Regions 8 and 10 Conference | Fargo

What is new at The Energy Conservatory?
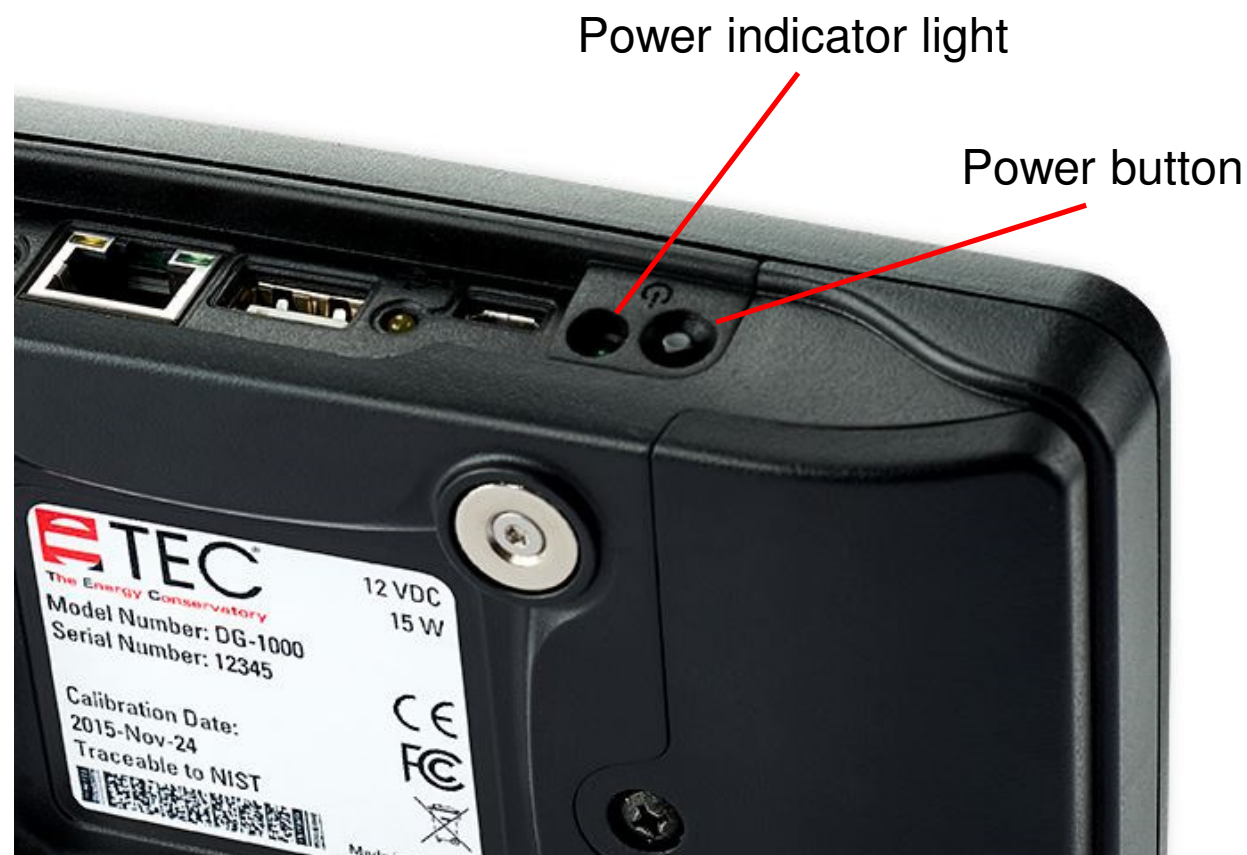

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Paul Morin

Agenda

» Intro to the DG-1000

» Demonstrate DG-1000 with blower door

» Demo with TEC Gauge

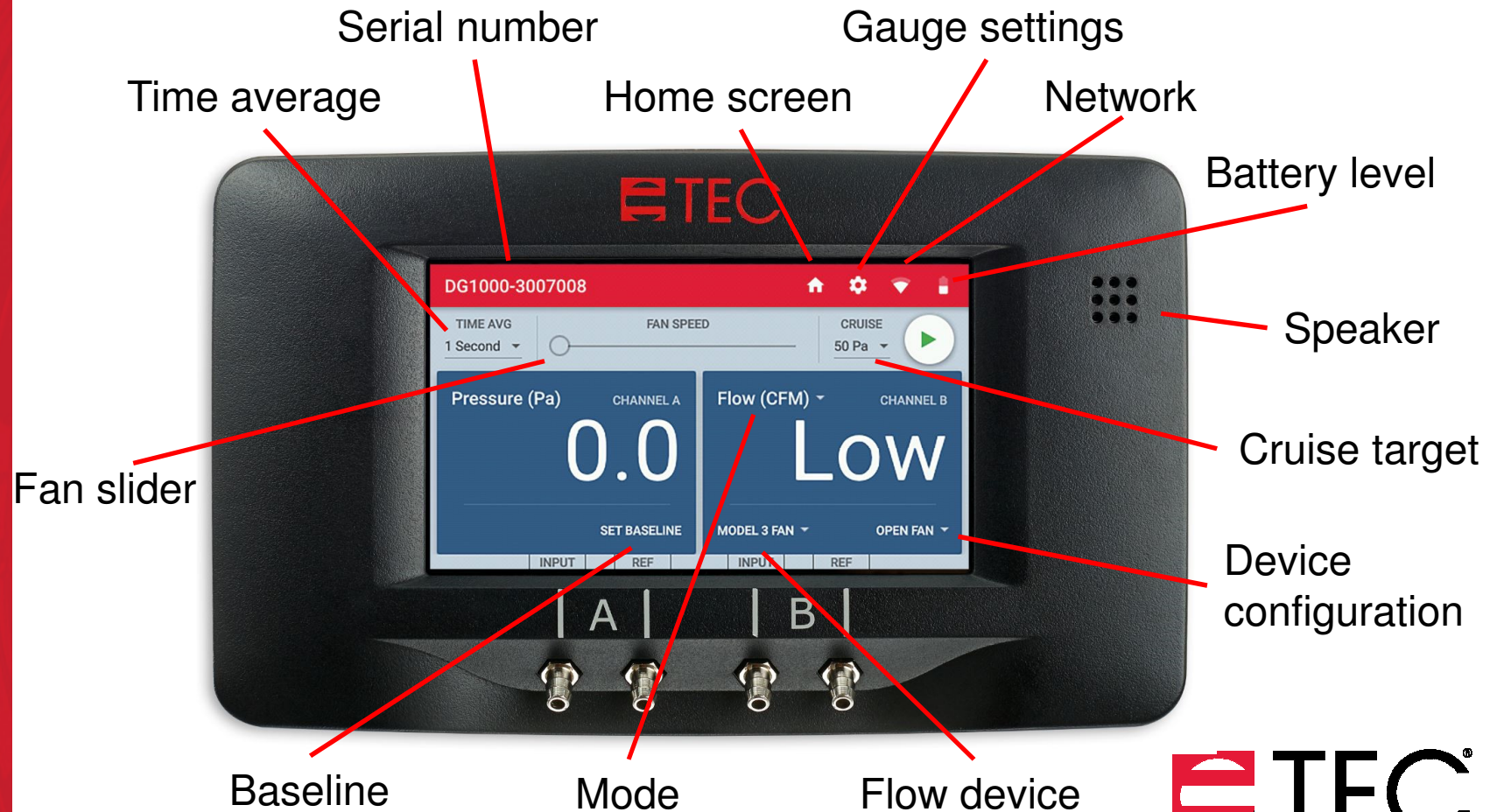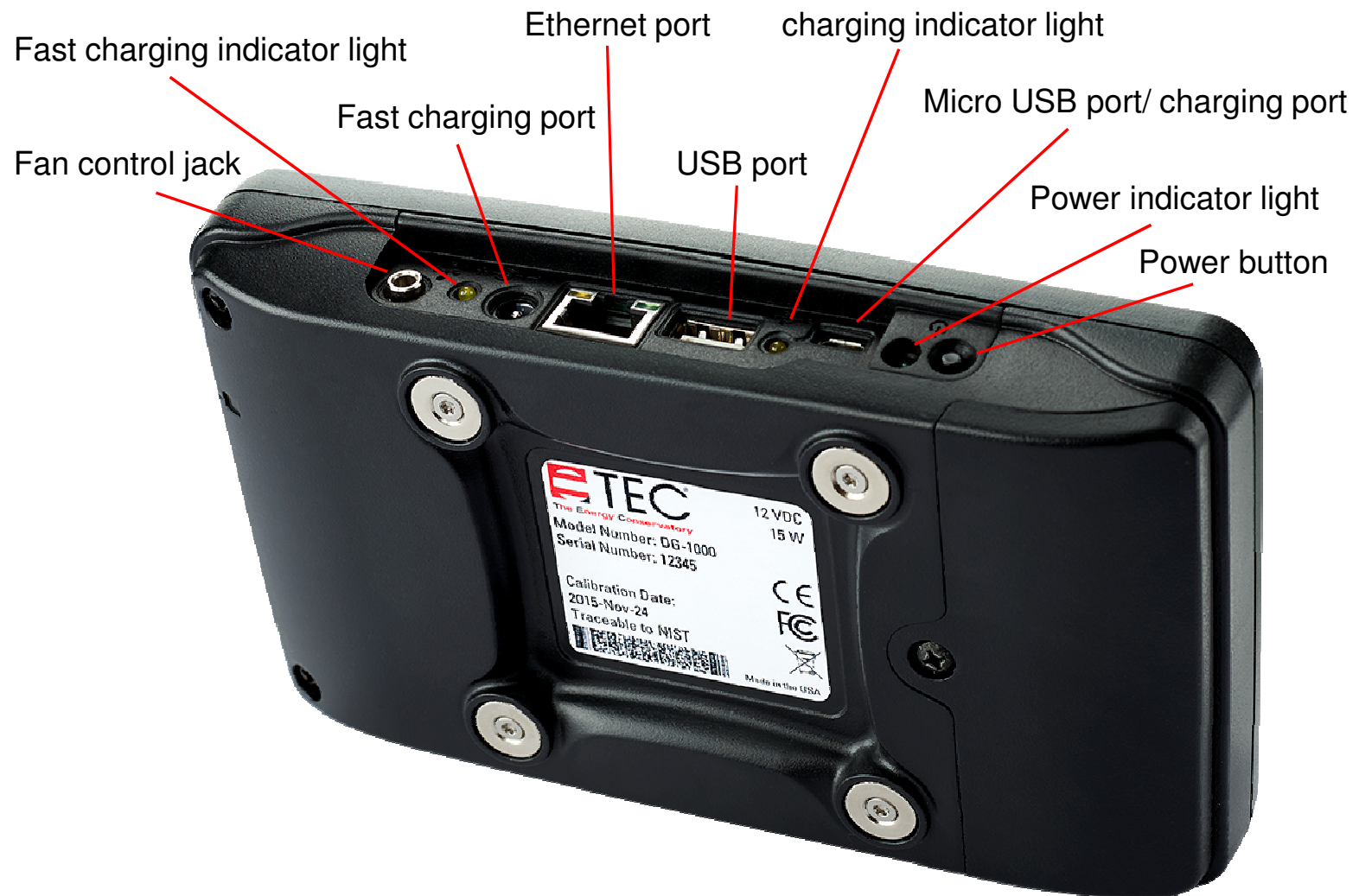» Demo with TEC Auto Test app

» TEC WiFi Link

Power on the DG-1000

Power indicator light

Power button

Launch the Gauge app

Gauge app

Gauge app Screen overview

Serial number

Gauge settings

Time average

Home screen

Network

Battery level

Speaker

Cruise target

Fan slider

Device configuration

Baseline

Mode

Flow device

DG1000-3007008

TIME AVG
1 Second

FAN SPEED

CRUISE
50 Pa

Pressure (Pa)   CHANNEL A

Flow (CFM)   CHANNEL B

0.0

Low

SET BASELINE

MODEL 3 FAN

OPEN FAN

INPUT   REF   INPUT   REF

A   B

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Fast charging indicator light

Ethernet port

charging indicator light

Fast charging port

Micro USB port/ charging port

Fan control jack

USB port

Power indicator light

Power button

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12 VDC
15 W

Model Number: DG-1000
Serial Number: 12345

Calibration Date:
2015-Nov-24
Traceable to NIST

CE

FC

Made in the USA

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Ethernet Cable

» Hub must have a DHCP Server to assign IP addresses to the DG-1000s

» TP-Link (TL-R860) $35

USB connections

» The DG-1000 Micro USB device driver needs to be installed on your computer
» The driver is compatible with:
- Windows 7
- Windows 8
- Windows 10

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Installing the USB Device Driver

» Make sure the computer is connected to the internet

» Windows Update must allow download and update of driver software

» Enable USB on the DG-1000

Installing the USB Device Driver

» Connect the USB cable

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Blower Door Test

Auto Test App Demo

WiFi Communication Needs

» Connect iPad/iPhone to Internet for Geotag and Sharing a Report.

» Connect Gauge (DG-1000 or DG-700/WiFi Link) to iPad/iPhone for Automated Test.

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Connection Options

» ## Gauge to iPad/iPhone (Auto Test):

- DG-1000 in Create Network mode, or WiFi Link in AP Direct Connect mode.
  - Connect iPad/iPhone to broadcast network from gauge.

- DG-1000 in Join Network mode, or WiFi Link in Router mode, <u>and</u> have a LTE Mobile Hotspot (*Verizon jetpack*).
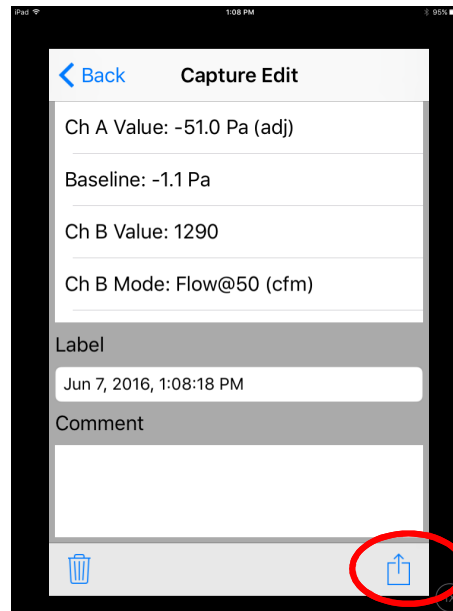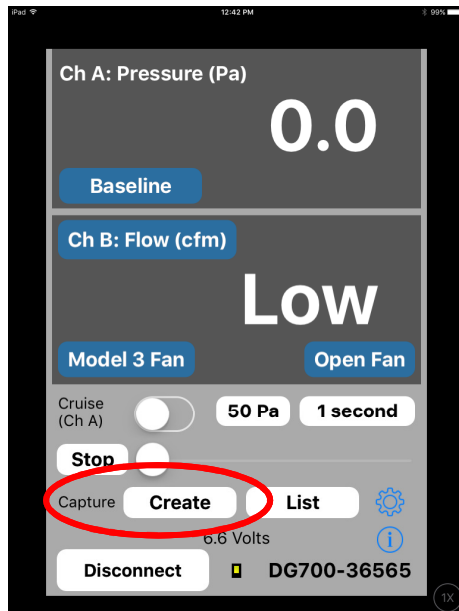 - Connect both gauge and iPad/iPhone to LTE Mobile Hotspot.

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Intro to the WiFi Link

Connect to PC, iPad, iPhone or Android

iTEC-700 Features

» Email results or send to a cloud

iTEC-700 Features

» Capture data and email results
  • Choose between XML and TEXT format


```
<?xml version="1.0" encoding="UTF-8"?>
- <EnergyConservatory>
  - <capture>
      <Version>1</Version>
      <Label>Jun 7, 2016, 1:08:18 PM</Label>
      <Comment/>
      <Timestamp>2016-06-07T13:08:18-05:00</Timestamp>
      <AppVersion>2.3.0 (198)</AppVersion>
    - <devices>
      - <DG700-36565>
          <ChannelAText>-51.0</ChannelAText>
          <ChannelBText>1290</ChannelBText>
          <ChannelBMode>CHANNELMODE_FLOWAT50</ChannelBMode>
          <ChannelBPressure>-52.1</ChannelBPressure>
          <BaselineState>BASELINE_DISPLAY_STATE</BaselineState>
          <BaselinePressure>-1.1</BaselinePressure>
          <FlowDevice>FLOWDEVICE_MODEL_3_FAN</FlowDevice>
          <FlowDeviceConfig>FLOWDEVICECONFIG_RING_A</FlowDeviceConfig>
          <FlowUnits>FLOWUNITS_CFM</FlowUnits>
          <AreaUnits>AREAUNITS_SQUARE_FEET</AreaUnits>
          <Area>1200.0</Area>
          <VolumeUnits>VOLUMEUNITS_CUBIC_FEET</VolumeUnits>
          <Volume>120000.0</Volume>
          <FanSpeed>0</FanSpeed>
          <FanSpeedMax>16127</FanSpeedMax>
          <Cruise>CRUISESTATE_OFF</Cruise>
          <CruiseTarget>CRUISETARGET_50</CruiseTarget>
          <CustomCruiseTarget>0</CustomCruiseTarget>
          <TimeAverage>TIMEAVERAGE_1</TimeAverage>
          <WifiLinkFirmwareVersion>2.1.4</WifiLinkFirmwareVersion>
          <WifiLinkFirmwareBuildDate>Dec 19 2014 10:13:16</WifiLinkFirmwareBuildDate>
          <GaugeCalibrationDate>Jun 01 2015</GaugeCalibrationDate>
        </DG700-36565>
      </devices>
    </capture>
  </EnergyConservatory>
```

XML

```
Label: Jun 7, 2016, 2:20:43 PM

Ch A Value: -50.5 Pa (adj)
Baseline: -1.4 Pa
Ch B Value: 1297
Ch B Mode: Flow@50 (cfm)
Ch B Flow Units: cfm
Ch B Pressure: -52.0 Pa
Flow Device: Model 3 Fan
Flow Device Config: Ring A
Time Average: 1 second
Area: 2,400.0 ft²
Volume: 24,000.0 ft³
Timestamp: 2016-06-07T14:20:43-05:00
Gauge Serial Number: DG700-36565
Gauge Calibration Date: Jun 1, 2015

Comment
Pre test before any air sealing or insulation
```
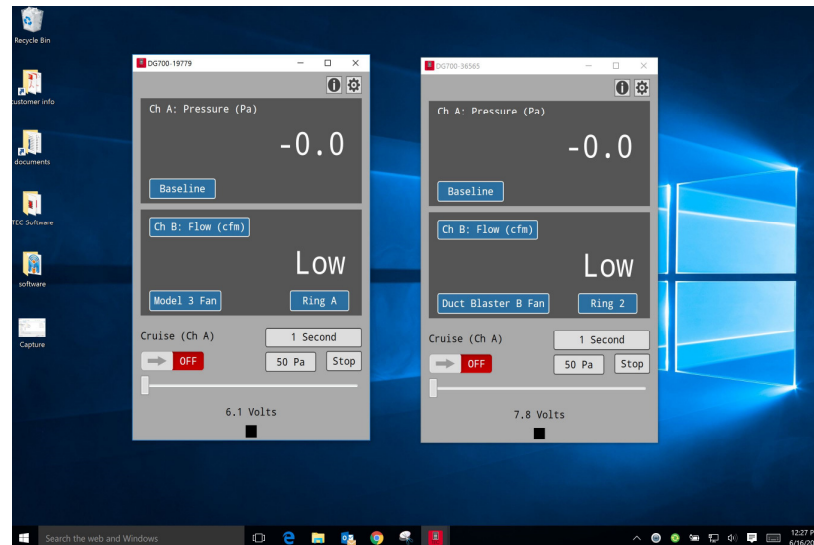
Text

iTEC-700 Applications

» **CAZ Testing**
  - Support / Training
    - Past Webinars
      – 2014 Webinars

» **ZPD Testing**

» **Blower door guided air sealing**
  - Checking your progress
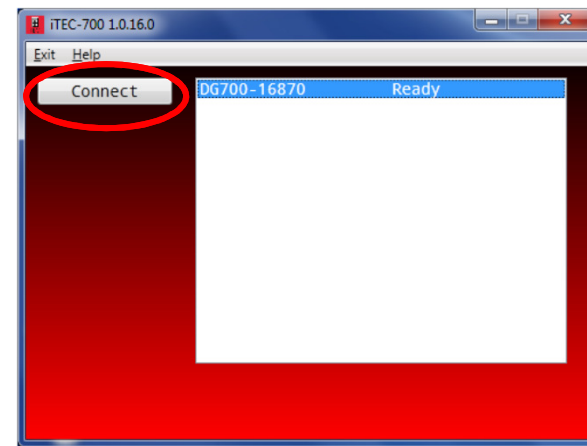 - Checking your work

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iTEC-700 for PC

» Remotely view and control multiple DG-700

» Duct leakage to outside test

» State-of-the-art training applications

» Offsite sharing of gauge readings and control (using screen-sharing software).

» Used to configure WiFi Link to data-logging mode

  • Data is stored on the WiFi Link

Stand alone data logging

» Connect to TEC WiFi Link wireless network

» Launch the iTEC-700 for PC software

» Click on the gauge you want to choose

» Click on Connect
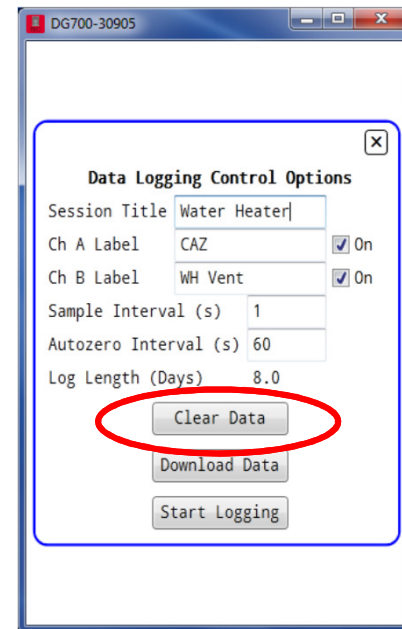
Stand alone data logging

» Click on the **Settings** button ⚙

» Click on **Logging Menu**

» Fill in information and click on **Start Logging**

» Fresh batteries last 8 hours

Stand alone data logging

» Data logging starts and lights blink every 2 sec.
- blue #1: logging mode is active
- green #2: not used
- green #3: data storage is taking place
- yellow #4: batteries are low, or critically low

» WiFi Link will disconnect from computer and iTEC- 700 screen will continue to search

Stand alone data logging

» AC power supply and splitter can be used instead of battery power

» With new alkaline batteries and an external 12vdc 7 amp-hr sealed battery - able to get 20 to 25 days of logging

Stand alone data logging

» To stop data logging, hold **A Button** down until all lights flash
» Connect to TEC WiFi Link wireless network
» Launch the iTEC-700 for PC software
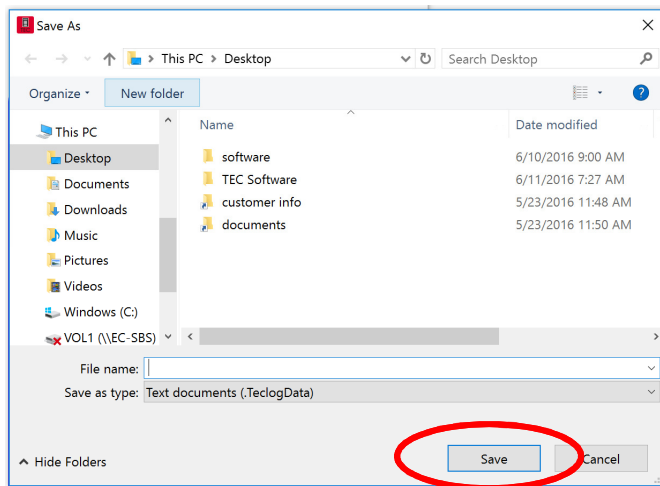» Click on the gauge you want to choose
» Click on Connect

Stand alone data logging

» Click on the **Settings** button ⚙
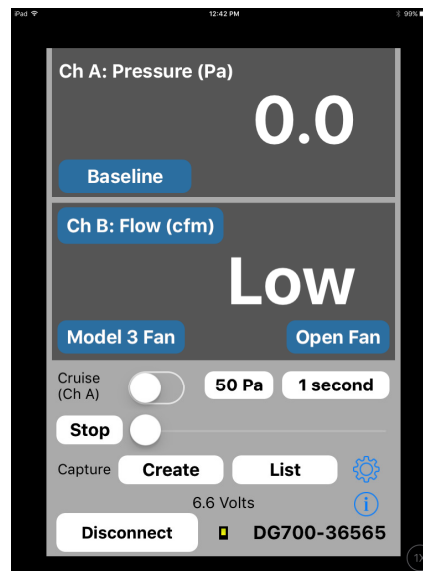
» Click on **Logging Menu**

» Click on **Download Data**

Stand alone data logging

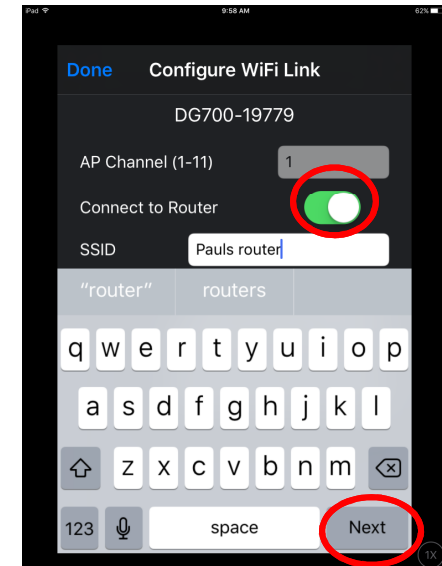» Enter file name and click **Save**
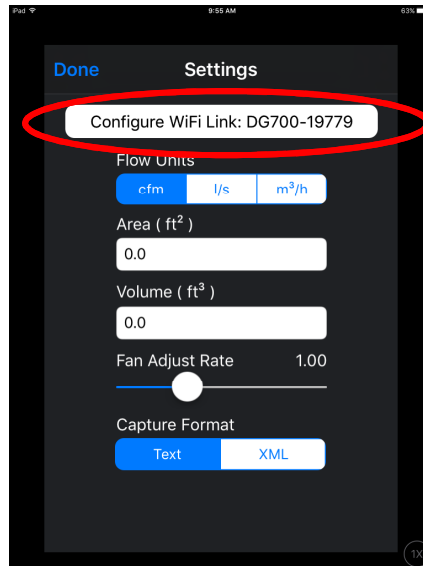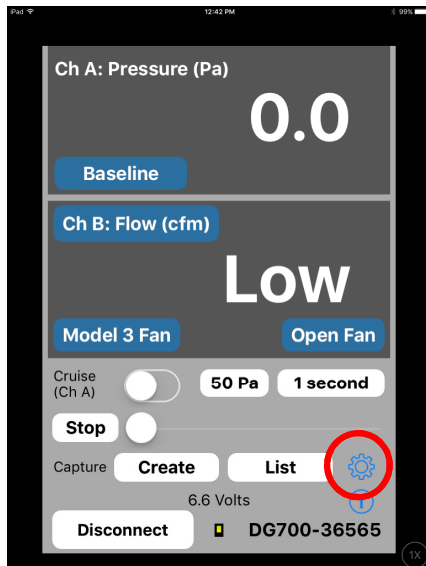
» Click on **Clear Data**

Router Mode

»   Increase the range of WIFi connection

»   Connect to multiple DG-700s for TECLOG3

»   Connect to TEC WiFi Link wireless network
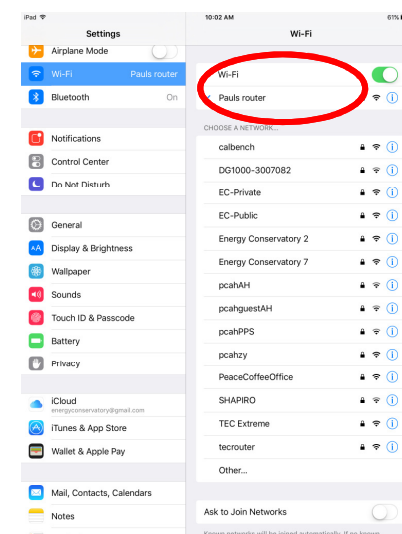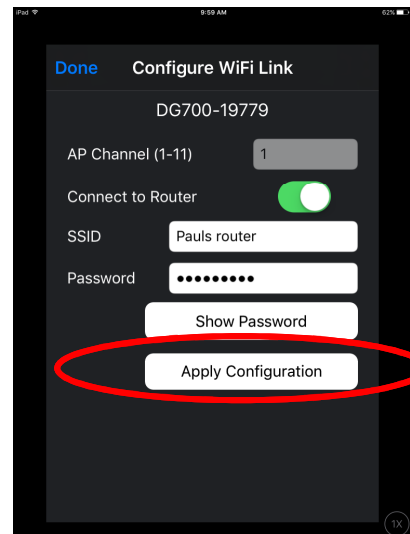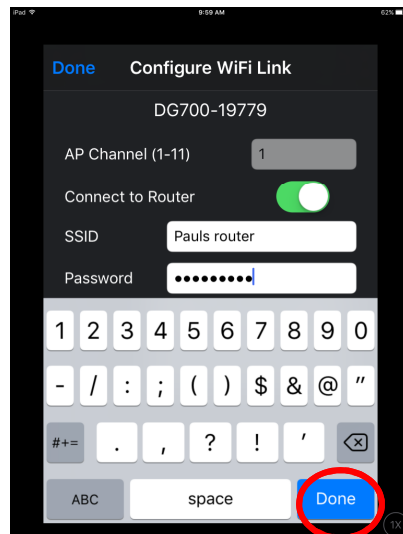
»   Launch the iTEC-700 app

»   Click on Connect

Router Mode

» Click on the **Settings** button ⚙

» Click on **Configure WiFi Link**

» Move **Connect to Router** button

» Enter the SSID (name of router as is appears under WiFi Settings)

» Click on **Next**

Router Mode

» Enter Password and click **Done**

» Click **Apply Configuration**

» WiFi Link is now configured in Router Mode

» Follow same procedure with other gauges
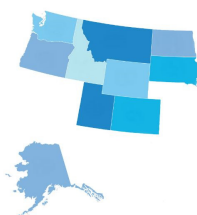
» Connect to the router through WiFi Settings

Questions?

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