



Quick Start Guide

Minimum System Requirements

- PC with Windows XP 32 bit, (Service Pack 2 or higher), Windows 7 (32 or 64 bit)
- Pentium 2 GHz processor
- RAM Requirements: 2 GB minimum, 4 GB recommended
- 100 MB free Hard Disk Space
- USB 2.0 High Speed enabled port

Install Software

- From CD: Insert the ComProbe installer disk into your computer DVD drive. Click on the Install CPAS shortcut and follow the directions.
- From Download: Download the latest ComProbe installer from FTE.-com. Once downloaded, double-click the installer and follow the directions.

1 Apply Power

Insert the USB cable between the ComProbeHSU with ProbeSync USB port and your computer USB 2.0 port. The computer USB port provides the only power needed by the HSU hardware.

2 Connect the ComProbe HSU to the Device Under Test

The ComProbe HSU is designed for use with TTL voltage levels, 0 to 5 volts max (exceeding the 5.0 volts max damages the ComProbe hardware). The ComProbe HSU interprets 0 to 0.8 volts as a logical zero, and 2.0 to 5.0 volts as a logical one. To ensure accurate data collection and proper operation, connect the ComProbe HSU to the TTL side of any transceivers, line drivers, or line receivers.

Use the table below to determine the connection configuration you need for monitoring signals on the source device. Disconnecting and reconnecting the wires in a different configuration negates the validity of the following table. To avoid confusion, we recommend that you maintain the color code as expressed in this table.

Only "Data Connection" and "Ground" need to be connected, all the other signals are optional.

When using the HSU in conjunction with ProbeSync enabled ComProbe devices, the HSU CAT 5 cable must be connected to the ComProbe device providing the synchronizing clock. Connect the HSU CAT 5 connector to the synchronizing device OUT connector.



The table below provides information on the ProbeSync CAT 5 cable RG-45 connector pin out.

HSU with ProbeSync Pin Out

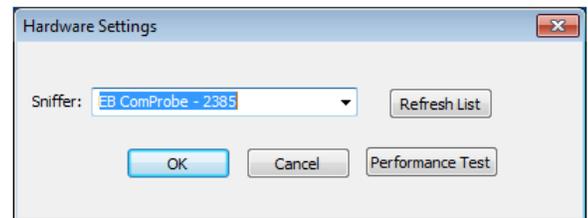
Wire Label	Label/Wire Color	Signal	Meaning
G	Green	Ground	Ground
G	Green	ProbeSync Ground	ProbeSync Ground (CAT 5)
C	Blue	ProbeSync Clk	CLOCK_OUT_P of Master (CAT 5)
T	Brown	ProbeSync Clk	CLOCK_OUT_N of Master (CAT 5)
0	Orange	ProbeSync Link	LINK_OUT of Master (CAT 5)
1	White/Orange stripe	ProbeSync Clk Select	CLOCK_SELECT of Master (CAT 5)
2	Red	CH0	Data Connection (TX)
3	Orange	CH1	Data Connection (RX)
4	Yellow	RTS	Request to send
5	Green	CTS	Clear to send

HSU with ProbeSync Pin Out(continued)

6	Blue	DSR	Data Set Ready
7	Purple	DTR	Data Terminal Ready
8	Black	CD	Carrier Detect
9	Brown	RI	Ring Indicator

3 Hardware Settings

The Hardware Settings window appears automatically the first time you run ComProbe software. To get back to the Hardware Settings menu later, select Options menu, Hardware Settings the on the Control window. Use the Hardware Settings window to select which ComProbe HSU to monitor (if you have more than one connected). Click the OK button.



It is recommended that you run your PC Performance Test. The HSU is a very CPU-intensive analyzer and although the ComProbe HSU hardware is capable of capturing data at speeds of up to 8 Mbps, actual data rates may be limited by the speed of your PC. The Performance Test will tell you the maximum data capture rate your PC can handle.

4 I/O Settings



Click the I/O Settings icon on the Control window. The analyzer needs to know the bit rate, parity, length, and number of stop bits being used in the circuit under test.

There are two groups of settings, one for the Channel 0, and one for the Channel 1. To change the Bit Rate, Parity, word Length or number of Stop bits, click on the down arrow next to the setting box and choose an option from the list. For Bit Rate, you can either choose a listed rate or enter a rate. After entering the settings for Channel 0, click the Copy CH0 button to apply the same settings to the Channel 1 row.

Click the OK button.

5 HSU Start Capture

- Click the Start Sniffing icon on the HSU with ProbeSync datasource toolbar.
- As data is being captured, the Capture Status message in the Control window indicates the synchronization status of the HSU analyzer.

When you are capturing data, there are several important concepts to consider.

- Files are placed in My Capture Files by default and have a .cfa extension. Choose Directories from the Options menu on the Control window to change the default file location.
- Watch the status bar on the Control window to monitor how full the file is. When the file is full, it begins to wrap , which means the oldest data will be overwritten by new data.
- Click the Stop icon  to temporarily stop data capture. Click the Start Capture icon again to resume capture. Stopping capture means no data will be added to the capture file until capture is resumed, but the previously captured date remains in the file.



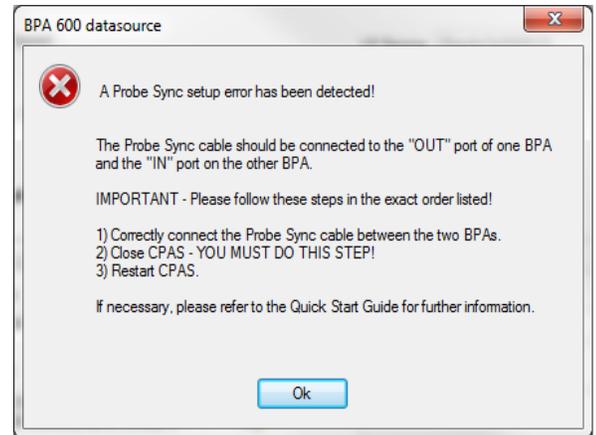
6 HSU Capture with ProbeSync

ProbeSync™ allows multiple ComProbe analyzers to work seamlessly together and to share a common clock. Clock sharing allows the analyzers to precisely synchronize communications stream and to display resulting packets in a single shared view. When capturing data with the ComProbe HSU using ProbeSync the maximum capture data rate is 6 Mbit/sec.

When configured for synchronization through ProbeSync one device provides the clock to the other device in a "master-slave" arrangement, not to be confused with Bluetooth® device master-slave relationships. The clock is provided by a CAT 5 cable between the ComProbe HSU hardware with another ComProbe analyzer OUT connector—sending the synchronizing clock.

The HSU with ProbeSync is *always* the device receiving the synchronizing clock, that is, it is *always* the "slave" in the chain and thus will *always* physically appear at the end of the chain.

Should the hardware be incorrectly connected, that is the HSU CAT 5 connector is plugged into an IN connector on the other ComProbe hardware, an error message will appear. Follow the instructions in error message. To continue click on the OK button. The datasource Status window will also display a warning message suggesting information sources.

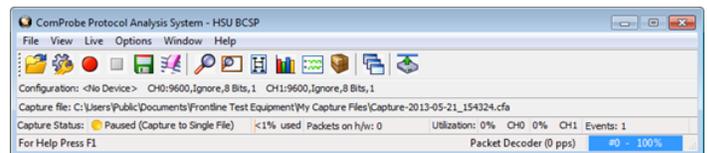


In the device providing the clock, the datasource dialog Start Sniffing  button initiates the capture for both devices. On the HSU receives the clock the datasource dialog Start Sniffing button is disabled. In the ComProbe device providing the synchronizing clock, that device's status window in the Datasource dialog will announce the synchronizing function of each.

Data captured in the synchronized device will appear in the Frame Display, Event Display, Bluetooth Timeline, Bluetooth low energy Timeline, and Coexistence View. Data saved as a capture file will include data captured on both devices. Within these dialogs the packets identified as link 1, 2, and 3 were captured on the synchronizing device that provides the clock. Those packets captured on the synchronized device carry link 4, 5, and 6 identifiers.

7 Analyze Data

From the Control window toolbar select the following icons to view and analyze the captured data.



-  Event Display - for framed data, used to conduct byte-level analysis.
-  Frame Display - for framed data, used to conduct protocol-level analysis.
-  Message Sequence Chart (MSG) - Displays information about messages passed between protocol layers.
-  Show Statistics- supplies basic information about the data on the network..
-  Signal Display-provides a graphical view of control signal transitions that you can manipulate after you have captured data.
-  Breakout Box- provides a real-time graphical view of control signals.
-  Extract Data/Audio - pull out data from various decoded Bluetooth protocols. Once you have extracted the data, you can save them into different file types, such as text files, graphic files, email files, .mp3 files, and more.

This quick start guide provides sufficient information to begin the data capture. Detailed hardware and software information is contained in the ComProbe HSU User Manual. The manual is available on FTE.com.

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