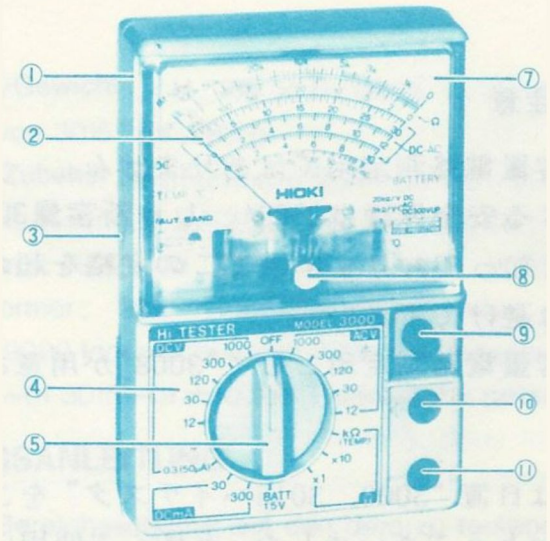
3000

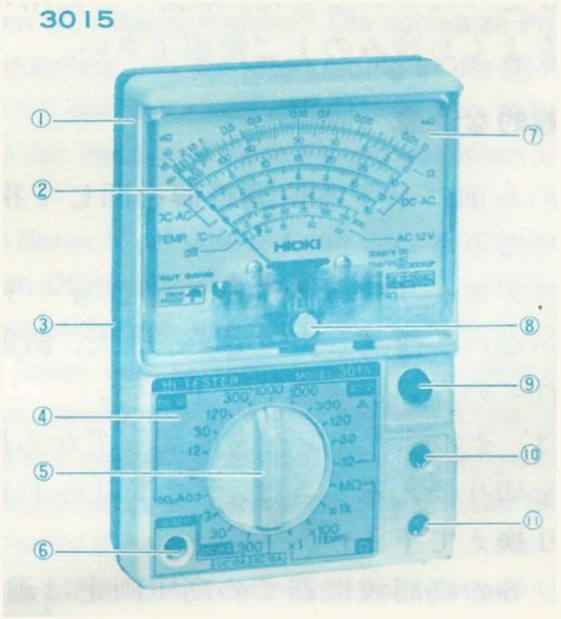


HIOKI

3000.3015
Hi TESTER

INSTRUCTION MANUAL

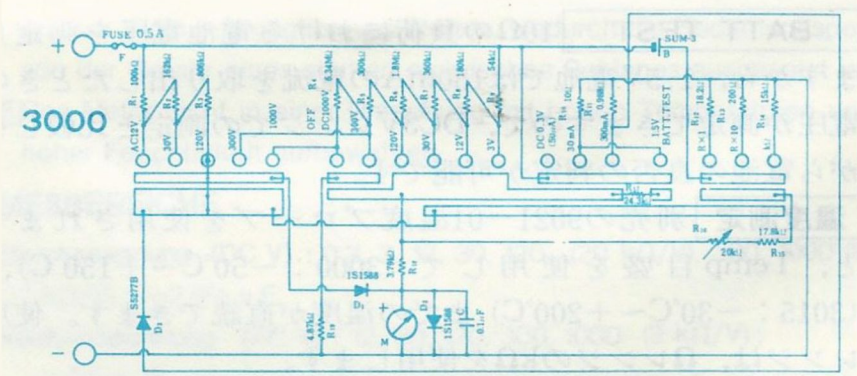
3015



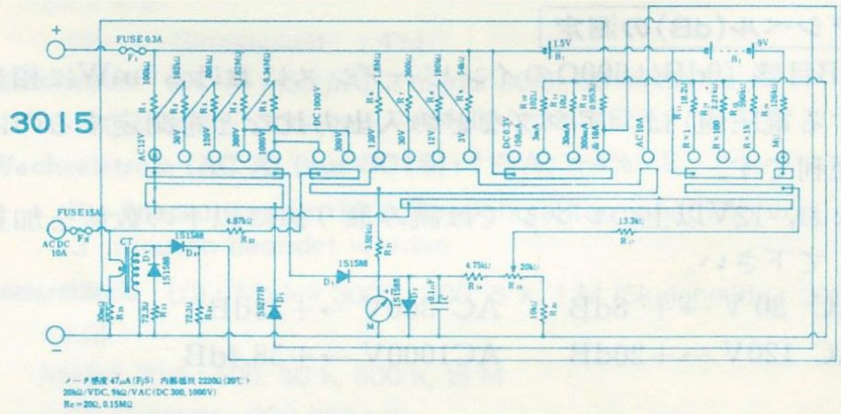
Meter Nomenclature

① Panel ② Pointer ③ Case back ④ Faceplate ⑤ Range selector switch ⑥ AMP terminal (3015 only) ⑦ Scale plate ⑧ Zero adjust screw ⑨ Ohms zero adjust knob ⑩ Positive (+) terminal ⑪ Negative (−) terminal

3000



3015



⚠ **IN HIGH POWER CIRCUIT AREA (DISTRIBUTION TRANSFORMER AND BUS BAR)**
BEFORE ATTEMPTING ANY MEASUREMENT, DOUBLE CHECK THAT THE RANGE SWITCH IS AT THE CORRECT POSITION.
IF THE RANGE IS INCORRECTLY SET, A DANGEROUS ARC OF EXPLOSION WOULD OCCUR.

WARNING

This Instrument is designed to prevent accidental shock to the operator when properly used. However, no engineering design can render safe an instrument which is used carelessly. Therefore, this manual must be read carefully and completely before making any measurement. Failure to follow directions can result in a serious or fatal accident.

1. Prior to making measurements, always make certain the pointer is on the 0 mark of the scale. If it is not, adjust it using the zero adj screw.
2. Check for a blown fuse by shorting the test lead probes together in the Ω range. If the meter is inoperable, always check for a blown fuse before taking any other action.
3. Make certain the range selected is greater than circuit current or voltage prior to attempting a measurement. Also, when changing ranges always break contact from the circuit with one of the test leads.
4. Do not use this meter for measuring high voltages on equipment operated at high frequency (e.g., microwave ovens etc.). High frequencies reduce the dielectric strength of the meter to only a fraction of its specified rating at commercial frequency, and can result in serious electrical shock to the operator.
5. Do not store the meter in a high temperature, high humidity environment.

SPECIFICATIONS

DC V: 0.3, 3, 12, 30, 120 (20kΩ/V), 300, 1000 (9kΩ/V); ±2.5% F.S.
AC V: 12, 30, 120, 300, 1000 (9kΩ/V); ±2.5% F.S.
(12V accuracy: ±4%)
DC A: (50μA), 3m (3015 only), 30m, 300m *10A (3015 only); (300mV drop), ±3% F.S.
AC A (3015 only): *10A; ±4% F.S. *: Measurements in the 10A range should be completed in under 3 minutes.
Ohms (Ω): Model 3000: 500, 5k, 1M (mid-scale value: 20Ω/10kΩ)
Model 3015: 500, 50k, 500k, 15M (mid-scale value: 20Ω/150kΩ)
Temperature Scale: Model 3000: −50 to +150°C; Model 3015: −30 to +200°C; ±3% of scale length (Requires optional temperature probe.)
Battery Test (3000 only): 0.9 to 1.8V; load resistance: 10Ω
Decibel Scale (3015 only): −10 to +23dB (0dB = 0.775V, 600Ω)
Meter: Internal magnet, taut-band suspension with diode overload protection
Fuse Protection: Ohms and mA, A range fuse protected up to 250V AC at commercial frequency (Fuses: MF60NR250V, 0.5A AC 10 Non-Arcing (3000), MF61NR250V 0.3A AC0.5 / MF61NR250V, 15A AC10 } (3015)
Droptest: One meter onto concrete floor surface.
Dimensions/Weight: 136H × 92W × 39D (mm)/230g (approx.); 3015 weight: 295g (approx.)
Accessories Furnished: Test lead set 9067(3000),9066(3015) spare fuse; 0.5A · φ6.5×30L(3000), 0.3A · φ6.5×31.5L / 15A · φ6.5×30L } (3015)

Optional Accessories: 9021—01 Temperature Probe; 9005—01 RMS Current Transducer; 9017 High-Voltage Probe; 9088 Carrying Case*; 9090 Internal Fuse Test Lead Probes
*Model 3000—01, 3015—01 includes carrying case.

OPERATING INSTRUCTIONS

DC V Position the range switch to the DCV range appropriate for the circuit to be tested. Plug the black test lead into the ⊖ test lead terminal and the red lead into the ⊕ terminal. Connect the meter in PARALLEL with the load; with the black test lead on the negative ⊖ side and the red lead on the positive ⊕ side.

DC mA Position the range switch to the DCmA range appropriate for the circuit to be tested. Plug the black test lead into the ⊖ test lead terminal and the red lead into the ⊕ terminal.
Cut the power to the circuit to be tested and connect the meter in SERIES with the circuit; with the black test lead on the negative ⊖ side and the red lead on the positive ⊕ side. Readings up to 50μA are read off the 10 scale and multiplied by a factor of 5.

DC 10A-AC 10A For DC measurements, position the range switch to 300— AMP ; or AMP for AC measurements. Plug the red test lead into the AMP terminal, and the black lead into the negative (−) terminal. The measurement procedure is the same as for DC mA measurements.

AC V Position the range switch to the ACV range appropriate for the circuit to be test and proceed as in DCV measurements.

Position the range switch to the Ω range appropriate for the circuit or device to be tested. Plug the black test lead into the ⊖ test lead terminal and the red into the ⊕ terminal. Short the two test leads together and adjust the pointer to 0Ω using the ZERO Ω ADJ knob.If the pointer will not deflect all the way over to the 0Ω mark, replace the meter battery. Always cut power to the circuit prior to making circuit resistance measurements.

BATT. TEST Battery voltage is measured with a 10Ω load applied to the battery. Battery condition can be determined by comparing the readings obtained using this method with those obtained using the DC 3V range. The scale is graduated from 0.9 to 1.8V.

NOTE: When set as above an internal 'dummy' load of 10Ω has been introduced - thus an accurate battery check will be shown.

TEMP Temperatures from (3000: −50 to + 150°C, 3015: −30 to+ 200°C) may be read off the temperature scale by using HIOKI 9021 Temperature Probe (optional). The kΩ range is used for these measurements.

Decibel (dB) Measurements

The decibel is the most commonly used unit of measurement for determining gain between the input and output of amplifiers and similar devices. 0dB on the decibel scale indicates the voltage value equivalent to 1mW output from a 600Ω impedance device. Note that when reading decibels off scales above 12V, the values listed below must be added to the reading.

AC 30V → +8dB AC 300V → +28dB
AC 120V → +20dB AC 1000V → +38.4dB