

Scheduler Device Control

This document describes the integration of basic device control into the Video Commander Scheduler. With this capability, you can cause the schedule to automatically start and stop video tape decks or comparable equipment as part of the schedule events.

What You Need

Your Video Commander system must already be set up with some form of device control hardware and the necessary software drivers. An example would be the IRIS CX-IR8 infrared controller and the supporting Video Commander software, although this is certainly not a specific requirement.

You also need to set up the basic controls which the Scheduler will initiate—play, record, stop, rewind, and possibly cue, as appropriate—and test these manually using standard Video Commander device control functions. Depending upon your equipment, this setup could involve filling in control information, training an infrared unit or running a prepared installation; nevertheless, you want to follow the documentation for that software driver and verify that the controls work through the Video Commander control panel.

And, naturally, you need to have the Video Commander Scheduler product. We recommend that you have at least Video Commander Service Release 2, particularly if you intend to use the preroll capabilities described later in this document.

Scheduler Control Basics

What Scheduler does with device control is rather easily explained. For a schedule event between some source device and some destination device, Scheduler will always automatically *try* to instruct the devices to perform basic control operations. At the beginning of the event, Scheduler asks the source to “play” and the destination to “record.” At the end of the event, Scheduler asks both devices to “stop,” and may optionally ask the devices to “rewind.”

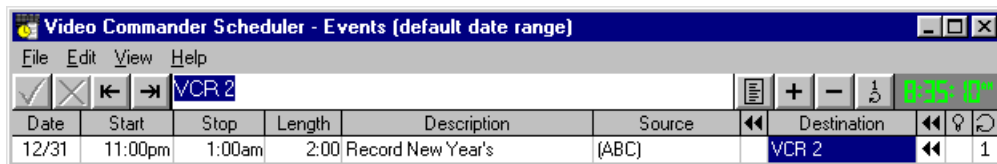
Since many scheduled devices have no such control functions, it is not a problem if the Scheduler is unable to accomplish these commands. Scheduler is, in effect, saying to the devices, “if you have this ability, then do this now.”

The issue for you is to set up Video Commander such that Scheduler can *find* the controls it wants for the devices you wish to be automatically controlled. Having a “Play” button on a device control panel is *not sufficient*; you must set up the system to know that the control information behind the “Play” button *represents the “play” command the Scheduler is looking for.*

Again, this control all occurs automatically for every Schedule event, except for the rewind operations, which you can determine for both the source and the destination devices on specific schedule events.

To choose the rewind operation in Scheduler, simply double-click on either column with the “rewind” symbol in the header while editing an event. (Or, use the rewind tool

button which appears while you're in that column instead of a double-click.) The rewind symbol appears or disappears in that square to indicate whether the device to the left of the symbol will be rewound or not. For example:



In this sample event, the destination device (a VCR) has been instructed to rewind, while the source device (a television network) has not. Actually, a television network is not going to play, stop, or rewind, but the Scheduler doesn't mind! The VCR *will* record, stop, and—because the event was set up this way—rewind afterwards.

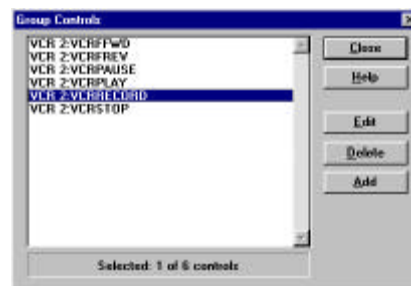
All that is necessary is that Scheduler know how to ask the VCR to do these things. Setting that up is your job; here's what you do.

Configuring a Control for Scheduler

You already have working device controls for the operations Scheduler is supposed to perform automatically. All you have to do is identify these controls to the system as the ones Scheduler is looking for. In Video Commander Setup, go to the "Controls" section of "System Setup." Select the device you are configuring from the list of device control groups and click "Edit." You will see information about that control group:



Simply click the "Controls" button, which displays the list of controls associated with that device:



Choose a control to configure, and click "Edit." (In most cases the names of the controls are pretty well associated with the buttons on the control panels. See the end of the next page for some standard control names.) In this case, since we wanted VCR 2 to record a particular event, we'll do the record function first.

Initially the Edit Control window is fairly simple, like this:



Click the “Details” button to expand the window. It then looks like this:



It is the middle section, “Control Classifications,” which you need to set up, by choosing items from the drop-down lists as follows:

Category: This selection is *optional*, but you would typically set the closest match for the kind of equipment. In our case, “VCR / VTR / Editor” is the best match.

Action: This is how we identify the control as an operation Scheduler can use. We want this control to be the “record” operation, so we select that from the list of actions.

Usage: The items in this list don’t make much sense, but “Do (no state)” is the selection we need. It essentially means that this is a simple control with no special issues, and that is the sort of control that the Scheduler wants.

Once you have set up the control classifications, click “OK” to save your changes and go on to the next control, or device, you need to configure.



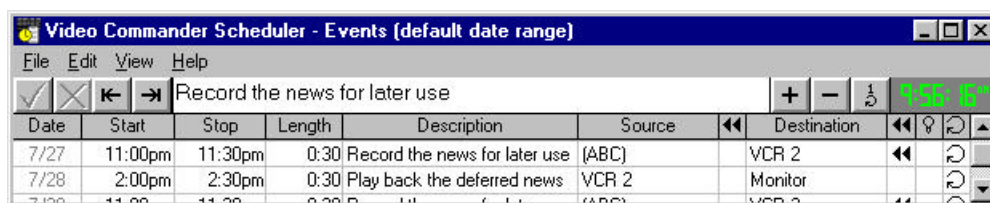
For your reference, most IRIS device control panels for VCRs use control names like the following:

“VCRPLAY”=play	“VCRFREV”=rewind
“VCRPAUSE”=pause	“VCRFFWD”=fast fwd
“VCRSTOP”=stop	“VCRRECORD”=record
“VCRPREROLL”=preroll	“VCREJECT”=eject

Early Control Start

The control operations described so far are pretty straightforward. However, in some cases this simplicity is a little *too* basic. In particular, starting device control at the same moment as the accompanying routes are made generally means that there is a slight lag while the devices get underway. For playback decks going out over a broadcast or cable feed, this can be an annoying visual issue. In cases like this, it may be worth a little extra setup to implement a preroll function.

Let's consider another sample schedule:



The simplest form of preroll simply involves telling Scheduler that the “play” control on the source device and the “record” on the destination device should actually occur *several seconds before the event starts*. For example, you might choose to have these controls always occur five seconds before the route. Here's what that would mean in the schedule above:

- At 10:59:55 P.M., VCR 2 would be put into “record.” Although there would be a second or two of blank video recorded once the deck was rolling, it would absolutely be ready for the route at 11:00:00.
- At 11:30:00, the route would break and VCR 2 would simultaneously be commanded to stop, then rewind. The time shift only affects start times, *not* stop times.
- At 1:59:55 P.M. the next day, VCR 2 would be put into “play.”
- At 2:00:00 the route would occur. Assuming the startup times for the VCR are reasonably constant, the tape should be at just the right place when the route is made.

In both cases, the “other device” in the route had no control, and is unaffected by the changes.

There is also one other consequence: at 10:00 P.M., the “next event” clock in Video Commander showed “0:59:55” rather than “1:00:00” because the next event is actually the control operation. That is, all “early” control operations will be considered when counting down to the next step, *even if the route involves no devices which support control*.

In order to tell Scheduler to cause control early, you need to modify the **VC.INI** file in your Video Commander programs directory. You can use Windows Notepad (or some other plain text editor) to look at, and modify this file.

Note: changes to VC.INI can cause your Video Commander installation to stop working or become unstable. Only make the changes described in this document if you are sure you will not accidentally modify some other aspect of the file. If you have *any* reservations about your ability to do this, *please contact IRIS Technologies Technical Support* for assistance. These features are not worth damaging your Video Commander system!

Within the VC.INI file, locate the line which reads “[Server].” Add a new line beneath that label which reads:

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SchedPlayPreroll=5
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(You can use any number of seconds in place of “5,” as appropriate for your equipment. Remember that this number applies to *all* your scheduled equipment.)

Save the VC.INI file. When next you restart the Video Commander Server, the initial play (and record) control events will precede the start of a scheduled event by the specified number of seconds.

Preroll and Cue

If you have more advanced playback equipment, you may have a different definition of “preroll” than simply starting the device early. If your device has a “preroll” control, then you actually want to command the device to get positioned and standing by, and subsequently start the tape rolling with no delay. Video Commander Scheduler can support this as well.

In the previous section we added a line to the VC.INI file which moved the “record” and “play” operations ahead a few seconds in time. Now, let’s add one more command to the VC.INI file’s [Server] section:

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SchedCuePreroll=10
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This means that at an *additional* ten seconds (or whatever number you choose) before the “play” command is issued, the source device is given a “preroll” command. For equipment supporting this control, it means that the tape will be precisely positioned and the unit spun up into standby mode, *but the tape does not start moving* until the “play” command arrives. When the “play” arrives, the unit *immediately* begins playing, and a precisely measured five seconds of tape go by before the route occurs.

Let’s take the example from the previous page with this new behavior. The 11:00 P.M. record event is unchanged, but the next day:

- At 1:59:45, VCR 2 is commanded to preroll. The VCR may take a variable number of seconds to spin up, nudge the tape to just the right time code position, and go into standby, but we know that this device will be ready in under ten seconds. The starting position was chosen by us to be the start of the previous night’s newscast, minus exactly five seconds.
- At 1:59:55, VCR 2 is commanded to play. The tape begins moving immediately since the unit was already in standby.
- At 2:00:00, the route occurs just as the video reaches its start point.
- At 2:30:00, the event is over and VCR 2 is told to stop.

This process depends upon there having been a manual step between the evening recording and the subsequent afternoon playback, namely, a human operator positioning the tape and setting the preroll position in the VCR. However, once that was done, the synchronization of the playback to the route was much more precise than simply relying on a VCR taking a predictable amount of time to begin playing from some repeatable position (like full rewind).

All that is necessary to implement this additional behavior is the extra entry in the VC.INI file, and, of course, having a control on the VCR which has been configured with the “preroll” action. As with other Scheduler control, it is not a problem for a device to *not* have this control operation available.

Common Questions

We'll conclude this document with a few questions and answers regarding Scheduler device control.

Q. *Can I choose which events use control and which do not?*

A. No, except for the rewinds. Control is automatic; usually a device is either always controlled for schedule use, or never is. This is how Scheduler was designed, to simplify event entry.

Q. *Can I use different preroll intervals for different events?*

A. No, again to simplify event entry. Although it also simplifies your life if you standardize on specific time durations for preroll events throughout your facility!

Q. *Can I use the preroll function, but not have any lead time on the tapes?*

A. Yes. You can set Video Commander to use the "SchedCuePreroll" with some value (say, ten seconds) and set "SchedPlayPreroll" to zero. This way the preroll command occurs ten seconds before the route, and the play occurs concurrently with the route. Again, pick values which work best for your facility.

Q. *Can I use device control on open-ended or zero-length events?*

A. Yes. The preroll, play and record commands will all be issued at the beginning of the event, although of course there will never be a stop or rewind.

Q. *Why didn't anyone tell me about the preroll functions before?*

A. This part of the Scheduler device control was new in version 3.5 Service Release 2, and was added because of customer requests. Your requests and suggestions do matter to us!

Q. *Why does the "next event" clock count down to preroll on events with no control?*

A. Scheduler blindly tries the control functions on every event, and does not know (or care) whether the control is supported ahead of time. Thus there is no good way to know whether the event should be part of the countdown or not.

Q. *In my schedule log, some events show "control start" and some don't. Why?*

A. In order to not clutter the log, the early control and the preroll are only logged if, when Scheduler went to try them, the device(s) were found to have the control in question. This is different from the server log, which shows the control commands whether they succeeded or not.

Q. *The control panels that came with my control equipment don't have a "preroll" button. How do I make this control?*

A. There is one control panel, **SchedCtl.ctl**, which includes the Preroll button along with the other essential device controls; you could use that for your device. Simply choose that file when adding control to a device for the first time; if you already have a control panel, you can edit that device's control group (through Video Commander Setup) to use SchedCtl.ctl instead of the original panel.

If you don't, or cannot, use that control panel, you can edit the control group to *temporarily* use SchedCtl.ctl long enough to configure and test the preroll function, and then return to the control panel file you were using. Although you won't have the button once you return to your preferred control panel, Scheduler can still use the preroll control you had added.

Q. *My control needs are not well met by your preroll capabilities. What do I do?*

- A. First make sure that our device control support cannot be made to fit your needs. For example, you might want the source device for a route, a satellite receiver, to tune to a certain channel for any *scheduled* route and return to a different channel afterwards. Although it isn't obvious, you *could* define a "play" control which tunes the channel, and a "stop" control which tunes it back; thus, our control operations would accomplish the desired operations, even though we defined "play" and "stop" quite loosely!

However, you may have legitimate control operation needs which don't fit within the scope of our device control features. (If you had wanted to tune the receiver for only *some* scheduled events, for example, then the trick doesn't work.) The only solution, ultimately, is to place these controls within macros and schedule the macros. Please consider this option carefully, though; IRIS does *not* recommend scheduling of macros if it can be avoided.

Q. *Why doesn't IRIS want me to schedule macros?*

- A. Simply answered, we've seen far too many customers get confused when macros are scheduled. The Scheduler can't see device conflicts, and it isn't obvious from looking at the schedule what "hidden" operations will also occur. We've heard from many customers that the Scheduler "did the wrong thing," and hours of research later, it would turn out that the Scheduler did the *right* thing, using a macro whose behavior wasn't clearly understood by the person making the schedule. Macros are supported in Scheduler as a last resort because of the potential for confusion; if you must schedule macros, please be careful with your setup, and document what you are doing for your own understanding!