CuePoint

Universal Autolocator

Owner's Manual

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JLCooper Electronics

CuePoint Owner's Manual
JLC Part Number 932047

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JLCOOPER ELECTRONICS

Greetings

Thank you for purchasing CuePoint, JLCooper's Universal Autolocator.

CuePoint's function is to provide you with remote transport control (Play, Stop, Record, Fast Forward, Rewind) over multiple machines including digital tape recorders, analogue tape recorders, hard disk and CD recorders.

You can make the machines chase to some point, specified either as a time code address, bar and beat, or stored locate number. The locate points can be entered manually, or captured on the fly.

You can arm tracks on the recorders. The tape recorders can also automatically loop and punch in and out.

CuePoint can even emulate a JLCooper CS-10 Control Station, giving you transport and wheel control for hard disk recorders from Spectral, Digidesign, and others.

CuePoint has many special features, including digital bounce and track delay with the ADAT and RD-8.

JLCooper also expects to manufacture a number of optional plug-in cards for CuePoint, to add extra features.

The "dataCARD" allows CuePoint to produce MIDI Time Code (MTC) from an ADAT without wasting a track for SMPTE.

Optional software will permit Mac or Windows editing of tempo maps and MIDI file recognition.

Please fill out your registration card and send it in right away, so we can notify you of related product developments and updates.

CuePoint™, dataCARD™, dataMASTER™, dataSYNC™, and dataCABLE™ are registered trademarks of JLCooper Electronics. All other product names are the property of their respective holders.

Table of Contents

Troubleshooting

If the Loop B→A isn't working as expected,

- Make sure that your A point comes *before* your B point.

If you try to enter one locate point and CuePoint always displays a different point than what you entered,

- Check your User Entry Offset value by pressing Shift 7.

Remember that the User Entry Offset will automatically be added to the locate that you enter, or punch in / out point that you enter.

- Check also Pre Roll time, by pressing Pre Roll.

Remember this is a number of seconds from 00 to 99 that will automatically be subtracted from the locate you enter.

If the RD-8 is not responding,

- Check that the RD-8 is at least version 1.02

To find out the version number of the RD-8, press the NEXT button until item 9 is selected in the main menu. Press F3.

- Check that its Remote setting is to MIDI, and that both the Remote and Local LEDs are on.

- Check its MIDI ID#, refer to instructions on page 22 of this manual, and in the RD-8 manual.

If an ADAT is not responding correctly,

- Check that the ADAT is at least version 3.06.

To find out the version of the ADAT, press and hold SET LOCATE and FAST FORWARD (on the ADAT, not on CuePoint.)

ADAT SYNC Related Options

If you intend to use CuePoint to control the Alesis ADAT, several options are available to you to facilitate hook up.

(1) The JLCooper dataCARD option.
(2) The JLCooper dataMASTER or Alesis / TimeLine AI-2.
(3) The JLCooper dataSYNC and dataCABLE.

Very Important! CuePoint will not control an ADAT until you use one of these.

In more detail, here is how CuePoint may control ADAT:
(1) Via JLCooper's dataCARD
JLCooper's data CARD is a user-installable plug in card for CuePoint. It features the ability to enable the ADAT to send MIDI Time Code (MTC) without wasting an audio track for SMPTE.

Its just like JLCooper's dataSYNC in that regard, only it has two important benefits:
- It fits inside CuePoint so you'll have one less box.
- It allows CuePoint to connect directly to the ADAT with 9-pin cables.

(2) Via a JLCooper dataMASTER or an Alesis AI-2
JLCooper's dataMASTER and the Alesis / TimeLine AI-2 are SMPTE Synchronizers for the Alesis ADAT. They connect to ADAT with 9-pin cables.

CuePoint controls the ADAT by simple MIDI connections to either the dataMASTER or the AI-2.

(3) Via JLCooper's dataCABLE
If you already have a JLCooper dataSYNC, you know it connects to the Sync Out of the ADAT. An inexpensive adapter from JLCooper called a dataCABLE completes the connection from CuePoint to ADAT's Sync In.

Getting Started

If You Read Nothing Else, Read This:

It is known that many people cannot endure owners manuals. Some may prefer to hook up CuePoint and rely on their intuition and experimentation to learn how to use it. (Call it the progressive education method.) Most will just skim what they need to know, and later refer back to the manual only when necessary. But at least please read this.

The very barest information you will need to know is on these nine pages. This just tells you some things that must be setup on CuePoint to get it to work at all, no operation instructions are given here.

What is the minimum stuff you have to do to get predictable results?

(1) Define Machines, that is, tell CuePoint who is out there.

(2) Enable Machines, that is, select which of the connected machines should respond to CuePoint.

(3) Hook it up to your tape recorders, etc., according to a simple principle.

(4) Set the frame rate.

(5) If you want to work in bars and beats, enter a "tempo map".

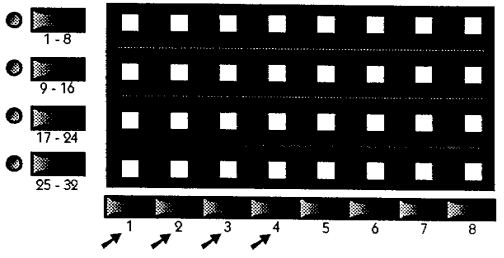
All of these settings are stored in CuePoint's battery-backed RAM, so you only have to define machines once (until you change your studio by adding or changing a tape recorder.)

(1) Define Machines

CuePoint sends MIDI Machine Control (MMC) commands. Each tape recorder that responds to MMC has its own unique little twist on the implementation, so CuePoint needs to know who its talking to.

After plugging in CuePoint and turning it on, enter Define Machine mode by pressing Shift 2 (on keypad). The time code display blanks out, and the Locate / Mode display says "dE".

Under the track status display, there are 8 buttons numbered 1 through 8. These buttons are usually used for arming tracks. However, in this mode the first 4 are used for defining machines.



Defining Machines

Press one of the first 4 buttons, then use the INC+ (increment) and DEC- (decrement) buttons near the top of the keypad to scroll through the internal menu of machines. Observe the time code display:

AdAt		GP-8		GP stands for General Purpose, for example, select GP- 16 for a 16 track tape recorder not listed here.
rd-8		GP-8	c	
--c- 100		GP- 16		
dA-88		GP- 16	c	
dA-88	c	GP-24		
GP-4		GP-24	c	
GP-4	c	GP-32		--c- 100 means the Tascam MMC-100.
GP-6		GP-32	c	
GP-6	c	--nonE--		

Define Machines, Continued

The next most obvious question is, what is the meaning of the small "c" that appears following the DA-88 and the "GP" menu items. It stands for "chase mode".

CuePoint needs to know whether or not the DA-88 is in chase mode, meaning, is the DA-88 a slave to SMPTE.
If the DA-88 is a slave to SMPTE, then select dA-88 c.
Otherwise select just dA-88.

The same is true for any unlisted General Purpose device. ADATs, RD-8s, and MMC-100s do not require this special treatment, hence, there is no "c" option in the menu.

- After defining up to 4 machines, press Enter to exit the mode.

When defining multiple machines, we will call the machines Machine 1, Machine 2, Machine 3 and Machine 4.

If these were all 8-track recorders, then
Machine 1 would be tracks 1 through 8,
Machine 2 would be tracks 9 through 16,
Machine 3 would be tracks 17 through 24, and
Machine 4 would be tracks 25 through 32.

When using ADATs (or RD-8s) in combination with other machines, the ADATs (or RD-8s) must always come first.
For example, if using an ADAT along with a DA-88, the ADAT must be Machine 1 (tracks 1 through 8) and the DA-88 Machine 2 (tracks 9 through 16.).

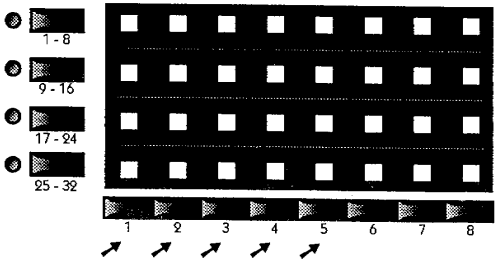
When using more than one ADAT (or RD-8s), the ADATs (or RD-8s) must always be consecutive.
For example, if using 2 ADATs along with a DA-88,
the ADATs must be Machines 1 and 2, tracks 1 through 16,
the DA-88 must be Machine 3, tracks 17 through 24.

(2) Enable Machines

Once you have defined the machines connected to CuePoint, you can choose which of the connected machines will be controlled at any time. Say for example you are controlling a combination of machines. You can press PLAY and have just your RD-8s go into play, and later press REWIND and have just your DA-88 go into rewind.

Enter Enable Machine mode by pressing Shift 1 on the keypad. The time code display blanks out, and the locate/mode display says "En".

Under the track status display, there are 8 buttons numbered 1 through 8. The first 5 will be used for enabling machines.



Button 1 enables Machine 1.
Button 2 enables Machine 2.
Button 3 enables Machine 3.
Button 4 enables Machine 4.
Button 5 enables "CS-10" Emulation

(You can actually control 5 machines. Pressing button number 5 under the track display enables CS-10 emulation. This is used for transport and wheel control of HD recording systems made by Spectral, Digidesign, and others.)

If your machines consist of multiple ADATs or RD-8s synched together, then enabling the master (Machine 1) is sufficient for transport control of all machines. For track arming control, however, you will need to enable each machine individually.

(3) Hook Cue Point up to your tape recorders, according to a simple principle.

To hookup CuePoint, the simple principle is to keep two things in mind:
(A) CuePoint does its work by sending MIDI commands to the machine(s) you are controlling.
(B) CuePoint needs to receive time code from the machines you are controlling, so CuePoint can tell when they are running and where they are.

So there must always be two-way communication, MIDI Machine Control from CuePoint to the machine (tape recorder, etc.), and time code *from* the machine to CuePoint.

First of all, in the simplest case, suppose you are controlling an ADAT. If you have the optional dataCARD installed into your CuePoint, connect CuePoint to ADAT with two 9-pin cables.

Otherwise, lets look at our options.

(A) Getting the MMC into the tape recorder.

For the Fostex RD-8, connect a MIDI cable from CuePoint's MIDI out to the MIDI in of the RD-8.

For any Tascam equipment connected to a Tascam MMC-100, connect a MIDI cable from CuePoint's MIDI out to the MIDI in of the MMC-100.

To connect ADATs using an AI-2 or dataMASTER, connect CuePoint's MIDI output to dataMASTER's MIDI input. On dataMASTER, turn MMC = enabled.

Otherwise, to connect an ADAT used with or without a JLCooper dataSYNC, connect a JLCooper dataCABLE from the MIDI output of the CuePoint to the Sync In of the first ADAT.

To connect a DA-88 or DA-60, connect CuePoint's MIDI out to the MIDI In of one of Tascam's SY sync cards.

(B) Getting Time Code into CuePoint
The time code coming from the tape recorders can be either MIDI Time Code (MTC) or SMPTE time code. If you are using an ADAT, CuePoint's optional dataCARD will do this.

Otherwise, you can get MTC out of a JLCooper dataSYNC or dataMASTER without wasting an audio track for SMPTE. Simply connect the MIDI out of the dataSYNC or dataMASTER to the MIDI in of CuePoint.

Similarly, if you are using Tascam's SY-88, in conjunction with DA-88, connect its MIDI out to the MIDI in of CuePoint.

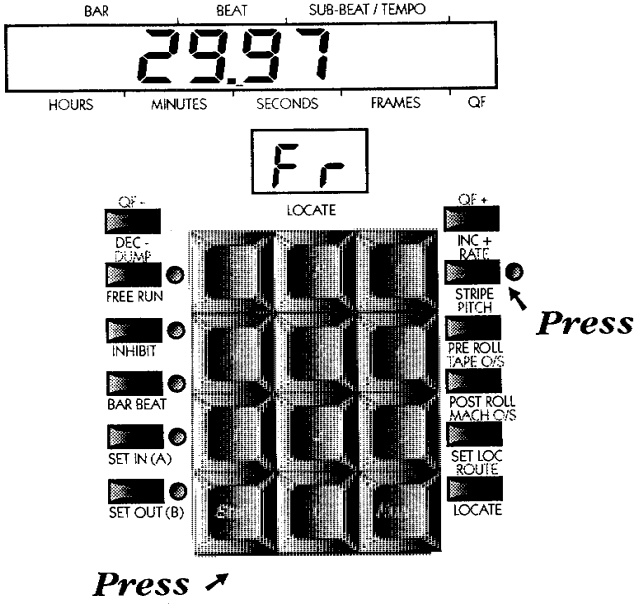
If no source of MTC is available, then use SMPTE. Connect an audio cable from the sync track output of any tape recorder to the Sync In connector of CuePoint. This assumes that your tape already has a SMPTE stripe on one track. If not, then first stripe one track with SMPTE. To use the SMPTE generate function of CuePoint, Enter Stripe mode, Stripe LED on, and press Enter. Connect the Sync Out of CuePoint to a tape recorders track input and record SMPTE from the beginning to the end of the tape. Always record SMPTE tones around -10.

An Important Note
Remember that CuePoint is first and foremost a powerful autolocator and remote control. CuePoint is *not* a SMPTE machine synchronizer! If you want to lock up an ADAT to SMPTE, you need a JLCooper dataMASTER, or an Alesis AI-2, (or a BRC). To lock up a DA-88 to SMPTE you need Tascam's SY-88 sync card.

Another Important Note
Turn on tape recorders first, CuePoint should be turned on last!

(4) Set the frame rate

CuePoint defaults to 30 frames per second. So if you striped with CuePoint, or some other known source of 30 frames per second, you can skip this step. If, however, the tape has some other frame rate on it, then you will need to set the frame rate so CuePoint will accurately display the position of the tape. Press Shift RATE (STRIPE button).



The Locate / Mode display says Fr to indicate that you are in the Frame Rate mode. Use the DEC- and INC+ buttons on either side of the top of the keypad to scroll through the list of possible frame rates: 24, 25, 29.97 drop, 29.97, 30d, and 30 frames per second.

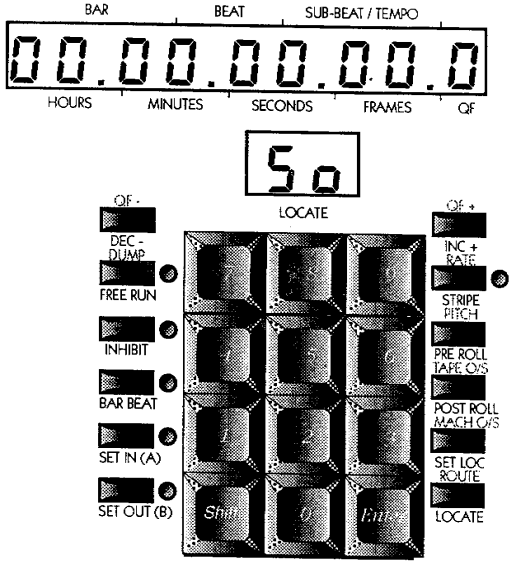
(5) If you want to work in bars and beats, Enter a "Tempo Map".

This means that you need to tell CuePoint:

- When the song starts, a SMPTE time.
- The bar number of each tempo change, and the tempo.
- Then the meter.

First, we will capture the Song Start time.

- To Enter the Start time of the song, Press Shift Song Start (4). Locate / Mode display says "So".



- Use the Transport Controls to rewind before the beginning of the song. Press PLAY. Listen to the tape with your finger poised over the Enter key.

- At the exact moment the song begins, press Enter.

Don't worry if you didn't really hit it exactly, you can edit the start time later. To edit the start time, when the tape is stopped, press Shift Song Start again. Use the INC+ and DEC- keys to nudge the time up or down. Shift INC and Shift DEC gives you quarter-frame editing. Press Enter to store the Song Start time.

• Press the BAR BEAT button. The LED indicates that CuePoint is in BAR BEAT mode.

• To enter the Tempo Map, that is, the Bar number, tempos, and time signatures, press Shift "Enter TMap" (5).

• Locate / Mode display indicates "tP".
The time / bar beat display shows the first tempo flashing.
Use keypad to enter the first tempo, e.g., 1, 2, 0, press Enter.

• Locate / Mode display indicates "tS". Display: 4r
Enter a Time Signature, e.g, 4, Enter, 4, Display: 4r4, Enter.

• Locate / Mode display indicates "br". Display: ---
CuePoint is waiting to you to enter the bar number where the first *change* in tempo occurs. At this point you can simply press Enter to exit. Or, to continue to make more tempo map entries, Enter the Bar number of the change, e.g., 0, 0, 1, Enter.

Admittedly, the information in this chapter is sketchy and cryptic. We recognize that some need to get started right away, but this is tempered by the fact the product is complicated. (The owners manual for a Lear Jet has no "instant gratification" chapter!)

Of course, since CuePoint has so many features and possible uses, we would encourage you to find time to read the whole manual when you have nothing better to do. Perhaps while sitting on a wooden crate eating saltine crackers in a tornado shelter.

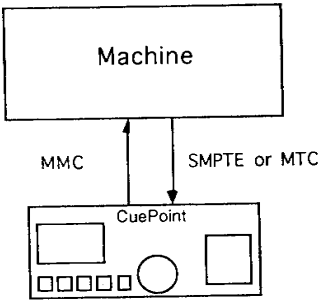
Hooking it up

It will be simpler to connect CuePoint if you just keep two things in mind:

(Uno) CuePoint does its work by sending MIDI commands to the machine(s) you are controlling.

(Dos) CuePoint needs to receive time code from the machines you are controlling, so CuePoint can tell when they are running and where they are.

So there must always be two-way communication. Refer to this fascinating illustration.



MIDI Machine Control comes from CuePoint *to* the machine (tape recorder, etc.), and time code *from* the machine to CuePoint.

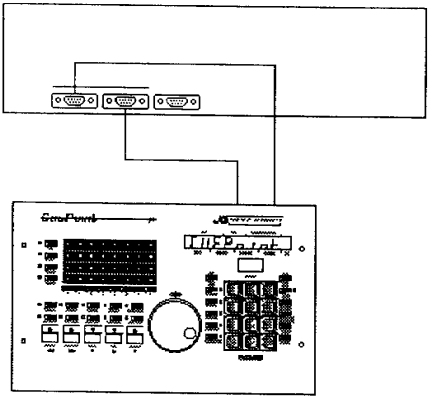
In the simplest case, to connect to an ADAT, if you have the optional JLCooper dataCARD installed into your CuePoint, everything is taken care of for you. Connect CuePoint to ADAT with two 9-pin cables.

To Connect One or More ADATs:
with dataCARD

As stated earlier, if your CuePoint has the optional dataCARD installed, connect it to the ADAT with two 9-pin cables.

- dataCARD's TO SYNC IN connects to the ADAT's SYNC IN.

- dataCARD's FROM SYNC OUT connects to ADAT's SYNC OUT.

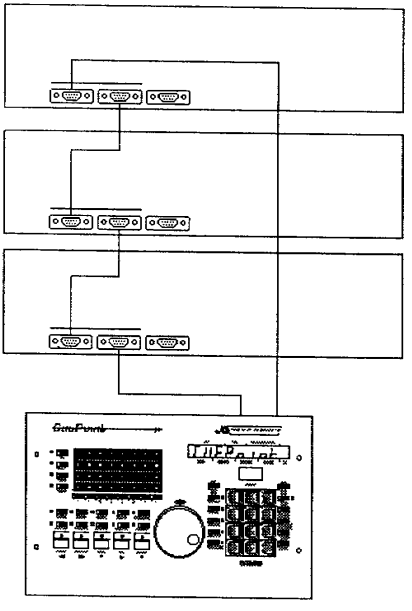


To connect to more than one ADAT,

- dataCARDs TO SYNC IN connects to the SYNC IN of the first ADAT.

- Chain the ADAT's SYNC OUT to Sync In as illustrated.

- Connect the Sync Out of the last ADAT to the "FROM SYNC OUT" connector on the dataCARD.



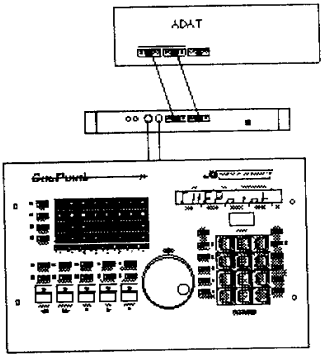
With dataMASTER or AI-2

• Connect the dataMASTER or the AI-2 to the ADATs according to their hookup instructions.

• Connect the MIDI output of CuePoint to the MIDI input of dataMASTER or the AI-2.

• Connect the MIDI output of dataMASTER to the MIDI input of CuePoint.

• On dataMASTER, set MMC = enable.



VERY IMPORTANT

Currently, there are significant limitations on the operation of CuePoint with the AI-2. Refer to addendum at the end of this manual (Page 109) for details.

With dataSYNC

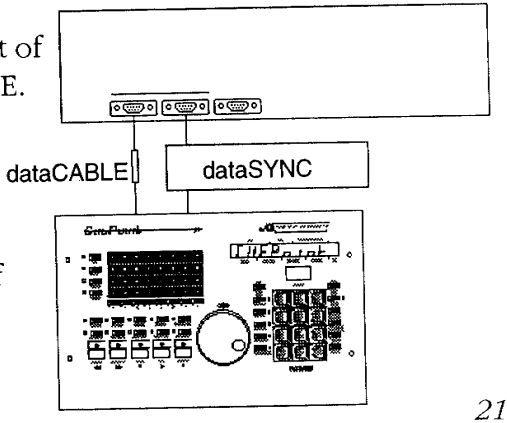
• Connect the dataSYNC to the ADATs according to its hookup instructions.

• You will need the optional JLCooper dataCABLE.

• Connect the MIDI output of CuePoint to the dataCABLE.

• Connect dataCABLE to the ADAT Sync In.

• Connect the MIDI out of dataSYNC to the MIDI in of CuePoint.



To Connect RD-8s

Very Important: Check All of the Following

To work properly, the RD-8 must have the following items checked and set correctly.

(1) The RD-8 must be version number 1.02 or higher.
(2) The Remote setting is to MIDI.
(3) The MIDI ID # is set correctly.
(4) Both the Remote and Local LEDs are on.

Here is how to check the items above. The instructions below refer to buttons on the RD-8.

(1) To find out the version number of the RD-8, press the NEXT button until item 9 is selected in the main menu. Press F3.

(2) Press the DATA EDIT button. Press the REMOTE LOCAL button. Press F3. The LCD display indicates "Remote In: Midi".

(3) Press the NEXT button.
The display indicates "MIDI Device: 000."
Leave it set to 000 if the RD-8 is your Machine 1.
Set it for 001 if the RD-8 is Machine 2.
Set it for 002 if the RD-8 is Machine 3,
Set it for 003 if the RD-8 is Machine 4.
Press the DATA EDIT button again to exit this mode.

(4) Press the REMOTE LOCAL button until both Remote and Local LEDs are on.

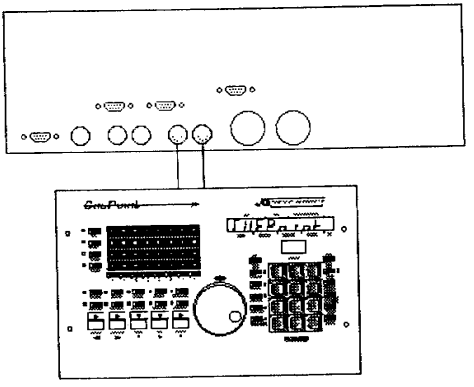
Put the RD-8 First

The RD-8, like the ADAT, should be the first machine in a multiple machine system. If using a system includes both RD-8s and ADATs, put the RD-8 first to take advantage of its synchronization abilities. If the system includes multiple RD-8s, they must be consecutive. For example, if using 2 RD-8s and a DA-88, the RD-8s must be machines 1 and 2, that is, tracks 1 through 16.

Connect CuePoint to the RD-8 via MIDI

- Connect CuePoint's MIDI Out to the MIDI In of the RD-8.

- Connect CuePoint's MIDI In to the MIDI Out of the RD-8.



The RD-8 will not accept commands from CuePoint's optional dataCARD. The reason for this is as follows:

If you set the Remote setting of the RD-8 for "ADAT", the RD-8 will expect commands to arrive on the 9-pin ADAT Sync connector.

But the moment you set the Remote setting to "ADAT" the RD-8 also expects that and ADAT is going to be the timing master, and the RD-8 will not respond unless it sees a source of 48K sample clock, something which the dataCARD cannot send.

That is why we set the Remote setting to MIDI and connect CuePoint with MIDI cables.

If using multiple RD-8s, or RD-8s combined with ADATs,

- Chain the Sync Out of each RD-8 or ADAT to the Sync In of the next RD-8 or ADAT

The RD-8 derives its MTC from its time code track. So you will need to use the RD-8 to internally generate time code on its time code track.

Refer to the instructions in Chapter 5 of the RD-8 manual for generating TC.

You will want to select **Internal Generator Mode**. Generator Mode should be **Rec-run**, not Free.

In Internal Generator Mode, if the Address mode is set to **ABS**, then the time code coming from the RD-8 will be equal to the ABS Time on the tape. In other words, setting locates will be a lot easier because the time code on the tape will be equal to the time displayed on the tape counter.

Select the **Frame Rate**, and make sure that CuePoint is set to the same frame rate.

With the DATA EDIT LED off, press GEN SET-UP. Locate to 0, then press Record and Play to record time code on the tape.

Change User Entry Offset

CuePoint has a feature called User Entry Offset. It is described in detail on page 57. But suffice it to say for now that, from the factory, CuePoint is going to automatically add 1 hour to any locate time that you enter on the keypad. This is very useful for an ADAT, but not necessarily so for the RD-8.

Set CuePoint's User Entry Offset to 00:00:00:00 by pressing Shift 7, 0, Enter.

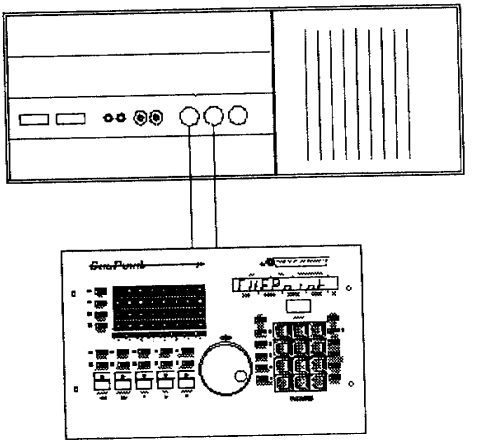
If you do not do this, every locate time that you enter on CuePoint will automatically have an hour added to it, and the RD-8 will fast forward to the end of the tape.

To Connect One or More DA-88s

The DA-88 requires the SY-88 sync card to respond to MMC.

After installing the SY-88 sync card,

- Connect CuePoint's MIDI out to the DA-88's MIDI In.
- Connect the MIDI out of the DA-88 to the CuePoint's MIDI in.
- Connect multiple DA-88s via the 15-pin Sync In and Sync Out connectors according to the DA-88 manual.



- If each DA-88 has its own SY-88, connect the MIDI Out of the first DA-88 to the MIDI In of the second DA-88. Connect additional DA-88s in a similar manner, connecting the MIDI Out of the last DA-88 to CuePoint.

- If only one of the DA-88s has an SY-88, CuePoint's transport and locate controls will function for all DA-88s, except track enables. Only the DA-88 with the SY-88 will accept track enable commands from CuePoint. The DA-88 is configured in such a way that to respond to track enables via MMC, each DA-88 must have its own SY-88.

There may be in the future a serial card option from JLCooper specifically for the DA-88, eliminating the need for multiple SY-88 sync cards. Contact JLCooper for details.

Very Important: Check the Following

To work properly, the DA-88 / SY-88 must have the following items checked and set correctly.

(1) On the rear DIP switch, switch #2 must be up.
Consult to SY-88 manual for the setting of the remaining switches, which have no bearing on CuePoint operation.

(2) Each DA-88 must be set to its own unique ID number, via *internal* DIP switch "S 2" in the SY-88.
Set to Device 1 if the DA-88 is your Machine 1.
Set to Device 2 if the DA-88 is Machine 2.
Set to Device 3 if the DA-88 is Machine 3,
Set to Device 4 if the DA-88 is Machine 4.
Consult your SY-88 manual for more details.

The rotary switch, labeled "Machine ID", has no effect on CuePoint operation.

Important

CuePoint needs to receive MIDI Time Code (MTC) from the DA-88.

The DA-88 derives its MTC from its time code track. So you will need to use the DA-88 to internally generate time code on its time code track.

Refer to the instructions in Chapter 5 of the SY-88 manual for generating TC. You will want to set the Generator start time. It is recommended that you use 01:00:00:00, to avoid problems that can be associated with time code that rolls across 23:59:59:00.

If you do use a 1 hour offset, remember you will need to add an hour to the locate or song start times you enter on CuePoint.

To Connect ADATs or RD-8s and DA-88s.
Hook up the ADAT or RD-8s first according to the previous directions above. Connect one of CuePoint's MIDI Outs to the MIDI In of the SY-88.

If the ADAT is to be the master and the DA-88 is to the slave, then you will need a JLCooper dataMASTER. When the dataMASTER is connected to the ADAT, it can produce SMPTE. Connect the SYNC OUT of dataMASTER to the Time Code In of the SY-88.

If the ADAT is to be the slave and the DA-88 is the master, connect the Time Code Out of the DA-88 to the Sync In of either a dataMASTER or an AI-2.

If both the ADAT and the DA-88 are slaves to some other source of sync, use a Y-cord to send time code into both the SY-88 and the dataMASTER or AI-2.

To Connect MMC-100
The MMC-100 is Tascam's MMC to serial interface for Tascam machines having the "ACCESSORY 2" 15-pin I/O port.

Connect the MIDI In and Out of CuePoint to the MMC-100.

To Connect Other Equipment

Following the principles illustrated in the above examples, connect one of CuePoint's MIDI Outs to the MIDI input of the machine you are controlling.

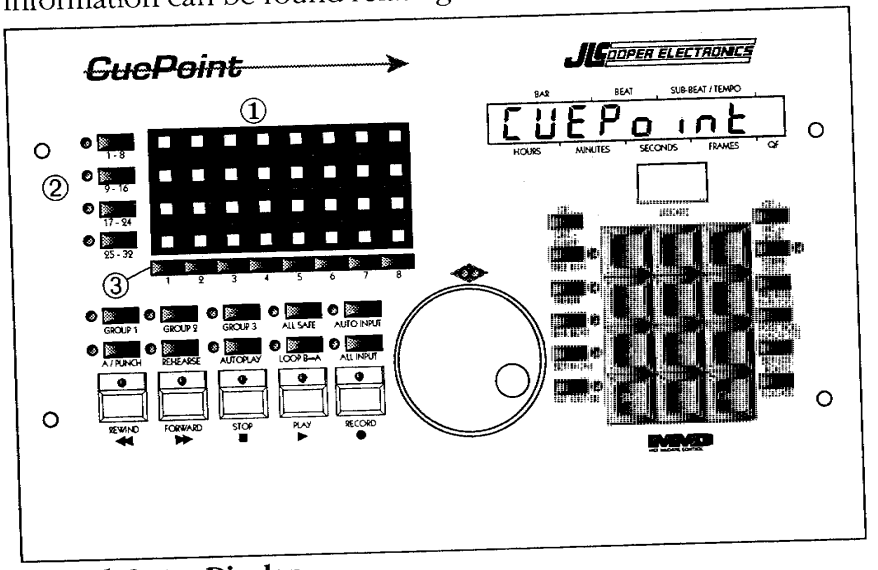
Connect the time code output of the machine, either MTC or SMPTE, to either the MIDI or Sync input of CuePoint.

If your tape doesn't have time code on it yet, you can use the SMPTE generate function of CuePoint. Connect a cable from the sync out of CuePoint to one of the tape inputs, usually the highest track is used for time code, that is, for example, track 8 of an 8-track or track 24 of a 24 track.

Refer to page 45 for information on how to stripe SMPTE on to tape.

Front Panel Displays and Controls

Here is a brief description of CuePoint's displays and controls, followed by the page number (in brackets) where more information can be found relating to the control.



① Track Status Display

32 sets of green and red LED's indicate the status of 32 tracks.

The green LED is on when the machine switches its monitor from tape to input source.

The red LED flashes when a track is armed for recording. The red LED is on steady when then track is recording.

This display is also used to indicate other things, such as source tracks for digital bounce and which machines are enabled for remote control.

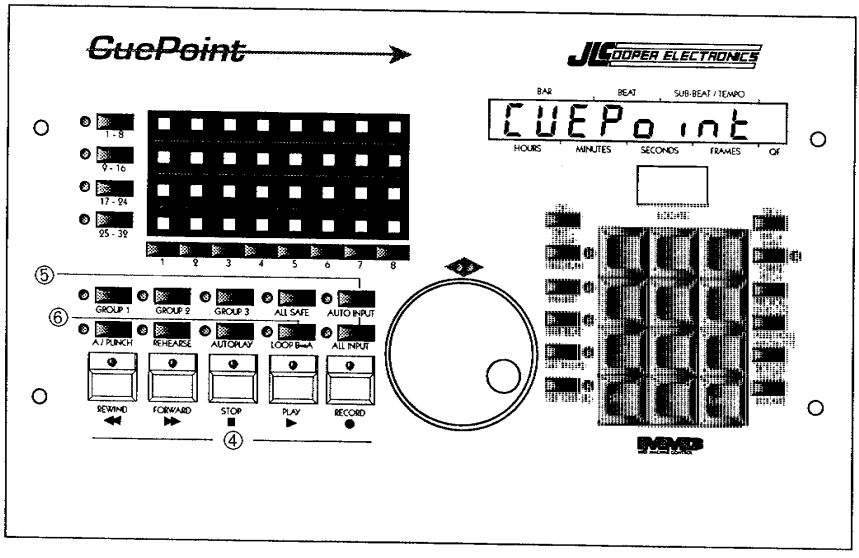
② **Track Range** buttons and ③ **Track Select** Buttons

For selectively arming up to 32 tracks. There are four Track Range buttons, and eight Track Select buttons.

To arm a track, press a Track Range button, followed by a Track Select button.

For example, to arm track 8, press the button labeled 1-8, then press the button labeled 8. To arm track 19, press the button labeled 17 - 24, and then the button labeled 3.

Front Panel Controls (Continued)



④ Transport Controls
Rewind, Forward, Stop, Play, Record.
Each has an LED to reflect the condition of the affected deck(s).
Transport controls can control one or more machines at a time.

Roll Back
If you hold STOP and press REWIND, the tape will roll back to a point 30 seconds earlier than the currently displayed time. Each time you press rewind will add an additional 30 seconds. For example, to roll back 90 seconds, hold STOP and while holding STOP press REWIND 3 times.

⑤ Track Functions

GROUP 1, GROUP 2, GROUP 3

These three "arming groups" a single button push to simultaneously arm a user-determined combination of tracks.

An LED indicates which group is currently selected. The LED goes out when you make any changes to the group. The user-defined groups are stored in battery-backed memory.

ALL SAFE

Instantly "safes" all tracks. Turns off all track arming. As long as ALL SAFE is selected (LED on), you can't use CuePoint to arm any tracks for recording.

ALL INPUT

Switches monitoring to the input on all tracks, indicated by 32 green LEDs turning on.

AUTO INPUT

All tracks hold off switching to input monitoring until the tracks actually punch into record.

Permits you to listen to previously recorded material until the punch in point.

⑥ Automated Transport Functions

A/PUNCH (Auto Punch In and Out)

Makes all armed track automatically go into record mode at a user defined punch-in point, called A.

Tracks go out of record at a user-defined punch-out point, called B.

REHEARSE

Like A/PUNCH, but the armed tracks don't actually go into record. Rather, they switch their monitoring to the input at the user defined punch-in point.

AUTO PLAY

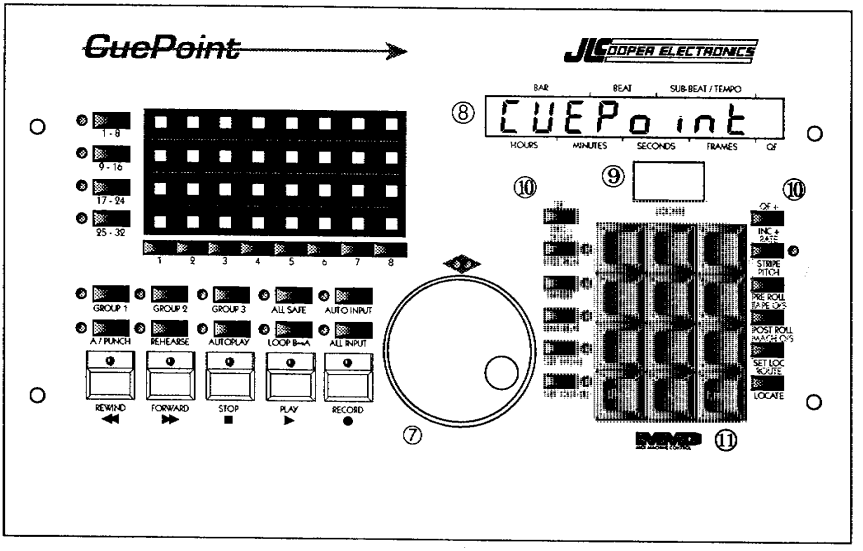
Causes the decks to go into play after locating or looping.

LOOP B→A

Causes the decks to loop between two points. The points are user definable as absolute times, or bars and beats.

The loop points are also offset by user-defined Pre Roll and Post Roll time constants.

Front Panel Controls (Continued)



⑦ Shuttle Wheel
For tape shuttling, and rock-reel type locates and edits.
Function of wheel depends on the capability of the machine.
On the ADAT and RD-8, wheel initiates a shuttle/search.
On the DA-88, wheel controls a variable-speed shuttle.
On disk-based digital audio workstations, wheel initiates sound file scrubbing.

⑧ SMPTE / Bar Beat display
Shows current position of tape in terms of SMPTE, that is, hours.minutes.seconds.frames.quarter frames, or Bar Beat, that is, bar. beat. sub beat (24th of a beat).

This display is also used for setting other parameters such as Tempo Maps, Pre and Post Roll times, Frame Rate, etc.

Numbers enter the display from the right, and skip past the Quarter Frame. So just pressing "1", "0", "0", "0" would correspond to "10 seconds".

⑨ Locate / Mode Display
Displays Locate number 00-99.
Displays 2-character indication of mode, such as St for stripe mode.

⑩ Function Buttons

The **DEC-** and **INC+** buttons are used to change the entered time by a frame at a time.

Shift and DEC- and Shift INC+ allow you to change the quarter-frame digit.

INHIBIT

Normally, when you recall a locate point, all enabled machines immediately chase to that point. When INHIBIT is selected, you can freely recall and edit locate points without CuePoint sending the locate commands.

BAR BEAT

Puts CuePoint into Bar Beat mode, Locate points are in terms of Bars, Beats, and Sub Beats. Automated transport functions, such as Punch In and Out, may also be entered in Bars and Beat.

SET IN (A)

For entering punch in or loop start time. Time can be entered one of three ways: manually, captured, or a recalled locate point.

SET OUT (B)

For entering punch out or loop end time. Time can be entered one of three ways: manually, captured, or a recalled locate point.

STRIPE

CuePoint may be used to generate SMPTE by pressing STRIPE and then Enter. Frame rate is selected by holding keypad Shift and while holding Shift press STRIPE. Frame rate choices are 30, 24, 25, 30-drop, 29.97 drop, and 29.97 non-drop. These are selected using the DEC- and INC+ buttons.

When the STRIPE button is pushed, "St" appears in the LOCATE window, and the current Stripe start time appears in the time window. At this point, a new start time may be entered, or the Enter key may be pushed.

PRE ROLL and POST ROLL

When in the LOOP B→A mode, PRE ROLL sets an amount of time that will be subtracted off of the A point, so the tape always rewinds a certain number of seconds before a Punch In point, for example.

When in the LOOP B→A mode, POST ROLL an amount of time to be added to the B point to so the tape continues to play a certain amount of time, after a Punch Out, for example, before rewinding.

PITCH
Shift PRE ROLL
Special ADAT and RD-8 feature.
Entered in terms of cents. Changes do not take effect until Enter is pressed.

SET LOC
For Storing Locate Points in Memory.
After pressing SET LOC, enter a 2-digit number, up to 99.
Enter time and press Enter.
Or, locates can be captured "on the fly", while tape is rolling. Press SET LOC, and press Enter at the capture point.

LOCATE
For Recalling Locate Points from Memory.
After pressing LOCATE, enter a 2-digit number, up to 99. Press Enter. Locate will be recalled, and tapes will begin to chase immediately. (Unless Inhibit has been turned on, see above for INHIBIT).

Track Delay (Tape Offset)
Shift POST ROLL
Special ADAT and RD-8 feature.
Offsets individual tracks with respect to master time code.

Machine Offset
Shift SET LOC
Special ADAT and RD-8 feature.
Offsets slave machines with respect to master.

ROUTE (Digital Track Bounce)
Shift Locate
Special ADAT and RD-8 feature.
Enters Digital I/O mode, allows you to select source tracks for digital bounce.

⑪ Numerical Keypad
For manually entering SMPTE times, for programming tempo map, etc.

Keypad Shifted functions

Clear (Shift Enter)

Hold Shift, Enter, and the function that you want to clear. To clear Tempo Maps, or Locates., Machine Offsets, etc. Display indicates CLEAr?
Press Enter to clear, press any other key to cancel.

Define Foot Switch (Shift 0)

An optional, user-supplied foot switch may be connected to CuePoint. The action of the foot switch is user-programmable. It can actuate Play or Punch In, Selected by the DEC- or INC+ keys

Enable Machine (Shift 1)

Determines which machines will be sent MMC commands. After entering Enable Machine mode, use the first 5 track select buttons to turn the machines on or off. A red LED above the track select button indicates machine on.

Define Machine (Shift 2)

Defines machines so CuePoint can send the correct MMC commands to control them. After entering Define Machine mode, use the first 4 track select buttons to select the machine. The INC+ and DEC- buttons scroll through a menu of available machines.

Safe Segs (Shift 3)

When Safe Segs mode is enabled, the ALL SAFE LED flashes. CuePoint prevents accidental over recording on those tracks that have been recorded on.

Song Start (Shift 4)

When in Bar Beat mode, defines the start time of a song.

Enter Tempo Map (Shift 5)

When in Bar Beat mode, defines tempo and meter, and tempo and meter changes, within a song.

Edit Tempo Map (Shift 6)

For editing tempo and meter changes within a song.

Entry Offset (Shift 7)

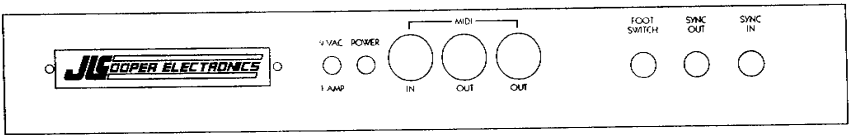
Allows a user-entry offset to be defined. This is a time which will automatically be added whenever you enter a SMPTE locate time.

Shift 8 and Shift 9

These combinations are undefined at time of printing.

Rear Panel

As viewed from rear, from left to right:



Cover Plate

This plate is removed when one of CuePoint's optional interface cards is installed.

Power Jack

CuePoint uses a 9 VAC, 1 amp supply. 2.5 mm plug, no polarity.

Power Switch

Push in to turn on. CuePoint should be turned last, after turning on tape recorders.

MIDI Input

For receiving MIDI Time Code (MTC).

MIDI Outputs

The two MIDI outputs are identical. They can send out MIDI Machine Control (MMC) , MIDI Time Code (MTC), etc.

Foot Switch input

User definable for either Play or Punch In. Jack accepts most any user-supplied momentary foot switch. CuePoint can automatically sense whether it is the normally open or normally closed type of switch. For this reason, if you are using a foot switch, connect it before turning on CuePoint so CuePoint's microprocessor can sense which type it is.

System Setup

Much of this information was already presented in the Getting Started section. It is presented again here with more detail.

This section describes:

1. Define Machines

(Telling your CuePoint who's out there, what brands of tape recorders are connected.)

2. Enable Machines

Say that you have four tape recorders connected to CuePoint. There are times when you may want to target specific commands to specific machines. Machine Enable turns on or off the remote control of specific machines. This way you could, for example, set up a digital transfer from one ADAT to another ADAT. At the same time, you could be doing some tracking and looping punch ins on another recorder without disturbing the transfer.

3. Frame Rate Selection

Since CuePoint is making its chasing and punch in calculations based on incoming time code, it is very important that you select the correct frame rate before beginning to work with CuePoint.

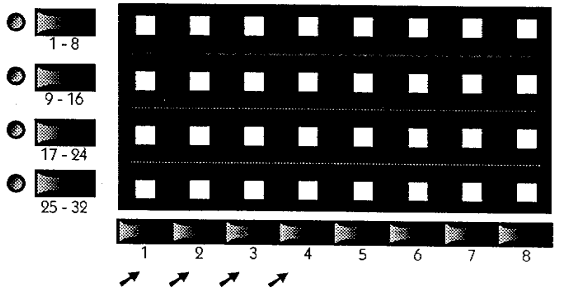
4. Striping SMPTE

If you do not have a source of MIDI Time Code, then one track of one machine must have an analogue SMPTE stripe.

Define Machines

After hooking up CuePoint, and before you actually use it, the first thing that you need to do is tell it what brands of machines you have connected. CuePoint sends MIDI Machine Control (MMC) commands. Each tape recorder that responds to MMC has its own unique little twist on the implementation, so CuePoint needs to know who its talking to.

After plugging in CuePoint and turning it on, enter Define Machine mode by pressing Shift 2 on the keypad. The time code display blanks out, and the Locate / Mode display says "dE".



Defining Machines

Under the track status display, there are 8 buttons numbered 1 through 8. The first 4 are used for defining machines. Press one of these buttons, then use the INC+ (increment) and DEC- (decrement) buttons near the top of the keypad to scroll through the internal menu of machines. Observe the time code display:

RdRt		GP-8		GP stands for General
rd-8		GP-8	c	Purpose, for example,
--c- 100		GP- 16		select GP- 16 for a 16
dR-88		GP- 16	c	track tape recorder not
dR-88	c	GP-24		listed here.
GP-4		GP-24	c	
GP-4	c	GP-32		--c- 100 means
GP-6		GP-32	c	Tascam's MMC-100.
GP-6	c	--nonE--		

Define Machines, Continued

The next most obvious question is, what is the meaning of the small "c" that appears following the DA-88 and the "GP" menu items. It stands for "chase mode".

CuePoint needs to know whether or not the DA-88 is in chase mode, meaning, is the DA-88 a slave to SMPTE.
If the DA-88 is a slave to SMPTE, then select dA-88 c.
Otherwise select just dA-88.

The same is true for any unlisted General Purpose device. ADATs, RD-8s, and MMC-100s do not require this special treatment, hence, there is no "c" option in the menu.

When defining multiple machines, we will call the machines Machine 1, Machine 2, Machine 3 and Machine 4.

Machine number 5 allows CuePoint to emulate a JLCooper CS-10 Professional Control Station. This is used for transport and wheel control of HD recording systems made by Spectral, Digidesign, and others.

If each machine is an eight track tape recorder, then
Machine 1 would be tracks 1 through 8,
Machine 2 would be tracks 9 through 16,
Machine 3 would be tracks 17 through 24, and
Machine 4 would be tracks 25 through 32.

Example
Say that CuePoint is controlling 2 ADATs.
We need to let CuePoint know that it is controlling ADATs.
•Enter Define Machine mode. Press Shift and 2 on the keypad. (The 2 key is labeled Define Machine in red.)

•Press the number 1 button under the Track Status display. From the factory, AdAt has already been selected. If some other machine is currently selected,

•Use the INC+ and DEC- buttons, noticing the list of available machine definitions. When the AdAt is displayed, press Enter.

•Then, press the number 2 button under the Track Status display. Again, use INC+ or DEC- until AdAt is displayed, then press Enter.

Another Example:
Say that CuePoint is already controlling 2 ADATs.
Now you want to add 1 DA-88.

•Again, enter Define Machine mode. Press Shift and 2. (The 2 key is labeled Define Machine in red.)

•Press the number 3 button under the Track Status display. Use the INC+ and DEC- buttons, when dA-88 is displayed, press Enter.

Important
Because of the unique way that ADATs and RD-8s are addressed using MMC, when using them in combination with other brands of machines, the ADATs and RD-8s must always come first. And, when using more than one ADAT or RD-8, they must always be consecutive.

Example
In the example above,
Machine numbers:

1	2	3	4
Have been defined as:			
ADAT	**ADAT**	**DA-88**	

This is OK. The ADAT is first, and the two ADATs are consecutive, tracks 1 through 16.

Notice that we put the DA-88 as the third machine, that is, tracks 17 through 24.

What we cannot do is this:

1	2	3	4
ADAT	**DA-88**	**ADAT**	

This is not OK, because the ADATs are not consecutive.

Nor can we do this:

1	2	3	4
DA-88	**ADAT**	**ADAT**	

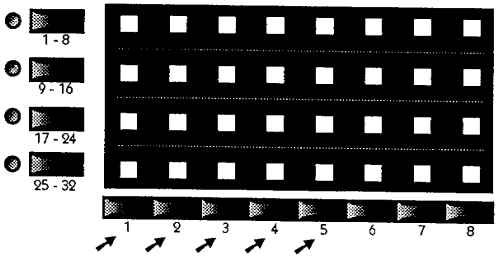
This is not OK, because the ADATs do not come first.

Enable Machines

Once you have defined the machines connected to CuePoint, you can choose which of the connected machines will be controlled at any time. Say for example you are controlling a combination of machines. You can press PLAY and have just your RD-8s go into play, and later press REWIND and have just your DA-88 go into rewind.

Enter Enable Machine mode by pressing Shift 1 on the keypad. The time code display blanks out, and the Locate / Mode display says "En".

Under the track status display, there are 8 buttons numbered 1 through 8. The first 5 are used for enabling machines.



Button 1 enables Machine 1.
Button 2 enables Machine 2.
Button 3 enables Machine 3.
Button 4 enables Machine 4.
Button 5 enables "CS-10" Emulation

(You can actually control *five* machines. Pressing button number 5 under the track display enables CS-10 emulation. This is used for transport and wheel control of HD recording systems made by Spectral, Digidesign, and others.)

If your machines consist of multiple ADATs or RD-8s synched together, then enabling the master (Machine 1) is sufficient for transport control of all machines. For track arming control, however, you will need to enable each machine individually.

Frame Rate Selection

CuePoint requires that you set the frame rate of the incoming time code. To set the frame rate:

- Press Shift STRIPE.

(RATE is labeled in red above the STRIPE button.)

- Use the DEC- and INC+ buttons to select the frame rate.

Frame Rate	Typical Use
30	General purpose time code for audio
24	Film
25	European video
29.97 drop	U.S. Video
29.97 non-drop	U.S. Video
30 drop	Used by the terminally insane

- Press Enter to exit Frame Rate selection mode.

SMPTE Generation / Striping a Tape

CuePoint features a built-in SMPTE generator.
Before generating SMPTE, select the frame rate first, see above.

Recording the SMPTE is known as striping the tape (not stripping the tape). It is not necessary to stripe a track of tape with SMPTE if you are using CuePoint to control a machine that already has time code available. For example, if you are controlling an ADAT in conjunction with either a dataCARD, dataSYNC, or dataMASTER, it is not necessary to stripe a SMPTE track.

To stripe a tape with SMPTE, first connect the Sync out of the CuePoint to a line input of your tape recorder.

The CuePoint's output level is around -8 dBm. A good record level for time code is around -10. You just mainly don't want to clip the code by overdriving it, or bury the code in noise by setting the level too low.

Recording the SMPTE

Usually, a sync tone will survive dbx and Dolby C.
If you are routing the SMPTE through a mixing console, be certain that E.Q. is bypassed.

Put the tape recorder into record. Be sure to monitor the input level.

- Press the STRIPE button to enter STRIPE mode, LED on.

When the STRIPE button is pushed, "St" appears in the LOCATE window, and the current stripe starting time appears in the time window.

- At this point, a different start time may be entered if you wish.

- Press Enter to begin striping.

Always stripe SMPTE the length of the whole tape, as it is impossible to go back later and add a little extra stripe.

- Press Enter again to terminate striping.

- Press the STRIPE button again to exit Stripe mode.

CuePoint Operation

CuePoint Operation

CuePoint has so much flexibility that we will present a few features at a time, tutorial style, This means you should try the examples as they are presented.

By the time you are finished with this section of the manual, you should be able to, by simply entering a 2-digit Locate number and pressing Enter, initiate a very complicated series of automated events, like this:
Chase to a point 3 seconds before Bar 24.
At Bar 24, Beat 3, Sub Beat 12, punch into record on tracks 11, 12, and 13. Switch the monitor to input at the time of punch in.
Punch out at exactly Bar 25, Beat 1.
Then, after playing 4 more seconds of tape,
Rewind back to bar 15 and park.
(Always take your keys and remember where you parked.)

Transport Controls

The standard transport controls, Rewind, Fast Forward, Stop, Play, and Record, behave as expected.

The LEDs on the Transport Controls are lit in response to information received from the tape recorder being controlled.

On the ADAT and RD-8, the tape can be engaged or disengaged. If the tape is disengaged when you press play, then you must wait for the tape to engage before the deck goes into play.

Record is enabled by pressing Play and Record.

When the machines are playing, you should see time code displayed on CuePoint.

Roll Back
If you hold STOP and press REWIND, the tape recorder should rewind to a point 30 seconds earlier than the currently displayed time. This takes place when Stop is released.

The "roll back" is 30 seconds back from the current time, 30 seconds for each press of Rewind while stop is held down. In fact, if you hold stop and press rewind 3 times, the tape should rewind 90 seconds before the currently displayed time.

How are things going so far?
If you cannot get the transport controls to work, please re-read the System Setup section on page 39.

You need to check the following:
•Hook Up, that is, are the commands getting from CuePoint into the tape recorder?
•Machine Definition, that is, does CuePoint know what kind of tape recorders are connected to it?
•Machine Enabling, is CuePoint currently programmed to communicate with the tape recorders?

ADAT's Time is Always Displayed with One Hour Added
The ADAT's time code is a little unusual. That is because the ADAT has a two-minute section of tape reserved for "data" . So by the time that the tape counter reads "00:00", the time code from the ADAT is already at 2 minutes.

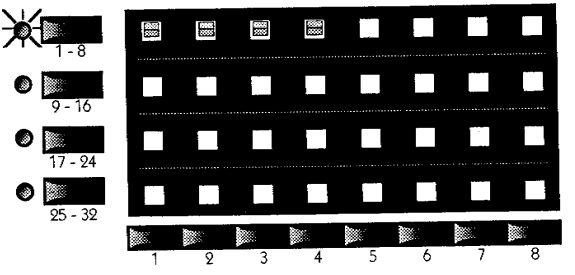
CuePoint's dataCARD, like the dataSYNC and the dataMASTER, automatically adds 58 minutes to the time code.
So, when the ADAT's tape counter says 00:00,
CuePoint displays 01.00.00.00.0.

Track Arming

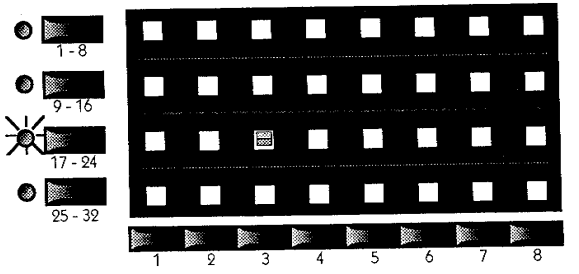
To arm a track for recording, observe the track status display. The buttons to the left of the display select a range of eight tracks, the buttons under the display selects the track. If four eight-track machines are connected, then the buttons to the left of the display select which machine you will be arming tracks on.

Example

To arm tracks 1 through 4, first press the 1-8 button, then press buttons 1, 2, 3, and 4 under the display.



To arm track nineteen, press button 17-42, and then press button 3 under the display.



Track Status LEDs
When you arm a track, you will see its green LED turn on and the red LED flash.

•The green LED indicates that the monitor (what you are listening to out of the tape recorder) has switched from the tape to the input.

•The flashing red LED indicates that the track is ARMED and ready to record.

•When you are recording, the red LED stays on steadily.

Auto Input and the Track Status Display
When Auto Input is selected, armed tracks will not change their monitor status until recording. So, pressing a track arm button while Auto Input is selected will result in only the red LED flashing.

ALL SAFE
Pressing ALL SAFE immediately "safes" all tracks, and turns off all of the red track arm LEDs. As long as ALL SAFE is on (LED on), no track will go into record.

ALL INPUT
Switches all tracks to monitor inputs. Turns on 32 green LEDs.

Group Arming

There may be occasions where you want to simultaneously arm multiple tracks. CuePoint's grouping feature accomplishes this. A single press of a button can arm any combination of tracks. And you have three groups to work with.

For example, pressing Group 1 could arm all tracks on machine 2 (for a tape to tape transfer), while Group 2 could arm just tracks 23 and 24 for a vocal overdub, while Group 3 could arm tracks 1 through 4 and 32. The tracks do not have to be on the same machine. This will save you a lot of button pressing time, especially when doing repetitive tasks.

• To Assign a Group, first manually make your track assignments using the Track Range and Track Select buttons.

• Then press and hold down one of the Group buttons, and while holding press the Enter key on the keypad.
The Group LED on indicates which group is selected.

• To Recall a Group, press
GROUP 1 or GROUP 2 or GROUP 3.
The corresponding GROUP LED will turn on. If you change any of the input assignments, the GROUP LED will turn off, which is a reminder to you that you have made some change to the Group.

•To Edit an Existing Group, first press one of the GROUP buttons to recall the Group. The LED turns on. Manually edit the Group by pressing the desired Track Select buttons.

The first button you press will make the Group LED go out, to let you know that you are editing the Group.

•To re-store the new group assignments, hold the GROUP button, and while holding press Enter on the keypad.

Group Assignment Example
To assign tracks 9-16 to Group 1,
First press Track Range Select 9-16.
Then press all eight buttons under the Track Status Display.
Then, hold down the GROUP 1 button, and, while holding, press Enter on the keypad.

Group Assignment Example
To assign tracks 23 and 24 to Group 2,
First press Track Range Select 17-24 button
Then press buttons 7 and 8 under the Track Status Display, for tracks 23 and 24.
Then, hold down the GROUP 2 button, and, while holding, press Enter on the keypad.

Now, if you press Group 1, the second row of 8 LEDs turn on, indicating that tracks 9 through 16 are armed. Press Group 2 and LEDs for tracks 23 and 24 turn on.

Group 3 is assigned in the same manner.

When you press a GROUP button, the current state of all the enables will be saved. When you press the GROUP button again to turn off the group-armed tracks, the previously selected armed tracks will be recalled.

Locate (Cue) Points

CuePoint can cause the tape recorders to chase to any location.

CuePoint stores 100 locate points.
Locate points can be stored and recalled by a number, 00-99.

You can store these locate points either by entering them manually, or you can capture them on the fly while the tape is playing.

The locate point may be either an absolute time, like, "go to 1 hour, 30 minutes, 3 seconds". Or, the locate point may be in Bars and Beats, like, "go to Bar 24, Beat 3".

CuePoint's Locate Control, In terms of SMPTE

Since working with CuePoint in terms of Bars and Beats involves some extra operation steps, we will start by explaining how do things in terms of SMPTE times, then in the next section we will discuss working with Bars and Beats.

Even if you plan on working exclusively in terms of Bars and Beats, work through the examples in this section, since it will make working with CuePoint in terms of Bars and Beats easier to understand later on.

Manually Entering a Locate Point, in General

- Use the keypad to enter a locate time.

- When you are satisfied with the entry, press Enter, and the enabled machines will immediately be issued the command to go to that locate point.

As you key in a time, numbers appear in the right of the display first, and then scroll left as you enter them. The quarter frame digit is skipped automatically.

Example

To make a machine go to a locate point of, say for example, 3 minutes and 7 seconds:

Press	Display
3	3.
0	30.
7	3.07.
0	30.70.
0	3.07.00.

Enter 00.03.07.00.0

Entry Offset Time

If CuePoint is controlling an ADAT, the moment that you pressed Enter, 1 hour was automatically added to the time.
Enter 0 1.03.07.00.0
This 1 hour offset time that CuePoint provided can be changed by the user and is explained below.

Here are two important concepts to be aware of:

- ADATs require that 1 hour be added to their locate times.

- CuePoint has a feature called User Entry Offset, which can automatically add that hour to all your entries for you.

Important!
ADAT's Require 1 Hour Added to Their Locate Times!
The time code that comes from an ADAT is a little unusual. Because of the 2 minute "data" section at the start of the tape, the tape is already at 2 minutes by the time the tape counter reads 00.00. CuePoint *adds* 58 minutes to the time code coming from the ADAT. That way, ***a counter reading of 00.00 corresponds to time of 1 hour even***.

The RD-8, if connected via a dataCARD, also requires a 1 hour offset.

So, to make an ADAT locate to 20 seconds, enter 0 1:00:20:00
This is facilitated by the User Entry Offset feature.

User Entry Offset Feature (Shift 7)
There may be times when you want your tape recorder to locate to a certain point plus some constant offset time.

That is, say your tape has time code on it that starts at 1 hour. This is the case for the ADAT, and is also common on audio tapes for video.

To locate to a point 20 minutes into the tape, you need to key in a time of 01:20:00:00. To locate to a point 32 seconds into the tape, you need to key in 01:00:32:00.

This is true for any tape that doesn't start at 00:00:00:00. It is often the case that the time code on a tape starts at 1 hour, or 2 hours, or 3 hours, etc.

CuePoint's User Entry Offset feature saves you a lot of keystrokes by automatically adding a user-specified offset time to every manually entered locate time.

So, for example, if you want the machines to chase to 1 hour and 5 seconds, you only have to key in the 5 seconds.

User Entry Offset Feature (Continued)

•To set the User Entry Offset, press Shift 7 on the keypad. Enter the Offset time, press Enter.

Right "out of the box", CuePoint already has 01:00:00:00 stored as the User Entry Offset.

You may change this time if your application requires a different time.

To clear out the User Entry Offset,
•Press Shift 7 on the keypad,
•Press 0, Enter.

User Entry Offsets are entered to the nearest frame. They cannot be nudged with the DEC- or INC+ keys, nor can the quarter-frame value be changed.

An example follows on the next page.

User Entry Offset Example

Suppose you are working with a tape that has time code with a 2 hour offset. You are doing a lot of work that requires locating to points around 7 or 8 seconds.

Without the User Entry Offset, you would have to key in 2, 0, 0, 0, 7, 0, 0, and then Enter. That's a total of eight keystrokes.

To speed this process up, Press Shift 7.
The Locate / Mode display indicates Uo.
Key in 2 hours (2, 0, 0, 0, 0, 0, 0), press Enter.

Now, to issue a locate command at 7 seconds, all you have to do is key in 7, 0, 0, Enter. (Four keystrokes). Refer to this table:

Press	Display
7	7.
0	70.
0	7.00.
Enter	02.00.0 7.00.0

The 2 hours were added automatically.

User Entry Offset only affects locates and punch in points entered manually by SMPTE time.

Correcting Mistaken Entries

A question that is likely to arise is, "what if I enter a wrong number?"

First of all, certain times are valid and others aren't. Hours cannot exceed 23, for example, and minutes and seconds cannot exceed 59. If a number is keyed in that is not actually a valid time, when you press Enter ***the display will flash bright and dim***, indicating an error. Simply re-enter a valid time.

If, however, you enter a time you didn't want, you can deal with it two ways:

You can go ahead and press Enter anyway, and then re-enter the correct time. The disadvantage of this is that the moment you pressed Enter, you've sent your machines off chasing to the Ukraine. Press STOP.

The other way to deal with it is to remember that the display scrolls continuously from right to left. So you can just keep pressing numbers on the keypad, which will force all of the old numbers in the display to go away. Then, re-enter the correct, desired locate point.

An example follows.

Example of Correcting a Mistake

Say you want your machines to chase to 23 minutes--but you accidentally keyed in 2 hours and 30 minutes:

Press	Display	
2	2.	
3	23.	
0	2.30.	
0	23.00.	
0	2.30.00.	
0	23.00.00.	This was what you wanted.
0	2.30.00.00.	Oops! Don't press Enter yet.

Clear the display by keying in three more zero's:

0	23.00.00.00.	
0	30.00.00.00.	
0	00.00.00.00.	Now, you can start again:

2	00.00.00.02.	
3	00.00.00.23.	
0	00.00.02.30.	
0	00.00.23.00.	
0	00.02.30.00.	
0	00.23.00.00.	
Enter	00.23.00.00.0	

Storing Locates with SET LOC Button

•To store a locate time, enter the time as above.

•Then, press SET LOC. The Locate / Mode display flashes.

•Enter a 2 digit number from 00 through 99, and press Enter.

Please Note
Remember that entering a time will initiate a locate command. Press **INHIBIT** *first if you don't want the machines chasing all over the place while you are setting locates.*

Recalling Locates with the LOCATE Button

•To recall a locate point, press LOCATE. The display flashes.

•Enter a 2 digit number corresponding to the desired locate point, 00 through 99, and press Enter.

Please Note
Remember that if **AUTO PLAY** *is enabled, the machines will go into play after they have arrived at the locate point.*

Example
Suppose that you want to have three locate points,
one at 00 minutes, one at 20 minutes, and one at 30 minutes.

We want to store these times in LOCATE numbers,
00, 01, and 02, respectively.
(We could have chosen any number from 00 through 99).

First, turn INHIBIT mode on, so that your machines don't go into a chase while you are setting these locates.

Press 0
Press Enter Display reads 00.00.00.00
Press SET LOC, 0, 0, Enter.

Press 2, 0, 0, 0, 0, 0,
Press Enter, Display reads 00.20.00.00
Press SET LOC, 0, 1, Enter.

Press 3, 0, 0, 0, 0, 0,
Press Enter, Display reads 00.30.00.00
Press SET LOC, 0, 2, Enter.

To make the tape recorder(s) go to 00.00.00.00,
Press LOCATE, 0, 0, Enter.

To make the tape recorder(s) go to 00.10.00.00,
Press LOCATE, 0, 1, Enter.

To make the tape recorder(s) go to 00.20.00.00,
Press LOCATE, 0, 2, Enter.

Capturing Locate Points

Suppose you want to store the locate point that represents the beginning of a solo. Or, perhaps you want to store a locate point that relates to a specific bad note within the solo which you later want to punch in on to correct. You do not know the SMPTE time that this occurred. A means has been provided so that you can simply listen to the tape, and press a key when you hear the right part. The time when you pressed the key is said to be "captured", and stored as a locate point.

Capturing locates allows you to store locate points while the tape is playing. Here's how to do it:

- Start the tape (that is, press PLAY.)

- At the exact moment you hear the part you want to capture, Press SET LOC.

The Locate display automatically increments to the next LOCATE number.

Warning, this will erase any older locate point previously stored at that locate number.

Another way to capture a locate point is even simpler. Play the tape and listen. At the moment you hear the part you want to capture, stop the tape.

When the STOP button is pressed, the last time will remain in the display. Store this as a locate point by pressing SET LOC, a 2-digit locate number, and Enter.

Editing Locate Points

Any locate point may be easily edited by recalling it, changing it, and then re-storing it again. You may store it in either the same or a different locate number.

Use the DEC- and INC+ buttons to change the time one frame at a time. Hold the DEC- and INC+ buttons to scroll the time.

Clearing Locates

To clear out entire locate memory,
•Hold Shift and Enter, and while holding these down,
Press LOCATE.

The display indicates CLEAr?.

•Press Enter to clear.
The display will flash CLEAr? to confirm the clear.

•To cancel the Clear operation, don't press Enter.
Simply press any other key.

Inhibiting Locates

As mentioned earlier, if you don't want CuePoint to send locate commands into the tape recorder, turn on INHIBIT mode. Press the INHIBIT button (INHIBIT LED ON). This allows you to enter times without CuePoint actually sending the locate commands.

Bar Beat Mode

Introduction

Locate points can be displayed in terms of SMPTE, that is, hour, minutes, seconds, and frames, or in terms of Bars and Beats.

This section of the manual is written with the assumption that you have read and followed through the examples in the preceding section regarding working with SMPTE times.

Even if you plan on working exclusively with Bars and Beats, it is important to read through the section on working with SMPTE times to make the following easier to apprehend.

Check that Frame Rate Has Been Set

To work in terms of Bars and Beats, first make sure that the SMPTE frame rate has been set correctly. The frame rate should be set to match the frame rate of incoming SMPTE or MTC.

If you are using the JLCooper dataCARD, then CuePoint should be set for 30. If you are using a JLCooper dataMASTER, Alesis AI-2, or some other synchronizer, make sure that CuePoint's frame rate is set to match the frame rate of the synchronizer.

If you haven't yet set the frame rate, do so now by holding down the Shift key and pressing STRIPE. The Locate / Mode display says "Fr", and the time display shows the frame rate. Use the DEC- and INC+ buttons to change the rate, and then press Enter.

Song Start Time and Tempo Map Must be entered

Before working in Bar Beat mode, you must program CuePoint with the Start Time of the song. You must also program the tempo and the meter of the song, and any tempo and meter changes. The tempo and meter changes of a song, taken together, are called the Tempo Map.

Entering Song Start Time
There are two ways to do this:
(1) You can manually key in a time, if you know it pretty close.

(2) You can listen to the tape and "capture" the time.

In either case, you can edit the time by nudging it up or down using the DEC- and INC+ buttons, until it is exact.

(1) To manually enter the Start Time,
Press Shift 4, which is labeled in red, "Song Start".
The Locate / Mode display indicates SO.
The time code display flashes, displaying any previously entered Song Start Time.
Use the key pad to enter the new Song Start Time, and Press Enter.

Example
Say that the song starts at around 1 hour, 20 minutes.
Press Shift 4.
The Locate / Mode display indicates SO.
On the key pad, press 1, 2, 0, 0, 0, Enter.
On another listening, you decide that the song really starts a half second later. Press Shift 4 again, and use the INC+ button to nudge the start time up 15 frames, that is, a half second.
Press Enter.

(2) To Capture the Start Time
To capture a Start Time, press PLAY to listen to the tape.
Press Shift 4, which is labeled in red, "Song Start".
The Locate / Mode display indicates SO.
At the moment that the song starts, press Enter. Press STOP.

Very Important!
ADAT's Require 1 hour Added to Song Start Times!
The time code that comes from an ADAT is a little unusual. It actually starts at zero at the beginning of the tape. But since there are 2 minutes of "data" on the beginning of the tape, the time code is already at 2 minutes by the time the tape counter reads 00.00. Instead of subtracting off those 2 minutes, CuePoint (like JLCooper's dataSYNC and dataMASTER) *adds* 58 minutes to the time code coming from the ADAT or RD-8. That way, ***a tape counter reading of 00.00 corresponds to SMPTE time of 1 hour even***.

So, when working with an ADAT and CuePoint is in Bars and Beats, the Song Start must have an hour added to it.

The RD-8, if connected via a dataCARD, also requires a 1 hour offset.

For example, if the song starts when the ADAT's counter reads 00:23, then the Song Start Time that you enter into CuePoint must be 01:00:23:00.

To Edit the Song Start Time
To view the current song start, press Shift 4 again.
You may then change the time by reentering it, or use DEC- and INC+ to nudge the time by one frame at a time. Shift DEC- and Shift INC+ nudge the time by one quarter frame at a time.

Entering Tempo Map

Next, you need to enter a tempo map of the song. This is because there is no natural relationship between SMPTE and tempo. So CuePoint needs to know when the song starts and its tempo and meter.

If you haven't already done so,

•Press the BAR BEAT button.

The LED indicates that CuePoint is in BAR BEAT mode.

•Press Shift 5, which is labeled in red, "Enter TMap".

The Tempo Map consists of

The bar number of each tempo change, the tempo, and the meter.

•If no tempo map is in memory currently, the first tempo is assumed to occur at bar 1.

•Locate / Mode display indicates "tP".

Enter the first tempo.

For example, if 120 beats per measure, press 1, 2, 0.

Press Enter.

•Locate / Mode display indicates "tS".

Bar Beat display indicates 4♩

Enter the first time signature.

For example, if 4/4, press 4, Enter, 4, Enter.

Bar Beat display indicates 4♩4

•Locate / Mode display indicates "br".

The Bar Beat display flashes. ---

At this point, if there are no tempo changes, your tempo map is complete. Press Enter again to exit tempo map entry mode.

• If there are tempo changes, enter the bar number where the tempo change occurs. You will then be prompted again to enter a tempo and time signature.

At any time, when the machines are stopped, you may re-enter the tempo map entry mode, and add additional tempo map entries. They need not be in order, you can go back and insert a tempo map entry between two previous entries and CuePoint will figure out what you mean.

Some CuePoint Tempo Map Statistics

• The Tempo Range is 30 to 240 BPM
• The Meter Range is 1 through 16 beats per measure, with the quarter note, eight note, or sixteenth note equaling one beat.
• Up to 256 tempo changes may be entered.
• The song may be up to 999 bars.

Editing Tempo Maps

You have previously seen how *Enter* TMap is used to add Tempo Map Entries. Now you will use *Edit* TMap to change the bar, tempo, and time signature parameters of a previously entered Tempo Maps.

• Press Shift 6, which is labeled in red "Edit TMap."

• Locate / Mode display indicates "br".
The Bar Beat display flashes.
Press Enter.

Important!

Don't enter a new bar number here. It doesn't make sense to change the bar number of your first tempo map entry, and will only result in confusion to both you and CuePoint. A song must always start at bar 1.

•Locate / Mode display indicates "tP".
The display flashes the first tempo of the song. ♩ 120
If you wish to edit it, key in the new tempo now and press Enter. Otherwise, don't key in a new tempo, just press Enter to skip to the next parameter.

•Locate / Mode display indicates "tS".
The Bar Beat display flashes the number of beats per measure of the start of the song, for example, 4

If you wish to edit it, key in the new number now and press Enter. Otherwise, don't key in a new number, just press Enter to skip to the next parameter.

•The Bar Beat display flashes the note which gets the beat, for example, 4 8

If you wish to edit it, key in the new note value now, and press Enter. Otherwise, don't key in a new value, just press Enter to skip to the next tempo map entry.

•Locate / Mode display indicates "br".
The Bar Beat display flashes the bar number of the first tempo change, for example 20
This bar number you can edit, if you want the tempo change to occur earlier or later. Change it or press Enter.

• As you continue to press Enter, you will be able to view every tempo map entry you have previously made, in order of their occurrence. An example follows.

Example
Suppose you have made three entries, at bars 1, 20, and 30. The meter is consistently at 5/8, but the tempo changes from 80, to 90, and finally 200 bpm. As you press Enter repeatedly while in the Edit Tmap mode, you would see the following:

```
1      80
5/8

20     90
5/8

30     200
5/8
```

Each parameter of each tempo map entry is editable. (With the exception of the first bar number, as previously mentioned.)

Clearing Tempo Maps
To clear out entire tempo map memory, hold keypad Shift Enter, and while holding these down, press BAR BEAT. The display says "CLEAr?". Press Enter to confirm. The display will flash to confirm the clear. To cancel the Clear operation, don't press Enter. Simply press any other key.

Dumping Tempo Map
CuePoint holds one tempo map in its battery-backed memory. To work with bars and beats, you will need a different tempo map for each song. Before clearing and re-programming the tempo map, it is recommend that you save the start time and tempo map parameters, by doing a MIDI System Exclusive bulk data dump to a suitable storage device, such as a software-based editor / librarian, an Alesis data disk, a disk-based sequencer or workstation, etc. To initial a dump of MIDI data, Hold Shift Free Run. The display indicates "dAtA oUt". The dump of data comes out of both MIDI outs and takes about 17 seconds.

Automated Transport Functions

This section focuses on CuePoint's automated functions, including AUTO PLAY, AUTO INPUT, LOOP B→A, A/PUNCH, and REHEARSE

AUTO PLAY

When turned on, tape recorders go into play automatically at the end of a locate or loop operation.

AUTO INPUT

When turned on, armed tracks continue to monitor tape playback until a punch in occurs. Then, the monitor switches to the tape inputs.

When AUTO INPUT is turned on, arming tracks causes red LEDs to flash, but the green LEDs do not turn on.
This indicates that the track is armed, but you are still listening to the previously recorded tracks. At the moment a punch into record occurs, the red LED stays on, and the green input monitor LED also turns on.

Loop B→A

LOOP B→A automatically causes the decks to roll back from one predetermined point B to another predetermined point A. (Loop B→A may be used with or without PRE ROLL and POST ROLL, defined in the next section.)

The Loop A and B points can be entered in terms of SMPTE or in terms of Bars and Beats. Also, the A and B points can be set in three different ways, depending on your requirements.

(1) **Manually** entering the points.
(2) **Capturing** the loop points, on the fly.
(3) **Copying** displayed time or locates into the points.

In any case, the A and B points may be recalled and edited with either quarter-frame or sub-beat precision.

(1) Manually Entering the A and B Points

•To set the A point, the beginning of the loop, press Set In (A). The display flashes the previous A point, if any.

•Use the keypad to key in the new A point.

If working in SMPTE, enter Hours: Minutes: Seconds: and Frames, just as you would enter a locate time.

If you are working in Bars and Beats, a Start Time and a Tempo Map must have previously been entered. (Refer to last chapter.) The point is entered in Bars, Beats, and Sub-Beats. (1/24th of a beat)

•If there is already an A point in memory, you may also use the DEC- and INC+ keys to modify the A point.

Shift DEC- and Shift INC+ will modify the currently displayed time by either quarter-frames (when working with SMPTE) or Sub Beats (when working with Bars and Beats.)

•Press Enter

The Set Out (B) LED automatically turns on, allowing you to enter the end of the loop, the B point Again, this may be entered in terms of a SMPTE time, or Bars, Beats, and Sub Beats.

•After keying in the B point, Press Enter.

Example of Loop B→A (Manually Entered SMPTE)
Suppose that you want the machines play to a point at 10 seconds, and then automatically rewind to 5 seconds.

As our A point we will thus use:
00:00:05:00

And as our B point will use:
00:00:10:00

- Turn LOOP B→A On

- Press SET IN (A)

- Press 5, 0, 0, Enter.
The SET OUT (B) LED turns on automatically.

- Press 1, 0, 0, 0, Enter.
The SET OUT (B) LED turns off

Now, locate to some point before B.
For example, press 0, Enter.
This will cause the machines to locate 0. Then Press PLAY.

At 10 seconds, the machines will automatically stop, go into rewind, and park at 5 seconds.

If you want the loop to be perpetual, turn AUTO PLAY on before pressing PLAY. After the machines rewind to 5 seconds, they will automatically go into PLAY.

Example of Loop B→A (Manually Entered Bar Beat)
Suppose that you want the machines play to bar 20 of a song, and then automatically rewind to bar 5.

As our A point we will thus use:
Bar 5, Beat 1, Sub Beat 1.

And as our B point will use:
Bar 20, Beat 1, Sub Beat 1.

- Turn LOOP B→A On

- Press SET IN (A)
Bar, Beat, and Sub Beat are displayed. Bars are flashing.

- Press 2, 0, Enter.
Beat flashes, Press 1, Enter. Sub Beat flashes, Press 1, Enter.
The SET OUT (B) LED turns on automatically.

- Press 5, Enter.
Beat Flashes, Press 1, Enter. Sub Beat flashes, Press 1, Enter.
The SET OUT (B) LED turns off.

Now, locate to some point before B. For example, press 1, Enter. This will cause the machines to locate bar 1. Then Press PLAY.

At bar 20, the machines will automatically stop, go into rewind, and park at bar 5.

If you want the loop to be perpetual, turn AUTO PLAY on before pressing PLAY. After the machines rewind to bar 5, they will automatically go into PLAY.

(2) Capturing the Loop Points, On the Fly
If the machines are currently playing, pressing the SET IN button "arms" CuePoint to capture the A point at the instant the Enter key is pressed.

When the Enter key is pressed, the SET OUT (B) LED turns on, and CuePoint is "armed" to capture the B point at the instant the Enter key is pressed.

Example
Say that you want the machines to continuously loop through a verse of a song. You will want to set the A and B points to "bracket" the verse.

It doesn't matter for sake of this example whether you are in SMPTE or Bar Beat mode.

- Press PLAY.

- Press SET IN (A).

- Listen to the song, with a finger poised over the Enter Key. At the start of the verse, press Enter.

- At the end of the verse, press Enter again.

Locate to some point before the verse, turn on AUTO PLAY and LOOP B→A.

- Press PLAY.

(3) Copying Displayed Time or Locates into Loop Points
The currently displayed time is either the result of recalling a locate point, manually keying in a time, or simply the last position of the machines when you pressed STOP.

These can be copied into the A point by holding Shift, and while holding Shift press SET IN (A).

The currently displayed time will be copied into IN (A).
It will flash to indicate that you may edit it or press Enter.

The SET OUT (B) LED will turn on, as before.
Press Enter to skip past this and exit SET OUT (B) display.
If in Bar Beat mode, press Enter several times to scroll past Beat and Sub Beat.

Next, to copy a locate into the B point, recall the locate by using LOCATE and the 2-digit locate number.
Hold Shift, and while holding Shift press SET OUT (B)

Example
Say that you want your machines to loop between locate numbers 45 and 52.

To make locate 45 into the A point,
Recall locate 45 by pressing LOCATE, 4, 5, Enter.
Hold Shift, and while holding Shift, press SET IN (A). .

Press Enter until SET OUT (B) LED turns off.

To make locate 52 into the B point,
Recall locate 52 by pressing LOCATE, 5, 2, Enter.
Hold Shift, and while holding Shift, press SET OUT (B).

Turn AUTO PLAY on, Turn LOOP B→A. Play the machines from some point before locate 52, and the rest is totally automatic.

Pre Roll and Post Roll

Pre Roll makes your machines consistently chase to a point some number of seconds before the Locate point. Post Roll determines how long the tape will continue to play after the end of the loop out (B) point.

When using multiple machines, it is standard practice to apply some amount of Pre Roll when issuing a locate command, so that all the machines have the opportunity to chase and sync up before they reach the point that you are interested in hearing.

Also, if you do a punch in, (discussed in the next section), you will want to hear a certain amount of the song roll by before the punch in occurs, so that the musicians can begin playing and have time to prepare, before actually being recorded.

In simpler terms, entering a Pre Roll, of, say, 5 seconds means that when you tell your machines to locate to, say, bar 30, they will instead locate to a point 5 seconds *before* bar 30.

Pre and Post Roll are always entered in seconds, from 00 to 99. This is regardless of whether CuePoint is in SMPTE or Bar Beat.

To Set Pre Roll Time:

- Press the PRE ROLL button.
- Enter a time in seconds from 00 to 99.
- Press Enter.

To Set Post Roll Time:

- Press the POST ROLL button.
- Enter a time in seconds from 00 to 99.
- Press Enter.

Pre Roll and Post Roll, Continued
Pre Roll applies to locates, either entered manually or recalled with the LOCATE button.

Pre Roll and Post Roll apply to Loops.

Example of Locates with Pre Roll
Pre Roll applies to locates, either entered manually or recalled with the LOCATE button.

Say that you have two machines connected to CuePoint and an external machine synchronizer. Say also that it typically could take as long as 30 seconds for these two machines to lock up in sync.

So, if you want to hear a particular verse of a song, simply issuing a locate command to the beginning of the verse is inadequate, because as much as 30 seconds of the verse has gone by before the machines are locked up and all the tracks can be monitored.

Enter a Pre Roll of 30 seconds to compensate for the long chase and lock time. Press PRE ROLL, 3, 0, Enter.

Now, when you key in a time, or recall a locate with the LOCATE button, CuePoint will automatically subtract 30 seconds from that time before issuing the locate command.

It will do this regardless of whether you are in SMPTE or Bar Beat. It will continue to apply the Pre Roll until you enter a 00 time for Pre Roll.

Example of Loop B→A with Pre Roll and Post Roll
Suppose that you have captured your loop points on either side of one verse of a song. The artist wishes to listen to a continuous loop of the verse.

To listen to the verse in context with the whole song, you obviously don't want to come in on the down beat of the beginning of the verse, and start rewinding exactly at the end of the verse.

A 5 second Pre Roll and a 5 second Post Roll will be of assistance here.

Assuming that you already are successfully looping (refer to previous section),

- Press PRE ROLL, 5, Enter.

- Press POST ROLL, 5, Enter.

- LOOP B→A On, AUTO PLAY On.

- Press PLAY.

Auto Punch

Auto Punch causes armed tracks to automatically go into record at a user-specified IN point (A) and go out of record at a user-specified OUT point (B).

(Auto Punch is also what you do when your car stalls in traffic.)

First Set the IN (A) Point and the OUT (B) Point

To Use Auto Punch, you must set the IN (A) point and the OUT (B) point. The procedure for doing this was described in torturous detail in on pages 73-78. To recap very briefly here:

(1) The IN (A) point may be *manually entered* by pressing SET IN (A) and keying in a time (or bar, beat and sub beat.) After entering the IN (A) point, enter the OUT (B) point.

(2) The IN (A) and OUT (B) points may be *captured* on the fly, that is, while playing and listening to the tape. Press PLAY. Press SET IN (A). At the in point, press Enter. At the out point, press Enter again.

(3) A locate point can be *copied* into the IN (A) or OUT (B) point.

Recall the locate by pressing LOCATE followed by the 2-digit locate number. Press Enter. Then, hold the Shift key, and while holding down Shift press SET IN (A). Enter.

Press Enter again until the OUT (B) point LED turns off.

Recall another locate number to use as the OUT (B) point. Then, hold the Shift key, and while holding down Shift press SET OUT (B). Enter.

Example
Say that you want to punch in and re-record a track of a particular section of a song.

First, play the tape and listen to it, to get your bearings on where the punch in and out are going to occur.

Then, play it again, this time press SET IN (A), and at the intended punch IN point, press Enter.
At the intended punch OUT point, press Enter again.
Stop the tape.

You may edit the IN and OUT points by pressing either SET IN (A) or SET OUT (B). The previously captured time or bar, beat, sub beat, will flash. You may either key in a new time, or nudge the existing time using the DEC- or INC+ keys. Use Shift DEC- or Shift INC+ to nudge the time by quarter-frames or sub-beats (1/24th of a beat.)

Arm the track you intend to record on using the Track Range and Track Select buttons.

Turn A/PUNCH On. Locate the machines to some point before the IN point.

Press Play and Record.

The select track(s) will punch into record at the IN point, and out of record at the OUT point.

Auto Punch with AUTO INPUT
When doing punch ins, it is usually desirable to turn AUTO INPUT on. When AUTO INPUT is on, you will continue to be able to monitor the tape until the punch in occurs. At that point, the monitor will automatically switch to input (source), allowing you to listen to the new part you are recording.

Auto Punch
With Loop B→A, Auto Play, Auto Input, Pre and Post Roll
Auto Punch is most effectively used when it is fully automated with Loop B→A on, Auto Play on, Auto Input on, and a Pre and Post Roll time entered.

This allows the artist to
(1) Listen to his part on a previously recorded track for some period of time, that is, Pre Roll, before the punch in occurs.

(2) Before the punch in, the artist is able to listen to the part previously recorded, because Auto Input automatically holds off switching the monitor to the input until the punch in point.

(3) At the punch out, the tape continues to play for some period of time, that is, Post Roll.

(4) After the Post Roll, the tape automatically rewinds to the Pre Roll point.

(5) The tape automatically goes into Play again, because of Auto Play being on.

The process repeats itself until you are satisfied that you have a "take". At that point, turn A/PUNCH off or STOP the tape, so you don't accidentally record over the successful take.

Rehearsal Mode

Rehearsal mode is used along with Auto Punch and Auto Input. It is used for rehearsing a part without committing it to tape.

When REHEARSE is turned on along with A/PUNCH and AUTO INPUT, the tape recorders do not actually go into Record. Rather, at the punch in point, they merely switch from monitoring the tape to monitoring the input.

On the ADAT, when punched in while in Rehearsal mode, the RECORD LED flashes instead of turning on steadily.

Everything else already said about A/PUNCH in applies to rehearsal mode. It does not require that Loop B→A be turned on, but you must have previously set an IN (A) point and an OUT (B) point. Turn on REHEARSAL along with AUTO INPUT and AUTO PUNCH.

Special Features

Foot Switch

The Foot Switch jack will accept either Normally Open or Normally Closed types of foot switch. The only requirement is that it be plugged in upon power-up so that CuePoint can sense what kind of foot switch you have connected.

The foot switch's operation is user-selectable, you can chose whether it will initiate Play/Stop or Punch In/Out.

To select the desired operation of the foot switch,
- Press Shift and "0" keys.

(The "0" key has "Define FS" written in red.)

"FŁ" appears in the Locate / Mode display.

In the time code display, either the words "Punch", "PLAY" or nothing appears. This shows that the foot switch activation will either cause a Record Punch In/Out, Play/Stop, or no action at all.

- A change to the current setting may be made by pressing DEC- or INC+. Pressing either Enter or Shift 0 will exit this mode and store the new selection.

Wheel Operation

CuePoint's shuttle wheel is an infra-red optically encoded, software-nulled positioning device. Neat. But what does it do?

The action that is has depends on the capabilities of the machine you are controlling. Some machines simply search, others do a variable-speed shuttle, some scrub.

Null Point

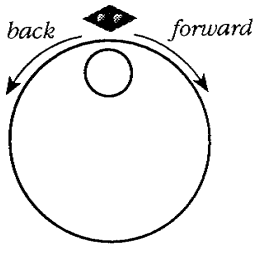
When you first turn on CuePoint, both Wheel LEDs turn on. Regardless of the position of the wheel, the two LEDs turn on when you turn CuePoint on. This becomes your "software detent" or "null point".

- Rotation the wheel clockwise from this null point sends forward commands to the machines.

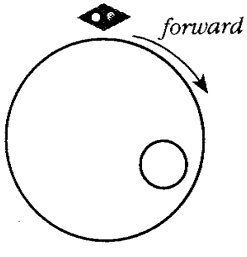
- Rotating counter-clockwise from this null point sends reverse commands to the machine.

In all cases, when a search or shuttle command has been initiated, you can override it by the transport buttons, for example, pressing STOP.

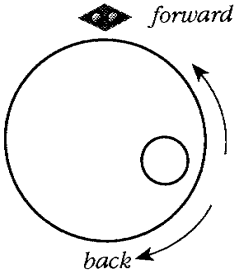
Pressing STOP re-nulls the wheel. That is, both arrow LEDs turn on, and the wheel is considered to be nulled.



Wheel is Nulled, Both LEDs On



Rotate Clockwise Right LED On



Press STOP, Wheel is Nulled, Both LEDs On.

The wheel has about 20° of play on either side of the null to prevent accidental actuation.

To Assign the Wheel to a Machine
If you have more than one brand of machine connected, the first question one might ask is this, "Which machine will be affected?" The answer is in two parts:

(1) The first enabled machine gets wheel control.
Remember that to choose which machine(s) are under control of CuePoint, you press Shift 1 (Enable Machines) and use the first five track select buttons to enable remote control of the machines.

Say that the first machine is an ADAT and the second is a DA-88. If both machines are enabled, then the wheel will control the ADAT, since it is the first machine enabled.

To control the DA-88, enable only the second machine.

(2) Using CS-10 emulation overrides all other machines.
If Machine 5 is enabled, then CuePoint is in CS-10 emulation mode. Turning the wheel results in CuePoint sending only MIDI Controllers, no other commands are sent when the wheel is moved, regardless of what machines are enabled.

The Wheel and the ADAT and RD-8

With the ADAT or RD-8, the wheel will initiate a "shuttle-search" mode. This gives the same results as holding FAST FWD or REWIND and PLAY on an ADAT.

The ADAT has only one shuttle search speed, so the speed will not change regardless of how far you turn the wheel.

A rotation of the wheel clockwise from the null point results in a forward search. The rotation of the wheel backwards results in a reverse search. Returning the wheel to its null position (both LEDs on) results in a Stop condition.

The Wheel and the DA-88

On the DA-88, turning CuePoint's wheel lights the LED below the DA-88's shuttle wheel. CuePoint's wheel then behaves like the DA-88 variable-speed shuttle wheel.

The Wheel and the Hard Disk Recorders

In CS-10 emulation mode, turning the wheel results in CuePoint sending MIDI Controllers, which can scrub through sound files in HD systems made by Spectral Syntheses and Digidesign.

Safe Segments

There are times when tracks become very cluttered, and the user is just trying to find an odd segment of a track to lay down, for instance, one more percussion overdub. The danger is that a momentary lapse on the user's part will result in over-recording some previous segment. Worse of all is when the erasure isn't discovered until too late.

CuePoint offers the Safe Segment mode as a protection against this accident. When enabled by pressing Shift 3 (the "3" key has "Safe Segs" written on in red), CuePoint starts keeping a second-by-second log of Record activity taking place on each of the 32 possible tracks. Any attempt (while this mode is enabled) to record over a previously recorded segment will result in the decks coming to a Stop, and the message "SAFE SEG" to appear in the time code display.

Of course, the user can purposely over-record a segment by exiting the Safe Segment mode.

CuePoint indicates that it is in the Safe Segments mode by slowly flashing the ALL SAFE LED.

Clearing Safe Segments

To clear out the memory of recorded segments, hold keypad Shift , Enter, and while holding these down, press #3. The display says "CLEAr?". Press Enter to confirm. The display will flash to confirm the clear. To cancel the Clear operation, don't press Enter. Simply press any other key.

JLCooper Electronics plans to have available a Segment Log program available for Mac and Windows that allows the display, modification, and printing of the Safe Segment Log.

Free Run Mode

This is a special mode on the CuePoint that allows all operations to take place without the receiving of time code (whether SMPTE or MTC) from external sources.

The main purpose of this mode is when CuePoint acts as time master to the rest of the system. For instance, when CuePoint is attached to a hard disk recorder that can lock to MTC, the Free Run mode allows all automated transport functions to operate.

This gives you the ability to perform locate, loop, and auto play operations on an MTC-based sequencer or hard disk recorder.

To enable Free Run mode,

- Press FREE RUN button. (LED On).

Both MTC and SMPTE are generated in this mode.

Special ADAT and RD-8 related functions

The following functions operate only with the ADAT or RD-8.

Pitch Shifting

Pitch shifting is accomplished by holding down Shift and the PRE ROLL buttons. (The PRE ROLL button has PITCH in red above it.) The Locate / Mode display will show "PH".

Pressing the DEC- or INC+ buttons will cause a pitch shift up or down. The pitch shift takes place when you press Enter.

Machine Offset

It is often useful to offset one or more machines in time from each other to allow, for instance, the bouncing of a Chorus to multiple points.

Machine Offset is used in the situation where one machine is the master, and the remaining machines are slaves. This is the case when multiple ADATs or RD-8s are chained together.

This function is called "Tape Offset" on the Alesis BRC.

The slaves are offset with respect to the master.
In other words, if the offset is 5 seconds, then the slaves will play 5 seconds ahead of the Master.

•To enter a Machine Offset, first put CuePoint into Machine Offset mode by pressing Shift MACH O/S.

The Locate / Mode display indicates oF.

Select a machine by using one of the first four of the track select buttons. Then enter an offset time using the keypad. Offset it entered in SMPTE Time plus some number of samples.

Machine Offset (Continued)
After selecting the machine, the current offset, if any, for that machine is displayed:
00:00:00:00.0

After entering the offset SMPTE time and pressing Enter, the number of samples offset is displayed.
0000
Press Enter again to exit.

Example
Say you have two ADATs, as machines 1 and 2.
To Offset Machine 2 by three seconds, enter Machine Offset mode by pressing Shift MACH O/S.
Then press Track Select number 2.
Then enter 3, 0, 0, Enter. The display indicates:
00:00:03:00.0

Press Enter again. The display indicates:
0000

Press Enter again to exit the Machine Offset mode.

As with any time entry, you may use the DEC- and INC+ buttons to scroll up or down the time by frames. Shift DEC- and Shift INC+ will change the time by Quarter Frames.

Clearing Machine Offset
To clear out all Machine Offsets, hold Shift and Enter, and while holding these down, press SET LOC.
The display says "CLEAr?". Press Enter to confirm.
The display will flash to confirm the clear.
To cancel the Clear operation, don't press enter.
Simply press any other key.

Tape Offset (Track Delay)
The ADAT and the RD-8 allow for the delaying of the audio off of specified tracks.

To delay a track, first enter Track Delay mode by pressing Shift Tape O/S. The Locate / Mode display indicates td.

Select a track using the Track Select buttons. Its green LED only will come on, not flashing.

• The green LED indicates that you have selected one specific track, and may edit the track delay for that track.

• The red LED indicates that you have entered some delay on that track.

Enter the track delay for that selected track in terms of milliseconds from 000-170 using the keypad and press Enter.

Continue to assign track delay to other tracks in the same manner. Select the track, key in the delay, press Enter.
A red LED will stay on for each track that has been delayed.

Pressing Enter again without having selected a new track exits the mode to assign Track Delay.

The next time that Track Delay mode is entered, you will notice that a red LED is on for each track that has been delayed. To view or edit the delay time for a given track, simply select it. Enter a new time and then press Enter.

Clearing Track Offset
To clear out track offsets, hold Shift and Enter, and while holding these down, press Post Roll.
The display says "CLEAr?". Press Enter to confirm. The display will flash to confirm the clear. To cancel the Clear operation, don't press enter. Simply press any other key.

ROUTE (Digital Track Bounce)
It is always desirable to do bouncing from one machine to another in digital, so that there is no loss of quality. The ROUTE function allows the defining of the source and destination tracks through the digital link, and places the machines into Digital I/O mode.

• First connect the optical Digital Bus cable(s) following the instructions in your ADAT or RD-8 manuals.

• CuePoint is put into digital route mode by pressing ROUTE (That is, Shift LOCATE button.)
The Locate / Mode display says "dr" for "digital route."

• Use the Track Enable buttons to select which tracks are going to be the ***source*** of digital data.

You can select up to eight tracks, but they must be on ***one machine only***. As source tracks are selected, both the red and the green LEDs turn on.

• After selecting the source tracks, press Enter.

• As soon as you press Enter, the CuePoint and the ADAT go into Digital I/O mode. On CuePoint, this is indicated by the Track Range LED flashing.

Set the ADAT for Internal Sync

When you enter Digital I/O mode on the ADATs, you may hear their speed change or become unstable. This occurs because the ADATs have set themselves to respond to an external clock, derived from the digital signal on the optic cables. The ADAT which is acting as the master must be set to internal clock. Here's how to do it:

- On the master ADAT,
press SET LOCATE and while holding SET LOCATE,
press DIGITAL I/O.
The ADAT will display " Int".

Pressing SET LOCATE and DIGITAL I/O toggles the ADAT between Int and d iG. The ADAT does not retain this setting when the power is turned off. So, if the power to the ADAT has been turned off, it is necessary to toggle the clock setting to internal prior to doing a digital bounce

- Select the Record (destination) tracks using the Track Range and Track Select buttons in the normal manner.

- Initiate recording using transport controls or automated transport controls.

Example
Say that you have 2 ADATs.
Now, suppose that your goal is to digitally bounce track 1 of the first ADAT on to track 4 of the second ADAT.
This is a noble goal, and one worthy of pursuing.

- Enter Digital Route mode by pressing Shift ROUTE.

- Use the Track Select buttons to select track 1.

Notice that the Track Range LED flashes.

- Press Enter to exit ROUTE mode.

Notice that the Track Range LED continues to flash.
This is to remind you that you have selected some number of tracks as a digital source and you are now in digital I/O mode.

We now want to arm our destination track. This is track 4 of the second ADAT.

- Press Track Range 9-16. Press Track Select 4.

- Press RECORD and PLAY to initiate the bounce.

Some Notes On Digital Track Bounce
Note that only one machine can be a source. Selecting any source tracks automatically makes that machine the digital master.

If you assign more destination tracks than source tracks, the source tracks will cyclically assign themselves to the destination tracks.

Example
Suppose tracks 1 and 2 are your selected source tracks (two source tracks.)
Say tracks 17, 18, 19, and 20 are your selected destination tracks (four destination tracks).
Then track 1 will bounce to track 17 and 19,
track 2 will bounce to tracks 18 and 20.

If you assign more source tracks than destination tracks, the excess source tracks will be ignored.

Example
Suppose tracks 1, 2, and 3 are your selected source tracks (three source tracks).
Say tracks 17 and 18 are your selected destination tracks (only two destination tracks).
Then track 1 will bounce to 17,
track 2 will bounce to 18,
track 3 will not bounce anywhere.

Digital Track Bounce from One of Eight Machines
CuePoint is said to control 4 machines, in terms of track arming and transport control. It can actually select one of up to 8 machines as a source when digital bouncing with the ROUTE function. A QuadraSynth, for example, placed "upstream" in the digital buss, can be track enabled as a source for digital bounce.

A Future Feature
CuePoint, in anticipation of the future, already has in place the means to select tracks for digital bouncing from additional machines. However, at time of printing of the manual, the machines are not yet available to take advantage of this.

For reference, here is how it will work,

•Holding the Shift key while in ROUTE mode gives you access to a "second page" of track enables.

Select source tracks using the Track Range and Track Select buttons. Exit ROUTE mode by pressing Enter, and enable the record (destination) tracks.

Technical Helps

Clearing Memory

In general, to clear memory, you hold down Shift and Enter. Then, while continuing to hold Shift and Enter, press the function to be cleared. The display will show "CLEAr?" Pressing Enter will clear, the display will flash to confirm the clear. To Cancel the operation, don't press Enter, simply press any other key.

The following operations have Clears
1. Tempo Maps (Press Shift Enter and Bar Beat)
2. Safe Segs (Press Shift Enter and 3)
3. Locates (Press Shift Enter and LOCATE)
4. Machine Offset (Press Shift Enter and SET LOC)
5. Track Offset (Press Shift Enter and POST ROLL)

To initialize the entire memory, hold down Rewind and Record while powering up.

Software Version Number

To view the version number of the firmware (EPROM) inside CuePoint, hold the STOP button while applying power.

MIDI System Exclusive Data Dump

CuePoint will dump its entire memory (including locates, track and machine offsets, groups, safe segments, and tempo maps, etc.) via MIDI system exclusive. To initiate a dump, Press Shift and Free Run. The dump will take about 17 seconds and consist of about 24 Kilobytes of data. It comes out of both CuePoint MIDI outputs at the same time.

To send the data back into CuePoint, there is nothing special to do to enable CuePoint to receive the data. Just don't do it at the same time that time code is coming in. The display will lock up while it is receiving the data, and return to normal after the data is received.

"What Mode Am I" ? Index

The Locate / Mode display can show a lot of different abbreviations. Fortunately, you can't get lost, When in doubt, just press the Enter key to get out.

Here is a listing of the various abbreviations for modes that you might find in the display, given with a page number cross-reference in case you want to learn more about them.

CS-10 Emulation

CuePoint's Transport and Wheel can emulate a JLCooper CS-10 Professional Control Station. This gives CuePoint the ability to control hard disk-based editors such as those made by Spectral and Digidesign.

To make CuePoint send CS-10 MIDI commands, enable "Machine 5". This is done by entering Enable Machine mode (Shift 1) and then pressing Track Select number 5. Then press enter.

Here are the commands sent by CuePoint. The CS-10 uses Controller commands on MIDI channel 16. These messages are all of the form:

0BFh cc vv

where cc = switch or wheel number and vv = value. The value equals 7Fh when the key is pressed, and 00 when the key is released.

The cc (controller number) assignments are as follows:

Rewind	13h
Fast Forward	14h
Stop	15h
Play	16h
Record	17h
Wheel	60h

Technical Information about the Wheel In CS-10 Mode
This information is provided for software developers who want to be able to respond to the controller commands that are sent in response to wheel movement while in CS-10 emulation mode.

The wheel count is in form of 2's Complement with bit 6 as the sign bit. Positive numbers are sent for clockwise rotation. The number sent represents the number of wheel counts accumulated since last transmission, (that is, a relative position count), much like what a mouse transmits. The resolution is approximately 144 counts per revolution, and transmissions are sent at about 10 millisecond intervals when wheel is being turned.

Troubleshooting (Continued)

•If a DA-88 will not respond,
Have a qualified person check the Device Number set on the SY-88's *internal* DIP switch "S 2". This must agree with the Machine number set on Cue Point.

If you issue a locate command to a DA-88 and it seems to take a long time for the DA-88 to finally settle down and park,

•That is normal behavior for a DA-88. CuePoint only issued a single locate command. The DA-88 may respond with a lot of fast forward and rewind activity until it settles on the locate point.

If CuePoint's time code display does not agree with the tape counter display,

•With the dataCARD installed, CuePoint's time code display will always be one hour ahead of the tape counter of an ADAT or RD-8.

•Without a dataCARD, CuePoint is reading SMPTE or MTC. Keep in mind that SMPTE or MTC can have an offset value quite different from absolute or tape counter time.

•Most modular digital multitracks send out time code that is read off of a dedicated time code track. That time code track may be recorded from an internal generator. The digital multitrack's internal generator may or may not have the option of being set to absolute time. The internal generator most certainly allows for a user-determined offset time.

CuePoint with Alesis AI-2 Operation Notes
Very Important
CuePoint can control ADAT via the Alesis AI-2 by TimeLine. The operation is limited by the ability of the AI-2 to pass through certain commands sent by CuePoint. The operation is also limited by the AI-2's not sending "tally back" or tape positional information back into CuePoint. These operation notes apply to AI-2 version 1.04.

What Does Operate
Track Arming, transport controls, and locating operate as described in the CuePoint manual. Some notable exceptions follow.

What Does Not Operate
Presently, the following special commands sent by CuePoint are not passed through the AI-2 and will thus not operate:
Jog/ Shuttle Wheel Commands
Pitch Shift, Digital Bounce, Track Delay and Machine Offset.

Also, there is currently no "tally back" through the AI-2's MIDI output. This is significant because it means that the AI-2 is not informing CuePoint of the position of the tape during fast forward and rewind. Therefore, automated transport functions (looping, auto punch) will not work under any circumstance with a long chase and lock time. In any situation, a Pre Roll time must be entered on CuePoint.

Setup

What you have to set on the AI-2:

In the Tracks Menu, set All Safe Off, it is normally On by default.

Also in the Tracks Menu, set Sel: Lynx/MMC, to put the ADAT under MMC control.

Press the ONLINE button.

What you have to set on CuePoint:

In Define Machine mode, define the AI-2 as a "General Purpose" machine in chase mode.

Set the number of tracks to correspond to the total number of ADAT tracks.

For example,

For 1 ADAT, define machine as GP-8 c

For 2 ADATs, define machine as GP-16 c

For 3 ADATs, define machine as GP-24 c

For 4 ADATs, define machine as GP-32 c

Press Play on CuePoint and verify that the ADAT goes into Play.

While in Play, turn REHEARSE on CuePoint on and then off, which sends a message to the AI-2 to enable track arming.

Enter at least 11 seconds Pre Roll to allow for the lock time of the ADAT to the AI-2.

Press PRE ROLL, 1, 1, Enter.

Hookup

There are three possible scenarios we will describe.
When we refer to the MIDI In of the AI-2, we are always referring to the "MIDI In", and not the "BRC MIDI In".

I. The ADAT is master. And CuePoint is simply used as a remote control for the ADAT. There is no RDR input to the AI-2. Connect the MIDI In and Out of CuePoint to the MIDI Out and In of the AI-2.

II. Some external source of SMPTE time code is the master, such as a DA-88 with an SY-88 card, or an analogue tape recorder with a time code track. That time code is fed into the RDR input of the AI-2. In that case, CuePoint is used for track arming the ADATs. CuePoint must be set up to control the machine that is the time code master in order for automated functions (looping, auto play, etc.) to operate.

Connect CuePoint to the machine that is the time code master according to the directions in the CuePoint manual.

Connect one MIDI Out of CuePoint to the MIDI In of the AI-2.

Keep in mind that this scenario will not operate correctly at the present time.
The AI-2 does not send a "tally back" of position information. So CuePoint doesn't know if the ADAT has gone into a long chase.

III. CuePoint is the master, and is used as a source of time code in Free Run mode.
Put CuePoint in Free Run Mode.
Connect the MIDI Out of CuePoint to the MIDI In of the AI-2.
Connect the GEN OUT of the AI-2 to the Sync In of CuePoint.
Connect the Sync Out of CuePoint to the RDR input of the AI-2.

Additional Notes

If the AI-2 receives a Record command from CuePoint before ADAT lockup is obtained, it will flash the red NON STD LED and display Record Not Locked. Press the ONLINE button to clear this error condition, and try the record punch in again with a longer Pre Roll.