

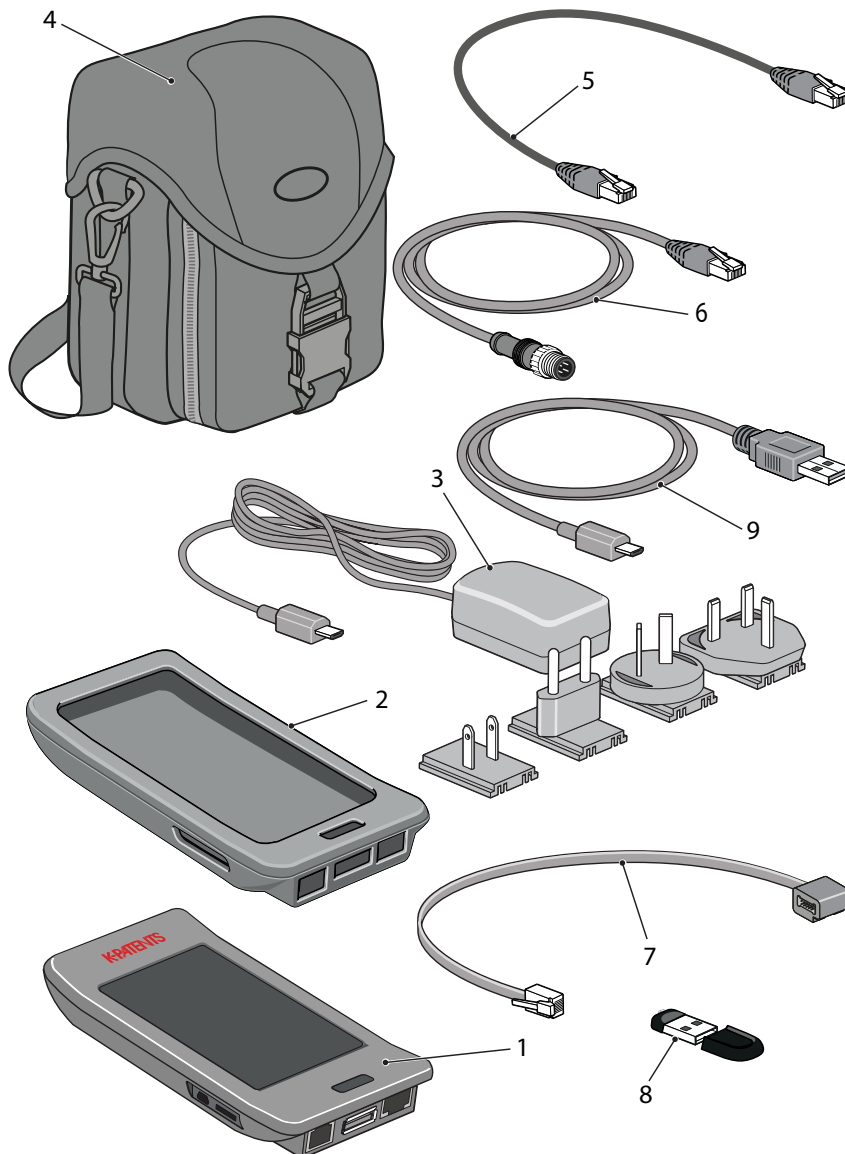
Quick Guide

Field Communicator
FC-11



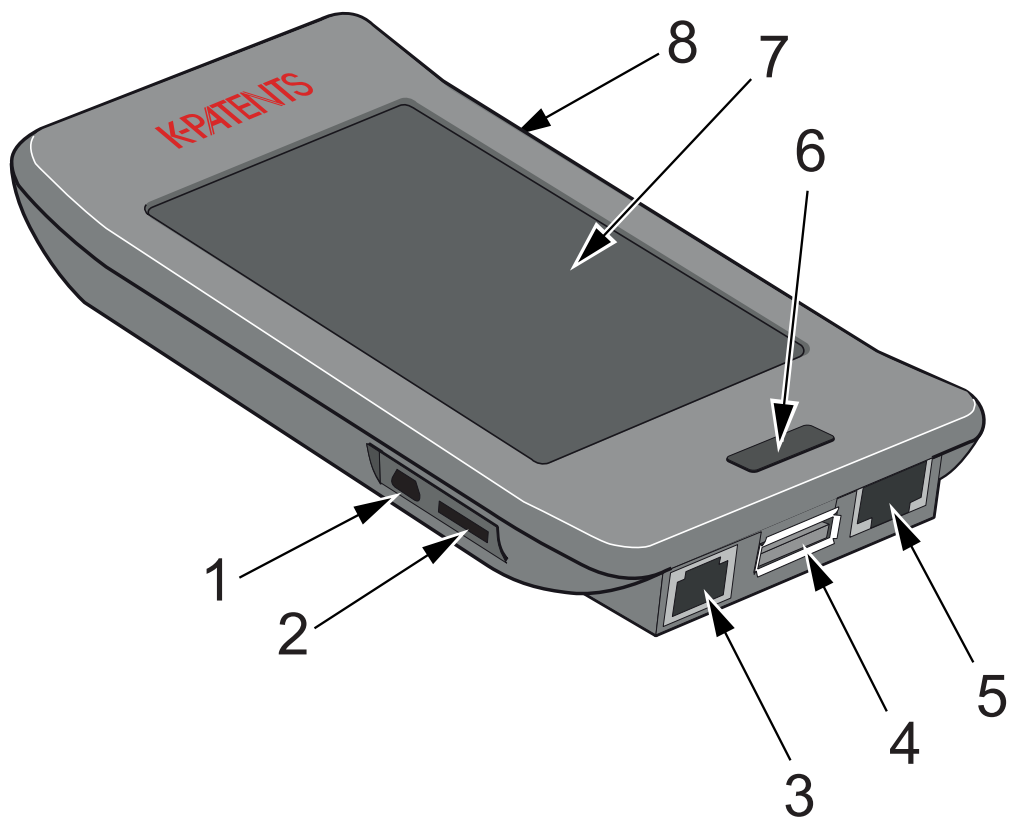
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Kit contents



1. FC-11 Field Communicator
2. PR-8817 Protective rubber cover
3. PR-8815 Standard micro-USB charger
4. PR-8812 Carrying case for FC-11 Field Communicator
5. PR-8814 Ethernet cable, RJ-45 10/100, 0.5 m / 1.6 ft
6. PR-8330-001 Ethernet cable for PR-33-AC, 1 m / 3.3 ft
7. PR-8811 Power adapter cable for PR-23 Indicating transmitter DTR
8. PR-8818 USB memory stick
9. PR-8813 Standard USB to micro-USB cable, 0.5 m/1.6 ft

Field Communicator FC-11



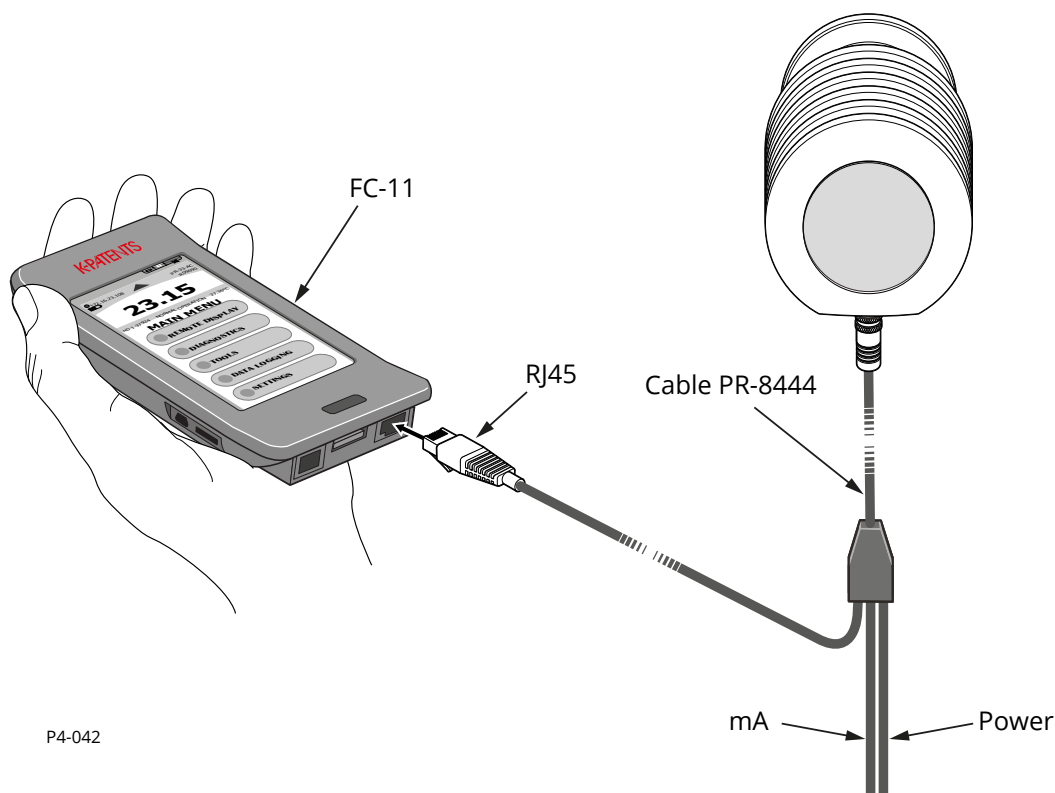
1. Micro-USB connection (for charging and connecting to a computer)
2. *Not in use*
3. DTR power connection
4. USB connection (for memory stick)
5. Ethernet connector
6. Button
7. Touch screen
8. *Not in use*

Connecting

The FC-11 can be connected without shutting down the refractometer system or the communicator. Connect one end of the suitable ethernet cable to the Field Communicator FC-11 and the other end to your instrument. The charge in FC-11 lasts 2-3 hrs, connect to an appropriate power outlet for longer usage time.

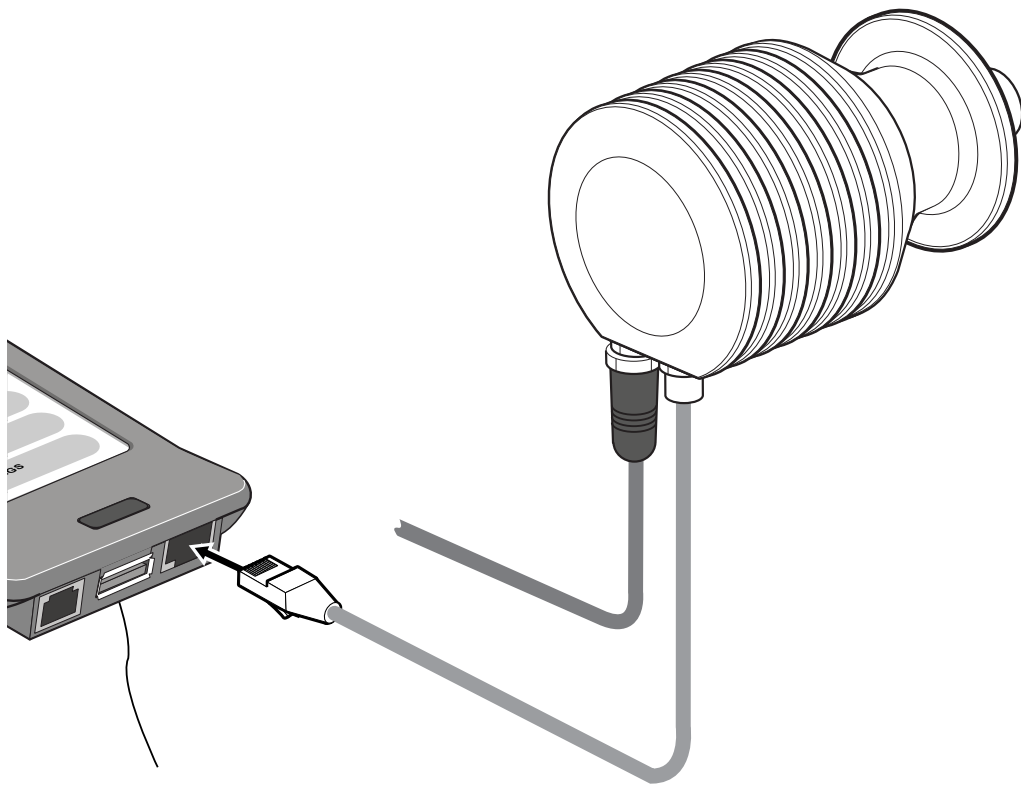
- With a PR-43 refractometer use Split cable PR-8444. External power source is needed.
- With PR-33-AC use the PR-8330-001 cable included in the delivery. Separate power source is not needed.
- With a PR-33-S the ethernet is connected to the PoE switch. Note that FC-11 cannot charge from a PoE switch, so an external power source is needed.
- In a PR-23 system the FC-11 is connected to the DTR. Use the provided power cable PR-8811 to get power from DTR.
- In a DD-23 system the FC-11 is connected to the ethernet output in the Divert Unit.

For additional information see the FC-11 instruction manual, chapter 2.

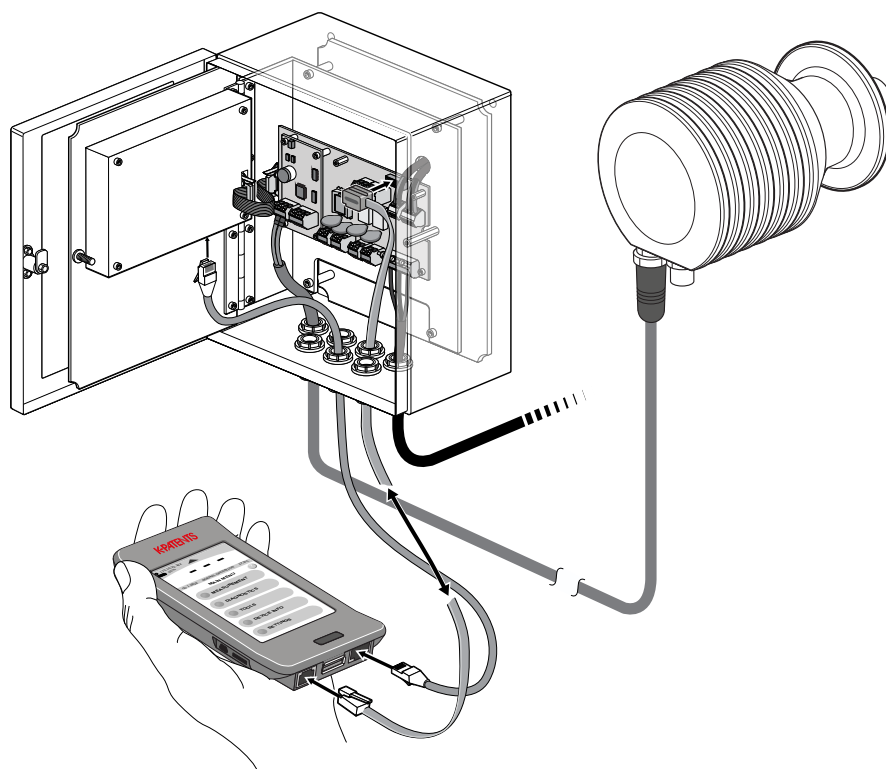


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Connecting FC-11 to a PR-43 refractometer



Connecting FC-11 to a PR-33-AC refractometer

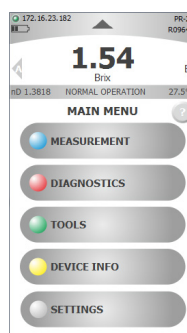


Connecting FC-11 to a DTR

Start the Field Communicator by pressing the button (6) until the light on the button turns red. The startup screen will show briefly. The field communicator will look for your instrument and if it is found, you get the main screen. If your instrument is in a factory network or the IP address has been otherwise changed, you'll need to enter the IP address manually.



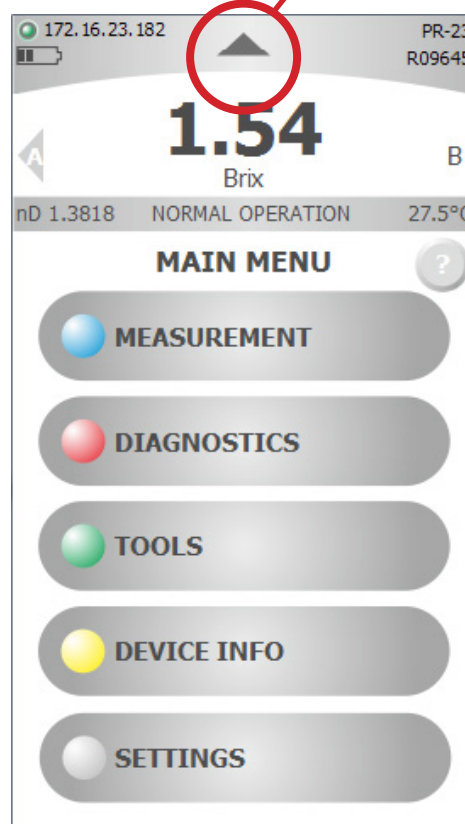
Startup screen

IP address
screen

Main screen

Using FC-11

Tap the screen to choose a function. To get back, tap the little triangle on top of the screen or press the button.



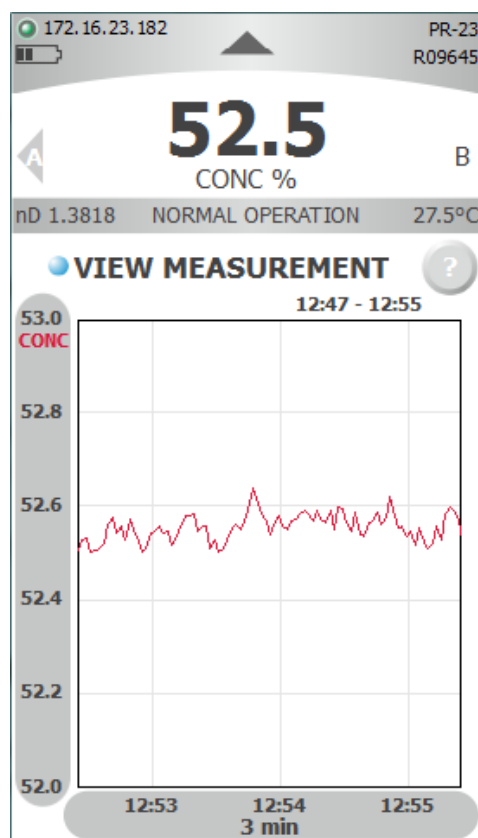
Viewing measurement

To view the real-time measurement, go to Measurement, then to View measurement.

The plotted measurement value can be changed by touching the grey area of the y-axis. The plotted measurement value can be either CALC, CONC, T or nD. CALC is the calculated concentration value without Field calibration adjustment, CONC is the final concentration value including Field calibration adjustment. T indicates temperature, while nD is the refractive index value nD of the refractometer.

The graph is automatically scaled based on measurement values. Time scale for the graph can be set to 3, 10 or 30 minutes. The time scale can be altered by touching on the grey area of the x-axis. The image can be dragged horizontally to see older data values.

Note: Measurement values older than 2 hrs are discarded from the real-time view.



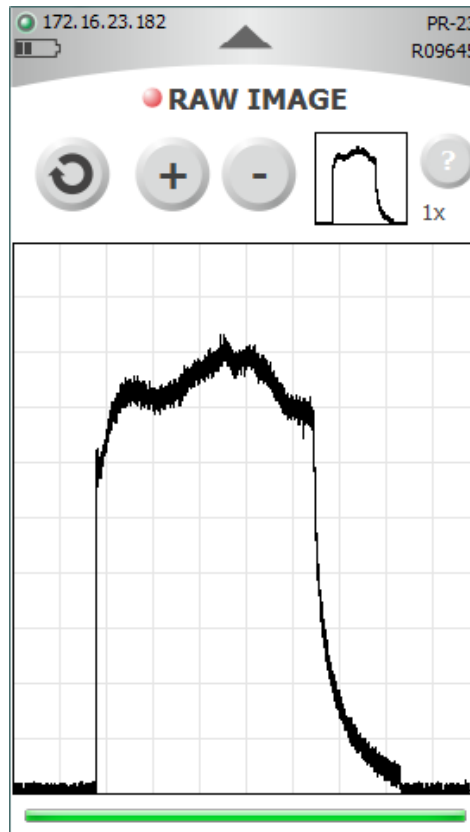
Viewing measurement

Viewing optical image

To view the optical image, go to to Diagnostics, then to Raw image.

The raw image display shows the optical image of the refractometer on all CCD photocells. Use the + and - buttons to zoom. Areas outside the boundaries of the zoom area box can be displayed by dragging the image.

Tap the refresh button (left of + and -) to load the latest image from the refractometer. If you hold the refresh button for over 1 second, the FC-11 goes into autoload mode, in which new raw images are loaded as quickly as possible; the autoload speed depends on your refractometer system.



Viewing optical image

Data logging

To **log data**, go to Measurement, then Data logging. Choose your logging interval, then tap Start to start the logging process. If a USB stick is connected to the USB connector (4) at the bottom of the FC-11, data will be written onto the stick. If there's no USB memory available, the logged data is kept in internal memory.

For additional information see instruction manual, section 3.2.3.

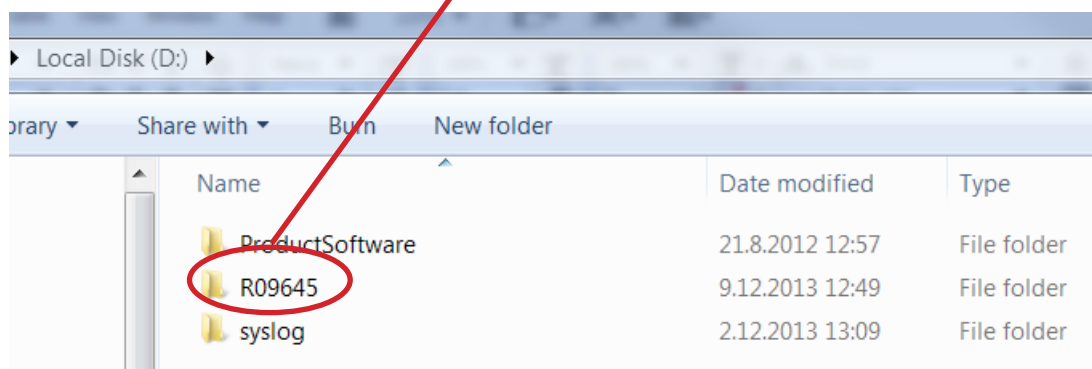
Downloading logged data

If you are logging onto a USB stick, stop the logging process. Then you can remove the USB stick and plug it into your computer.

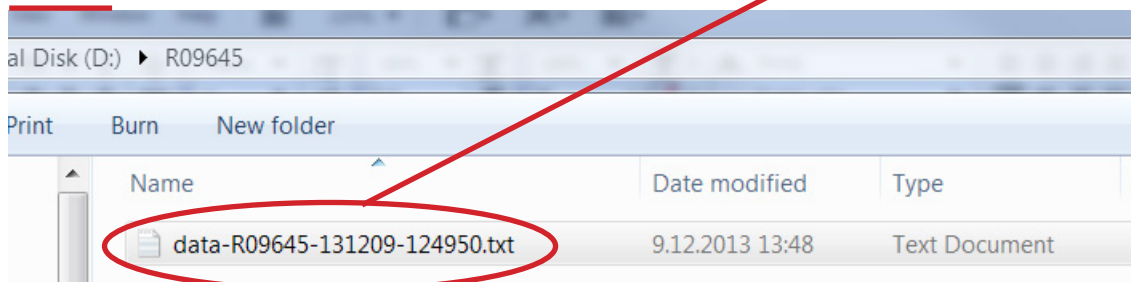
If your logging data is written into the internal memory of FC-11, stop the logging process. Then use the micro-USB connection on FC-11 (2) and a standard micro-USB-USB cable (included in the delivery) to connect the device to your computer.

In both cases your computer will show the plugged-in USB connection as a new disk. Click on the disk name to open the memory. Note. The FC-11 will not show up if logging is still going on.

Your logging data is written to a folder named with the serial number of the refractometer you logged.



In that folder you find one or several text files identified with instrument serial number, date and time.



The file format is plain text. The file can be opened as such or it can be imported e.g. to Excel for further examination.

Troubleshooting

When inactive, the FC-11 is programmed to dim and later turn off the display to conserve energy. Tap anywhere on the screen or press the button to show the display. The Dim time and Off time can be changed in Settings menu.

When the FC-11 is used on battery power, it shuts down when the battery is empty. After plugging in the power, restart the device by pressing the button until the light turns red. Then re-enter date and time with the Set Time/Date command in the Settings menu. Make sure the current date and time are entered before resuming any logging operation. Note: If the IP address is entered manually to FC-11, you have to reenter it to connect to your instrument.

Some commands are not available when connected to a Divert Control System DD-23. Also, if the FC-11 is logging, some commands like the Tools menu are unavailable. If you connect the FC-11 to a computer, but the FC-11 does not show up as an external disk as it should, that may be because logging is on. Stop logging first, then connect to the computer. If the use of USB is limited or forbidden on your computer, FC-11 will charge through the micro-USB to USB cable, but will not show as an external disk. Contact your system administration about allowing the connection

Disposal

When wishing to dispose of a FC-11, please observe local and national regulations and requirements for the disposal of electrical and electronic equipment.



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