

VRC-S

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VRC-S

What's the VRC-S for?

The VRC-S (**V**irtual **R**emote **C**ontrol) is a sophisticated software remote controller used to control both VDAT modules (optional Plug-In) and external ADAT* multitrack recorders efficiently and conveniently. The VRC serves as 'master control' for your modular recording environment by giving you access to all important functions of your VDAT and ADAT recording modules. Among other things, the VRC-S controls:

Transport functions (Play, Stop, Record, Rewind, Fast Forward, Scrubbing)

Synchronization settings

Locator functions for looping and automated punching

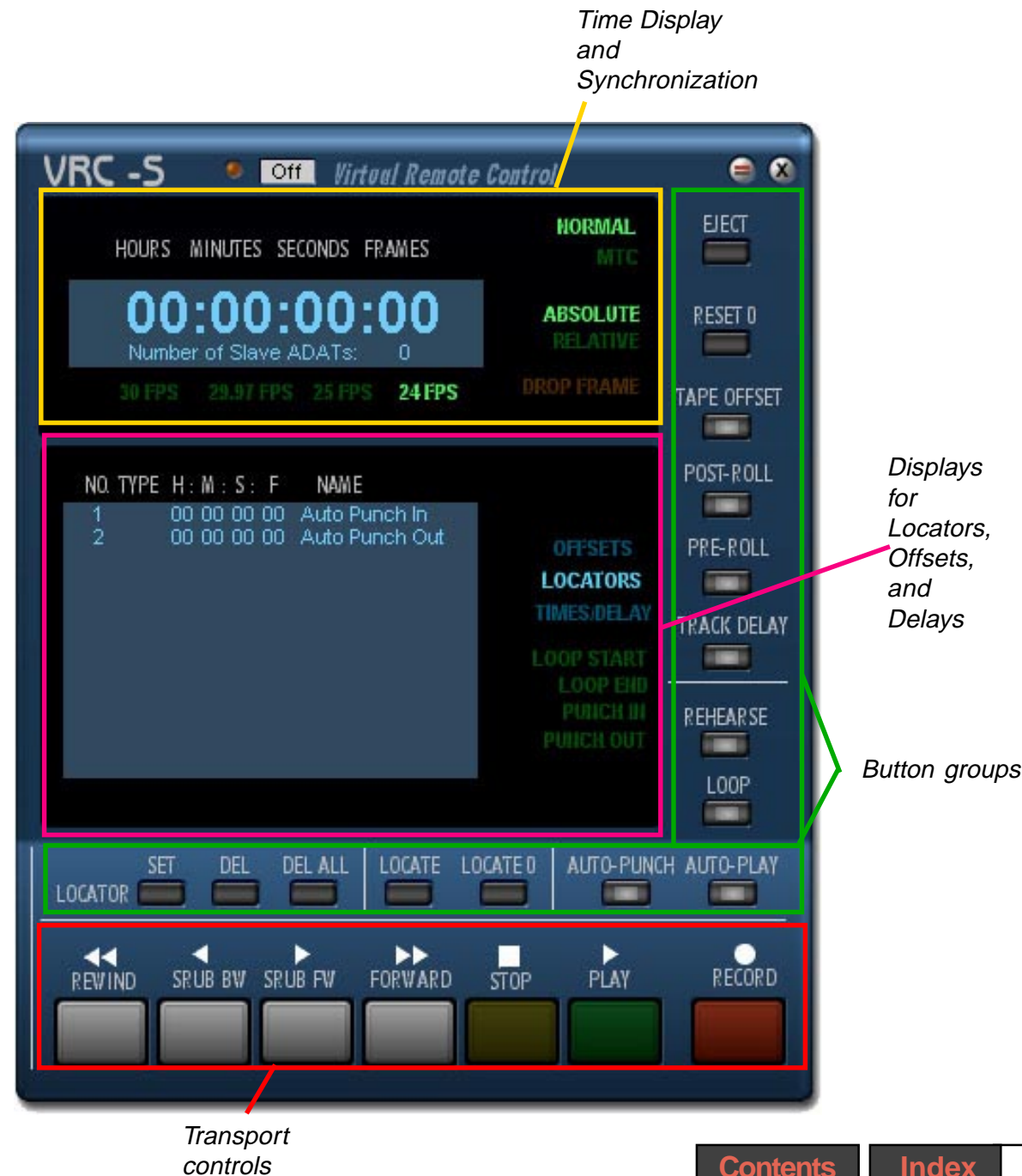
Copy procedures between individual modules or tracks with an adjustable offset for flexible track bouncing and digital transfer from track to track at different time positions.

Portions of this VRC manual overlap with the VDAT manual. For some questions you may want to consult the VDAT or BRC* manual, which you should keep handy.

** ADAT and BRC are a registered trademarks of Alesis Corporation.*

Control Interface (Front Panel)

The following pages describe all the control and display elements of the VRC-S virtual front panel. The elements are grouped into functional areas as shown in the illustration.



The Transport Group

The transport group provides a single set of transport controls for all VDATs and ADATs present in your recording environment.

REWIND: For ADATs, rewinds the tape. For VDATs, the 'virtual tape' is rewound (the current position moves quickly back).

The button flashes until the ADATs reach the appropriate tape position.

SRUB BW: Rewinds at about three times normal speed with audible playback.

SRUB FW: Fast forward at about three times normal speed with audible playback.

FORWARD: Fast forwards the tape or virtual tape.

The button flashes until the ADATs reach the appropriate tape position.



STOP: Stops any transport motion such as play, record, fast forward etc. If ADAT devices are connected, pressing STOP a second time disengages the tape (button flashes). When the button is lit continuously, it indicates that the tape is engaged.

PLAY: Starts playback.

The button flashes until the ADATs reach the appropriate tape position.

RECORD: Starts recording.

At least one track must be record-enabled. When actual recording is taking place, the button shines continuously. The button flashes if the current position lies before for a punch-in point or after a punch-out point, or while waiting for a synchronization signal.

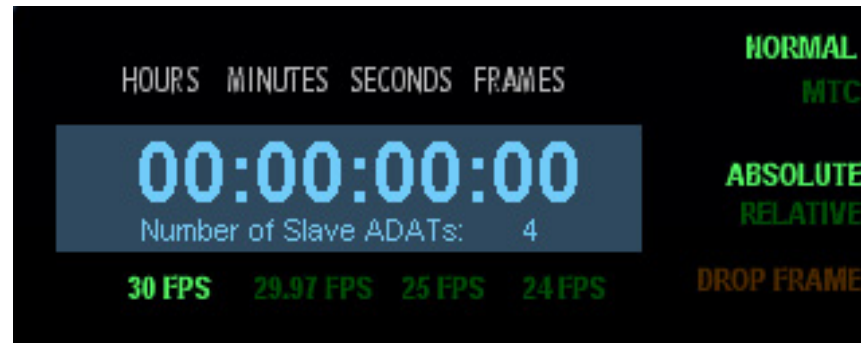
Time Display and Synchronization

This display indicates the current time location. Four display modes are available. Select a mode by clicking on the corresponding text next to the display on the right. The modes:

Normal: In this mode the display shows the timing in the format *hh:mm:ss:cc* where *hh* = hours, *mm* = minutes, *ss* = seconds, and *cc* = hundredths of a second.

MTC: In this mode the display shows the timing in the format *hh:mm:ss:ff* where *hh* = hours, *mm* = minutes, *ss* = seconds, and *ff* = frames. The time display takes into account an offset if one is set. The range of frames displayed depends on the current frame rate setting (0-23, 0-24 or 0-29 for 24fps, 25fps or 29.97/30fps respectively).

Early models of the ADAT displayed timings only at 30 fps, so there may be discrepancies in the time display when using these models. Also, early models operated only at 48 kHz. If you work with the VRC-S at 44.1 kHz, there will be timing problems with older ADAT equipment.



In either of the two above modes the time displayed can use an absolute or relative reference:

Absolute: The time displayed corresponds to the actual 'tape' time as referenced from the beginning of the tape (virtual or real tape).

Relative: The time displayed corresponds to the time position with reference to locator 0 (the null locator).

Synchronization Settings

Select the desired format for MTC output by clicking on the corresponding text in the area just beneath the time display.

30, 29.97, 25, 24 FPS: These 'text buttons' select the frame rate (in frames per second) to use for MTC synchronization.

Drop Frame: Enables drop-frame counting for 29.97 or 30 fps MTC output.

Slave ADATs: Displays the number of ADATs and VDATs detected in the control chain.

Display Window

This window is used to display and set fixed offsets, locator points, and time delays. Click on the blue text to the right of the display window to select the desired display. For long lists, the display window enables a vertical scrollbar on the right.

Most values in the display window can be edited directly by double clicking on the value, or, in the case of a timing in the format hh:mm:ss:ff, on the particular time element (e.g. minutes or seconds) you want to change. After entering the value from the keyboard, confirm by hitting the <Enter> key.

PARAMETER	H : M : S : F	
MTC-Offset	00 10 00 00	OFFSETS LOCATORS TIMES/DELAYS LOOP START LOOP END PUNCH IN PUNCH OUT
Tape Offset 1	00 00 00 00	
Tape Offset 2	-00 01 15 00	
Tape Offset 3	00 00 00 00	
Tape Offset 4	00 00 00 00	
Tape Offset 5	00 00 00 00	
Tape Offset 6	00 00 00 00	
Tape Offset 7	00 00 00 00	
Tape Offset 8	00 00 00 00	
Tape Offset 9	00 00 00 00	
Tape Offset 10	00 00 00 00	
Tape Offset 11	00 00 00 00	

Offsets

In this mode the display shows all MTC offsets: the system global offset and offsets for individual ADAT or VDAT devices. This display lets you edit any numeric value. (See also the section, *Tape Offsets*).

Locators

This display lists all defined locate points. You can define new locate points, edit existing ones, or delete them. Use the buttons in the LOCATOR area beneath the display to add a new locate point, or to delete one. (See also the section, *Locate Points*).

The green text buttons to the right of the display window are used to define loop start and end points, or punch-in/out points. (See also the section, *Using the Locators*).

Loop Start: Defines the selected locator as the start point for looping or auto return functions.

Loop End: Defines the selected locator as the end point for looping.

Punch-In: Defines the selected locator as the punch-in point for automated punch recording.

Punch-Out: Defines the selected locator as the punch-out point for automated punch recording.

Auto Punch In/Out Locators: Two locators will always appear in the list named *Auto Punch In* and *Auto Punch Out*. These locators contain the in and out times for the last manual recording. You can use these timings as punch points simply by defining them as punch-in and punch-out locators as described above.

NQ	TYPE	H	M	S	F	NAME	
1		00	02	10	14	Auto Punch Out	OFFSETS LOCATORS TIMES/DELAYS
2		00	02	06	85	Auto Punch In	
3		00	00	03	19	Intro	
4	▶	00	00	14	97	Verse 1	LOOP START LOOP END PUNCH IN PUNCH OUT
5	⬇	00	00	43	45	Vers 2	
6	⬆	00	01	14	60	Bridge	
7	↷	00	02	08	33	Chorus	

Times/Delays

In this mode the display window shows the pre- and post-roll times, the punch in/out crossfade length, and the delays set for individual tracks. All numeric values can be edited directly within the display window.

PARAMETER	SAMPLES	MILLISECONDS	
Pre-Roll	240000	5442	OFFSETS LOCATORS TIMES/DELAYS
Post-Roll	48000	1088	
Record X Fade	512	11	
Track 1	0	0	LOOP START LOOP END PUNCH IN PUNCH OUT
Track 2	0	0	
Track 3	0	0	
Track 4	0	0	
Track 5	0	0	
Track 6	0	0	
Track 7	0	0	
Track 8	0	0	
Track 9	0	0	

Button Groups

These areas contains option switches for various features including locator functions, loop and punch operations, and other options.

Locator group

SET: This button adds a new locate point to the locator list at the current time position.

DEL: Removes the selected locator from the locator list.

DEL ALL: Removes all locators from the locator list, with the exception of the Punch-In and Punch-Out locators.

LOCATE: Locates all VDATs and ADATs to the start time position as set in the selected locator.

LOCATE 0: Locates all VDATs and ADATs to the time position stored in locator 0, the null locator (00:00:00:00 in relative mode).

Auto group

AUTO-PUNCH: Enables automated punch recording. Recording will begin at the defined punch-in locator and end at the punch-out locate point (see *Auto Punch In/Out Locators*, above).

AUTO-PLAY: When this option is enabled, the VDATs will start playback immediately after any locate function has completed.

Loop/Rehearse group

LOOP: When enabled, the section of audio defined by the two loop locators will play repeatedly until stopped.

REHEARSE: This feature lets you practice punch recording to adjust the punch points or give the performer some practice, without actually recording over any existing audio. When the punch points are reached, the monitor signal switches from tape to source and back just as it would had you really been recording.

The Rehearse option cannot be switched on or off during recording.



Miscellaneous group

EJECT: For ADATs, this ejects the tape cartridge. For VDATs, the virtual tape is removed.

RESET 0: This resets locator 0 with the current tape time. Locator 0 is used to provide the base reference (00:00:00:00) in *Relative* time mode.

TAPE OFFSET: When enabled, the values set in the Offsets display (time displacements) of the various VDAT and ADAT devices are used to realign the tapes or virtual tapes.

POST-ROLL: This option uses the value set under Post-Roll in the Times/Delay display. When it is on, playback or recording continues past a loop end locator for the length of time specified by this value. Only then does the loop start again.

PRE-ROLL: Sometimes it is desirable to hear a little of the audio before a locate point. When pre-roll is enabled, and you locate to a particular point, playback starts ahead of the locate point by the amount of time set in the Pre-Roll field in the Time/Delays display.

TRACK DELAY: With this option you can delay individual tracks to improve the musical feel. The values used are those set for the individual tracks in the Time/Delays display. Tracks can be delayed up to 8192 samples, or 185 ms at 44.1 kHz. Tracks can only be delayed. To advance a track, you will have to delay all others by the same amount.



Working with the VRC-S

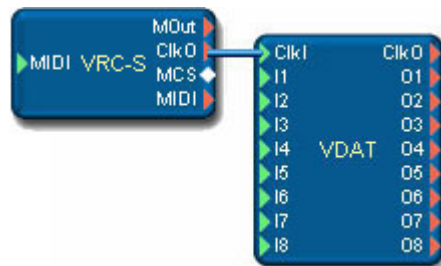
Loading the VRC-S

To load the VRC-S for use, drag it from the File Browser (Devices/HardwareIOs/ Syncplate directory) into the Routing window.

Connecting the VRC-S

Case A: The VRC-S and VDAT

In the Routing window, connect the ClkO output of the VRC-S to the ClkI input of the VDAT module. This connection carries not only the clock signal, but all control signals as well.



VRC-S

Case B: VRC-S as master-control for VDAT and/or ADATs

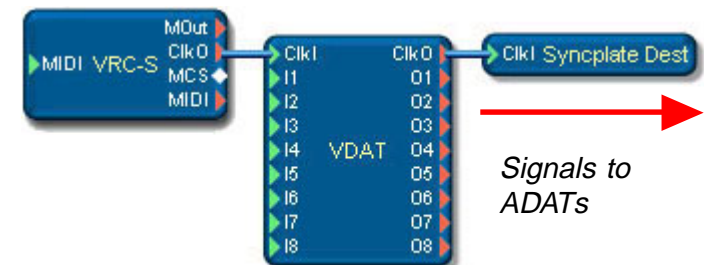
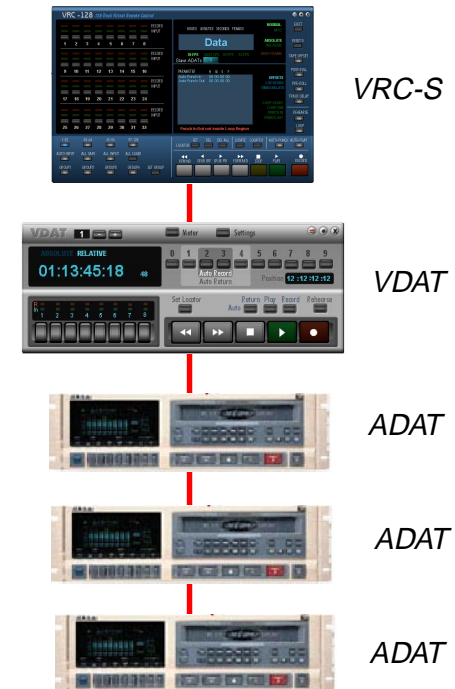
If ADATs are to be controlled in your configuration, they must lie in a chain ahead of the VDAT module (if used).

If you are not including a VDAT in the setup, then only the ClkO output of the VRC-S needs to be connected to the ClkI of the Syncplate dest module.

If a VDAT module is included, it must lie downstream from the ADATs. Therefore, make the connection as above, and then connect the ClkO output of the Syncplate source module to the ClkI input of the VDAT module.

The VRC-S does not differentiate between VDATs and ADATs.

VDAT itself does not provide any control information for external ADATs. To control ADATs, the VRC-S is required.



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Using Locate Points





Viewing and Editing Locate Points

Set the display to show the Locator list by clicking on the blue *Locators* text button to the right of the display window. The text lights up to indicate the current display mode (now Locators).

Displayed parameters

You can edit many of the settings directly within the display window. Each line in the Locator list indicates the following:

NO.: The locators are numbered according to their chronological position. When you change the locate position, the locator number may change to reflect the new position relative to other locators.

Type: This setting lets you define a functional type for a locator. For a normal, undefined locator, no symbol appears in this field. Special purpose locators - loop start , loop end , punch-in , punch-out  – all display an identifying symbol in this field. To

NO.	TYPE	H	M	S	F	NAME	
1		00	02	10	14	Auto Punch Out	OFFSETS
2		00	02	06	85	Auto Punch In	LOCATORS
3		00	00	03	19	Intro	TIMES/DELAYS
4	▶	00	00	14	97	Verse 1	
5	⬇	00	00	43	45	Vers 2	LOOP START
6	⬆	00	01	14	60	Bridge	LOOP END
7	↶	00	02	08	33	Chorus	PUNCH IN
							PUNCH OUT

define a locator for a special function, first select the locator and then click on the appropriate green text button in the area on the lower right side of the display window.

H:M:S:F: This is the currently stored time position of the locator indicated in either absolute or relative time depending on the current time display mode. The format is hours (H): minutes (M): seconds (S): frames (F):. Each individual component can be edited. To edit a time component, click twice slowly on the field to enable

edit mode. Type in the new number and confirm with the <Enter> key.



Name: Select this field when you want to assign a function to a locator, or when you want to change its name. To change a locator's name, slowly click twice to enable edit mode, type in the new name, and confirm by hitting the <Enter> key.

Setting and Removing Locate Points

You can set as many locators as you want. These identify positions on the ‘tape’ for quick access. Set a locator by pressing the Set button in the locator group. You can do this either while running or stopped. In either case, the current time location is used to set the locate timing for the new locator. Now, when you press the Locate button while this locator is selected, the VDAT and ADATs position themselves to the corresponding time location. If AUTO-PLAY is enabled, the system will automatically go into play after the locate function has completed.

To remove a locator from the list, select it and click on the DEL button in the locator button group, or strike the key on the computer keyboard. The locators named *Punch-In* and *Punch-Out* cannot be deleted.

Loops

You can define any two locators to serve as loop start and end points. Select an existing locator, or add a new one at the desired position, and click on the LOOP START or LOOP END text buttons to the right of the display. The locators are now defined, and the loop symbols appear in their TYPE fields,  and . Now, if the LOOP feature is enabled (LOOP button in the Loop/Rehearse group), the audio will play again from the loop start point after it reaches the loop end.

Automated Punch Recording

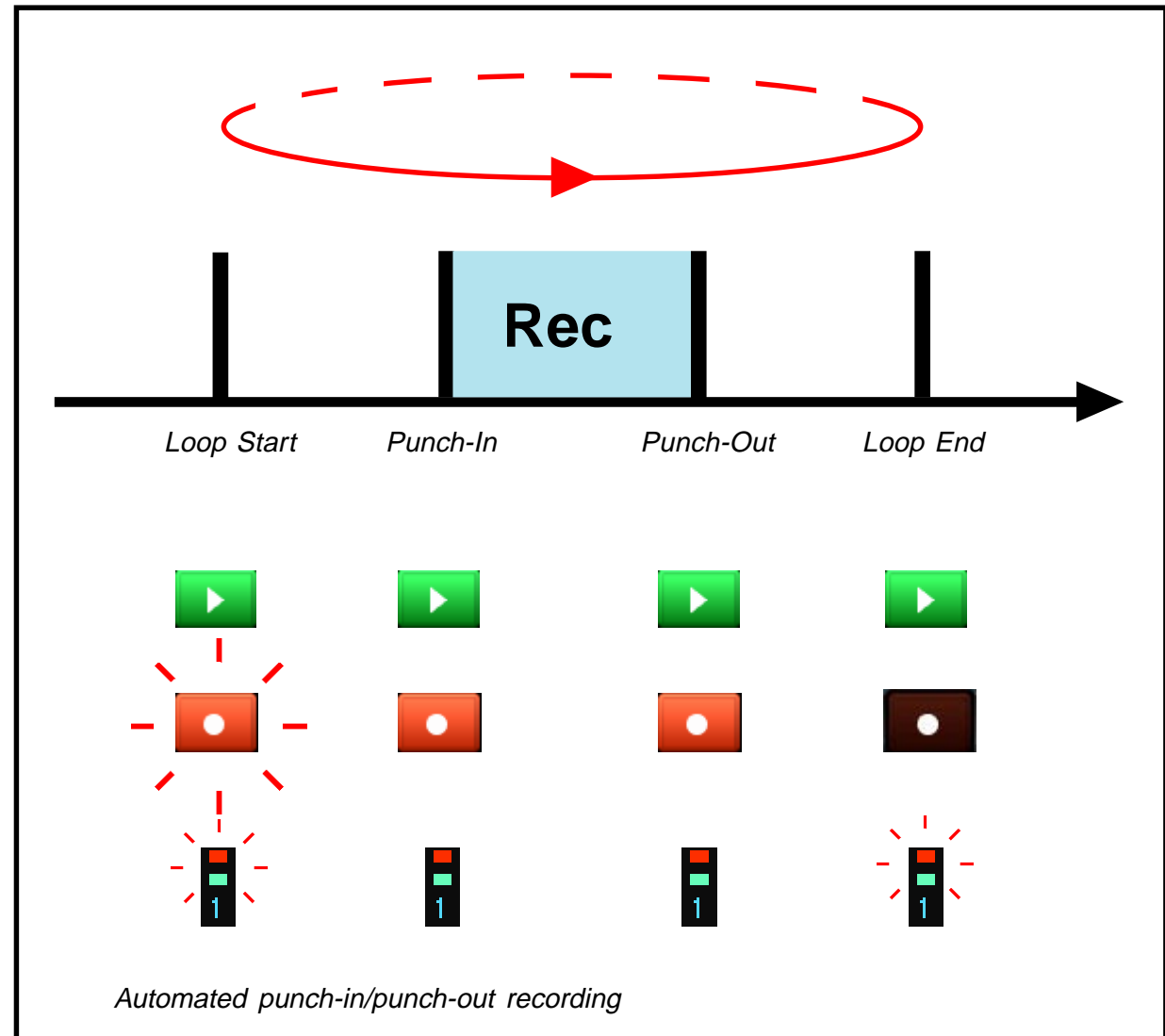
Automated punch recording is enabled when the AUTO-PUNCH button is lit. You must also define two locators to serve as punch-in and punch-out points. The punch-in point must, of course, be located before the punch-out point. Set these points by selecting the desired locator, and clicking on either PUNCH-IN or PUNCH-OUT to the right of the display. Note that recording will not occur unless at least one track is record-enabled.

Position the VDAT to some point comfortably ahead of the punch-in point. Press the RECORD button. The VDAT starts and the RECORD button flashes red. When the current position reaches the punch-in point recording begins, and both the RECORD button and the record-ready LEDs shine continuously red. When the position reaches the punch-out locator, recording stops, the RECORD button and red LEDs begin to flash again, and playback resumes.

You can combine automated recording with the loop function. For this to work, the locator defined as the beginning of the loop must precede the locator defined as the punch-in point, and the locator defined as the loop end must follow the punch-out point. Therefore, four locators are used in the following chronological order: loop start, punch-in, punch-out, loop end. Also, LOOP must be enabled.

Each time through the loop all armed tracks go in and out of record at the punch points. The previous take is overwritten. When you are happy with a take, click on STOP (before the current position reaches the punch-in point again).

You can also set the start and end loop and punch points respectively to the same position, and then use the Pre-Roll and Post-Roll options to provide listening space before and after the punch/loop points.



Redoing a manual recording

Two locators are assigned the default names of Punch-In and Punch-Out respectively. These special locators (their associated numbers change depending on their relative timings, but the names remain the same) always contain the positions of the start and end points of the last record procedure—even a manual recording. All you need to do to duplicate the last recording procedure is to define these as punch-in and punch-out points for automatic punch recording. Then proceed as above.

Simulating an automated punch recording: Rehearse

You can simulate automated recording without actually recording or overwriting anything. Click on the REHEARSE button and then proceed as described above for automated punch recording. No actual recording takes place, but the VDAT and ADATs behave in every other respect as if they are recording—monitoring switches from tape to source and back at the punch-in and punch-out points. This lets you practice the punch with a performer or adjust the punch points without actually recording over an existing take.

The Rehearse option can not be switched on or off during recording.

When Rehearse is active, the record-enable LEDs switch from blinking to continuous as usual when punching in. The Record button, however, continues to flash, even during rehearsal 'recording'.

Pre-Roll and Post-Roll

Sometimes you may want to hear a few seconds of music before a locate point. The PRE-ROLL feature lets you specify an amount of time ahead of the locate points to begin playback. Likewise, with POST-ROLL you can specify an amount of time after a loop end point during which playback will continue.

The actual time values used are those as set in the Pre-Roll and Post-Roll fields in the TIMES/DELAYS display. You can overwrite the default values directly in the display. Edit either the number of samples or the value in milliseconds.

Enable one or both options by clicking on the respective PRE-ROLL or POST-ROLL buttons in the Miscellaneous button group.

Tape offsets

The VRC-S lets you specify time displacements between individual VDAT and ADAT units. With this feature you can use two (or more) ADATs to record continuously for lengths of time exceeding the length of an ADAT tape. This is accomplished by loading a new tape into an ADAT when it is not recording, and then enabling recording on the changed tape before the other machine finishes. This is useful for recording concert or other longer performances. You can also use this feature to copy sections of a recording to another time position on different tracks. You could, for example, copy the background vocal parts from the first chorus to the second chorus.

PARAMETER	SAMPLES	MILLISECONDS
Pre-Roll	240000	5442
Post-Roll	48000	1088

Setting offsets

Switch to the OFFSETS display mode. This opens a list that includes the 16 possible offset settings for up to 16 VDAT and/or ADAT units (each with a default offset of zero). Edit a timing by overwriting its individual time component values (click twice on a field, such as hours, to open it for editing).

Negative offsets: Click just to the left of the 'hours' column to open a text field in which you can enter the <-> sign from the keyboard.

The values set in the offset list do not come into play unless the TAPE OFFSET button is enabled. In this case, all VDAT and/or ADAT units realign themselves at the next play or locate operation.

Example:

Let's say you want to copy a section of background vocals from the first chorus to the second chorus. The first chorus begins at an absolute time of 00:01:27:12. A good way to determine the chorus' start time is to set a locator on-the-fly during playback, and then make fine adjustments until it very accurately marks the beginning of the section. Do the same for the second chorus section. In our example, the second chorus starts at 00:02:43:19, which gives, by subtraction, a difference of 00:01:16:07.

Don't forget to use the correct range of frames as defined by the frame rate in use. For 30 fps, for example, the range is 0-29.

Let's proceed assuming that the source material to be copied is on the third track of the first VDAT unit, and we want to copy it to the fifth track of the second VDAT unit. The first thing to do is to connect the output of the source track (O3) to the input of the destination track (I13).

Now we need to delay the second unit by 00:01:16:07 so that it plays at the beginning of the second chorus when the first one plays at the beginning of the first.

When you record with the offset to the second unit, the background singers are recorded in place at the destination timing. Now, if you turn off the TAPE OFFSET option button and playback the tracks, the background singers will be heard as desired in the second chorus.

PARAMETER	H : M : S : F	
MTC-Offset	00 10 00 00	OFFSETS LOCATORS TIMES/DELAYS
Tape Offset 1	00 00 00 00	
Tape Offset 2	-00 01 15 00	
Tape Offset 3	00 00 00 00	

Track delays

Any track can be delayed to improve the musical feel. Sometimes, by very slightly delaying the right instrument or two, the overall feel will relax, leading to a stronger, deeper 'groove'.

Setting delay values

Switch the Display window to TIMES/DELAYS mode. This list includes delay settings for each of the 128 available VDAT or ADAT tracks. All values default to 0. Edit the value, in samples or milliseconds, by overwriting the existing value (clicking twice on a field opens it for editing).

Negative delays: Negative delays are not possible. To advance a track, it is necessary to delay all the others by a single value.

Delays only come into effect if the TRACK DELAY button to the right of the Display window is enabled (lit). After enabling this option, the tracks are delayed accordingly when next played back.

PARAMETER	SAMPLES	MILLISECONDS	
Pre-Roll	240000	5442	
Post-Roll	48000	1088	
Record X Fade	512	11	
Track 1	0	0	
Track 2	0	0	
Track 3	0	0	
Track 4	0	0	
Track 5	0	0	
Track 6	0	0	
Track 7	0	0	
Track 8	0	0	
Track 9	0	0	

OFFSETS
LOCATORS
TIMES/DELAYS

LOOP START
LOOP END
PUNCH IN
PUNCH OUT

ADATs with your Sequencer

The VRC-S generates MTC (MIDI Time Code) you can use to synchronize a MIDI sequencer.

Select the preferred MTC format by clicking on the corresponding text in the area just below the time display. In addition to the frame rate selection, a drop-frame option is available for NTSC video (29.97 fps) and 30 fps MTC output.

The drop-frame format (actually, a method of counting frames) was developed to compensate for the fact that NTSC color video (as used in North America, Japan, Mexico etc.) actually runs at a rate of 29.97 fps—not 30. The frame numbering has to ‘catch-up’ with real time periodically, so the frame count skips over a couple of frames now and then. Unless you are synchronizing to video or another audio track that is coded in drop-frame, use one of the ‘normal’ non-drop formats when synchronizing your sequencer.

To synchronize a sequencer running on the same computer, connect the MOut (MIDI Out) of the VRC-S to the In of the Sequencer dest module so that MTC will be available to the sequencer program. To send MTC to an external device (hardware sequencer, synchronizer, or HD recorder etc.) connect MOut to the Midi Dest module so that MTC is output through the hardware MIDI port.

Set the sequencer to read the incoming MTC and operate as a slave (consult your sequencer’s documentation if necessary).

Now when you start playback of the VRC, MTC is sent to the sequencer, and the sequencer should start as well.

You can set a global MTC offset for the VRC-S in the Times/Delays display. This allows you to start the sequencer in another position if desired.

ASIO2 Synchronization

Programs that use the ASIO2 driver, such as Cubase VST, are capable of ‘sample-accurate sync’. To take advantage of this you must connect the ClkO from the VRC-S to the Clk input of the ASIO2 dest module.

The Clk output of the VRC is normally occupied (connected to the Clk input of the VDAT or the Syncplate dest module). However, in SCOPE an output can be ‘ganged’ to several inputs, so you can send the Clk signal of the VRC-S both to the VDATs and the Clk inputs of the ASIO2 dest module.

Cubase VST example:

In the Cubase synchronization settings you must set the Sync source to ‘ASIO 2.0’. The other settings don’t matter for now. Make sure, however, that the frame rate agrees. If you now engage the Sync button in the Cubase transport group, Cubase will start and stop along with the VRC-S.

Synchronizing with tripleDAT

Connect the MCS (Motion Control Signal) signals of the tripleDAT source and the VRC-S together. Connect the ClkO of the VRC-S to the Clk input on the tripleDAT source. TripleDAT is now automatically set to MTC slave mode, as you can see by checking the module's control surface (in the 'Options' drawer). The Slave box will be enabled. When you start the VRC-S tripleDAT will follow (after its normal pre-roll pause) in sample-accurate sync.

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