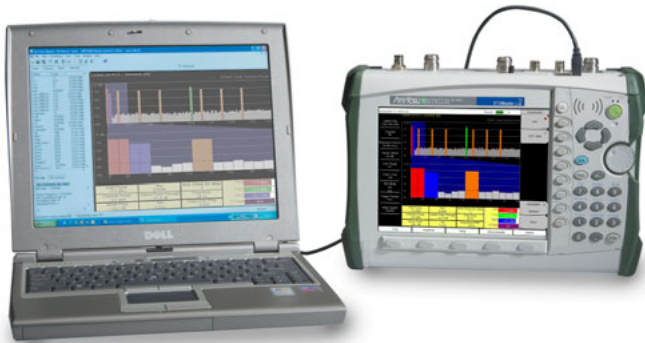


Quick Start Guide

Motorola WinLMF with MT8222A BTS Master

Connecting WinLMF to the BTS Master



Anritsu

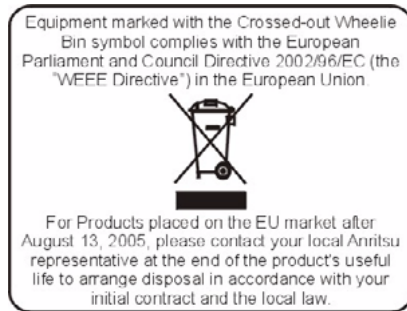
Notes On Export Management

This product and its manuals may require an Export License or approval by the government of the product country of origin for re-export from your country.

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When disposing of export-controlled items, the products and manuals need to be broken or shredded to such a degree that they cannot be unlawfully used for military purposes.

European Parliament and Council Directive 2002/96/EC



Caution



Electrostatic Discharge (ESD) can damage the highly sensitive circuits in the instrument. ESD is most likely to occur as test devices are being connected to, or disconnected from, the instrument's front and rear panel ports and connectors. You can protect the instrument and test devices by wearing a static-discharge wristband. Alternatively, you can ground yourself to discharge any static charge by touching the outer chassis of the grounded instrument before touching the instrument's front and rear panel ports and connectors. Avoid touching the test port center conductors unless you are properly grounded and have eliminated the possibility of static discharge.

Repair of damage that is found to be caused by electrostatic discharge is not covered under warranty.

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Setup and Operation

1-1 Introduction

This document addresses setup and operation of the handheld Anritsu MT8222A BTS Master for use with Motorola WinLMF to perform calibration and acceptance test procedures on Motorola CDMA Base Stations.

1-2 Motorola WinLMF

The Motorola Local Maintenance Facility for Windows™ (WinLMF) is an automated calibration and optimization tool for Motorola CDMA/EVDO Base stations. This tool performs BTS (Base Transceiver Station) calibration, optimization, and maintenance by communicating remotely with the BTS as well as with the test equipment.

1-3 Tools Needed To Establish Connection

The following tools are needed to establish connection between Motorola WinLMF and the Anritsu MT8222A BTS Master:

1. Anritsu MT8222A BTS Master
2. Windows PC running Motorola WinLMF
3. Anritsu Master Software Tools installed in the Windows PC. (If you do not have a copy of Anritsu Master Software Tools, then please visit the following URL:
<http://www.us.anritsu.com/Custom/display.aspx?ID=170>
Click on the “Download Master Software Tools” link.
4. RJ-45 Ethernet Crossover Cable (Anritsu Part Number 3-806-152)

1-4 **BTS Master Ethernet Setup Instructions**

Use the following procedure to set up the your BTS Master to connect to your PC:

1. Turn on the BTS Master
2. After the instrument has booted up completely, press the **Shift** key and then the **System** (8) key.
3. In the System Menu, press the System Options soft key.
4. In the System Options Menu, press the Ethernet Config soft key.
5. Press the Type soft key until Manual is underlined, not DHCP as shown in [Figure 1-1](#).
6. Press the Field soft key until IP is underlined.
7. Press the First Octet soft key and enter 128.
8. Press the Second Octet soft key and enter 0.
9. Press the Third Octet soft key and enter 0.
10. Press the Fourth Octet soft key and enter 49.
11. Press the Field soft key until G-Way is underlined.
12. Press the First Octet soft key and enter 128.
13. Press the Second Octet soft key and enter 0.
14. Press the Third Octet soft key and enter 0.
15. Press the Fourth Octet soft key and enter 48.
16. Press the Field soft key until Sub is underlined.
17. Press the First Octet soft key and enter 255.
18. Press the Second Octet soft key and enter 255.
19. Press the Third Octet soft key and enter 255.
20. Press the Fourth Octet soft key and enter 0.
21. Press the **Enter** key.
22. Reboot the instrument (turn it OFF and then back ON).

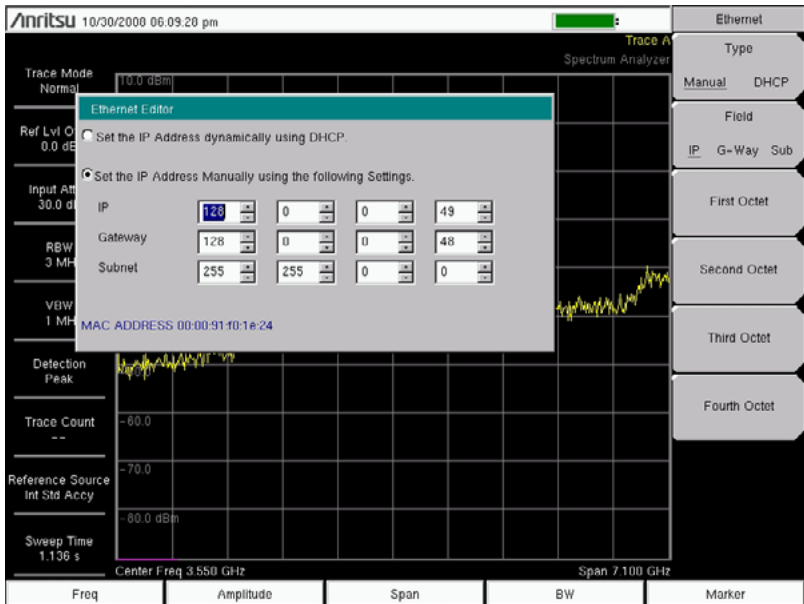


Figure 1-1. BTS Master Ethernet Configuration Editor

1-5 Checking MT8222A Firmware Revision

To ensure that your BTS Master can work with WinLMF, you need to make sure that your BTS Master is loaded with the correct Application Firmware Revision. The BTS Master must be loaded with version 1.48 or above. Follow the directions below to check for the application version:

1. Turn on the BTS Master.
2. After the instrument is completely booted up, press the **Shift** key and then the **System** (8) key.
3. In the System Menu, press the **System Options** soft key.
4. In the System Options Menu, press the **Status** soft key.
5. In the status window, look for the “Package Version” and make sure that it is equal to (or greater than) V1.48. Refer to [Figure 1-2](#). If the package version is not equal to (or greater than) V1.48, then follow the instructions in section “[Updating MT8222A Firmware Version](#)” on page 1-9 to load the BTS Master with the current Firmware Package after going through section “[Setting Up the PC Network Connection](#)”. If the package version is equal to (or greater than) V1.48, then you can skip the “[Updating MT8222A Firmware Version](#)” section.

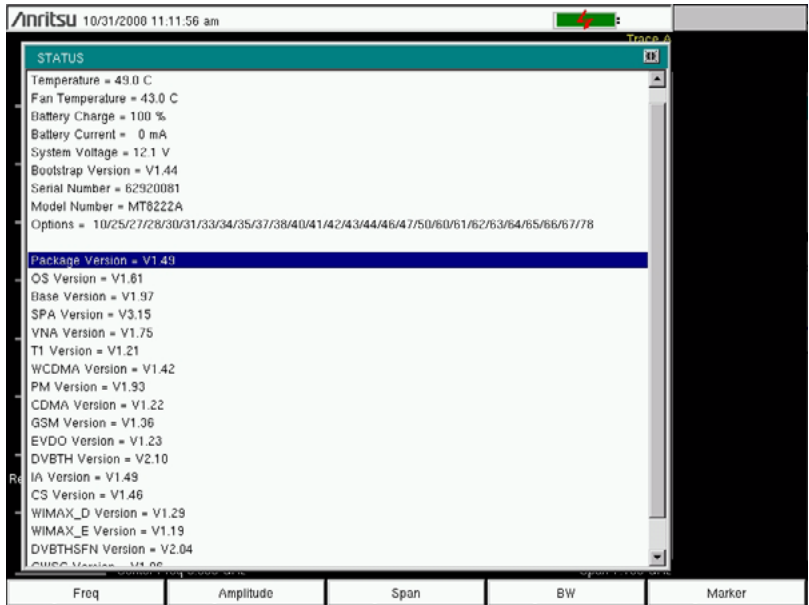


Figure 1-2. BTS Master Status Window

1-6 Setting Up the PC Network Connection

1. Open the computer “Network Connections” by first clicking “Start” and “Settings” and then clicking “Network Connections”.
2. Find the connection to the Ethernet Controller in your PC. For example, in [Figure 1-3](#), this corresponds to “Local Area Connection – Broadcom NetXtreme 57xx Gigabit Controller”

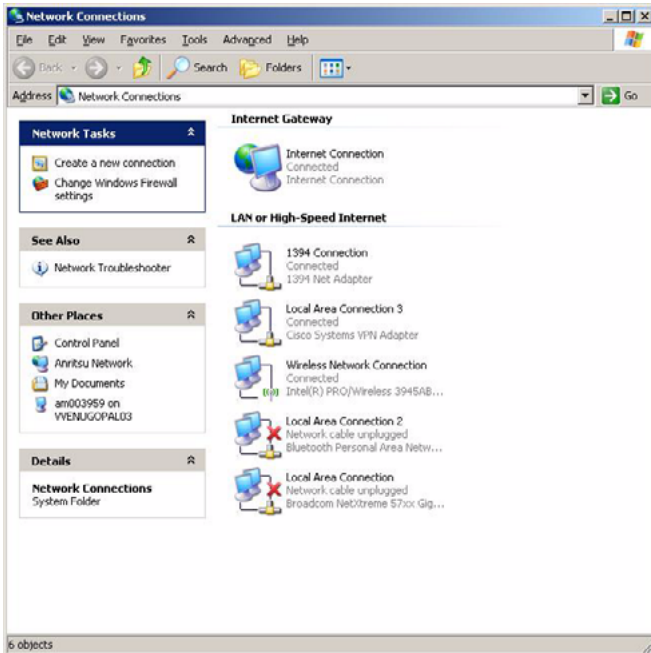


Figure 1-3. PC Network Connections

3. Right click the Ethernet Controller and click “Properties”.
4. In the Local Area Connection Properties dialog box, under the section titled “This connection uses the following items:”, select “Internet Protocol (TCP/IP)”, and then click the Properties button (below the list of connections). Refer to [Figure 1-4](#).

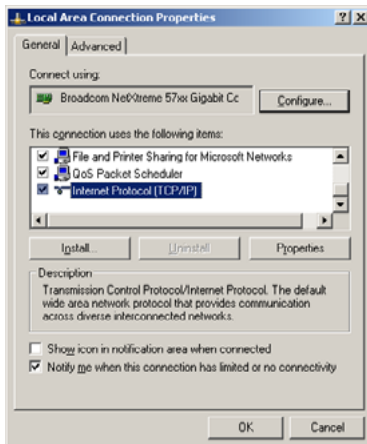


Figure 1-4. Local Area Connection Properties

5. Select “Use the following IP Address” or confirm that it is selected, as shown in [Figure 1-5](#).
6. In the “IP address” box, enter: 128.0.0.48
7. In the “Subnet mask” box, enter: 255.255.255.0
8. In the “Default gateway” box, enter: 128.0.0.2

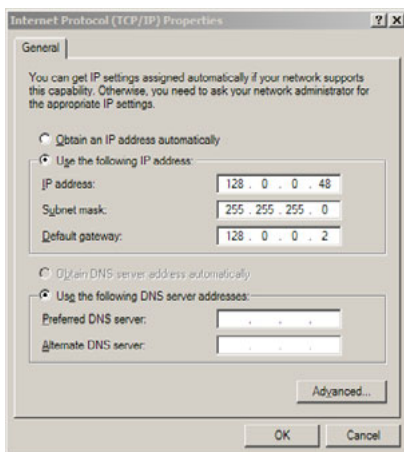


Figure 1-5. TCP/IP Properties

9. Click the Advanced button (in the lower-right corner of the dialog box). Refer to [Figure 1-6](#).
-

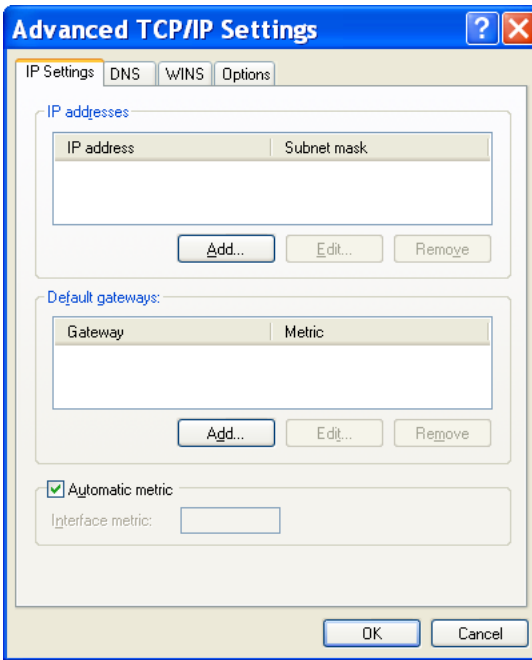


Figure 1-6. Advanced TCP/IP Settings

10. In the “Default Gateways” section, click Add and enter: 128.0.0.1
11. Click OK to close the dialog boxes for Advanced TCP/IP, TCP/IP, and Local Area Connection Properties.
12. Connect one end of the RJ-45 crossover cable to the PC, and connect the other end to the BTS Master Ethernet port. The crossover cable is provided with the BTS Master. The cable part is Anritsu part number 3-806-152.

1-7 Updating MT8222A Firmware Version

1. Start Anritsu Master Software Tools in your PC.
2. Click the “Connection Menu” and then click “Enter IP Address”. Refer to [Figure 1-7](#).

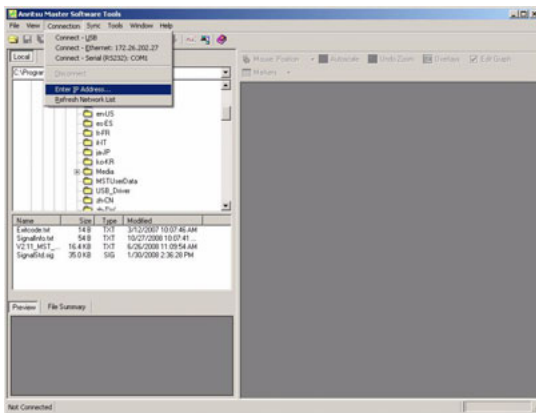


Figure 1-7. Master Software Tools Connection Menu

3. Enter the IP Address 128.0.0.49 in the box next to “Enter a valid IP Address”. Refer to [Figure 1-8](#).

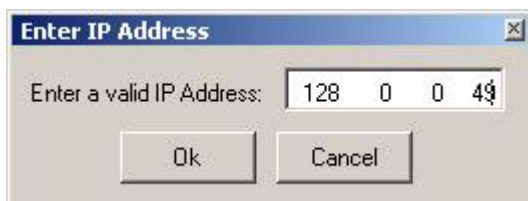


Figure 1-8. IP Address Entry Box

4. This should automatically establish a connection between Anritsu Master Software Tools and the your BTS Master. When connected, you should see the text “Connected to 128.0.0.49” in the status bar below Anritsu Master Software Tools
5. In Master Software Tools, click the Tools menu and then select the “Product Updates” menu

6. In the “Product Updates” window, scroll down to select MT8222A. Refer to [Figure 1-9](#).
7. Make sure that your computer is connected to the Internet.
8. In the top right section of the Product Updates window, make sure that both the Instrument and the Internet lights are green, as shown in [Figure 1-9](#) (upper-right corner).

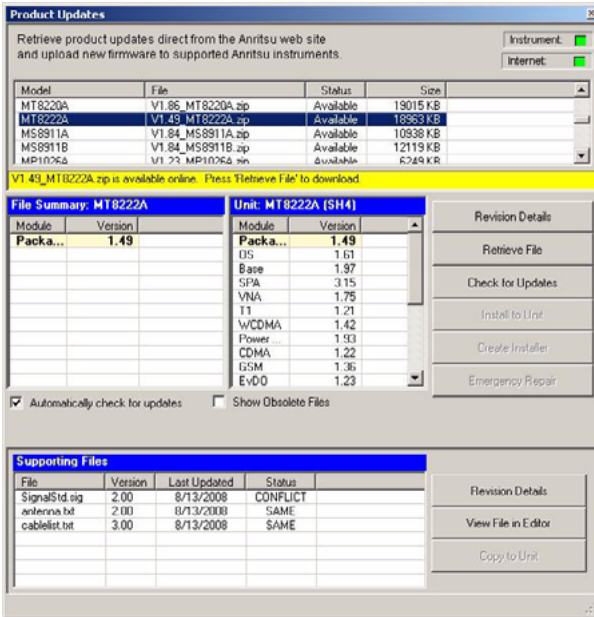


Figure 1-9. MST Product Updates Window

9. Click the Retrieve File button. This should automatically download the Firmware Version from the Anritsu Website.
10. After the firmware is retrieved, the status next to MT8222A in the list should change from Available to Ready.
11. Click the Install to Unit button.
12. During the installation process, you will be asked to choose which files to save. Click “Select All Files”, choose a directory in which to save configuration files, and type a filename.

13. After the install process is complete, the instrument automatically reboots. Do not close Master Software Tools until this process is complete.
14. Go back to section [“BTS Master Ethernet Setup Instructions”](#) on [page 1-2](#) to reconfigure the BTS Master Ethernet configuration

1-8 Setting up WinLMF

Connecting WinLMF to Your MT8222A BTS Master

1. Open WinLMF.
2. Click on Tools and then click on Options as shown in [Figure 1-10](#).
3. In the Options Window, under Connection Type, select Network.
4. In the Ethernet Test equipment section, select Agilent E7495, as shown in [Figure 1-11](#).
5. In the IP Box, enter 128.0.0.49
6. Now press the Detect button.
7. When WinLMF has successfully detected the BTS Master, you should see the word “Remote” in the BTS Master top status bar next to the battery indicator.
8. Click Apply and Save to close the Options box.

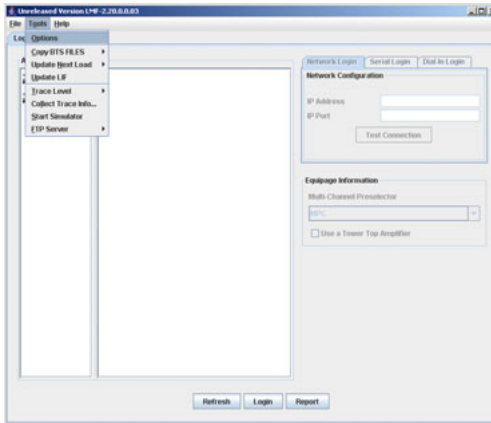


Figure 1-10. BTS Master Ethernet Configuration Editor

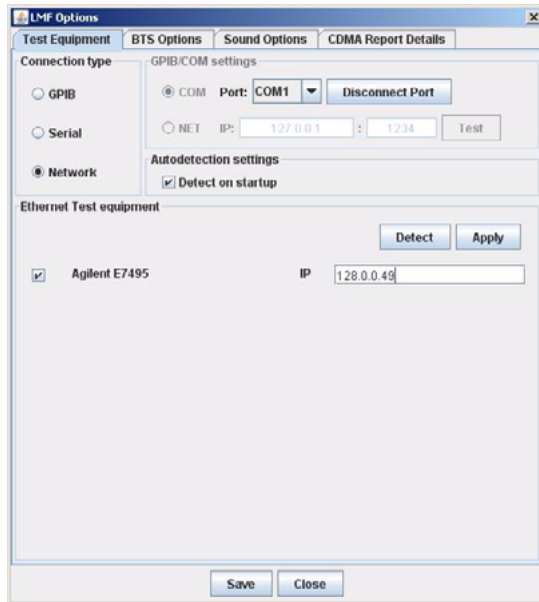


Figure 1-11. BTS Master Ethernet Configuration Editor

1-9 Setting up a Motorola Base Station

Use the following procedure to set up a Motorola Base Station to connect to the PC that is running Motorola WinLMF:

To calibrate a CDMA BTS and run tests, LMF (Local Maintenance Facility) takes control of the BTS and the Anritsu BTS Master. The previous section described how the BTS Master and the PC need to be configured to connect to LMF. This section provides you with instructions to connect a Motorola BTS with a PC that is running the WinLMF software.

The PC running LMF should be connected to the LAN A or LAN B at the Service Shelf of the BTS. The LAN A and LAN B connectors are located behind the frame lower air intake grill below the C-CCP cage. To access the LAN connectors, open the LAN cable access door and remove the hook-and-loop fabric covering the BNC connector.

The BTS is equipped with a 10BASE-2 BNC connector. If you have a second Ethernet port available in your PC, then you may use that, or you could use a PCMCIA 10BASE-T Ethernet Network Interface Card.

BTS to PC Connection Options

Three different options are available to connect the BTS to the PC.

Option 1 – Using a 10BASE-2 to 10BASE-T Converter

Connect one end of the 10BASE-2 cable to the BNC connector. The other end of the BNC connector should be connected to a 10BASE-2 to 10BASE-T convertor. The other end of the convertor is connected to the PC's PCMCIA Ethernet Network Card or an available Ethernet card.

Option 2 – Using a Hub

Connect the two cables (one 10BASE-2 cable from the BTS and one 10BASE-T cable from the PC) to a Hub.

Option 3 – Using a Xircom Model PE3-10B2 or equivalent

Connect the BNC end of the PE3-10B2 to the BTS, and connect the Parallel Port end to the PC Parallel Port. You will need an external AC/DC transformer. In this case, the BNC cable must not exceed 91 cm (3 ft) in length.

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