio and time code from your Source tape to your Master tape. With Insert editing, you can record either video or a combination of one or two audio tracks on top of video that already has a time code signal.

To do either kind of edit, you need to have some video recorded onto your Master tape. Recording a signal onto an empty tape is called **Blackbursting**.

An Edit Procedure

In order to put together a program on the DV Cuts system, use this procedure.

1. Put your blank Master tape into the top deck.
2. Place a Color bar Countdown Blackburst tape into the Source deck.
3. Set the proper input on the Record deck. Press the i.Link button (1) to get the superior firewire quality. Press the Video button (2) if you want to add titles to any video signal you edit.
4. Press the Play button (d) on the source side of the edit controller to play your blackburst source tape.
5. Press the Record and Play buttons (e) on the Master/Record side of the edit controller to blackburst your Master tape.
6. Record blackburst for up to a few seconds past the end of the Countdown. Notice that the countdown ends on the first frame of the number two. The countdown does not show you the numbers one or zero. When you set your first edit point on the Master deck, you will need to compensate for this "invisible zero." Press stop on both decks (or use the All Stop button on the edit controller). Rewind and eject the blackburst source tape.
7. Use the **Shuttle/Jog wheel** (c on the Record side) to cue your tape up to the zero point of





the countdown. You will notice that the countdown ends two seconds before that "invisible zero" point comes. You will need to use the **Reset** button (f) of the counter to find the zero point, which comes two seconds after the last frame of "2" in the countdown.

8. Mark that zero point as the In Point of your Master tape. Do this by pressing the **Entry** bar (g) and the **In** button (h) on the Record side at the same time. You will see an In Point light (i) illuminate in the counter for the Record side. Once you have marked your Master In Point, you may want to press the stop button to take your Master tape away from the video heads. Keeping a tape in pause mode for long can cause permanent damage to your tape.

9. Put your source tape into the source deck. Use the **Shuttle/Jog wheel** (c on the Source side) and the **Entry** (g) and **In** button (j) to identify the frame of video you would like your edit to begin with. You may also cue your source tape up to the point where you wish your edit to end. Mark this by pressing **Entry** (g) and **Out** (k) at the same time. *Note: you may only set a total of three edit points, i.e. an In Point on the Master side and In and Out Points on the Source side. The edit controller figures out where to stop the Master tape based on the Source tape's Out Point.*

10. Select your edit mode. Being that our tape's time code signal ends just after the countdown, we will have to do an Assemble edit. Make sure the **Assemble edit button** (1) in the Edit Mode section is lit. *Note: you must release an edit mode before you can change it. If you have any of the Insert edit buttons lit up, you will have to press them to exit that mode. Once all the Edit Mode buttons are flashing you can press the Assemble button to switch to Assemble edit mode.*

11. Press the **Still** button on both the Source and Master side of the edit controller to engage both tapes.

12. To see what your edit will look like without actually recording it, press the **Preview** button (m). Note: If you press Preview without having marked any edit points, the edit controller will mark the current frames on each deck as In Points for an edit.
13. Notice that both tapes roll back a few seconds prior to your edit point before they start rolling for the edit. This roll-back before your edit point is called **Pre-roll**. It allows the decks some seconds to come up to speed before they begin the edit. You must be sure that you have five seconds of clean video before your In Point in order to do an edit. This allows for Pre-roll. The edit controller will beep at you or refuse to do the edit if there is a problem with your Pre-roll video or if you do not have enough video for Pre-roll.
14. To adjust your edit points, use the **Trim keys** (n). These allow you to adjust your edit points one frame at a time. Hold down the button of the edit point you wish to adjust, and while holding that button down, press the **Trim + or** buttons to adjust the point one frame at a time. For example, if the In Point on your Source tape started half a second late and cut off the first sound of a word, hold down the In button on the Source side and press the Trim minus button 15 times to move your In Point back 15 frames (half a second).
15. Once you have made a successful preview, press the Still button on both the Source and Master side of the edit controller to engage both tapes.
16. To actually record your edit onto your Master tape, press the red **Auto Edit** button (o). To end an edit before your Out Point, or if you did not mark an Out Point, press the gray **All Stop** button (p).
17. Use the **RVW/jump** button (q) to Review, or to see what your edit looks like once it has recorded. Only your Master tape will play back at this time. Proceed on to your next edit.
18. If you want to change some of the audio or video that you have assemble edited onto your tape, release the edit controller from the Assemble mode. If you want to cover up some of your video, select the **Video** button from the Insert edit buttons. If you want to record over some of your audio to add music, for example, press one or both of the **Audio buttons (A1 or A2)**. Set edit points for your edit and proceed as above.

Tape format

The Sony 1500 decks in this suite will play back tapes recorded in both the DV and DVCAM format. However, the Master deck will only edit onto a master tape in the DVCAM format. A 60 minute mini-DV tape in the record deck used as your master tape will hold only 40 minutes of DVCAM video total once edited.

When you place into the record deck a tape that already has DV format video on it, a **No Edit** light glows on the front panel of the deck. The deck will not edit on a tape previously blackburst in DV.

Inputs

The deck can take either a direct Digital input (i.Link), or a standard video signal (S-video or composite video). Use the i.Link input for best quality video transfer. Use the composite

video setting for adding titles or inputting extra audio through the audio mixer.

In order to select the i.Link input, press the **SDTV/i.Link** button on the Record deck until you see the word **i.Link** lit up on the left side of the display.

i.Link is a straight connection of digital video information. You should experience no video quality loss in this mode.

To use the Character Generator or to bring in music, press the **Video** button so that the **Composite** setting lights up on the display. You may need to press the **Audio** buttons until **Analog** lights up in the two audio positions, to insure that audio from the source deck or the audio mixer gets into your master deck.

Audio

MTN recommends that you use the 48K audio setting, which allows two maximum quality audio channels. Press the **Monitor Select** button (4) until you see both the "1" and "2" lit up under the VU meters (5). Make sure the **Meter** button next to it is set so that the VU meters are reading the levels for channels one and two.



audio levels. On the source deck they control audio output. On the record deck they control audio input level. Please watch them and avoid the "0" (red) section of the VU meter. Audio over this level will be clipped and will sound terrible.

Look at the switch just under the four audio knobs. If the switch is set at **Preset**, the audio level will be sent out of the source deck as is and will show up in the record deck as it is received. If the switch is set in the **PB** position, you can adjust the level of the audio leaving the deck (you might want to do this on the source deck to raise a low audio signal). If the switch is set in the top position, **Var**, you can control the level of the audio coming into the deck. You would use this position to adjust the level of audio recorded onto your Master tape.

When your input is set to **i.Link**, the audio signal travels directly through the firewire cable from one deck to the other. When the input is set to **Composite**, the audio signal travels through the attached audio mixer before reaching the record deck. Use the mixer to control the levels for the two source audio channels. Also use it to add music from the attached CD player.

Blackbursting

Before blackbursting, you should check to see what the counter on the deck is reading. Press the **Counter Select** button to make sure that the display is reading Time Code (TC) rather than User Bits (U).

You can blackburst your tape with a Blackburst-Color Bar tape that you can get at checkout. You can also do it directly with the deck. In order to do this, the input on the Record deck must be set to either **Composite** or **SG**. **SG** stands for Signal Generator, and can be set either to black or to color bars. Please ask staff to change it if the SG is not set at what you want.

The counter will not move unless a tape in the source deck provides a synchronization signal when you are in the "i.Link" input setting.

Making Edits

Here are some hints that might be helpful while editing:

The long **Entry** bar under the In and Out point section must be hit along with the button for the edit point you wish to set in order for the point to be recorded by the machine.

The **Reset** button on either side of the tape counters will reset your edit points on that side, as well as resetting the counter number.

You will get a beep and an error message if you try to preview an edit when the master deck is in standby. Engage the deck by pressing the **Still** button or by turning slightly on the shuttle wheel to place the tape in pause and carry on with your edit.

Let's say you have labeled both In and Out points on either the source or master side and want to know how long the edit you marked is. If you press both the In and Out buttons together, the counter will read you your edit duration.

The Review button is labeled **RVW/jump**. After your edit reviews, it jumps to and pauses at the Out point of the edit on the master tape. The Review button only works if you set on Out point on your edit.

The counters on the edit controller can read either Time Code, which consists of numbers directly recorded on your tape, or a counter that can be reset. The counter reading is useful if you are trying to check the total running time of your master tape. To switch from Time Code to Counter reading, you must raise the panel in between the two counters and change the switch. Choose **CTL** if you wish to see a counter reading that may be reset.

Audio Mixer

When the audio lights on the Record deck read **Analog**, the audio comes into the Record deck through the attached audio mixer. In the mixer, audio from the two audio channels of the source deck come into inputs 1 and 2. Audio from the CD player comes in through inputs 5-6

and 7-8. These controls need to be up as well as the Main Mix control to send an audio signal to the Record deck. Make sure your level is not too strong (make sure it does not go up into the yellow or red warning zone), or it will be distorted.

Error Messages

We have set the decks so that they will liberally give you error messages, called "Alarms," on the screen of the edit master monitor. If you see one of these alarms and do not understand what it is trying to tell you, please check the edit problem list on the wall or ask someone in checkout.

