

# **Landt Instruments**

# **Battery Test Systems Quick Start Guide**

Model M340A/G340A/D340A/D350A

High Precision Battery Test Systems

**Read this guide first.**

Please read this guide before operating this equipment. The remarks for detailed instructions are described in the Instruction Manual. After you finish reading the Start Guide, store it in a safe place for future reference.

# Checking the supplied accessories

- M/G/D340A Tester Units
- Ethernet Cables (2 meters)
- Router (Ethernet Hubs)
- Channel Cables with Clamps  
(alligator clips and/or coin/pouch cell clips)
- Starter Guide



10M/100M Router



# You need to get a computer ready (with Ethernet port RJ45)

## ■ Recommended configuration

- CPU i5 or better
- RAM 8G or better
- Recommend SSD 120G or more
- Windows 7/10
- Support NTFS file format
- 100M Ethernet Port

## ■ Install the software V4.3

- [www.landtinst.com/precision-download/](http://www.landtinst.com/precision-download/)

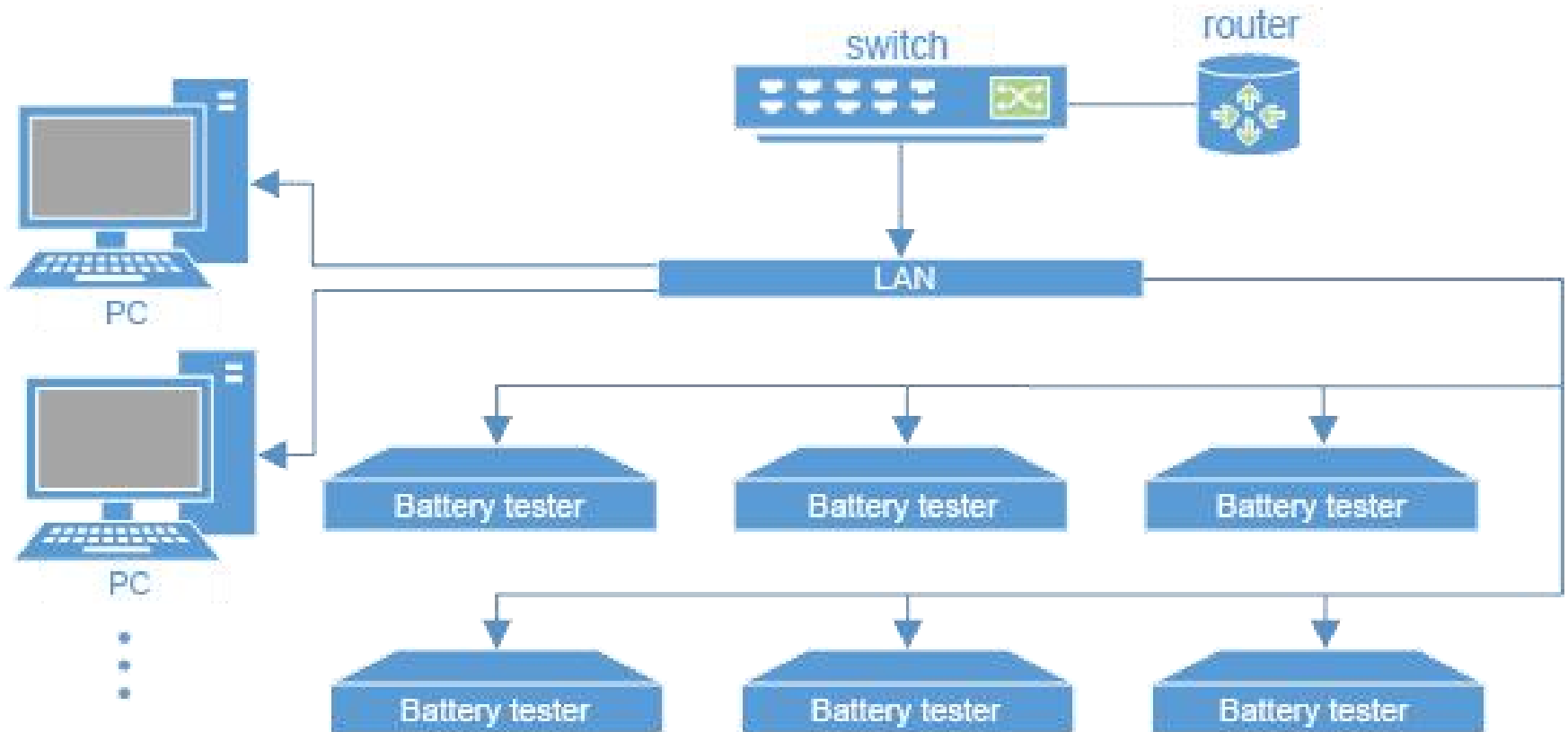


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Ethernet RJ45



# Connecting



- Multiple tester units and the computer are connected with an Ethernet Switch/Router
- Multiple Ethernet Switches are connected with a router

# Start the equipment

- Plug in the power for battery testers/router
- Switch on the battery testers



## Channel Indicator

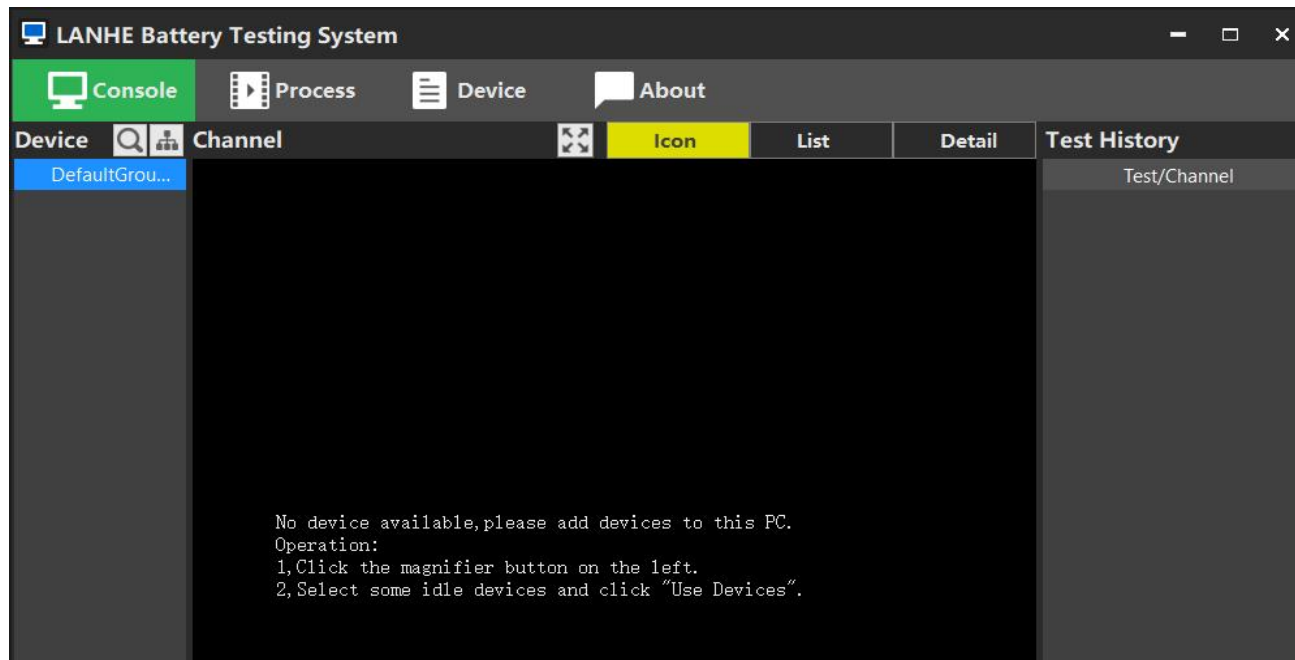
- Red - Charging
- Blue - Discharging
- Green - Rest
- Yellow - Pause

## Unit Number Indicator

2-digit Yellow LED (need to define later by users)

# Connecting

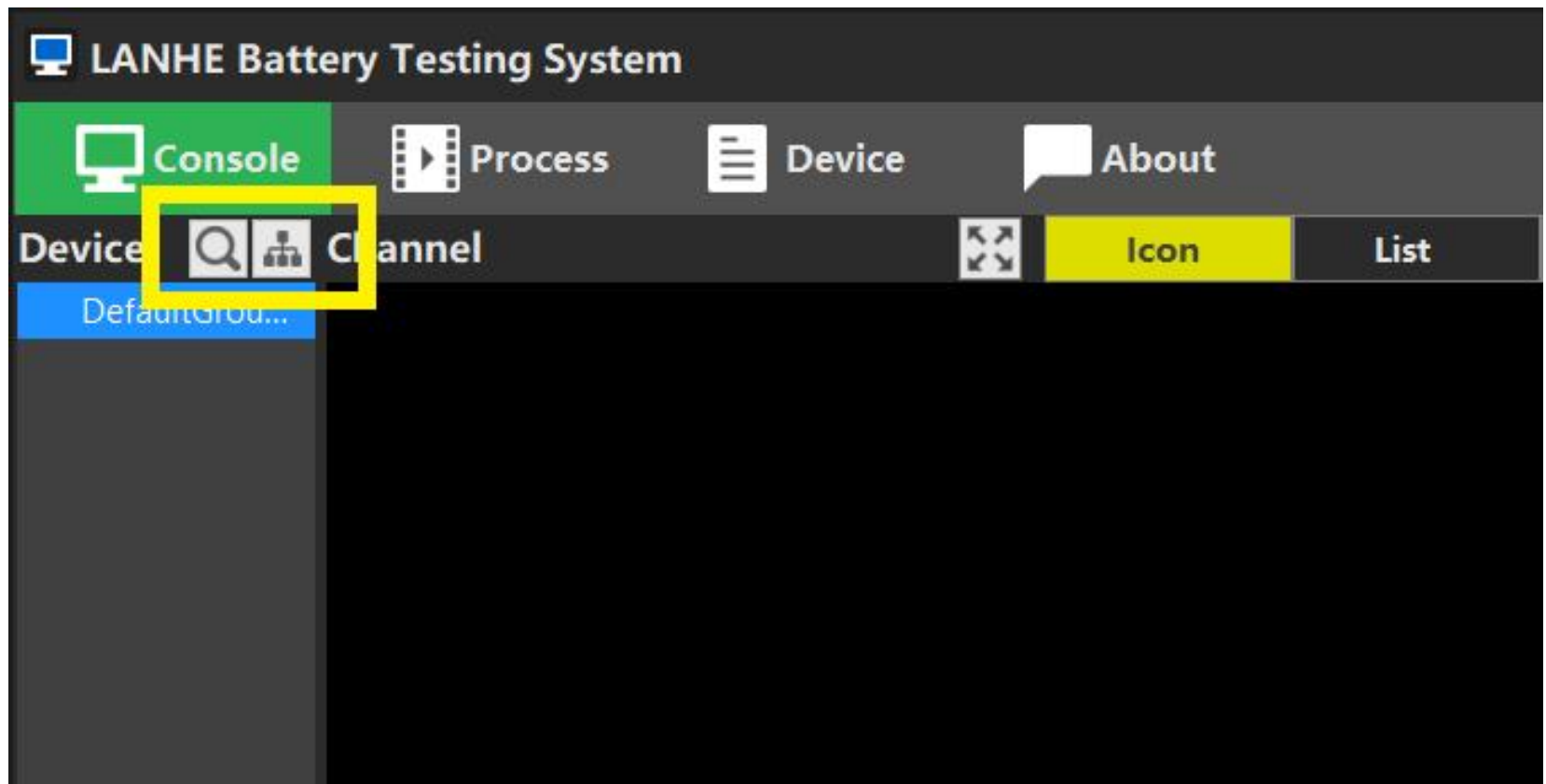
- The testers are controlled by LAHE Programs
- Start the LANHE Mon program



- Console shows Devices, Channels and Test log
- Process shows all the test programs saved. It can be edited offline
- Device - Summary of all devices and channels with current ranges

# Search for Testers

- In the Console, click the “Search” icon to search for new testers. Click “Device Manager” icon to assign a Unit Number (IP Address) for each tester (01-99)



# Defining Unit Number

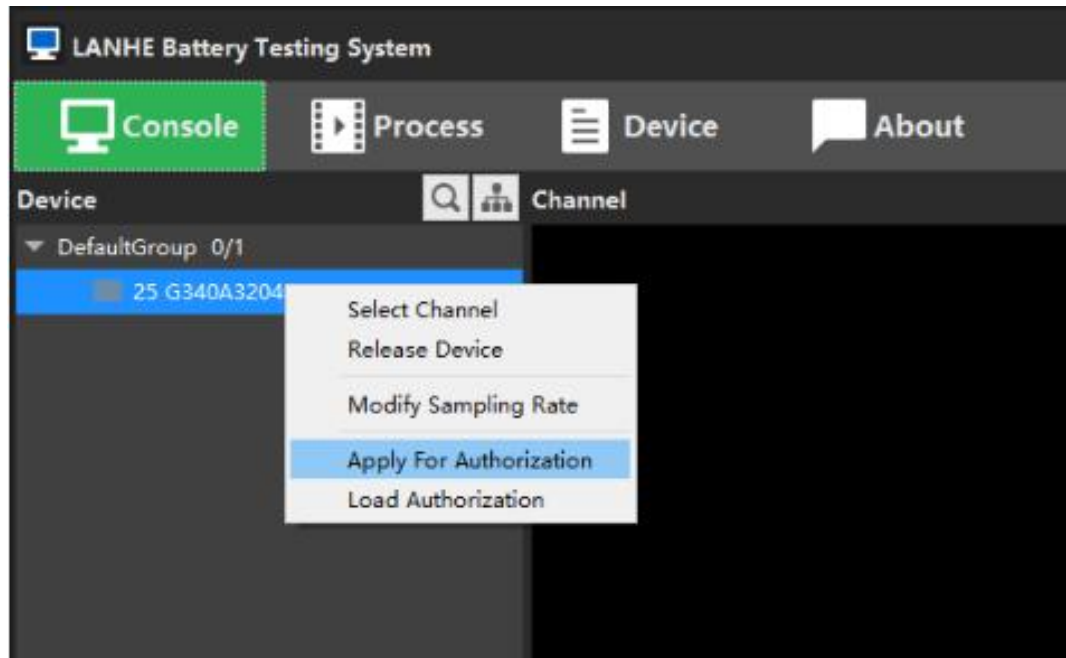
The screenshot displays the LANHE Battery Testing System software interface. At the top, there are navigation tabs for 'Console', 'Process', 'Device', and 'About'. Below these, a 'Device' section shows a tree view with 'DefaultGroup 1/1' expanded, listing a device '00 M340A320302032 100.00uA/1.0...'. A 'Channel' section shows eight channels, each with 'IDLE' status and '100.00mA 0-0' range. A 'Device Manager' dialog box is open, displaying a table of device configurations. The 'Device Number' column is highlighted with a yellow box, and the value '02' is entered in the corresponding cell. The table also shows 'Serial Number', 'Range', and 'Sampling Rate/sps' for the selected device.

Group	Device Number	Serial Number	Range	Sampling Rate/sps
DefaultGroup	02	M340A320302032	100.00uA/1.0000mA/10.000mA/100.00mA/5.0000V	100

The number indicated on the 2-digit LED panel on the battery tester should change accordingly

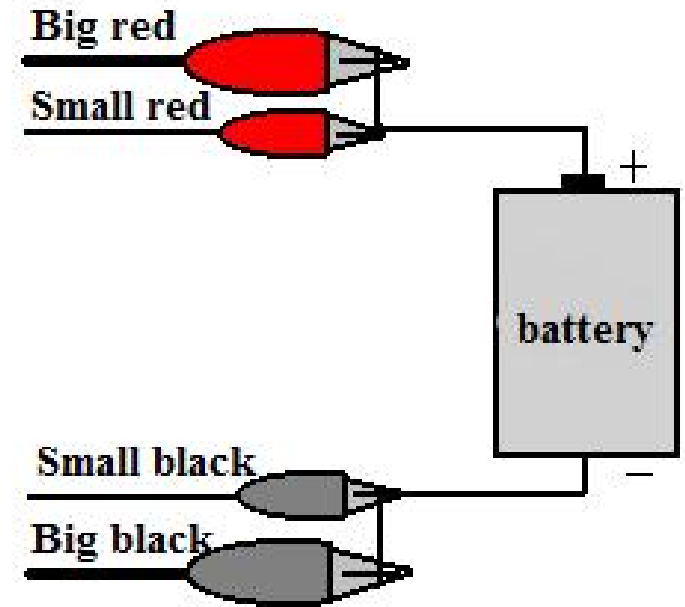


# Software Authorization



- Un-authorized software can only be used temporarily
- When all the testers are connected, select all, right click and “Apply for Authorization”. Save the “ini” file
- Send the ini file to [landt@landtinst.com](mailto:landt@landtinst.com) to get the authorization file.

# Connecting the battery



- Big clips for current output/input, little clips for voltage measurement,
- Red clips connecting the positive terminal of a battery, black clips connecting the negative.

# Start a test

- Select a channel: Right click the channel → Click “Start”
- Double click a process to edit test steps

**Start**

**Process**

- ✓ 1 Ref Battery Test 1
- 2 Ref Battery Test 2
- 3 Ref Capacitance Test
- 4 Ref GITT Test
- 5 Ref Pulse Test
- 6 Ref Slope Test
- 7 Ref CCCV Output
- 8 NewProcess

**Test**

Name:  Required

Description:

Cycle Order:  Charge->Discharge  Discharge->Charge  Auto High Precision

**Data**

Location:  ...

File Name:

Preview: NewTest\_20210115173620\_DefaultGroup\_01\_1.ccs

**Active Material**

Nominal SpeCap:   mAh/g  mAh/cm  mAh/cm2  mAh/cm3

Active Material:  mg

Capacity:  mAh

New Copy Modify Start Cancel

# Schedule a program

Test flow chart

Unit Scheme

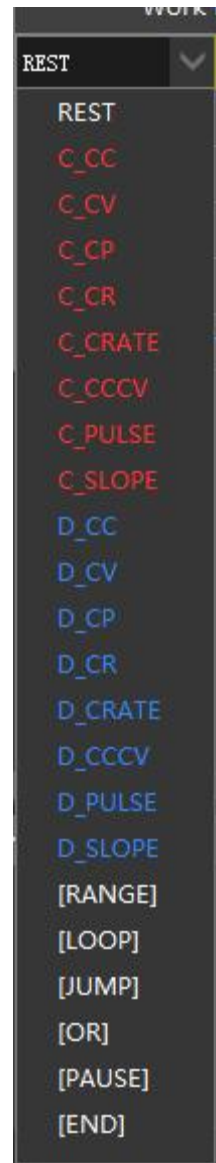
Order	Work Mode	End/Jump Condition 1	(and)End/Jump Condition 2	Sampling
1	REST	Time $\geq$ 00:30		1000mS
2	C_CC 1 mA	Voltage $\approx$ 2 V		1000mS
3	C_CV 2 V	Time $\approx$ 01:40		20mS
4	REST	Time $\approx$ 01:40		1000mS
5	[END]			
	+ New Step			

Safety Protection when any condition is reached the test will terminate

Test process can be saved for future use

# Test Setup – Working Steps

- Rest: No current, OCV record
- C\_CC: Constant Current Charge
- C\_CV: Constant Voltage Charge
- C\_CP: Constant Power Charge
- C\_CR: Constant Rate Charge
- C\_CRATE: Constant C-rate Charge
- C\_CCCV: Constant Current Charge followed by Constant Voltage Charge
- C\_PULSE: Pulse charge
- C\_SLOPE: Charge with a current slope
  
- D\_CX: Constant XXX Discharge
  
- Loop: cycling loops
- Jump: to jump to another step
- Pause: pause
- End: last step



Should you have any questions

Contact us:

## **Landt Instruments**

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