

ETH2020 Converter Setup (RJ45)

1. INTRODUCTION

The main function of ETH2020 is to receive instructions from the control PC with an Ethernet cable and forward it to the battery test equipment. At the same time, it obtains the real-time voltage and current data from the testers and transmits it back to the computer.



Figure-1

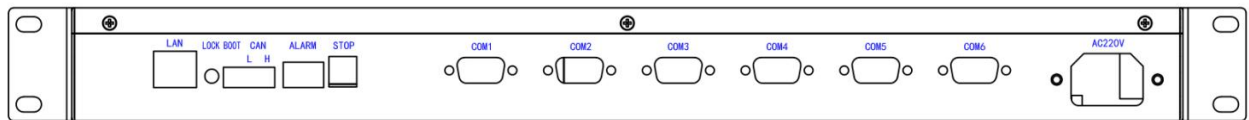


Figure-2

LAN port: connected with PC with Ethernet cable.

LOCK: release the binding between PC and ETH2020 converter.

BOOT: used for programming on the equipment.

CAN: reserved for other uses.

ALARM: for alarm flashlight.

STOP: for emergent stoop.

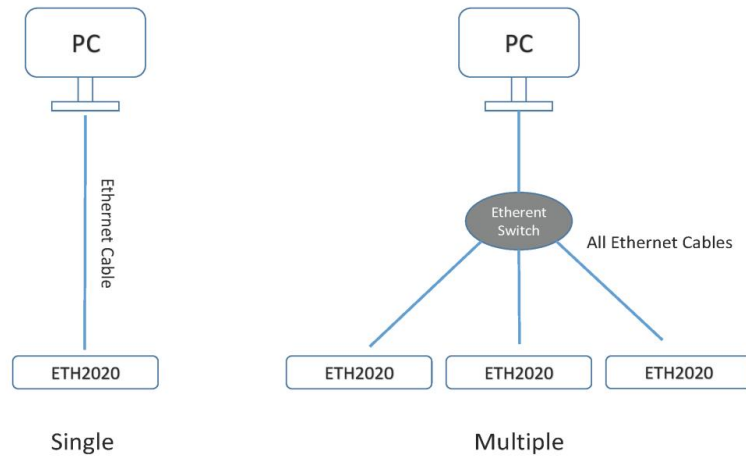
COM1-COM6: connected battery testers with serial cables. Every two testers are connected in series and then to the COM port.

2. QUICK INSTALLATION

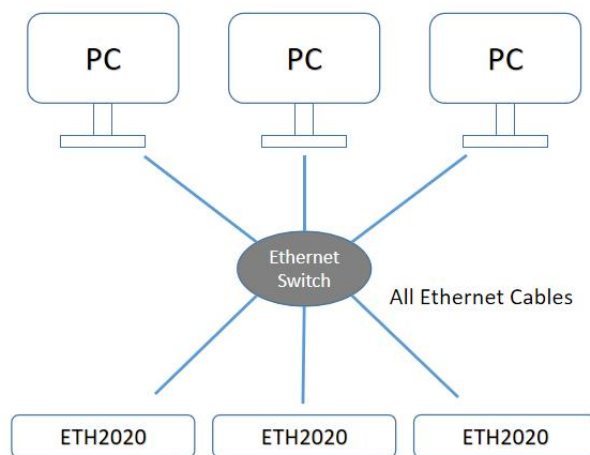
2.1 CONNECTIONS

The ETH2020 converter works as an intermediary between the PC and battery testers. All the connections are with LAN cables. If there are several ETH2020 converters, a switch is necessary. There are two connections: direct connection and local area network(LAN) connection.

- a) Direct connection: connect PC and ETH 2020 converter with Ethernet cables directly. For several ETH2020, use an Ethernet switch. The whole network is closed and doesn't communicate with the outside. Direct connection is preferred as it is simple and reliable.



- b) LAN connection: several PCs and ETH2020 are connected via one or more Ethernet switches. A LAN network is formed. This connection allows devices to be expanded and a large number of battery testers can be managed. It requires the IP of each device to be individually assigned.



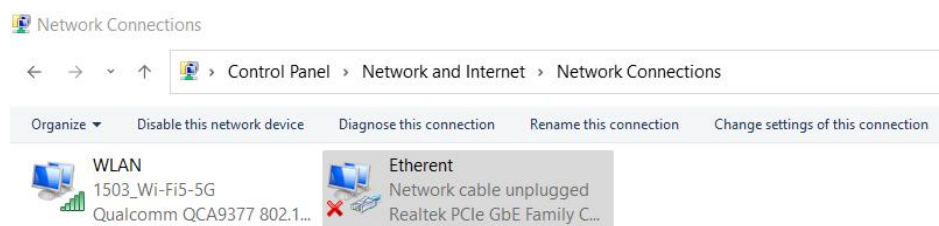
LAN Connections

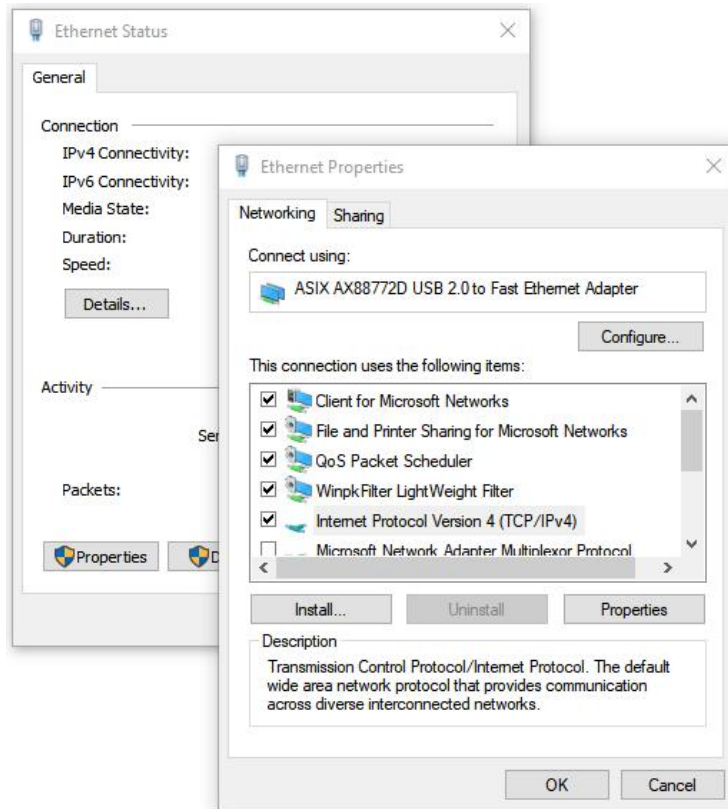
Note: Don't turn on all the ETH 2020 simultaneously when they are initially connected to the same computer, since all the ETH2020 have the same default IP address (192.168.10.100). The ETH 2020 should be turned on and set one by one. It is to be bound to the computer. Once the IP address was re-assigned, turn on another. Note that the IP addressing requires a restart of the device manually to take effect. Repeat the above to assign the IP of all the ETH2020. Pay attention to the IP allocations, and make them in sequence. The region (192.168.10.100 ~ 192.168.10.110) is strongly suggested for the ETH 2020.

2.2 IP ADDRESS OF THE PC

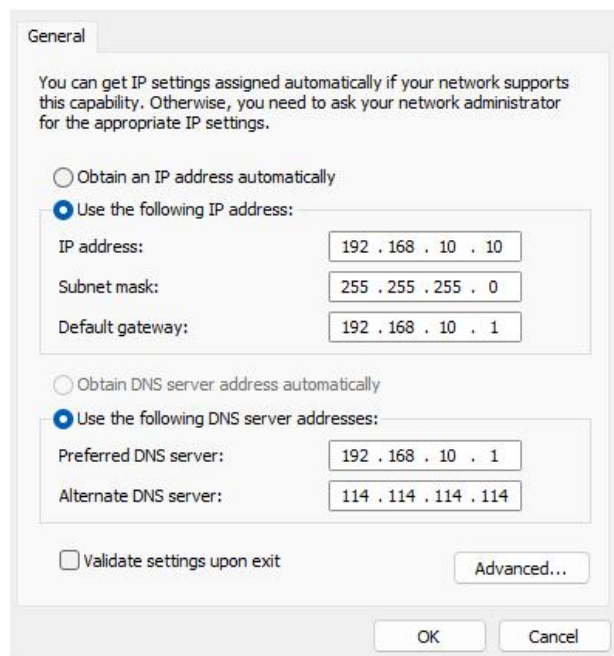
The default IP address for every ETH2020 is 192.168.10.100. it requires the IP of the computer to be in the same region.

Go to Control Panel\Network&Internet\Network Connection to find the Ethernet connection. Right-click the Ethernet icon, and select "Property". Then double click TCP/IPv4 option.

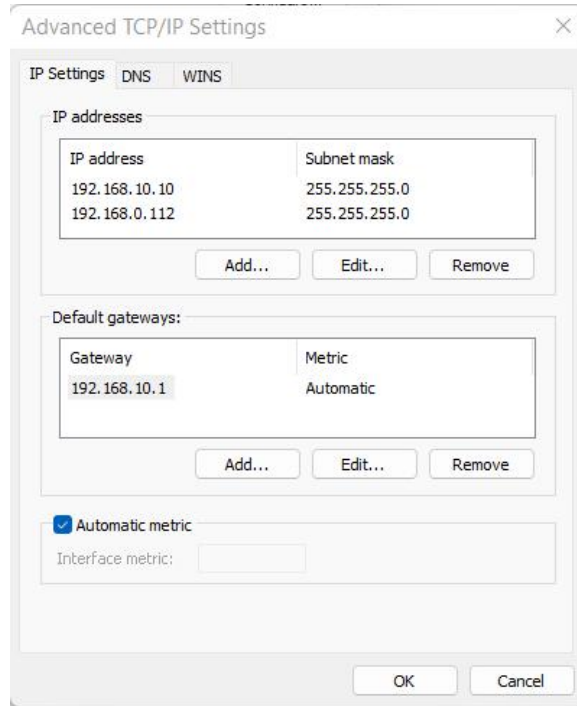




Modify IP address to be in the region 192.168.10.X network. For example 192.168.10.10.



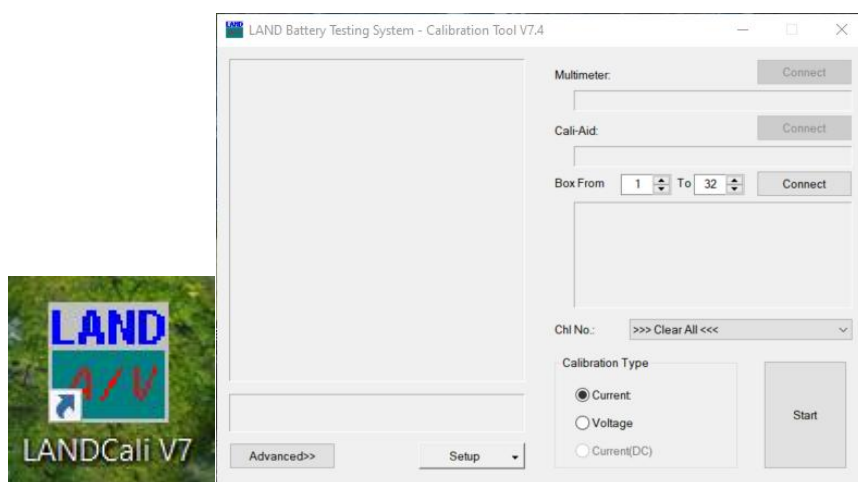
If the current IP address needs to be retained, the IP 192.168.10.X can be used as an additional. Click "Advanced" button to add the additional IP.



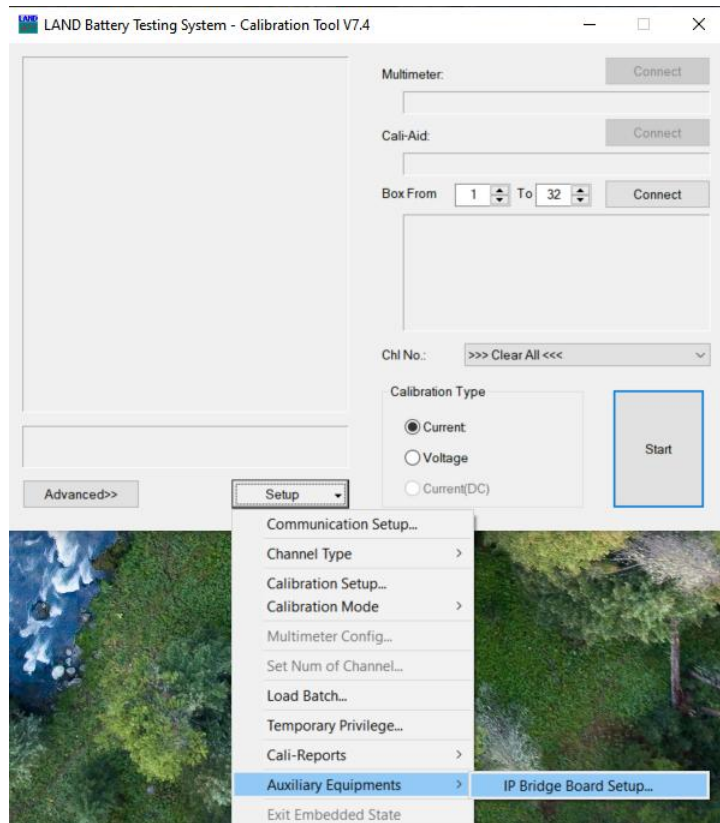
Note: Make sure that the IP of the computer is different from that of the ETH 2020 converter. Fill in the subnet mask with 255.255.255.0 and default gateway with 192.168.10.1. The default gateway can not be used if the computer has dual Ethernet cards or has several IP addresses.

2.3 BIND THE ETH 2020 TO THE COMPUTER

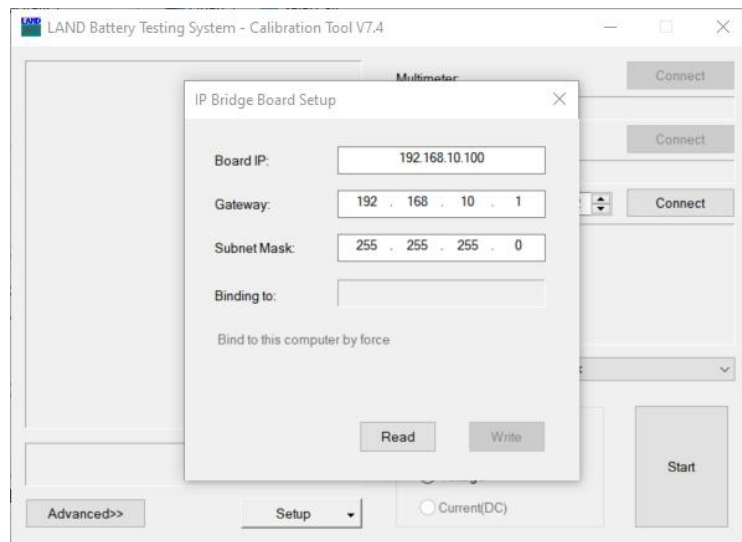
Turn on the ETH 2020 and start the LANDCali program V7.



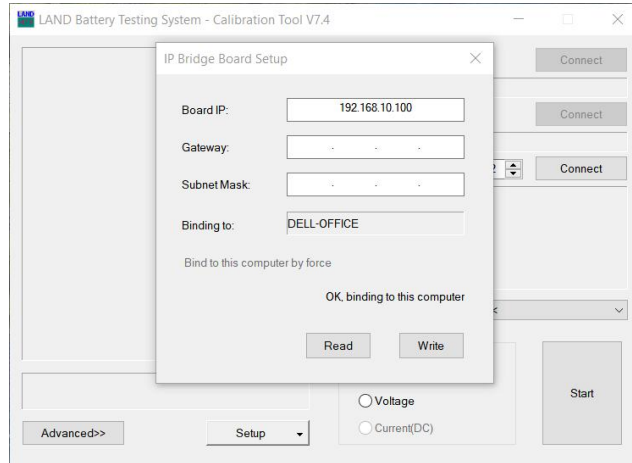
Select Setup -> Auxiliary equipment -> IP Bridge Board Setup



Fill in the IP address and gateway of the ETH2020 device (default IP 192.168.10.100) and click Read.



Click “Bind to this computer by force”. Once it becomes grey, the ETH 2020 is bound to the computer.

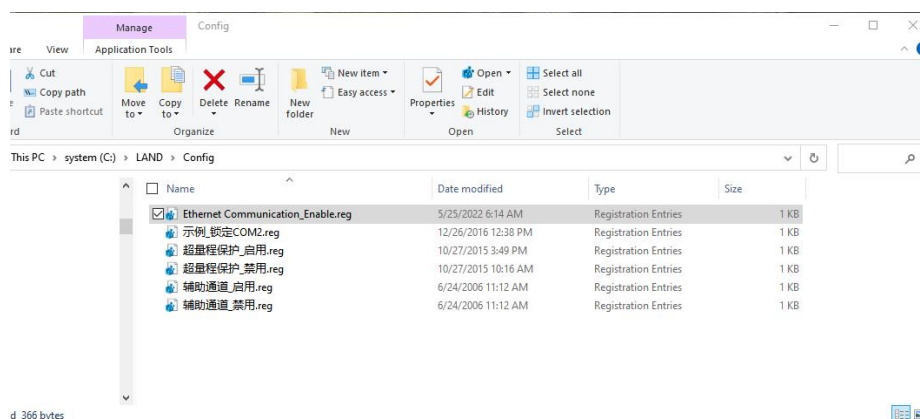


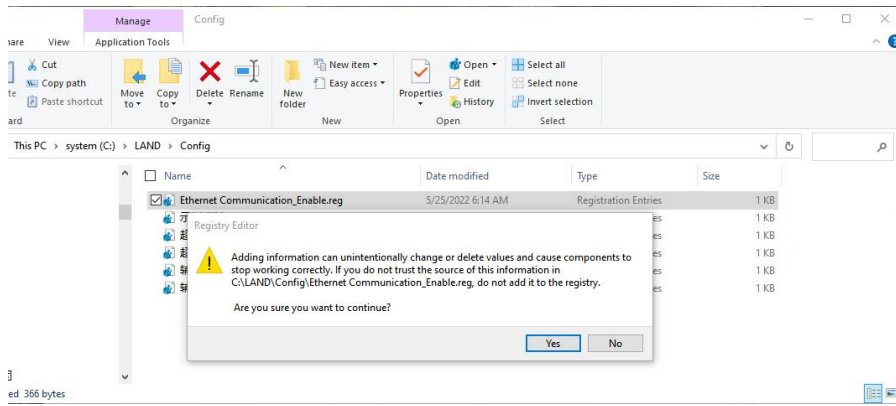
2.4 IP ADDRESS OF THE ETH 2020

The device has the default IP: 192.168.10.100 and it is bound to the computer. For other ETH 2020 devices to be added to the same computer, this IP needs to be modified. Input another IP value, for example, 192.168.10.101, the Gateway and Subnet Mask, and click “Write”. The modification will take effect when the ETH2020 device is restarted manually.

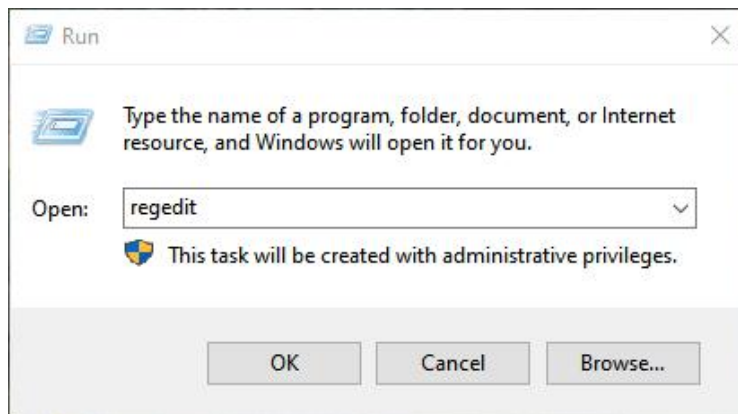
2.5 REGISTRY MODIFICATION

Open the Config folder where the software is installed (normally D:\LAND\Config), and double click the “Ethernet Communication_Enable.reg”. Click Yes, and then click OK. If the registry file can not be found, download the .reg file and move it to “\LAND\Config\”. (download page: www.landtinst.com/registry-download/)

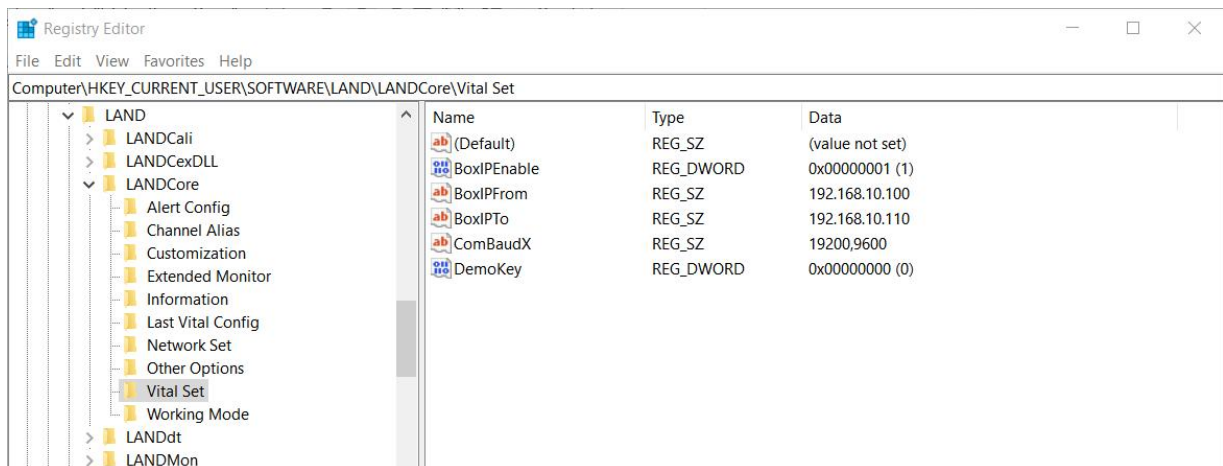




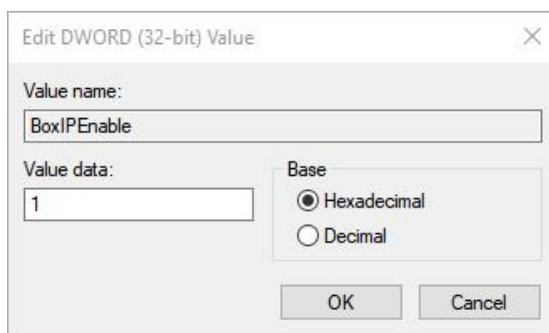
Press Windows key + R to get the “RUN” box. Type “regedit” and enter to open the Registry Editor.



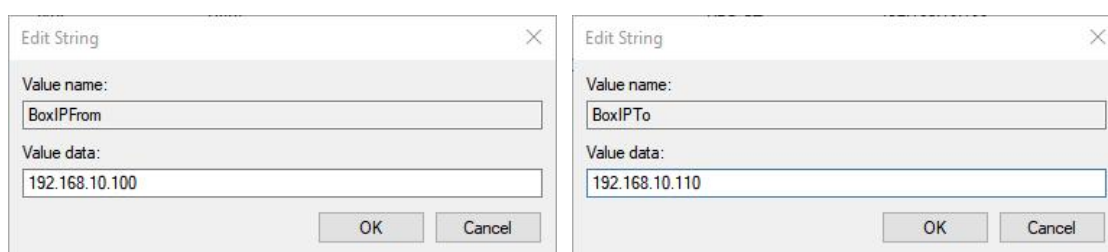
Locate the registry values here:
 Computer\HKEY_CURRENT_USER\SOFTWARE\LAND\LANDCore\Vital Set



Open "BoxIPEnable" and set the value as 1.

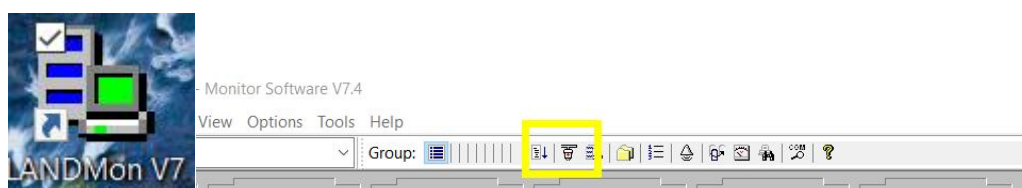


Modify the values in "BoxIPFrom" and "BoxIPTo", which are the IP ranges of ETH 2020 devices. If there is only one ETH 2020, the same value (192.168.10.100) can be used for both "BoxIPFrom" and "BoxIPTo". If there are several ETH 2020, the IP addresses should be within the range defined by "BoxIPFrom" and "BoxIPTo".



2.5 BATTERY TESTER CONNECTIONS

The CT3002 battery testers are connected to the ETH 2020 with serial cables. Each ETH 2020 has 6 serial ports. Two battery tester units are connected in series and then to one COM port. A maximum of 12 units can be connected to an ETH 2020. Once everything is set, start the LANDMon program. All the testers should be found.



LAND Battery Testing System - Monitor Software V7.4

Network Test Data Capacity View Options Tools Help

Connect: <Local> Group: [Icons]

Channel	Value
001	
-1-	0.0468 V
-2-	0.1471 V
-3-	0.0215 V
-4-	-0.3247 V
-5-	-0.2276 V
-6-	0.3235 V
-7-	-0.5483 V
-8-	-0.3060 V

Time
2022/05/29 22:33:36
2022/05/29 22:33:43

Evt Descriptio
Load Monitor
Connect Succo

Ready