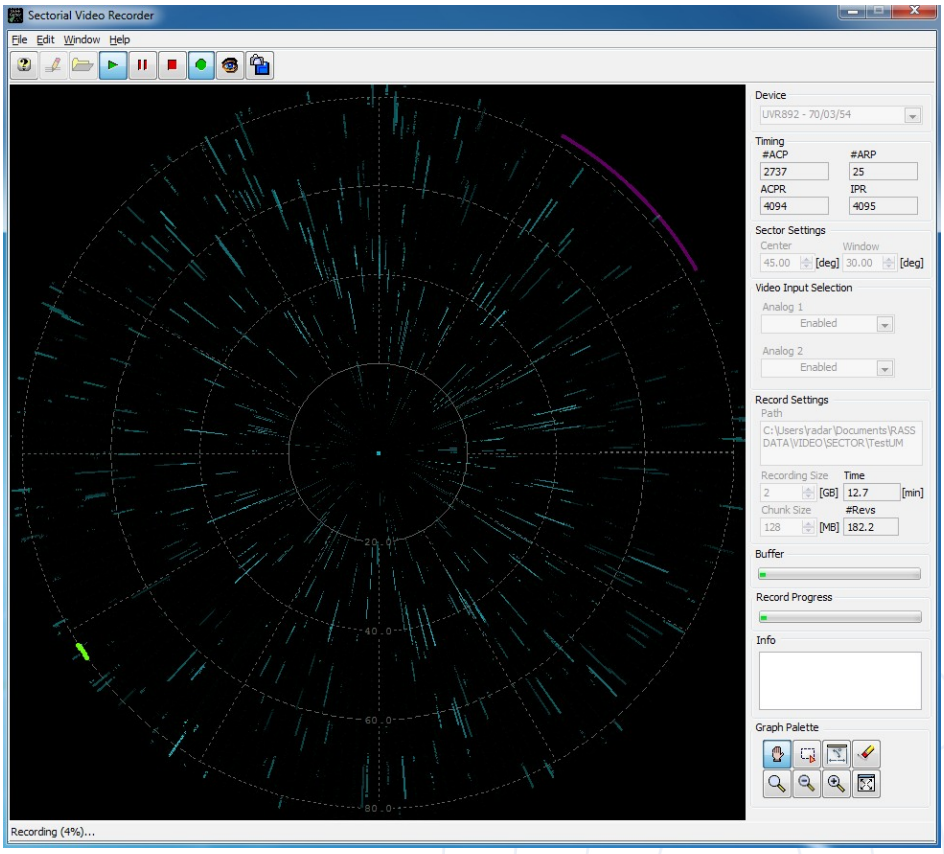
UVR892 Sector Recording Manual

Use of Sector Video Recording tool



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1. Introduction

The Sectorial Video Recorder is based on the UVR892 hardware and has been designed to create highly detailed video recordings, unlimited in both range as azimuth.

2. Sectorial Video Recording

2.1. Sectorial Video Recording Tool

The Sectorial Video Recording connection diagram leaflet delivered with the UVR892 shows the correct connections and set-up. This connection diagram can also be loaded through the Help menu of the Sectorial Video Recording software. A Tutorial explaining how to use the UVR892 together with a DTI529 (Didactical Test Interrogator) to practice the Sector Recording function can also be found in the Help menu.

The ***Video Sector Recording*** software can be started from the RASS-M Toolbox or Windows Start menu .

Video Sector Recording button

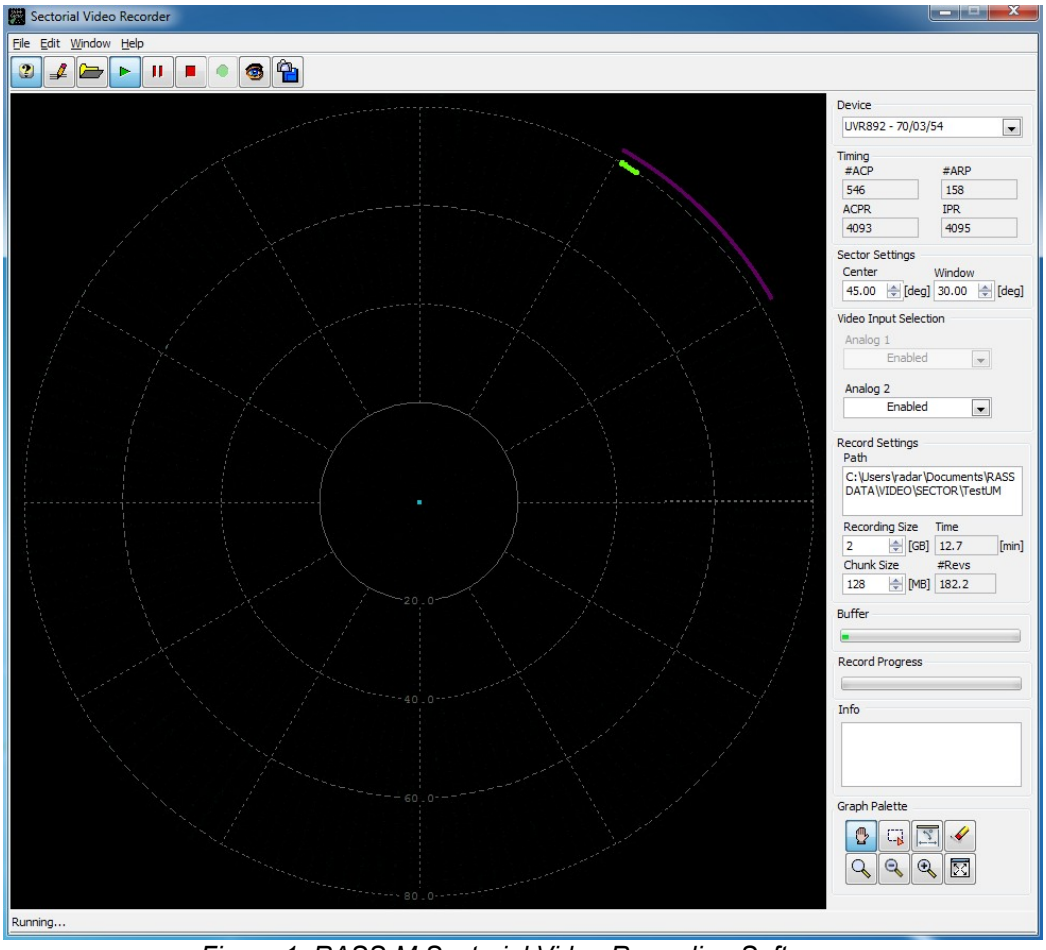

Figure 1: RASS-M Sectorial Video Recording Software

2.2. Performing a Sectorial Video Recording

Step 1: Select recording folder

When the ***Select folder***  button is clicked the user will be prompted to select a folder which will contain the sectorial recording. By default the folder RASS DATA\VIDEO\SECTOR will be selected. The user is encouraged to create a new folder for each recording.

Note: If an existing folder is selected the previous recording will be overwritten. A warning will be issued to make sure this does not happen accidentally.

Step 2: Set recording parameters

With the ***Sector Settings*** the user can select a part of a scan to reduce the amount of disk space needed for the recording. The window width can be set between 0deg and 360deg and largely depends on the throughput capability to the PC hard disk and processing power of the computer used. A 360 degree window will result in a continuous 32MB/sec data stream to disk.

Figure 2: Sector settings

Using the ***Record Settings*** the user can control the amount and size of the files used during a recording. The ***Recording Size*** control controls the amount of disk space that will be allocated for this recording. The recording will be chopped into smaller pieces; the size of the pieces can be set with the ***Chunk Size*** control.

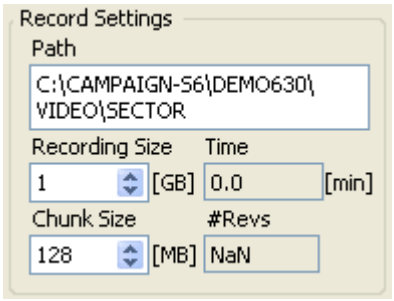

Figure 3: Recording settings

Step 3: Configure RTI966

Configure the RTI966 by following the steps of the RTI966 user manual.

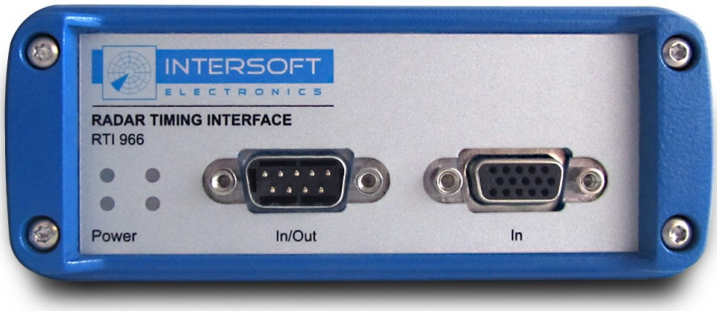

Figure 4: Radar Timing Interface - RTI966

Step 4: Start recording

Use the  ***Record*** button to start the recording.

The ***Record Progress*** progress bar shows how much of the pre-allocated disk space (set using the ***Recording Size*** parameter in the ***Recording Settings*** window) has been written. In the bottom left corner the recording information will be shown as well.

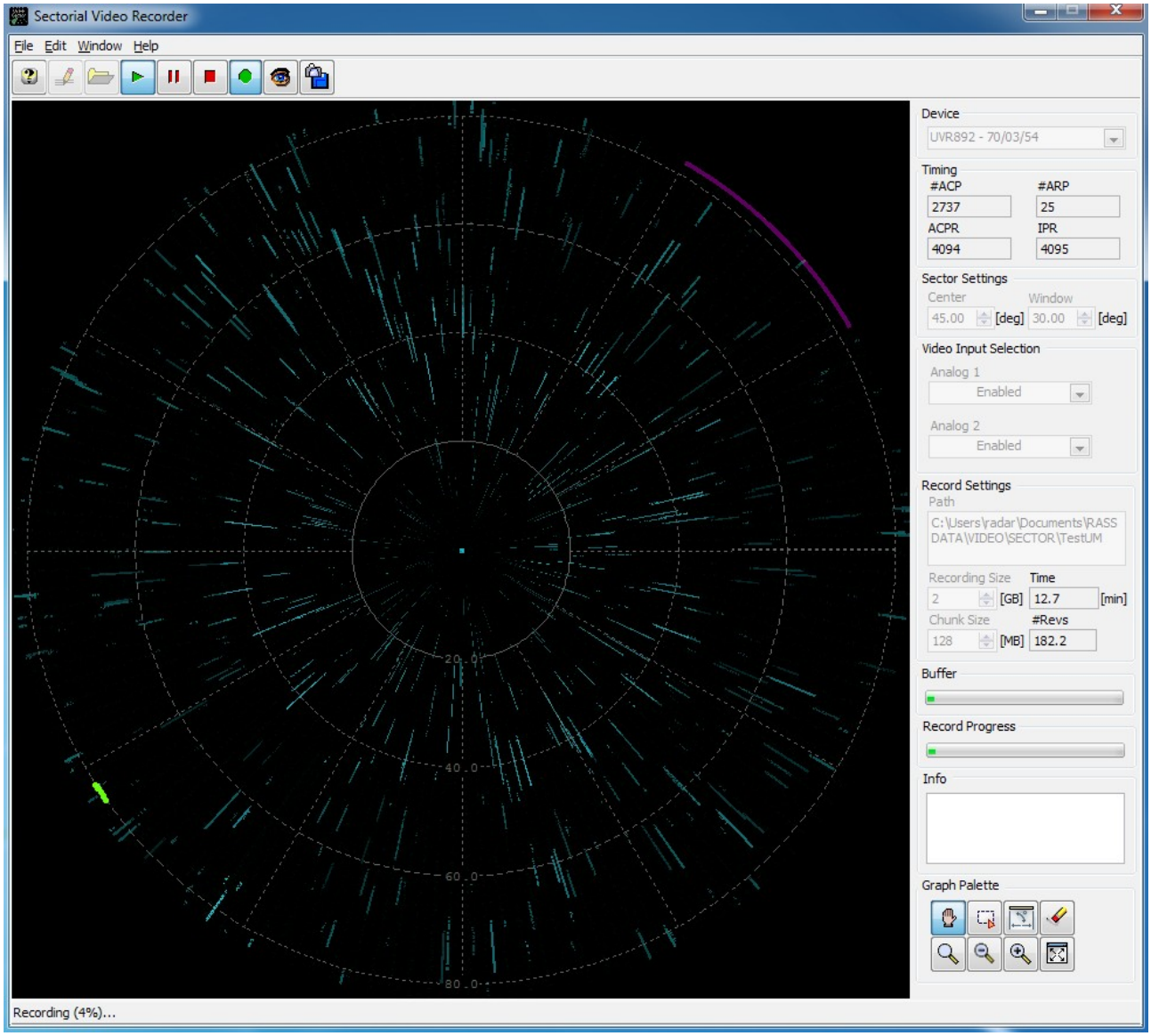

Figure 5: During the sectorial video recording (targets injected with RFA641)

Step 5: Stop recording

Use the  ***Stop*** button to stop recording.

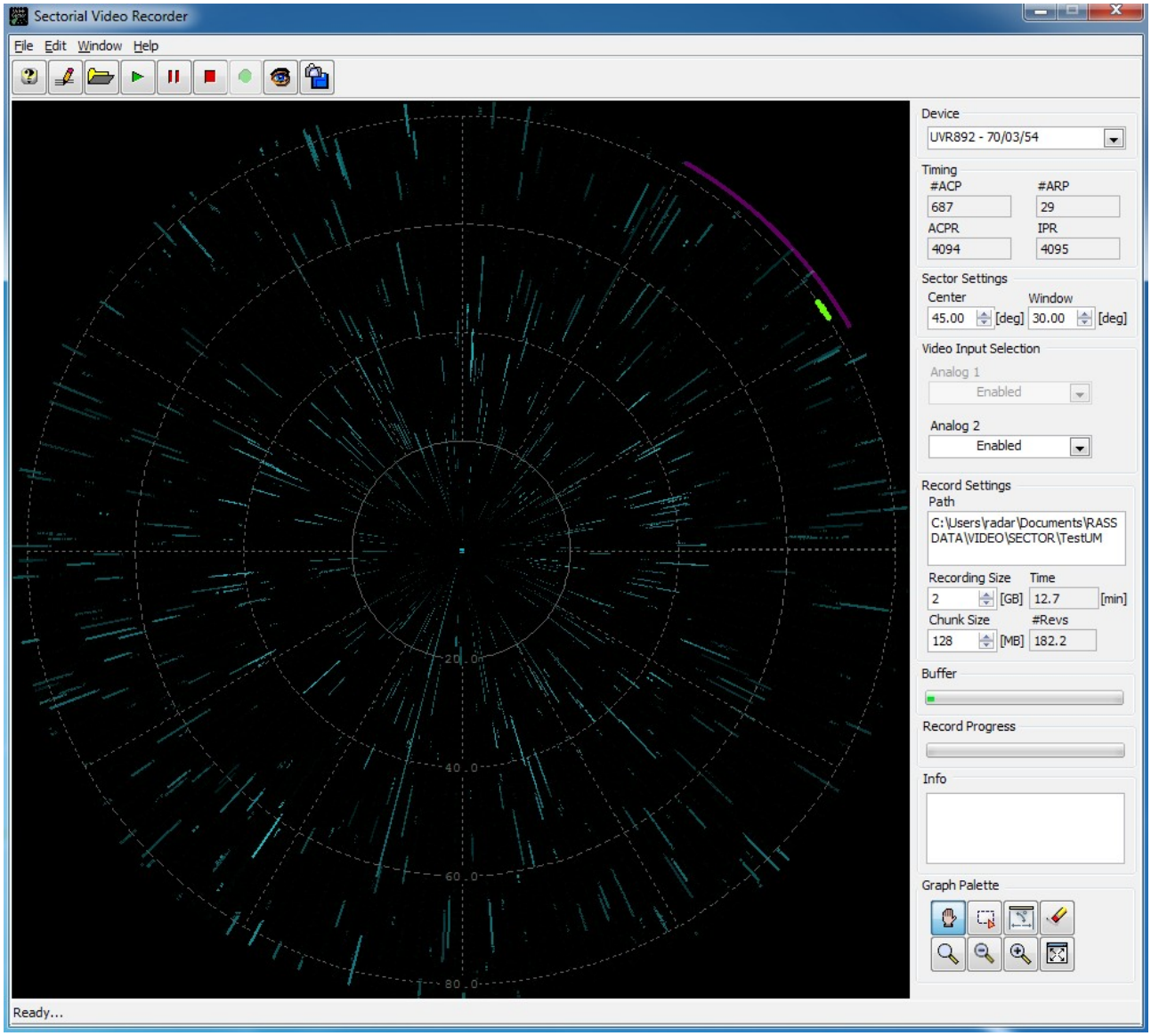

Figure 6: When the recording is stopped

The Sectorial Video Recorder tool will stop running as well, use the  ***Run*** button if you want to run the tool again (the tool will start sampling the data and updating the display).

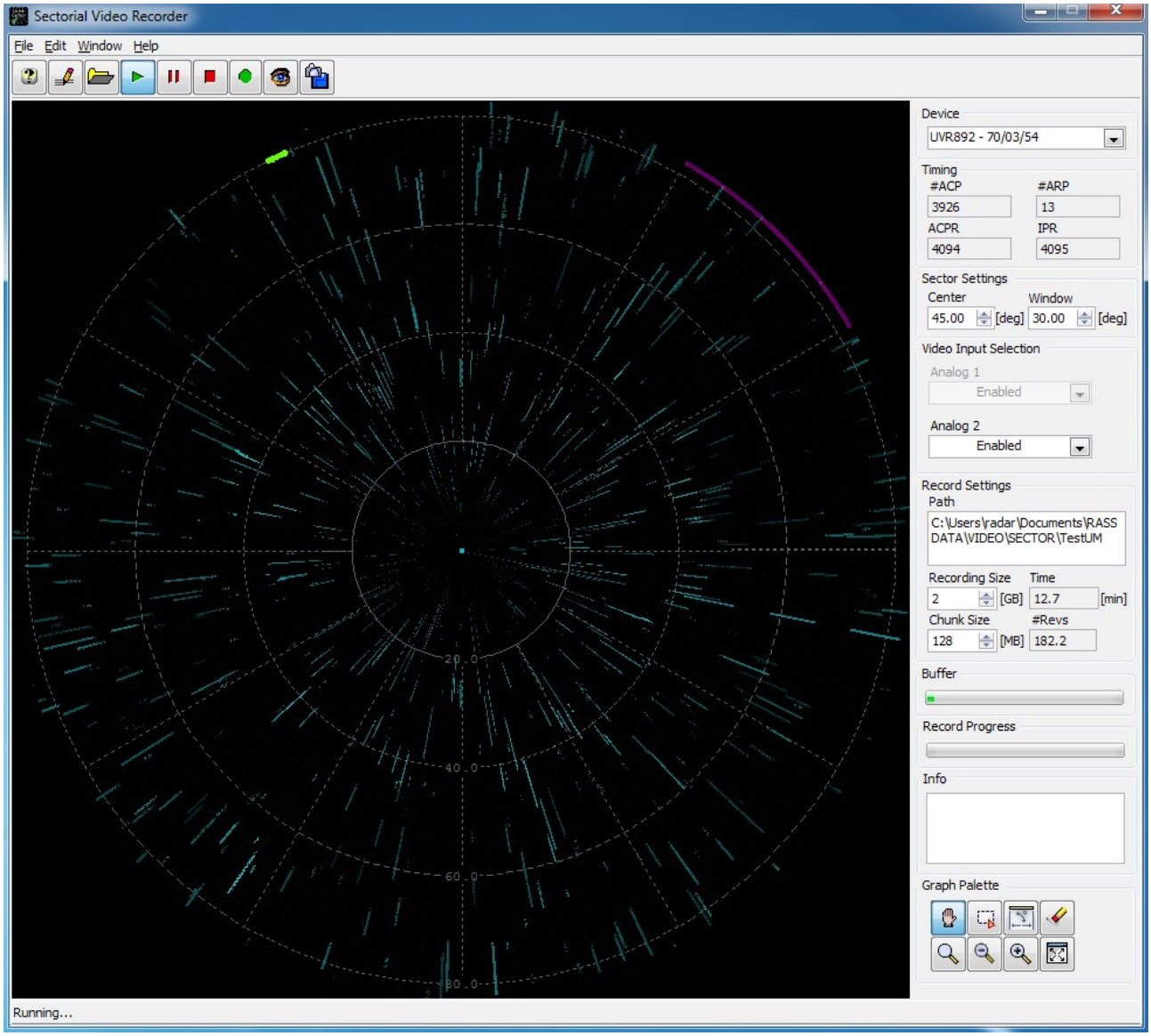

Figure 7: Software in running mode

As you can see it is not possible to disable the Analog 1 video input selection (CH1 of the UVR892), the user can decide to record on a single channel but that channel has to be CH1 of the UVR892. It is not possible to record only on CH2, that is why the ***Analog 1*** selector is grayed out.

The recorded video data is stored in the selected recording folder and can now be viewed and analysed using the RASS-M ***View Video*** tool.

2.3. Advanced Settings: Graph Palette – Zoom/Select Functions

The graph palette can be found in the right bottom corner of the main window and is used to zoom in or select a part of the data. The following buttons are available:

Table 1: Zoom/select functions sector recording

Button	Usage
Pan	Switch the display to pan mode, use the cursor to move the display area around
Select	Switch the display to select mode, use the cursor to select targets
RBL	Enables the Range Bearing Line on the display
Erase all	Clear all display data
Zoom	Switch the display to Zoom mode, use the cursor to zoom into areas of interest
Zoom out	Zoom out progressively until maximum viewing area is visible
Zoom in	Zoom in progressively until maximum zoom (highest level of detail) is reached
Home	Switch back to default zoom (-500) and center (or press the home button)

2.4. General Settings

The ***General Settings*** window can be opened by pressing the ***Settings*** button and selecting the general tab using the ***General*** button on the left.

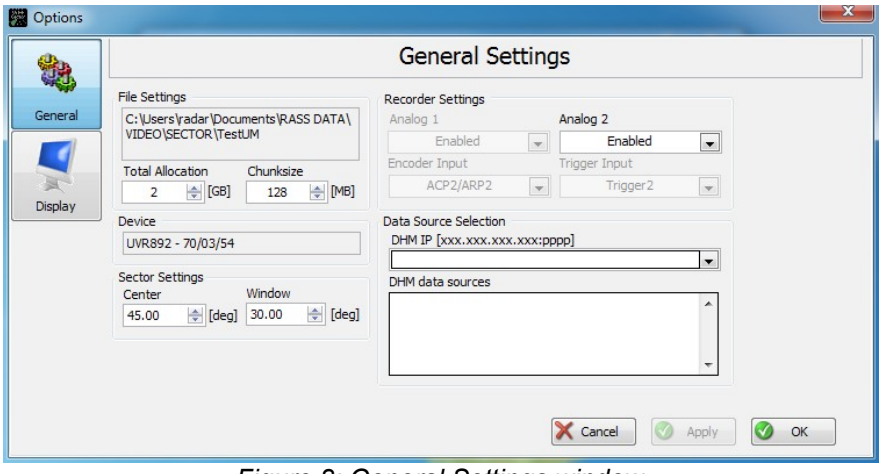

Figure 8: General Settings window

The left part of the General Settings tab contains the most frequently used settings and therefore has been repeated on the sectorial video recorder main window.

Note: In order for changes to take effect, the Apply or OK button in the settings window needs to be pressed.

If the ***Apply*** button is pressed the changes will be saved and the General Settings window remains open. In this case one can return to the main window using the ***OK*** button or by closing the window. If the ***OK*** button is pressed the changes will be applied and the General Settings window will close. In case no changes need to be made, one can close the General Settings window by pressing the ***Cancel*** button or closing the window.

In the right part of the General Settings you can control the recorder settings and the data source selection:

1. ***Recorder Settings***: The Recorder Settings control which video input(s), encoder (ACP/ARP) input and trigger input are sampled and recorded. The video input selected for Analog 1 will be displayed. If only one video input is selected for recording, it will be sampled at 16MSPS. If two video inputs are selected, they will be recorded at 8MSPS.

2. ***Data Source Selection***: This optional setting allows the user to connect to any DHM session running on the local network. The DHM session should be configured to have a digital D6 output. Refer to the RASS-R user manual on the Data Handler Module (DHM) for more details on this.

2.5. Display Settings

The ***Display Settings*** window can be opened by pressing the ***Settings*** button and selecting the Display tab using the ***Display*** button on the left.

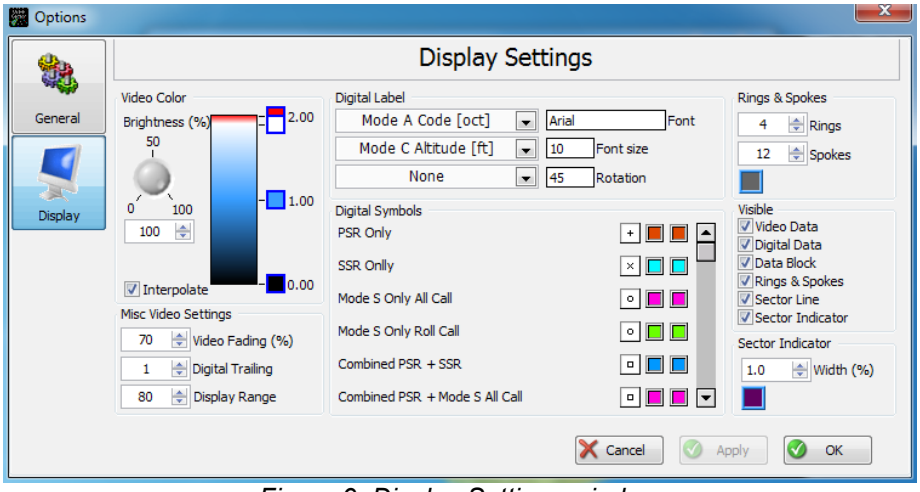

Figure 9: Display Settings window

The settings on the left control the video layer display. The following video settings can be set:

- ***Video color***: The video color graph allows you to set different colors for different voltages being sampled and displayed. Sliding the values up and down will change them, clicking the color boxes allows the user to change the color. A new level can be dragged out of the color ramp as well.
- ***Brightness***: The brightness knob will determine the intensity at which the different levels are displayed.
- ***Interpolate***: The interpolate check box allows the user to switch between discrete voltage levels or a more gradual color ramp.
- ***Video fading***: The video fading control allows you to have a fading effect on the video being displayed.

- ***Digital trailing***: The digital trailing control allows you to set a number of scans that the digital data will remain on the display.
- ***Display range***: The display range control limits the amount of data drawn on the PPI display.

Note: The Display Range control will not limit the data range in the recordings. All sector recordings will cover full range!

The center part settings control the optional digital part of the display. In order to have digital data present on the display the user needs to connect to a DHM session having a D6 digital output running. This can either be on the local computer or any other computer on the network.

- ***Digital label***: The digital label settings allow the user to control which digital information is displayed. Optionally font, font size and rotation can be changed.
- ***Digital symbols***: Digital symbols control how a specific target is displayed. Both symbol and color can be changed.

The right part of the Display Settings controls some more general display settings.

- ***Rings & Spokes***: control the amount of rings and spokes drawn on the display and the color of the rings and spokes.
- ***Visible***: The visible check boxes control which data is drawn on the display. This way some parts of the data can be temporarily disabled.
- ***Sector Indicator***: This control allows setting the width of the sector indicator.

2.6. Scope Preview

Use the  ***Scope Preview*** button to open the Scope Preview window. The Scope Preview graph will show the content of the current sampled data for both channels (when 2 channels are active).

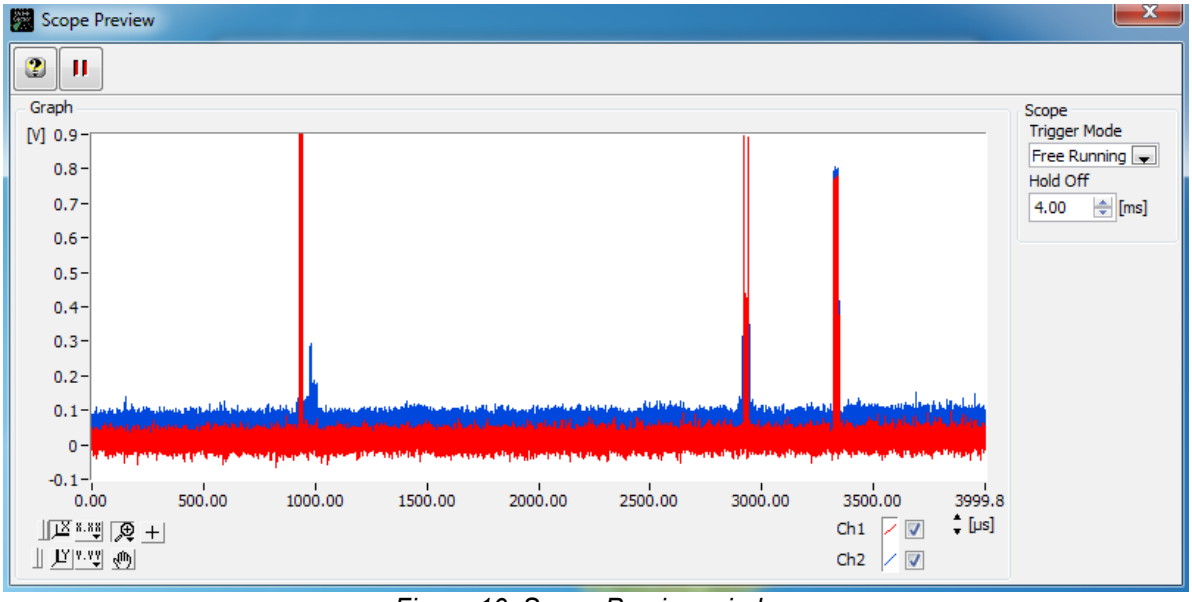

Figure 10: Scope Preview window

At the right side of the Scope Preview window, 2 controls are available:

- ***Trigger Mode***: trigger mode allows the user to switch between different ways of displaying the data
  - ***Triggered***: a sampling window between 2 consecutive triggers will be set and is set as the default trigger mode
  - ***Hold off***: a sampling window will be started at a trigger and has a size set in hold off
  - ***Free running***: a random sample with the size set in the ***Hold Off*** control will be sampled and displayed
- ***Hold Off***: The Hold Off setting is used when the trigger mode is set to either Hold Off or Free running. The Hold Off setting will limit the amount of data sampled and displayed.

You can use the ***Pause*** button to pause the updating of the Scope Preview graph, the data stream and the sampling engines will keep running in the background. This function will give you the possibility to zoom in on the sampled data in the Scope Preview graph.

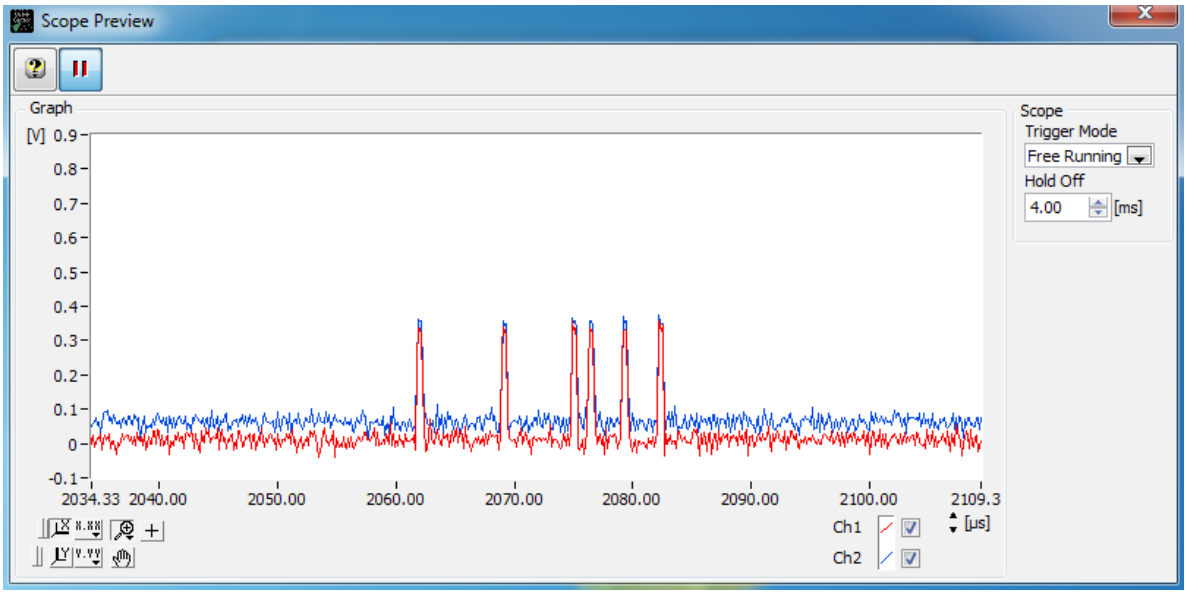

Figure 11: Scope Preview Zoom