

Futronix Co.

609 Lee On Building
70 Hung To Road, Kwun Tong
Kowloon, HONG KONG
Tel : (852) 3580 7725
Fax : (852) 3753 4800

website : www.futronix-hk.com e-mail : info@futronix-hk.com

FWWT22DF-01-17-2005

Value+



WT22 DEF Manual

The Value+ Model WT22D, WT22E and WT22F digital wire tracker (the equipment) is for circuit identification. By applying the digitalize signal, the equipment can minimize the noise during detection. To help the users minimizing their workload, the equipment is also designed for using on PoE-capable devices.

With careful use, the equipment will provide years of reliable service.



TABLE OF CONTENT

Read Before Use – Safety Information	1
The Equipment	2
Transmitter	2
Receiver	3
Operating the Equipment	3
A. Select Between Digital and Analogue Tracing Signal	3
B. Tracing Pairs	4
C. Tracing Cables	5
D. Tracing Phone Lines	6
E. Tracing Data / LAN Cable	6
F. Cable Testing	7
G. Phone Line Voltage Testing (WT22D/E)	8
H. Battery Voltage Polarity Testing (WT22D/E)	8
I. Continuity Test (WT22D/E)	8
Auto Power Off	9
Specification	10
Maintenance	11
Changing Battery	11
Cleaning	12

READ BEFORE USE – SAFETY INFORMATION

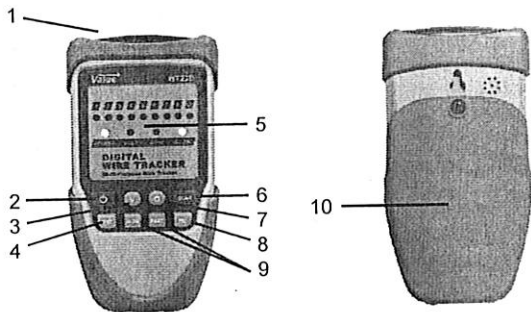
WARNING

To ensure safe operation and service of the equipment, please follow these guidelines:

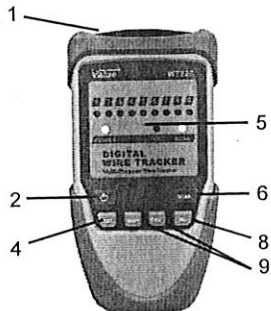
- Do not use the equipment just before, during or just after an electrical storm (electrical shock / high energy overvoltage!). Please make sure that your hands, your shoes, your clothing, the floor, switches and switching components are dry.
- Trace only non-energized wiring. Contact with live circuits can result in serious injury or death. Always disconnect power to the circuit prior to using the equipment.
- Never use the cable testing features on live circuits, except only on the network cable connecting to POE enabled devices.
- Do not use the equipment if they look damaged and / or wet.
- Never use the equipment if it just brought from a place with great temperature difference.
- Avoid to use the equipment in the environment with strong magnetic fields, strong electrostatic fields and strong RF fields.
- Read the instruction before use and follow all safety instructions.
- Use the equipment only as specified in the instruction card; otherwise, the equipment's safety features may not protect you.
- Clean the case with a damp cloth and mild detergent only. Do not use abrasives or solvents.
- Replace the battery(ies) if the power indicator is flashing.
- Remove the batteries if the equipment planned to be stored for long period.
- A " Warning" statement identifies hazardous conditions and actions that could cause bodily harm or death.
- A " Caution" statement identifies conditions and actions that could damage the Meter or the equipment under test.

THE EQUIPMENT

TRANSMITTER



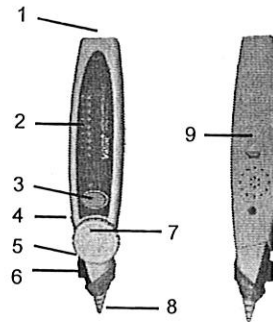
WT22D/E



WT22E

- 1) External Probe Connectors
- 2) Power Switch
- 3) Voltage Detecting Button
- 4) Cable Testing Button
- 5) LED Indicators
- 6) Cable Tracing Button
- 7) Continuity Test Button
- 8) Tone Adjusting Button
- 9) Pairing Speed Adjusting Button
- 10) Battery Door

RECEIVER



- 1) RJ45 Connector
- 2) Indicators
- 3) Cable Tracing Button
- 4) Flashlight Switch
- 5) Scan Ready Indicator / Low Battery Indicator
- 6) Flashlight
- 7) Volume Adjusting Wheel
- 8) Tracing Probe
- 9) Battery Door

OPERATING THE EQUIPMENT

A. SELECT BETWEEN DIGITAL AND ANALOGUE TRACING SIGNAL

Press "SCAN" button on the transmitter to switch between sending out digital and analogue tracing signal. The SCAN indicator will switch on to indicate the transmitter is now sending signal out.

Press "SCAN" button on the receiver to switch between :

Functions	Standby Indication
Receiving digital signal with sound indication on finding the correct wire	Blue scan indicator switch on
Receiving digital signal with vibrating indication (WT22E) on finding the correct wire	Blue scan indicator flashing
Receiving analogue signal with sound indication on finding the correct wire	Red scan indicator switch on

B. TRACING PAIRS

- 1) If the cable does not connect with plug, Connect the cable with alligator clip to the transmitter and connect the red clip to one of the tracing wire and the black clip to the other. Or, plug in the tracing wire to either the RJ-11 or RJ-45 on the transmitter if the cable is connected with plug.
- 2) Switch on the transmitter.
- 3) Push the "SCAN" button on the transmitter and select the signal as Section A mentioned. The SCAN indicator will switch on as shown in Section A.
- 4) Activate the receiver by holding down the "SCAN" button for 3 seconds. The scan indicator is now standby to receiving signals. Select the suitable signal and indication mode as per Section A mentioned.
- 5) At the opposite end of the wire, move the receiver tip near each pair. The pair with the loudest tone is the intended pair.
- 6) After use, switch off the receiver by holding the "SCAN" button down for 3 seconds and also holding down the Power button for 3 seconds to switch off the transmitter.

Note:

- When searching by analogue signal, press "Hz" button can change the tone for easily identifying the signal from the environmental noise.
- Turn the Volume Adjusting Wheel to adjust the sound indicator to a comfort level.

C. TRACING CABLES

- 1) Connect the cable with alligator clip to the transmitter.
- 2) Connect the red clip to:
 - a) A wire in the unknown cable for cables with multiple wires.
 - b) The outer shield for tracing a shielded / coaxial cable.
- 3) Connect the black clip to :
 - a) Another wire in the unknown cable but not in the same pair or to ground for cables with multiple wires.
 - b) The center conductor or ground for tracing a shielded / coaxial cables.
- 4) If the cable has the plug, simply plug in the cable to the RJ-11 or RJ-45 plug on the transmitter.
- 5) Switch on the transmitter.
- 6) Push the "SCAN" button on the transmitter and select the signal as Section A mentioned. The SCAN indicator will switch on as shown in Section A.
- 7) Activate the receiver by holding down the "SCAN" button for 3 seconds. The SCAN indicator is now standby to receiving signals. Select the suitable signal and indication mode as per Section A mentioned.
- 8) Move the receiver towards a section of the wall where the cable could be located. When the loudest tone is obtained, the cable is located there.

Note:

- When searching by analogue signal, press "Hz" button can change the tone for easily identifying the signal from the environmental noise.
- Turn the Volume Adjusting Wheel to adjust the sound indicator to a comfort level.

D. TRACING PHONE LINES

- 1) Connect the RJ-11 cable with the transmitter and phone jack.
- 2) Switch on the transmitter.
- 3) Push the "SCAN" button on the transmitter and select the signal as Section A mentioned. The SCAN indicator will switch on as shown in Section A.
- 4) Activate the receiver by holding down the "SCAN" button for 3 seconds. The SCAN indicator is now standby to receiving signals. Select the suitable signal and indication mode as per Section A mentioned.
- 5) Move the receiver close to each phone line. The line with the loudest tone is the intended line.

Note:

- When searching by analogue signal, press "Hz" button can change the tone for easily identifying the signal from the environmental noise.
- Turn the Volume Adjusting Wheel to adjust the sound indicator to a comfort level.

E. TRACING DATA / LAN CABLE

- 1) Connect the RJ-11 / RJ-45 cable with the transmitter and phone jack.
- 2) Switch on the transmitter.
- 3) Push the "SCAN" button on the transmitter and select the signal as Section A mentioned. The SCAN indicator will switch on as shown in Section A.
- 4) Activate the receiver by holding down the "SCAN" button for 3 seconds. The scan indicator is now standby to receiving signals. Select the suitable signal and indication mode as per Section A mentioned.
- 5) Move the receiver close to each phone line. The line with the loudest tone is the intended line.

Note:

- It is allowed to plug in the testing cable to the transmitter directly if the testing cable was installed with plug.
- When searching by analogue signal, press "Hz" button can change the tone for easily identifying the signal from the environmental noise.
- Turn the Volume Adjusting Wheel to adjust the sound indicator to a comfort level.

F. CABLE TESTING

⚠ Warning

Never use the Cable Testing features on live circuits except the power from PoE devices.

The equipment is designed to test the following cables.

Network cables : IEEE 10Base-T, EIA/TIA 568A, EIA/EIA568B, AT&T258A, Token Ring
Phone lines : Both 2 and 4 lines
Any metallic connection cables

- 1) Connect the testing cable with the transmitter and receiver.
- 2) Switch on the transmitter.
- 3) Push the "TEST" button and the "OHM" indicator will switch on, the "SCAN" indicator flashing.
- 4) The result of measurement is indicated over the status of green LEDs at both devices.

Note:

Press the "SLOW" and "FAST" to adjust the scanning speed.

G. PHONE LINE VOLTAGE TESTING (WT22D/E)

Warning

Never use the equipment to test AC voltage and other high voltage circuit.

- 1) Connect the testing cable with the transmitter.
- 2) Switch on the transmitter.
- 3) Push the "V" button and the VOLT indicator will switch on to indicate the transmitter is standby.
- 4) If voltage is present in the testing cable, either the SCAN or OHM indicator will switch on.

H. BATTERY VOLTAGE POLARITY TESTING (WT22D/E)

- 1) Connect the cable with alligator clip between the transmitter and the testing 9V battery.
- 2) Switch on the transmitter.
- 3) Push the "V" button and the VOLT indicator will switch on to indicate the transmitter is standby.
- 4) If the red clip is connect to the positive side, the SCAN indicator will switch on. Otherwise, the OHM indicator will switch on.

I. CONTINUITY TEST (WT22D/E)

- 1) Plug the cable with alligator clip in the transmitter
- 2) Connect the cable with alligator clip to the two ends of the testing cable
- 3) Switch on the transmitter.
- 4) Push the " Ω " button and the OHM indicator will switch on.
- 5) SCAN indicator will switch on if the cable is good enough to let current pass though.

AUTO POWER OFF

The equipment will automatically switch off if there is no function or button press for 30 minutes.

SPECIFICATIONS

Temperature	Operating: 0°C ~ 40°C Storage: -10°C ~ 50°C
Relative Humidity	< 90%
Battery	Transmitter: 3 x 1.5V AA (R6) Receiver: 9V (6F22)
Size	Transmitter: 65 x 120 x 32mm Receiver: 35 x 187 x 29mm
Weight	Transmitter: 136g (include batteries) Receiver: 103g (include battery)

	WT22D	WT22E	WT22F
Basic Functions			
Tracing network or phone cable in bundle of wires	✓	✓	✓
Digitalized tracing to increase the accuracy	✓	✓	✓
Tracing cables connected to ethernet hub with POE support	✓	✓	✓
Checking the correctness and quality of wire connections	✓	✓	✓
Testing network and phone circuit voltage	✓	✓	
Testing continuity of wires	✓	✓	
Maximum cable length can be tested	3km		
Output signal level	-23Vp-p		
Special Features			
Vibration indication		✓	
Emergency lighting in dark area	✓	✓	✓
Adjustable loudness of buzzer	✓	✓	✓
Change of buzzer tone for identification of buzzer sound	✓	✓	✓
Low power indication	✓	✓	✓

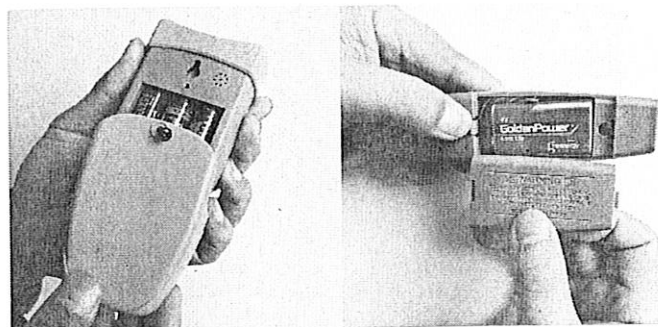
MAINTENANCE

CHANGING BATTERY

Warning

To avoid shock, injury, or damage to the equipment, remove all the connection before opening the battery doors.

Replace the battery if the power indicator on the transmitter is flashing and/or the low battery indicator on the receiver is flashing in red. To replace the battery, switch off the transmitter. Open the battery doors as following photos.



Replace the 3 x 1.5V AA (R6) batteries for the transmitter and 1 x 9V (6F22) battery for the receiver.

CLEANING

Caution

To avoid damaging the equipment, do NOT submerge them in water. Do not use abrasive cleaners, they will damage the case.

Wipe the case with a damp cloth and mild detergent. Do not use abrasives or solvents. Dirt or moisture in the jacks can affect the measurement.