UTC RETAIL™

3170 Touch Screen POS Workstation

INSTALLATION GUIDE: Rear Customer Display (RCD)

Congratulations on your purchase of UTC RETAIL's innovative 3170 Touch Screen POS Workstation Rear Customer Display! Designed for the 3170, the RCD is as user-friendly as it is customer-friendly. The display features selectable baud rates, 180° display rotation and 20° tilt.

The 3170 RCD uses a standard serial interface, a 2 line by 20 character vacuum fluorescent display and has four programmable display intensities.

This guide is designed to help you efficiently assemble, install and test the UTC RETAIL 3170 RCD.

3170 RCD Display Components

You will find the following components inside the 3170 RCD box:

- RCD head and pole with attached cable

- RCD pole adapter

- DB9 to RJ45 adapter

Product Safety

DANGER: High Voltage

This unit contains high voltage. There is a risk of electrical shock if the case is opened. If service is required, contact an authorized service agent or UTC RETAIL at 1-800-349-0546.

WARNING: Access to Internal Components

All access to internal components of the 3170 workstation or the 3170 RCD is restricted to Authorized Service Personnel only. Opening the case or service by anyone else will automatically void the warranty on this product.

WARNING: Electrical Shock

Use caution when connecting cables. To avoid electric shock, do not connect safety extra-low voltage (SELV) circuits to telephone-network voltage (TNV) circuits. Local Area Network (LAN) ports contain SELV circuits, and telephone ports contain TNV circuits. Some LAN ports and some telephone ports use RJ-45 connectors.

CAUTION:

Damage to the logic module components may occur if AC power is not removed from the product prior to attaching any accessories.

CAUTION:

Do not hot plug to the rear panel serial ports. Turn off the 3170 Unit before connecting serial port cables.

CAUTION:

Do not use the Magnetic Stripe Reader (MSR) unit as a handle when moving or carrying the 3170.
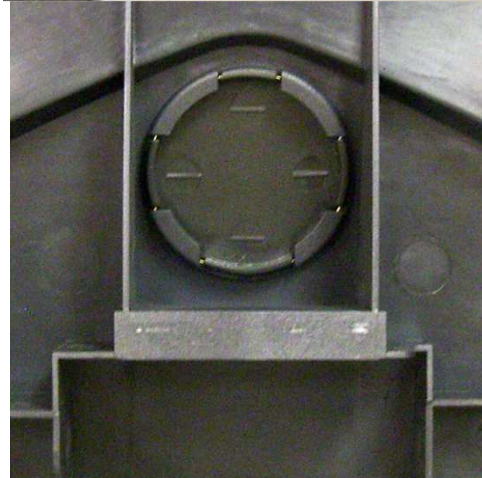
Preparing the 3170 Workstation

If your 3170 POS was received with the RCD pole adapter already installed onto the rear cover, go to the section titled Attaching the RCD Head.

After shutting down Windows and the 3170 workstation is off, unplug it from the wall outlet. Unplug all cables from the front panel and rear panel of the 3170. Using a fine tip Phillips screwdriver or other device with a point, remove the rubber plug from both sides of the main cover, just behind the side cooling vents. On both sides, remove the screw that was hidden by the rubber plug.

From the rear of the machine, press in the tab on both sides of rear cover, unlocking the rear cover from the front panel. Pull the rear cover straight back, then lift it off the machine.

Press tab here (both sides of cover).

Being careful not to scratch the cover, turn it over and hold it in your lap. Locate the plastic knockout and its tabs on the back side of the cover. Ensuring the knockout is not against your leg, and using a flat instrument, apply a slow, steady pressure on the knockout's retaining tabs, while pushing down on the knockout with your thumb. The knockout will slowly start to release, and then pop out.

Attaching the RCD pole adapter

Note: Once the RCD pole adapter is installed, it is permanent. The adapter cannot be removed from the rear cover

From the 3170 RCD box, remove the pole adapter. Turn the rear cover over (right side up) and align the 4 tabs on the pole adapter with the 4 slots in the rear cover. The adapter will only attach in one way; the smallest pole adapter tab goes towards the rear of the cover. Press the pole adapter into the cover's knockout hole until the adapter locks into place.

Configuring the COM Ports

The 3170 has 4 serial ports; one of these ports will be used to send power and data to the 3170 RCD. Check with your POS software supplier for information regarding which serial port you should use. Serial ports are also known as COM ports; the remainder of this manual will assume COM2 is the port being used. The 3170 RCD requires +5VDC on pin 9 of its serial cable and the 3170 standard configuration has COM2, COM3 and COM4 ports setup to provide +5VDC to pin 9. If you have not modified this standard configuration, continue the installation at the Attaching the RCD Head section of this document. If the RCD will be attached to COM1 or COM2, continue below at Configure COM 1 / COM2. If the RCD will be attached to COM3 or COM4, continue below at Configure COM 3 / COM4.

Configure COM 1 / COM2

Set the rear cover aside. Gently pull straight back (a half inch) using the handle on the rear of top cover of the logic unit chassis. The cover will unlock from the chassis bottom.

Pivot the cover up and raise the cover fully; aligning the pivot screws in the chassis slots and locking the rear cover up at a 45° angle.
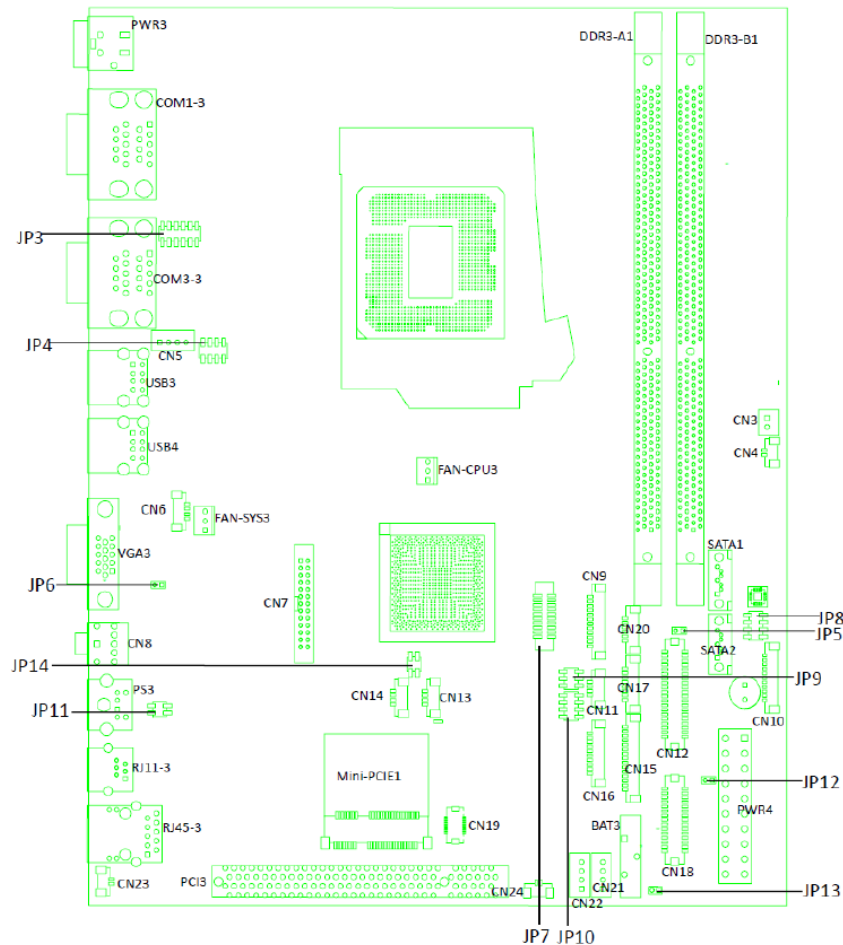

Use the motherboard drawing below to locate terminal block JP3 & JP4. COM1 uses pins 1-6;

COM2 uses pins 7-12. The drawing's left side is the rear of the motherboard; pin 1 on each terminal block is indicated by the small circle on the board. Now use the tables seen below to select the jumper setting for JP3 or JP4. For +5V COM1, move the jumper to 3-4 location, for COM2, move the jumper to the 9-10 location. For +5V COM3, jumper 1-2 on JP4; for COM4, jumper 5-6.

Function		JP3 (1 – 2) (3 – 4) (5 – 6) (7 – 8) (9 – 10) (11 – 12)
COM1 Pin 9	▲RI	jumper on pins 1-2
	+5V	jumper on pins 3-4
	+12V	jumper on pins 5-6
COM2 Pin 9	RI	jumper on pins 7-8
	▲+5V	jumper on pins 9-10
	+12V	jumper on pins 11-12

Function		JP4 (1 – 2) (3 – 4) (5 – 6) (7 – 8)
COM3 Pin 9	▲+5V	jumper on pins 1-2
	+12V	jumper on pins 3-4
COM4 Pin 9	▲+5V	jumper on pins 5-6
	+12V	jumper on pins 7-8

Reverse previous steps to close the chassis cover. Lift the chassis cover out of the locking slots, reconnect the power cable, lay the cover flat on the main chassis and slide it forward the half inch required to seat the pivot barrels into their mating slots.

Attaching the RCD Head

Install the rear cover back onto the 3170. Do not install the rear cover screws and plugs at this time. Remove the RCD head from the box and feed the RCD head's cable through installed adapter and behind the handle on the chassis cover. Continue to install the head onto the adapter, locking the adapter's nub into the middle of the 5 holes in the RCD pole adapter.

Connect to the COM Port

Lift up the rear door of 3170. Plug the DB9-RJ45 adapter into the COM port matching the port selected in the "Configuring the COM Ports" section. The photo to the right shows the connection to the COM2 jack. Secure the assembly to the chassis using the two attached locking screws. Insert the plug from the RCD head into the DB9-RJ45 adapter; it will lock into place.

Reattach all the cables disconnected at Preparing the 3170 Workstation.

Configure COM3 / COM4

If using COM3/COM4, continue here. If not, go to Testing the RCD.
1. Power on the system, and press the <DEL> key when the system is booting up to enter the BIOS Setup utility.
2. Select the Advanced tab.
3. Select Power Configuration COM/VGA/CD Ports and press <Enter> to go to display the available options.
4. To enable the power, select COM3 Power Setting or COM4 Power setting and press <Enter>. Select Power and press <Enter>. Save the change by pressing F10.
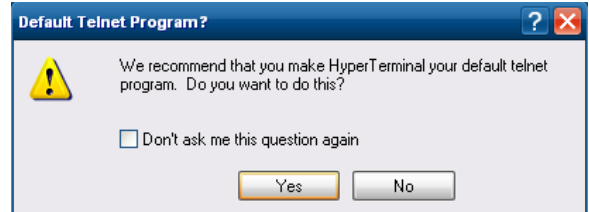
Testing the RCD

Turn on the 3170. A bootup message (shown at right) will appear on the RCD for about 2 seconds.
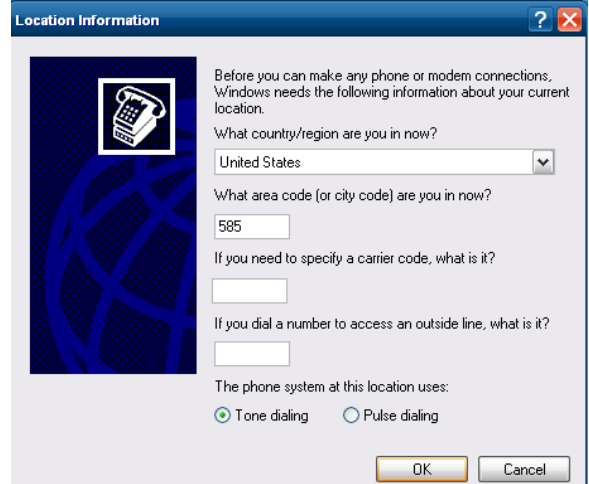
When at the Windows desktop, start HyperTerminal. Look on the Start menu, All Programs → Accessories → Communications → HyperTerminal.
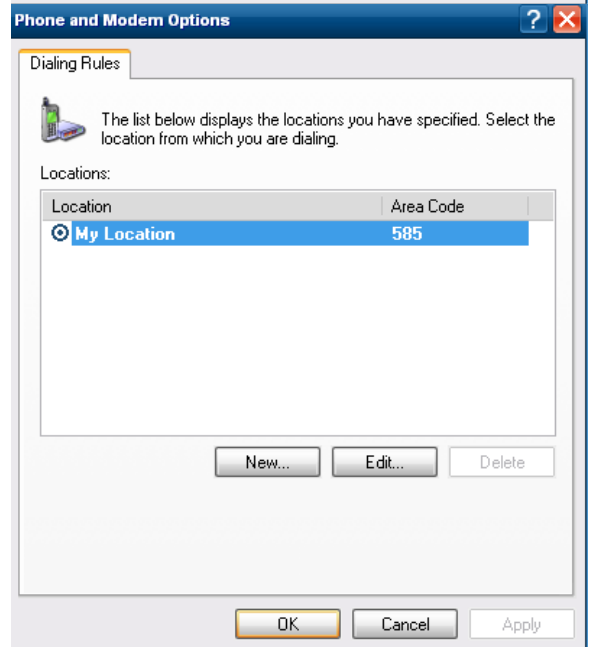

If necessary, answer the question regarding default telnet program.

If necessary, put in your local area code.

Accept the Phone and Modem Option presented, or edit it as desired.
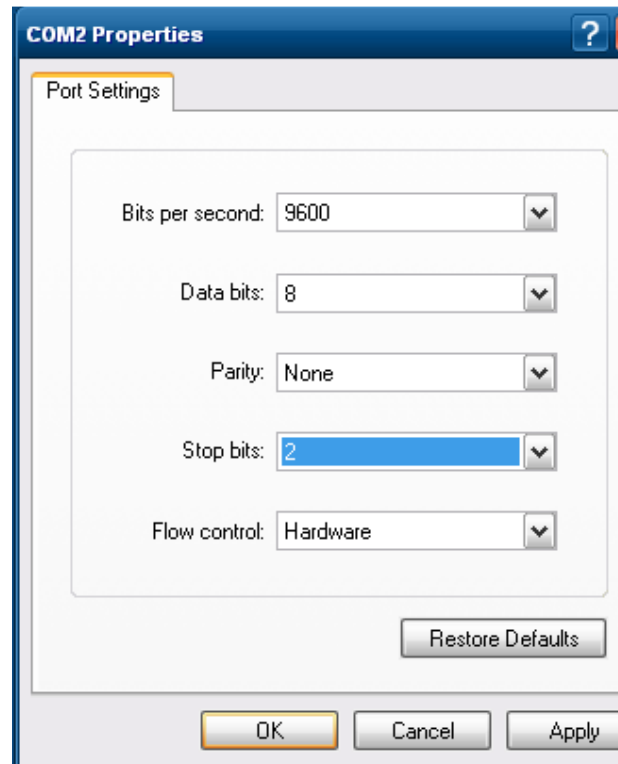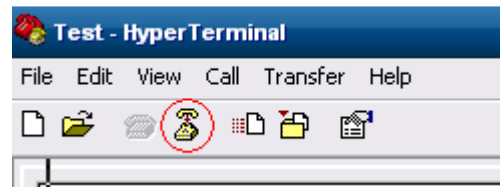
Enter a Connection Description.

Connection Description

New Connection

Enter a name and choose an icon for the connection:

Name:

Test

Icon:

OK   Cancel

Select the COM port to which you connected the RCD.

Connect To

Test

Enter details for the phone number that you want to dial:

Country/region: United States (1)

Area code: 585

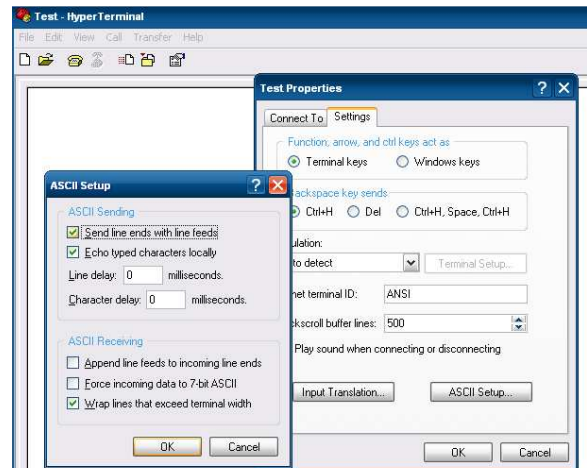Phone number:

Connect using: COM2

OK   Cancel

Click the Configure button that appears and setup the COM Properties form that appears as seen on the right.
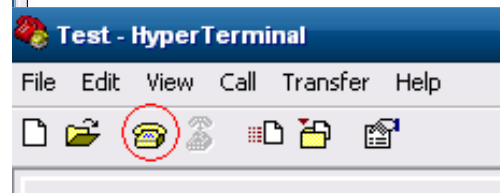
When you click OK, the form will disappear and the software will connect to the RCD. Click the Disconnect icon.

Click the Properties icon. Click the Settings tab and then the ASCII Setup... button. Check the "Echo typed characters locally" box and the "Send line ends with line feeds" box.
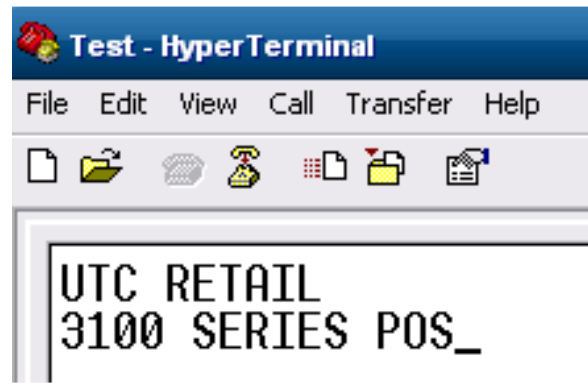
On the main page, click on the Call icon.

Now type a test message using a POS keyboard. Your message will appear in the HyperTerminal window and on the RCD. The RCD can display 2 lines of 20 characters each. The display will wrap to line 2 after the 20th character. At the 20th character on line 2, line 2 will move to line 1 position. The Esc key will erase the display and return to line 1, character 1 position.

The message will be displayed in the RCD.

To disconnect HyperTerminal from the RCD, click the Disconnect icon and then exit HyperTerminal. Any message in the RCD will remain until the 3170 is restarted.

Install the Rear Cover's screws and rubber plugs.

RS232 RCD Factory Settings Baud rate = 9600, Word length = 8, Stop bits = 2, Parity = None. Refer to the 3170 RCD Programming guide to change baud rates or parity.

You have completed the installation of the 3170 RCD. If you experience problems with any of the components of the RCD, see the "Troubleshooting Procedures" section below.

Troubleshooting Procedures

The following table presents symptoms and solutions for problems potentially encountered when installing the 3170 RCD.

Symptom	Solutions
The display does not have power.	• Ensure the RS232 connector is plugged into a COM port providing +5VDC on pin 9. On the 3170 Workstation in a standard configuration, COM2, COM3 and COM4 can provide power to the RCD.
Meaningless characters appear on the pole display when I run my application.	• For RS232 Devices, check the baud-rate settings for the application to ensure that they match the settings for the pole display.

Note: Please call UTC RETAIL Technical Support at 800.349.0546, if you have any problems not addressed in the Troubleshooting Procedures, or have questions about other sections of this documentation.