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### An Engineers Best Friend? Should it be B.O.B or B.E.R.T?

BOBs are the most simple and yet the most useful piece of test equipment you can lay your hands on. A large proportion of problems that occur during installations is when equipment just will not talk to each other. The cause of this lack of communication is most likely because one of the control signals on the interface (X.21, V.35, V.24 or RS-449) is not showing the correct level (either positive or negative) or maybe even not be present at all. The only way you will find out what's wrong is by using a breakout box (BOB). Simply plug a BOB between the two pieces of equipment you are having trouble with and take a close look at the LEDs.

In a good BOB, the LEDs will shine RED (positive), GREEN (negative), ORANGE (signal present) or NO LIGHT (no connection). By following the easy to follow instructions, you will very quickly determine if the problem lies in the physical connection or not. Another very useful role provided by BOBs is when you need to call one of our engineers for help. If you have a breakout box, the engineer will use it as his eyes over the phone and will be able to solve the problem a lot faster and more accurately. BERTs are the next logical step up from the BOB. They are still a very simple tool to use but very effective at determining where errors are being generated in a link. Now that you have got your link up and running using a BOB to sort out any minor glitches, you find out that your link is giving errors and your users are not very happy. For example take a link between points A and B made up of two line drivers. The errors could be coming in from any of the line drivers, the line itself or from the end user's equipment. Easy, simply isolate each device in turn and perform a BERT test. Start by performing a loop-back test on user A's equipment (this can easily be done if you have a breakout box). Have user A transmit some data and check to see if it is returned to his/her computer in good condition. Next loop the line side of the first line driver and connect the BERT tester to the digital side. Send a bit pattern and check for errors.

And so on until you find the source of the problem. You can go on using the BERT tester until you have eliminated all the equipment and pinpointed the problem on the line for instance, or anywhere else. ANALYSERS are the cream of testers and only justify their cost when the user has a large Network. Analysers start as very simple to use pieces of equipment that simply display the actual data being transferred between two or more devices, and go up to very complex pieces of equipment that are able to look at the control signals as well as the data in any format the user may need to. Today's Network analysers even display cable lengths, break points on the Network, compliance with laid down specifications, Network usage, etc. Different analysers show the results in different types of displays, from simple multi-line LCDs, to complex high density dot matrix LCDs, to very powerful, easy to use CRTs. Please consult our engineers before you decide on the best route to take. They will be pleased to help you make this very important decision.

# Tools, Testers & Analysers



### SignalTEK Data Cable Transmission Tester

#### Description

If you install or maintain data cabling, SignalTEK CT allows you to generate PDF test reports that prove installed links run at Gigabit Ethernet transmission rates. For installers, this means having a cost-effective way to demonstrate that the copper cabling was installed correctly and is capable of supporting Ethernet applications. By proving real world performance, SignalTEK CT confirms a professional job - reducing the risk of call backs. SignalTEK CT also gives network owners the assurance that installed cabling will support bandwidth hungry services like VoIP, IP CCTV and video streaming following moves, adds and changes.

#### TODAY'S CHALLENGE

The foundation of all Ethernet networks is the physical cabling. As networks become faster and more complex they become more susceptible to disruption from external interference as well as faulty cabling and or connectors. These physical layer problems can cause a high number of server re-transmissions resulting in network drop-out or slow connection speeds. If network performance issues are to be avoided, today's installers and technicians need test equipment that not only verifies correct wiring but also confirms a links ability to transmit data at full rate.

#### TOMORROW'S SOLUTION

Uniquely SignalTEK CT proves a Links ability to support Gigabit applications by performing two primary tests; data transmission and wiremap testing. With a single press of the Autotest button, SignalTEK CT transmits 823,452 data frames between the two handsets and reports any transmission errors against performance criteria laid down by the IEEE 802.3ab Gigabit Ethernet Standard. It takes only 1 bit of data to get corrupted or lost to give rise to a transmission test failure. Autotest also measures cable length and checks for wiring faults such as crossed pairs, opens, shorts and split pairs. Simple pass/fail results are displayed once the Autotest is complete which can be automatically saved for later review or download.

#### TEST REPORTING

SignalTEK CT automatically generates test reports in PDF format. Reports can be uploaded to a removable USB memory stick for later PC import. The summary page of each report can be customised to include logo, company and operator details. The summary provides an overview for each link tested including date and time of test, the overall result of the wiremap and data tests, the Ethernet rates that the cable can support, and the individual and total cable lengths. Detailed information relating to each tested link is reported on subsequent pages. This includes a graphical image of the wiremap, pass/fail information, length per pair, frame errors and data rate.



#### FEATURES

- Fast & Flexible
  - Fast Autotest provides proof of network performance in seconds
  - USB port enables rapid transfer of test results to memory stick
  - Support for shielded and unshielded twisted pair cable including Cat 5e, Cat 6, Cat 6A and Cat 7 (TIA 568A and 568B wiring schemes)
  - Stores up to 5000 tests to accommodate even the largest jobs
  - Ability to identify and trace cables with a compatible amplifier probe (62-164)
- Intuitive
  - Automatic generation of format test reports makes documentation effortless
  - User-friendly menu structure for trouble-free operation and minimal training
  - Simple cable naming and job creation enhances on-site productivity
- Dependable
  - Tests against IEEE802.3ab to assure cable performance against a recognised international standard
  - Field replaceable RJ45 contacts eliminate downtime from worn or damaged connectors
  - Rugged design provides protection against knocks in the field
  - No requirement for annual calibration reducing cost of ownership

Order Code	Description	Price
<b>G-SignalTEK CT</b>	SignalTEK CT Data Cable Transmission Tester. Includes 1 x display, 1 x remote, 2 x NiMH batteries, 2 x patch cables 30cm, Cat5e STP, 2 x power supply with EU/UK/US adaptors, 1 x usermanual 1 x carry case	<b>£1,250.00</b>

### RWC100K Real World Certifier

#### Description

In addition to the normal distance, opens, shorts, distance to fault and wire map, the Real World Certifier (RWC) performs sophisticated timing, crosstalk and cable construction tests to display cable category (Cat 5E, CAT6, etc.), propagation delay and skew. This greatly improves your installation skills because the RWC spots slightly under-crimped connections, cable coiled in the wall and other maladies that affect cable performance. Plus, you can store up to 250 test results in the flash memory for later printing using standard Excel spreadsheets. These can be emailed or given to your customer as proof of test. If you wish to test hubs, switches and NIC cards, the RWC displays the device's signal level(s) and device type (10,100,1000MB/s, half and full duplex). This is useful in determining signal strength at the end of a long cable run.



#### FEATURES

- Digital Cable Category: 3, 5 5e, 6
- Data Levels of Real Live Data (From any Device)
- Length (TDR), Splits, Opens Shorts, Wire Map
- 250 reports
- Product Dimensions 8 x 5 x 1.5 inches
- Batteries: 2 9V batteries required. (included)

Order Code	Description	Price
<b>G-RWC100K</b>	Real World Certifier	<b>£575.00</b>

Order Line: 01908 560200

Technical Help: 01908 561400

LanTEK II

Description

Superior performance, revolutionary fibre options and outstanding value makes LanTEK II the ultimate cable certification platform. Choose from three models that provide the test capabilities you need today with cost-effective upgrades should these change tomorrow; choose from 350 MHz - Class E/Cat 6, 500 MHz - Class EA/Cat 6A or 1000 MHz - Class FA/Cat 7A all with accuracy verified by ETL. Productivity on the job is assured by 11-second Class D/Cat 5e and a 14-second Class E/Cat 6 autotest times that include full graphical data storage. Certification costs and efficiency are further improved by a patented universal adapter system that lets you certify most cabling with off-the-shelf patch cords.

This unique feature eliminates the need for proprietary permanent link adapters. The LanTEK II series also offers ultimate versatility with options for Alien Crosstalk testing, certification of TERA, GG45 and EC7 Class F/FA / Category 7/7A, plus M12 Industrial Ethernet, and coaxial test adapters. The optional FibreTEK FDX modules provide the world's only dual wavelength, bidirectional fibre certification for multimode, singlemode and Gigabit application that's three times faster than existing testers. Superior price/performance - Models ranging from 350 MHz to 1000MHz available for ISO Class E/Category 6 through ISO Class FA/ Category 7A certification

Universal Link Testing

The patented testing process features universal test adapters for ISO Class D/Category 5e through Class EA/Category 6A certification. Consequently, patch cords are typically the only item that needs to be replaced when worn out or damaged. This eliminates the expense of proprietary adapters meaning more time is spent testing and less time searching for replacement parts.

Channel and Permanent Link Testing with One Adapter

Only LanTEK allows permanent link and channel certification without changing adapters. The patented DualMODE function allows cabling to be certified to two different standards with one press of the Autotest button; less than half the time it would take with any other certifier. For example, certify cabling to both ISO Class E permanent link and channel link standards at the same time, satisfying requirements from cabling manufacturers and end users without costing any more time in the field. Or certify cabling to current standards and upcoming standards, which could eliminate retesting at a later date.

Fast Test Times

ISO Class D/Category 5e certification in 11 seconds, ISO Class E/Category 6 in 14 seconds, and ISO Class EA/Category 6A in only 17 seconds with graphs! Plus enjoy improved productivity in the field with exceptionally fast fibre certification and 10 Gigabit Alien Crosstalk certification.

Cut the Power Cord

The new smart lithium battery technology provides an amazing 18 hours of use in the field. The revolutionary battery technology has two charging modes that offer the best flexibility available. Slow charge the battery overnight while it is inside the LanTEK II, or remove the battery and plug in to its dedicated charging port for a 4 hour fast charge. Plus, the batteries internal indicator automatically self-adjusts every time the pack is completely discharged and recharged, providing accurate charge readings throughout the life of the battery pack.

Three Models to Suit Any Need

LanTEK II is offered in three models: 350, 500 and 1000. The LanTEK II-350 has a measurement bandwidth of 350MHz allowing it to certify ISO Class E/Category 6 cabling and below. LanTEK II-500 sweeps to 500MHz, and is the only certifier designed specifically for ISO Class EA/Category 6A cabling. LanTEK II-1000 offers an unsurpassed 1000 MHz that goes well beyond the requirements of ISO Class F/Category 7 (600MHz), all the way to the ISO Class FA (1000MHz) standard to support shared cabling applications such as CATV, Ethernet and voice in the same cable.



Order Code	Description	Price
G-33-991	LanTEK II-350: TIA/EIA Cat. 6, ISO Class E certifier w/ Cat. 6 adapters	£4,545.00
G-33-992	LanTEK II-500: TIA/EIA Cat. 6A, ISO Class EA certifier w/ Cat. 6A adapters	£5,845.00
G-33-993	LanTEK II-1000: TIA/EIA Cat. 7A, ISO Class F/FA certifier w/ Cat. 6A adapters	£6,945.00

Contents: LanTEK II Display and Remote Handset, two smart lithium ion batteries, two 110-240V power adapters with US/EU/UK plugs, lockable semi-rigid carrying case, Cat. 6A F/FTP patch cords, USB cable, IDEAL DataCENTER data management and reporting software, two headsets, hanging straps, calibration and ETL accuracy certificate, quick reference guide, user manual on CD.

Order Code	Description	Price
G-33-990-FA01	FibreTEK FDX Multimode (850/1300nm) kit with LED light sources for standard multimode fibre, 850nm LED, 1300nm LED	£2,660.00
G-33-990-FA02	FibreTEK FDX Multimode (850/1300nm) kit with VCSEL/laser light sources for laser optimized fibre, 850nm VCSEL, 1300nm FP laser	£3,195.00
G-33-990-FA03	FibreTEK FDX Singlemode (1310/1550nm) kit with laser light sources for singlemode fibre, 1310nm FP laser, 1550nm FP laser	£3,740.00
G-33-990-FA04	FibreTEK FDX Combination MM/SM kit with LED MM sources and laser SM sources (33-990-FA01 & 33-990-FA03)	£6,240.00
G-33-990-FA05	FibreTEK FDX Combination MM/SM kit with VCSEL/laser MM sources and laser SM sources (33-990-FA02 & 33-990-FA03)	£6,660.00

Contents: Two FibreTEK FDX modules, semi-rigid carrying case, SC, FC, ST adapters for modules (2 ea), SC-SC patch cords (MM kits: 3 x 62.5µm, 3 x 50 µm; SM kits: 3 x 9 µm) compliant to ISO/IEC 14763-3 standard, quick reference guide, and electronic operation manual.

FEATURES

- High speed testing saves time and money
- Largest internal memory capacity of any cable certifier - Store over 1,700 ISO Class E/Category 6 tests with graphs
- Patented test method -
- Provides lower cost of ownership by eliminating expensive permanent link adapters
- Exceptionally fast fibre testing with FibreTE FDX - The world's first dual wavelength, bidirectional fibre certification option
- Large, ultra-bright display - 11 cm widescreen display with white LED backlighting provides easy viewing of high-frequency data plots
- Futureproof your investment - 350 MHz & 500 MHz models are fully upgradeable to 1000 MHz
- Smart lithium-ion battery technology - Exceptional 18 hour battery life with accurate, self-calibrating charge indicator

SignalTEK II

Description

Handheld qualifier designed to confirm correct installation of copper and fibre cabling capable of supporting voice, video, data and CCTV applications over 10/100 Megabit or Gigabit Ethernet. Working in environments where cable qualification is necessary to confirm correct installation, SignalTEK II is a cost-effective way to test network links to performance standards including IEEE 802.3ab. SignalTEK II is designed to test copper and fibre cabling capable of supporting voice, video, data and CCTV applications over 10/100 Megabit or Gigabit Ethernet. With multiple network troubleshooting features including wiremap by pin with distance to fault, cable tracing and verifying Ethernet connectivity, SignalTEK II is a highly versatile and cost effective handheld tool. The rubber moulded housing is perfect for the cabling installer whose workplace requires a rugged and robust tool. When working in poorly lit areas the bright, backlit colour screen displays test results clearly.

User-exchangeable RJ45 inserts and intuitive screen icons ensure the installer maximises productivity in the working day. Completed jobs can be reported upon, using the internal memory and USB interface to export results. Capable of multiple performance testing, SignalTEK II enables the IT or network administrator to operate, with confidence in the accuracy of the results, both rapidly and with minimal user training. SignalTEK II performs active network testing through hubs and switches all the way to the server. Not only does it detect and run load testing on PoE and PoE+, SignalTEK II is specifically capable of running full bi-directional Gigabit tests, providing time savings and assurance of network performance.

FEATURES

- Incorporating IPv6 compatibility, SignalTEK II provides a future-proof investment for all who need a cable qualifier.
- Full Gigabit bi-directional load testing
- Save time and improve the reliability of your test results with full bi-directional testing
- Additional Ethernet troubleshooting capabilities
- Maximise Return on Investment with the added ability to identify Ethernet,
- Power over Ethernet (PoE) and PoE+ issues, in addition to verifying Ethernet connectivity
- Suitable for both copper and fibre
- Eliminate the need to purchase and carry multiple different testers by using one device to conduct active and passive testing across both copper and fibre networks Wiremapping by pin as well as pair
- Save time on the job and locate wiremap faults more quickly and accurately by testing via both pin and pair, detecting split pairs and identifying the distance to fault
- Reporting of test results
- Simplify customer reporting and create accurate documentation on jobs undertaken using SignalTEK II to generate and store test results in standards compliant XML format. Additionally, view and export results to enable report printing
- Load test through hubs and switches
- Save money by measuring available network speed without needing to purchase a separate transmission tester



Order Code	Description	Price
G-SignalTEKII	1 x Near-End unit (copper only), 1 x Remote unit (copper only), 2 x Power module (rechargeable), 2 x Mains PSU/charger, 2 x 30cm RJ45 cable, 1 x Quick reference guide (English), 1 x User manual CD, 1 x Carrying case	£1,045.00
G-SignalTEKIIFO	1 x Near-End unit (copper and fibre), 1 x Remote unit (copper and fibre), 2 x Power module (rechargeable), 2 x Mains PSU/charger, 2 x 30cm RJ45 cable, 1 x Quick reference guide (English), 1 x User manual CD, 1 x Carrying case	£1,280.00

**WireScope 350**
**Description**

This new tester will provide comprehensive support for all current and emerging LAN cable certification standards. A fully modular design allows for both software and hardware upgradeability to ensure maximum support for future LAN and cabling standards beyond Category 6 / Class E. The frequency test range is 350MHz, with a measurement accuracy beyond the draft TIA level III specification and the hardware exceeds the proposed requirements for Category 6/Class E certification testing.

For a user friendly interface it has a bright colour touch screen to simplify navigation through menus and improves comprehension of test result data, resulting in faster operation and reduced training times. Setup instruction screens assist the operator when configuring test options, minimising the chances of inadvertently testing to the wrong limits. All settings can be defined on a PC and downloaded in a single operation, speeding the process of configuring multiple sets for the same job site testing requirements. Reports are of a professional quality so as the complexity of the cable testing standards increase there are professionally designed report layouts which include plots of test data, facilitating at-a-glance analysis of cabling quality and headroom vs. limits. The memory can be expanded with removable CompactFlash memory cards to support plot storage for all tests

**Kit Includes:**

(1) Wirescope 350, (1) DualRemote 350, (1) Nylon Carrying Case, (2) Hanging Straps, (2) AC Power supplies, (1) ScopeData Pro Software, (2) Cat 6 Basic Link Probes, (2) Cat 6 Channel Probes, (1) ScopeData Pro User Guide, (1) WireScope 350 User guide, (1) Serial Cable. (Optional Probes and Accessories are available please call for more details). When you purchase the SmartProbe you are transforming the WireScope into a high performance optical fibre power metre and loss metre. The probe acts as both transmitter and detector supporting both 850 and 1300nm measurements. The Probe will support both single and double-ended test configurations and the fibres can be tested individually or in pairs for faster testing operation. The Fibre SmartProbe provides the same ease of use and automated setup capability as the WireScope 350. Attaching the fibre SmartProbe automatically sets up the WireScope 350 for fibre testing. The same menu selections used for twisted pair testing control corresponding fibre tests. The test results are stored in the WireScope database and can be printed or uploaded to a windows based PC via the same scopeData software used to manage twisted pair test results.



Order Code	Description	Price
<b>G-WS350</b>	CAT6 LAN Cable Certification Tester	<b>£Call</b>
<b>G-FSPMM</b>	Fibre Smart Probe Kit - Multimode	<b>£Call</b>

N.B Singlemode Smart Probes also available please call for details.

**SPECIFICATIONS**

- Test parameters: 1-350MHz
- Accuracy: Proposed TIA Level III
- Memory: CompactFlash memory allows for flexible test record storage. Type II Compact Flash card slot.
- Power: Removable/Rechargeable NiMH batteries
- Dual Remote: Provides all required testing from the far end of the cable
- Interface: 60 x 160mm touch-sensitive colour LCD display screen
- Dimensions: 228 x 114 x 66 mm
- Ports: Intelligent Test Ports, Serial Port, Universal Serial Bus, Talkset Interface: 3.5mm stereo jack

**Wonder Gel - IP68 solution**
**Description**

Wonder Gel, single component green Polymeric Gel supplied in a ready to use 280ml standard cartridge. Ideal for situations where electrical connections require isolation to IP68 and/or anticorrosion protection. Wonder Gel offers a dielectric isolation of 23kV/mm and is a safe, non-toxic, eco-friendly product with unlimited shelf life and can be applied under all weather conditions.

**FEATURES**

- No mixing and no waiting, ready to use
- Operating temperature of -60 to +200C
- Dielectric strength >23kV/mm
- Does not solidify when opened, unlimited shelf life
- Provides protection to IP68



Order Code	Description	Price
<b>G-WONDERGEL</b>	Single component mixing gel	<b>£16.25</b>

**FaultCaster - Cable Fault Locator**
**Description**

The FaultCaster is a palm-top Digital Time Domain Reflectometer designed to detect and locate faults on all types of copper cable up to a distance of 2000m (6,000ft). Fast-Edge Step TDR technology enable the FaultCaster to identify opens and short circuits, and directly indicate the fault distance on an alpha-numeric LCD, with better range and resolution than existing products. An internal library of standard cable types enables accurate measurements on cables without the necessity of entering Velocity Factor information. In the event that the FaultCaster is connected to a live cable a warning will be displayed, and alarm tone sounded and testing inhibited. The FaultCaster incorporates an oscillating tone generator, that is detectable using a standard tone probe, for use in the tracing and identification of pairs within a cable.

**FEATURES**

- Low Cost Full specification Professional Digital TDR
- Measures Distances to Open or Short Circuit Faults
- Extended Measuring Range to 2000m (6000ft) on all cable types
- Fast-Edge Step TDR technology for improved range & Resolution
- Voltage Warning & Test Inhibit
- Built in Tone Generator for Pair Tracing & Identification
- Rugged & Compact - 350g (12oz)
- Water & Dust Proof to IP54
- Complete with Tool-belt holster and Test Leads



Order Code	Price
<b>G-FaultCaster</b>	<b>£207.00</b>

**LanCaster Pro ST**
**Description**

The LanCaster Pro-ST is a low cost wire map tester which tests and certifies structured cabling continuity to a TIA568A/B, USOC and ISDN standards. The new Lancaster Pro-ST displays on screen wiring configurations showing the length of all 4 pairs and length of pair to fault up to 150m (500ft). The Lancaster Pro-ST will store up to 1000 test results which can be viewed or be downloaded to a PC via the lancaster pro-st software (provided). Test results can then be customised with your corporate identity and certificates produced displaying the customer's location/job, length, cable VP and testing standard. Maintaining all the proven features of the Lancaster Pro ST identifies all common faults on wiring schemes installed to TIA568A/B USOC and ISDN standards including open circuit wires, shorted pairs, shorts between pairs, crossed pairs, split pairs, pair reversals and shield /screen continuity. In addition the Lancaster Pro-ST has a large backlit screen.

As with the standard LanCaster the Pro-ST can check installed wiring networks, alerting the operator if any telephone services are active on the cable test and can test for and indicate any other active services (10mb/s, 100mb/s, token ring etc. to prevent accidental testing of a live network. In addition, a built in tone generator (oscillator) transmits a warble tone into the cable enabling detection and tracing using a standard probe.

The LanCaster Pro-ST comes complete with one intelligent remote office identifier with a further 15 units available as optional accessories, unlike far end units on competitor products the Lancaster Pro-ST remotes are intelligent and indicate if the test has passed or failed.

Order Code	Price
<b>G-LanCaster-Pro-ST</b>	<b>£279.00</b>


**FEATURES**

- Certifies cable continuity to TIA568A/B
- Records 1000 test results/view or download to pc
- Large 128 x 64 pixel LCD with backlight
- Multi-lingual customisable certification software
- Displays time and date for recording test data
- Measures length of all 4 pairs
- 150m (500ft) measuring range
- Voltage warning and test inhibit
- Indicates all common wiring faults
- Measures and identifies length to fault
- Graphical display gives unambiguous fault indication
- Complete with 1 active remote unit and test leads
- Up to 16 unique intelligent remote unit identifiers
- Up to 7 hours continuous battery life

**LanCaster**
**Description**

The LanCaster is a professional Structured Cabling Tester and Trouble Shooter designed to speed up the on-site testing of data and voice networks, and the production testing of cable assemblies. The LanCaster identifies all common faults, including split pairs, on wiring schemes installed to TIA568 A/B, USOC and ISDN standards. In addition to this the LanCaster can inform the user which end of the installed link contains certain types of fault, enabling rapid location and correction. Before checking an installed wiring network, the LanCaster will alert the operator if any telephone services are active on the cable under test and can test for, and indicate, any other active services (10Mb/s, 100Mb/s, Token Ring, etc), to prevent accidental testing of a live network. The LanCaster also measures the length of cable or link under test, and has a built in tone generator, detectable with a standard probe, for cable tracing and identification.

The LanCaster is supplied complete with 1 active remote unit / office identifier, and there are a further 15 available as optional accessories. These can be used to identify different radial circuits at the network hub. Housed in a tough, ruggedised ABS plastic moulding, and supplied complete with test leads, the LanCaster is designed and manufactured to international standards for quality, safety and reliability


**FEATURES**

- ◆ Indicates all common wiring faults including split pairs
- ◆ Shows which end the installed link contains the fault
- ◆ Cable Length Metre, Tone Generator & Service Indicator
- ◆ Instant digital display gives unambiguous fault indication
- ◆ Rugged Palm-Top design weighs less than 350g (12oz)
- ◆ Complete with 1 Active Remote unit and test leads
- ◆ Up to 16 unique Active Remote units / Office Identifiers

Order Code	Price
G-LanCaster	£207.00

**Quintest**
**Description**

The Quintest is a simple to use Structured Cabling Tester featuring a continually sequencing green / red LED display on both main and remote units. The product caters for the most frequently used functions needed by Network Installation Engineers, and can test UTP and STP patch cables as well as installed wiring. Wire Map and Cable faults, including Short Circuit Pairs, Open Circuit Pairs, Shorts between Pairs, Pair Reversals, Transposed Pairs and other Cable Miswires are indicated. Additional LED indicators show screen continuity, when testing STP cables, and provide warning of a low battery condition. When not in use, the two halves of the Quintest, together by means of a magnetic clasp, providing protection against damage and automatically powering down. Housed in a tough ABS plastic moulding, the Quintest is designed and manufactured to international standards for quality, safety and reliability.


**FEATURES**

- ◆ Tests UTP, STP & Installed Networks
- ◆ Tests & Verifies Short circuits, open circuits, pair reversals & miswires
- ◆ 2, 3 & 4 pair voice data channels
- ◆ Instant results via LED display
- ◆ Automatically tests for Screen
- ◆ Auto power off
- ◆ Low Battery Indicator

Order Code	Price
G-Quintest	£68.00

**TX2001 Cable Fault Locator**
**Description**

The TX2001 is a professional Time Domain Reflectometer and Toner designed to detect and locate faults on copper communication cables up to a distance of 3000m (10,000ft). Advanced signal processing techniques enable the TX2001 to find opens, short circuits, splices, taps, water ingress and other more elusive impedance mismatches. A built in oscillator also provides a tone for pair tracing and identification. Selectable cable impedance matching, along with variable velocity factor, enable the TX2001 to be used to test all communication cables, including twisted pair and coaxial, with graphical results and fault distances displayed on a dot matrix LCD. The TDR/Toner is housed in a tough, ruggedised ABS plastic moulding, water and dust proof to IP54, and supplied complete with test leads and a protective tool-belt holster. The TX2001 is designed and manufactured to international standards for quality, safety and reliability


**FEATURES**

- ◆ Lowest Cost Full Specification Professional Graphical TDR
- ◆ Rugged Palm Top Design 350g (12oz)
- ◆ 5 Measurement Ranges up to 3000m (10,000ft)
- ◆ 50, 75 & 100 ohm Selectable Impedance
- ◆ Built in Tone Generator for Pair Tracing & Identification
- ◆ Suitable for testing all Communications Cables
- ◆ Water & Dust Proof to IP54
- ◆ Complete with tool-belt holster & test leads

Order Code	Description	Price
G-TX2001	Cable Fault Locator	£379.00

**TX2002 Cable Fault Locator**
**Description**

The TX2002 is a professional Time Domain Reflectometer and Toner designed to detect and locate faults on copper communication cables up to a distance of 3500m (11,500ft). Advanced signal processing techniques enable the TX2002 to find opens, short circuits, splices, taps, water ingress and other more elusive impedance mismatches. A built in oscillator also provides a tone for pair tracing and identification.

Selectable cable impedance matching, along with variable velocity factor, enable the TX2002 to be used to test all communication cables, including twisted pair and coaxial, with graphical results and fault distances displayed on a 64 x 128 dot matrix LCD. The LCD has an ultra bright electroluminescent backlight to ensure good readability in all lighting conditions. The TDR/Toner is housed in a tough, ruggedised ABS plastic moulding, water and dust proof to IP54, and supplied complete with test leads and a protective tool-belt holster. The TX2002 is designed and manufactured to international standards for quality, safety and reliability.


**FEATURES**

- ◆ Lowest Cost Full Specification Professional Graphical TDR
- ◆ Rugged Palm Top Design 350g (12oz)
- ◆ 5 Measurement Ranges up to 3500m (11,500ft)
- ◆ 50, 75 & 100 ohm Selectable Cable Impedance!!
- ◆ Built in Tone Generator for Pair Tracing & Identification
- ◆ Suitable for testing all Communications Cables
- ◆ Water & Dust Proof to IP54
- ◆ Complete with tool-belt holster & test leads

Order Code	Description	Price
G-TX2002	Cable Fault Locator	£395.00

**TX2003 Cable Fault Locator**
**Description**

The TX2003, 6k (19,000ft) range Time Domain Reflectometer weighing only 350 grams (13oz) fits neatly into the hand. With its 128x64 pixel backlight, scratch resistant display, provides accurate and easy to read fault locations on metallic cables. With a 3 nano second pulse, rise time, cable faults can be clearly identified without the need to suppress the transmitted pulse. Housed in a rugged IP54 rated ABS enclosure, the TX2003 is suitable for outside use. Using pre determined gain and pulse widths for each range setting and with only 4 control buttons, all major operating and setting parameters can be easily accessed.

A 6km cable run can be scanned in seconds, allowing the operator a view of the cable run, yet arriving quickly to the fault. By using the TX2003 scan lock facility, the cable can be continually scanned or the trace held for closer analysis.

To enable the TX2003 to test all metallic cables, four user selectable output impedances are provided 25, 50, 75 & 100 ohms. Faulty cables may be traced using the TX2003 warble tone feature, an oscillating tone is injected into the suspect power or transmission line and by using a commercially available tone tracing probe, the suspect line can be identified.


**FEATURES**

- 6 km (19,000ft)
- 0.5mtr dead Zone
- Selectable Cable Impedance
- Warble Tone Generator
- Rapid Fault Location
- Large 128x64 LCD with Backlight
- Scratch Resistant Display
- Environmental Protection IP54
- CE Approved
- 3yrs Manufacturers Warranty
- 60 Hours Battery Life
- Soft bag & Test Leads
- Easy to Use

Order Code	Description	Price
G-TX2003	Cable Fault Locator	£515.00

**TX4000 Cable Fault Locator**
**Description**

The TX4000 is a hand held Time Domain Reflectometer with 11 range scales covering the range 0-4000 metres, with a 7 meter first range scale and a 0.5 metre dead zone near and far end faults are clearly displayed on its 128x64 pixel back light Liquid Crystal Display. The Auto Fault Location key will move the cursor directly to the first event or fault, thus eliminating the need to visually interpret the wave form. When set in manual mode, the wave form may be visually scanned as on conventional TDRs. In both modes the user variable gain covering the range of default to 64 db's may be used to magnify small events identified on the waveform.

The scan lock feature will allow the user to hold the trace for closer examination. Designed for identifying and locating faults on all metallic cables with two or more insulated conductors. The TX4000 has impedance matched circuits for 25, 50, 75 and 100 ohms and with velocity of propagation settings from 1-99% (or the equivalent in feet or metres/micro second) will cover the range of power, data, communication and CCTV cables. Housed in a rugged IP54 rated ABS enclosure and weighing only 350 grams (12 ounces), the TX4000 is suitable for outside use.


**FEATURES**

- Auto Fault Location
- Rugged Palm-Top design
- Weighs less than 350g (12oz)
- 11 Measurement Ranges up to 4000m(4km)
- 25, 50, 75 & 100ohm Selectable Cable Impedance
- User Variable Gain Control
- Built in Tone Generator for Pair Tracing and Identification
- Suitable for testing all Communication and Power Cables
- Environmental Protection IP54
- CE Approved
- Soft bag & Test Leads

Order Code	Description	Price
G-TX4000	Cable Fault Locator	£525.00

**TX6000 Cable Fault Locator**
**Description**

The TX6000 is a hand held Time Domain Reflectometer with 11 range scales covering the range 0-6000 metres, with a 7 meter first range scale and a 0.5 metre dead zone near and far end faults are clearly displayed on its 128x64 pixel back light Liquid Crystal Display. USB 2.0 interface with Windows compatible software "TraceXtra" gives the user an option to download and analyse saved traces to a windows PC. Also the interface allows the user to upload saved traces from PC hard disk to the unit.

New firmware upload feature gives the facility to update the unit (TDR) with recent additions. Designed for identifying and locating faults on all metallic cables with two or more insulated conductors. The TX6000 has impedance matched circuits for 25, 50, 75 and 100 ohms and with velocity of propagation settings from 1-99% (or the equivalent in feet or metres/micro second) will cover the range of power, data, communication and CCTV cables. Housed in a rugged IP54 rated ABS enclosure and weighing only 350 grams (12 ounces), the TX6000 is suitable for outside use.


**FEATURES**

- USB 2.0 Interface with a Windows compatible software TraceXtra to download/analyse traces
- Rugged Palm-Top design
- Weighs less than 350g (12oz)
- 11 Measurement Ranges up to 6000m (6km)
- 25, 50, 75 & 100ohm Selectable Cable Impedance
- Memory capacity upto 50 saved traces
- Built in Tone Generator for Pair Tracing and Identification
- Suitable for testing all Communication and Power Cables
- Environmental Protection IP54
- CE Approved
- Soft bag & Test Leads

Order Code	Description	Price
G-TX6000	Cable Fault Locator	£615.00

**NavITEK II**
**Description**

NavITEK II is a highly cost effective solution, comprising multiple advanced testing capabilities in just one handheld tester. Suitable for copper and fibre. Eliminate the need to purchase and carry multiple different testers by using one device to conduct active and passive testing across both copper and fibre networks Wiremapping by pin as well as pair. Save time on the job and locate wiremap faults more quickly and accurately by testing via both pin and pair, detecting split pairs and identifying the distance to fault.

Additional Ethernet troubleshooting capabilities Maximise Return on Investment with the added ability to identify Ethernet and Power over Ethernet (PoE) issues, in addition to verifying Ethernet connectivity. Support for IPv6 and PoE. NavITEK II supports both IPv4 and IPv6 internet addresses, as well as PoE, making it a future-proof investment.

Reporting of test results Simplify customer reporting and create accurate documentation on jobs undertaken using NavITEK II to generate and store test results in standards compliant XML format.

Additionally, view and export results to enable report printing 802.1x compatibility. Log onto networks secured by this protocol, avoiding unnecessary security complications and lengthy project delays NavITEK II - Entry model facilitates LAN testing over copper networks and includes functionality for detecting Power over Ethernet NavITEK II PLUS - Introduces additional testing capabilities, including support for VLAN and storage for test results NavITEK II PRO - Fully featured solution, suitable for copper and fibre networks.



Order Code	Description	Price
G-NavITEKII	Entry Model NavITEK	£385.00
G-NavITEKIIPPLUS	NavITEK Plus Model	£595.00
G-NavITEKIIPRO	Pro Model NavITEK	£765.00

PingerPro Tester

Description

The PingerPro's extensive features make it even easier for managers and technicians to meet the growing challenges of cable and network management. The PingerPro brings a new level of connectivity testing with: fault location, Gigabit Ethernet capability, advanced IPv6 support, Logical Link Data Protocol (LLDP/CDP) and a powerful feature set that you will use every day. As a result, the PingerPro is the complete high performance first-response-tool, designed to solve your most frequent network problems. Installing new network drops or devices, monitoring performance or troubleshooting problems, the PingerPro quickly provides;

THE ANSWERS YOU NEED:

- ▶ Is this cable wired correctly?
- ▶ Where is a cable fault located?
- ▶ Is this wall outlet connected?
- ▶ What speed and duplex do I need to set to be compatible with the far end device?
- ▶ What port on a switch is connected to the outlet that I am testing?
- ▶ How is the connected switch port configured?
- ▶ Is my MAC address registered?
- ▶ Are the DHCP and DNS servers available?
- ▶ Can I connect to servers and the Internet with IPv6?
- ▶ Can I connect over copper or fibre links?
- ▶ Is this patch cable good?
- ▶ How can I document test results?

The PingerPro touch screen interface lets you select discrete tests, or a configurable AutoTest that provides critical Link information; conduct network connectivity tests and provide switch port information in seconds. The PingerPro provides critical, clear and easy to read answers. Document your test results with a few keystrokes, to prove the job's done right. The rechargeable battery pack and rugged weather resistant design, lets you test anywhere. The PingerPro is always available, always ready to.



Order Code	Description	Price
G-PingerPro	PingerPro Tester	£Call For Price

FEATURES

- Monitor network health
  - Manage network changes
  - Identify cable and network problems
  - Optimize network performance.
- Network Test Features
- Link Tests
  - Verify Link Connection
  - Identify Port Speed (10/100/1000baseT) and Duplex
  - Selectable Speed/Duplex or Auto-negotiation Ping Tests
  - Verify Connectivity across a Network or the Internet
  - Measure Packet Round Trip Time
  - Count Packets Received, Lost or Corrupted
- Configurable Ping Test
- Single, Continuous or Burst of Ping Packets
  - IPv4 or IPv6
  - Packet Payload Size from 64 to 10,000 Bytes (Jumbo Frames)
  - Trace Route
  - Show Packet Route across a Network or the Internet
  - Device Emulation
  - MAC Cloning/Spoofing
  - Switch Port Information
  - Supports Link Layer and Cisco Discovery Protocol (LLDP/CDP)
  - Provides Port Speed and Duplex, VLAN, Switch Model, Port Number and More (Note: Information Varies by Manufacturer and Switch Model).
- AutoTest
- Performs Selected Tests in Seconds
  - Allows Rapid Testing of Large Numbers of Ports
  - Saves Test Results Quickly with Automatic File Naming
  - Store up to 1000 Tests Security
  - IEEE 802.1x Port-based Network Access
  - Provides User Name and Password Authentication (EAP-MD5)
- Cable Test Features
- Cable Length and Fault Location
  - Measures the Length of Each Wire Pair
  - Provides the Distance to Open or Short Cable Faults
- Wire Map
- Graphical, Colour Display of Wire Connections
  - Identifies Opens, Shorts, Mis-wires and Split Pairs
  - Measures all Pin Pair Combinations for Highest Accuracy
- Port ID
- Flashes the Link LED on a Connected Switch Port
  - Tone Generator for Cable Tracing
  - Generates 5 Different Selectable Tones for Tracing Cables
  - Optional CableTracker Probe (CT15) Available for Cable Tracing
  - Human-Centered Design Features
  - Rugged Weather Resistant Case
  - Rechargeable Li-ion Battery
  - Colour Touch Screen Interface
  - Cable Management Brackets
  - Tilt Stand
  - Built-in Help Screens
  - Multiple Language Support
- Additional Test Features for PRO75
- Test Fibre Links
  - Verify Connectivity over Multimode (850nm) and Single Mode (1310nm) Links
  - Base
  - Optional 100baseFS
  - Optical Power Metre
  - Measure Received Optical Power Levels
  - PingerPro Tools
  - PC Based Software
  - Download Test Results to Review and Generate Professional Reports
  - Install Firmware Updates

Certifier40G

Description

The Certifier40G equips technicians with all the capabilities they need to certify both copper and fibre networks quickly, completely, and correctly for all current and future cabling standards for the new enterprise.

Drive user efficiency

The Certifier40G is not only the most advanced solution available, it is also the fastest and most complete. Whether certifying copper or fibre, users will get the job done right and on time, the first time! The industries fastest CAT6A solution can certify each cable within 9 seconds, saving users 30 minutes each time they test 150 CAT6A cables\* Tier 1 certification of multimode, singlemode, and multimode MPO fibre in less than 6 seconds. Automate pass/fail end-face analysis for all fibre types. Gain complete test visibility at both local and remote ends. Pre-configured with all leading manufacturer's cabling specifications.

Key Benefits

Achieve complete network certification with one device Optimize productivity with the industries fastest test workflow Obtain comprehensive results for the latest TIA-568 and ISO 11801 requirements View test set up and results data and edit labels at both local and remote ends.

Applications

Complete TIA 568/ISO 11801 copper and fibre certification TIA 942-A data center certification Certify plug-and-play (trunk/cassette) fibre connectors with MPO connectors Objective pass/fail testing for IEC 61300-3-35 fibre end-face requirements.

FEATURES

- Permanent link and channel adapters for certifying to TIA category 5e/6/6A and ISO class D/E/EA/F/FA
- Multimode (850/1300 nm) and singlemode (1310/1550 nm) adapters for Tier 1 fibre certification (loss/length/polarity)
- Multimode (850 nm) MPO adapters for certifying and troubleshooting MPO links and trunks
- Industry-leading P5000i digital fibre end-face inspection probe support
- Integrated, standards-based certification labelling and reporting
- Easily Test 10/40/100 G MPO Links

Order Code	Price
G-Certifier40G	£6,785.00

Data Circuit Protection with the DigiAlert™ 350

Description

DigiAlert™ Test telephones are designed to protect lines carrying digital transmission by alarming and locking the engineer out if digital traffic is present.

FEATURES

- Fully Waterproof Unit
- Large belt clip
- 3 Year warranty
- Durable nylon braided line-cord
- Line polarity indication
- Low battery indication
- Contoured shoulder grip
- Loud speaker



In new enterprise architectures, the use of parallel optics has become essential to achieve the demand for high-speed 40 G and 100 G transmission. From active media incorporating quadrature small form-factor pluggable (QSFP) transceivers to using trunk cables and cassettes, MPO connectivity is essential for delivering speeds of 40 G and beyond in the enterprise.

- The industry's only modular certifier with MPO test capability
- Test MPO to LC/SC
- Discover or ensure correct polarity with Fibre Map
- Conduct 5-second loss and polarity tests on 12 fibres
- Display absolute and relative power levels
- Measure MPO power on live systems
- Inspect Fibre End Faces with Pass/Fail Analysis
- Dirty connectors are the No. 1 cause for troubleshooting in optical networks.
- Microscopic dirt particles create enough signal loss and back reflection to cause significant network errors and downtime. Proactively inspecting fibre end faces is critical for testing and certifying a fibre network. The Telecommunications Industry Association (TIA) recently revised TIA-568 to establish quality and cleanliness acceptance criteria for fibre connector end faces when testing optical connections. Whether using TIA-568 or customer-specific requirements, users can easily inspect and certify fibre connector end faces with automated pass/fail analysis at the push of a button on the Certifier40G to get the job done quickly and correctly. Prove compliance to the new TIA-568 end-face inspection requirements.
- Get fast results at the push of a button
- Eliminate subjectivity with automated pass/fail analysis
- Ensure your network is optimized for a lifetime of performance
- Prevent costly network downtime and time-consuming troubleshooting



Order Code	Description	Price
G-TESUTS3	All weather hands-free Butt-in Test Telephone	£165.00

Test, verify and repair 10, 100 and 1000 Base-T Networks!

Description

The latest model supports all network speeds plus displays full and half duplex. Go in-line between two LAN devices and see if the negotiated speed and duplex is what you expect! The TVR10/100/1000 answers the 10 most common questions occurring during the repair and install of 10, 100, 1000 Base-T LANs.

LAN devices questions answered:

- ▶ Is my hub/switch or PC ON and transmitting?
- ▶ Do I require a straight thru or crossover patch cable?
- ▶ Is my LAN speed 10, 100 or 1000MB/s and is it half or full duplex?
- ▶ Is the hub/switch and PC link negotiating a slower speed and duplex than expected?
- ▶ Do my hub or PC appear as a hub or PC?

LAN cabling questions answered...

- ▶ Is a hub or PC connected to my cable?
- ▶ Does my hub or PC require 2 or 4 pair cables.
- ▶ What pairs are terminated in my cable?
- ▶ Where is my cable in the wiring closet?
- ▶ What hub port is my PC using?
- ▶ Is my cabling straight thru or crossover?
- ▶ Does my cable have inverted pair or other faults?



FEATURES

- Hub/PC verifier that indicates the equipment Device Type (is it a hub/ switch or PC?)
- Straight thru/crossover cable jacks indicates the patch cable required.
- Tone probe and tone generator for tracing cable locations (and the port used)
- Cable pairs tester that verifies what cable pairs are wired and identifies straight thru and crossover configurations.

Order Code	Description	Price
G-TVR10/100/1000	LAN Tester	£349.00

Voice, Data, Video Verifier

Description

The new VDV II Series are easy to use cable testers that check the integrity of copper cables commonly found in domestic, commercial or industrial voice, data or video installations, including telephone wiring, data network and video/security cabling. Employing state-of-the-art technology, VDV II offers functionality not previously available in a wiremapper. The advanced wiremap engine accurately displays complex wiring faults instantaneously whilst TDR (Time Domain Reflectometry) aids troubleshooting and improves on-site productivity.

Accuracy

The flagship VDV II Pro utilises TDR to accurately measure cable length and provide distance to fault information. TDR's work by injecting a signal into the cable and measuring the time for any signal to be reflected back after encountering changes in impedance caused by cable damage, open and short circuits. The recorded time is then translated into an accurate distance measurement. TDR helps to pinpoint where cabling faults occur. This speeds up fault finding as well as minimising disruption and potential damage to fixtures and fixings.

Speed

With comprehensive details on faults such as opens, shorts, crossovers and split pairs, VDV II identifies wiring errors instantly. The integrated RJ11/RJ12 (voice), RJ45 (data) and F-Type (video) connectors allow faster testing of most types of low-voltage cables by eliminating the need for separate testers or adaptors.

Intelligence

Connection issues are not always associated with cable faults, so VDV II Pro has the capability to help identify service related issues. By detecting the presence of voltage and checking polarity, VDV II Pro quickly determines which media service is running over the cable, such as ISDN, PBX and PoE (Power over Ethernet) resulting in faster fault diagnosis. Troubleshooting active Ethernet networks is also made easier with in-built network detection that displays network rate and duplex information. Furthermore, to prevent potentially costly damage to the tester all VDV II's are smart enough to know when they have been plugged into an outlet where voltage is present.



**VDV II - Voice, Data and Video Cable Verifier.**  
Includes 1 x tester, 1 x dual port remote unit, 1 x coax remote unit, 1 x alkaline battery, 1 x multi-language user guide.

**VDV II Plus - Voice, Data and Video Cable Verifier.**  
Includes 1 x tester, 1 x dual port remote unit, 1 x coax remote unit, 1 x alkaline battery, 1 x multi-language user guide, 2 x RJ45 to alligator clip cable 390mm, 2 x screened RJ45 to RJ45 cable 150mm, 2 x RJ11/12 to RJ11/12 cable 100mm, 1 x F-type plug to F-type plug cable 230mm, 1 x F-81 barrel splice, 1 x BNC female to F-type male adaptor, 1 x BNC female to F-type female adaptor, 1 x RCA female to F-type male adaptor, 1 x RCA female to F-type female adaptor, 1 x wallet wiring card, 1 x carry case.

**VDV II Pro - Voice, Data and Video Cable Verifier.**  
Includes 1 x tester, 1 x dual port remote unit, 1 x coax remote unit, 1 x alkaline battery, 1 x multi-language user guide, 2 x RJ45 to alligator clip cable 390mm, 2 x screened RJ45 to RJ45 cable 150mm, 2 x RJ12 to RJ12 cable 100mm, 1 x F-type plug to F-type plug cable 230mm, 1 x F-81 barrel splice, 1 x BNC female to F-type male adaptor, 1 x BNC female to F-type female adaptor, 1 x RCA female to F-type male adaptor, 1 x RCA female to F-type female adaptor, 1 x wallet wiring card, 1 x carry case.

Order Code	Description	Price
G-VDVII	Voice, Data, Video Verifier	£99.00
G-VDVIIPlus	Verifier with extras	£175.00
G-VDVIIPro	Pro version of Verifier	£275.00

LanMaster 30 Testers

Description

Eliminate guessing when connecting telephones, modems, fax machines and computers to the RJ-45 jacks of a wall outlet. The LanMaster 30 Outlet Identifier is an essential tool for any user responsible for managing, installing or maintaining network or telecom systems. Connecting equipment to an untested wall outlet can damage the installed device if the outlet does not have a compatible electrical interface. Identifying outlet connections with the Model 30 reduces time troubleshooting physical layer problems and tracing cables to identify the far end equipment.

FEATURES

- Identifies a 10baseT Link, 100baseTX Link, Token Ring Link, Analog Telephone Line, PBX Line or an ISDN Line.
- The unit will also warn the user if unidentified signals are present at the jack or if the jack is not connected.
- The LanMaster 30 scans all eight wires connected to an RJ-45 outlet to identify the type of system connected or the presence of potentially harmful unknown signals.



Order Code	Description	Price
G-LM30	LanMaster 30	£139.00
G-AP-2*	Accessory Pack	£19.00

\*Nylon carrying case, RJ45 Patch cable, RJ45 coupler.

The Complete Remote Cable Tester

Description

The Remote Cable Tester is a palm-sized unit with four kinds of connectors: RJ45, RJ11, USB and BNC for testing the most popular media in current use. This unit can be used to verify the condition of cables, both before and after their installation. The tester also offers easy operation; you begin testing by pressing a button and multiple LEDs give a clear indication of the testing status.

FEATURES

- Tests; USOC4/6/8, Ethernet 10BaseT/2/5, EIA/TIA-568B, AT&T 258A, Token Ring, Telephone, PhoneNet & USB
- 8 breakable circuits
- No Connection/No Termination LED & Battery Condition LED
- Non parallel / 50 Ohm LED
- Open / Short wiring test
- Detachable module for remote testing
- 145mm x 86mm x 26mm, 185g



Order Code	Price
G-CT210	£54.50

CTX200 Cable Tester

FEATURES

- Tests CAT5/6 cables to TIA568 specs
- Tests both CAT5/6 and Coax cable
- Tone for Tracing cables
- Available Lighted Probe
- Tests both RJ45-CAT5/6 and coax cables.
- Ruggedized for field use. No LCD to break.
- PASS/FAIL results appear in one second.
- Each pair's status is highlighted.
- Complete TIA568 test performed. Continuity, opens / shorts, reversals and split pairs.
- Tone mode for tracing and troubleshooting.
- Auto-off (12 seconds) battery saver.
- Low battery indicator.
- Belt clip, batteries (9V) and pouch included.
- The perfect testers for any toolbox. Performs a TIA568 test on CAT5/6 network cable (RJ45) with instant PASS/FAIL results.
- Ruggedized and cushioned for toolbox use with a hidden drawer for remote storage. Includes a tone generator.
- Available with or without a filtered, lighted inductive tone probe.
- Coax remote also included. Ruggedized for field use



Order Code	Price
G-CTX200	£44.95

**Tel-All Indicator**
**Identifies Telephone & Data Lines.**
**FEATURES**

- Identifies telephone and data lines
- 10Base-T, Token Ring, 100Mbit Systems
- Installer packs available



Order Code	Description	Price
G-BBXT100	Tell-All indicator	£26.00

**RS232 Tester**
**Description**

Troubleshooting is made easy with this RS-232 mini tester that checks for failures and helps identify cable and connection problem areas. The RS-232 Tester is designed to be connected in series with any RS-232 interface. It is used to test the interface for failures and to help identify the equipment that has failed. The tester may be left in the line permanently. Seven LED's indicate the status of the following lines:



Pin No.:	Signal:	Description:
3	TD	Transmit Data
2	RD	Receive Data
7	RTS	Request To Send
8	CTS	Clear To Send
6	DSR	Data Set Ready
1	CD	Carrier Detect
4	DTR	Data Terminal Ready

Order Code	Description	Price
G-PTEST232	RS232 Tester	£39.95

- Two Colour Testers (Clear LED's):
- Positive Voltage = Space = LED Green
- Negative Voltage = Mark = LED Red
- Male and female DB9 connectors

**Digital Multimeter**
**Description**

Measures voltage, current, resistance and frequency Tests continuity and diodes Backlit LCD with 6,000 count display Two voltage detection modes - non-contact or using a single test lead Beep/Jack warns when test leads are incorrectly inserted in current measurement terminals Automatic and manual range selection Relative offset mode to see changes in measurements.


**SPECIFICATIONS**

- Use optional USB / RS-232 interface DMSC2U for direct-to-PC logging
- Accessories included: (2) 1.5V AAA batteries, 40°F/204°C max), test leads, protective boot
- Amperage Measurement : 600, 6000uA; 60, 600mA; 6, 8A
- Battery: (2) 1.5 V AAA
- Capacitance : 60, 600 nF; 6, 60, 600, 3000uF
- Frequency Measurement : 10Hz - 50kHz Sine Wave, 5Hz - 999.9kHz Logic Level Square Wave
- Includes: (2) 1.5V AAA Batteries, 400 DEG F/204 DEG C max), Test leads, Protective Boot
- Measurement Category: CAT IV 300 V, CAT III 600 V, CAT II 1000 V
- Replacement Part: TSG-3 Sure-Grip Test Leads
- Resistance Measurement: 600 Ohm; 6, 60, 600 kOhm; 6, 60 MOhm
- Standard: CAT IV, CAT II, C/UL US Listed, CAT III, CE Listed
- Sub Brand: ESM
- Temperature Rating: K Type, -58° To 1832°F (-50° To 1000°C)
- Voltage Measurement: 60, 600 mV; 6, 60, 600, 1000V

Order Code	Description	Price
G-DMM200	Digital Multimeter	£59.95
G-DMSC2U	USB Interface Kit	£54.95

**X.21 Circuit Tester & Loopback Module**
**Description**

The BetterBox® X.21 Loop Module is an extremely useful diagnostic accessory designed for data circuit interfaces conforming to the X.21 specification. This passive unit simply connects in-line between the DCE and DTE equipment and allows a data loop to be applied in either direction; i.e. towards the DTE or the DCE, or in both directions simultaneously if required. During fault conditions, this feature will help to assist you in determining which area is at fault without the need for two engineers to test the circuit end-to-end. By simply applying the remote loopback function the circuit can be tested quickly and easily from the far end.

In addition to its diagnostic and test features the BX21L can also loopback in both directions, the Control and Indicate lines, a particularly useful feature in situations where the communications link does not support end to end C & I connectivity.

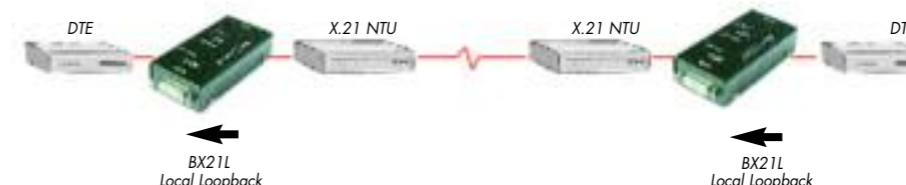

**SPECIFICATIONS**

- Dimensions: 102mm x 50mm x 25mm
- Weight: 75g
- Connectors: 1 x DB15M, 1 x DB15F

**FEATURES**

- Local & Remote Data Loop
- Control and Indicate Loop
- Simple to Use
- Passive Device
- Operates at all X.21 data rates
- Reduces Engineer call-out charges
- Quick fault isolation

Order Code	Description	Price
G-BX21L	X.21 Loop Module	£99.00
G-BBX15-MM-002	X.21 2mtr Male to Male Cable	£17.30
G-BBX15-MF-002	X.21 2mtr Male to Female Cable	£17.30
G-BBX15-FF-002	X.21 2mtr Female to Female Cable	£17.30


**V.24, X.21, V.35, G.703 High Speed Modular BERT**
**Description**

The HSBERT tester is a compact, colour-LCD, graphic-user-interface, single hand E1 Bit error rate tester designed for field use in analysis and maintenance of data communications (V.35, RS530, X.21, RS232) and E1 (2.048Mbps) lines. The HSBERT performs framed, unframed drop and insert Nx64Kbps, or nx56Kbps data into any time slot. The HSBERT tester also provides a variety of E1 line statuses, transmission performance testing (BERT) and monitoring. On the E1 line, the HSBERT may be used as a generator or receiver.

**FEATURES**

- Colour LCD display graphic mode
- USB port for remote control
- Results Report
- Supports G.821/826, M.2100 BERT analysis
- Sa bits setup and monitor
- Internal Memory storage of test result; Direct display on LCD screen
- Print out via Parallel Printer port
- Portable for field use
- Upgradeable for advanced features
- Rechargeable battery with battery low indicator
- Supports CRC & BPV performance analysis
- Datacom BERT analysis available for V.35, RS-530, X.21 and RS-449
- V.35/ V.24/RS-232/449/530/ X.21



Order Code	Description	Price
G-HSBERT	High Speed BERT	£1,745.00



**Continuity Tester**
**Description**

A pocket sized continuity tester with remote probe. Ideal for testing local components, devices and cable assemblies but also installed cables using the remote probe.

**SPECIFICATIONS**

- Ideal for use in verifying connections and labeling conductors
- Remote flashing LED continuity indication (green/red for polarity reverse)
- Croc clip type probes
- Warning: Not suitable for use on live circuits.

**Technical Data**

- Continuity <1kOhm
- Wire Verification 3km
- Remote Distance 3000m (26 Gauge Min)
- Test Current 20mA DC
- Power 9V PP3 (Supplied)
- Dimensions 47 x 92 x 47mm
- Weight 135g



Order Code	Description	Price
G-CT9170	Continuity Tester	£14.95

**Laser Light**
**FEATURES**

- 1310/1550nm wavelengths
- Stable calibrated output
- Easy to use
- Continuous wave and modulated output.
- Fixed connect interface FC, SC or ST
- Long battery life - approx. 80 hours
- User selectable auto shut-off
- Rugged and splash-proof

**SPECIFICATIONS**

- CDRH Laser Class : Class 1
- Connector interface : FC, SC Or ST
- Dimensions: 2.800 IN (7.200 CM) X 5.600 IN (14.200 CM) X 1.400 IN (3.500 CM)
- Humidity : 0 To 95 PCT Non-Condensing
- Max Spectral Width : Lesser Than 5 NMTR
- Measuring Range : 1280 NMTR To 1340 NMTR, 1520 NMTR To 1580 NMTR
- Modulation Frequency : 270 KHZ, 1 KHZ And 2 KHZ
- Power Supply: Two AA Size 1.5 V Batteries
- Stability: Plus Or Minus 0.05 DB For 1 HR

**Standard :**

- EN61010
- EN50081-1: 1992
- EN55011, Group 1, Class A EN50082-1: 1992 IEC 801-2, -3, -4, CDRH Laser Class 1
- Storage/Operating Temperature: -15 To 55 °C-35 To 70 °C
- Typical Power Output 9125 : -8 DBM Minimum, -7 DBM Typical
- Wavelength: 1310 NMTR Centre, 1550 NMTR Centre
- Weight: 241.000 GM (8.500 OZ)



Order Code	Description	Price
G-LLS01FC	Laser Light Source with FC connectors	£765.00
G-LLS01SC	Laser Light Source with SC connectors	£765.00
G-LLS01ST	Laser Light Source with ST connectors	£765.00

**E1 Analyser**
**Description**

The PA7000, our flagship tester, is a portable, battery powered E1 and data communication tester, designed for a wide range of protocol analysis and BERT (Bit Error Rate Test) at full E1 speeds (2.048Mbps) and is fully suitable for equipment installations, on-line or off-line diagnostics, debugging, and interface development. The PA7000 features a backlit Liquid Crystal Display (LCD), push-button switch keyboard, interface lead indicator LEDs, user replaceable data port interface modules and internal rechargeable Li-Ion battery. The unit includes the Basic Interfaces, basic operational firmware, comprehensive User Guide, universal AC power adapter (100~240 VAC) and a sturdy hard shell carry case.


**FEATURES**

- E1, Datacom, Protocol Analyser and BERT
- Protocols: Frame Relay, SS#7, X.25, PPP (Sync.), V5.1, V5.2, ISDN-D, Sync (BSC), HDLC, SDLC, Async
- Dual pluggable interface ports with available modules:
- Datacom Module: RS-232C/D (V.24), RS-449 (V.36), RS-530, X.21, V.35, E1 Module: G.703 E1 (2048K)
- Supports Centronics printer & control serial port.
- ASYNC terminal Emulation
- File Management
- Self Tests and Diagnostic
- Display Modes: Full /Half Duplex Data, Frame / Packet and Lead Status
- Error Check: None, Parity, LRC, CRC-16, CRC-CCITT
- Capture Buffer: SDRAM
- Line Monitor: DTE; DCE; DTE & DCE
- Emulation: DTE; DCE; MONITOR only
- Counters & Timers: 5 each internal counters and timers

Order Code	Description	Price
G-PA7000	E1 Analyser/BERT	£2,950.00

**RJ45 LAN Tester**
**FEATURES**

- RJ45 LAN Tester: True cabling function identifies:
- Good connection, opens, shorts and crosses
- Connector and cable pin-out, Clear LED display for each pin and shield
- Shielded RJ45 modular plug socket
- Automatic display of mapping with dual speeds: slow or fast
- Tests RJ11 and RJ45 cables with runs up to 600'
- Check polarity of telephone line
- View telephone line status: dial tone, ringing or busy line
- Provides talk power for telephone lines and butt set use
- Selectable dual/single tone application for balanced and unbalanced circuits
- Four tone generator patterns
- Test continuity of wires, cables and loads
- Tone generator features auto-off function
- Jack for headset
- Audible speaker with adjustable volume control



Order Code	Description	Price
G-TT1573	Tone & Tracer Set	£69.00

**Cable Checker - One Tester, Multiple Tests**
**Description**

Quickly & easily troubleshoot cables to eliminate the cable as the source of a problem. True cable mapping for over 20 different cable types: BNC coax & S-Video, VGA, Firewire, USB & Mini-USB, PS/2, parallel printer, RS-232 serial and Cat5e or Cat6 LAN Supports these connectors: male and female DB9, DB15, DB25 and HDB15

**FEATURES**

- 36-pin Centronics printer
- RJ11, RJ12, RJ45 shielded & unshielded
- Male and female mini-DIN6, female mini-DIN4
- USB-A and USB-B, mini-USB 5-pin
- IEEE 1394 Fire Wire 4- and 6-pin
- Tests 50 ohm cables up to 1000' (305 m) & 75 ohm cables up to 600' (183 m)
- Easy to read and understand LED indicator lights
- Auto scan or manual scan modes
- Rubber feet grip to desk or bench to prevent slipping
- Auto-off after 30 seconds of non-use to extend battery life
- 9V battery included



Order Code	Description	Price
G-PCCHECK02	Cable Checker	£135.00

**Every Troubleshooter needs a Breakout Box**
**INTERFACER 6 - V.24**

- 18 LEDs to monitor all main signals for positive signals
- 18 LEDs to monitor all main signals for negative signals
- 24 DIP Switches to break main leads
- Positive & Negative Outputs to Simulate Control Lines
- Pulse Trap for detecting short pulses
- 3 settings for Signal detection threshold


**V24**

Order Code	Description	Price
G-IFACER6	V.24 / RS-232 TroubleShooter	£99.00

 IFACER6 - V.24  
[Shown Here](#)
**X.21 Breakout Box**
**INTERFACER 7 - X.21**

- 6 red LEDs & 6 green LEDs to indicate status of main signals
- Dual DIP Switches to open both A and B legs simultaneously
- Positive & Negative Outputs
- Test input with threshold detection

**X21**


Order Code	Description	Price
G-IFACER7	X.21 TroubleShooter	£159.00

**V.35 / X.21 Breakout Box**
**Description**

The V.35 / X.21 Breakout Box is a troubleshooting tool used to determine the wiring of a V.35 or X.21 interface on a networking device or computer. The breakout box can be inserted between two V.35 or X.21 devices to determine which wires are active. Breakout boxes are useful in troubleshooting connection problems resulting from a manufacturer's device not using standard pinning or general trouble shooting signals in cabling. The unit has status LED's for each signal and flash or are solid green. Each signal lead on the unit allows user to break, pass or force individual signals or jumper together. When using a Breakout Box, the interpretation of the LEDs can at times be misleading. Many short term events, are undetected by a very brief flash of an LED. Also, constant events such as clocks or constant data may only be a faint glow on the LED. The V.35 Breakout Box contains circuitry to help alleviate this problem. A pulse stretching technique is used to keep the LED illuminated long enough to be interpreted. The V.35 / X.21 Breakout Box is housed in a sturdy aluminum enclosure and is supplied with an internal linear power supply. The unit has a 110/120 volt rotary select switch located on the rear of the housing


**FEATURES**

- Interface - V.35 or X.21, V.35 Female Connectors and X.21 Adapter Cables
- Data Rates - Up to 10Mbps
- All Signals Supported
- Pulse Stretching Technique for positive LED Indications
- Crossover, Patch or Jumper any combination of leads
- Compact Simple Economical Design
- High Quality test tool for Test Labs
- AC Mains Powered
- Sturdy Metal Aluminium Enclosure

Order Code	Description	Price
G-V35X21BOB	V.35 / X.21 Breakout Box	£395.00

**Complete Engineers Tool Kits**
**Engineers Toolkits to suit your budget.**
**5 Piece ToolKit**
**Consists Of :**

Wire Stripper, 9" Side Cutting Pliers, Terminal Crimping Tool, 6-in-1 Multi-Tool, 5 Pocket Leather Pouch, Number Of Pieces: 5  
 Weight: 5.080 LB (2.300 KG)



Order Code	Description	Price
G-TLK5	5 Piece Toolkit	£67.99

**21 Piece ToolKit**
**Kit Includes :**

Side-Cutting Pliers 9" with Moulded Grip, Diagonal Pliers 8" with Moulded Grip, Long Nose Pliers 8" with Moulded Grip, Pump Pliers 10" with Moulded Grip, NM Cable Ripper, Screwdriver, Flat Key 1/4 x 4, Screwdriver, Flat Cabinet 3/16 x 6, Screwdriver, Phillips #1 x 3, Screwdriver, Phillips #2 x 4, Rule, Power Return 7.5M Electricians 18 oz Hammer, Cordura Caddy Bag, Non-Contact, Voltage Detector, SS Wire Stripper Pro, SS Stripping/Crimping Combination Tool, Cable Cutter, Torpedo Level, Square Tip Driver Set 4 Pc (includes #0 x 4, #1 x 4, #2 x 4, #3 x 4)



Order Code	Description	Price
G-TLK21	21 Piece Toolkit	£185.50

**16 Piece ToolKit**
**Consists Of :**

8" Moulded Grip High Leverage Diagonal Cutting Pliers, 8" Moulded Grip Side Cutting/High Leverage Long Nose Pliers, Pump Pliers 10" Moulded Grip, Heavy Duty Keystone Tip, High Leverage Side-Cutting Pliers 9" Moulded Grip, Pro Plus Wire Stripper 10 - 18 AWG, 4 PC Squaredrive (Robertson) Set, Square Tip Driver #0 X ", Square Tip Driver #1 X 4", Square Tip Driver #2 X 4", Square Tip Driver #3 X 4" Square Shank 1/4" X 4" Flat Blade Screwdriver, Heavy Duty Cabinet Tip, Round Shank 3/16 IN X 6" Flat Blade Screwdriver, Heavy Duty Phillips Tip #1 - 3/16" X 3" Screwdriver, Heavy Duty Phillips Tip #2 - 1/4" X 4" Screwdriver, 7.500 MR/25.000 FT Tape measure. Heavy Duty 8 Pocket Leather Pouch, Heavy Duty Leather Tool Belt, Number Of Pieces: 16, Type: Electrician's, Metric Weight: 16.500 LB (7.500 KG)



Order Code	Description	Price
G-TLK16	16 Piece Toolkit	£138.50

**28 Piece ToolKit**
**Consists Of :**

18" Heavy-Duty Multi-Pocket Bag, Heavy-Duty 8-Pocket Leather Pouch, 2" Leather Tool Belt, 9" Side-Cutting Pliers, 8" Diagonal Cutting Pliers, 10" Pump Pliers, Pro Plus Wire Stripper 10 - 18 AWG, Stripping/Crimping Combination Tool, Cable Cutter, Utility Knife, 12" Hacksaw, Keystone Tip Square Shank 1/4 IN X 4" Flat Blade Screwdriver, Keystone Tip Square Shank 5/16 IN X 6" Flat Blade Screwdriver, Cabinet Tip Round Shank 3/16 IN X 6" Flat Blade Screwdriver, Cabinet Tip Round Shank 1/4 IN X 6" Flat Blade Screwdriver, Phillips Tip #1 - 3/16 IN X 3" Screwdriver, Phillips Tip #2 - 1/4 IN X 4" Screwdriver, Screwholding Screwdriver 3/16 IN X 6", 3" Scratch Awl, 9-Piece Folding Hex-Key Set, 25FT Tape Measure, Torpedo Level, 18 OZ Electrician's Hammer, High Dexterity Gloves (L), GT-11 Voltage Tester, Long Nose Pliers 8", NM Cable Ripper, Adjustable Wrench 10" with Dipped Grip, Number Of Pieces: 28, Weight: 19.700 LB (8.960 KG)



Order Code	Description	Price
G-TLK28	28 Piece Toolkit	£285.00

**Basic Termination Kit for 10Base-T**


**Kit Includes:**  
UTP/Coax Stripper, Telemaster RJ-11/RJ-45 Tool, 50 8-Position RJ-45 Non-Keyed Solid Plugs, Durable hard case.

Order Code	Description	Price
G-TLK750	Basic RJ45 Crimpmaster Kit	£81.50

**Data/Video Kit**


**Kit Includes:**  
Data T-Cutter, Twist-a-Nut 7-in-1 Screwdriver, UTP Stripper, Coax Stripper w/Replaceable Cartridge, Punchmaster II Punch Down Tool w/ 110 Blade, 110/66 Blade Combo, Punch Down Blade, Crimpmaster Crimp Tool for RJ-45 Modular Plugs, OmniSeal XL Compression Tool, Probe Pic and Spudger, Coax Connector Tool - F & BNC, VDV MultiMedia Cable Tester, Amplifier Probe, Electrician's Scissors w/Stripping Notch, Large Mouth Bag - 13".

Order Code	Description	Price
G-TLK917	Data/Video Kit	£289.00

**Complete Pro Kit for Voice and Data Installation and repair**


**Kit Includes:**  
Includes test equipment for wiremap and tracing. Any facility with a LAN or enterprise network would have use for this kit. The user can Cut, Strip, Terminate, and Test a twisted pair cable with this kit.  
Contents:  
Ratchet Telemaster, Punchmaster II Punch Down Tool with full 110 and 66 blades, Probe Pick & Spudger, Coaxial Stripper, 3/16 Inch to 5/16 Inch, Cable Splicing Kit, Replacement Blade, Punchmaster II Turn-Lock Style 66 Blade, LinkMaster Tester, 7-in-1 Twist-a-Nut Screwdriver/Nutdriver, Tone Generator and Amplifier Probe Kit, Smart6 Modular Tester, Kinetic T-Stripper/Tel Crimp Tool, 8-Position 8-Contact Round Solid, (RJ-45) (Package of 50), Large Mouth Bag - 13 in. long.

Order Code	Description	Price
G-TLK706		£280.00

**Termination Kit for RJ45**


**Kit Includes:**  
Data T-Cutter UTP/Coax Stripper Crimpmaster, Frame Only 8-Position Die Set for RJ-45 Plugs, 200 8-Position RJ-45 Non-Keyed Solid Plugs.

Order Code	Description	Price
G-TLK652	RJ45 Crimpmaster Kit	£183.00

**Includes products to cut, strip, terminate, and test CAT 5, phone and coax**


**Kit Includes:**  
Data T-Cutter Scissors w/Stripping Notch Center Conductor Cutter, UTP/Coax Stripper, Coax Stripper w/Black Cassette Crimpmaster Frame Only, 2,4,6-Position Die Set for RJ-11 Plugs, 8-Position Die Set for RJ-45 Plugs, RG-58/59/62 BNC Die Set, Punchmaster II w/100 Blade, Punchmaster II 66 Blade Only, ABS Signal Thrower, ABS Tester, ZipKit Carrying Case.

Order Code	Description	Price
G-TLK869	TP/Coax ToolKit	£329.00

**Pro Data and Video Installer Tool Kit**


**Kit Includes:**  
Large Mouth Bag, 110/66 Blade, 66 Blade Only, Punchmaster II 110 Blade only, Lever Snipes Electricians Scissors, Probe Pic and Spudger, UTP/STP Stripper, 7-in-1 Twist-a-Nut Screwdriver/Nutdriver, Mag-Tape Tape Measure, Torpedo Level, Jab Saw, UniSeal Compression Tool, Coax Stripper - 2-Step, Smart-Grip Long-Nose Pliers- 7-3/4", Smart-Grip Tongue & Groove Pliers - 10", Tongue & Groove Pliers- 9-1/2", Tone Generator, Amplifier Probe, Data T-Cutter, Ratchet Telemaster, F-Connector Tool.

Order Code	Description	Price
G-TLK945	Data & Voice ToolKit	£425.00

**Computer Service Kit**


**Kit Includes:**  
3.6V cordless screwdriver, battery & charger, ESD wrist strap, 30-watt soldering iron, Desolderer & soldering aid with pick & scraper/cutter tip, Needle nose pliers (2), Angled-head lead cutter, Insulated tweezers, Component gripper & IC extractor, 10-piece driver socket set, 24-piece driver bit set: Torx, Hex, Phillips, Pozidrive, Slotted, and Square-Head, Socket adapter/extender & socket bit holder/extender.

Order Code	Description	Price
G-COMPKIT	Computer Service Kit	£86.50

**STRAIGHT-LINE The Laser Line Generator**

*It creates an actual Laser Line - Not just a Dot.*

**Description**

This multi-task tool was designed for a wide variety of professional and DIY applications. This revolutionary new Laser-Line Generator casts a line, not a dot, on any surface without leaving a mark. In addition to a robust semiconductor laser device this compact and easy to use tool also has two spirit levels for horizontal and vertical positioning. You can even use it hands free on a wall or ceiling by simply pressing two miniature studs that attach themselves into the surface being worked on. Perfect for applications when an accurate line is required such as laying conduit or other wiring applications. With its special lens you can draw a laser line even over imperfect surfaces and obstacles.



Push down to release self retracting pushpins

Order Code	Description	Price
G-LLG64001	Laser Line Generator	£39.95

Batteries included.

**Longnose Pliers**
**Description**

Forged from chrome vanadium steel for greater durability and strength. Effectively cuts both solid & stranded copper wire, Serrated jaws and laser-hardened cutting edges for optimum cutting and gripping performance, Through-hardened steel for longer life, Exceeds ASME/ANSI specifications, Rugged riveted construction for smooth precise action, Application: Effectively Cuts Both Solid And Stranded Copper Wire, Handle Type : Custom Grip, Material : Chrome Vanadium Steel, Standard : ASME/ANSI, Type : Long Nose Side Cutting.



Order Code	Description	Price
G-LONGNOSE6	6" Longnose Pliers	£12.45
G-LONGNOSE7	7" Longnose Pliers	£12.75
G-LONGNOSE8	8" Longnose Pliers	£16.95

**7 Piece Screwdriver Set**
**Description**

Heavy-Duty Construction For Longer Life, Handle Marked For Easy Identification Of Screwdriver Size, Type And Length, Precision-Machined Tips For Accurate Fastener Contact, Strong, Durable Black Phosphate Tips Prevent Chipping of Plating, High-Grade, Rust Resistant, Chrome-Plated Finish, Soft, Cushioned Grip For Extra Comfort And Torque, Exceeds ASME/ANSI Specifications, lade Finish: Chrome-Plated Shank, Durable Black Phosphate Tip, Contains: 3/16" X 4" Cabinet, 3/16" X 6" Cabinet, 1/4" X 4", Keystone, 1/4" X 4" Cabinet, 5/16" X 6" Keystone, #1 X 3" Phillips And #2 X 4" Phillips, Handle Type : Soft, Cushioned Grip, Number Of Pieces: 7, Standard : ASME/ANSI, Weight : 1.630 LB (0.740 KG).



Order Code	Description	Price
G-SCREW7	7 Piece Screwdriver Set	£27.50

**9 Piece Insulated Screwdriver Set**
**Description**

Exceeds the IEC 60900 and ASTM F1505 standards for insulated tools. Complies with the IEC 60900 & ASTM F1505 standards. Helps meet the requirements of OSHA 1910.331-335, NFPA 70E & CSA-Z462. Individually tested to 10,000 VAC & rated for 1,000 VAC. Dual layer insulation provides added safety and protection against electric shock. Custom Tool Roll-Up Carrier. Includes : Insulated Screwdriver #1 x 3". Insulated Screwdriver #2 x 4". Insulated Screwdriver #3 x 6". Insulated Cab Screwdriver 1/4" x 4". Insulated Cab Screwdriver 3/16" x 4". Insulated Cab Screwdriver 3/16" x 6". Insulated Cab Screwdriver 3/16" x 8". Insulated Cab Screwdriver 5/16" x 6". Insulated Cab Screwdriver 3/8" x 10". Tool Roll-Up. Number Of Pieces : 9. Standard : ASTM F1505, IEC 60900, OSHA 1910.331-335, NFPA 70E And CSA-Z462. Type : Insulated. Voltage Rating : 1000 V. Weight : 3.100 LB (1.380 KG).



Order Code	Description	Price
G-SCREWINS9	9 Piece Insulated Screwdriver Set	£94.50

**Engineers Tools**

Manufactured from the highest grade materials.

**Handtool 6**
**Description**

Includes 6 essential premium quality hand tools: 3 Pliers - forged from chrome vanadium steel, precision machined and laser hardened cutting edges offer greater durability and strength. Exceeds ANSME/ANSI specifications for maximum performance, 2-layer dipped grips for added comfort and slip resistance, 8" Long-Nose Pliers, 8" Diagonal Cutting Pliers, 9" High Leverage Side-Cutting Pliers, 2 Screwdrivers - Precision-machined tips for optimal fastener contact, high-grade rust resistant chrome plating, black phosphate coated tips to prevent surface chipping. Exceeds ANSME/ANSI specifications for maximum performance. Soft, cushioned grips for extra comfort and torque. Handles marked for easy identification, x 4" Heavy Duty Slotted Screwdriver, Cabinet Tip #2 x 4" Heavy Duty Phillips Screwdriver. Professional wire stripper - Machined stripping stations with positive stop for precise applications, curved handles with 2-layer PVC dipped for comfort, one-handed locking tab for added safety and protection of cutting edges. ProPlus Wire Stripper, 10-18 AWG.



Order Code	Description	Price
G-HandTool6	6 Piece Tool Set	£74.25

**Insulated Tool Set**
**Description**

Exceeds the IEC 60900 and ASTM F1505 standards for insulated tools, Complies with the IEC 60900 and ASTM F1505 standards, Helps meet the requirements of OSHA 1910.331-335, NFPA 70E and CSA-Z462, Individually tested to 10,000 VAC and rated for 1,000 VAC, Dual layer insulation provides added safety and protection against electric shock, Custom Tool Roll-Up Carrier, 8" Insulated Diagonal Cutting Pliers, 8" Insulated Long-Nose Pliers, 10" Insulated Pump Pliers, 3/16" X 4" Insulated Cabinet Tip Screwdriver, 9" Insulated Side-Cutting Pliers, 1/4" X 4" Insulated Cabinet Tip Screwdriver, #2 X 4" Insulated Phillips Tip Screwdriver, Custom Tool Roll-Up Carrier, Standard : IEC 60900 And ASTM F1505, OSHA 1910.331-335, NFPA 70E And CSA-Z462, Type: Insulated, Voltage Rating : 1000 V, Weight : 4.940 LB (2.240 KG).



Order Code	Description	Price
G-7PCINS	Insulated Tool Set	£149.50

**Hex Key Set**
**Description**

9 piece set for convenience and versatility. Available in imperial or metric size sets. One-piece, powder-coated handle/case for corrosion resistance, Laser-etched sizes on case for easy identification, Heat-treated and tempered for extra strength and durability, Exceeds ASME/ANSI specifications, Note: This is not an insulated tool, Finish : Powder-Coated Handle/Case. Includes : Imperial Hex Sizes 5/64", 3/32", 7/64", 1/8", 9/64", 5/32", 3/16", 7/32" and 1/4", Includes : Metric Hex Sizes 1.5MM, 2MM, 2.5MM, 3MM, 4MM, 5MM, 5.5MM, 6MM and 7MM, Overall Length : 4-3/8 IN (11.100 CM), Standard : ASME/ANSI, Type: Standard, Folding, Weight : 0.480LB Imperial, 0.51LB Metric,



Order Code	Description	Price
G-HEXKEYIMP	9 Piece Imperial Hexkeys	£4.95
G-HEXKEYMET	9 Piece Metric Hexkeys	£4.95

**Soldering Irons & Guns**

Order Code	Description	Price
G-SGPG100	Pistol Grip 100W Soldering Gun	£19.95
G-SISG025	General Purpose 25W Soldering Iron	£11.49
G-SIGAS01	Gas Soldering Iron	£24.95
G-SIGASK	Gas Soldering Iron Kit	£39.95
G-TIP001	Spare Tip for SGPG100	£1.95
G-TIP002	1mm Needle Soldering Tip	£6.95
G-TIP003	2.4mm Soldering Tip	£6.95
G-SOLD12	1.2mm Multiple Core Solder	£7.68
G-SOLD10	1.0mm Multiple Core Solder	£2.20



SGPG100

SIGASK

**Engineers Tools**
**Voltage Detector**

- ▶ Detects DC between 1.3V - 36V
- ▶ Detects AC between 70V - 500V
- ▶ Sensitivity switch determines difference between live and neutral/earth wire



VOLD001

Order Code	Description	Price
G-VOLD001	Voltage Detector	£5.95

**Wrench**

Order Code	Description	Price
G-WRENCH6	6" Wrench	£12.45
G-WRENCH8	8" Wrench	£13.45
G-WRENCH10	10" Wrench	£16.95
G-WRENCH12	12" Wrench	£18.75


**Cutters**

Order Code	Description	Price
G-CUTTER5	5" Cutters	£11.95
G-CUTTER6	6" Cutters	£12.95
G-CUTTER7	7" Cutters	£13.45
G-CUTTER8	8" Cutters	£16.75


**Cable Cutters**

Order Code	Description	Price
G-CBLCUT51	Round Cable Cutter, Max 12mm Diameter	£14.95
G-CBLCUT61	Round Cable Cutter, Max 25mm Diameter	£17.95
G-CBLCUT74	Heavy Duty Cutter, Max 12mm Diameter	£14.95
G-CBLCUT55F	Kevlar Scissors for Fibre Cables	£29.95



CBLCUT74

CBLCUT51

**6" Junior Hacksaw**

Order Code	Description	Price
G-JNRSAW	6" Junior Hacksaw	£9.95
G-JNRBLDE	Pack of 10 replacement blades	£5.95



JNRSAW

**A.D.C Wire Inserter**

Order Code	Description	Price
G-TL1697	A.D.C Wire Inserter	£59.00



TL1697

**Compu-Driver (For Screwlocks on D-Type Connectors)**

Order Code	Size	Price
G-ICTCD4	4 inch	£7.95
G-ICTCD10	10 inch	£12.95



ICTCD4

**Plastic Pipe Cutter**

Order Code	Description	Price
G-PPC0026	Up to 26mm Pipe Cutter	£24.95



PPC0026

**Crimping Tools**
**Description**

The Performance range of crimping and wire stripping tools offers you a low cost entry to make your own cables. Whatever your requirements, may be we have a tool to help you out.

Order Code	Description	Price
G-04TLS00024	Crimp Frame	£42.00
G-04TLS00029	RJ-45 Die	£18.00
G-04TLS00030	RJ-11 & RJ-12 Die	£18.00
G-04TLS00031	Shielded RJ-45 Die	£16.00
G-04TLS00027	RG-58, RG-59, RG-62AU	£18.00
G-04TLS00025	RG-58, RG-59, RG-62AU, RG-6	£18.00
G-04TLS00026	RG-58, RG-62, Belden 8581, 50+75Ohm	£18.00
G-04TLS00028	SMA, SMB, SFR, ST, SC Type	£18.00

Order Code	Description	Price
G-TLRJLCRP	RJ-11, low cost Crimp Tool	£7.95

**PLUGS**

G-PL0164	RJ-11 (6 Way, 4 Contact) Plug	£0.18
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Order Code	Description	Price
G-TLRJ11CRP	RJ-11, 4 and 6 way Crimp Tool (RJ-11 plug part No. PL0164) (RJ-12 plug part No. PL0166) (Handset plug part No. PL0144)	£19.95

**PLUGS**

G-PL0164	RJ-11 (6 Way, 4 Contact) Plug	£0.18
G-PL0166	RJ-12 (6 Way, 6 Contact) Plug	£0.21
G-PL0144	RJ-9 (Handset 4 Way, 4 Contact) Plug	£0.19

Order Code	Description	Price
G-TLRBTCRP	BT Plug Crimp Tool	£22.95

**PLUGS**

G-PL0264	BT 4 Way Plug	£0.28
G-PL0266	BT 6 Way Plug	£0.30

Order Code	Description	Price
G-TLRG5859	RG-58/59 Coaxial Crimp Tool	£25.00

Order Code	Description	Price
G-TLDB0125	DB-Type Pin Crimp Tool	£39.00

**CRIMP PINS**

G-BBXDPINSM	Male	£0.12
G-BBXDPINSF	Female	£0.12

Order Code	Description	Price
G-TLCP48	RJ-48 Crimp Tool	£39.00



04TLS00024



TLRJLCRP



TLRJ11CRP



TLRBTCRP



TLRG5859



TLDB0125



TLCP48

**Crimping Tools**

Order Code	Description	Price
G-TL040	Tool + one Die	£95.00
G-TL041	RJ-11 die (spare)	£41.00
G-TL042	RJ-45 die (spare)	£41.00
G-TL043	DEC/MMJ Die (spare)	£49.00
G-PL1058	RJ-45 Plug by AMP® (Crimp Tool TL040)	£0.45



TL040

This tool must be used in conjunction with RJ-45 Plug Part No. PL1058

Order Code	Description	Price
G-TLMMJ45CRP	Dual purpose MMJ/RJ-45 Crimp Tool (MMJ plug part No. PL0066) (RJ-45 plug part No. PL0058)	£29.00
G-TLMMJ45SH	Shielded RJ45 Crimp Tool (RJ-45 plug part No. PL2058)	£105.00
G-PL0058	RJ-45 plug	£0.25



TLMJ45CRP

**Cable Preparation & Stripping Tools**

Order Code	Description	Price
G-TL3002	Low cost UTP & STP Cable Stripper (Maximum external cable diameter of 11mm)	£12.95



TL3002

Order Code	Description	Price
G-04TLS00001	Wire Cutter/Stripper for AWG 22-10 wire	£7.95
G-04TLS00002	Wire Cutter/Stripper for AWG 30-20 wire	£7.95



04TLS00001

Order Code	Description	Price
G-TL5859	Heavy Duty Coax multi-strip one step Tool (adjustable for RG-58 and RG-59)	£45.00



TL5859

Order Code	Description	Price
G-04TLS00003	Low cost 3 layer Coax Strip Tool for RG58, RG-59, RG-62AU, RG-6	£12.00
G-04TLS00004	3 layer Strip Tool for RG-8/11 & RG-213	£12.00
G-04TLS00005	CATV "F" Coaxial Stripper for RG-59, RG-6, RG-6 quad preset for RG-6	£12.00
G-04TLS00006	RG-174, RG-178, RG-179, RG-188, RG-189 + diameter 1.5mm - 30mm	£12.00



04TLS00005

Order Code	Description	Price
G-TLEBLSTP	Flat Cable/Wire Stripper	£9.95



TLEBLSTP

**Insertion / Extraction & Punchdown Tools**
**Splice-Block Termination Tool**

Order Code	Description	Price
G-TOOLS66AT	Splice Block Termination Tool	£8.95



TOOLS66AT

**110 Punchdown Tool**

Order Code	Description	Price
G-TL4274	110 Punchdown Tool	£28.95



TL4274

**Impact Punchdown Tool with Twist & Lock Style Blades**

Order Code	Description	Price
G-04TLS00013	Impact Punchdown Tool handle only	£27.00
G-04TLS00014	110/66 reversible cut only blade	£38.00
G-04TLS00015	110 reversible cut & punch/punch only blade	£38.00
G-04TLS00016	66 reversible cut & punch/punch only blade	£38.00
G-04TLS00017	BIX cut only (scissors type) blade	£49.00
G-04TLS00018	110 & 66 reversible cut & punch/punch only blades	£49.00
G-04TLS00019	110/66 reversible combination cut only blades	£11.00
G-04TLS00020	110 reversible blade for IDC termination	£11.00
G-04TLS00021	66 reversible blade for IDC termination	£11.00
G-04TLS00022	BIX cut only blade	£19.00
G-04TLS00023	Black Belt Patch with extra pocket	£14.00



04TLS00013


**110 Multi-Pair Punchdown Tool**

Order Code	Description	Price
G-04TLS00007	Multi Pair Punchdown 5-pair Head	£75.00
G-04TLS00008	5-pair replacement head with Blade Cassette	£26.00
G-04TLS00009	5-Pair Replacement Head	£16.00
G-04TLS00010	Multi Pair Punchdown 4-pair Head	£75.00
G-04TLS00011	4-Pair S110 Replacement Head with Blade	£26.00
G-04TLS00012	4-Pair S110 Replacement Blade	£16.00



04TLS00007

**Pin Insertion/Extraction Tools**

Order Code	Type	Price
G-BBXTLHIN	Heavy Duty Insert & Extraction Tool	£17.95



BBXTLHIN

Order Code	Type	Price
G-BBXTLBIN	Budget Insert & Extraction Tool	£2.95



BBXTLBIN

**Mains 'Socket & See' Testers**
**Description**

The 'Socket & See' 230V/13A range comprises three testers that allow you to check 13A sockets quickly, safely and with total confidence. The bright, clear LEDs are highly visible, even in poor light. A quick glance at the comprehensive diagnostic table on the faceplate shows the likely cause of any problem.

**SOK 12 Quick Test 13A Socket Tester.**

- Bright LED's out-perform fragile old style neons.
- Logical 'Green for Go' LED indication.
- New circuitry means less chance of tripping RCD's.
- GS TUV approved.
- Detects good plus 13 wiring fault conditions.

**SOK 22 Craftsman 13A Socket Tester Features as SOK 12 plus:**

- Continuous audible tone gives positive good wiring indication.
- Strong warbling tone gives clear warning of faulty wiring.
- Advanced electronics include a quad comparator to give clear indication even on noisy circuits.
- Detects good plus 13 wiring fault conditions.

**SOK 32 Professional 13A Socket Tester Features as SOK 22 plus:**

- The first socket tester in the world to show where the actual fault is - Live, Earth or Neutral.
- New patented 'Fault Locate' electronics gives clearest indication yet of good plus 17 wiring fault conditions - more than any other known socket tester.
- Continuous or strong warbling tone gives positive quick indication of good or faulty wiring.
- Built-in self-check at start of testing gives confidence in correct operation at all times.

**Local Authorities, Police Forces, Hospitals, Schools and College, Health and Safety Officers.**



Order Code	Description	Price
G-SSOK12	Quick Test Socket Tester	£10.95
G-SSOK22	Craftsman Socket Tester	£15.95
G-SSOK32	Professional Socket Tester	£19.95

**Keep all your PCs, Video Screens, CDs, etc. clean**
**Description**

With BetterBox's range of cleaning products you can now maintain your workplace speck and span. We offer a product for most of your daily spillage or dust problems. Problems, which if not taken care of will in some circumstances, reduce the useful life of very expensive equipment. Static on your desk can cause magnetic media problems, simply use the anti-static foam to reduce the static

build-up on your desk. Is your Video screen full of fingertip marks? Use our multipurpose or dry wipes and soon it will look as new again. Is your CD-ROM drive needing several attempts to read a disk? Maybe the lens needs a simple cleanup with our CD lens cleaner. Whatever your cleaning problem may be we have a product to help you.



Order Code	Description	Price
G-CPBULK010	Antistatic Cleaning Foam	£3.19
G-CPBULK012	Screen & K/B Cleaner (200ml)	£2.59
G-CPBULK014	Air Duster	£6.99

Order Code	Description	Price
G-CPBULK016	Multi-purpose Cleaning Wipes (100 pack)	£2.69
G-CPBULK018	CD-ROM Lens Cleaner	£4.95
G-CPBULK020	Dry Wipes (50 pack)	£4.79

Led Lenser Head Torches

Description

Our head torch range provide a variety of innovative specifications offering hands free lighting to assist you in many different tasks even in harsh conditions, whilst remaining comfortable.



The LED Lenser head torches feature a casing that glows, ensuring that the user can be seen as well as being able to see, a secondary glare free red LED to preserve night vision, a swivelling lamp head to provide directional light, and IPX6 water and dustproofing. Power levels can be adjusted to conserve battery life and the power switch is lockable to prevent accidentally turning the lamp on during transport.

The SE03 features 3 powerful LEDs providing a great balance between light output and battery life. The SE05 provides twice the illumination of the SE03 with one powerful Cree LED, and features a variable focus that can be set to focus or flood, and stepless dimming. The flagship SE07R not only features the highest light output, but also rechargeable lithium ion technology, and hands free light sensing technology which automatically adjusts its light output according to the darkness of the operating environment as well as the focus and dimming abilities of the SE05.



Order Code	Price
G-SE03	£29.95
G-SE05	(in both Black and Red) £39.95
G-SE07R	£62.50

Led Lenser Torches

Description

Our range of handheld torches from Led Lenser showcase light weight, highly portable and powerful performance with long battery life, and all conform to IPX54 levels of resistance to water and dust.



The P5.2 offers a lightweight (79g) torch in a durable aluminium body that is compact enough to easily fit in a pocket. The high end LED can be focused into an intense spot or wide angle flood and can generate a very impressive 120 lumens for 5 hours from a single AA battery.

The P7.2 is only marginally larger than the P5.2, however it can throw out more than twice the light intensity at 320 lumens, reaching up to 853ft. Taking 4xAAA batteries, this torch will perform flawlessly for up to 50 hours. The extra large multifunction switch which also allows for different power levels has been designed to operate simply even when wearing gloves.

If you need rechargeable performance in an even more compact product, the M3R is the perfect choice. Despite measuring just 10cm long and weighing only 45 grams, it still features adjustable focus and switchable power levels. The built in Lithium Ion battery provides a huge 220 lumens for a generous 6 hours, and includes a low battery message system.

Order Code	Price
G-P5.2	£34.95



Order Code	Price
G-M3R	£49.95



Order Code	Price
G-P7.2	£49.95

