



## TA 2015.22-MT1000 Settings

**Overview:** This document explains how to get the most out of your MultiTrack 360° prisms, and how they work.

**Equipment:** Trimble MultiTrack Prism (MT1000)

**Results:** User should see more accurate and consistent measurements in the field.



**How It Works:** The features of the MT 1000 are: prism glass, diodes, channel selector, and the battery compartment. The top cap also unscrews to reveal the serial number, prism offset, and part number. The prism uses a Trimble lithium-ion 7.4V battery (P/N 92600) just like the ones used in the R8/R6/R2 GNSS receivers. The diodes above and below the glass are controlled by the selector switch with channel options from 1-8. When the diodes are turned on your robotic total station will only track when Autolock is on and is set to either Active or Semi-Active mode. The eight different channels allow you to have multiple targets on the same jobsite without having target interference. However this prism will work without battery power just like a standard prism

as long as you are set to Passive mode. With Passive tracking turned on you will encounter the same target lock issues as other standard prisms. The robotic total station will have the ability to lock on to other “reflective” objects, for example: road signs, reflective vests, car mirrors, etc. During Active or Semi-Active, as long as the robotic total station can “see” the diodes it will track you.

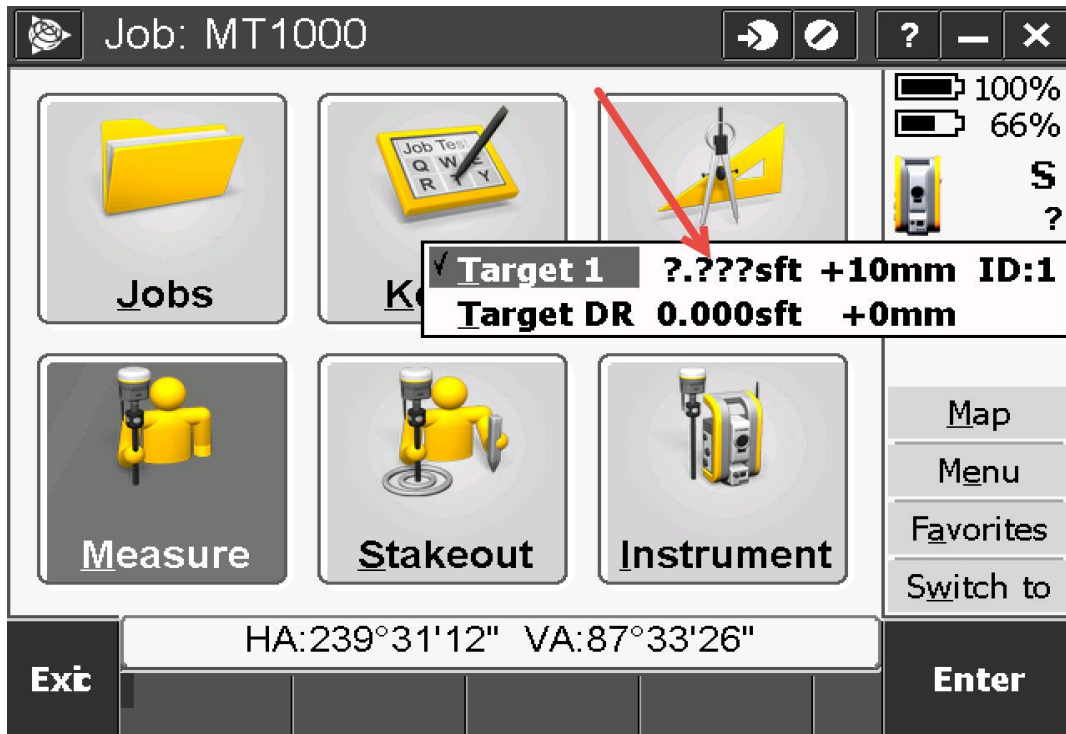
**Procedure:** If you are planning to measure in Active tracking mode you need to have your tracker realigned by your dealer’s service department on a regular basis. There is also an Autolock Collimation which can be performed in the field or by our service department. For information on these procedures, you can download the manual from the Trimble website or contact your local dealer. For most applications, Active tracking works well, however we have seen some slight vertical accuracy issues when using this method. In situations where higher accuracy is required, it is best to use Semi-Active tracking mode. Semi-Active tracking works by allowing the diodes to be tracked while in motion but it shoots the actual prisms when taking measurements. This method will take slightly longer while measuring but you will see more consistent vertical results. Maintenance on the prism is critical to accuracy. You should check the prism for any broken, missing or in-set diodes. Also, check that each diode is emitting an equal amount of light and not covered with a foreign substance. Lastly and always important, make sure your prism rod is plumb.

**Review:**

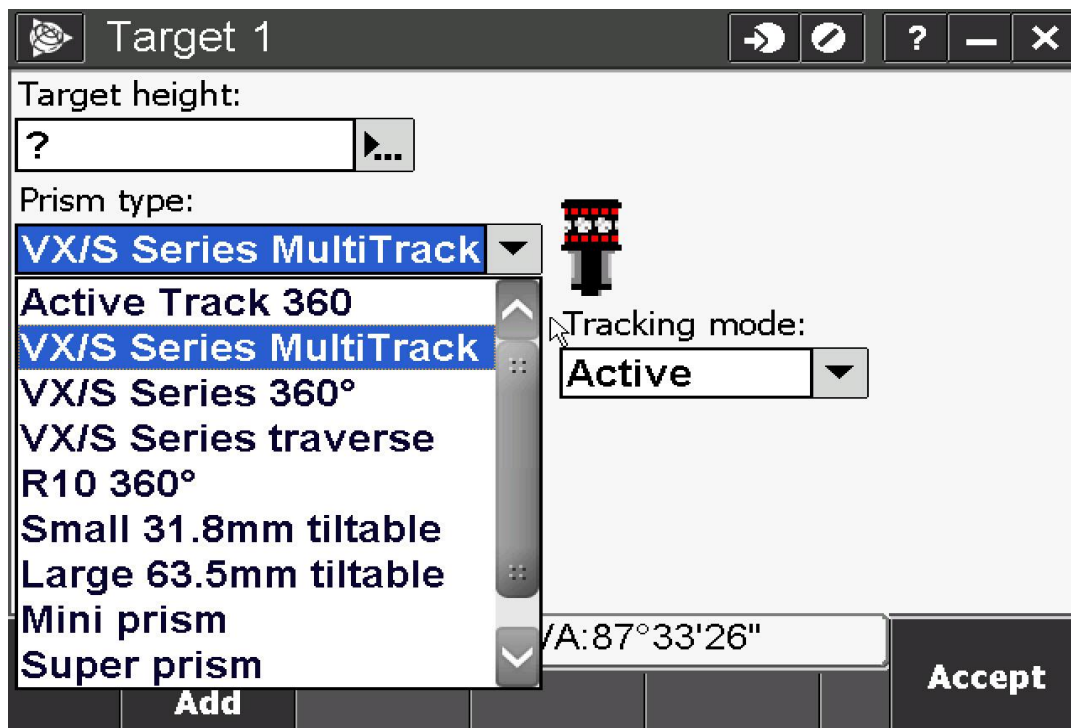
Step 1. In Trimble Access click on the target icon.



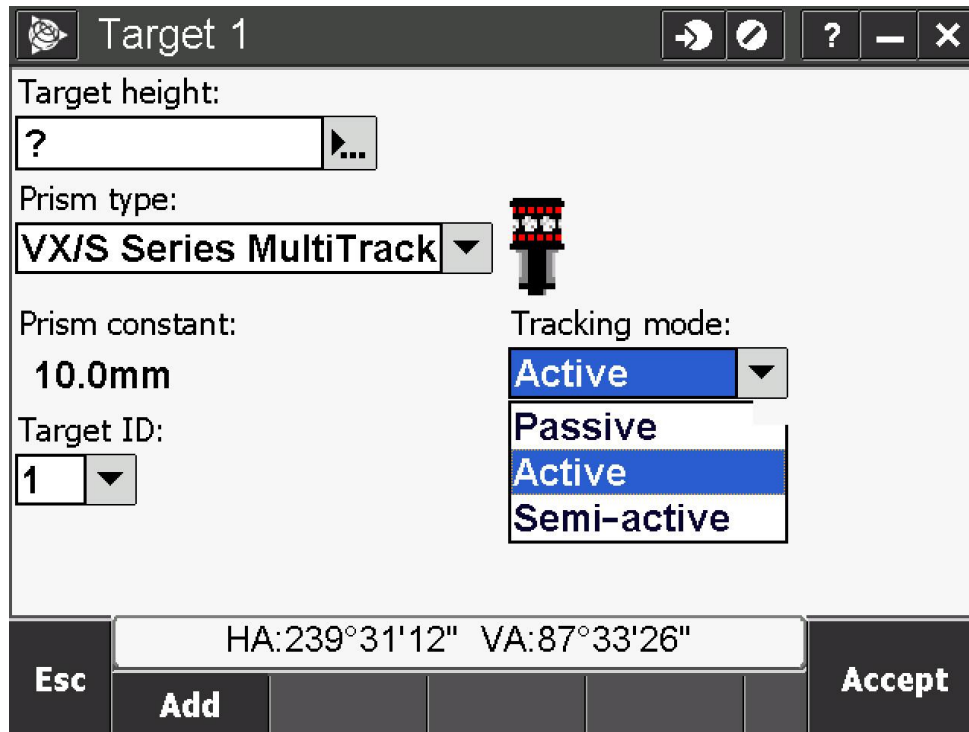
Step 2. Click on the target height location (may contain question marks).



Step 3. Under the drop down menu for prism type select **VX/S Series MultiTrack**



Step 4. Click on the drop down menu for **tracking mode**. This is where you will select the mode based on what you are trying to do. Most applications will be Active track. When you need more accurate vertical results, it is best to select Semi-Active. Passive is rarely used but is always an option if you run out of battery power or when interference is highly unlikely.



The screenshot shows a software window titled "Target 1" with a standard Windows-style title bar (back, forward, search, and close buttons). The window contains the following fields and controls:

- Target height:** A text input field containing a question mark "?" and a right-pointing arrow button.
- Prism type:** A dropdown menu currently displaying "VXIS Series MultiTrack". To its right is a small icon of a surveying prism.
- Prism constant:** A text input field containing "10.0mm".
- Target ID:** A dropdown menu currently displaying "1".
- Tracking mode:** A dropdown menu with a list of options: "Active" (highlighted in blue), "Passive", "Active", and "Semi-active".

At the bottom of the window, there is a dark grey bar with several buttons and a central display:

- Buttons: "Esc", "Add", and "Accept".
- Central display: "HA:239°31'12" VA:87°33'26"