VDV II SERIES

User Manual
Cloud Connected
VDV Series

TREND NETWORKS

Cloud Connected VDV II Series

Basic | Plus | Pro

User Manual

158851 Rev.1 (2023)

TREND NETWORKS
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WARNING!

Do not attach to AC power or telecoms cables carrying >60volts. The VDV II testers may be damaged and cause a safety hazard to the user.

CAUTION!

Improperly crimped, damaged or un-crimped plugs can damage the ports on the VDV II testers. Inspect plugs for proper termination and crimping before inserting into the tester. Contacts should always be recessed into the plastic grooves of the plug. Only use 8-Position plugs with the 8-Pin (DATA) port and 6-Position plugs with the 6-Pin (VOICE) port.

VIDEO (F-Coax) port

VOICE (6 Pin RJ) port

DATA (8 Pin RJ) port

ON/OFF button

Display

VIDEO port selection (▼) button

VOICE port selection (▲) button

DATA port selection button

TOOLS/SAVE button

TONE button

Dual Port Remote Unit

Dual Port Remote Unit VOICE port

Dual Port Remote Unit DATA port

Storage for Coax Remote Unit

POWER

To remove / insert the battery:
- Remove the battery cover screw and the battery cover from the back of the tester.
- Remove / insert the battery, taking care to connect correctly and not to trap the cable.
- Replace the battery cover and screw.

To switch the tester ON:

Press the ON/OFF button.
- The display shows the selected port (VOICE, VIDEO or DATA).
- If the Battery Low Indicator is shown, the battery should be replaced with a new 9V battery.

Battery cover screw

Battery cover
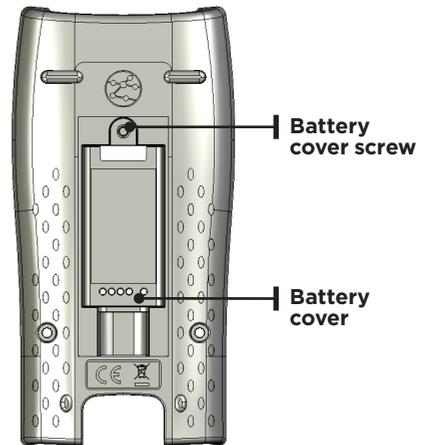
| VOICE port selected	VIDEO port selected	DATA port selected	Setting Indicator	Backlight Indicator (Plus/Pro)	Battery Low Indicator

Settings:
- Press the TOOLS/SAVE button to enter the settings menu.
- Each press of the TOOLS/SAVE button advances to the next setting. The available settings depending on the model are,
  - Port blink, On or Off
  - NVP setting
  - Backlight timer
  - Length units, ft/m
  - Wiremap test mode, 4-pair or 2-pair
  - Bluetooth, On or Off
- Press ▼ or ▲ to cycle through the available options for each setting.
- Press the TOOLS/SAVE button repeatedly until the Setting Indicator disappears.

Port Blink (Plus & Pro only)

When set to ON causes the link LED on the connected port to slowly flash, enabling visual location of the switch port. The VDV II can also be connected directly to an Ethernet device to check if it's port is responding to link pulses.

- Press ▼ or ▲ turn Port Flash On (✓ symbol).
- Connect to an active Ethernet port/cable.
- The link LED on the switch will flash 2 seconds on, 2 seconds off then repeat.
- Press ▼ or ▲ to turn Port Flash Off (✗ symbol).
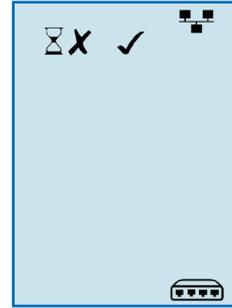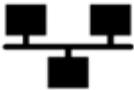
Length Calibration (Pro model)

Adjust the NVP (Nominal Velocity of Propagation) value with the ▼ or ▲ buttons to set the TDR to the electrical characteristics of the cable being tested.

Set the NVP value from the cable data sheet. If the data sheet is not available, connect a known length of cable that is at least 20ft/6m long to the desired test port and adjust the NVP until the displayed length matches the length of the cable. The far end of the cable does not need to be terminated or connected to the remote.
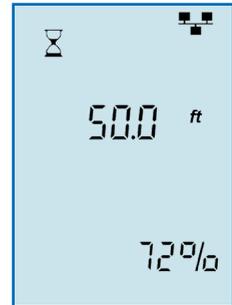
Typical NVP values

	NVP
Telephone	65
RG59/RG6	82
Cat 3	65
Cat 5/5e/6/6A	68-72
Cat 7	79

Length Zeroing (Pro Model)

The TDR length can be set to 0.0 by pressing the [icon] + [icon] + [icon] buttons simultaneously. This can be performed without any cables connected so the measured length during testing includes all connected cables. Or it can be performed with a patch cord connected so the measured length during testing excludes the length of the patch cord.

Length Calibration (Plus model)

Adjust the pF (picofarad) value to adjust the capacitance with the ▼ or ▲ buttons to the characteristics of the cable being tested. Alternatively, connect a known length of cable (at least 20ft/6m long) and adjust until the displayed length matches the length of the cable.
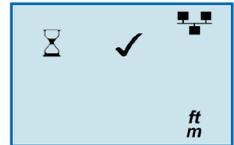
Backlight Timer (Plus & Pro models)

Adjust the backlight timer in steps of 0 (off), 10, 30, 60, or 300 seconds. The backlight timer resets each time a button is pressed. The backlight timer is disabled when connected to an Ethernet switch or PoE switch/injector.

Length Units (Plus & Pro models)

Toggle the length measurement between feet (ft) and meters (m) using the ▼ or ▲ buttons.

2 or 4 Pair Testing (Pro model)

The VDV II Pro can be set to test 4 pair cable (default setting) or 2 pair cable.

In 2 pair mode, the test will Pass when pins 1,2,3 and 6 are connected. 2 pair mode should be used when testing industrial cabling using RJ45-to-M12 patch cords.

• Press ▼ or ▲ to toggle between the 4PAIr and 2PAIr modes.
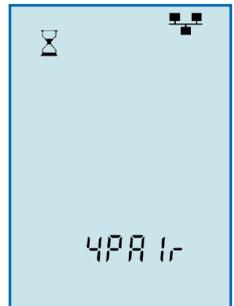
Bluetooth Settings

Turn the Bluetooth radio ON or OFF using the ▼ or ▲ buttons. The unique ID of the tester is shown at the bottom of the screen. The ID of the tester will be displayed when connecting the tester to the TREND AnyWARE Cloud App.
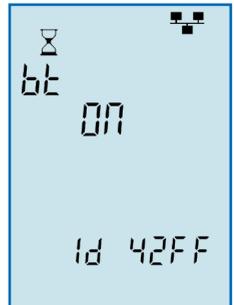
TERMINATIONS

The Dual Port Remote Unit can be stored in the bottom end of the Tester, with the jacks either inside for protection or outside for testing patch cables without removing it from the Tester, and provides internal storage for the Coax Remote Unit.
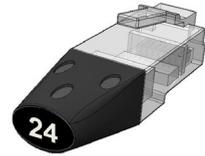

Dual Port Remote Unit	**Coax Remote Unit**	**RJ45 Remote Unit**	**RJ45 Identifier**
# 1 (Standard) Wiremap/Length/ID	# 1 (Standard) # 1 to 12 (Optional - 158053) Wiremap/Length/ID	# 1 to 12 (Optional - 158050) Wiremap/Length/ID	# 1 to 24 (Optional - 158051) Length/ID

Connections

To connect to a cable and to confirm correct connection:

- Use the correct port (VOICE, VIDEO or DATA) according to the cable connector type. (Use VOICE for RJ11, RJ12, RJ14 or RJ25 connectors, VIDEO for F 75 Ω Coax or DATA for RJ45 connectors).
- Press the corresponding port button (VOICE, VIDEO or DATA).
- The display shows the selected port.
- Connect one end of the cable to the selected port on the tester and the other end to a Remote Unit for cable identification and testing or to an Identifier for cable identification only.
- The display shows the type of termination (Remote Unit or Identifier) and its Number to assist identification when a number of different terminations are in use.

Termination Number

Identifier Indicator

Remote Unit Indicator
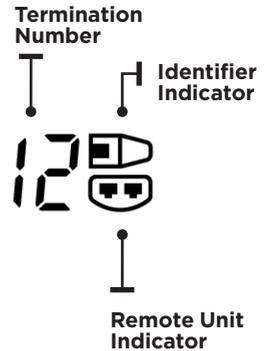
CABLE TESTING

To test a cable:

Connect the cable to the tester and to a suitable Remote Unit as described above.

• Cable testing runs continuously (except when in TOOLS/SAVE mode or if voltage is detected). There is no need to start or stop the cable test.

Cable test results are shown using the two rows of numbers in the lower half of the display. The top row of numbers refers to the pins at the near end. The numbers displayed, and **S** (Shield), depend on the port in use...

Split Pair test:

! next to the Split Pair symbol is displayed when the test is disabled.

• When the Split Pair test is enabled, split pairs will cause the test to fail.
• When the Split Pair test is disabled, split pairs will not cause the test to fail.

VOICE – Pins 1, 2, 3, 4, 5 and 6 are shown
VIDEO – S and Pin 1 are shown
DATA – Pins 1, 2, 3, 4, 5, 6, 7 and 8 are shown. S is shown if the shield is connected.

The lower row of numbers refers to the pins at the far end. The numbers displayed show which pin at the far end is connected to which pin at the near end. Open circuits and short circuits are shown. Multiple short circuits are shown in sequence.

To disable / enable the Split Pair test:

Press and hold the network mode button for 2 seconds to change the setting.

Shows when Test Failed

Shows when Test Passed

Shows that Pin 4 and Pin 5 are reversed

Shows that Pin 6 is connected to Pin 7

Shows that Shield and Pins 1, 2 and 3 are correctly connected

Shows that Pin 8 is open

Flashes when Split Pair is detected

Shows when a crossover (uplink cable) is detected (does not cause the test to fail)

Shows when Split Pair test is disabled
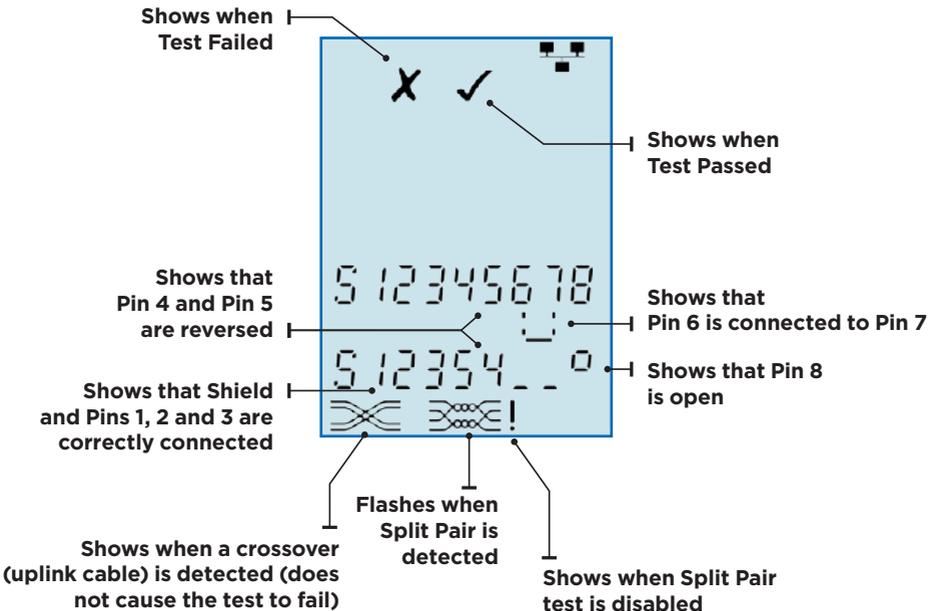
LENGTH MEASUREMENT (PLUS & PRO MODELS)

To measure the cable length:

Connect the cable to the tester.
• The display shows the cable length. Press the port selection button of the currently selected port to cycle through the different pairs.
• The display changes to show the overall cable length or the length of an individual pair inside the cable.
• When the overall length setting is selected, the length of the shortest pair in the cable is displayed as required by TIA & ISO cabling standards.
• By investigating the individual pair lengths, cable faults can be found.

• The Pro model will display the distance to terminated, opened and shorted pairs.
• The Plus model will display the distance to terminated and opened pairs.
• The individual pairs are often different lengths and may be longer than the overall cable because of the internal twisted construction.
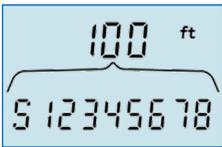
Length of shortest pair   **Length of Pair 3-6**   **Length of pair 1-2**

ETHERNET SERVICE DETECTION (PRO MODEL)

The VDV II Pro displays the maximum link speed (100M/1000M/2.5G/5G/10G) when connected to an active Ethernet port. The PoE indicator and voltage are displayed if the Ethernet port has active PoE.
Note: the PoE display is an indication that PoE is present on the circuit, this is not a PoE load test.

Max Ethernet Speed
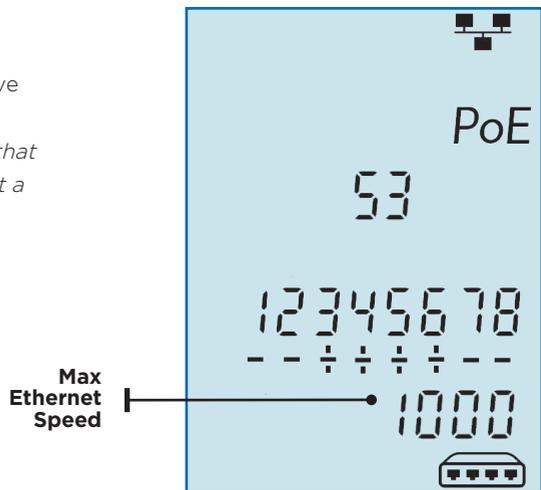
VOLTAGE MEASUREMENT (PRO MODEL)

If a voltage greater than approximately 2 volts is detected on any pin(s), cable testing and length measurement are not possible. The Pro model displays information about the voltage(s) present and the type of service that those voltages indicate, where applicable.

The display shows the detected voltage and the pins on which it is present, together with polarity. Depending on the port and the voltages on the pins, the display also shows the type of service detected on the cable.

Port	Service	Voltage	Pins
Voice	PBX	>30v	3-4 or 2-5
Data	PoE	(See previous section)	
	PBX	>30v	4-5
	ISDN	>30v	3/6 – 4/5

Example 1 –	Example 2 –	Example 3 –
PBX service on VOICE port	**ISDN service on DATA port**	**Unknown service on DATA**

Shows analog telephone service (PBX)

Shows digital telephone service (ISDN)

Warning Indication

48V

01010
38V

23V

123456

12345678

12345678
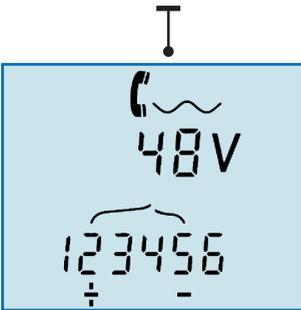
Shows Pin 2 is 48volts positive compared to Pin 5
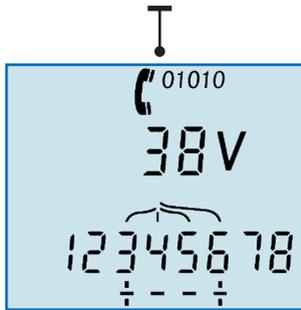
Shows Pins 3 and 6 are 38volts positive compared to Pins 4 and 5
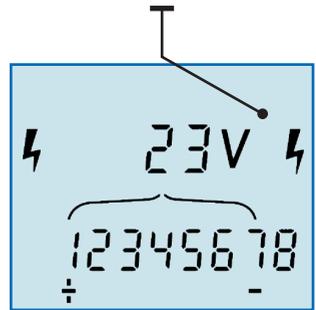
Shows Pin 1 is 23volts positive compared to Pin 7

TONE GENERATION

VDV II can be used together with a compatible tracing probe (available from TREND NETWORKS) to identify and trace cables. VDV II can generate various types of tone on various combinations of pins. Choice of tone type and pin connection is best determined by experiment to achieve the best results with a particular probe and cable combination.

To switch on tone generation:

Press the TONE button.
- The currently selected tone type is generated on the currently selected pins of the currently selected port.
- Tone generation continues until switched off or for a maximum of 144 minutes.

To change the port that the tone is applied to:

Press the desired port selection button.
- The tone is applied to the selected port using the tone type and pin settings that were last used on that port.

To change the pins that the tone is applied to:

Press the port selection button of the currently selected port.
- The pins that the tone is applied to change each time the button is pressed.

To change the tone type:

Press the TONE button.
- The tone type changes each time the TONE button is pressed.

The tone generation can be controlled from the far end of the cable, to assist in confirming that the correct cable has been traced.

To control the tone generation from the far end:

Briefly apply a short circuit between any two wires of the cable.
- The sound of the tone changes.

To switch off the tone generation:

Press and hold the TONE button.
- The tone generation stops and normal cable testing is resumed.

Digital tone active

Shows the port that the tone is applied to

Analog tone active

Shows tone type

Tone generator active

Shows pins that tone is applied to
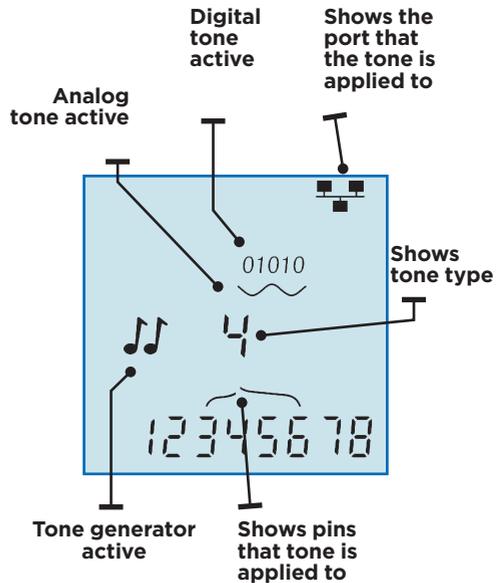
PORT BLINK (PLUS & PRO MODELS)

To assist in confirming correct cabling of Ethernet installations, VDV II Pro can generate Ethernet signalling on one end of a cable which causes the port LED of the device connected to the other end to flash.

Port Blink is only available when the DATA mode is selected.

Ethernet Device Indicator
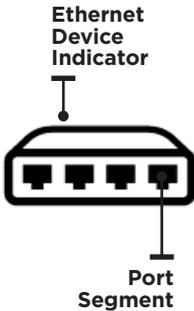
Port Segment

To switch on Hub Blink:

Press the TOOLS/SAVE button until the Ethernet Device Indicator flashes.

Press ▼ or ▲

- The ✔ symbol displays when Port Blink is switched on.
- The Port Segment of the Ethernet Device Indicator blinks.
- Port blinking continues until switched off or for a maximum of 144 minutes.

To switch off Port Blink:

Press the TOOLS/SAVE button

- The Ethernet Device Indicator Port Segment stops flashing.
- Port Blink stops.

USING VDV II WITH THE TREND ANYWARE CLOUD APP

The VDV II testers can be used with the TREND AnyWARE Cloud App to store test results and upload to TREND AnyWARE Cloud to manage projects and generate reports.

Process overview

- Download the TREND AnyWARE Cloud App from the Apple App Store or Google Play Store and sign-in to your AnyWARE Cloud account.
  New users can create a new account on the App.
- Pair the tester to the AnyWARE Cloud App.
- Connect the VDV II to the cable being tested.
- Send the result from the VDV II to the AnyWARE Cloud App where the result is stored.
- Upload completed jobs to AnyWARE Cloud where results can be viewed and organized.
- Generate test reports of jobs or individual test results.

Log-in or create a free account on TREND AnyWARE Cloud
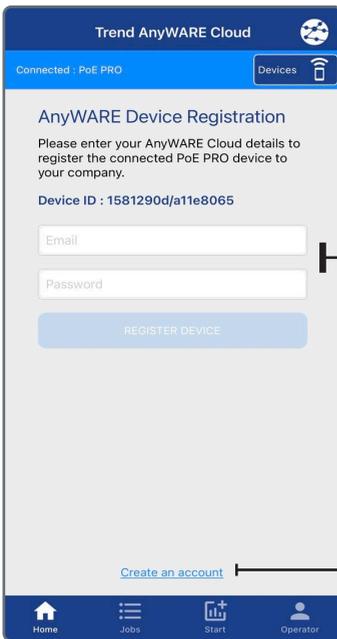
Use an existing account AnyWARE

Create a new AnyWARE account

The connected tester will be automatically registered to your AnyWARE account and all uploaded results will sent to this account.

All test saved by the VDV II will upload to the account used to log into the app. If you have an existing AnyWARE Cloud account and want the test to upload to that account, enter the user name/password for that AnyWARE Cloud account.

- Once logged in the app will default to the Home screen and begin searching for a tester.

Pair tester to App

- Turn on the tester and ensure Bluetooth is turned on.
- Device with ID 41ff detected but not connected.
- Tap the device ID to pair with the App.

Tester paired to App

When successfully connected to the App, a picture of the tester and its Device ID will be displayed on the Home Screen.
The tester is automatically registered to the AnyWARE Cloud account used to log in.

Create a new job

- Press the Jobs button to open the Jobs screen.
- Press + to create a new job. Names can be up to 25 characters long. Up to 500 jobs can be saved in the App.
- Enter a name then press CREATE JOB.
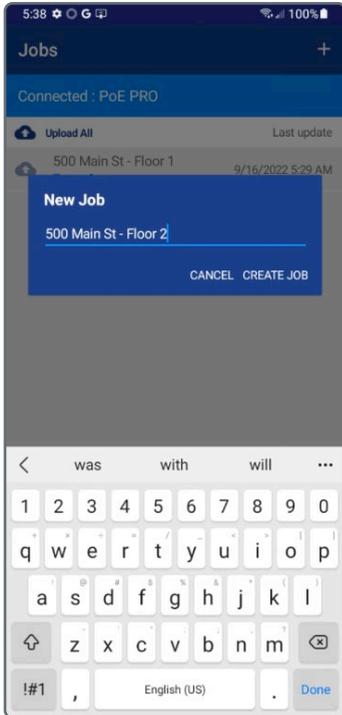
Job list

The Jobs screen displays a list of jobs, the number of tests in each job, the upload status and the date/time of the last update.
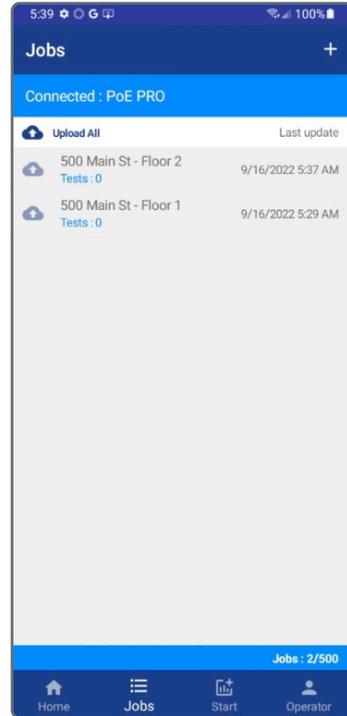
Set Operator name

- Press the Operator button to set the name of the operator.
- The operator's name will appear on the test reports saved on the App.

Test Setup

- Press the Start button to begin saving tests from the tester.
- Tap the Job name to select the Job where tests are saved.
- Enter the ID for the next test to be saved. The ID will auto-increment each time a new test is saved.
- Optionally enter text into the CABLE INFORMATION field. This text will appear on the report to identify the type of cable tested.
- An image can be added to the record before or after the test is saved, but **before** the job is uploaded to the Cloud. Press the ⊕ button to select an existing image from the phone or use the camera to take a new picture.

Adding Photos to a Test

- A photo can be added to the record before or after the test is saved, but **before** the job is uploaded to the Cloud. Press the ⊕ button to select an existing image from the phone or use the camera to take a new picture.
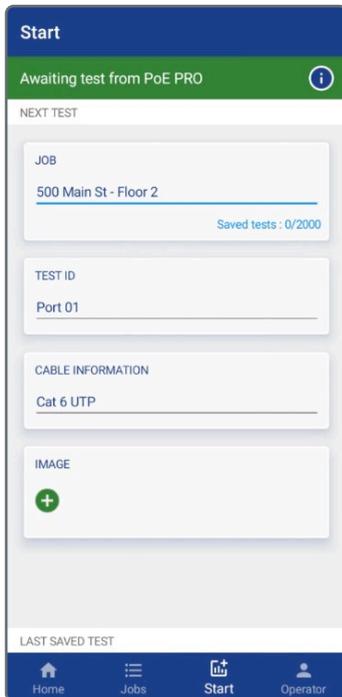
Saving Tests to the AnyWARE App

- Connect the VDV II to the cable or PoE link to be tested and wait for the result to appear on the screen.
- Change to the Start screen on the app.
- Press the Save 🔧💾 button on the tester for 2 seconds. This will send the current test result to the App and save the record.
- The Test ID and Job name will be displayed on the App when the test is saved.
- The last digit/letter of the Test ID will increment and the App is ready to save a new test.
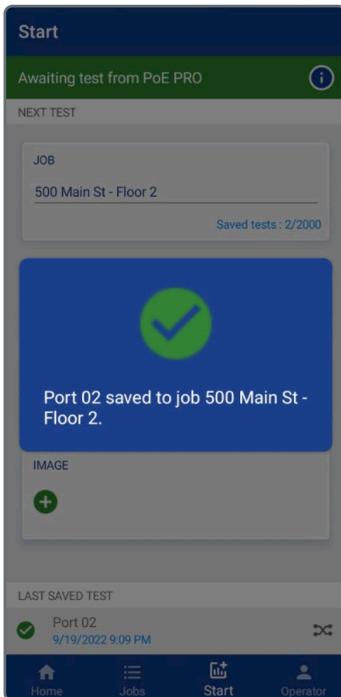
Delete a Job

- Tap Jobs to view the job list.
- Swipe the Job name to the right to delete the Job.
  Deleting a job permanently deletes the tests from the App. Upload tests remain on the Cloud when deleted from the App.

Viewing Saved Results

- Tap Jobs to view the Job list. The list of Jobs displays the current number of tests stored in each Job.
- The blue cloud with the arrow next to the Job name indicates a Job contains tests that have not been uploaded to AnyWARE Cloud.
- Tap the Job name to view the tests stored in the Job.
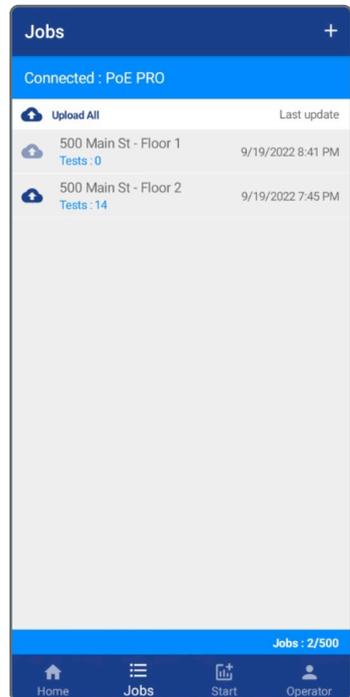
Test List

- The test list displays the Test ID, date/time, type of test, and pass/fail result if applicable. Only wiremap and PoE tests display a pass/fail result.
- Tap the Test ID to view the test information

Test Information

- **Before** a Job is uploaded to AnyWARE Cloud, only the test information, not the test results are available.
  After a Job is uploaded to AnyWARE Cloud, the results are processed and can be viewed on the AnyWARE App.
- **Before** uploading to AnyWARE Cloud the Test ID can be modified by tapping the edit button in the upper-right corner.
- Tap JOB to open the Job List and move the current test to a different job.
- Tap the ⊕ below IMAGE to add or change the image attached to the Test ID.
- Tap the waste bin in the bottom-right corner to delete the test.
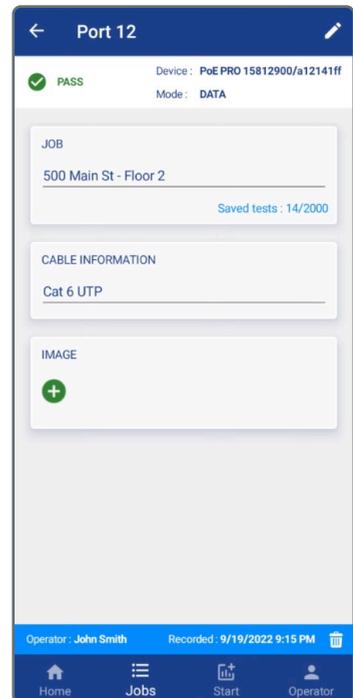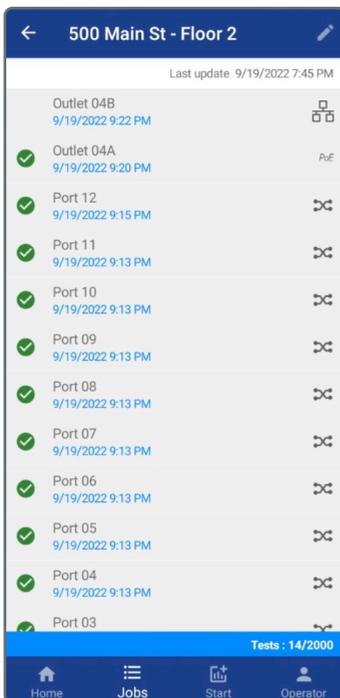
Uploading Test to AnyWARE Cloud

A Wi-Fi or mobile data connection is required to upload results

- Tap the blue upload icon beside the Job name to upload only that Job to AnyWARE Cloud.
- Tap Upload All to upload all Jobs from the App to AnyWARE Cloud.
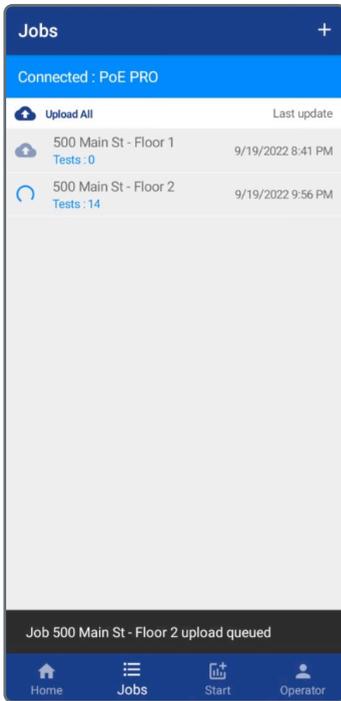
Viewing Uploaded Test Results

- **After** a job is uploaded to AnyWARE Cloud the test results can be viewed on the App.
- The test results are read-only and cannot be modified once the tests have been uploaded to AnyWARE Cloud.
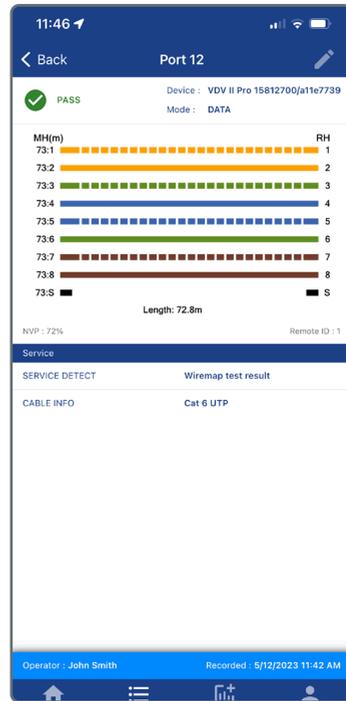
- After the Job is uploaded, the arrow will change to a tick mark which indicates all tests in the Job are uploaded.
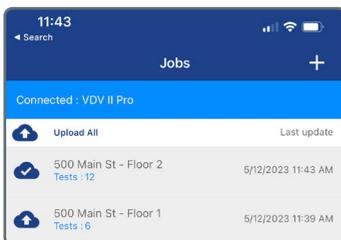
Viewing Uploaded Test Results on AnyWARE Cloud

- Log into AnyWARE Cloud to view uploaded test results.

  www.anyware.trend-networks.com

- The Job Tree and list of Jobs is shown in the order of most recent at the top by default.

- Click on the Job name in the tree or in the blue box to open the Job and view the test results.

Viewing Uploaded Test Results on AnyWARE Cloud

• Click on a Test ID to open the detailed result.

Organizing Tests into Structured Elements

• In the example below the Test IDs are labelled with a panel name and port number. Structured cabling components can be created in the job tree to organize test results into logical levels to improve organization of data.

Adding Structured Cabling Components to the Job Tree

- Right-click on the Job name to which the component will be added.
- Click on Add, then select the component to add below the Job name.
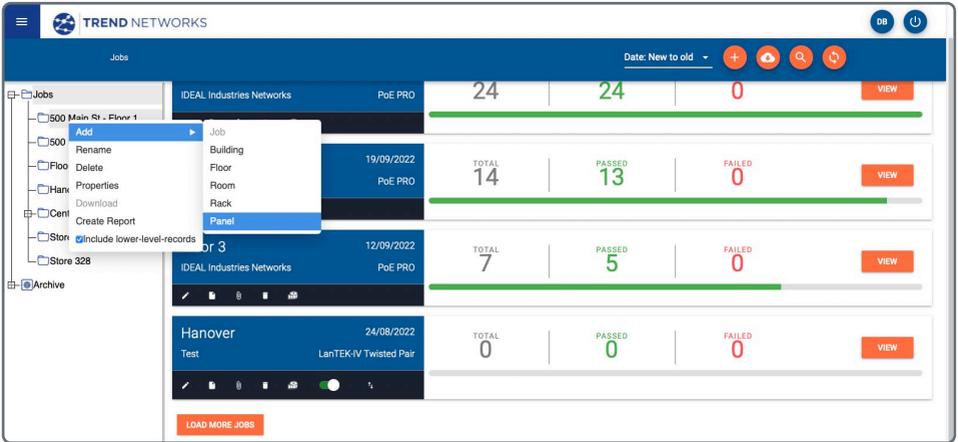
- Type the name of the new Element and Click SAVE or press Enter.
  Repeat the process as needed to create the desired structured cabling component tree.
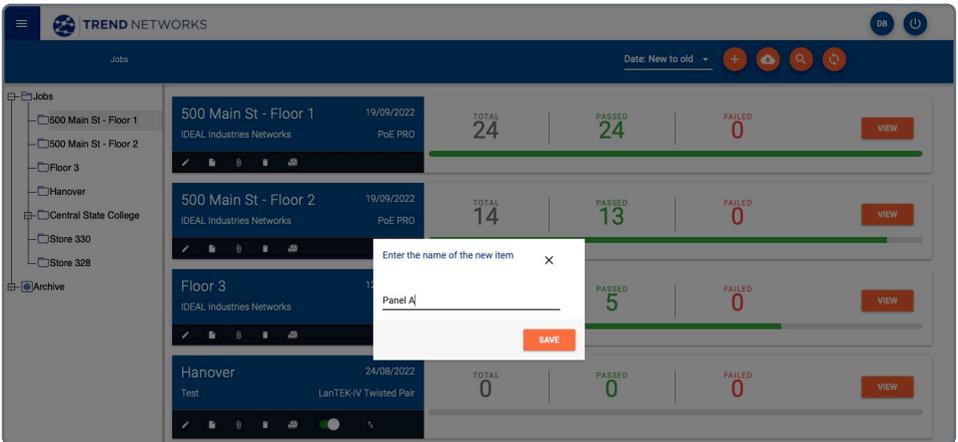
Note: Elements can be nested in the order from largest to smallest. Example, a Panel can be created below a Building. A Building cannot be created below a Panel.

Organizing Tests into Components

• Select the tests to move by clicking the selection box beside each test to be moved or click the box at the top of the page to select all tests on the current page.

• To select a range of tests, click the selection box of the first test, hold SHIFT, then click the selection box of the last test to select the tests in between.

• Click and drag the multi-test selector icon to the component where the tests are to be moved.

• The tests will move into the new component and the black header bar will display the name of the component where the tests are located.

Creating Test Reports

Note: At least one customer must be created in the account to generate a test report. Use the menu button in the upper-left corner and select Customers to add customers to the account.

- Create a report of all the tests in a Job or in a Component by right-clicking on the selection to be reported. If "Include lower-level records" is selected, all of the tests in components at a lower level of the selected component will be in the report.
- Create a report of individual tests by selecting the boxes beside each test then click the orange report icon at the top of the screen.

- Create a report of an entire job from the job list by clicking the Create Report icon below the job name.

Enter the name of the test report. The default name is the name of the job that was active when Create Report was selected. Edit the name if necessary and click CONTINUE to complete the remaining report options.

View Test Reports

- Click the menu button in the upper-left corner ☰ .
- Click Reports to view available reports in your AnyWARE Cloud account

Click the ☁ icon to open a PDF of the report in a new browser tab.

Note: Pop-up blockers may attempt to prevent the new tab from opening.

Emailing Reports

- Select one or more reports by clicking the tick-box beside the report name.
- Click the 📧 icon and type in one or more email addresses separated by a semicolon " ; ". AnyWARE Cloud will send an email to each recipient with a link to download the report.
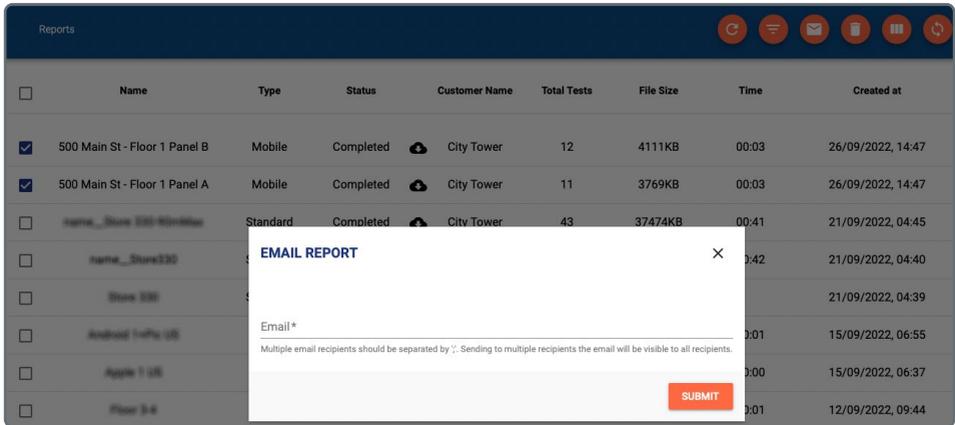
	Name	Type	Status		Customer Name	Total Tests	File Size	Time	Created at
☑	500 Main St - Floor 1 Panel B	Mobile	Completed	☁	City Tower	12	4111KB	00:03	26/09/2022, 14:47
☑	500 Main St - Floor 1 Panel A	Mobile	Completed	☁	City Tower	11	3769KB	00:03	26/09/2022, 14:47
☐	name__Store 330 90mhhm	Standard	Completed	☁	City Tower	43	37474KB	00:41	21/09/2022, 04:45
☐	name__Store330							0:42	21/09/2022, 04:40
☐	Store 330								21/09/2022, 04:39
☐	Android 1+Pro US							0:01	15/09/2022, 06:55
☐	Apple 1 US							0:00	15/09/2022, 06:37
☐	Floor 3-4							0:01	12/09/2022, 09:44

EMAIL REPORT ✕

Email *

Multiple email recipients should be separated by ';'. Sending to multiple recipients the email will be visible to all recipients.

SUBMIT

Removing Tester from AnyWARE Account

To use a tester with a different AnyWARE Cloud account it must first be deleted from the current account.

- Click ≡ and select Devices.
- Select the tester to delete and click the waste basket icon to remove the device from the account.
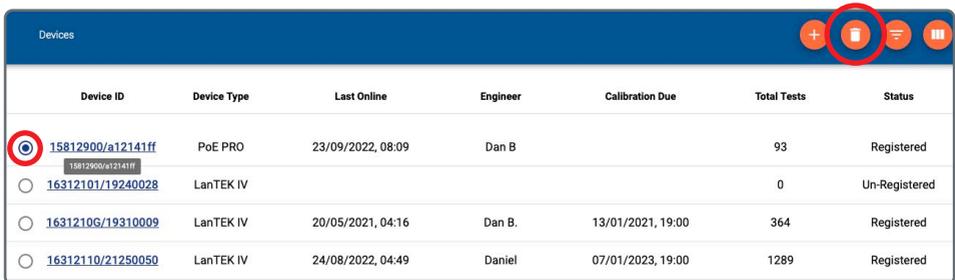
	Device ID	Device Type	Last Online	Engineer	Calibration Due	Total Tests	Status
⦿	15812900/a12141ff	PoE PRO	23/09/2022, 08:09	Dan B		93	Registered
○	16312101/19240028	LanTEK IV				0	Un-Registered
○	1631210G/19310009	LanTEK IV	20/05/2021, 04:16	Dan B.	13/01/2021, 19:00	364	Registered
○	16312110/21250050	LanTEK IV	24/08/2022, 04:49	Daniel	07/01/2023, 19:00	1289	Registered

TREND NETWORKS