Network Construction with One Single Instrument

- LAN Cable HiTESTER 3665
- Wiremap
  - Detect Split Pairs with Wiring Check
- Cable Length
  - Get NVP-Enhanced Measurement Accuracy
- Direction
  - Identify Up to 21 Cable Destinations

Actual Size

 CAT 6 Compatible
 Shield Check

HIOKI

Network Construction with One Single Instrument
Both straight-through and crossover cables (10/100BASE, 1000BASE-T and 1000BASE-TX) can be checked.

For wiring confirmation and locating broken wires after installation. Quick PASS/FAIL reading helps you complete your work faster.

**Super-sensitive Detection**

**Caution!**

**1 Wiremap**
- **PASS** Display Examples
  - Both straight-through and crossover cables (10/100BASE, 1000BASE-T and 1000BASE-TX) can be checked.

<table>
<thead>
<tr>
<th>Straight Cable</th>
<th>Cross Cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>PASS</td>
<td>PASS</td>
</tr>
<tr>
<td>20.1m</td>
<td>20.1m</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FAIL Display Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reversed</td>
</tr>
<tr>
<td>FAIL</td>
</tr>
<tr>
<td>12 30 45 78</td>
</tr>
<tr>
<td>pins 1 and 2 are reversed.</td>
</tr>
</tbody>
</table>

**2 Direction (ID No.)**
- Identify the terminator ID here.

**3 Cable Length**
- Obtain a record of the entire length of the cable, or up to the point where the cable is damaged.

**Fully Compatible to CAT6 LAN Cables**
- Detect the existence of shields or check for shield integrity.

**Can you find split pairs?**
- **PASS** Proper Wiring: LAN cable wires should be connected as shown in the diagram above, such that pins 3 and 6 are twisted.
- **FAIL** Split Pair: A "Split Pair" is detected when pins 3 and 6 are not twisted and paired together as shown above.
Have you ever had trouble installing additional cables?

Take advantage of the conveniences offered by the tester's capabilities to check wiring while confirming multiple cable destinations.

You will never need to go back and forth again just to change the terminators.

Up to 21 terminators can be connected (additional terminators sold separately.) Convenient for confirming the connection destinations of multiple cables.

The NVP setting is a cable-length compensation function that enhances the accuracy of cable length measurements.

Accuracy with NVP activated:
- ± 4% rdg. ± 1m
  (vs.previous HIOKI model: 15% rdg. ±1m)

NVP (Nominal Velocity of Propagation) is the ratio of the speed of a signal in the cable relative to the speed of light in a vacuum. NVP differs according to the type of cable and the manner in which the wire pairs are twisted, so measurement accuracy can be enhanced by setting the NVP value for the particular type of cable to be measured.

**Activating the NVP function is as simple as 1-2-3**

**Preparation**
Prepare a reference cable using a known length of the same type as that to be measured (at least 100-meter length recommended).

**Measurement**
On the Settings screen, select "Length Adjust".

**Adjust**
Press the TEST button to measure the (already known) length of the reference cable.

**Calibrate**
Calibrate the display to the measured reference cable.

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**How Can Split Pairs Affect the Network?**

- Communication speed can be suppressed - 100BASE signals may reach only 10BASE speeds.
- Excessive communication errors - data transfer may be intermittent or completely inhibited.
- Cables miswired in this way are more susceptible to electrical noise.

Split pairs appear to be properly connected to the untrained eye, and cannot be detected with continuity testing.

To properly check LAN cable wiring, a tester capable of detecting split pairs is indispensable.

The HIOKI 3665 can do the job for you properly and accurately by also detecting split pairs.
### Specifications

**Measurable cables**
Twisted-pair cable
100 Ω characteristic impedance, shielded and unshielded, CAT 3, 4, 5, 5e and 6

**Compatible connectors**
RJ-45 plugs

#### Measurement Items

- **[Wiremap]**
  Wiring condition and shielding can be confirmed using the HIOKI TERMINATOR 9690
  Detectable errors: open, short, reversed, transposed, split pairs and other miswiring

- **[Cable Length]**
  Measurable lengths: 2 to 300 m, 6.6 to 984 ft
  Measurement accuracy: ±4% rdg. ±1 m, ±4% rdg. ±3.3 ft
  Display resolution: 0.1 m

- **[Destination]**
  Up to 21 cables can be identified using the supplied TERMINATOR 9690 and optional Models 9690-01 to 9690-04 to test multiple cables simultaneously

#### Display
128 x 64 dot matrix LCD (with backlight)

#### Functions
- **Auto Backlight**: pressing a button turns the backlight on (it turns off automatically after about 20 seconds)
- **Beeper**: sounds when pressing buttons and when measurement results are displayed
- **Energy-Saving Mode**: enter into energy-saving mode after measurement (and resume when the TEST button is pressed)
- **Auto Power Save**: the 3665 turns off automatically about 10 minutes after the last button press
- **Battery Check**: Battery indicator blinks when voltage falls below 2.4 V
- **Unit Switch**: Select between meters or feet

#### Compliance Standards
- **Safety Standard**: EN61010 Pollution Level 2
- **EMC Standard**: EN61326

#### Allowable Input
- 3.3 V peak (between RJ-45 pins)

#### Operating Temperature & Humidity
- 0 to 40 °C, 80% RH or less, non-condensating

#### Storage Temperature & Humidity
- –10 to 50 °C, 80% RH or less, non-condensating

#### Power supply
- LR6 (AA) alkaline batteries × 2

#### Maximum Power Consumption
- 1.4 VA

#### Operating Time
- Approx. 50 hours (measuring once per minute)

#### Dimensions
- Approx. 85 mm (3.35 in) W × 130 mm (5.12 in) H × 33 mm (1.30 in) D

#### Mass
- Approx. 160 g (5.6 oz)

### Model: LAN CABLE HiTESTER 3665

<table>
<thead>
<tr>
<th>Model No. (Order Code)</th>
<th>(English model)</th>
</tr>
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<tbody>
<tr>
<td>3665-20</td>
<td></td>
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</tbody>
</table>

Accessories: Terminator 9690 ×1, Carrying case ×1, LR6 (AA) alkaline battery ×2, Instruction manual ×1

### Supplied Accessories

- **TERMINATOR 9690**
- **CARRYING CASE**
  (Stores the HiTESTER 3665 and TERMINATORs 9690)

### Options

- **TERMINATOR 9690-01** (IDs 1 to 5)
- **TERMINATOR 9690-02** (IDs 6 to 10)
- **TERMINATOR 9690-03** (IDs 11 to 15)
- **TERMINATOR 9690-04** (IDs 16 to 20)
- **CARRYING CASE 9249** (stores the 3665 and 9690 together)

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