

First Steps...

... with WireXpert

IT Networks

FW 8.xx
Menu structure and operation

Scope of delivery

WireXpert

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- 2x WireXpert 500/4500 handheld devices
- 2x Li-Ion batteries
- 2x Stylus with cord
- 2x Protective covers for LCD screen
- 2x CAT 6A/Class E_A Permanent Link Adapter
- 2x CAT 6A/Class E_A Permanent Link Test Cord
- 2x CAT 6A/Class E_A Channel Adapter
- 1x USB stick containing documentation and eXport PC software
- 2x Headsets
- 2x AC adapters
- 2x Country-specific power cords
- 1x Calibration Certificate
- 1x Soft carrying bag
- 1x Quick Start Guide



Connectors and buttons on the device

WireXpert

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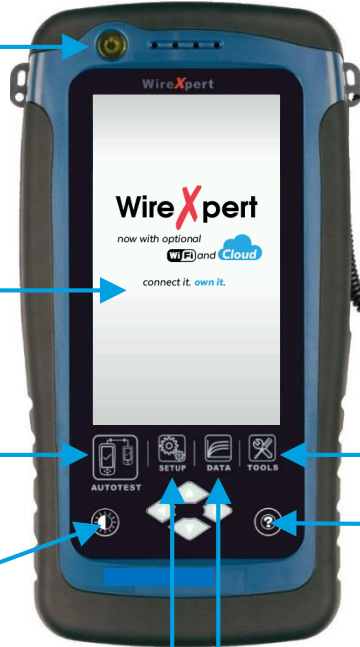
ON/OFF switch

Touchscreen

Menu button: AUTOTEST
Start testing

Adjust display brightness

Menu button: SETUP
Manage settings for device and measurement



Menu button: TOOLS
Carry out individual measurements, FieldCal, etc.

Menu button: DATA
Open measurement results database

Mini USB: Port to transfer the measurement data to a PC with eXport software (only on LOCAL unit)

USB: Transfer the measurement data using USB stick (only on LOCAL unit)



Stylus for touchscreen operation

Headset Connector

Not active (used for Sync on AXT tests only)

Port for charger

Tilt stand

Measurement adapters

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Channel adapters
(copper)



Optical fiber adapter
(e.g. multi-mode)



Permanent Link adapter
(copper) plus Test Cords

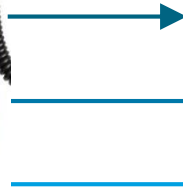


Starting the WireXpert

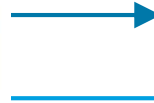
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Starting the WireXpert



Standard start screen
if calibration is still valid for minimum of 2 weeks



Start screen
if calibration is still valid for maximum of 2 weeks, message box disappears after 10 seconds



Start screen
calibration expired, message box needs confirmation to disappear

Start Screen



Connection/
headset symbol
turns red as soon as
the REMOTE and
LOCAL device are
connected to one
another



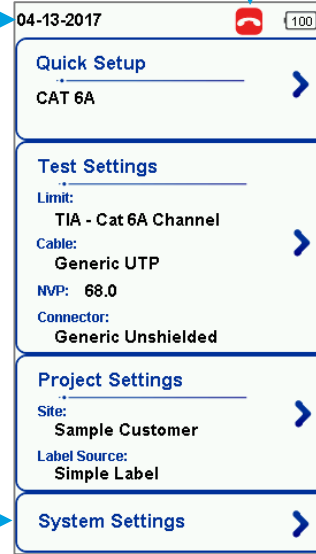
WireXpert

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Activate/
deactivate headset
(tapping on symbol)

Date display

Device
settings



Battery
display

Menu for "rapid
setting/measurement"

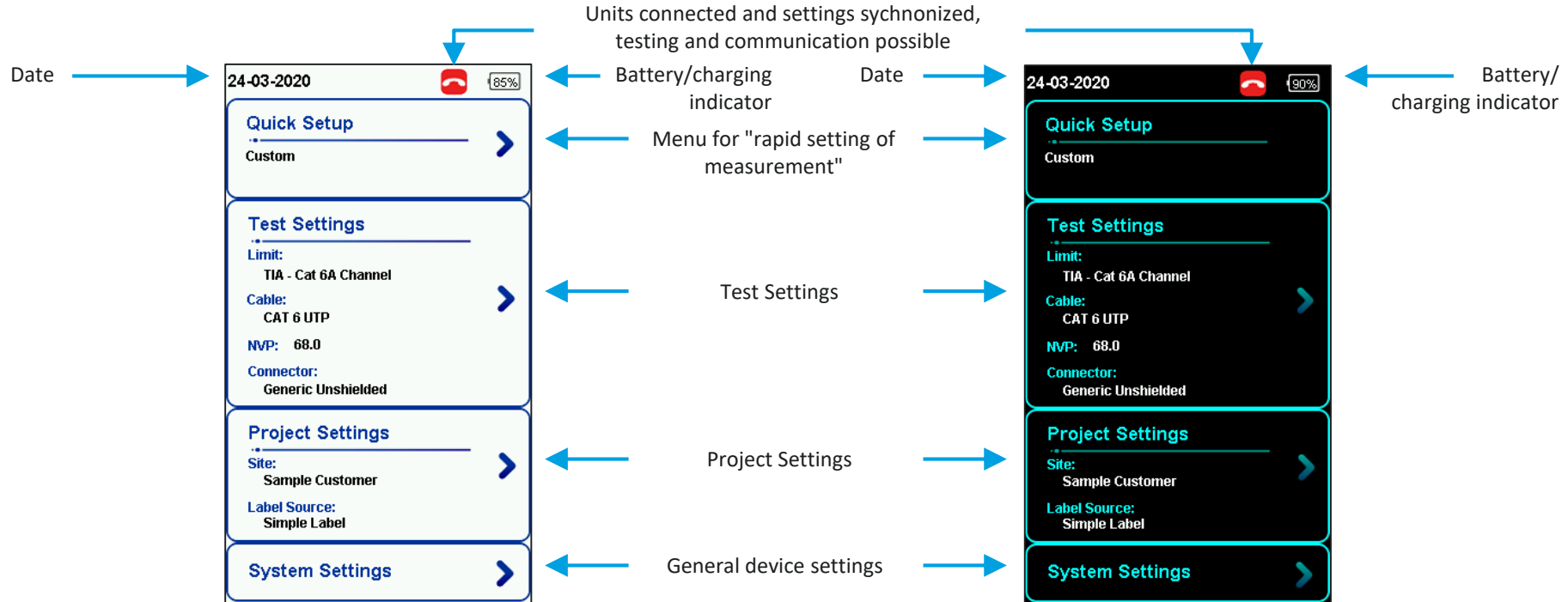
Test Settings

Project Settings

- All measurement settings are made on the LOCAL device and synchronized with the REMOTE device during the first connection
- Some System Settings, such as Language and Audio Settings, can be set individually on both devices.

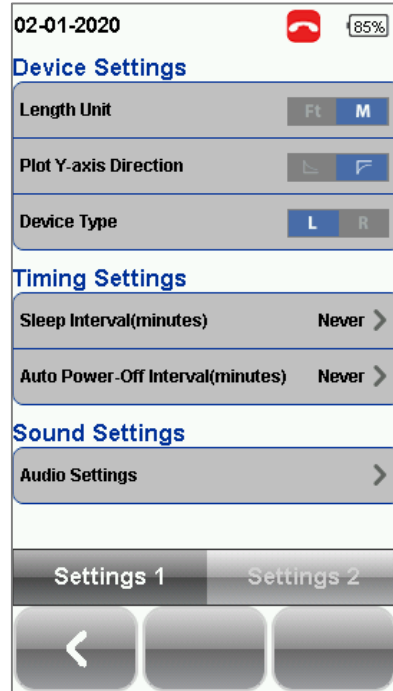
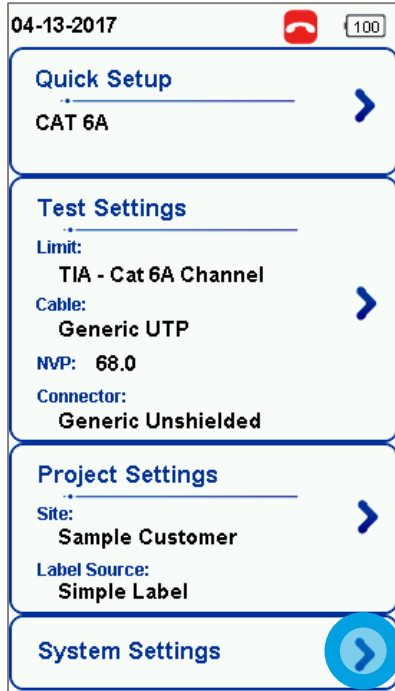
Local

Remote



Device specific settings (Page 1)

Start screen



← Unit of length measurement

← Define graph orientation

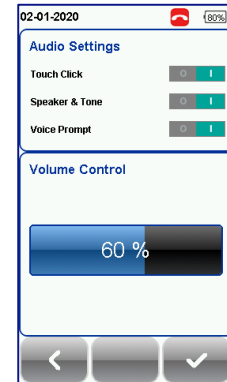
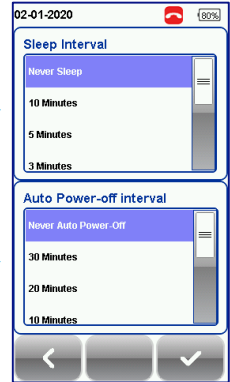
← Defining device type LOCAL or REMOTE

← Set standby mode (dark screen)

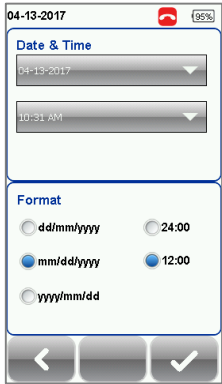
← Automatic shutdown

← Audio Settings (individual for LOCAL & REMOTE)

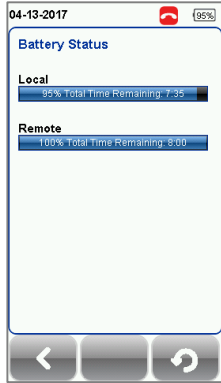
← Settings page navigation



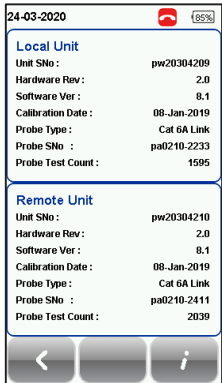
Device specific settings (Page 2)



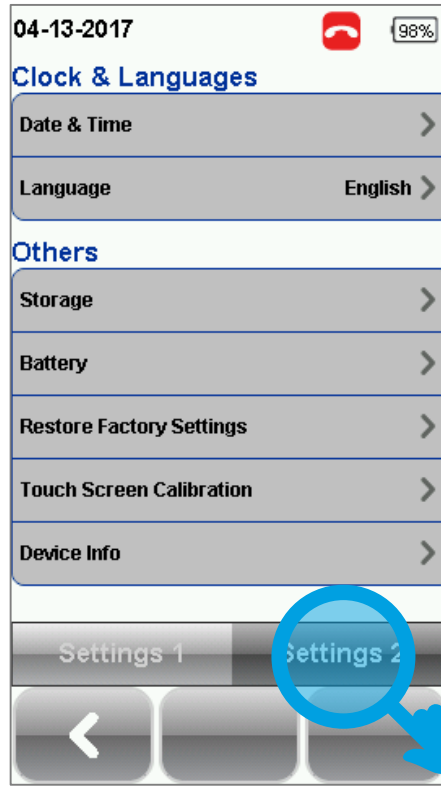
Set date & time



Display battery charge status



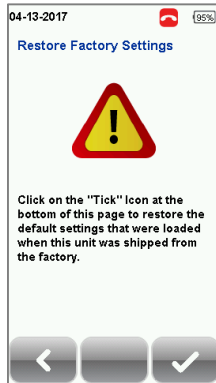
General device information



Change system language
Language can be set differently for LOCAL and REMOTE device

Query storage space

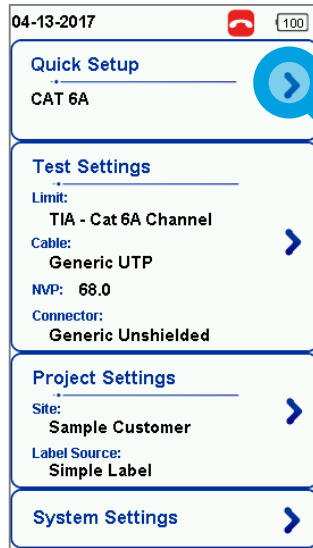
Reset settings to factory default



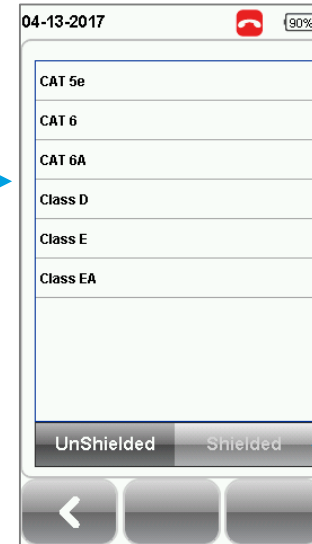
Quick Setup of measurement parameters

Quick Setup

Start screen



Quick selection
of the performance Category/Class of
the cabling system to be measured



Quick selection
of unshielded
or shielded system

INFO:

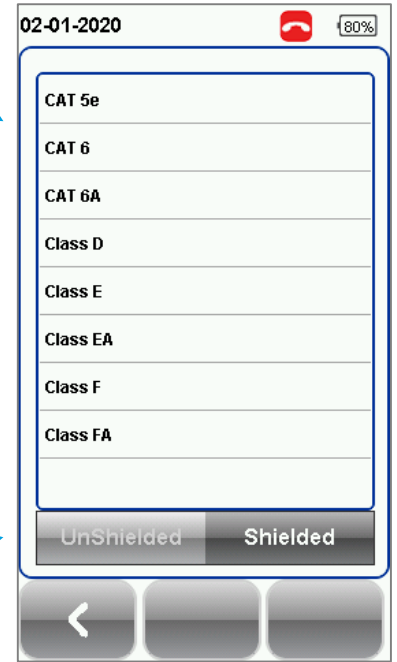
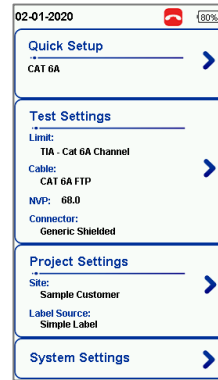
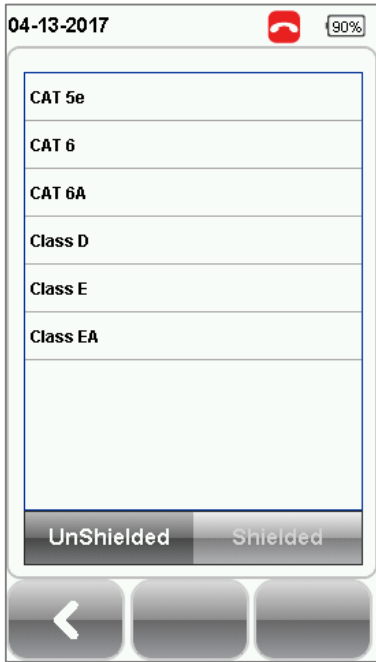
What is the "Quick Setup"?

The "Quick Setup" menu is designed for checking a system or carrying out a repeat measurement. By using the Quick Setup, you have configured the device in seconds for an acceptance measurement.

IMPORTANT: These adjustments can only be carried out from the LOCAL device

Quick Setup

Select Category/Class of measurement and all other settings will be set accordingly based on used type of adapters (here: Channel-Adapter)



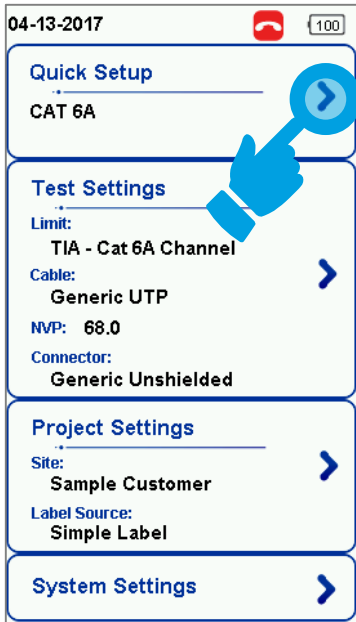
Switching from UnShielded to Shielded system

Overview: Defined standards and their description in the WireXpert / FW version 8.x

	100 MHz	250 MHz	500 MHz	600 MHz	1000 MHz	1600 MHz	2000 MHz
USA	ANSI/TIA 568.2-D Category 5e	ANSI/TIA 568.2-D Category 6	ANSI/TIA 568.2-D Category 6A				ANSI/TIA 568.2-D Category 8
Permanent Link	Cat 5e Permanent Link	Cat 6 Permanent Link	Cat 6A Permanent Link TIA TSB-155 Link				Cat 8 Permanent Link
Channel Link	Cat 5e Channel	CAT 6 Channel	Cat 6A Channel TIA TSB-155 Channel				Cat 8 Channel xxAWG
Inter-national	ISO/IEC11801-1: Class D	ISO/IEC11801-1 Class E	ISO/IEC11801-1 Class E _A	ISO/IEC11801-1 Class F	ISO/IEC11801-1 Class F _A	ISO/IEC11801-1 -9901 (TR) „40G“	ISO/IEC 11801-1 Class I & II
Permanent Link	Class D 2 Connection Link Class D 3 Connection Link	Class E 2 Connection Link Class E 3 Connection Link	Class EA 2 Connection Link Class EA 3 Connection Link TR24750 - Link	Class F 2 Connection Link Class F 3 Connection Link	Class FA 2 Connection Link Class FA 3 Connection Link		Class I Link Class II Link
Channel Link	Class D Channel	Class E Channel	Class EA Channel TR24750 – Channel	Class F Channel	Class FA Channel	TR11801-9901 Channel e TR11801-9901 Channel y	Class I Channel Class II Channel
Europe	CENELEC EN50173-1 Class D	CENELEC EN50173-1 Class E	CENELEC EN50173-1 Class E _A	CENELEC EN 50173-1 Class F	CENELEC EN50173-1 Class F _A		
Permanent Link	Class D Config A B D Class D Config C	Class E Config A B D Class E Config C	Class EA Config A B D Class EA Config C	Class F Config A B D Class F Config C	Class FA Config A B D Class FA Config C		
Channel Link	Class D Channel	Class E Channel	Class EA Channel	Class F Channel	Class FA Channel		



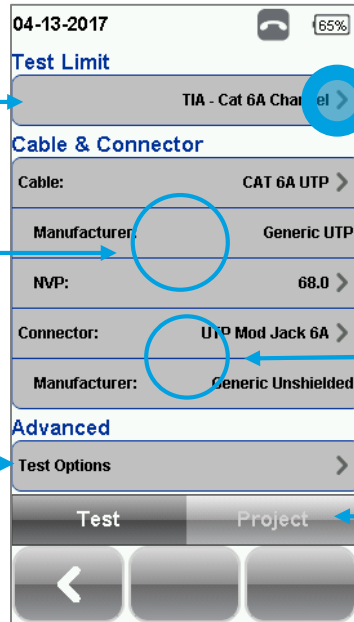
Selection of Standard



Display of the currently selected standard

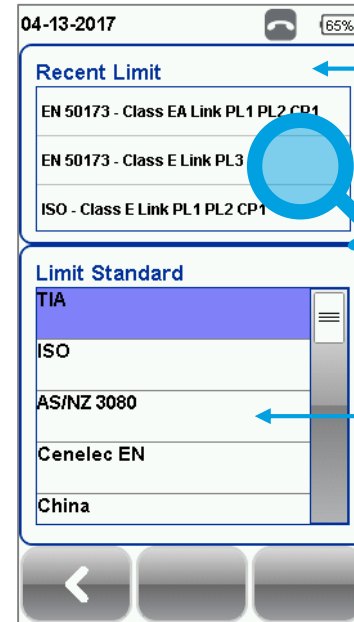
Display of the selected cable type and its properties (NVP)

Additional test settings



Display of the selected connector

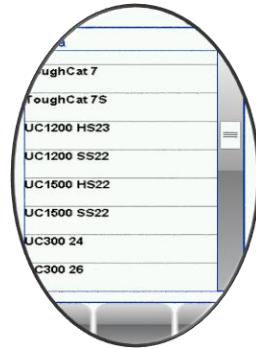
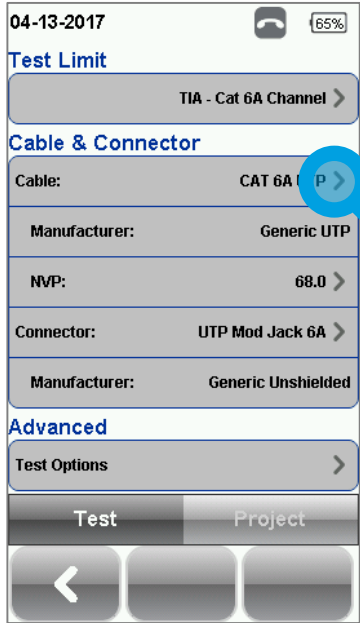
Shortcuts for rapid navigation between Test and Project settings



Quick selection of the last three standards selected

Standards database for selecting a defined measurement limit set (see previous page for correct selection)

Selection of Cable type

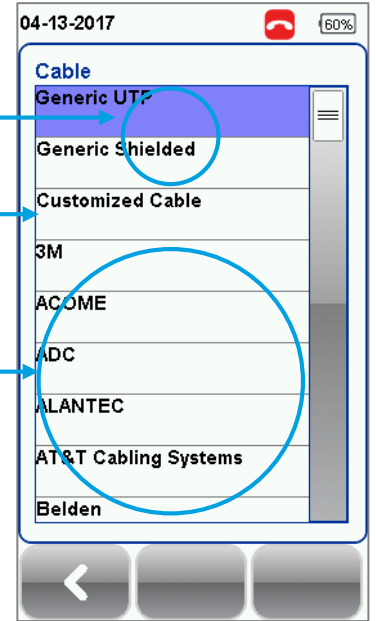


Example:
DRAKA Cables in database

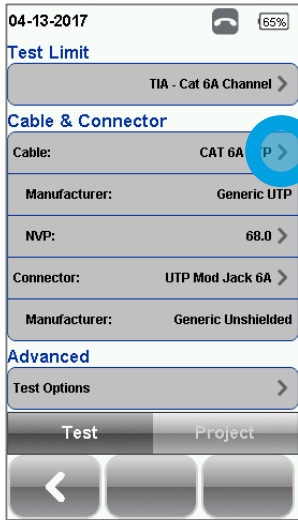
Selecting pre-defined cable types

Menu for creating your own cable types

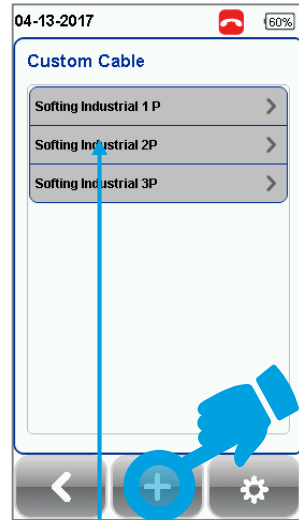
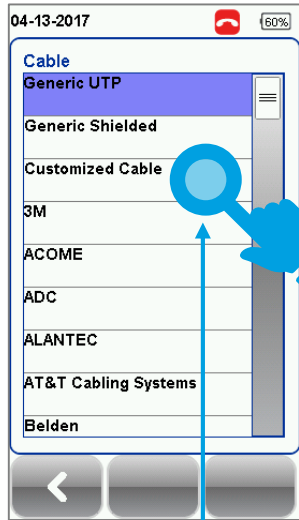
Database of cable manufacturers for selecting a cable with stored NVP value of that cable



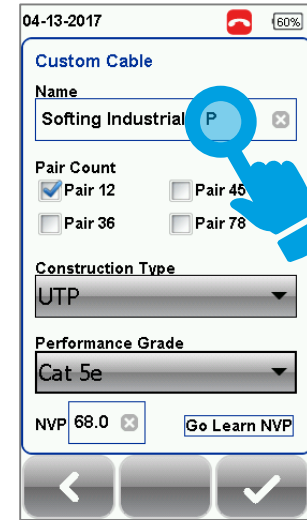
Creation of a customer defined cable type



Select Customized Cable to create your own cable type

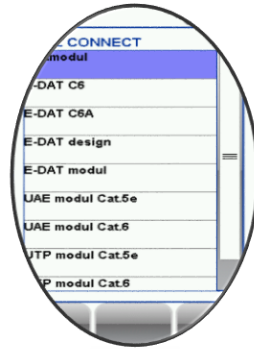
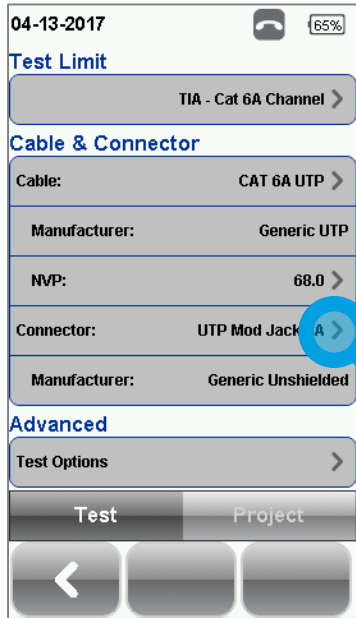


Overview of already created own cable types



- Enter name (click on the text field in order to open the input keyboard)
- Select wire pairs present
- Select construction and category
- Set/determine NVP value
- Save new cable type

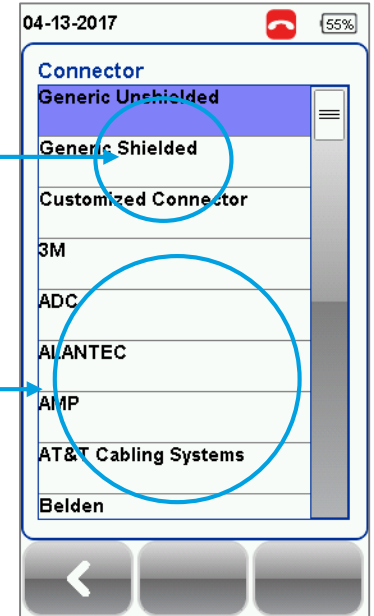
Selection of Connector type



Example:
Extract from
METZconnect database

Select generic connector types or create your own connector type

Database with component manufacturers and stored connector types of the manufacturer



Creation of a customer defined connector type

04-13-2017 65%

Test Limit

TIA - Cat 6A Channel >

Cable & Connector

Cable: CAT 6A UTP >

Manufacturer: Generic UTP

NVP: 68.0 >

Connector: UTP Mod Jac 6A >

Manufacturer: Generic Unshielded

Advanced

Test Options >

Test Project

04-13-2017 55%

Connector

Generic Unshielded

Generic Shielded

Customized Connector

3M

ADC

ALANTEC

AMP

AT&T Cabling Systems

Belden

04-13-2017 50%

Custom Connector

Softing Ind. M12D >

Softing Ind. M12X >

04-13-2017 50%

Recent Connector

Name

Softing Ind. M12X

Construction Type

Shielded

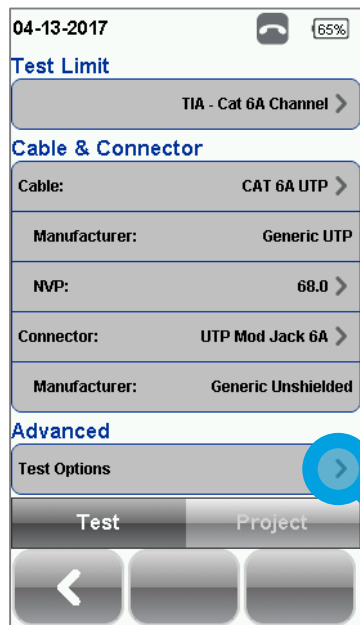
Performance Grade

Cat 6A

- Enter name (click on the text field in order to open the input keyboard)
- Select construction and category
- Save new connector type

Overview of already created own connector types

Advanced Test Options



02-01-2020 75%

Test Option

- Locator
- Cable Pairing Type T568- A B
- Autotest On Connection
- Direct Attach
- AC Wiremap
- Crossover
- DCRU
- Shield Integrity

General Lab

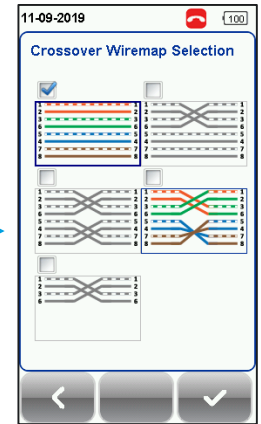
Annotations:

- Activate/deactivate fault locator (troubleshooting tool) → Locator
- Start Autotest upon connecting Yes/No → Autotest On Connection
- Activate/deactivate hybrid measurement (Use channel and link adapter in one measurement) → Direct Attach
- Measurement of DC Resistance Unbalance Parameters (only selectable if appropriate adapters are plugged in) → DCRU
- Verification of Shield Integrity (only selectable if appropriate adapters are plugged in) → Shield Integrity

Color scheme T568A or T568B

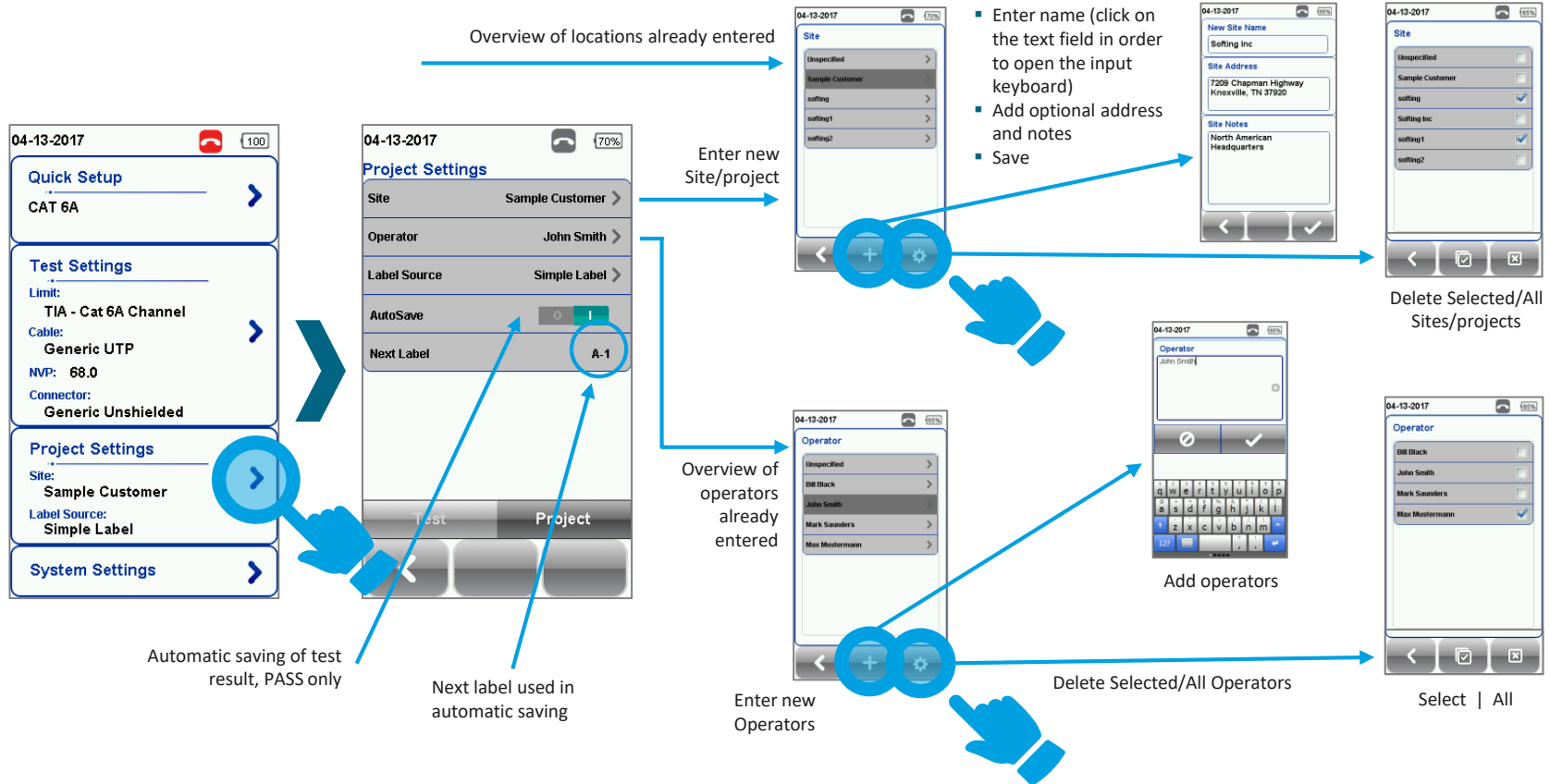
Activate wiremap measurement via PoE Midspan device

Selection of wiremap scheme(s) for testing against Application Standards



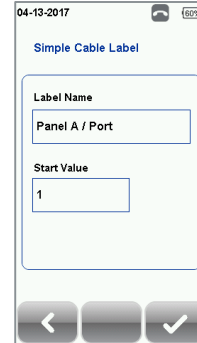
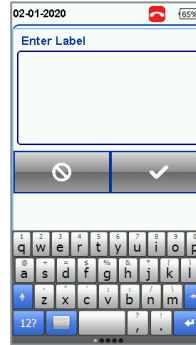
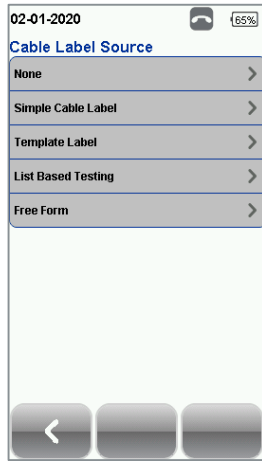
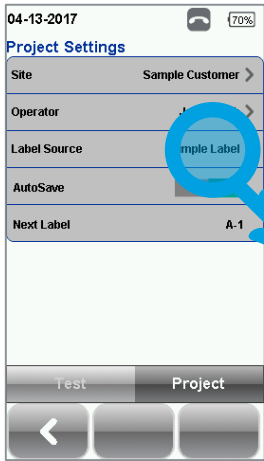
Project Settings

Sites and operators

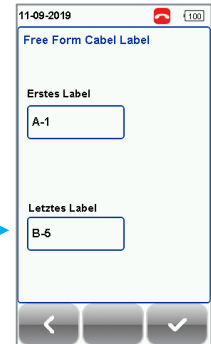
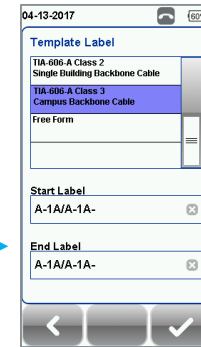


Project Settings

Selecting and defining measurement labels



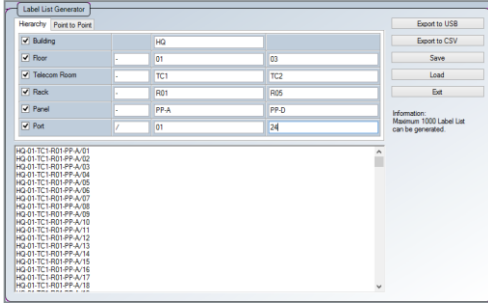
Based on TIA-606-A



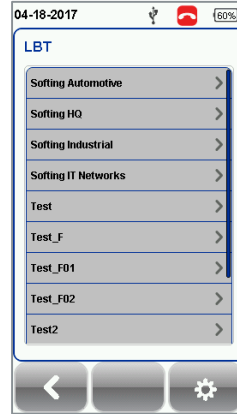
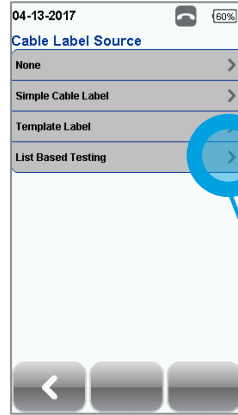
- **None:**
 - Each measurement run has to be named manually
- **Simple Cable Label:**
 - Free definition with up to 70 characters and counting function at the end of the label
- **Template Label:**
 - Counter scheme based on TIA-606-A
- **List Based Testing:**
 - Option of loading site specific label lists for major projects created in eXport PC software into tester (see next slide)
- **Free Form:**
 - Counter scheme based on self defined scheme reflecting complex naming requirement

Project Settings

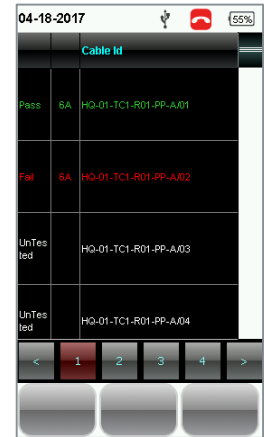
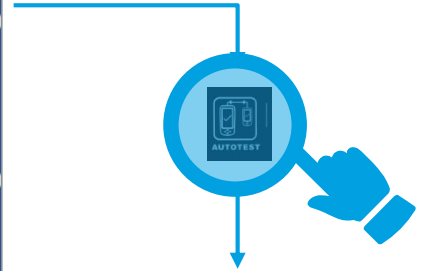
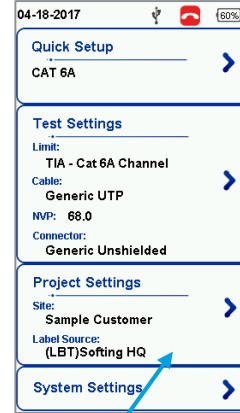
Using List Based Testing



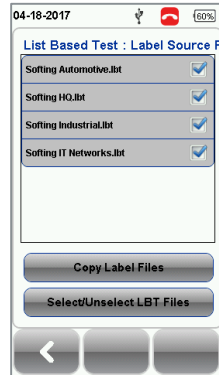
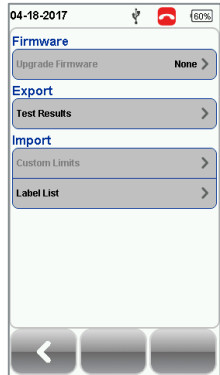
Defining Label Lists in eXport software



Selecting Label List for testing



Testing guided by Label List



Importing Label Lists into WireXpert via USB stick

Initiate AUTOTEST - No REMOTE connected

The AUTOTEST button can be pressed from any menu in order to commence measurements



No REMOTE connected!



- If no REMOTE is found, the tone generator starts (progress bar)
- Possibility to localize port with inductive receiver
- Automatic switch-off of the tone generator and start of measurement on contact with REMOTE

Commencing measurements with WireXpert

Initiate AUTOTEST - REMOTE connected

The AUTOTEST button can be pressed from any menu in order to commence measurements



Progress bar display on LOCAL and REMOTE device whilst AUTOTEST is carried out

Commencing measurements with WireXpert

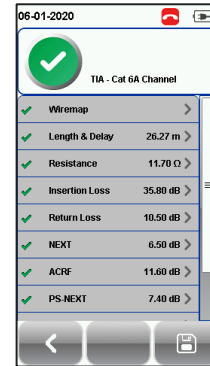
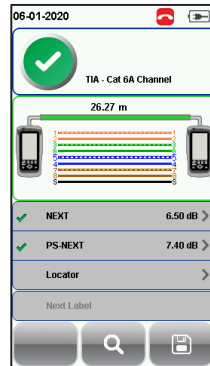
AUTOTEST finished- Viewing results

Autotest runs

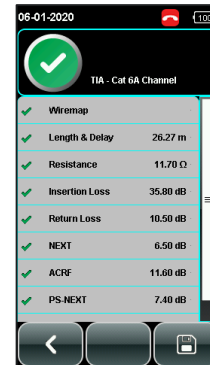
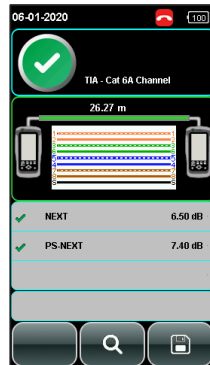


Result of Autotest

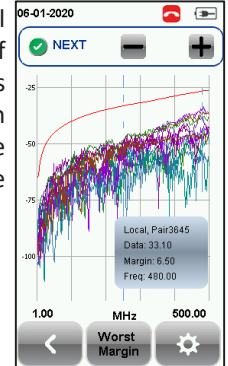
LOCAL



REMOTE



Graphical representation of measured values displayed in relation to the limit line



Saving measurement results (manually)

Results display on LOCAL device

Results display on REMOTE device



Locator function for troubleshooting of NEXT and RL faults (only possible from LOCAL device)

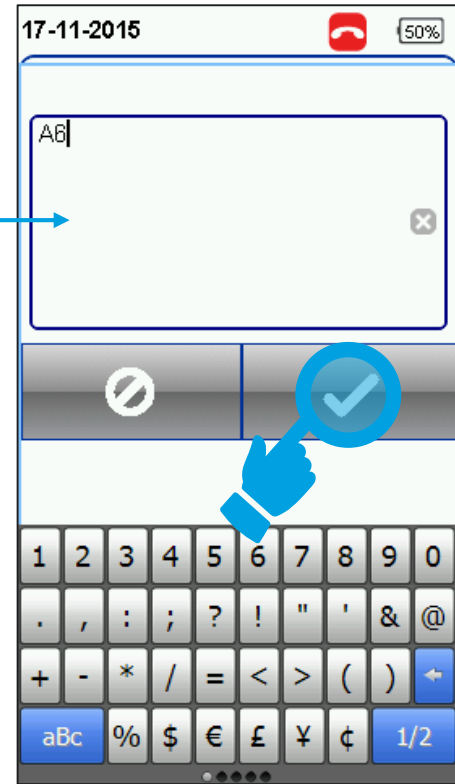
Results saving possible from LOCAL and REMOTE device



Saving measurement results (manually)



The label can be changed from both devices, LOCAL and REMOTE, prior to saving

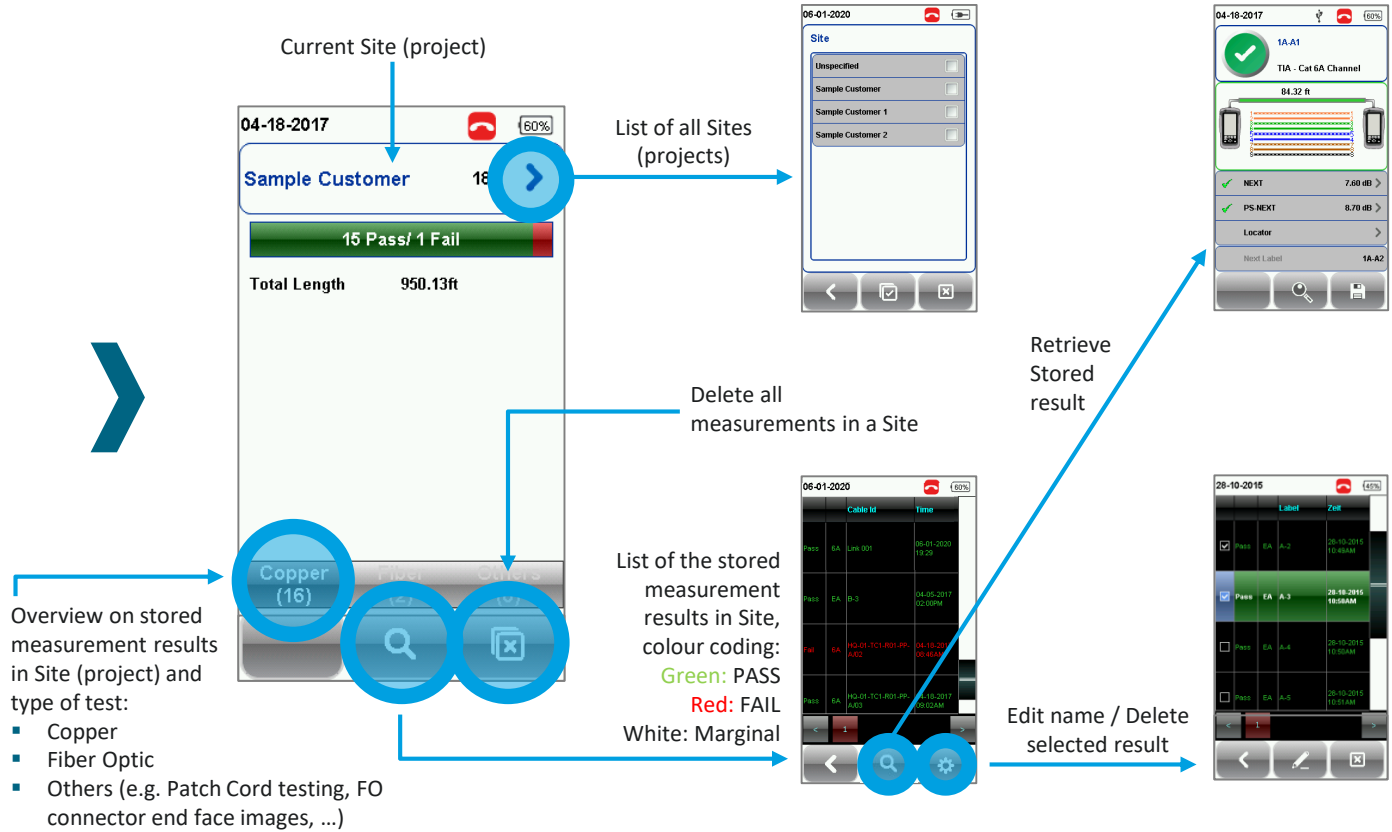


DATA menu

Retrieving measurement results

WireXpert

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Exporting stored results via USB stick



Mini USB:
Port to transfer the measurement
data from internal memory using to
a PC with eXport software

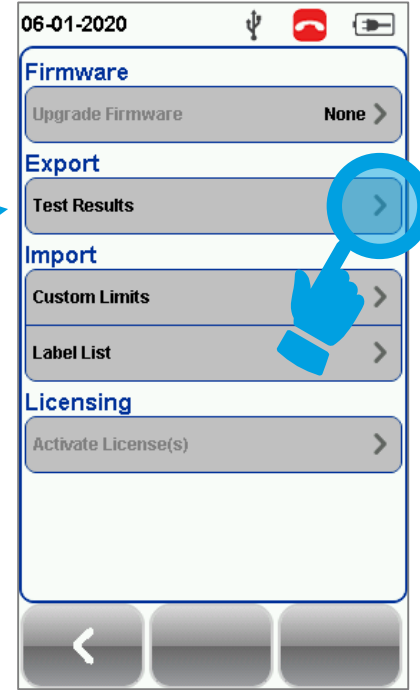
USB port for
connecting a
USB stick



IMPORTANT

Measurement results are only stored
on the LOCAL device and can only be
transferred from a LOCAL device

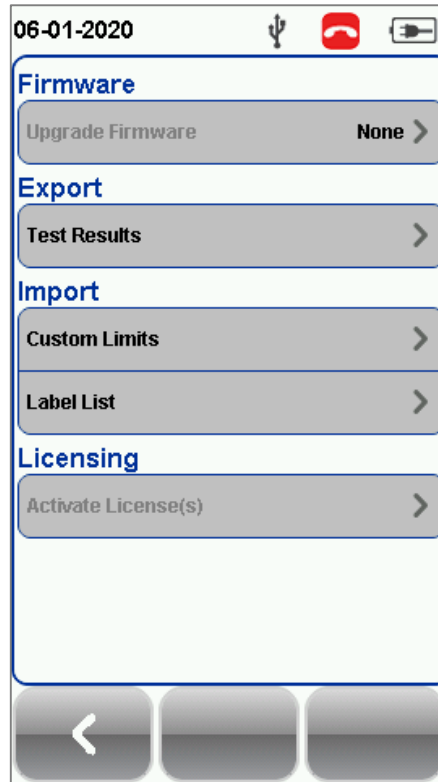
Display after connecting the
USB stick to the LOCAL device



Additional functions via USB interface



USB port for connecting a USB stick



Firmware Update

- Via USB stick
- Update files copied from eXport to USB stick

Export

Test Results

Selective **export of test results** from internal memory

Import

Custom Limits

Import of:

- Customer defined test limits

Label List

- Label List prepared in eXport

Licensing

Activate License(s)

Upgrading the unit to higher bandwidth or extended functionality via software licensing

TOOLS menu (1)



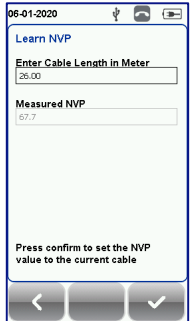
WireXpert

optimize!
softing

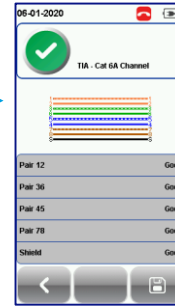


Set Reference using:
(1x Link Adapter, 1x
Channel-Adapter and
1x PL Test Cord)

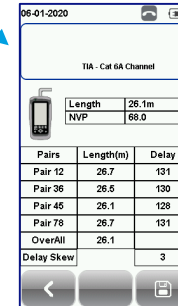
Start Set
Reference



Determining NVP
values using a
known cable length
(>30m)

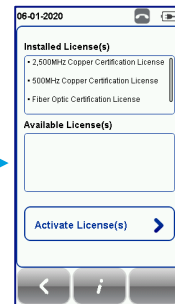


Wiremap test, only



One-sided measurement
on Length and Delay

License menu
(Enhancements)



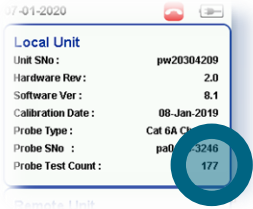
Contact Information
(Softing Branches)

TOOLS menu (2)

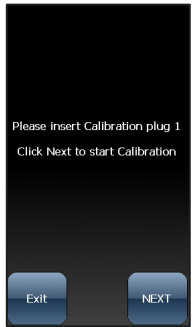
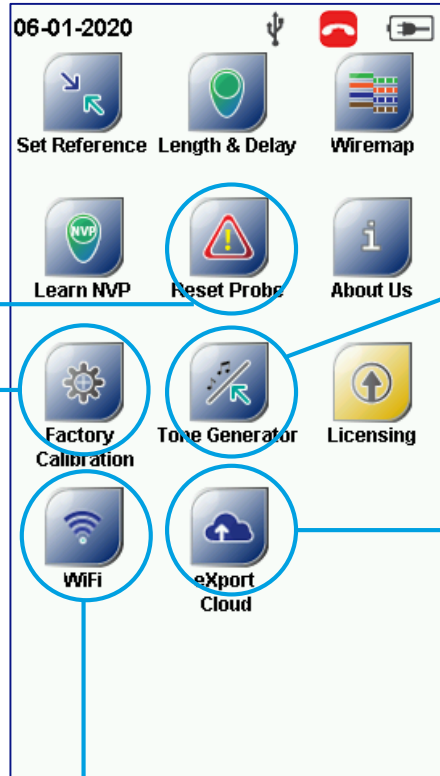


WireXpert

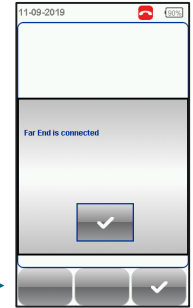
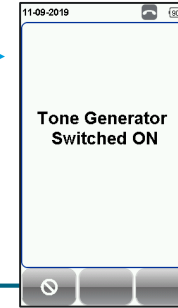
optimize!
softing



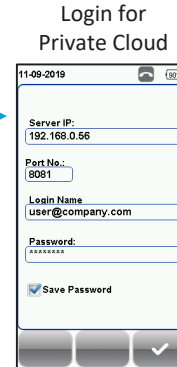
Reset of measurement counter in Permanent Link adapter (e.g. when changing test cords)



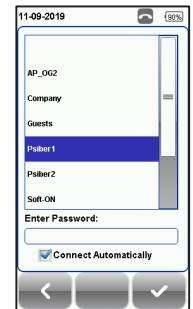
Service- and calibration menu (Access for Softing technicians only)



Error message if REMOTE connected



Setup of WiFi connection for data exchange with Private Cloud (optional WiFi dongle at WireXpert required)



Optional adapters to WireXpert (excerpt)

Class F_A / Class II adapters



COAX adapters



Fiber Optic adapters for SM and MM (EF)



Industrial adapters



Patch cord test adapters



DCRU adapters



Support und Service

optimize!
softing

North America & Canada

Softing Inc.
7209 Chapman Highway
Knoxville, TN 37920
USA
Tel: +1.865.251.5252
Fax: +1.865.579.4740
E-Mail: sales@softing.us

China

上海竣福汀网络地址
上海竣福汀网络有限公司
上海市徐汇区田林路 388 号
新业大楼 #01-208 室
邮区 200233
电话: +86-21-54133123
传真: +86-21-54133123
电子邮件: china-sales.itnetwork@softing.com

EMEA

Softing IT Networks GmbH
Richard-Reitzner-Allee 6
85540 Haar
Germany
Tel: +49-89-456 56 660
Fax: +49-89-456 56 656
E-Mail: support.itnetworks@softing.com

France

Softing SARL
87 Rue du Général Leclerc
94000 Créteil
France
Tel: +33 (0) 1 45 17 28 05
Fax: +33 (0) 1 45 17 28 06
E-Mail: info.france@softing.com

Asia/Pacific

Softing Singapore Pte Ltd
73 Science Park Drive
#02-12/13 Cintech I
Singapore Science Park 1
Singapore 118254
Tel: +65 6569 6019
Fax: +65 6899 1016
E-Mail: asia-support.itnetworks@softing.com

Italia

Softing Italia Srl
Via M. Kolbe 6
20090 Cesano Boscone (MI)
Italia
Tel. +39 02 4505171
E-Mail: info@softingitalia.it

www.softing.com
itnetworks.softing.com

