

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



Test Leads to Fit your Application

# Quickly Save Data and Create Reports Right in the Field

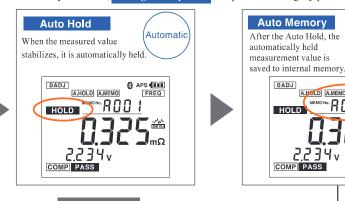
#### Just connect the test lead to the terminal



Connect to the voltage terminal and measure



When the measured value stabilizes, save it automatically without having to operate the switch. Wait time can be as short as only 2 seconds to auto-save from when the test leads make contact with the battery terminals, cutting time by 60% compared to the legacy product.



Next measurement

#### Instantly submit loaded data

# Create reports on-site

#### Data transfer

Dedicated application available

In addition to viewing measurement data downloaded from the BT3554-01 or BT3554-11 in a tabular format on a tablet, smartphone, or PC, you can graph data to assess conditions on a cubicle-by-cubicle basis (up to 500 values). Then, instantly create reports on-site.



## Graph display



#### Report display

Automatic



### 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

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 for past data

#### Model: BATTERY TESTER BT3554

Model No. (Order Code)	Built in Bluetooth®Wireless technology	Standard leads
BT3554	_	9465-10
BT3554-10	_	L2020

#### Model: BATTERY TESTER BT3554-01

Model No. (Order Code)	Built in Bluetooth®Wireless technology	Standard leads
BT3554-01	✓	9465-10
BT3554-11	✓	L2020

#### Accuracy specifications

Accuracy guaranteed for 1 year, Post-adjustment accuracy guaranteed for 1 year

Temperature and humidity for guaranteed accuracy:  $23^{\circ}$ C  $\pm 5^{\circ}$ C ( $73^{\circ}$ F  $\pm 9^{\circ}$ F),  $80^{\circ}$ RH or less, Warm-up time: None (Unnecessary), after zero-adjustment

#### Resistance measurement accuracy

Measurement current frequency: 1 kHz  $\pm 30$  Hz, With function for avoiding noise frequency enabled: 1 kHz  $\pm 80$  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	±0.8% rdg. ±6 dgt.	160 mA
300 mΩ	310.0 mΩ	100 μΩ		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:  $\pm 5$  dgt. / When model 9465-10 is used:  $\pm 6$  dgt. When model 9772 is used:  $\pm 1$  dgt. / When model 9460 is used:  $\pm 16$  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/ rda . 0 dat
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

Savable settings: 200 tables

Value for warning Value for failure

Resistance (high)

FAIL

FAIL

		Resistance (low)	Resistance (medium)
Value for	Voltage (high)	PASS	WARNING
warning	Voltage (low)	WARNING	WARNING

#### General specifications

Measurement types		nt 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		
- 1	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 to and humidit		0°C to 40°C (32°F to 104°F), 80% RH or less (no condensation)		
	Storage tem and humidit		-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 strength		1.5 kV AC for 1 minute, between all measurement terminals and the USB terminal		
i	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, With protector attached		
	Mass		BT3554, BT3554-10: Approx. 790 g (27.9 oz) (Including batteries and protector) BT3554-01, BT3554-11: Approx. 800 g (28.2 oz) (Including batteries and protector)		
			PIN TYPE LEAD 9465-10 (Bundled with BT3554, BT3554-01), PIN TYPE LEAD L2020 (Bundled with BT3554-01, BT3554-11), 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, Protector, Cautions for using radio waves (BT3554-01, BT3554-11),		

#### 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-

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, when the battery terminal contains a resistance higher

L2020, 9465-10
Pin to Sheath:
0.65 mm (0.03 in)
Pin to Pin:
2.5 mm (0.10 in)
Pin to Pin:
2.5 mm (0.10 in)