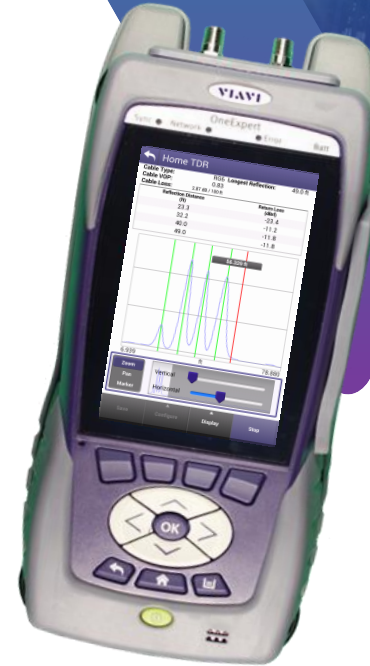




# OneExpert CATV Home TDR

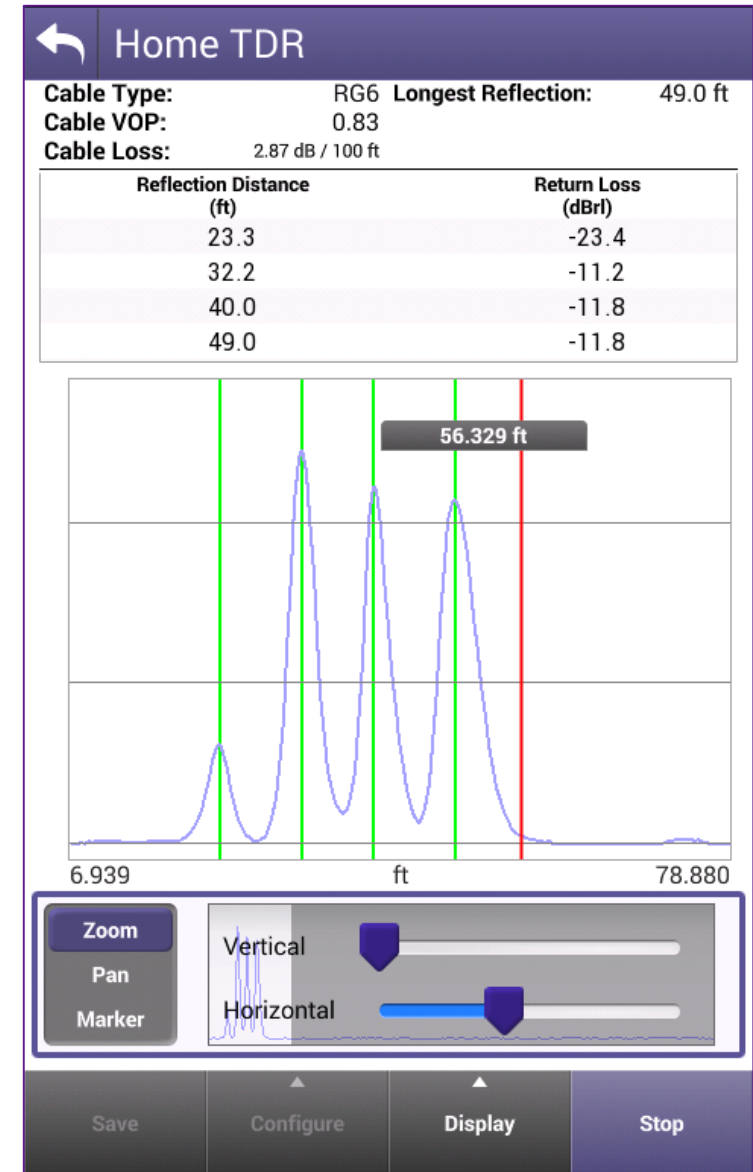
Introduction and Overview

November 2017



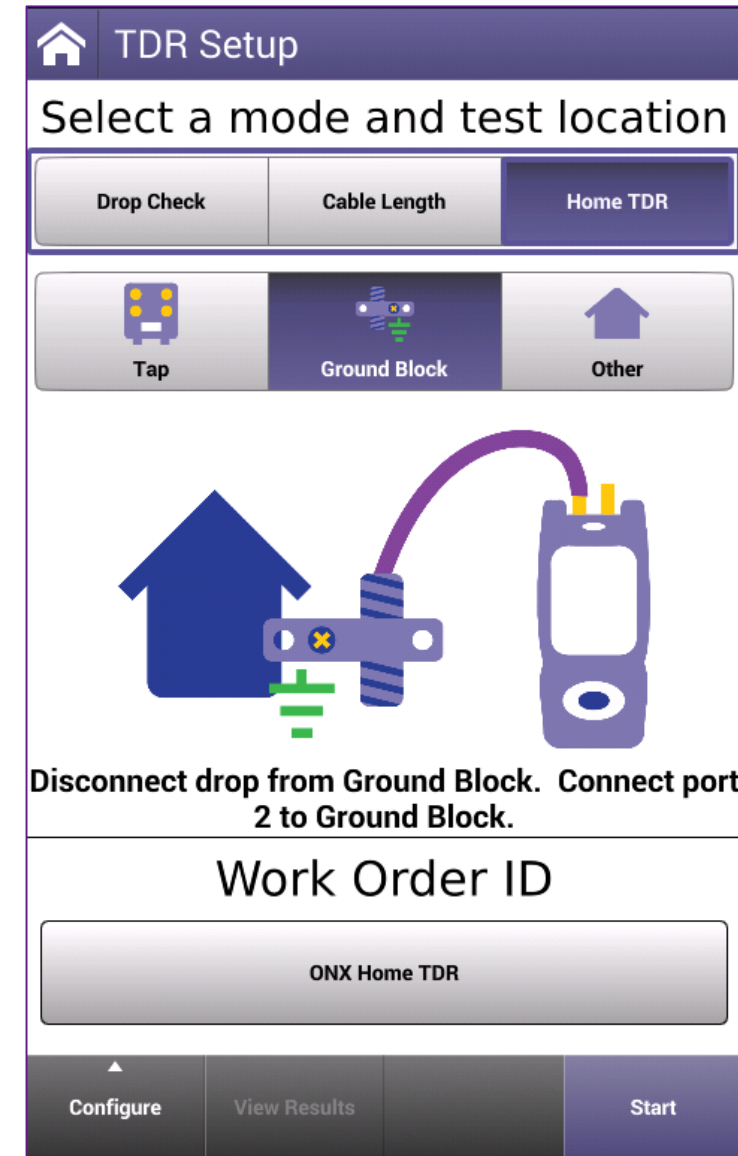
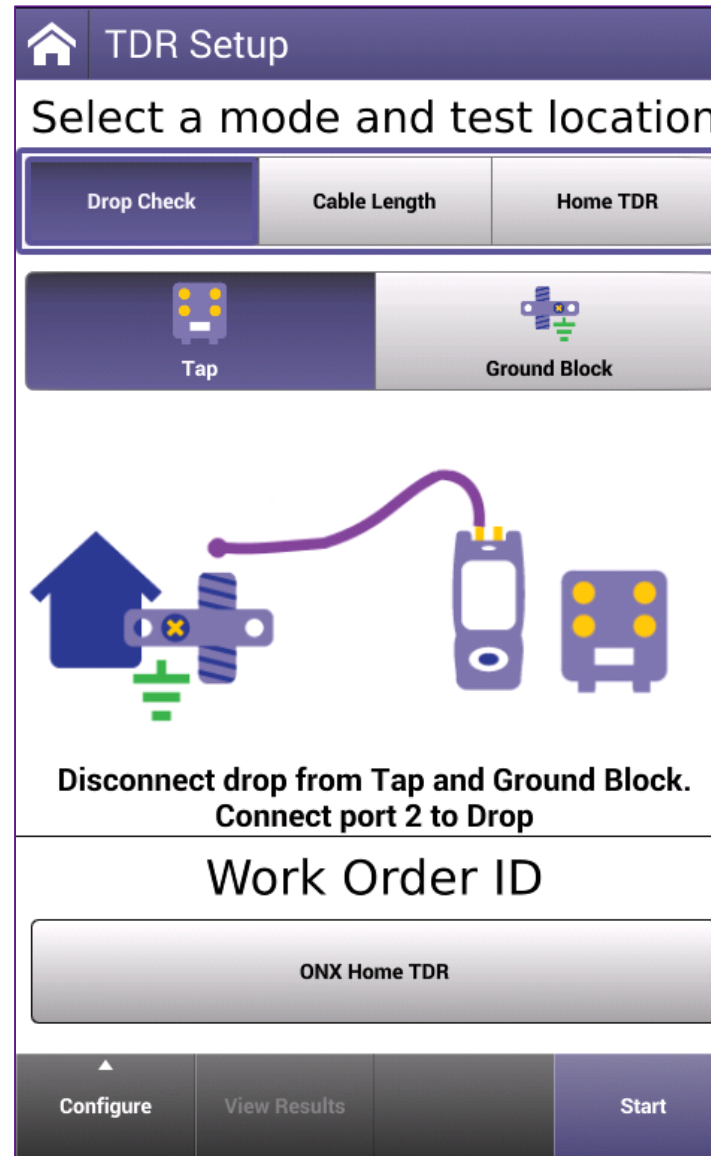
# Introducing the Home TDR

- Optional on all ONX models
- Test, and understand cable lengths and in-home coax topologies
- Transmits short pulse into coax network, measures returned pulse echoes, calculates length to reflections
- Displays reflections graphically and in table
- Save and sync TDR results to StrataSync
  - Better subscriber drop validation
  - Tech and/or contractor accountability



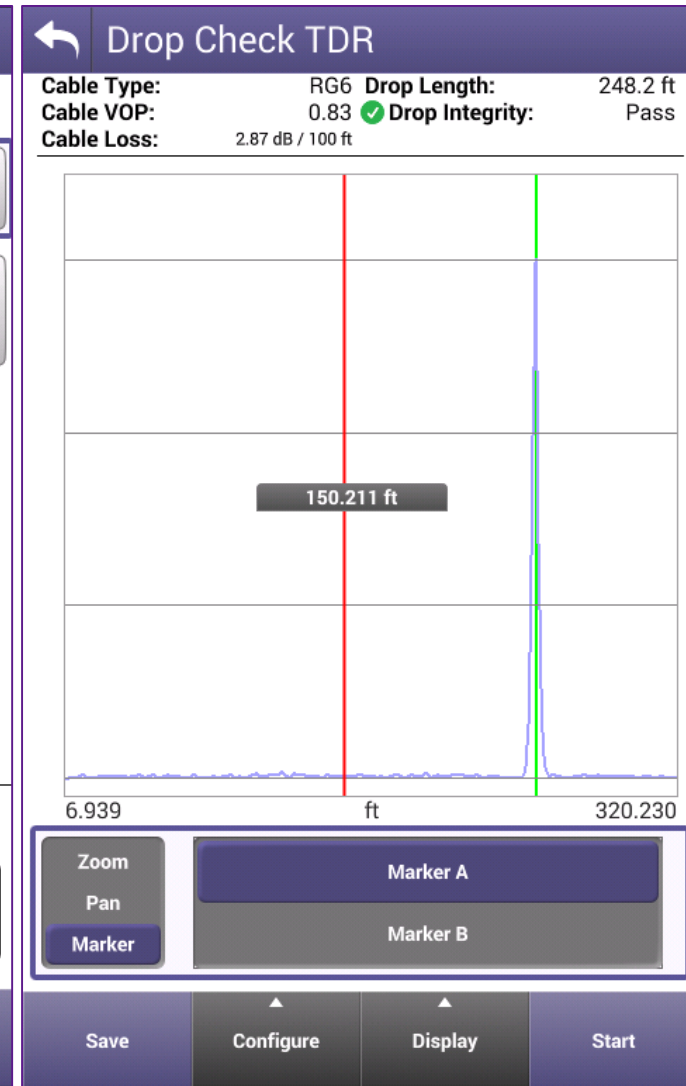
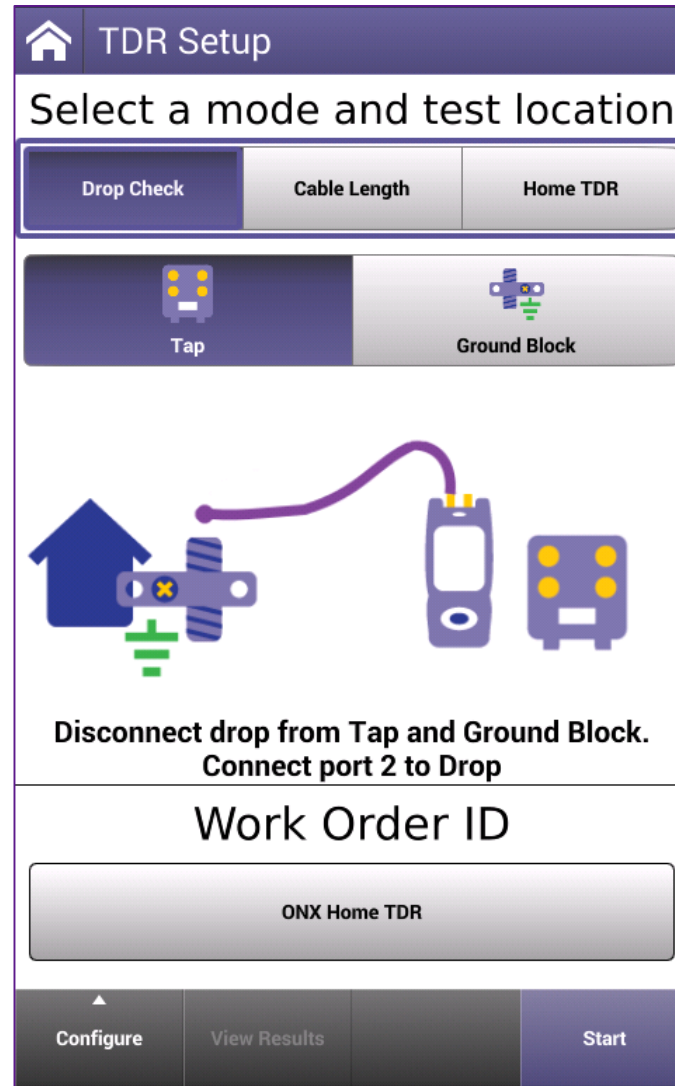
# Guided User Interface

- Select mode and test location
  - Pass/fail criteria per selected TDR mode
  - Setup graphic adapted by mode and location, helps tech properly connect for test
- Multiple tests can be automatically saved under same Work Order ID
  - Organizing data eases test result archiving and review



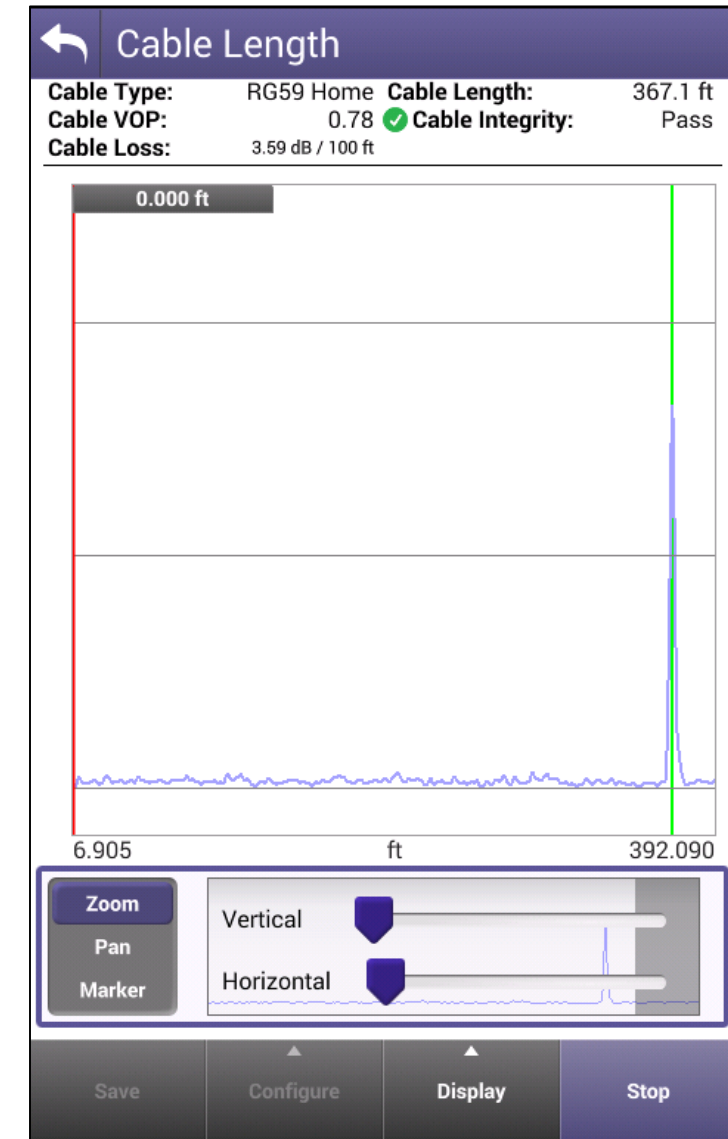
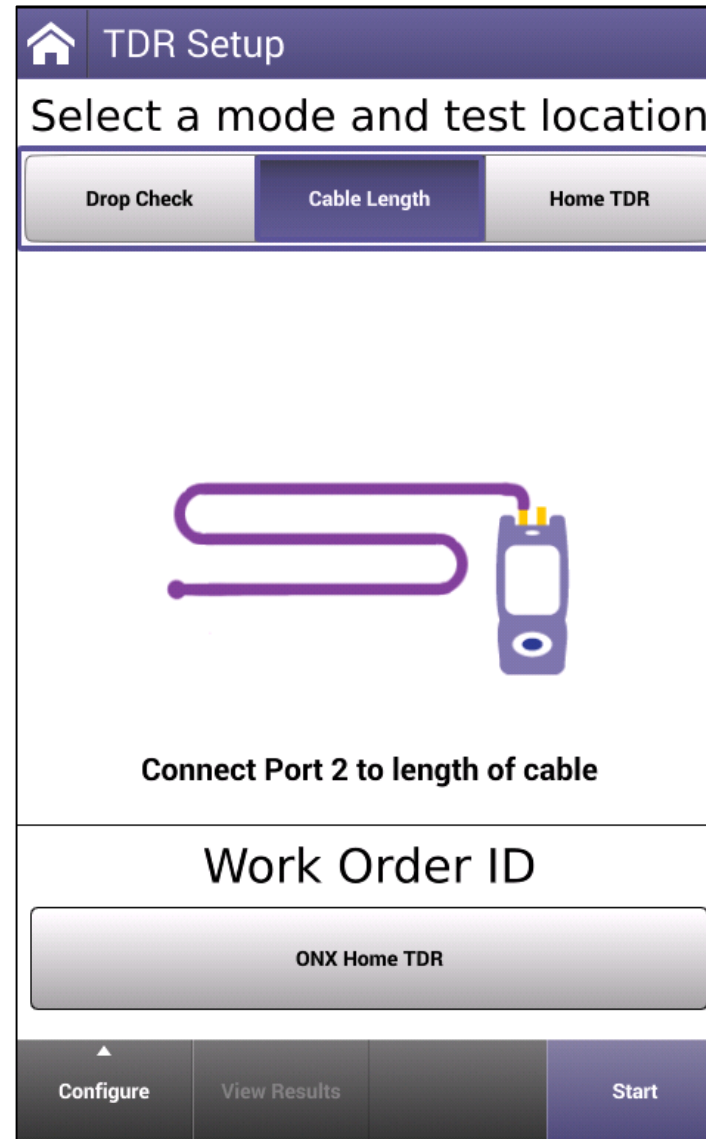
# Home TDR – Drop Check TDR Mode

- Drop Check mode for validating and recording disconnected drop cable length,
  - looks for single reflection and distance to end of coax drop
- If more than one reflection is identified, Drop Integrity metric shows “Fail”
  - Good quality drop cable should have only one reflection – the cable’s open end



# Home TDR – Cable Length Mode

- Cable Length measures any coax cable's length
- If more than one reflection is found, Cable Integrity metric shows "Fail"
  - Good quality cable has one reflection – the cable's open end



# Home TDR – Home TDR Mode

- Home TDR mode analyzes a home coax network and identifies several reflections
- Automatically identifies up to 4 reflections and lists in reflection table with distances and return loss amplitudes
  - Longest reflection and 3 next highest return loss reflections greater than -25dBrl are listed in reflection table
  - Any reflection detected is shown graphically but may not be listed in table
- Markers show distance to any point in graph
- Use “delta” markers to see distance differences between any 2 graphed points

TDR Setup

Select a mode and test location

Drop Check Cable Length Home TDR

Tap Ground Block Other

Disconnect drop from Ground Block. Connect port 2 to Ground Block.

Work Order ID

ONX Home TDR

Configure View Results Start

Home TDR

Cable Type: RG6 Longest Reflection: 49.0 ft

Cable VOP: 0.83

Cable Loss: 2.87 dB / 100 ft

Reflection Distance (ft)	Return Loss (dBrl)
23.3	-23.4
32.2	-11.2
40.0	-11.8
49.0	-11.8

56.329 ft

6.939 ft 78.880

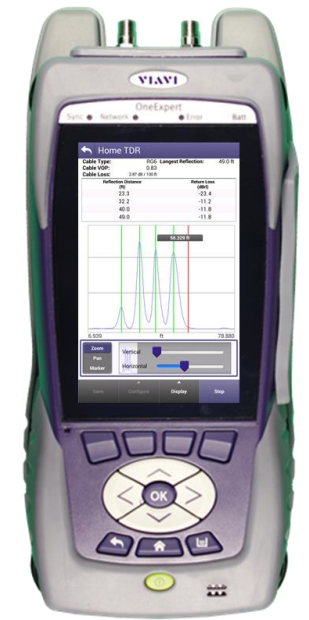
Zoom Pan Marker

Vertical Horizontal

Save Configure Display Stop

# Notable ONX-CATV Coax Home TDR Attributes

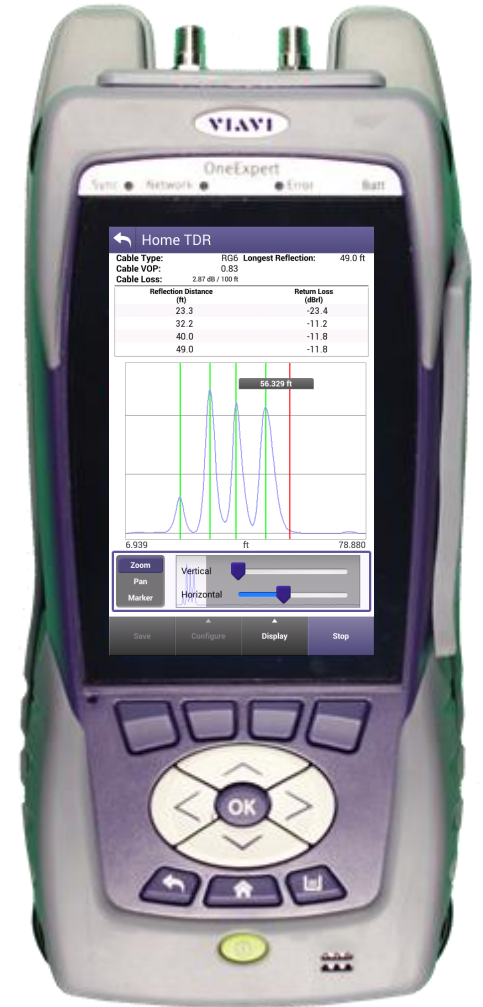
- Maximum distance depends on ONX conducting the testing
  - ONX-620 without Sweep hardware – 450ft (~135m) max distance
  - ONX-630 with Sweep enabled hardware – 700ft (~210m) max distance
- TDR displays are continuously updated to quickly see adjustment updates
- Graph initially adjusts to maximum reflection detected
- Pinch and Zoom to see reflections with higher or lower resolution
- Use a marker to determine distance to any graphed point or use delta marker to compare graphed distances
- Select one of several different cable types, or enter a custom cable type with cable VoP and cable loss values
  - Velocity of Propagation (VoP): how fast a signal traverses coax cable relative to speed of light - modifications to VoP affect calculated distance
  - Cable Loss: degradation of signal amplitude over distance – modifications to cable loss adjust TDR's cable compensation value and affect calculated dBrl value



# Ordering Information

- Add OneExpert CATV Home TDR feature to any ONX, new or already in the field

Order Number	Description
<b>ONX-CATV-SW-HOMETDR</b>	New unit software option OneExpert CATV Home TDR
<b>UPG-ONX-CATV-SW-HOMETDR</b>	Upgrade/ software/ OneExpert CATV/ for ONX 6XX Add Home TDR option via SS







VI.VI