Factory Disk Instructions

Configuring the RS-232 and Ethernet Ports for downloading files to the unit:

To configure the Ethernet port, you must first configure the RS-232 port.

A terminal/emulation program is required to load files to your unit. We strongly recommend the freeware program TeraTerm if you are not using Ameritec's GUI FeatureCall. TeraTerm has been identified to work for both serial and Telnet error-free transfers to the Ameritec AM2/CRS/FTE units. The TeraTerm program can be downloaded from Ameritec's website. TeraTerm will run on MS-Windows 95/98, MS-Windows NT 3.51, and MS-Windows NT 4.0 Operating Systems. Download the archive named TeraTerm.zip from the following location:

http://www.ameritec.com/downloads/drivers/TeraTerm.zip

CAUTION: When connecting to Ameritec AM2/CRS units via the serial port, HyperTerminal has typically been the most common terminal emulation program used to transfer files to and from the unit. When transferring files, Ameritec units require the use of XON/XOFF software flow control. We have found that the HyperTerminal program drops characters when used in this mode, which can cause code corruption requiring return of hardware to the factory for repair. Therefore, HyperTerminal <u>cannot</u> be used when transferring host files to and from Ameritec units.

Configuring the RS-232 Port for Ethernet Operation:

Configuring the RS-232 Port consists of:

- Connecting a PC to the Call Generator RS-232 Port.
- Setting up the Call Generator and PC serial communication parameters.

To configure the RS-232 Port, perform the following:

1. Obtain the necessary serial cable. Depending on the COM port on your PC, you many need a 25 to 25 pin or a 9 to 25 pin serial cable (see Tables 1 and 2). Forte units require a 9 to 9 pin serial cable (Table 3).

Table 1. PC Cable [RS-232 Port to 9-pin Female Connector (48-0107)]

DB 25-Pin Female Connector		DB 9-Pin Female Connector
2	connected to	2
3	connected to	3
7 (ground)	connected to	5
5, 9, and 22 jumpered		4 and 6 jumpered
6 and 20 jumpered		7 and 8 jumpered
15 and 25 jumpered		

Table 2. PC Cable [RS-232 Port to 25-pin Male Connector (48-0084)]

DB 25-Pin Female Connector		DB 25-Pin Male Connector
2	connected to	3
3	connected to	2
7 (ground)	connected to	7
5, 9, and 22 jumpered		4 and 5 jumpered
6 and 20 jumpered		6 and 20 jumpered
15 and 25 jumpered		

Table 3. PC Cable [RS-232 Port to 9-pin Female Connector (48-0321)]

DB 9-Pin Female Connector		DB 9-Pin Male Connector
2	connected to	3
3	connected to	2
5 (ground)	connected to	5

2. Power up both the Call Generator and PC/Workstation.
3. Connect the Call Generator serial port to an available communications port on the PC/Workstation; usually COM1 or COM2.

   Run TeraTerm and set the communications setup in TeraTerm to serial port with these parameters, **19200 baud**, **8 data bits**, **no parity**, **1 stop bit**, and **XON/OFF** software flow control. Be sure to select the correct COM Port. Select "setup", then save to keep your parameters. Save the file as TeraTerm.ini.
4. Enter **RM** to verify communication. TeraTerm should display the Call Generator status.
5. If you have privileged access, enter **ML <password>**. The default is **ML ameritec**. The monitor will display "Privileged Login".

   Note: If you need to change the password, use the **MP** command. If the password has been changed and you need to setup the Ethernet port, contact your system administrator.

To configure the Ethernet port you must have privileged access. In many locations the System Administrator performs Ethernet configuration.

A PC may be connected to the Call Generator via a LAN by connecting through a hub or directly via a crossover connection. Both connections use an 8-wire twisted pair cable with RJ-45 Telco Jacks. The pinouts for the hub and crossover Ethernet connection are shown in Table 3.

Table 3

Hub Connection			Direct Connection (Crossover Pinout)		
RJ-45	**Signal**	**RJ-45**	**RJ-45**	**Signal**	**RJ-45**
1	Transmit +	1	1	Transmit +	3

2	Transmit -	2
3	Receive +	3
6	Receive -	6

2	Transmit -	6
3	Receive +	1
6	Receive -	2

Port Configuration – General

Configuring the Ethernet Port consists of using the RS-232 port to:
- Set the Internet Protocol (IP) address
- Optionally set the subnet mask
- Optionally set the Default Gateway
- Optionally set the Transmission Frame Type

Setting Up the Frame Type, IP Address, Subnet Mask, and Default Gateway

Before you start, check with your system administrator to obtain the following addresses:
- Ethernet IP address
- Default Gateway IP address (optional)
- Ethernet Subnet mask (optional)

Note: The Call Generator accepts addressing and masking in a decimal format. If your administrator provides you with addresses in hexadecimal format, you must convert them to a decimal format.

To set up the IP addresses, frame type, and subnet mask, perform the following:
1. Enter one or more of the following commands and their respective parameters:
   a) **NI nnn.nnn.nnn.nnn** to set the IP address, where **nnn** is a number between 0 and 255. The default IP address is **192.0.0.2**. Make sure the Call Generator, PC/Workstation, and any other FeatureCall PC share the same address classification. The address ranges for each class are:

Class	IP Address Range		
A	0.0.0.0	To	127.255.255.255
B	128.0.0.0	To	191.255.255.255
C	192.0.0.0	To	233.255.255.255
D	234.0.0.0	To	239.255.255.255
E	240.0.0.0	To	247.255.255.255

   a) **NG nnn.nnn.nnn.nnn** to set the Default Gateway IP address, where **nnn** is a number between 0 and 255.
   b) **NF1** or **NF2** to set the Transmission Frame Type, where **NF1** is **Ethernet II** and **NF2** is **IEEE 802.3**. The default Transmission Frame Type is Ethernet II.
   c) **NM nnn.nnn.nnn.nnn** to set the Subnet Mask, where **nnn** is a number between 0 and 255.

Note: The addresses are stored in Non-Volatile RAM and only need to be reentered for changes or after battery replacement.

2. Turn the Call Generator off and then back on and wait for the unit prompt to appear.

Note: For the NI, NM, and NG commands to take effect, turn the Call Generator off, then on.

3. Enter **ND**. The PC displays the Ethernet address, Transmit Frame Type, IP Address, Subnet Mask, and Default Gateway. The terminal displays a message similar to the following:

   ameritec>**ND**

   Ethernet addr = 00:a0:4f:00:00:39

   Tx Frame type = Ethernet II

   IP addr   = 192.0.0.2

   Subnet mask   = 255.255.255.0

   Def Gateway   = 192.0.0.2

   ameritec>

   > **Note**: You can log these results to a file or print them for later reference.

4. Compare the displayed values to the values that you entered. Return to step 1 if any settings are incorrect.
5. Disconnect the PC from the Call Generator RS-232 port.
6. Connect the Ethernet port to the Ethernet LAN. CRS units have a built in Ethernet port, while AM2 units require an Ethernet adaptor that connects to the RS-232 port.
7. Open a Telnet or FTP session and enter the Call Generator IP address. If everything is set properly the Telnet or FTP application will respond with a connection message.

Downloading Script and Protocol .hex Files via FeatureCall

To download .hex files to a Call Generator using FeatureCall, perform the following:

1. It is recommended that you login to privileged access when downloading factory scripts and protocols. This will allow access to the factory protected script locations in the unit. Login by selecting the **File** menu followed by **Privileged Login…** Enter your password at the prompt and click **OK**. The default password is **ameritec**
2. From **File** menu, select **Download Files to Unit**.
3. When the **File: Download Hex Files to Unit** window is displayed, select the file to download and click on **OK**. Only one file can be downloaded at a time. Repeat procedure for each script/protocol to download.

> **Note**: Script and protocol files are both downloaded as **.hex** files. This may become confusing. Be sure to give each type of file a distinctive name so that it may be readily identified. Ameritec's convention is scripts are 932xxxx.hex files and protocols are 922xxxx.hex files.

Possible messages during download:

    For Protocols:
        Enter Protocol Number (1 to 8)
    For Scripts in non-privileged mode (no password entered):
        Enter Script Number (11 to 20)
    Existing Script/Protocol message:
        Script/Protocol Number # Exists; Overwrite? (y/n):
    Successful Download OK:
        Script Save Successful
        Please wait for call programs to assemble or
        Protocol Save Successful
    You selected Cancel anytime during the download:
        Serial Load Hex File: aborted by user

Complete the transfer by entering the correct responses.

Downloading Script & Protocol .hex Files via the TeraTerm Terminal Emulator

To download scripts or protocols from the PC/Workstation to a Call Generator using TeraTerm Terminal Emulator, perform the following:

1. Start the TeraTerm Terminal Emulator program.
2. Set the TeraTerm Terminal Emulator found on the Ameritec Website to **19200 baud**, **8 data bits**, **no parity**, **1 stop bit**, and **XON/OFF** software flow control. Be sure to connect to the correct COM port. Select setup and then save to keep your settings. Save as TeraTerm.ini.
3. To verify that the PC/Workstation is communicating with the Call Generator, enter **RM**. The monitor should display the unit status following by the unit ID prompt.

> **Note**: If the monitor displays the unit status but not the unit ID prompt enter **!a**. If it still doesn't appear, enter **M>1**. The monitor should return the unit ID prompt.

4. It is recommended that you login to privileged access when downloading factory scripts and protocols. This will allow access to the factory protected script locations in the unit. Login by typing: **ml <password>** where <password> is the password for your unit. The default password is **ameritec**
5. To transfer a Script or Protocol file to the Call Generator, enter **HL**. The monitor will display the message: **<unit> serial download.**
6. Under the "file" dropdown menu, select "send file". A popup window to select the file to transfer will appear. Select the filename for the Script or Protocol hex file to download.

> **Note**: Script and protocol files are both downloaded as **.hex** files. This may become confusing. Be sure to give each type of file a distinctive name so that it may be readily identified. Ameritec's convention is scripts are 932xxxx.hex files and protocols are 922xxxx.hex files.

Possible messages during download:

    For Protocols:
        Enter Protocol Number (1 to 8)
    For Scripts in non-privileged mode (no password entered):
        Enter Script Number (11 to 20)
    Existing Script/Protocol message:
        Script/Protocol Number # Exists; Overwrite? (y/n):
    Successful Download OK:
        Script Save Successful
        Please wait for call programs to assemble or
        Protocol Save Successful
    You pressed Ctrl-C anytime during the download:
        Serial Load Hex File: aborted by user

Complete the transfer by entering the correct responses.

Using prep.exe to Convert .src Script Files Downloadable .hex Files:

Prep is incorporated into FeatureCall GUI and is therefore not needed when using FeatureCall. If using FeatureCall, select Call Setup/Scripts to download the .src file to the unit. The prep.exe utility program is

supplied on the factory diskette to allow users to compile their own script files into the .hex format, which is downloaded to the unit. To convert the files into the .hex format, follow these steps:

1. Copy the prep.exe file into the same directory as your script file. The script file must use the .src file extension.
2. Open a DOS window and use the cd command to change directories until you are in the directory where your script and prep.exe are located.
3. Type **prep "Unit Script Name" <filename> unit_location**

   "Unit Script Name" is the script name you want to appear in your unit. This name cannot be longer than 12 characters and must be surrounded by quotes if spaces are included in the name.

   <filename> is the name of the script file without the .src file extension

   unit_location is an optional selection of where in the unit the script is to be loaded by default. This must be a value from 1-20.

   A .hex file will be created as <filename>.hex

   E.g. **prep "A->B std" 9320001f 1** would use the file 9320001f.src and convert it to 9320001f.hex. The script would load by default into script location 1 and would appear with the name A->B std.
4. The .hex file will be created in the same directory as the .src file and can be downloaded to the unit by following the "Downloading Script & Protocol .hex Files via the TeraTerm Terminal Emulator" instructions above.

Note: In order to load ScriptMate scripts to your AM2, Squirt™, Crescendo®, or Forte™ unit you must be running Host version 4.50 or higher. Voice over Packet (VoP) ScriptMate scripts also require ScriptMate version 1.04 or higher.
Visit http://www.ameritec.com/downloads/softwareupdates.cfm to download the latest upgrade patches for ScriptMate, FeatureCall™ and Host Software.
To verify the current version of your software:
• Choose About from the Help menu in ScriptMate to view the revision number of your software.
• Choose About from the Help menu in FeatureCall while connected to the unit in question to view the Host and FeatureCall revision of software. If you do not have FeatureCall, use the RS-232 or Ethernet port to connect to the unit. Type RM at the unit prompt to view unit's Host version. AM2 models (excluding Squirt) will also display the Host version upon power up. If you need to upgrade your Host software, please visit our website for the upgrade patch and upgrading instructions.

Palette Files: Palette Files need to be moved to pre-set directories in order for ScriptMate to use them. Go to Tools menu in ScriptMate and choose Options. The Palette File directories will be listed at the bottom of the options window. You can copy the palette files to the listed directories in that window or add your own directories to that list if you prefer to use your custom directories to store palette files.

Converting Call Flow Diagrams to Script Files using ScriptMate

1. Start ScriptMate.

2. Open the Call Flow Diagram that you wish to convert to plain script format in order to download it to the unit.
3. Choose **Create Script** in **File** menu.
4. Your script will be saved as using the same name as your call flow diagram using a *.src extension.