

# **UDP TEST TOOL™**

**Version 2.1**

## **User Guide**

**08/2003**



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**This document contains information that is PATENT PENDING**

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## OVERVIEW

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SimpleComTools **UDP Test Tool™** is a software solution that provides the ability to both initiate and capture UDP packets to or from any Windows® PC. Designed for software programmers and network engineers, the UDP Test Tool™ will work with any IP network, including Ethernet LANs and wireless IP networks such as CDPD, CDMA, or GPRS.

UDP Test Tool™ provides (2) tools in one. The first is a UDP PACKET ASSEMBLER (sender) for initiating UDP traffic. The next is a UDP PACKET LISTENER (receiver). Both tools provide one complete solution for debugging UDP packet issues and other networking related issues.

UDP Test Tool™ is also great for network administrators and security professionals who need to test inter-network connectivity or firewall performance. By providing a more 'interesting' traffic payload than 'PING', UDP Test Tool™ is a much better tool for testing and troubleshooting.

When used as a packet initiator, UDP Test Tool™ can send packets to any pre-defined LAN or Internet IP address on any predefined port UDP port both as a single packet or using an automatic timer. It let's you control the destination, frequency, and exact message being sent, so you can easily differentiate test message traffic from other traffic on the network.

When used as a capture tool, UDP Test Tool™ allows you to bind to a specific UDP port, capture any incoming packets and display them in ASCII, HEX, or BINARY formats. It let's you control the presentation and display of messages received, including adding Date and Time stamps to each message received. This feature let's you automatically trap traffic for later review.

### About UDP vs. TCP

The most commonly used network protocols today are TCP (Transport Control Protocol) and UDP (User Datagram Protocol). TCP is a proven and reliable protocol, and probably the most widely implemented protocol in use on IP networks today. However, TCP has a lot of overhead and payload issues, and can sometimes be 'too-reliable' or robust for many applications. In fact, when used as transport, for many serial based applications TCP can actually hinder reliable communications. In contrast, UDP is a much simpler protocol, and is being used more frequently today - particularly in areas where bandwidth or throughput is constrained. An example is the predominant use of UDP for transport of wireless data applications.

UDP is first a connectionless protocol. Like TCP, UDP runs on top of IP networks. But unlike TCP, UDP does little to help with transport delivery or error recovery. Instead it offers a direct way to send and receive packets, letting the software application manage things like error recovery and data retransmission. Once primarily used for broadcasting small messages, UDP is now used for everything from browsers to Instant Messaging, Video, and Voice over IP applications.

While a powerful tool, the downside to using UDP is that there is not 'connection' report to know that you have end-to-end connectivity. This often makes detecting whether or not a packet is 'making it' from one place to another quite a hassle. UDP Test Tool™ makes that detection easy.

UDP Test Tool™ can be easily installed on any Windows-based computer, and is ideal for numerous types of applications:

- **Network Administrators**
- **Network technicians**
- **Technical Support Staff**
- **SCADA/Telemetry Engineers**
- **Wireless Developers**
- **Wireless Systems Integrators**
- **Telecom Engineers**
- **Application Developers**

## SOFTWARE INSTALLATION

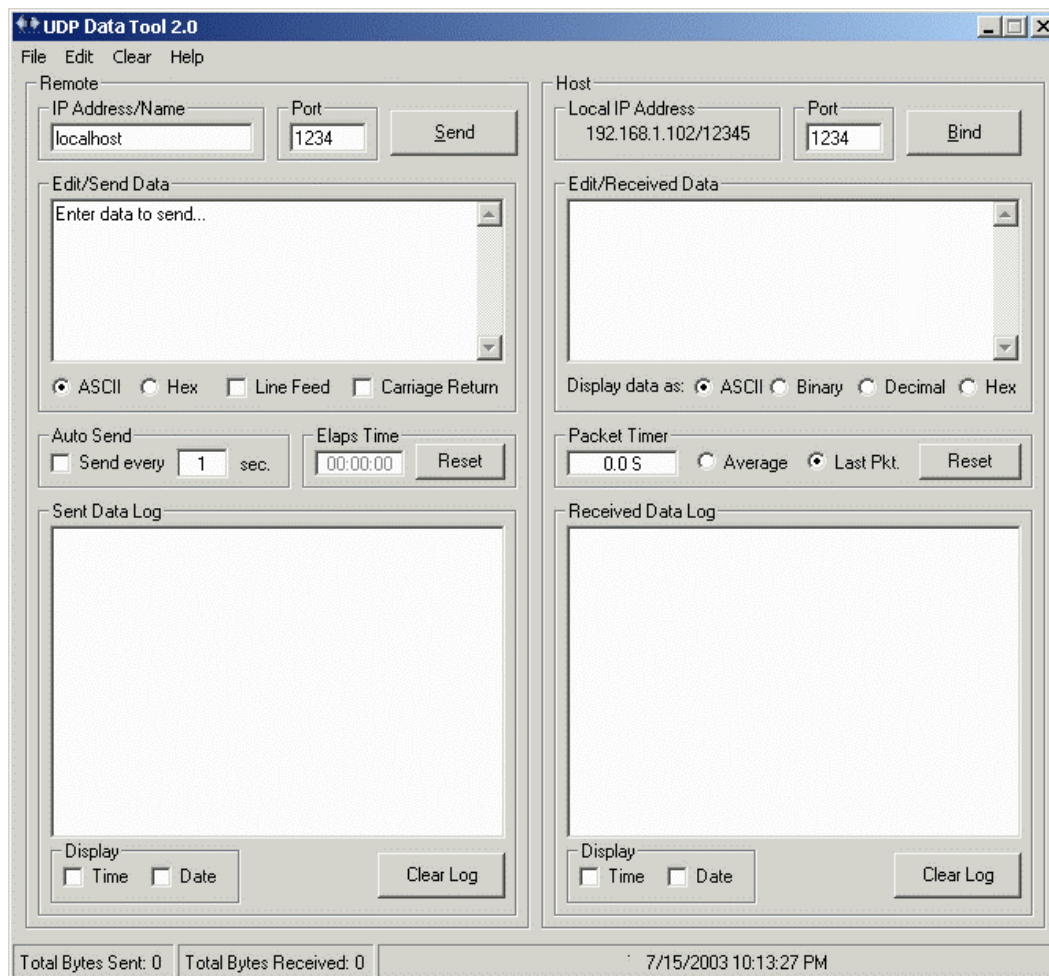
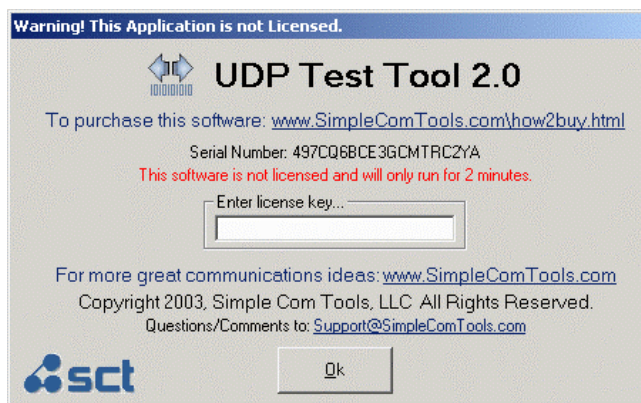
Install UDP Test Tool™ by downloading and unzipping the UDP Test Tool™ install package.

- Launch Setup.exe
- Accept the License Agreement
- Select the Destination Folder where the software will be installed
- The installer will complete the installation and automatically open the destination folder

### Getting Started...

Begin setup by double-clicking the “UDP Test Tool” icon. If you see this red highlighted alert screen, your version of software is unlicensed. An unlicensed version will only run for a period of 2 minutes before terminating.

Select OK and the software will open to the main screen/desktop. This is the only screen or window you will be using.



## SOFTWARE CONFIGURATION

UDP Test Tool™ has a simple and intuitive user interface. There is no real configuration or 'setup' that needs to be done, as the main screen/desktop puts all the settings at your fingertips.

### Using the software...

The application software involves only one screen, which is broken down into (2) sections:

1. The REMOTE COMMUNICATIONS section  
This 'section' is the UDP PACKET ASSEMBLER (sender) tool.  
It is used for sending data to any remote IP address and definable UDP port
2. The HOST/LOCAL COMMUNICATIONS section  
This 'section' is the UDP PACKET LISTENER (receiver) tool.  
It is used for receiving data from a remote device on a user definable UDP port

### UDP Test Tool™ view broken down into (2) sections

#### Remote Communications (Transmit)

This part is for **sending** data streams to a remote IP and UDP port. You can send one single packet, or multiple packets. You can send it using an IP or a hostname. Data can be in ASCII or HEX format.

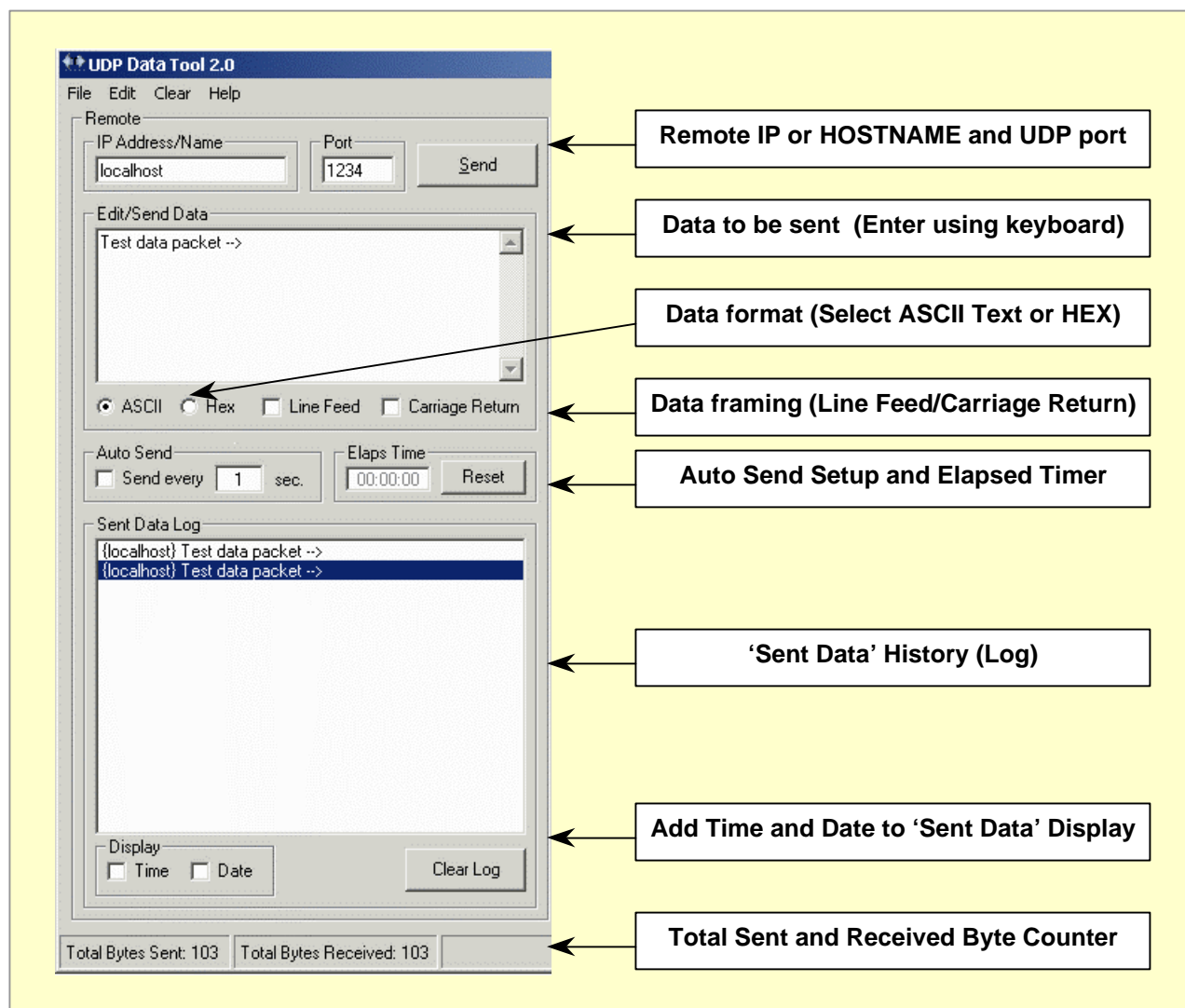
#### Host/Local Communications (Receive)

This part is for **receiving** data on any desired UDP port. Data is displayed in ASCII, Binary, Decimal, or HEX formats. You can log and edit the data adding Date and/or Time stamps if needed.

## Remote Communications (Transmit)

Sending data to a remote location and UDP port is easy.

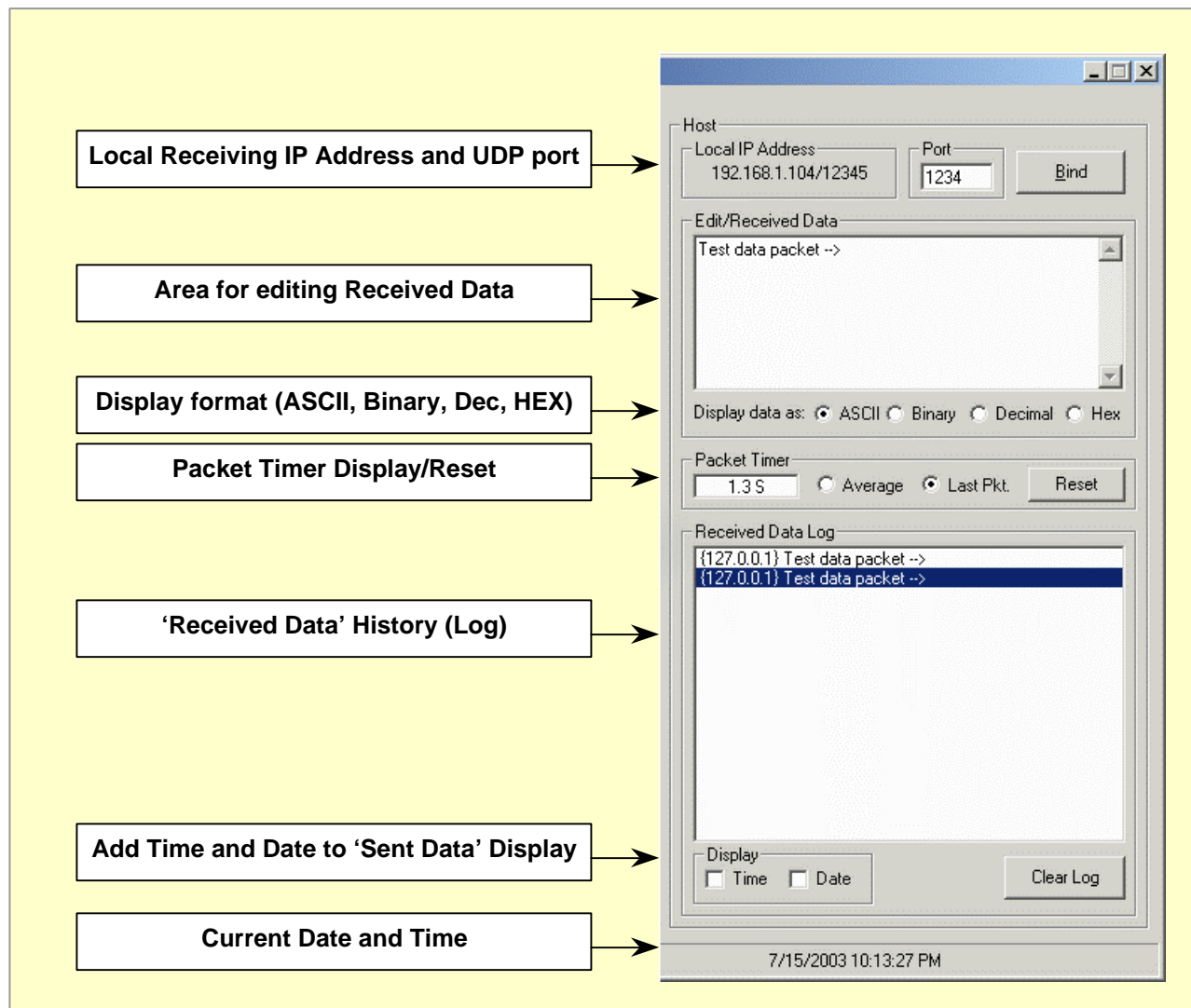
1. Enter the Remote IP or HOSTNAME and the desired destination UDP port. Since this is where you want the data to be sent, it assumes that there must be something listening for the packet at that location. The default is 'localhost' meaning it will send data to itself.
2. Enter the Data to be sent. Type into the box or paste text from another application.
3. Select the required data format and framing type. Most text will be ASCII. Most machine or coded data will be in HEX format. Add Line Feeds and/or Carriage Returns as needed.
4. Hit the **Send** button to send a single packet. If you want to send the packet on a recurring basis, select **Auto Send** and enter the interval. The application will send the data stream every x seconds until you stop the software or de-select the Auto Send button. (Default is every 1 second).
5. Data will be displayed in the Sent Data Log. You can append Time and Date if needed.
6. Data totals in bytes are displayed in the bottom status tray.



### Host/Local Communications (Receive)

Sending data to a remote location and UDP port is easy.

1. Enter the Local UDP 'listening' port on which you intend to be receiving data
2. Select **Bind**  
To stop listening for data on that port, or to release the port for another application, simply change the port number and select the **Bind** button again, or exit the software application completely. There is no 'Un-Bind' control button.
3. Select the format that you want for the data display (ASCII, Binary, Decimal, Hex)  
This can be changed 'on-the-fly' if you like.
4. Select the Packet Timer display option (Average Elapsed or Time Since Last Packet)
5. Data will be displayed in the Received Data Log. Append Time and Date if needed.
6. Date and Time are displayed in the status tray. (Received Bytes are shown on left side)



## SOFTWARE LICENSING

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To obtain a license, send the Serial Number shown on this screen to your SimpleComTools reseller and request a permanent LICENSE KEY.

If purchasing direct from SimpleComTools, enter the Serial Number shown on this screen in the appropriate field when completing your online transaction.

Questions about either process can be sent to [Support@SimpleComTools.com](mailto:Support@SimpleComTools.com).

**Thanks for using the UDP Test Tool™!**

**- SimpleComTools, LLC**

