

Network/Cabling Certifier

Operating Specifications

- **Display** 256 color active back lit LCD
- **Power Source** AC adapter/lithium ion rechargeable batteries
- **Interfaces** Serial port for direct printing from Validator™ and USB port for uploading/downloading files to/from a laptop/PC
- **Operating System** Linux
- **Keypad** Full navigation set with easy alphanumeric data entry and soft key functions.

Physical Characteristics

Physical Dimensions

- **Main Unit**
Size: 22.9 x 11.4 x 5.3 cm
(9 x 4.5 x 2.1 inches)
Weight: 710 grams (1 lb 9 oz.)
with battery
- **Remote**
Size: 14.2 x 11.2 x 4.4 cm
(5.6 x 4.4 x 1.8 inches)
Weight: 341 grams (12 oz.) with battery

Environmental

- Operating temperature: 0 to 50°C (32 to 122°F)
- Storage temperature: -20 to 70°C (-4 to 158°F)
- Humidity: 10% to 85%, non-condensing

Interfaces

- USB cable assembly
- 32 MB compact flash card

Test Connectors

- 8-position shielded modular jack (data)
- 6-position modular jack (telephone)
- F-coax (video) and dual banana jack (security, speaker, etc.)

Cable Types

- Shielded or unshielded Cat3, 5, 5E, 6
- Telephone, coax, speaker wire, security, fire, and alarm

Battery Type

Rechargeable, removable lithium ion packs

Maximum cable length for testing for split pairs

Up to 1500 feet, depending upon cable type

Signal Quality Testing on Network Cable

- Wiremap up to 8 locations at a time
- Length of cable (TDR) distance to Opens and Shorts
- SKEW
- NEXT—All combinations on all pairs (12)
- Channel Response
- Echo Testing (Return Loss)—impedance mismatches
- Signal to Noise Ratio
 - Attenuation
 - Amplitude
 - Return Loss

Performance and Speed Certification

- Supports IEEE802.3 speed criteria up to 1 gigabit with full Bit Error Rate Test (BERT)
- Test interconnect specifications per TIA568/570
- Measures the quality of the signal through the cable against set criteria on cable data-carrying capability in real time. 100Mbit/gigabit speeds
- Real-time testing of the performance capability of the cable
- Measures signal quality in actual link environments that could account for cable inadequacies. Physical installation, kink, loops etc., physical terminations, dry shorts, miswires etc.

Validator™
The 21st Century Certifier

patent pending

Specifications subject to change.

Validator™ Kit (NT950) includes

- Validator™ Main Unit and Smart Remote
- 2 lithium ion rechargeable long-life batteries
- 2 AC adapter/charger units
- 4 adapter cable assemblies
- USB cable assembly
- Compact flash card
- Plan-Um™ design layout software
- Deluxe carrying case with cushioned sides

- Tests to TIA 568/570 interconnect standards
- Certifies CAT5, CAT5E, and CAT6 cables to be IEEE compliant to 1 gigabit speed
- Tests coax, telephone, audio, and security cables
- Powerful Plan-Um™ design software included

- Creates and prints job reports
- Wiremap new or existing cable systems
- Simple to use



Validator™ gives you 4 steps to more professional, productive and profitable installations...



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patent pending

Test-Um Inc.
The Intelligent Test Solutions Company

805-383-1500 • FAX 805-383-1595 • www.test-um.com

Define the Job, Make the Tests, Print the Results, Store the Data...



Removable 32 MB compact flash memory card included

No other tester/certifier does so much, so easily and so economically.

Validator measures and presents fast and clear SPEED and PERFORMANCE results up to 1 gigabit. The included powerful Plan-Um™ software ties together all the different cable criteria that are found in complex voice/data/video installations and presents concise information in printed reports, while storing data for future use.

Speed certification assures your customer that the cabling will do the job it is rated to do. Attached components, switches, hubs, routers and systems will then operate at maximum efficiency.

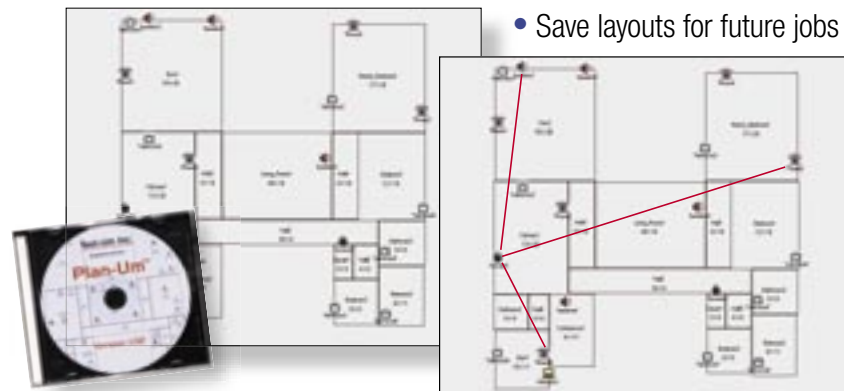
Completing and billing a cable installation job has never been easier. Simply layout your customer's requirements in a matter of minutes, then define cable types and runs. Test/certify each cable run. Print the results and attach them to your invoice. That's all there is to it.



dedicated I/O ports for network, telephone, coax and paired cables

1. Layout

- Create custom floor plans
- Show specific ports: network, telephone, cable
- Indicate cable runs
- Print or e-mail layout for approval
- Save layouts for future jobs



Powerful Plan-Um™ software included

2. Certify

- Certifies to IEEE802.3 speed criteria. Test/certify network cables to 1 gigabit speed, using live digital data packets in a full Bit Error Rate Test (BERT). Other typical TIA568 measurements include NEXT, Attenuation, Return Loss, SKEW and overall Signal-to-Noise Ratio (SNR).
- Measure cable length and distances to opens and shorts using advanced TDR technology

ID	Type	To	From	Result
Cable001	CAT5	01Phone01	01Panel01	✓ 1000
Cable002	CAT5E	01Net01	01Panel01	✓ 1000
Cable003	RG6	01TV01	01Panel01	✗ FAIL
Cable004	CAT3	01Phone02	01Panel01	✓ PASS
Cable005	CAT6	01Net02	01Panel01	✓ 1000
Cable006	Fire	01Fire01	01Panel01	✓ PASS
Cable007	Audio	01Splr01	01Panel01	✓ PASS

- Wiremap individual runs to locate and identify cable routes
- Test telephone, coax, security/alarm cables for continuity, proper termination and polarity

Expected	Results
1	1
2	2
3	3
6	6
4	4
5	5
7	7
8	8

- Skew and signal/noise ratio results shown on faulty cables

Length	Skew	SNR
Max: 300ft	Max: 35ns	Min: 20db
A → 182ft	0.0	25.5
B → 188ft	6.0	25.6
C → 183ft	2.0	25.6
D → 186ft	2.0	26.0

BERT Results: 0 errors

ID	To	From	Type	Result	Use	Length	Speed
1	01Panel01	01Panel01	CAT5	Phone	Phone	28.9	1000
2	01Panel01	01Panel01	CAT5	Phone	Phone	28.9	1000
3	01Panel01	01Panel01	CAT5	Phone	Phone	28.9	1000
4	01Panel01	01Panel01	CAT5	Phone	Phone	28.9	1000
5	01Panel01	01Panel01	CAT5	Phone	Phone	28.9	1000
6	01Panel01	01Panel01	CAT5	Phone	Phone	28.9	1000
7	01Panel01	01Panel01	CAT5	Phone	Phone	28.9	1000
8	01Panel01	01Panel01	CAT5	Phone	Phone	28.9	1000
9	01Panel01	01Panel01	CAT5	Phone	Phone	28.9	1000
10	01Panel01	01Panel01	CAT5	Phone	Phone	28.9	1000
11	01Panel01	01Panel01	CAT5	Phone	Phone	28.9	1000
12	01Panel01	01Panel01	CAT5	Phone	Phone	28.9	1000
13	01Panel01	01Panel01	CAT5	Phone	Phone	28.9	1000
14	01Panel01	01Panel01	CAT5	Phone	Phone	28.9	1000
15	01Panel01	01Panel01	CAT5	Phone	Phone	28.9	1000
16	01Panel01	01Panel01	CAT5	Phone	Phone	28.9	1000
17	01Panel01	01Panel01	CAT5	Phone	Phone	28.9	1000
18	01Panel01	01Panel01	CAT5	Phone	Phone	28.9	1000
19	01Panel01	01Panel01	CAT5	Phone	Phone	28.9	1000
20	01Panel01	01Panel01	CAT5	Phone	Phone	28.9	1000

Test Results
PASS

- Shows the actual error rate in the BERT test
- Clear test results

3. Document & Archive

- Automatically creates cable test schedule
- Cable List shows run starting and end points
- Each cable run is displayed for cross-checking
- Verify all tests are done against the plan
- Shows PASS/FAIL, cable length and speed rating
- Print End of Job Report for billing purposes

VALIDATOR™		Test-Um Inc.					
Cable Test Schedule							
Site Information		Contractor Information					
Job ID: 041112	Residential	Test-Um Inc.	Northridge, CA				
John Hammer	(800) 363-5000	John@test-um.com	808 Cable Plans				
John@test-um.com	1750 Geneva Street	Concord, CA	94012 USA				
Certified by: (INSTALLER SIGNATURE)		(INSTALLER COMPANY)					
CABLE ID	TO	FROM	TYPE	CBL. CAT	USE	LENGTH	RESULT
Cable001	01Panel01	01Panel01	CAT5	Phone	Phone	28.9	- PASS
Cable002	01Panel01	01Panel01	CAT5	Phone	Phone	28.9	- PASS
Cable003	01Panel01	01Panel01	RG6	Video	Video	4.9	- PASS
Cable004	01TV01	01Panel01	RG6	Video	Video	2.9	- PASS
Cable005	01Panel01	01Panel01	Audio	Video	Speaker	11.9	- PASS
Cable006	01Panel01	01Panel01	Audio	Video	Speaker	11.9	- PASS
Cable007	01Panel01	01Panel01	Audio	Video	Speaker	11.9	- PASS
Cable008	01Panel01	01Panel01	Audio	Video	Speaker	11.9	- PASS
Cable009	01Panel01	01Panel01	Fire	Video	Fire	8.9	- PASS
Cable010	01Panel01	01Panel01	Fire	Video	Fire	1.9	- PASS
Cable011	01Panel01	01Panel01	CAT5	Phone	Phone	28.9	- PASS
Cable012	01Panel01	01Panel01	CAT5	Phone	Phone	28.9	- PASS
Cable013	01Panel01	01Panel01	CAT5	Data	Network	31.9	- PASS
Cable014	01Panel01	01Panel01	CAT5	Data	Network	31.9	- PASS
Cable015	01Panel01	01Panel01	CAT5E	Data	Network	31.9	- PASS
Cable016	01Panel01	01Panel01	RG6	Video	Video	4.9	- PASS
Cable017	01Panel01	01Panel01	CAT5	Phone	Phone	28.9	- PASS
Cable018	01Panel01	01Panel01	CAT5	Phone	Phone	28.9	- PASS
Cable019	01Panel01	01Panel01	RG6	Video	Video	4.9	- PASS
Cable020	01Panel01	01Panel01	Fire	Video	Fire	8.9	- PASS
Cable021	01Panel01	01Panel01	RG6	Video	Speaker	4.9	- PASS

- Store finished jobs for reference in doing future adds, moves or changes
- Store data on either a laptop/PC or in flash card memory up to 2 GB. Thousands of jobs can be saved!
- Use archived info when upgrading or changing previously installed systems