

# Lake Shore Instruments: Wi-Fi Addendum

## I. Introduction

This document applies to the following Lake Shore instruments sold prior to August 2020, which included Wi-Fi capability:

- F71 multi-axis teslameter/F41 single-axis teslameter
- MeasureReady™ M91 FastHall™ measurement controller
- MeasureReady™ 155 AC/DC current and voltage source

## II. FCC and IC Compatibility

The radio transmitter/receiver in the instrument adheres to Federal Communications Commission (FCC) and Industry Canada (IC) requirements. The instrument contains the following certification numbers:

FCC ID: TFB-TIWI-01

IC: 5969A-TIW1101

This device is granted for use in mobile-only configurations in which the antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons, and not be co-located with any other transmitters except in accordance with FCC and Industry Canada multi-transmitter product procedures.

## III. Physical Connectivity

Wi-Fi connectivity provides a convenient method for communicating remotely with the instrument and updating instrument firmware. Make sure to attach the included Wi-Fi antenna to the WLAN connection on the back of the instrument.



Figure 1: **Communications connections and Wi-Fi antenna**

FCC	TFB-TIWI1-01
IC	5969A-TIW1101
Giteki	G209-J00157

Table 1: **Approvals**

Pin	Description
Center conductor	Antenna input
Outer shield	Antenna return (chassis ground)

Table 2: **WLAN connections**

### System Settings: Connectivity

The following fields are displayed on the Connectivity tab. Touch the enable switch next to each option to change settings.

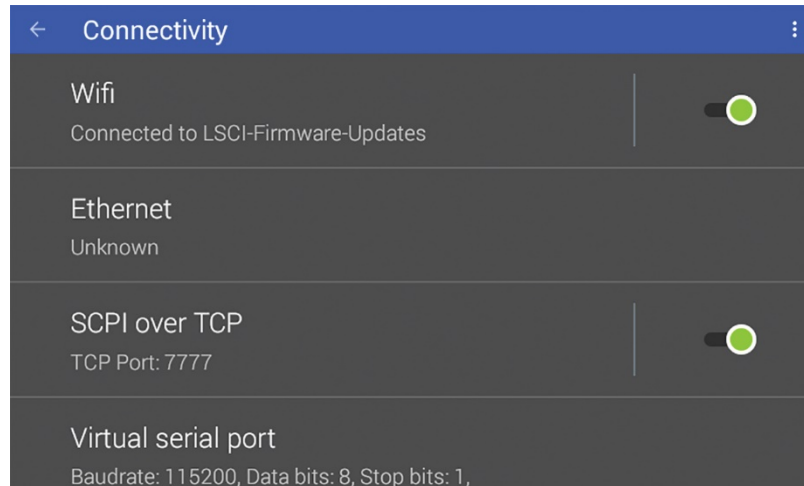


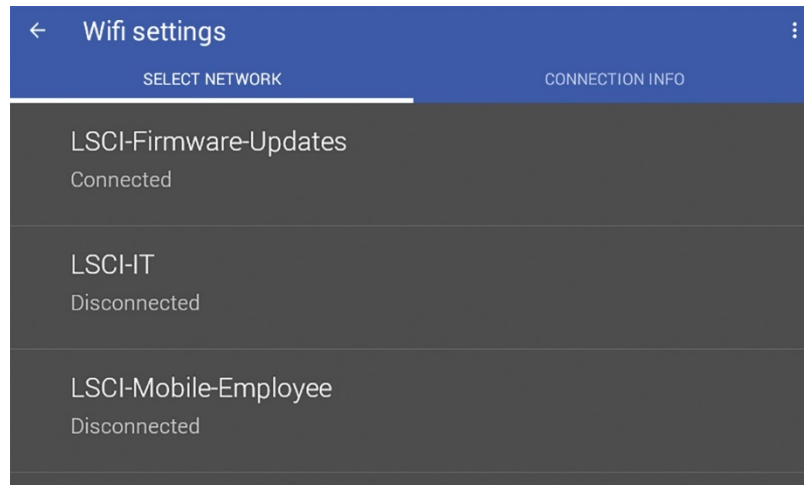
Figure 2: **System settings: Connectivity tab**

Field	Description
Wi-Fi	Enables Wi-Fi connectivity.
Ethernet	Touch the Ethernet box to see IP settings.
SCPI over TCP	Determines whether the teslameter will respond to SCPI commands from the Ethernet connection. If this option is turned off, the instrument will only respond to SCPI commands over the USB connection. This feature must be turned on if the GPIB adapter is connected to the teslameter.
Virtual serial port	Enables serial communications via USB.

Table 3: **Connectivity fields**

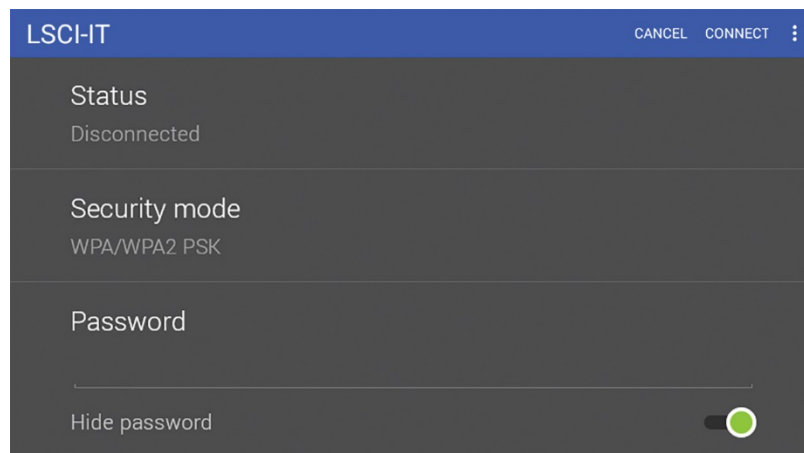
## Wi-Fi Configuration

Configuration and status for these network configurations can be found from the front panel by tapping the Settings menu (top left corner of the screen) to go to the navigation drawer. Then tap System settings. Wi-Fi and Ethernet settings can be found in the Connectivity box. Touch either item to see further settings. A screen is presented showing wireless networks that are broadcasting their Service Set Identifiers (SSID).



*Figure 3: Wi-Fi configuration*

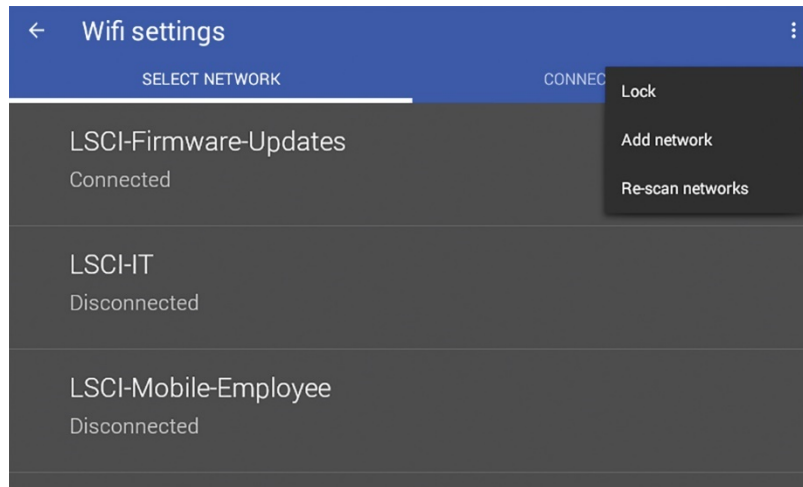
Choosing one of the visible networks will bring you to the following screen:



*Figure 4: Wi-Fi network configuration*

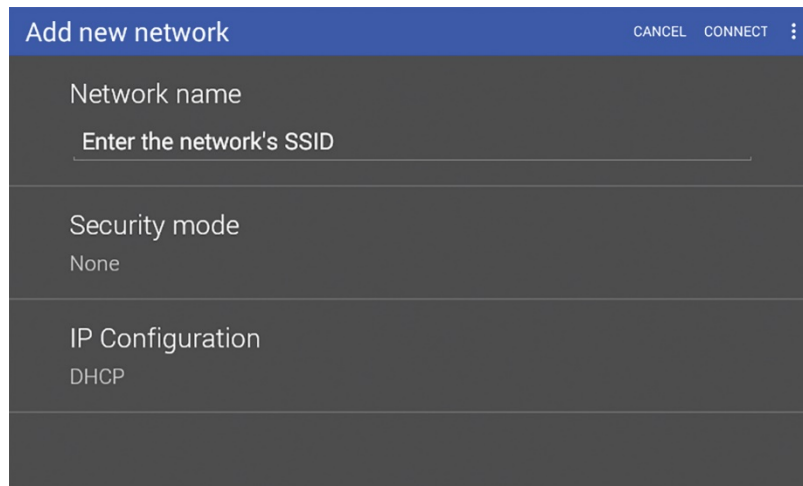
The screen shows the status of the network connection, the type of security protocols it adheres to, a password entry field, and the IP settings, allowing selection of either DHCP or static IP.

1. Enter the network password, then navigate to the upper right part of the screen and tap Connect.
2. To connect to a network that is not displaying its SSID, the network must be added manually. This can be done by touching Other network at the bottom of the available network list, or by tapping the action icon (three dots in the top right corner of the screen) and selecting Add network.



*Figure 5: Wi-Fi settings*

At that point, the SSID, security mode and IP setting type can be entered:



*Figure 6: Network parameters*

If static IP is desired, touch IP settings then select Static. The static IP items are listed, including IP address, gateway, DNS, and network prefix length. Network prefix is an alternative way to present the subnet mask. For example, a network prefix length of 16 translates to a subnet mask of 255.255.0.0, while prefix length of 8 translates to a subnet mask of 255.0.0.0.

Finally, the Wi-Fi connection can be enabled. This is done by touching the Wi-Fi enable switch. If the connection is successful, the status will change to Connected.

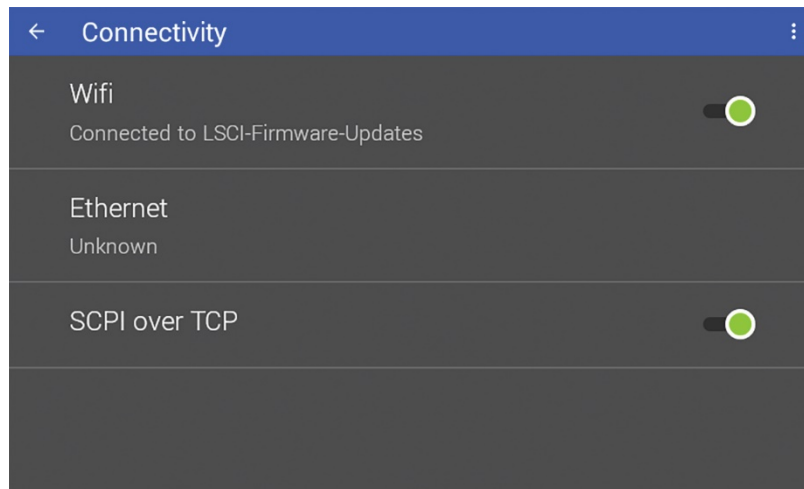


Figure 7: **Wi-Fi enabled**

#### IV. Service

The Lake Shore Service Department is staffed Monday through Friday between the hours of 8:00 AM and 5:00 PM EST, excluding holidays and company shut down days.

Contact Lake Shore Service through any of the means listed below. However, the most direct and efficient means of contacting is to complete the online service request form at <http://www.lakeshore.com/Service/>. Provide a detailed description of the problem and the required contact information. You will receive a response within 24 hours or the next business day in the event of weekends or holidays.

If you wish to contact Service or Sales by mail or telephone, use the following:

<b>Mailing address</b>	Lake Shore Cryotronics Instrument Service Department 575 McCorkle Blvd. Westerville, Ohio USA 43082-8888	
<b>E-mail address</b>	sales@lakeshore.com support@lakeshore.com	Sales Instrument Service
<b>Telephone</b>	614-891-2244 614-891-2243 option 6	Sales Instrument Service
<b>Fax</b>	614-818-1600 614-818-1609	Sales Instrument Service
<b>Web service request</b>	<a href="http://www.lakeshore.com/Service/">http://www.lakeshore.com/Service/</a>	Instrument Service