

TopCon BM-7A Colorimeter TopCon SR-3AR Spectroradiometer CalMAN Setup Guide

The TopCon BM-7A colorimeter and the TopCon SR-3AR spectroradiometer can be connected to and controlled by CalMAN to perform display measurements.

Required CalMAN Version

- Version 5.7.1 or later

BM-7A Colorimeter Connection

- Straight-through 9-pin female to female serial cable (different than the SR-3AR spectroradiometer).

SR-3AR Spectroradiometer Connection

- Null modem 9-pin female to female serial cable (different than the BM-7A colorimeter).

Notes:

The meter USB ports are not functional with CalMAN.

If a USB to serial adapter is required, the FTDI USB to Serial Adapter is recommended, as it includes a data buffer for superior data integrity at high communication rates.

http://calman.spectracal.com/store/p49/CalMAN_Certified_USB_to_Serial_Adapter.html

If a USB to serial adapter is used, be sure that its proper USB driver is installed. If necessary, run the SpectraCal Device Driver Pack from the following link. It contains both FTDI and Prolific drivers.

<http://www.spectracal.com/download.php?id=3>

[BM-7A Colorimeter Setup](#)

[SR-3AR Spectroradiometer Setup](#)

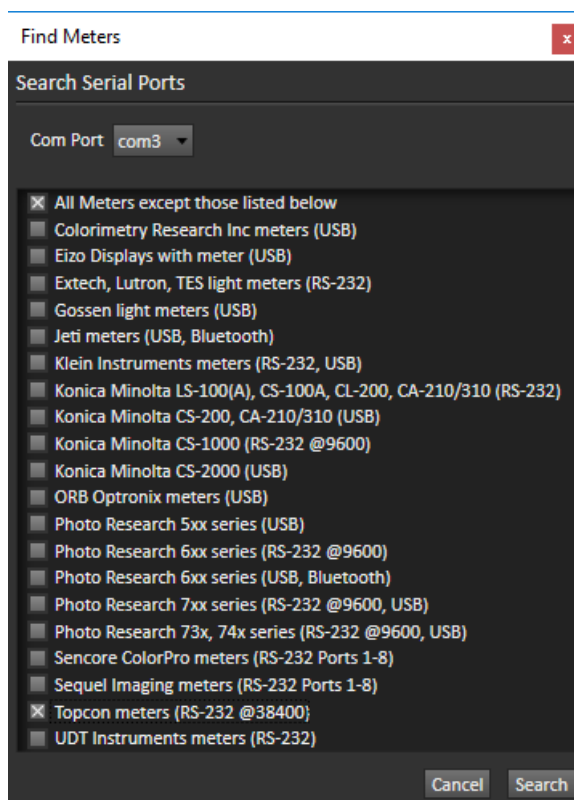
TopCon BM-7A Colorimeter

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CalMAN Meter Connection Procedure

For serial connection to CalMAN, the configuration switches on the BM-7A colorimeter need to be set as follows:

- a. Switches 1, 2 and 5 are down.
 - b. Switches 3, 4, 6, 7 and 8 are up.
(Baud rate = 38,400; Length = 7; Parity = Even; Stop Bits = 1; Delimiter = CR+LF)
2. Connect the BM-7A colorimeter to a serial port on the CalMAN computer or to a Serial to USB adapter, with a straight-through serial cable.
 3. On the CalMAN Meter Settings tab, click *Find Meter*.
 4. On the *Find Meters* popup dialog (see below):
 - a. Leave Com Port set to *auto*, or, select the com port that was assigned to the meter or to the Serial to USB adapter (shown in Device Manager, under *Ports (com & LPT)*).



- b. Check the box for "TopCon Meters (RS-232 @38400)."

- c. Click *Search*.
5. On the Meter Settings tab (see below):
- a. Under *Meter Mode (Target Display Type)* select either the factory correction factor or a user defined correction factor that corresponds to the display being measured.
 - Correction Factor 0 - Factory
 - Correction Factor 1 - User Defined
 - Correction Factor 2 - User Defined
 - Correction Factor 3 - User Defined
 - Correction Factor 4 - User Defined
 - ...
 - Correction Factor 15 - User Defined

The screenshot shows the 'Meter Settings' window. At the top, it says 'Meter Settings'. Below that, there's a section for 'Meter' with a dropdown menu showing 'Topcon BM-7A - 01000003' and a 'Find Meter' button. The next section is 'Meter Mode (Target Display Type)' with a dropdown menu showing 'Correction Factor 0 - Factory'. Below that is 'Meter Information' with the text 'BM-7A COM3' and a 'Disconnect' button. The next section is 'Meter Exposure Modes' with a dropdown menu for 'Standard Exposure Mode' set to 'Slow'. The final section is 'Profiles and Offsets' with a 'Meter Profile' dropdown set to 'None' and a 'New/Edit' button.

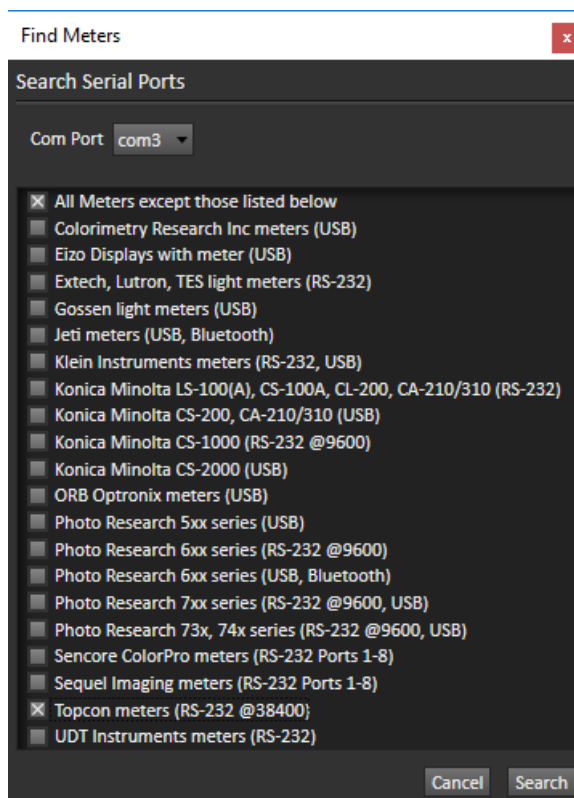
- b. Select a *Standard Exposure Mode* that yields stable continuous measurements.
 - Slow (default)
 - Fast

TopCon SR-3AR Spectroradiometer

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CalMAN Meter Connection Procedure

2. For serial connection to CalMAN, the SR-3AR spectroradiometer menu options need to be set as follows:
 - a. Baud rate = 38,400
 - b. Length = 7
 - c. Parity = Even
 - d. Stop Bits = 1
 - e. CS-900 On/Off = Normal Type
 - f. Delimiter = CR+LF
3. Connect the SR-3AR spectroradiometer to a serial port on the CalMAN computer or to a Serial to USB adapter, with a null modem serial cable.
4. On the CalMAN Meter Settings tab, click *Find Meter*.
5. On the *Find Meters* popup dialog (see below):
 - a. Leave Com Port set to *auto*, or, select the com port that was assigned to the meter or to the Serial to USB adapter (shown in Device Manager, under *Ports (com & LPT)*).



- b. Check the box for "TopCon Meters (RS-232 @38400)."

- c. Click *Search*.
6. On the Meter Settings tab (see below):
 - a. Under *Meter Mode (Target Display Type)* select “All Types.”

The screenshot shows the 'Meter Settings' dialog box with the following sections and controls:

- Meter:** A dropdown menu showing 'Topcon SR-3AR - 01000003' and a 'Find Meter' button.
- Meter Mode (Target Display Type):** A dropdown menu showing 'All Types'.
- Meter Information:** A text field showing 'SR-3AR COM3' and a 'Disconnect' button.
- Meter Exposure Modes:** A dropdown menu for 'Standard Exposure Mode' showing 'Normal Speed'.
- Profiles and Offsets:** A 'Meter Profile' dropdown menu showing 'None' and a 'New/Edit' button.

- b. Select a *Standard Exposure Mode* that yields stable continuous measurements.
 - Normal Speed (default)
 - High Speed

Note: In CalMAN, under Settings\Application Measurement Options, if the “Use Software Color Matching Functions” option is checked, the SR-3AR spectroradiometer returns full spectral data on every reading.