



RedRat Scheduler User Guide

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1. Introduction

RedRat Scheduler provides a mechanism for creating timed events for the output of remote control signals. Each timed event executes a *macro* which is a sequence of one or more remote control signals, so the scheduler program includes a mechanism for creating and editing macros.

Each timed event can be set to execute only once, a finite number of times or to repeat indefinitely.

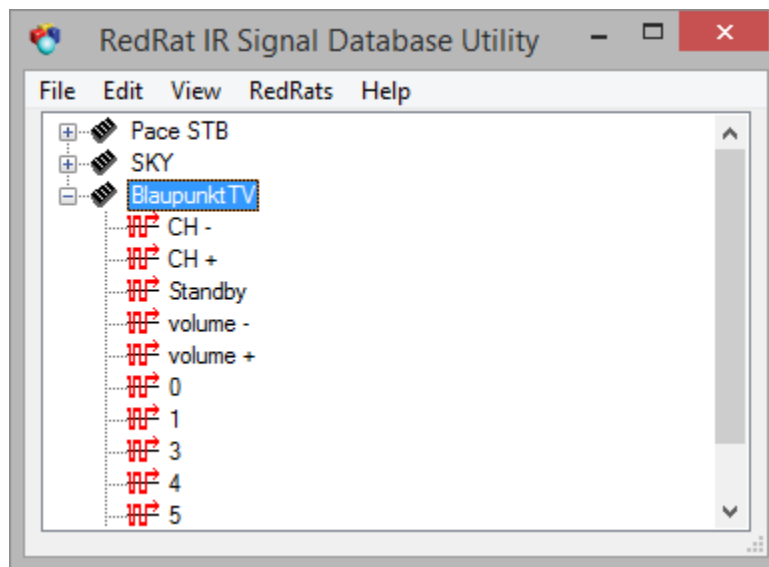
2. Prerequisites and Installation

Before installing RedRat Scheduler, please ensure that you have the following installed:

- The Microsoft .NET Framework 4.0. This is now installed by default on most PCs, but can also be downloaded from the Microsoft website: <http://www.microsoft.com/net>.
- The RedRat Signal Database Utility. The signal database utility can be downloaded from the RedRat website at: <http://www.redrat.co.uk/Software/SignalDBUtil>.

3. The First Step – Capture of Remote Control Signals

To use the *Scheduler* for output of IR signals, the IR signal dataset needs to be captured from the original remote control handset. You may already have the datasets from your remotes controls, but if not then they can be captured with the help of the Signal Database application:



The steps to create the database are as follows:

1. Add a device/remote (*Edit* → *Add Device/Remote*)
2. Select the new device and add an IR signal to it (*Edit* → *Add Signal*).
3. In the “Add New Signal” dialog, give the signal an appropriate name, then press the *Learn IR* button.

4. Point the remote at the RedRat and press the remote control button twice, separating the presses by one or two seconds. When pressing the button, make sure it is a firm press, but not too long.
5. Add as many signals from the remote as you intend use with *RedRat Control*.
6. Save the signal DB (*File* → *Save As...*).

The captured signals can be tested to validate that they have been recorded correctly by outputting them (*Edit* → *Test Signal Output* menu item) via the RedRat3 and checking to see if they control the A/V equipment.

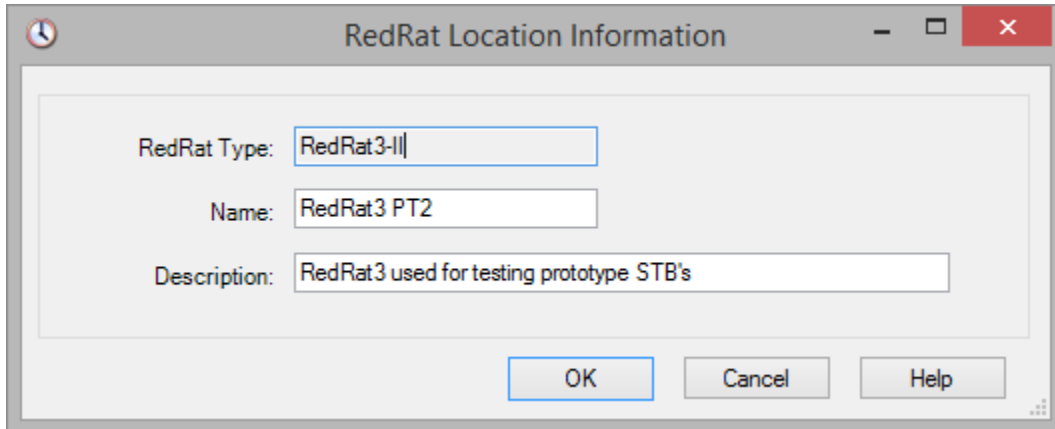
4. Using Scheduler

The instructions and examples in this section use the USB RedRat3 device, however the irNetBox can be used as well.

4.1 Giving your RedRat3 a Name/Location

If you are only ever going to use the *Scheduler* with one RedRat device, then this step is not so important. The reason for setting the RedRats Name (also called Location) is that when the *Scheduler* attempts to output IR signals, it has to know which RedRat to use for this operation.

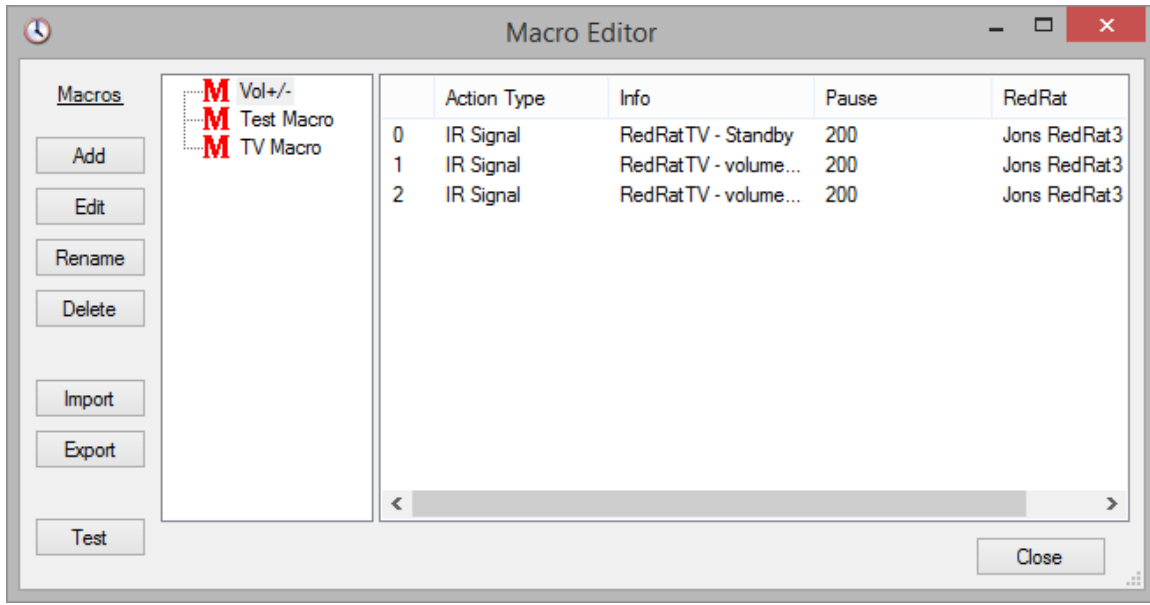
Start the *Scheduler* and bring up the RedRat device list (*RedRats* → *Find RedRats*.) which then shows available RedRats. Double clicking on your RedRat3 device will bring up a dialog box in which the name/location of your RedRat device.



If you have more than one RedRat and will be using one considerably more than the others, then this one can be set as the default (*RedRats* → *Select Default RedRat*).

4.2 Creating Macros

This is done with the Macro Editor in the Scheduler application (*Edit* → *Macro Editor*). It has two main panes, the left-hand one showing the list of *macros* and the right-hand pane showing the *actions* that have been setup as part of the macro. When a macro is executed, it steps through the actions in the order given in the macro pane.



Take the following steps to create a macro:

1. Open the Macro Editor from the *Edit* menu.
2. Click *Add* to insert an empty macro.
3. Click *Rename* to give it a name descriptive of its intended operation.
4. Ensure that the macro is selected (blue or grey background) and then drag an IR signal from the signal database utility to the right hand pane of the macro editor. This will create a new row in the action list.
5. Repeat drag and drop operation for all IR signals that are going to form part of the macro.

Each action in the action list has the following properties:

Action Type: Currently only IR signal actions are supported.

Info: This shows the remote and IR signal to be output.

Pause (units of ms): Following the output of each IR signal, a default pause is given. This is important so that audio/visual equipment is able to recognize the discrete IR signals rather than seeing one long stream of concatenated IR. This value can be adjusted, for example when turning on a TV or set-top box, it can sometimes take a couple of seconds before it responds to further IR commands.

RedRat: The displays which RedRat is to be used for output of the signals.

4.2.1 Re-ordering Actions

Actions can be re-ordered by dragging them to the required position.

4.2.2 Editing Actions

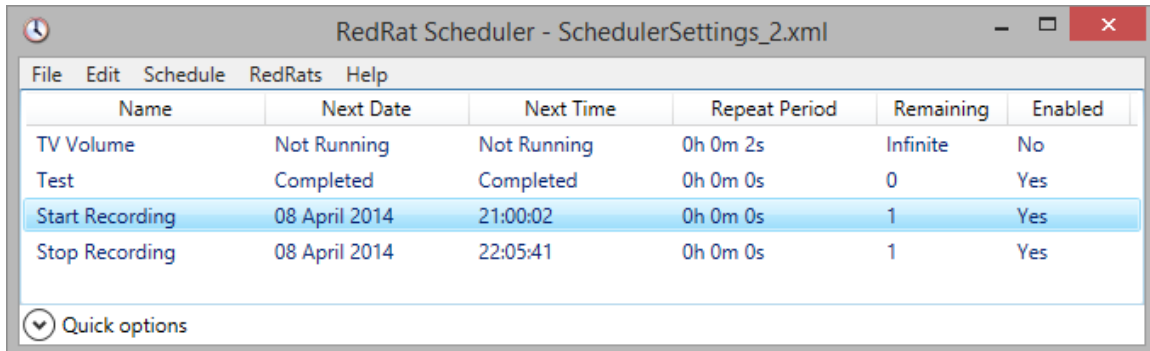
Double clicking on an action will bring up an action editor dialog.

4.2.3 Testing Actions and Macros

Both single actions and complete macros can be tested by right-clicking on the action or macro respectively.

4.3 Scheduling a Timed Event

A timed event is basically the execution of a macro at a particular time. All timed events are listed in the main scheduler window as shown below.



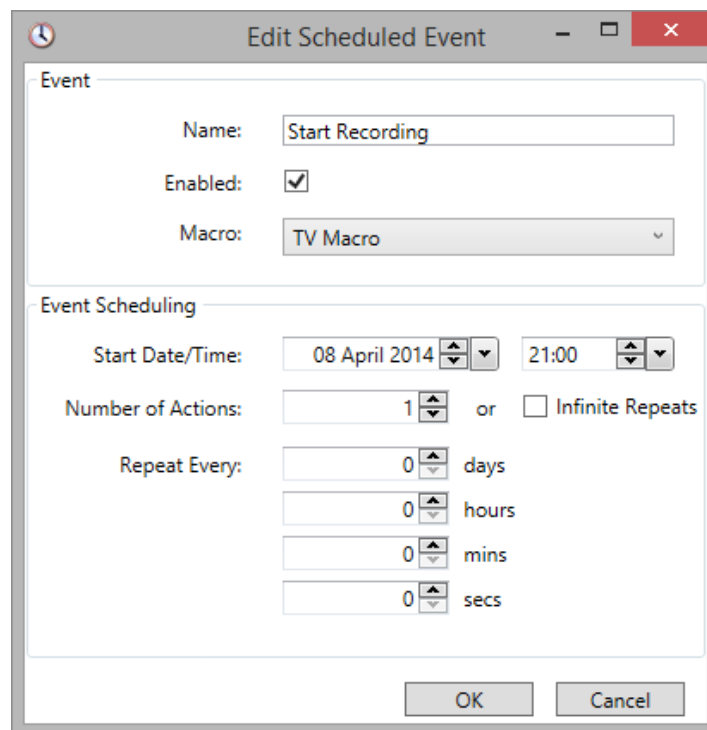
The screenshot shows the 'RedRat Scheduler - SchedulerSettings_2.xml' window. It features a menu bar with 'File', 'Edit', 'Schedule', 'RedRats', and 'Help'. Below the menu bar is a table with the following data:

Name	Next Date	Next Time	Repeat Period	Remaining	Enabled
TV Volume	Not Running	Not Running	0h 0m 2s	Infinite	No
Test	Completed	Completed	0h 0m 0s	0	Yes
Start Recording	08 April 2014	21:00:02	0h 0m 0s	1	Yes
Stop Recording	08 April 2014	22:05:41	0h 0m 0s	1	Yes

At the bottom of the window, there is a 'Quick options' section with a dropdown arrow.

The *Schedule* menu is used for adding, deleting, editing, enabling and disabling timed events. Even when an event has been run with no further remaining repeats, the event remains listed in the window until explicitly deleted.

Once an event has been created, the edit dialog is used to configure it (double-click on the event or use the *Schedule* → *Edit Timed Event* menu item).



The 'Edit Scheduled Event' dialog box is shown with the following fields and options:

- Event**
 - Name: Start Recording
 - Enabled:
 - Macro: TV Macro
- Event Scheduling**
 - Start Date/Time: 08 April 2014 21:00
 - Number of Actions: 1 or Infinite Repeats
 - Repeat Every:
 - 0 days
 - 0 hours
 - 0 mins
 - 0 secs

Buttons: OK, Cancel

Name: A descriptive label for display in the main window.

Enabled: Sets whether this timed event is to run or not.

Macro: The macro to be run by this event.

Start Date/Time: The time/date at which the macro will be run for the first time.

Number of Actions: By default, the macro will only be run once, however the event can be set to repeat a number of times, or to repeat indefinitely.

Repeat Every: If the macro execution is to be repeated, then the repeat interval is set here.

4.4 Macro Actions

There are several types of action that can be used as part of a macro. All action types can be edited by double clicking them in action list display.

4.4.1 IR Signal

These are the most common form of macro action, and each action is the output of a single IR signal. They are added to the action list by dragging them from the Signal DB utility and dropping them onto the action list.

4.4.2 Message Box

This action displays a message box with a user configurable message to notify the user that a certain point in the macro execution has been reached. Macro execution can continue while the box is displayed, or it can be halted until the user has clicked "OK" in the box. The message box can also be configured to emit an audible *beep* when it is displayed.

4.4.3 Beep

A *beep* is intended to provide audible feedback when a certain point in a macro has been reached. Various parameters can be changed:

- Pitch - there are three pitch settings.
- The beep duration.
- The number of times that it is to be repeated.

4.5 Options

Scheduler options are found under the *File* menu item.

4.5.1 Hide When Minimized

If Scheduler is kept running for long periods, you may not want to see it in the system tray. By checking this box, it will be hidden when minimized.

To bring up the application again, the icon in the notification area can be used.

4.5.2 Hold irNetBox Connections Open

When Scheduler outputs IR signals via an irNetBox, its default behavior is to open and close the connection each time. In some situations, this could lead to problems, for example if another application starts using the irNetBox while Scheduler is waiting for the next event. It is possible to instruct Scheduler to keep connections to irNetBoxes open permanently by checking this check box.

