

## Rohde & Schwarz VTC CalMAN Setup Guide

The internal pattern generator of the Rohde & Schwarz VTC Video Tester can be automatically controlled by CalMAN Display Calibration Software.

### Required CalMAN version:

- 5.7.1 or later

### Recommended CalMAN Workflows:

- All available measurement and calibration workflows

### Required Rohde & Schwarz Firmware:

- All firmware versions are acceptable

### Rohde & Schwarz Control Connection:

- Ethernet LAN cable

### CalMAN Connection Procedure

With the R&S VTC connected to your computer, you can then use CalMAN to control the VTC, following the instructions below.

1. Connect the R&S VTC via Ethernet cable to the same local network as your CalMAN computer.
2. Put the R&S VTC into Raw mode:
  - a. Select the wrench Setup icon on the upper right VTC toolbar.
  - b. Select the Setup dialog *Remote* tab.
  - c. Expand the *TCPIP* section.
  - d. Under *Protocol Mode*, select "Raw."
3. Determine the IP address of the R&S VTC:
  - a. Select the wrench Setup icon on the upper right VTC toolbar.
  - b. Select the Setup dialog *System* tab.
  - c. Note the unit's IP Address (top field).
4. On the CalMAN *Source Settings* tab, click "Find Source."
5. On the CalMAN *Find Source* dialog (see below):
  - a. Under *Manufacturer*, select "Rohde & Schwarz."
  - b. Under *Model*, select "Rohde & Schwarz – VTC."
  - c. Enter the IP address from the VTC *System* tab.
  - d. Click *Connect*.

Find Source

Source

Manufacturer: Rohde & Schwarz

Model: Rohde & Schwarz - VTC

Socket Connection

IP Address	Port
192.168.42.143	5025

Connect

When CalMAN connects, the VTC front panel displays "Controlled by Remote" on a blank white field. If this does not happen, then CalMAN is not yet connected.

## CalMAN Source Settings Tab

When CalMAN is connected to the Rohde & Schwarz VTC, Source Settings tab (shown below with VTC HDR10 mode first disabled, then enabled) provides Source information and Settings for the connected VTC test pattern generator.

Simulated Meter Simulated | Rohde & Schwarz VTC | Direct Display Control

### Source Settings

Source

Rohde & Schwarz VTC | Find Source

Source Information

Rohde & Schwarz

Triplet support: Full triplet support | Disconnect

Settings

Window Size: Window 10%

Delay: 0.75 | Optimize

Pattern Size: 10

Pattern APL: 18

Resolution: 1920x1080p23.98

Component Format: RGB

Deep Color: 10-bit

BT.2020:

HDR10:

EOTF: SMPTE ST 2084

Mastering Display Primaries: P3

Mastering Display White Point: D65

Max Mastering Display Luminance: 1000

Min Mastering Display Luminance: 0.005

MaxCLL: 1000

MaxFALL: 400

Specialty Patterns: Color bar 100%

## Settings

### Window Size

Select the desired test pattern size and type from the Window Size selection box.  
(Note: For Plasma and CRT displays, Constant APL 50 works well.)

### Delay

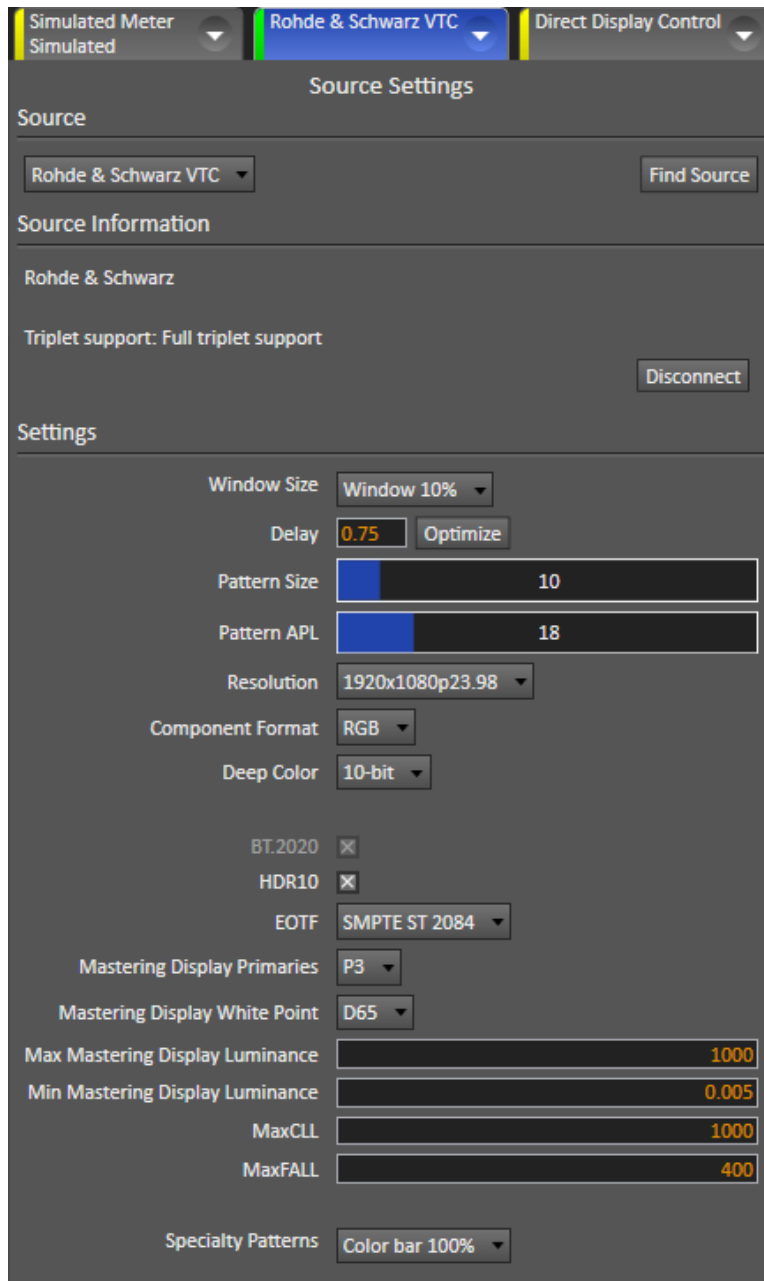
CalMAN provides a default measurement delay time of 2 seconds to accommodate the test pattern settling time of the Rohde & Schwarz VTC generator and an attached display. To optimize the delay time for a particular configuration, potentially speeding up all measurement times, click the Optimize button.

*Note: The Deep Color and the BT.2020 options are available only with RGB format.*

### HDR10 Support

The Rohde & Schwarz VTC can output HDR10 test patterns to enable the HDR10 mode on compatible HDR displays.

**HDR10:** The HDR10 option enables a generator's HDR10 output mode.



*Note: The following HDR10 Metadata is the Content Metadata that specifies the specifications of the HDR Mastering Display that was used to create the HDR10 content. To change the default values for the following fields, refer to EIA-861.3. If you do not know what values to set, leave the fields at their default values.*

**Mastering Display EOTF:** Electrical-Optical Transfer Function. The target luminance response function.

**Mastering Display Primaries:** Defines the Mastering Display's color gamut.

**Mastering Display White Point:** The white point of the Mastering Display.

*Note: The following HDR10 Metadata is the Content Metadata that specifies the specifications of the HDR Mastering Display that was used to create the HDR10 content. To change the default values for the following fields, refer to EIA-861.3. If you do not know what values to set, leave the fields at their default values.*

**Max Mastering Display Display Luminance:** The Mastering display's specified maximum luminance in nits ( $\text{cd}/\text{m}^2$ ).

**Min Mastering Display Display Luminance:** The Mastering display's specified minimum luminance in nits ( $\text{cd}/\text{m}^2$ ).

**MaxCLL:** Maximum Content Light Level. The maximum pixel value within the applied content.

**MaxFALL:** Maximum Frame-Average Light Level. The maximum value of the frame-averaged maxRGB, over all frames in the content.

## Specialty Patterns

The pattern selection field allows you to select patterns from the Rohde & Schwarz VTC other than the automated measurement windows or fields.