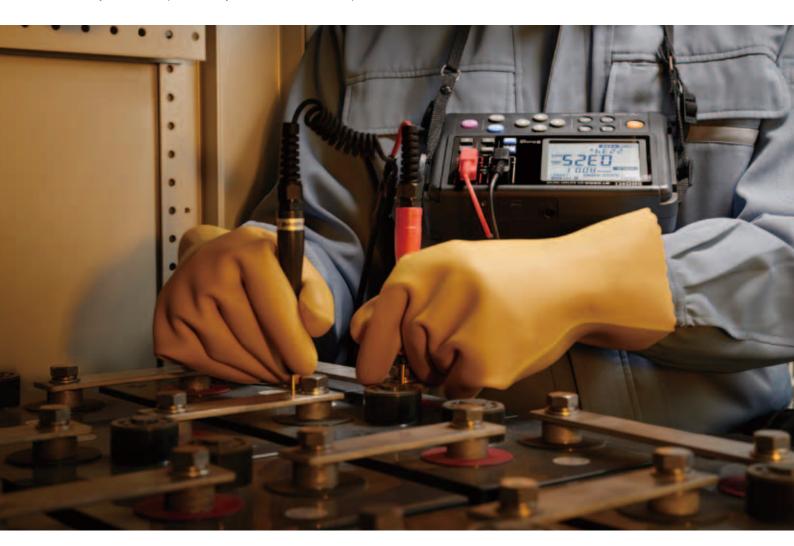




# Even Speedier Diagnosis of the Deterioration of Lead-acid Batteries

Measure and save data in as fast as 2 seconds, a 60% improvement from the legacy 3554 Easily create reports on your tablet or smartphone



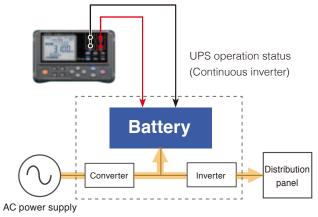
# **Use Noise Reduction Technology**

to Reliably Measure UPS Operation















# Use the New Test Lead for the Back of Distribution Panels and Other Hard-to-reach Places

The innovative L-shape design makes it easier to connect the test lead to electrode terminals, decreasing time spent measuring batteries.





#### Test Leads to Fit your Application

#### **PIN TYPE LEAD L2020**



TIP PIN 9465-90 (For the L2020, 9465-10)



A: 70 mm (2.76 in) (Red), 150 mm (5.91 in) (Black, up to 630 mm (24.8 in)) B: 164 mm (6.46 in), L: 1941 mm (76.42 in) (Red)

#### PIN TYPE LEAD 9465-10 (Bundled accessory)



TIP PIN 9465-90

(For the L2020, 9465-10)

A: 45 mm (1.77 in) (Red), 105 mm (4.13 in) (Black, up to 515 mm (20.28 in)) B: 176 mm (6.93 in), L: 1883 mm (74.13 in)(Red)

#### **LARGE CLIP TYPE LEAD 9467**



A: 300 mm (11.81 in) B: 116 mm (4.57 in) L: 1360 mm (53.54 in) Large clip diameter: Approx. φ29 mm (1.14 in)

#### **PIN TYPE LEAD 9772**



TIP PIN 9772-90 (For the 9772)



A: 45 mm (1.77 in) (Red), 105 mm (4.13 in) (Black, up to 515 mm (20.28 in))

B: 173 mm (6.81 in), L: 1880 mm (74.02 in)(Red)

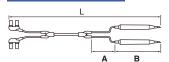
## REMOTE CONTROL



to hold or save the measurement.

Cable length: Approx. 2 m

#### Regarding probe length



A: Between split to probe, B: Probe length, L: Total length

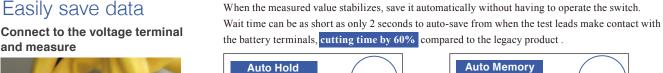


**CLIP TYPE LEAD WITH** 

A: 300 mm (11.81 in) B: 106 mm (4.17 in) L: 2268 mm (89.29 in)

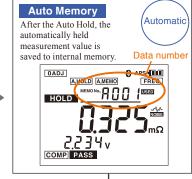
# Quickly Save Data and Create Reports Right in the Field

Just connect the test lead to the terminal









Next measurement

#### Instantly submit loaded data

### Create reports on-site

#### Data transfer

**Dedicated** application available Not only can you view the data you loaded from the BT3554 into a tablet, smartphone, or PC in ledger format, you can also graph the data to display it by cubicle (up to 500 data sets). Then, instantly create reports on-site.



# Graph display Report display



#### How to download the application:

Tablet or smartphone

Download it from the App Store® for iPhone® or iPad®, or download it from the Google Play™ Store for Android™ devices. Just search for "GENNECT Cross"

■ Data can be downloaded to tablets and smartphones using Hioki's dedicated apps available from the Google Play or App Store. Search for "HIOKI" and download the "GENNECT Cross" app.

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Bundled CD-R, Download from our homepage.

Interface specifications

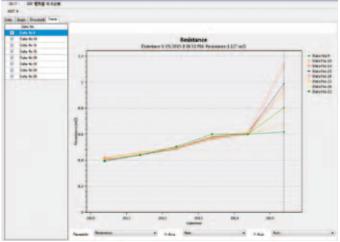
11110114000	opeomediene		
USB	Transmission speed: USB 2.0, Connector: USB mini-B		
	Bluetooth® 4.0LE		
	Transmission distance: Approx. 10 m (32.81 ft), line-of-sight		
	Supported OS: Android™ 4.3 or later, iOS 8 or later		
Bluetooth® Supported Android™ devices:			
(BT3554-01 only)	Devices that support Bluetooth® SMART or SMART READY		
	Supported iOS devices:		
	iPhone® 5 or later, third-generation iPad® or later,		
	first-generation iPad mini™ or later,		
	fifth-generation iPod Touch® or later		

#### Trend display for past data

## Analyze in the office

Graphically display the trend of one cubical (max. 500 batteries) or the condition of selected batteries.

#### [Example of data displayed for selected batteries]



\*Trend display is only available with a PC application.

#### Product Name: BATTERY TESTER BT3554

Model No. (Order code)	Wireless transmission
BT3554	_
BT3554-01	Built in Bluetooth® Smart

#### Accuracy specifications

Accuracy guaranteed for 1 year, Post-adjustment accuracy guaranteed for 1 year Temperature and humidity for guaranteed accuracy: 23°C ±5°C (73°F ±9°F), 80% RH or less, Warm-up time: None (Unnecessary), after zero-adjustment

#### Resistance measurement accuracy

Measurement current frequency: 1 kHz ±30 Hz, With function for avoiding noise frequency enabled: 1 kHz ±80 Hz

Measurement current accuracy: ±10%

Range	Max. display	Resolution	Measurement accuracy	Measurement Current
3 mΩ	3.100 mΩ	1 μΩ	±1.0% rdg. ±8 dgt.*	160 mA
30 mΩ	31.00 mΩ	10 μΩ		160 mA
300 mΩ	310.0 mΩ	100 μΩ	±0.8% rdg. ±6 dgt.	16 mA
3 Ω	3.100 Ω	1 mΩ		1.6 mA

<sup>\*</sup> If zero-adjustment was not performed, add the following values:

When model L2020 is used: ±5 dgt. When model 9465-10 is used: ±6 dgt When model 9772 is used: ±1 dgt. When model 9460 is used: ±16 dgt. When model 9467 is used: ±5 dgt.

When using test leads that are not listed above, or test leads whose length has been extended, accuracy is guaranteed only after zero-adjustment is performed.

#### Voltage measurement accuracy

Range	Max. display	Resolution	Measurement accuracy
6 V	±6.000 V	1 mV	. 0.000/
60 V	±60.00 V	10 mV	±0.08% rdg. ±6 dgt.

#### Temperature measurement accuracy

Measurement range	Max. display	Resolution	Measurement accuracy
-10 to 60°C	60°C	0.1°C	±1.0°C

#### Comparator function

Compares setting values (Resistance: 2 levels, Voltage: 1 level) and measured values Determination method: Following chart, beeping sound, red backlight lights up with beeping sound

When measuring certain batteries such as lead-acid cells, the resulting measurement value may differ depending on the

test leads used to conduct the measurement. This difference

is due to the shape of the probe tip as well as the dimensions of the 4-terminal test leads used for measurement. However,

despite a difference in value given by different test leads, it

is safe to assume that each specific value reflects the correct value obtainable by the respective test leads.

Based on this principle, when diagnosing battery

deterioration in a time series, it is particularly important to use test leads having the same

tip shape and dimensions in order to maintain

Savable settings: 200 tables

Value for

warning

1g	s: 200 tables	Value for	warning Value fo	or failure
		Resistance (low)	Resistance (medium)	Resistance (high)
	Voltage (high)	PASS	WARNING	FAIL
	Voltage (low)	WARNING	WARNING	FAIL

#### General specifications

	_		
Measurement types		Internal resistance measurement for batteries (AC four-terminal method) Terminal voltage measurement for batteries (DC voltage) Temperature measurement (when using the 9460)	
Display upd	ate rate	Approx. 3 times/s	
Absolute ma		±60 V DC max (No AC input allowed)	
Operating e	nvironment	Indoors, pollution degree 2, altitude up to 2000 m (6562 ft)	
Operating temperature and humidity		0°C to 40°C (32°F to 104°F), 80% RH or less (no condensation)	
Storage temperature and humidity		-10°C to 50°C (14°F to 122°F), 80% RH or less (no condensation)	
Power suppl	у	AA (LR6) Alkaline Batteries x 8	
Continuous operating time		Approx. 8.5 hours (When using alkaline batteries)	
Auto power s	ave	Auto power off after 10 minutes unless during data transmission	
Dielectric st	rength	1.5 kV AC for 1 minute, between all measurement terminals and the USB terminal	
Applicable	Safety	EN 61010	
standards	EMC	EN 61326	
Dimensions		Approx. 192 mm (7.56 in) W x 121 mm (4.76 in) H x 55 mm (2.17 in) D	
Mass		Approx. 790 g (27.9 oz) (including batteries) BT3554 Approx. 800 g (28.2 oz) (including batteries) BT3554-01	
Accessories		PIN TYPE LEAD 9465-10, ZERO ADJUSTMENT BOARD, PC Software Application CD, Power-on option sticker, Neck strap, AA (LR6) alkaline batteries x 8, Fuse, USB cable, Carrying case, Instruction manual, Cautions for using radio waves (BT3554-01 only)	

#### **Functions**

HOLD	(1) Hold measured value by pressing the HOLD key or when shorting the EXT. HOLD terminal (2) Automatically hold measured value after it stabilizes
Memory storage	Saving, loading, and deleting measured values Saved items: Date, resistance, voltage, temperature, comparator threshold, judgment Storable data: 6000 sets (500 data sets per unit) Memory structure: 500 data sets per unit (12 units)
Auto-Memory function	Automatically saves measured values to memory when they are held
Memory loading	Load stored data on instrument or with PC application in order

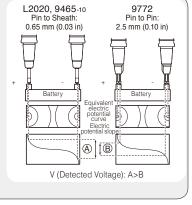
\*The thresholds for determining the pass/fail condition of a battery depend on the specifications and standards of the battery manufacturer, battery type, capacity, etc. It is important and necessary to always conduct battery testing against the internal resistance and terminal voltage of a new or reference battery

In some cases, it may be difficult to determine the deterioration state of traditional open type (liquid) lead-acid or alkaline batteries, which demonstrate smaller changes in internal resistance than sealed lead acid batteries.

#### The Advantages of 4-Terminal Measurement The Quality of Your Test Lead CAN Make a Difference

-Explanation-

The difference in the measurement values obtained by different test leads is a physical phenomenon caused by the difference in distance between the SOURCE and SENSE pins of the test leads. This is more significant when the battery terminal contains a resistance higher than the internal resistance of the battery under test. The figure on the right demonstrates how even minute physical differences between the SOURCE and SENSE pins for two types of test leads can affect the detected voltage level of the battery.



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# HIOKI E.E. CORPORATION

measurement consistency.

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