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This file must not be distributed without the full AceComm 2.0 package.

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Brief Tutorial

[Installation](#)

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Ports & Modems

[COMM.DRV](#)

The first time AceComm is run it will pop up a menu for serial port and modem type selection. You choose the serial port your modem is on, and then select a modem for the port. AceComm can keep track of a separate modem for each available serial port. If your modem is not listed, choose Generic.

You have the option of selecting "no modem" for the port. If you are using a **direct link**, DTR will be raised when the port is opened. Note that there is an option for the DTR state when closing the port. The default is to leave DTR high. If you are using a direct link and want to go "off line" when closing the port and/or quitting the program, change this setting to "Drop DTR" when closing the port. Leaving DTR high allows the modem to stay connected when shelling to other software (Internet software etc.).

Terminal Screen Area

After selecting a serial port and modem, AceComm goes into its [Terminal Screen](#) area. The Terminal Screen area is the Master Control Area where overall program use will be.

Calling Out, Connecting

Dialing can be accomplished easily from the [Phone Directory](#). AceComm keeps track of calls in a log file named AW.LOG. AW.LOG contains the BBS name, phone number, time on line, and date of each call made from inside the Phone Directory. Monthly and yearly line time totals for each phone number are stored inside the phone directory file.

Session capture files are used to capture character I/O to a file.

Log files are used to log activity and program use.

File Transfer Protocols

Down loading files is made easy with [Internal Protocols](#). Down loaded files are placed in a sub directory. The internal [Directory Lister](#) makes un arching and viewing files easy.

Run DOS and Windows Programs

The internal [Directory Lister](#) uses optional [External Programs](#) for un arching and viewing files.

QX QWK Mail Reader

An included [QWK Mail Reader](#) provides quick and easy off line mail reading capability.

COMM.DRV

Note from the Author: It is my experience that COMM.DRV's supplied with Windows 3.1, 3.11+ perform as good or better than the 3rd party drivers. There is plenty of misinformation floating around. Most 3rd party COMM.DRV's I've tried will drop DTR for a second when the port is opened. This will cause the modem to hangup. I like to use AceComm to access my internet provider. AceComm will allow closing the port and start WINSOCK. WINSOCK opens the port for its use. The 3rd party COMM.DRV's would cause a dropped carrier at this point. COMM.DRV supplied with Windows 3.1 is perfectly capable of running at speeds to 115200 and the "3rd party drivers are faster" is hype. My experience anyway.

3rd Party COMM Drivers

COMM.DRV from Windows 3.1 will allow opening a COMM port without dropping carrier. Most alternatives seem to drop carrier every time a port is opened.

COMM.DRV replacements verified to drop carrier while opening a COMM port include:

TWCOMM.DRV (COMIT TradeWinds Software)
WFXCOMM.DRV (WINFAX)

You can't use COMM.DRV drivers that drop DTR (carrier) when opening or closing the port -- when calling ISP's etc. Or how will we hand the port over to WINSOCK and retain the connection.

AceComm contains several functions for closing the port and leaving DTR ON, thus allowing external protocols, other serial port software to run off a connection established from AceComm. Watch out for COMM.DRV replacements that drop carrier when they aren't supposed to!

FIFO UART / 16550 UART Control

To set a trigger level for 8 bytes (optimum under Windows - my opinion)

Enter into SYSTEM.INI the following:

Com4RXSize=8

 | || Trigger level
 | || COMMS Port

Possible settings for "Trigger Level" include 1, 4, 8 and 14.

"Trigger Level" is a count of characters the UART stores before notifying the system. (16 - trigger level) characters positions remain to be filled before data overrun occurs.

A trigger level of 8 allows for 8 character times before an overrun will occur after notifying the system.

Support and Questions

Technical support is available at no charge by sending electronic mail to:

Internet: mgpsoft@minn.net or 75120.3306@compuserve.com
CompuServe: 75120,3306

sending US Mail to:

MGP Software (AceComm/WIN)
PO Box 75965
St. Paul, MN 55175-0965

Phones:

Voice support 612 578-3238
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Outside the USA 612 578-3239

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AceComm can be ordered through Compuserve. Just GO SWREG, and select program #7218.

Introduction

AceComm for Windows can be used with Win31, WFW311 and Windows 95.

AceComm is telecommunications software written for the Windows operating system. As telecommunications software, AceComm lets you capture, buffer, transmit and receive data using the serial ports in your computer. The serial port may be connected to a modem, a network, or simply another computer.

Data is displayed, and commands sent, in a central area know as the "terminal screen". The terminal screen acts as a window for data communications, with you, the user, at the controls. You have control over both function and appearance. Terminal emulations for VT100, ANSIBBS and RIPscrip let you navigate the dial up BBS world and Internet/lynx interface. A split screen chat window has host capability. Built in data transfer protocols include Zmodem and can be run in the back ground.

A macro-programming language lets you redefine function keys, menus, and write scripts. There is also a script learn function. The phone directory supports copy/paste across phone files, keeps track of on line time for the month and year, provides several ways for sorting, can write to printable text output, and more. Besides dialing from the phone directory, a circular queue window is provided for dialing from a list of marked records.

WAV files are supported for auto-play during various program functions including after file transfer, on dial/connect. The scroll back buffer can be sized, has a find and find-next function, quote-back-to-modem and write-to-file functions.

These are just some of the features. The AceComm package is an ongoing project with new updates available every few months.

System Requirements

AceComm for Windows requires a minimum Windows 3.1 or Windows for Workgroups and requires a minimum of 2 meg drive space.

AceComm requires enhanced mode, AceComm will not run in standard mode Windows.

A serial port with a modem or null modem.

External programs are optionally used other for ARCHIVE files. See [External Programs](#).

Installation

You can install AceComm as follows: insert the distribution disk in your a: drive, activate the Windows Program Manager, choose **Run** from the **File** menu, type **a:INSTALL**, and press the Enter Key. For details see the section titled System Requirements.

INSTALL.EXE will present a default directory C:\ACEWIN as a target directory for the program files. You have the option of changing the target directory. The install process can be canceled at any time.

After installation double click on the program ICON to start AceComm. Click on the Help icon or press ALT+H from AceComm Terminal Screen to access on line help. Many menu areas contain context sensitive help available from the Help button for the currently visible menu.

Un Install

Installation

To uninstall AceComm for Windows from your hard drive:

Deleting the sub-directory specified will remove %100 of the AceCom setup.

Terminal Screen



Choosing Fonts

Mouse

Optional Status Line Functions

The **Terminal** screen is the center point of control inside AceComm. From the Terminal screen all other menu areas are accessible. The client area of the Terminal screen is where data received from the modem will be displayed. Your Mouse can be used with text for character I/O in the Terminal screen. The screen size will adjust itself to FONT SIZE x ROWS x COLUMNS. You can change fonts on the fly.

Terminal Emulation

ANSIBBS and VT100 are supported in full time detecting from the BBS what to use. RIPscrip video needs be enabled by the remote.

Main Menus and Icon Bar

Icons at the top of the Screen (sample above) provide functions. Any setup will be done from the pull down menus.

Program Password

Any time you click the right mouse button inside the Terminal Screen, up pops the PROGRAM PASSWORD menu.

Selecting a PROGRAM PASSWORD provides a fairly secure means for limiting just who uses the program installation. When you provide a PROGRAM PASSWORD, you can set it to **prompt** for your PROGRAM PASSWORD each time the program is started.

Changing your PROGRAM PASSWORD

To change your PROGRAM PASSWORD, you will be prompted for your **current** PROGRAM PASSWORD. You can then type in a new PROGRAM PASSWORD.

Password Program Use

You can enable prompting for PROGRAM PASSWORD each time the program is started by clicking in the "Password Program Use" checkbox button. First, you will be prompted for your PROGRAM PASSWORD. If you type in your PROGRAM PASSWORD correctly, the option is enabled. The same steps are used to disable prompting for PROGRAM PASSWORD at program start.

Other Secure Options

Passwords stored inside the binary phone files are stored in encrypted form. No one can view your online password by peeking at the phone book files on your disk.

Scroll Back Buffer



What is a Scroll Back Buffer?

Lines that have scrolled off the display can be viewed from inside the scroll back buffer. When you enter the scroll back buffer the screen display will change color, and the top row buttons change to their scroll back functions.

Write to File

Marked Lines

This function checks to see if you have marked lines in the scroll back buffer, if lines are marked, only lines you have selected are written. To select (mark) a block inside the scroll back buffer, position the mouse cursor on the top line, then while depressing the left mouse button, drag the cursor down the screen. It will continue marking each line the cursor passes over, scrolling the display if marking more than one screen full.

All lines

If none or 1 line is marked, then the function writes the entire contents of the scroll back buffer to a file. You will be prompted for a filename. Files are stored in the SCREENS sub-directory.

Send Quoted

Marked lines are sent as quoted text. The intended purpose is for on line message replies where quoting some text from the original message is desired.

Below is a sample of quoted text from the scroll back buffer.

Note: The quote ID text can be edited from the configuration area.

```
<<Please reply to the E-Mail address below and I will see that  
the responses are forwarded to the group.>>
```

Internal Protocols

AceComm for Windows supports Zmodem and Zmodem-ZedZap (8K Zmodem), Ymodem/Ymodem-Batch/YmodemG, Xmodem/Xmodem1k, and Ascii-data protocols.

What is a Protocol?

A protocol is an agreement for data transfer made between two connected computers. Each protocol varies somewhat in how it moves data. The protocol is used so that the sender and receiver have a common set of rules for conversation with each other while the data transfer takes place.

Most Reliable Protocol

Under most circumstances, ZMODEM will perform best. Zmodem is capable of detecting any errors that may occur, and correcting the error. Zmodem is very fast. Zmodem will be your best overall choice when available.

Batch Protocols

Batch protocols are capable of transferring more than 1 file per session. To accomplish this the sender must send the receiver a filename before the data starts. Batch protocols provide a means for sending the filename and optionally file size and file time to the receiver. Zmodem and Ymodem are batch capable protocols.

Auto Engaging Protocols

Some protocols were designed so the sender can start the receiver automatically. Zmodem is such a protocol. Under normal circumstances, your zmodem downloads will start automatically. After you have told the BBS what filenames you want to download, a trigger sequence is sent from the BBS starting your internal zmodem.

Macro Language

Macro Variables

Recording Login Scripts

What is a Macro?

See Macro Reference for a listing. A MACRO is a text symbol used to represent a computer function or series of computer functions.

Macros are directives bounded inside of angle brackets < >

Macros must have a SPACE character in front of the "<" left bracket when stacking. Stacking refers to more than one macro on a line

Example for Macro Stacking:

```
<WaitStr>Select: <SendStr>f^Mf^M <MdmStill>5 <SendStr>^M
```

Macros may be any combination of CaSe

```
<RunProg> jmodem
```

```
<runprog> jmodem
```

The Macro Processor supports "Macro Stacking". Macro Stacking means multiple Macros per line

```
<SendStr>u z ACOM11.ZIP^M <SendZmo>ACOMM11.ZIP
```

```
<SendStr>u z ACOM11.ZIP^M <RunProg>GSZ sz -m ACOM11.ZIP
```

```
<SendStr>ATDT846-2940^M <WaitStr>CONNECT <SendStr>^[^[  
same in abbreviated form <SS>ATDT846-2940^M <WS>CONNECT <SS>^[^[
```

MACRO DATA PARAMETERS are bounded inside of square brackets []

MACRO DATA PARAMETERS need not have a <SP> character in front of them

MACRO DATA PARAMETERS must be upper CASE

```
<SendStr>[USER_NAME]^MY^M[PHO_PWD]
```

```
<SendStr>[USER_NAME]^M~[PASSWORD]^M
```

MACRO FUNCTION PARAMETERS are prefixed with a % character

```
<SendZmo> %PF
```

```
%PF stands for "Prompt For" <RunProg>dsz port %P speed %B sz %PF %WK
```

```
<SendStr>^M
```

Recording Login Scripts

Macro Variables

When you select the Record ICON from inside the Phone Book, the recorder begins recording *after* Dial/Connect.

```
<WaitTime> 60
<WaitStr> ame:
<SendStr> [USER_NAME]^M
<WaitTime> 20
<WaitStr> assword:
<SendStr> [PHO_PWD]^M
```

[USER_NAME] and [PHO_PWD] are Macro Variables used with the script language. Using variables allows for changing your user name and passwords without affecting scripts already written.

To include dialing information in a script, begin by selecting the Record ICON from the Terminal Screen area.

Information recorded into a script when begun from the Terminal Screen area.

```
<InitPhoRec> AceComm Support BBS
<Pho_Num> 1-602-846-2940
<Pho_Capfile> ace[MODA]
<Pho_LineCtrl> 8N1
<Pho_Baud> 2400
<Pho_Redial>

<OpenCapture> filename
```

Configure Settings

Setup Menus

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[Dialing Options](#)

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[Auto Engage Protocols](#)

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What Is A Phone File

The Binary Phone File

The files are binary data files using the .PHO file extension.

The Phone Record

A binary phone file is organised into binary data records. A record is kept for phone number.



Mouse

Using your Mouse for character I/O

Clicking the left mouse button on a single character inside the Terminal screen will **send the character to the modem**. Clicking the left mouse button on empty space inside the Terminal screen sends a carriage return to the modem. Clicking the right mouse button inside the Terminal screen send ESC character to the modem.

Using your Mouse to copy lines of text

You can **copy a line of text** off the terminal screen by holding down the left mouse button and dragging it across the text to be copied. The text will become highlighted. Releasing the mouse button picks up and copies the text. A text line will be copied to either the Modem or Strings Menu data area depending on the state of the copy mode. **Copy mode can be seen and toggled by clicking on the Copy Mode button, or selecting Copy Mode from the Edit Menu.**



Choosing Fonts

Choosing Fonts

You can change the default font for the Terminal Screen from the configure menus. The default font is "Terminal" and will display the graphic drawing characters many BBS's use.

True Type fonts do not normally display graphic drawing characters but can be used and work well with CompuServe, LYNX on the Internet etc.. Not all fonts will display properly in the terminal window.

You can click on the user definable menu selection in the utility bar that is pre defined to display sample text. Your modem needs be set for local display with E1 (default) for the sample to display locally.

Optional Status Line Functions



The Status Line Button Bar is optional

The **Name>** button sends your **name** to the modem. Your name is taken from the software KEY for registered versions, or the name used in IEMSI data. IEMSI data is used during IEMSI login. IEMSI login is an automated login protocol supported by some BBS systems. IEMSI data can be configured inside the Configuration Area menus.

The **PWD>** button sends your **password** to the modem. **password** is taken from the current loaded Phone Record. If you have not entered a password for the current Phone Record, the password in IEMSI data will be used.

The **ID>** button sends your **ID** to the modem. **ID** is taken from the current loaded Phone Record. If you have not entered an ID for the current Phone Record, a carriage return is sent.

The **Alias>** button sends your **Alias** to the modem. **Alias** is taken from the current loaded Phone Record. If you have not entered an Alias for the current Phone Record, IEMSI data is checked.

The **MsgFile>** button sends an ascii text file to the modem. This is handy when entering messages off line. You can get a message started on line, and send your pre-prepared message. The BBS will be able to record the message as if you had typed it on line. Note: When using the QWK mail reader your message will be up loaded in the form of an archive file with .REP extension.

The **CAP** button toggles a capture file on and off. A capture file records characters coming in from the modem to a text file. Capture files are stored in the sub-directory defined for CAPTURE files.

Note: The scroll back buffer is capable of retaining several thousand lines, and can be written to a text file.

The **ENTER>** button sends a carriage return to the modem.

The **Hangup** button hangs up the modem.



Comm Port Setup

COMM.DRV

Selecting a port from the configuration menu

The first time AceComm for Windows is run, it will search serial ports found in your computer for a modem, and present the first port with a modem found as a default. You can accept the port or choose another from the list.

When you choose a serial port from inside the configuration menu, you are choosing the default serial port that AceComm will use. The default serial port is used at program start, and for internal host mode. Host mode is the built in BBS.

Individual Fon.Records located inside the Phone List menu, can use alternate serial ports. Alternate serial ports for individual Fon.Records can be selected from inside the Fon.Record Edit menu.

Hardware Handshaking

RTS/CTS is Hardware handshaking

XON/XOFF is Software handshaking

Set RTS/CTS to ON to enable Hardware Handshaking. This is how high speed modems control data flow. Refer to your modem's user manual for RTS/CTS handshaking in conjunction with using locked port rates. If your modem is capable of connecting at 14400 or above, it requires the use of CTS/RTS handshaking be set ON, and the baud rate set to at least 1 speed above your modems fastest connect rate.

Line control

Line control means the parity, stop bits, data bits, and baud rate. Line control may vary from call to call. Most common will be NO PARITY, 1 STOPBIT, and 8 DATABITS. Each Fon.Record can be edited from inside the Phone List Menu Area, and retain it's own Line Control settings. Default Line control selected here will be used to setup the comm port at program start, and in Host Mode, and as Fon.Record's default values.

Locking the Baud Rate

Locking the port means selecting a baud rate higher than the highest connect speed the modem is capable of, and telling the communications software to lock it there.

Using a locked port requires your modem be in full handshake mode.

If you are using a high speed modem, you probably need to use the **Locked Port** option.

Locking the port causes AceComm to leave the modem speed set to it's default value, even when individual Fon.Records baud settings may vary. The reason for locking a comm port is to insure that the computer-to-modem speed is running faster than the modem-to-modem speed

Baud Rate Selection

Connect speeds such as 14400 and 28800 are not actual baud rates that the comm port can be set to. Modems capable of connecting at 9600 and above can usually be used with a **Locked port**. Setting the Baud rate to 19200 for a 14400 baud modem is necessary for proper performance.

Baud Rate Selection Explained

Your modem's highest connect speed is just that. A Connect speed. Your computer's serial port supports 9600, 19200, 38400, 57600 and 115200. 14400 is a connect rate your modem is capable of. The serial port in your computer cannot be set to 14400 baud. In order to operate at 14400 connect speeds, the serial port must be set to a higher value. You will need to select a higher baud rate. If 14400 is your modems highest **Connection Rate**. 19200 is the closest **Computer Rate** you can select. When using a **Locked Port**

your modem makes the translation between **Connection Rate** and **Computer Rate** by using FLOW control. The FLOW control used is called **RTS/CTS hardware handshaking**. Your serial port can be set to 19200, 38400, 57600, or 115200 and locked there. Start with 57600. If you experience errors, drop down to 38400. If you still experience errors, you will want to determine if your comm port is using a **Buffered Serial Port**. A buffered serial port is also known as a buffered UART, (16550 UART). A buffered UART is almost always required for data communications at 14400 and higher.

Dialing Options

Dial String Modifiers

Long distance filter

1-612- Strip 1-612- from phone numbers

1- Strip 1- from phone numbers

Number translation

456- 406- replace 456- with 406- in phone numbers

1-602-456 1-507-456



Modem Commands

AT Modem Command Set

Modem commands are used to configure your modem for the type of use intended. Your modem supports a command syntax in the form of ascii characters. Commands sent to the modem can be grouped. We refer to this command group as **command strings**.

Modem commands begin with the letters "AT". Thus the AT command set. AceComm provides a **Modem Selection menu** from inside the **Port Setup menu**. When you select a modem for the port, AceComm fills in a modem command data structure for the port. Each port contains it's own modem data structure. You can have a different modem for each port. AceComm will keep track of the setup for each modem. Some AT command are important to know.

&C1 tells your modem to report CARRIER only when connected to another modem. Some modems come from the factory configured to report CARRIER all the time. This can be corrected by typing AT&C1 <ENTER> from the terminal screen.

I type ATI to see your modem's highest connect speed supported.

&K3 tells your modem to use hardware hand shaking.

M M0 turns you speaker off, M1 turns it on.

QOV1 Enables verbal response strings. This is required for AceComm to correctly identify connect speeds when placing calls, and in detecting FAX from BBS callers when in host mode.

W2 CONNECT message reports actual connect speed, not fixed port rate.

Modem reports CARRIER is ON all the time?

Type AT&C1 in the terminal screen. This AT command tells the modem to only assert CARRIER when connected on line. You will want to put &C1 in your modem init string. If your modem supports writing to nonvolatile memory, then do so with the &W command "Write Active Configuration to Memory".

Modem doesn't report the true Connect Speed?

Include W2 in your init string. Your modem can be configured to report the connect speed or the locked port (fixed port) rate.

Why Lock the Baud Rate?

Connect speeds such as 14400 and 28800 are not actual baud rates that the comm port can be set to. Modems capable of connecting at 9600 and above can usually be used with a **Locked port**. Setting the Baud rate to 19200 for a 14400 baud modem is necessary for proper performance.

Baud Rate Selection Explained

Your modem's highest connect speed is just that. A Connect speed. Your computer's serial port supports 9600, 19200, 38400, 57600 and 115200. 14400 is a connect rate your modem is capable of. The serial port in your computer cannot be set to 14400 baud. In order to operate at 14400 connect speeds, the serial port must be set to a higher value. You will need to select a higher baud rate. If 14400 is your modems highest **Connection Rate**. 19200 is the closest **Computer Rate** you can select. When using a **Locked Port** your modem makes the translation between **Connection Rate** and **Computer Rate** by using FLOW control. The FLOW control used is called **RTS/CTS hardware handshaking**. Your serial port can be set to 19200, 38400, 57600, or 115200 and locked there. Start with

57600. If you experience errors, drop down to 38400. If you still experience errors, you will want to determine if your comm port is using a **Buffered Serial Port**. A buffered serial port is also known as a buffered UART, (16550 UART). A buffered UART is almost always required for data communications at 14400 and higher.

Modem Response Strings

Why modem response strings?

Your modem **MUST** be configured for verbal response messages!
Include Q0V1 in your init string if un-sure.

AceComm uses modem response strings to obtain information about the type of connect when placing a call, and the type of call when answering. Your modem is capable of reporting **connect speeds**, and the type of connection. Connection types may vary with error correction and data compression protocols available.

CONNECT SPEED

If you want host mode to determine the correct caller connect speed, see the ATW2 command. W2 tells the modem to report CONNECT speed instead of fixed port rate.

Intelligent Auto Login Technology (tm)

AceComm is capable of detecting when the BBS asks for your name and password. This detection is is configurational in a menu "Intelligent Login Setup". In the menu we have defined several common prompt strings from BBS systems. When a prompt string is seen from the modem, it triggers a login action. Each prompt string has an associated login action.

How Auto Login Technology works

The configuration menu for Auto Login contains several lines of 2 fields each. The field on the left is called the "Trigger String". The field on the right is the response. The response is coded with the macro language.

Examples:

Trigger String	Response
Last name:	<SendStr>[USER_NAME]^M
Last name:	<SendStr>Michael Phelps^M
Password:	<SendStr>[FON_PWD]^M

Explanation

The trigger string on the left is case sensitive. When a trigger string is seen, the response on the right is processed.

<SendStr>

"<SendStr>" is macro used to send a string to the modem. The string sent can be represented several different ways.

[USER_NAME]

The "[USER_NAME]" represents IEMSI data field for your name. AceComm takes your name from the software KEY at program start. If you are using an evaluation copy, your name is entered into the IEMSI setup menu.

[FON_PWD]

"[FON_PWD]" represents the password for the currently loaded Phone Record.

Auto Engage Protocols

Some protocols are designed to be started automatically by the remote sender. The auto starting protocols use a unique sequence of characters as a trigger sequence. The comm program must keep an eye out for the start up string for each auto starting protocol. Maximum efficiency is achieved when the comm program uses the last character in the start up string to know when to look, for the start up string, and the last character in the string is an un common character.

- HSLINK trigger sequence: "HS*^B" without the quotes
where ^B is decimal 2
- ZMODEM trigger sequence: "**^XB00" without the quotes
where ^X is decimal 24 (UP ARROW)

Auto Engage Protocol Setup menu

AceComm supports up to 10 auto engage type protocols including the built in Zmodem protocol. A setup menu in the configuration area allows you to define the way these protocols operate. You can edit the start up string associated with each protocol. When a new protocol is released, it can be easily added to the program from the "Auto Engage Protocol Setup" menu.

External Programs

Defining External Programs

This configuration area contains a menu for defining external programs. External programs are used to enhance the AceComm operating environment. Rather than exit AceComm, you may run your favorite programs directly from AceComm.

Editor	Used in the QWK mail reader
Spell Checker	Used in the QWK mail reader
File Viewer	Used from the File Lister menu
QWK Archiver	Used by the QWK reader
QWK Un Archiver	Used by the QWK reader
External QWK Reader	Define another QWK mail reader
ZIP Archiver	Used with Directory Lister
UNZIP Archiver	Used with Directory Lister UnArc Button
ARJ Archiver	Used with Directory Lister
UNARJ Archiver	Used with Directory Lister UnArc Button
ARC Archiver	Used with Directory Lister
UNARC Archiver	Used with Directory Lister UnArc Button

Work Directories

The Directories dialog box lets you specify the following information:

Where to look for:

Phone directory files (.PHO)

Upload files

VideoKey files (.KTS)

Script files (.SCR)

Where to open:

Capture files (.CAP)

Screen and scroll back buffer writes

Download files

Maile files

And a **TEMP** directory for un arching files

QX QWK Reader uses it's own **TEMP.QX** directory as a work area.

Phone Directory



[Edit Phone Record](#)

[What Is A Phone File](#)

[Dialing Options](#)

The Phone Directory window displays the contents of phone list data files.

Sort functions let you sort the displayed records by last call date, name, total time online and more.

Copy & Paste from File to File

To copy a data record from phone file "A" to phone file "B", click on the File ICON. Then click the "Copy" button. The currently selected phone record item will be stored for the "Paste" command. Now load phone file "B" and click the "Paste" button. Your phone record data from file "A" is appended to file "B". You can sort file "B" to move the record around.

Recording On line Time

When you make calls from the phone directory window, Dial/Connect time and date are recorded for the phone number. Information Recorded:

Last connect date

Duration for the call

On line time is kept totaled for the month and year and displayed in the directory window and from the print outs.

Multiple and Large Phone List files

The Phone directory lets you use separate .PHO files for different calling areas.

Optionally .PHO files can contain several thousand records each.

Phone files record your on line time for each call. On line time is remembered for the last call, a monthly total, and yearly total. Line Time information is displayed at the bottom portion of the Phone List Menu, and in the Dialer Window.

Dialing / Back Ground Dialing

[Dialing Options](#)

Dialing is easy. Double click or select the Dial button. A Dialer window will come up and re dial until a connection is made. If you decide to switch to another program while waiting for a connection to be made from the Dialer Window, AceComm will Wake up when a connection is made. Your current task remains active, AceComm simply becomes the Top Window.

Phone Record Flags

Each Phone Record stores a list of options affecting the connection.

Flag options are displayed in both the Phone Directory menu and the Dialer Window.

Options include:

Open capture file on connect

Use Auto login Technology for login

Allow IEMSI login

Long distance phone number filter

Edit Phone Record

Phone Directory Dialing Options

System Name: Name of host BBS
Phone Number: Complete phone number without dial prefix
Dial Prefix: If un-defined the program default is used
Log on Script: Script file to run at Dial/Connect
Capture file: Default capture filename [MODA] translates in to mmyy
Password: Used in [PHO_PWD] macro and [Password] button
Alias: Store an alias here, used in <SS> [PHO_ALIAS]
ID: Store an id string here, used in <SS> [PHO_ID]

Session Flags

 Capture Open capture file on Dial/Connect
 LD Filter Look for dial filter in from Phone Modifier Menu
 IEMSI Allow IEMSI auto logon
 Auto Logon Allow Intelligent Auto Logon

Video Emulation Type

 VT100 Loads VT100 keyboard on Dial/Connect
 ANSIBBS Loads ANSIBBS keyboard on Dial/Connect

Note: Both emulations are basically active for the video all the time. VT100 will force a 24 x 80 screen size.

QWK Mail Reader

What is QWK Mail?

QWK Mail is a type of mail service provided by a BBS that allows reading and writing mail off line. Commonly know as "Off Line Mail" QWK mail is the most common and widely used off line mail format.

Many BBS services support off line message reading/writing. To accomplish this the BBS allows you to select the message forums you want to participate in, the BBS then packs the messages from these forums into a single data file. The data file is placed into an archive with a few control files the mail reader uses. The QWK mail file can then be down loaded from the BBS.

AceComm supports QWK mail. AceComm's internal Zmodem protocol uses special renaming for QWK mail files. Typically you will down load the same file name from a BBS, every time you down load their QWK mail. From time to time if not often, you will have a prior QWK mail file in your down load directory. AceComm will rename the .QWK to QW0, QW1 etc, keeping files from over writing one another.

QWK files are down loaded into your Dnlds Directory. REP mail (reply mail) files are created in your Uplds Directory.

Note: AceComm for Windows includes QX.EXE QWK Reader, and QX keeps it's own setup file. You will need to configure QX separately.

AceComm provides a default Windows Editor for reading and writing messages off line. EDITOR.EXE is a Windows text file editor provided with the QX Reader.

AceComm provides a default Windows Editor. You can easily define your own Editor for use from inside the External Programs menu. You can define a Spell Checker for use in the QWK mail reader.

Directory Lister

The internal Directory Lister provides easy access to basic file functions. To change drives, click on the Drives menu. Double clicking in the directory list box selects a new directory and the directory contents are displayed in the files list box.

The Directory Lister is used from other parts of the program. The File button from the Phone Directory uses the Directory Lister for .PHO file selection. Upload Protocols use the Directory Lister for selecting a file to upload. The QWK Mail Reader uses the Directory Lister for selecting a .QWK mail file to load.

UnArc Button

If you have PKZIP/PKUNZIP, PKARC/PKXARC or ARJ archiver programs, the UnArc button will execute the appropriate archive utility and have it un arc the file into the TEMP sub directory. Directory Lister will the display TEMP sub directory. SDN files are recognized and ARJ is used for those. Archiver configuration is available from inside the External Programs menu.

TEMP sub directory

When choosing the UnArc button, the archive file is extracted into the TEMP sub directory. The directory is then displayed from the File Lister. The TEMP directory contents are not deleted until the next time the File Lister is run.

Run button

.COM and .EXE files for either DOS or Windows can be run (executed).

Delete button

The current file selection is deleted. You prompted with a FULL PATH FILENAME asking Yes or No. Select Yes if you want the file deleted.

EMSI Mailer Template

EMSI mailer commands allow automated file send and receive between other AceComm copies and any EMSI capable mailer (FIDONET mailers).

EMSI is a protocol designed so that two connecting computers can identify each other and exchange any mail and files addressed to the remote. Each end being a remote in this case. EMSI is the standard used in FIDONET for automated mail sessions.

Commands used in the Address menu

The Host Address selection listbox is loaded from the Remote Host Setup data.

The File Attach, File Request, and Poll functions will create outbound filenames for the currently selected address. Out bound filenames for the currently selected Host Address are listed in the Out Bound Files listbox.

Mailer Commands

These commands work with the currently selected Host Address listed in the Address listbox.

File Requests

File Requests require valid NET/NODE numbers in order to be honored by the remote. The remote EMSI mailer is expecting a mail filename addressed to the remote. Remote address 114/35 will expect 00720023.REQ. Most mailer display their NET/NODE numbers when called. Not all EMSI mailers are setup to honor file requests from unlisted callers. Most EMSI mailer are setup to send their all files list when "files" is the requested filename.

File Attach

Use the File Attach option for sending mail files and any other files to any of the Host Addresses you have defined. If you choose the "Call" button, an attempt to connect using EMSI protocol is made immediately. Alternatively, you can File Attach file(s) for an address, but not call out. Instead the out bound mail files will processed should the addressee call us. How?. Mail filenames are made up from the address. 114/35 becomes 00720023. When AceComm is in host mode with the mailer active, EMSI caller's addresses are checked for mail files waiting. If mail filenames are found for the caller's mail address, the mail files are processed and sent.

You can have mail and or files waiting for each address. Lets say you want to leave WORK.ZIP for address 100/10 to pick up. You will make a file attach for 100/10 by selecting the File Attach function. An out bound filename called 0064000A.FLO is created. This file contains a full path filename to WORK.ZIP. When an EMSI call comes in whose address is 100/10, WORK.ZIP will be sent to the caller. If you and 100/10 have a pre arranged password, you each will include the password in the password field for the Remote Host Address Setup. If you have a password for 100/10 and 100/10 calls in without the password. The WORK.ZIP will not be sent. If 100/9 call in, the outbound mail file on hold for 100/10 is never found as the mailer is looking for mail files addressed for 100/9 (00640009.*).

Mail Poll

The Poll function creates a blank mail file. A mail file for a remote address is needed to make a call. With the above example for WORK.ZIP, 100/10 could use the Mail Poll function to call and get the file.

Compuserve Template

Commands used in the menus

The menus are loaded from pre defined data files.

```
FORUMS.DAT  
FORUMCMD.DAT  
MSGCMD.DAT
```

Data files use the Macro Language

Each line of a data file becomes a separate command in the menu.

Sample:

```
<SendStr>Go WINSKD^M <Delay>10 <SendStr>Read New^M  
<OpenCapture>WSDK[MODA]
```

For the above macro line to work as intended, you want to have the forum options set to display all messages without a prompt. (never)

Note: <OpenCapture> closes any previously opened capture files [MODA] in the filename is converted to a date stamp in the form of mmdd (month-month day-day)

UPDATES: This part of the program is updated frequently. Current AceComm versions (pre release versions) are available from the support BBS

Remote Host Setup

Address

The address is in FidoNet node number format. If you want File Requests (FReq) to work, the address must be valid for the system you are calling. To send mail back and forth to a friend you can use any number.

Format: ZONE:NET/NODE or just NET/NODE

Example: 1:203/203 or just 203/203

The out bound mail filename is made up from the NET/NODE number, and the filename will be expected by the remote when making file requests.

Host Name

The name field can be any text you like.

Phone

The phone number will be affected by any long distance and dial string modifiers. See [Dialing Options](#)

Password

If you are a point, and your host has assigned you a password, use this field.

Host Mode

Server Variables

EMSI Mailer Template

EMSI Mailer Front End

When host mode is active, you have the option for the EMSI Mailer front end to be active.

Caller Control

Host mode provides a means for excepting modem calls. You control access to the BBS. The Host Mode status window displays a control setting which controls whether new callers are allowed. New callers are those not listed in the user file. Caller names can be added to the user file in advance from inside the general setup menu. If new callers are allowed access, their name will be added to the user list when they log in. Caller names can be removed from the user file from inside the User List menu.

Mail Check

Callers may access the file area and message area. When a caller logs in, the BBS will check for mail addressed to the caller. If the caller has mail, the mail is displayed and the caller is prompted with an option for deleting the message. The BBS allows callers to read mail addressed to their name only.

Time Limit

The BBS keeps track of the caller's on line time, the callers time is limited to the value specified in the setup menu. Default time limit is 30 minutes.

Answering calls

When call is detected, the host mode status window answers the modem. The modem should NOT be placed into auto answer mode (ATS0=1). Host mode will detect RING and answer the modem it self. When a CARRIER is detected, A message is displayed to the caller asking them to press the ESC key twice for BBS entry. The ESC key detection allows the host mode to differentiate between BBS callers and EMSI mail calls. Host modem is capable of EMSI handshaking and receiving mail files. EMSI mail will not be discussed here. Those expecting EMSI mailer calls will understand what EMSI mail capability means. The next release of this software will be capable of out going mail calls, completing a "for Windows" EMSI mailer interface. The "Press ESC key" message times out in 40 seconds. If the message times out, a BBS caller is assumed. If the caller's name is not found in the user file data base, and New Callers Flag is not set to ON, the message "We are not accepting new callers today.." is displayed. If the caller is allowed access, the BBS looks for any mail addressed to the caller, and if mail is found, each message is displayed along with a (D)delete MSG option. The caller may choose to delete the message, or read it again later. Each time mail is displayed, the (D)delete options is made available. The SysOp can delete messages from the Message Area Maintenance menu.

Using BGFAX

Put the BGFAX files into \BGFAX directory. Look in the Port Setup menu where it says Base=2E8, IRQ5. It will show your base address and IRQ particular to your system. Use the numbers to replace the default 2E8x5. BGFAX will except this command line on the fly and does not need it's BGFAX.CNF file. See the BGFAX manual for init strings for your modem. You will need to add them to the Host Init strings in AceComm. Pay no attention to the "brain dead" theory in BGFAX.DOC. He doesn't understand the whole picture. AceComm also appends a CR to an init string. AceComm uses delays between sending init strings. But we have valid reasons for **stacking** commands with inserted ^M~~ (CR delay) pairs.

Follows is my setup for Supra 28.8 modem:

```
HostInit1 ATZ^M~~AT+FCR=1;+FDCC=1,3,0,2,0,0,0,0
```

```
HostInit2 AT#CID=1+FAA=1;+FLID="612 578 3239"
```

The CID=1 enables caller ID. I set AceComm to answer on Ring 2. This setting is in the Host Setup menu.

The next release will make more use of the caller ID information.

My setup allows me to receive both FAX and DATA calls very easily on the same line.

Internal FAX is to be released with the next version. For now BGFAX works better than our routines.

Note: AceComm closes the port and leaves DTR ON in order to execute BGFAX. We have found third party COMM.DRV replacement drivers that drop DTR when either opening or closing the port. If carrier drops on you, you will need to change your SYSTEM.INI file setting and point it back to the standard COMM.DRV that comes with Windows. WE HAVE HAD ZERO PROBLEMS WITH ANY OF THE STOCK-OUT-OF-THE-BOX COMM.DRV DRIVERS THAT COME WITH WINDOWS! If you have a 16550 UART, Windows COMM.DRV will perform fine. We have here Win 3.1, WFW3.11 and Win95 all running with original COMM.DRV.

Menus displayed to callers

If the menu specified in the Host Mode Setup menu is not found, a default menu is displayed. Either way, the following commands are recognized in the AceComm host mode.

From the FrontDesk menu (caller has NOT yet logged in)

- | | |
|-----------------|--|
| A)bout | Display About menu |
| L)ogin | (if allowed in setup options) |
| H)ang up | up |
| 1) | Variable filename #1 is sent using Zmodem |
| 2) | Variable filename #2 is sent using Zmodem |
| 3) | Variable filename #3 is sent using Zmodem |
| 4) | Variable filename #4 is sent using Zmodem |
| 5) | Variable filename #5 is sent using Zmodem |

From the Main Menu (caller has logged in)

- | | |
|------------------------|---|
| A)bout | Display About menu |
| C)omment | Leave comment to SysOp |
| D)own load file | Down load a file listed in the file base |
| E)nter message | Enter a message to another user |
| F)ile list | Display filenames and description in file base |
| G)o log off | Display log off menu, hang up |
| P)age SysOp | Ring BELL 3 times |
| R)ead to you | Display message addressed to the caller |
| U)pload file | Prompts for filename and description |

- 1) **Variable filename #1 is sent using Zmodem**
- 2) **Variable filename #2 is sent using Zmodem**
- 3) **Variable filename #3 is sent using Zmodem**
- 4) **Variable filename #4 is sent using Zmodem**
- 5) **Variable filename #5 is sent using Zmodem**

Host Mode Setup Menus

You have four menus for configuring the host mode. The first menu is for general configuration such as the BBS name, your name, what type of calls you allow. The second menu provides a means for file area maintenance, and access to the files base. The third menu provides message area maintenance, and access to the message base. A fourth menu lets you view the user list and optionally delete user records from that list.

Host Mode Setup

- **System Name** Name for your BBS
- **SysOp Name** You

- **Outside Menu** Filename, the menu engine looks for *.MNU and *.RIP based on the caller's video capability as detected.
- **Main Menu**
- **Logoff Menu**

- **Add User Name** Add user name to user list
- **Minutes Allowed** Minutes of connect time per call
- **Minimum speed** Minimum connect speed to let callers on

- **Allow EMSI mailer** EMSI Mailer front end is active in host mode
- **Allow new callers** Callers not in user list can login
- **Allow Page Beeps** Callers can page you (rings bell 3 times)

Host Mode Setup Menu (File Area)

This menu lets you add and remove filenames and their descriptions from the files base. Filenames and descriptions are stored in a single data file. Files are not available for download unless they are listed in the data base. Files are not allowed to be up loaded if they are listed in the data base.

"Add filename" button

Filenames can be added to the data base from the Directory Lister function. This action lets you select a file from the Directory Lister. The filename is added to the data base.

"Import Description" button

The Directory Lister can be used to un arc a filename into the TEMP directory. Once un arced a description file can be selected.

a file such as FILE_ID.DIZ. The first 450 characters are read from the file. btw (Maximum allowable length for properly formatted FILE_ID.DIZ files is 450 characters, 10 lines by 45 wide)

"Remove Filename" button

Filenames can be removed from the data base by selecting a record and clicking on the "Remove" button. This action will cause the files record to be removed from the data base.

Host Mode Menu-file Commands

A macro language has been designed for the host mode menu system. Below is a listing for

the ANSI video control codes that can be inserted into a menu file. Video codes need be represented using macros for two reasons. A) the user may not display ANSI video codes. Host mode determines the caller's capabilities and will not display ANSI video codes when the caller is not responding to ANSI detection. B) your text editor may not like the ESC characters used in the actual video codes.

Samples:

```
\[Whi\BBl\ClrScr\BWhi\ClrEol]
\[ClrEol\Faint\CYA] You are connected at \[Gre\Bold\CSPEED\Blu]
```

```
\[VAR1].exe
\[VAR2].zip
```

^[represents decimal 27 (LEFT ARROW character)

Macro	Code sent
[AttrOff]	^[[0m
[Bold]	^[[1m
[Faint]	^[[2m
[Italic]	^[[3m
[Blink]	^[[5m
[RBlink]	^[[6m
[Rev]	^[[7m
[Conceal]	^[[8m
[BLa]	^[[30m
[Red]	^[[31m
[Gre]	^[[32m
[Yel]	^[[33m
[Blu]	^[[34m
[Mag]	^[[35m
[Cya]	^[[36m
[Whi]	^[[37m
[BBLa]	^[[40m
[BRed]	^[[41m
[BGre]	^[[42m
[BYel]	^[[43m
[BBlu]	^[[44m
[BMag]	^[[45m
[BCya]	^[[46m
[BWhi]	^[[47m
[CUp]	^[[A
[CDn]	^[[B
[CFwd]	^[[C
[CBwd]	^[[D
[ClrScr]	^[[2]
[ClrEos]	^[[I
[ClrEol]	^[[K

Other macros used in the menu language

Macro	Result
[CSPEED]	Connect Speed
[CURDATE]	MM/DD/YY
[CURTIME]	HH:MM

[LINETIME]	HH:MM:SS Time on line
[UNAME]	User first and last name
[UFIRST]	User first name

Variables can be re assigned in the menus. Note: Variables can also be defined from inside the program's Host Mode -Variables SEtup menu.

Variables defined in the program setup are defaults.

Variables defined in a menu, override variables defined in the program setup area.

In other words, by using the [VARn] macros, the 1-5 commands can have filenames for the Welcome Screen, then different filenames defined for the Main Menu.

[VAR1]
[VAR2]
[VAR3]
[VAR4]
[VAR5]

The menu macro language is much more complete for the DOS version. The Windows version macro language will be updated with each release. The latest code (beta versions) are always available from the support BBS).

Server Variables

The variables menu lets you assign filenames to the outside menu choices 1 - 5. This lets you have a menu that is presetup for easy downloads of preselected files.

Example:

Common Files for Download

Choose 1 for our all files list

Choose 2 for the very latest AceComm for Windows package

Choose 3 for our application form

Choose 4 for the latest BBS list

Choose 5 for this weeks favorite game

Select:

To activate choice 1 from the outside menu, simply define a filename for variable #1 from the Variables setup menu. You can include a full PATH/FILENAME when you type these in.

Variable choices left blank are simply ignored by the server.

Choices 1 - 5 for variables are available from the outside menu.

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Street Address: (_____)

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COMM.DRV

COMM.DRV

Note from the Author: It is my experience that COMM.DRV's supplied with Windows 3.1, 3.11+ and Win95 perform as good or better than the 3rd party drivers. There is plenty of mis-information floating around. Most 3rd party COMM.DRV's I've tried will drop DTR for a second when the port is opened. This will cause the modem to hangup. I like to use AceComm to access my internet provider. AceComm will allow closing the port and start WINSOCK. WINSOCK opens the port for it's use. The 3rd party COMM.DRV's would cause a dropped carrier at this point. COMM.DRV supplied with Windows 3.1 is perfectly capable of running at speeds to 115200 and the "3rd party drivers are faster" is hype. My experience anyway.

3rd Party COMM Drivers

COMM.DRV from Windows 3.1 will allow opening a COMM port without dropping carrier. Most alternatives seem to drop carrier every time a port is opened.

COMM.DRV replacements verified to drop carrier while opening a COMM port include:

TWCOMM.DRV (COMIT TradeWinds Software)
WFXCOMM.DRV (WINFAX)

You can't use COMM.DRV drivers that drop DTR (carrier) when opening or closing the port -- when calling ISP's etc. Or how will we hand the port over to WINSOCK and retain the connection.

AceComm contains several functions for closing the port and leaving DTR ON, thus allowing external protocols, other serial port software to run off a connection established from AceComm. Watch out for COMM.DRV replacements that drop carrier when they aren't supposed to!

FIFO UART / 16550 UART Control

To set a trigger level for 8 bytes (optimum under Windows - my opinion)

Enter into SYSTEM.INI the following:

Com4RXSize=8

```
|      ||      Trigger level
|      ||
|      ||      COMM Port
```

Possible settings for "Trigger Level" include 1, 4, 8 and 14.

"Trigger Level" is a count of characters the UART stores before notifying the system. (16 - trigger level) characters positions remain to be filled before data overrun occurs.

A trigger level of 8 allows for 8 character times before an overrun will occur after notifying the system.

Macro Reference

Macro Variables

Recording Login Scripts

Macros Supported in Version 1.1

Some macros have an abbreviated form shown below the long form.

<WaitStr> text

<WS>

<SendStr> text

<SS>

<WaitTime> seconds

<WT>

<Delay> seconds

<MdmStill> seconds

<MDMS>

<InitPhoRec> AceComm Support BBS

<Pho_Num> 1-602-846-2940

<Pho_Capfile> ace[MODA]

<Pho_LineCtrl> 8N1

<Pho_Baud> 2400

<Pho_Redial>

<OpenCapture> filename

<OCF>

<CloseCapture>

<CCF>

<MdmHup>

<MDMH>

<RecvZmo>

<RZ>

<SendZmo> filename

<SZ>

<SendAscii> filename

<SA>

<RunProg> filename

<RP>

<Shell>

[USER_NAME]

[ALIAS]

[LOCATION]

[DATA_PNUM]

[VOICE_PNUM]

[PASSWORD]

[PHO_PWD]

[PHO_ALIAS]

[PHO_ID]

[MODA]

Brief Macro Description and Example

<WaitStr> text

Wait for "text" from modem. This macro will timeout if "text" isn't seen. Timeout seconds can be set with <WaitTime>.

<SendStr> text

Send text to the modem. Control characters such as carriage return <CR> can be sent: ^M

<WaitTime> ascii value

Adjust timeout seconds for <WaitStr>.

<Delay> ascii value

Wait for x amount of seconds before processing next macro.

example: <delay>5

<MdmStill> ascii value

Wait for x seconds of silence from the modem. This is handy when capturing large amounts of text. <MdmStill>10 will let you know when the text has stopped coming in.

Example:

...

```
<SendStr>read non stop^M <OpenCapture>msgs[MODA]
```

```
<MdmStill>10 <CloseCapture> <SendStr> OFF^M
```

```
<Delay>5 <MdmHup>
```

...

The following macros are used to build a Phone Record for the re-dialer. The Script Recorder will place these macros into the script when you dial from the Phone List menu.

<InitPhoRec> AceComm Support BBS

<Pho_Num> 1-602-846-2940

<Pho_Capfile> ace[MODA]

<Pho_LineCtrl> 8N1

<Pho_Baud> 2400

<Pho_Redial>

This macro hands the Phone Record over to the dialer.

<OpenCapture> filename

<OpenCapture> will close any open capture files before opening a new capture file. In other words, you needn't call <CloseCapture> before calling <OpenCapture> filename, if you have already opened a capture file.

<CloseCapture>

Closes the opened capture file. This macro is automatically called from inside the program whenever carrier goes low. Capture files are always closed automatically when carrier drops. If a script is running or not makes no difference.

<MdmHup>

Hang up the modem right now without prompt. Good way to end a script.

...

```
<SendStr>G^M Y^M <MdmStill>3 <Delay>3 <MdmHup>
```

...

<RecvZmo>

Call the internal Zmodem receive.

<SendZmo> filename

Call the internal Zmodem send.

<SendAscii> filename

Internal ascii file send.

Open a capture file for receive.

...

```
<OpenCapture>ascii.txt <MdmStill>5 <CloseCapture>
```

...

<RunProg> filename

Run an .EXE or .COM program. Can be a DOS or Windows program.

To run a .BAT file:

```
<RunProg> COMMAND /C recvfax.bat
```

<Shell>

Drop to command shell, in most cases DOS.

Macro Data Args

The text inside square brackets is called "macro data" Macro data is used to represent your configuration.

[USER_NAME]

Your name taken from the software KEY.

The following macro data is taken from IEMSI log in configuration.

[ALIAS]

[LOCATION]

[DATA_PNUM]

[VOICE_PNUM]

[PASSWORD]

The following macro data is taken from the currently loaded Phone Record.

[PHO_PWD]

[PHO_ALIAS]

[PHO_ID]

Miscellaneous macro data.

[MODA]

This can be used in capture filenames.

Example: cap[MODA]

[MODA] is replaced with YYYY date.

Macro Variables

Macro Language

Recording Login Scripts

MACRO VARIABLES

Text inside square brackets [TEXT] represents your configuration.

Inside of the Configure menu is a menu labeled IEMSI/USER DATA

The following TEXT inside square brackets represents data from the IEMSI/USER DATA setup menu.

[USER_NAME]

Sample <SendStr>[USER_NAME]^M

This example sends the name you type into the USER NAME field from inside IEMSI/USER DATA setup menu. This specific field is prompted for when you first install the program. This approach lets you use [USER_NAME] in scripts and keyboard macros, and should you change your USER NAME setting, all the scripts and macros you use will reflect the change, because [USER_NAME] will always be replaced with the data setting you define for your USER NAME in the program.

Note: ^M represents a [RETURN] key press

The following macro variables work in the same way.

They are also defined in the Configure-IEMSI/USER DATA setup menu.

[ALIAS]

Sample <SendStr>Hi! I'm [USER_NAME], but I go by [ALIAS] on this BBS^M

[LOCATION]

Sample <SendStr>I'm from [LOCATION]^M

[PASSWORD]

Sample <SendStr>[USER_NAME]^M Y^M[PASSWORD]^M

Note: The [PASSWORD] field here is a program default. See Phone Book data below for a PASSWORD field that is specific to the phone number you are currently connected with.

[DATA_PNUM]

[VOICE_PNUM]

Phone Book entries also contain setup data which is represented with [TEXT] inside of square brackets.

This data is loaded when you make a call and connect. The data represents the phone number you have called. This allows you to use **PHO_PWD** to represent a different password for each phone number you call. **[PHO_PWD]**

Sample <SendStr>[USER_NAME]^M Y^M[PHO_PWD]^M

Go ahead and try these while off line. Become acquainted with the power you have in macro variables. They will save you online time!

[PHO_ALIAS]

Sample <SendStr>[ALIAS^M Y^M[PHO_PWD]^M

[PHO_ID]

Note: Bring up the Phone Book and click on an entry. Exit the Phone book. The entry you clicked on now has it's data represented by the **[PHO_PWD]** macro variable.

MODA]

You can include a macro variable in your capture filenames.

The filename cis[moda] is created as CISMDD where MMDD stands for MONTH MONTH DAY DAY. This lets you have capture filenames that include the date in the filename. Real handy for systems you call regularly. Each new day, you get a capture filename which reflects the date.

RIP Video)

Remote Imaging Protocol

What is RIPscrip?

RIPscrip is a graphical script language originally written by TeleGrafix Inc.

RIPscrip is a video control language that a BBS or HOST system can use to create both text and graphics on the client screen.

RIP 1.54 was originally designed for EGA video resolution, and for DOS Borland software tools. RIP 1.54 fonts and icon format are specific to "for DOS Borland software tools". RIP is a good idea, RIP 1.54 is of non portable design. Scrolling text is not going to match up using Windows Fonts!

MGP Software supports about %80 of RIP 1.54, with RIP2.0 icon format.

RIP 2.0 icon format uses *.BMP image format. Conversion from 1.54 to 2.0 (Windows *.BMP format) icons is required.

Version 2.0 RIP specification is supposed to address the non portable aspects of the RIPscrip protocol. If the specification ever becomes available, AceComm' RIPscrip will be updated and completed.

RIP Support in AceComm

Weak areas: (as of 8/95) Palette commands are not supported

Fonts are synthesized as closely as possible to "for DOS version fonts", but are not %100 compatible

Bezier curve drawing command is not supported.

Updates: This area of the program is always evolving. Latest versions are available from the AceComm (MGP Software) support BBS.

AT Command Set Reference)

The AT reference listed below is taken from the Supra 28.8 on line reference text. Many of the AT commands listed work with other 28.8 modems. The reference is included for those who want to find out more about their modem capability, and find a clue as to what many un documented AT commands are for. Many modems do not come with complete documentation.

...Original text begins here...

NOTE: This file includes commands, result codes, and display codes NOT AVAILABLE on all models and revisions. Some commands are new or were omitted from Reference Manual. NOT ALL commands are available or functional in all modes and states. This document is provided for reference only and is NOT certified to be free from errors. This document is produced and maintained by Supra's Technical Support Staff as a customer service.

288_LIST.TXT Rev 3.0 (PHM 8/25/94) from Supra BBS (503)967-2444

This document covers the following SupraFAXModem products:

SupraFAXModem 288	(External	Through v1.000-02... ROMs)
SupraFAXModem 288i	(PC Internal	Through v1.000-P02... ROMs)
SupraFAXModem 288PB	(Mac PowerBook	Through v1.000-A02... ROMs)

The command string buffer on the SupraFAXModem is limited to 250 characters.

DIRECT Commands (Commands NOT preceded by other characters)

A/ Re-execute Last Command
nnn Escape Code per setting in register S2 (Default is ANSI character 43, the "+" symbol) (This command must be preceded and followed by a minimum period of no transmission set is register S12.)
<CR> (A carriage return) - Terminate connection attempt in progress during the dialing or protocol neg. process.

DIALING Commands (Commands that follow ATD)

-()i These symbols and spaces are ignored (or invalid and therefore ignored) and maybe be used in the dialing string.
0-9 DTMF code for the given number
A-D DTMF code for the given letter
L Dial the last dialing string (limited to the first 40 characters).
P Pulse dial the following digits
R Accepted, but no action occurs.
Sn Use dialing string stored in register n (0 to 3)
T Tone dial the following digits
W Wait for dialtone
* DTMF code for "star"
DTMF code for "gate"
& Wait for "bong" Credit Card billing tone.
@ Wait for "quiet answer" (A 5 second silence.)
, Pause (time set in S8) before finishing dialing string
! Hook flash (go on-hook for 700ms)
^ Turn on 1300Hz call originating pulse
; Return to command state without going "on-hook"

AT Commands (Commands that follow AT)

- =x Write value x to the last S register viewed.
- ? Displays current setting for the last S register accessed.
- A Answer Phone Line
- Bn BELL/V.2x mode switches for 300 & 1200 bps
B0=V.21 (300 bps) & v.22 (1200 bps)
B1=BELL 103 (300 bps) & Bell 212A (1200 bps) (default in NA)
- C1 Carrier Control Selection
Provided for backward compatibility only. Does nothing but return "OK"
- D Dial Command
Dials any mixed string of dialing commands. (See Dialing Commands)
- En Command Echo
E0=not echo
E1=do echo (default)
- Fn Line Select Modulation (Use either ATFn or a combination of ATS37=n and ATN0, but DO NOT try to USE BOTH at the same time.)
 - F0 AutoMode Selection (Same as N1)
 - F1 300 bps only (Same as N0S37=1, uses protocol in Bn setting
S31 bit 1 set to 0 and S37=1)
 - F2 Undefined
 - F3 v.23 only 75TX/1200RX (originate) or 1200TX/75RX (answer)
(Same as N0S37=7, S31 bit 1 set to 0 and S37=1)
 - F4 1200 bps only (protocol according to Bn setting)
(Same as N0S37=5, S31 bit 1 set to 0 and S37=5)
 - F5 2400 bps only (v.22bis)
(Same as N0S37=6, S31 bit 1 set to 0 and S37=6)
 - F6 4800 bps only (v.32/v.32bis)
(Same as N0S37=8, S31 bit 1 set to 0 and S37=8)
 - F7 7200 bps only (v.32bis)
(Same as N0S37=12, S31 bit 1 set to 0 and S37=12)
 - F8 9600 bps only (v.32/v.32bis)
(Same as N0S37=9, S31 bit 1 set to 0 and S37=9)
 - F9 12000 bps only (v.32bis)
(Same as N0S37=10, S31 bit 1 set to 0 and S37=10)
 - F10 14400 bps only (v.32bis)
(Same as N0S37=11, S31 bit 1 set to 0 and S37=11)
 - F11 Undefined
 - F12 Undefined
 - F13 14400 bps only (v.FC)
(Same as N0S37=15, S31 bit 1 set to 0 and S37=15)
 - F14 16800 bps only (v.FC)
(Same as N0S37=16, S31 bit 1 set to 0 and S37=16)
 - F15 19200 bps only (v.FC)
(Same as N0S37=17, S31 bit 1 set to 0 and S37=17)
 - F16 21600 bps only (v.FC)
(Same as N0S37=18, S31 bit 1 set to 0 and S37=18)
 - F17 24000 bps only (v.FC)
(Same as N0S37=19, S31 bit 1 set to 0 and S37=19)
 - F18 26400 bps only (v.FC)
(Same as N0S37=20, S31 bit 1 set to 0 and S37=20)
 - F19 28800 bps only (v.FC)
(Same as N0S37=21, S31 bit 1 set to 0 and S37=21)

Hn Hook Control
 H0=On-Hook (Hang Up)
 H1=Off-Hook (pick up phone line) for the time period set in S7.

In Identification Codes
 I0=SupraFAXModem product ID code
 I1=Programmed ROM Checksum Used in Test
 I2=Test Checksum (OK if correct, ERROR if not)
 I3=ROM revision code
 I4=Encrypted report of supported protocols
 I5=Supra Copyright / Model / Feature information
 I6=Country Code for country PSTN Signals are Configured for.
 I7=DSP Model & Version Code
 I8=<Unknown, but it returns a number>
 I10=Supported Feature Listing

Ln Speaker Volume
 L0,L1 Low
 L2 Medium (default)
 L3 High

L+n Increase Total Volume Gain n units (1-33) L+33 sets maximum gain.
 (Not the same as Ln. Currently only in use on PowerBook models.)

L-n Decrease Total Volume Gain n units (1-33) L-33 sets minimum gain.
 (Not the same as Ln. Currently only in use on PowerBook models.)

Mn Speaker Control
 M0 OFF
 M1 On until carrier is received (default)
 M2 Always On
 M3 On when answering/On only after dialing & until carrier detect

Nn AutoMode Selection (Carrier Rate when Originating Call)
 N0=Connect ONLY at rate set in S37 register
 (N0S37=0 forces the modem to dial at the current serial port rate.)
 N1=Connect Normally (default)

On Return from COMMAND MODE to ONLINE state
 O0=Return to ONLINE state
 O1=Request a retrain & Return to ONLINE state

P Set dialing mode to PULSE (Sets S14 bit 5 to 1)

Qn Result Code Mode
 Q0=Enabled (Default)
 Q1=Disabled
 Q2=Enabled when Originating, Disabled when answering

Sr? Reports value in S register r

SCr? Reports value is SC register r

Sr=n Write value n into S register r

SCr=n Write value n into SC register r

T Set dialing mode to TONE (Sets S14 bit 5 to 0)

Vn Result Code mode select
 V0=Numeric
 V1=Verbose (default)

Wn Error Correction Result Code Selection
 W0=CONNECT XXXX (DTE rate) (default)
 W1=Report Error Correction Mode
 W2=CONNECT XXXX (DCE rate)

Xn Dialing mode/CONNECT result codes
 X0=Blind Dial (ignore Dialtone & Busy), send CONNECT (no rate)
 X1=Blind Dial, send codes set by Wn and S95
 X2=follow Dialtone, but ignore Busy, send codes set by Wn and S95

X3=follow Busy, but ignore Dialtone, send codes set by Wn and S95
 or BUSY
 X4=send codes set by Wn and S95, BUSY, or NO DIALTONE (default)
 Yn Long Space Disconnect
 Y0=Not active (default, S27 bit7 set to 0)
 Y1=Active (S27 bit7 set to 1, see manual for function)
 Zn Soft reset and Load Stored profile n (last functional command on line)
 Z0=resets modem & loads stored profile 0
 Z1=resets modem & loads stored profile 1
 &Cn DCD (RLSD) signal control
 &C0=DCD always on
 &C1=DCD follows carrier state (ON when carrier present)
 &Dn Modem reaction to DTR on to off transition greater than S25 setting
 a b c (Settings of &Qn)
 &D0= N 2 1
 &D1= 3 3 1
 &D2= 1 1 1
 &D3= 4 4 1

List of modem reactions:

N=No Action

1=Hang up if off-hook & auto-answer is disabled

2=Hang up if off-hook & auto-answer not disabled

3=Switch to asynchronous command state

4=Perform soft reset (like ATZ and profile is set by &Y setting)

List of &Q states:

a. &Q0,&Q5,&Q6

b. &Q1,&Q4

c. &Q2,&Q3

&Fn Load Factory Default Configuration
 &F0 No flow control, No error correction, No data compression
 &F1 MAC hardware flow control, correction & compression active
 &F2 Hardware flow control, correction & compression active
 (&F2 is default for DOS, WINDOWS, AMIGA, & STAND ALONE units.)
 &Gn Guard Tone Selection
 &G0 Do Not generate guard tones (US Default)
 &G1 Generate 550Hz guard tone (not supported)
 &G2 Generate 1800Hz guard tone (World Wide support models only)
 &Jn Phone Jack Selection
 &J0 Select RJ-11, RJ-41, & RJ-45S (Default)
 &J1 Select RJ-12 & RJ-13 (not supported)
 &Kn Serial Port Flow Control
 &K0=None
 &K3=Bidirectional Hardware (RTS/CTS)
 &K4=Software (XON/XOFF)
 &K5=Transparent Software flow control
 &K6=Software (XON/XOFF) & Hardware (RTS/CTS) flow control
 &Ln Line Type Selection
 &L0 Dial-up line (Default)
 &L1 Leased Line (not supported)
 &Mn Same function as &Q(0-3) settings.
 &Pn Pulse dialing MAKE/BREAK ratio

&P0 39%/61% make/break ratio at 10PPS {US/CANADA} (Default)
 &P1 33%/67% make/break ratio at 10PPS {UK/Hong Kong}
 &P2 39%/61% make/break ratio at 20PPS
 &P3 33%/67% make/break ratio at 20PPS {Japan}

&Qn Asynchronous/Synchronous Mode Selection
 &Q0 Asynchronous Direct mode
 &Q1 * Synchronous Mode 1 (Terminal must support both modes.)
 Call placed Async, modem switches to Sync. When DTR is dropped modem returns to Async.
 &Q2 * Synchronous Mode 2 Modem dials number in stored location 0 when DTR goes from LOW to HIGH.
 &Q3 * Synchronous Mode 3 Dial number manually on a telephone, and then bring DTR high to let the modems connect.

* CAUTION! Be VERY careful when issuing these commands! Once you enter &Q(1-3) and save it to memory, there are only three known ways to return to Asynchronous Mode:

1. Issue AT &Q(0,5-9) &W from a Synchronous Terminal to restore the modem to Asynchronous Mode.
2. Connect modem to an Asynchronous Terminal with the DTR signal (line 20) disabled (a "break-out" box works very nicely for this) and issue the configuration you want or AT &Q(0,5-9) &W to return the modem to Asynchronous Mode.
3. Send the modem in to our repair department.

&Q4 Not Used
 &Q5 Asynchronous Reliable Mode (most common default)
 &Q6 Asynchronous Normal Mode

&Rn RTS Synchronous Mode
 (In Asynchronous mode CTS is always ON unless &K3 is set.)
 &R0 CTS responds to RTS (default)
 &R1 CTS always on unless &K3 is set

&Sn DSR Action Select
 &S0 Always on (default)
 &S1 Follows EIA specification (Active following carrier tone, and until carrier is lost.)

&Tn Modem test modes for trained technicians (you must set the serial port at 2400 or 9600, set the modem with AT&F0, and set S18 between 1 and 255 if you wish the tests to stop on their own.)
 AT&T0 Terminate test in progress
 AT&T1 Local Analog Loopback (+++ then &T0 to stop)
 AT&T2 Returns ERROR
 AT&T3 Local Digital Loopback for remote modem
 AT&T4 Grant request for Remote Digital Loopback (default)
 AT&T5 Prohibit request for Remote Digital Loopback
 AT&T6 Remote Digital Loopback
 AT&T7 Remote Digital Loopback with self-test
 AT&T8 Local Analog Loopback with self-test (+++ then &T0 to stop)

&V Display Configuration Profiles

&Wn Write ACTIVE Profile to Stored Profile n
 &W0 Writes to profile 0
 &W1 Writes to profile 1

&Xn Synchronous Transmit Clock Source
 &X0=Modem generated (default)
 &X1=DTE supplied
 &X2=Derived from the data carrier received from the remote modem.

&Yn Select Configuration Loaded at power-up

&Y0=Load profile 0 (default)
 &Y1=Load profile 1
 &Zx=n Write telephone number n into register number x (0-3).
 \An Maximum MNP Block Size for Stream Links
 \A0 64 characters
 \A1 128 characters
 \A2 192 characters
 \A3 256 characters (default)
 \Bn Transmit Break of length n x 100ms where n is 1 to 9 in non-error correction state. (Sends Link Attention in MNP mode)
 \F Display Telephone Directory (As stored via AT&Zn)
 \Gn Modem-to-Modem XON/XOFF flow control (Normal and Direct Mode Only)
 \G0=Disabled (default)
 \G1=Enabled
 \Jn Enable DTE Auto Rate Adjustment
 \J0 Disabled
 \J1 DTE rate is adjusted to match carrier rate.
 \Kn Break Processing Control (controls remote modem during MNP mode)
 When received from local DTE & Modem is in Data Transfer Mode:
 \K0,\K2,\K4 Enter command state without sending BREAK to remote
 \K1 Clear Modem & Terminal Buffers & send BREAK to remote
 \K3 Don't clear Buffers, but send BREAK to remote
 \K5(default) Send BREAK to remote in sequence with any transmitted data (default)
 In Escape (Online Command) mode:
 \K0,\K1 Clear data buffers and sends break to remote modem.
 \K2,\K3 Send break to remote modem immediately.
 \K4,\K5(default) Send break to remote modem in sequence with data.
 When received from remote modem in non-error correction mode:
 \K0,\K1 Clear data buffers and sends break to DTE
 \K2,\K3 Send break to DTE immediately.
 \K4,\K5(default) Send break in sequence with received data to DTE.
 \Ln MNP Block Transfer Control
 \L0 Use Stream Mode for MNP Links (default)
 \L1 Use Block Mode for MNP Links
 \N Operating Mode
 \N0 Normal Mode (carrier and port rate may differ - No MNP or V42, forces &Q6)
 \N1 Direct Mode (carrier rate "matches" port rate - No MNP or V42, forces &Q0)
 \N2 Reliable Mode (a V42 or MNP connection must be made or the modem will hang up, forces &Q5 S36=4 S48=7)
 \N3 AutoReliable Mode (default mode where ALL connection are supported, forces &Q5 S36=7 S48=7)
 \N4 LAPM Mode (a V42 connection must be made or the modem will hang up, forces &Q5 S48=0)
 \N5 MNP Mode (a MNP connection must be made or the modem will hang up, forces &Q5 S36=4 S48=128)
 \S Report Active Configuration
 \W Split-Speed Operation (v.23)
 \W0 Disable split-speed mode (default)
 \W1 Enable split-speed mode v.23 (forces F3)
 %Cn Data Compression Enable/Disable
 %C0 Disabled
 %C1 MNP5 Enabled
 %C2 V.42bis (BTLZ) Enabled
 %C3 MNP5 & V.42bis (BTLZ) Enabled

%En Auto Retrain & Fallback/Fall Forward based on line quality monitoring
 %E0=Disabled (Default)
 %E1=Enable Auto Retrain based on line quality
 %E2=Enable Fallback/Fall Forward based on line quality
 %E3=Undefined

%Fn Split-Speed Direction Select
 %F1 75TX/1200RX
 %F2 1200TX/75RX

%Gn Rate Renegotiation based on line monitor readings
 %G0=Disabled
 %G1=Enabled (Default)

%L Reports Received Signal Level (at connection to DSP) nnn in -dBm.
 nnn=9 or stronger reports as 9
 nnn=10 to 45 reports as value directly
 nnn=46 or weaker reports as 46

%Q Report Received signal Quality aka EQM (nnn range 0 to 127)
 These values are for V.32 / V.32bis connections. VFC rates are not the same, but follow the same concept. For detailed data on what the %Q value is, please download the file %L_&_%Q.TXT
 nnn=0 to 7 current signal quality excellent (higher rate may be used)
 nnn=8 to 20 current signal good (best carrier rate for line condition)
 nnn=21 to 30 current signal poor (lower carrier rate should be used)
 nnn=31 to 127 signal very bad (or gone), try forcing a lower rate
 NOTE: Modem uses 8 and 20 as rate renegotiation watermarks.

%TTnn PTT Testing Utilities {Some settings not valid as listed}
 (Set S10=255 to transmit data in the absence of a received signal)

00-09 DTMF tone dial digits 0 to 9
 0A DTMF digit *
 0B DTMF digit A
 0C DTMF digit B
 0D DTMF digit C
 0E DTMF digit #
 0F DTMF digit D
 10 v.21 channel #1 mark (originate) symbol
 11 v.21 channel #2 mark symbol
 12 v.23 backward channel mark symbol
 13 v.23 forward channel mark symbol
 14 v.22 originate signalling at 600 bps
 15 v.22 originate signalling at 1200 bps
 16 v.22bis originate signalling at 2400 bps
 17 v.22 answer signalling (guard tone if PTT required)
 18 v.22bis answer signalling (guard tone if required)
 19 v.21 channel #1 space symbol
 1A v.21 channel #2 space symbol
 1B v.23 backward channel space symbol
 1C v.23 forward channel space symbol
 1D v.27ter carrier
 1E v.29 carrier
 20 v.32 at 9600 bps
 21 v.32bis at 14400 bps
 22 v.17 at 14400 bps
 30 Silence (on-line) - i.e. go off-hook
 31 v.25 answer tone
 32 1800 Hz guard tone
 33 v.25 calling tone (1300Hz)

- 34 Fax calling tone (1100Hz)
- 40 V.21 Channel 2
- 50 V.FC at 14400 bps
- 51 V.FC at 16800 bps
- 52 V.FC at 19200 bps
- 53 V.FC at 21600 bps
- 54 V.FC at 24000 bps
- 55 V.FC at 26400 bps
- 56 V.FC at 28800 bps

- *B Return Blacklisted Numbers
Displays a numbered chart of currently BLACKLISTED numbers {Except permanently forbidden numbers based on country setting} "OK" is returned if no temporary numbers are BLACKLISTED.
- *C Remote Password Configuration (for MNP connections ONLY)
Gives ENTER PASSWORD prompt and accepts a 6 to 12 character alphanumeric string. (Default is QWERTY)
- *D Return Delayed Numbers
Displays a numbered chart of DELAYED numbers and the length of delay in the format HH:MM:SS "OK" is returned if no numbers are delayed.
- *E Exit Remote Configuration Mode
- *Hn Link Negotiation Speed (MNP 10)
 - *H0 Link negotiation occurs at highest supported rate (Default)
 - *H1 Link negotiation occurs at 1200 bps.
(Mainly used for Cellular Connections)
 - *H2 Link negotiation occurs at 4800 bps.
{Do NOT use the)M1 setting with *H2 mode set.}
(Mainly user for poor quality telephone network connections)
- *L Display Secure Access Directory
Displays a numbered chart (0-19) of all secure access (callback) directory entries in the following format: #-Password:Callback_Number
If no callback number is set then the colon is omitted.
- *NC? Displays All Country Codes & Configurations Currently Supported
- *NCn Country Select (Only some of the possible countries are supported)
Sets country PSTN parameters to the code number specified.
You MUST reset (ATZ or power cycle) the modem for change to take occur.
 - *NC000 United States
 - *NC001 Austria
 - *NC002 Belgium
 - *NC003 Denmark
 - *NC004 Finland
 - *NC005 France
 - *NC006 Germany
 - *NC007 Ireland
 - *NC008 Italy
 - *NC010 Netherlands
 - *NC011 Norway
 - *NC012 Portugal
 - *NC013 Spain
 - *NC014 Sweden
 - *NC015 Switzerland
 - *NC016 United Kingdom
 - *NC017 Greece
 - *NC020 Canada
 - *NC021 Mexico

*NC022 United States
*NC040 Australia
*NC043 Japan
*NC047 Singapore
*NC048 New Zealand

*Px:p:n Store/Delete a Password/Phone Number Pair

*Px(0-19):p(password of 6 to 12 characters):n(0 to 40 dialing codes) If the last colon and dialing codes are omitted then password check occurs, but no call-back occurs.

*R Request Remote Configuration Mode (during MNP mode connection ONLY) If successful, a REMOTE PASSWORD prompt is display, and you should issue the 6 to 12 character password currently set. If the password is accepted, a !AT prompt will be displayed and a limited set of commands can then be issued with the "AT" header omitted. Exit this mode with the *E command.

*Zn Change Dialing Codes (Used in countries like NORWAY that support two methods of pulse dialing.)

*Z0 Use dial code 0 (default)

*Z1 Use dial code 1

#CID? Displays current CallerID mode (0-2)

NOTE! Command IS stored in NVRAM, and IS NOT set by ATZn or AT&Fn

#CID=n Caller ID Mode

#CID=0 Disable Caller ID (Default)

NOTE! Command IS stored in NVRAM, and IS NOT set by ATZn or AT&Fn

#CID=1 Enable Formatted Caller ID Mode

NOTE! Command IS stored in NVRAM, and IS NOT set by ATZn or AT&Fn

Result code syntax is as follows:

DATE=MMDD (where MM is month number 01-12 & DD is day 01-31)

TIME=HHMM (where HH is hour 00-23 & MM is minute 00-59)

"Single Page Mode"

NMBR= number code or statement*

* The NUMBER CODE is normally either the subscriber's area code, local exchange, and subscriber loop number, OR a code unique to that individual subscriber. STATEMENTS are used for calls from non Caller ID Areas and subscribers requesting no display.

NAME= listed subscriber name <this is an option not always supported>

"Multiple Page Mode"

MESG= formatted number string * * * * Here is an example string:

030A35303339363732343030 The string uses this code:

CCLL#0#1#2#3#4#5#6#7#8#9 CC (03) is the code meaning this is "Multiple Page" Caller ID LL is the hexadecimal length of the data in the string. (in this case 0A hex - 10 decimal)

#n's are the ASCII digits dialed (in hexadecimal) A neat trick to convert these to decimal is to note that the first digit is always a number "3" and the second digit is the decimal number dialed, so the formatted string: 030A35303339363732343030 converts directly to 5039672400

** At the time of this printing, conversion of "Multiple Page" Caller ID string coversion is not supported in the modem, so the data is displayed in the raw hexadecimal format.

#CID=2 Enable Raw (ASCII printable HEX number) Mode

NOTE! Command IS stored in NVRAM, and IS NOT set by ATZn or AT&Fn

#CID=? Returns Caller ID Modes supported.

)M Cellular Power Level Adjustments (MNP 10)

)M0 Power not adjusted during MNP 10 link negotiation (Default)

)M1 Power level adjusted during MNP 10 link negotiation.

{Do NOT use the)M1 setting with *H2 mode set.}

@Mn MNP-10 Power Transmit Level (0-31, 0 default)
 -B0 MNP 10 Forced Fallback to 1200bps
 -Cn MNP Mode Control
 -C0 MNP10 Sync Mode
 -C1 MNP10 Async Mode
 -C2 MNP 2
 -C3 MNP 3
 -Kn MNP Extended Services (MNP 10)
 (MNP10 disabled automatically {-K0} if S109 not equal to 62)
 -K0 Disable MNP 10 extended services
 -K1 Enable MNP 10 extended services
 -K2 Enable MNP 10 extended services detection
 -Qn Fallback to v.22bis/v.22 in MNP10 mode
 -Q0 Disabled (Fallback only allowed to 4800 bps)
 -Q1 Enabled (Fallback allowed to v.22bis/v.22) (Default)
 -Un Forced Transmit Level Change During MNP10 Fall Forward
 -U Allows automatic attenuation to -10 dBm
 -U1 Allows automatic attenuation to as low as -18 dBm
 -U2 Allows automatic attenuation to as low as -22 dBm
 -U3 Allows automatic attenuation to as low as -25 dBm
 -U4 Forces 2400bps transmit level to -10 dBm
 -U5 Forces 2400bps transmit level to -18 dBm
 -U6 Forces 2400bps transmit level to -22 dBm
 -U7 Forces 2400bps transmit level to -25 dBm
 :En Compromise Equalizer
 :E0 Disabled
 :E1 Enabled

FAX AT commands of special interest to Supra Users:

+FAE=n (CLASS 1 Only) Adaptive Answer / Silent Answer Mode Control
 NOTE! Command IS stored in NVRAM, and IS NOT set by ATZn or AT&Fn
 0 Disable Both
 1 Adaptive Answer ONLY
 2 Adaptive Answer & Silent Answer
 3 Silent Answer ONLY
 +FAA=n (CLASS 2 Only) Adaptive Answer / Silent Answer Mode Control
 NOTE! Command IS stored in NVRAM, and IS NOT set by ATZn or AT&Fn
 0 Disable Both
 1 Adaptive Answer ONLY
 2 Adaptive Answer & Silent Answer
 3 Silent Answer ONLY

V.25bis Commands / Indications

Examples: Issue ATS80=33Z (toggle S80 bit 5 high & reset) for V.25bis mode
 Issue CNLS80=1Z (toggle S80 bit 5 low & reset) to return to AT mode

Commands

CIC Connect Incoming Call (goes off-hook to answer call, if no call is present INV is returned)
 CNL Local Configuration (in Async. mode this command allows AT Command to be used - CNLS0=3) {Extended V.25bis}
 CRI Call Request with Number and Identification (same as CRN, but a ";" character can be inserted and followed by a code, which the modem will ignore.)

CRN Call Request with Number (goes off-hook and attempts to dial the string issued with the command)

These characters are accepted in the string:

0-9 Digits 0-9
* "Star" digit (Tone dial only)
"Gate" digit (Tone dial only)
T Select TONE dialing
P Select PULSE dialing
< Pause (Length set via S8)
= Pauses for twice the period set in S8
: Wait for dialtone
& Flash (Goes ON-Hook for the period set in S29)
^ Enable calling tone

CRS Call Request with Memory Address (same as CRN, but dials string stored in dialing memory locations 0-19)

DIC Disregard Incoming Call (Ignores incoming call, returns INV if no call is present or autoanswer is not enabled)

PRI Program Identification (Just returns VAL)

PRN Program Number (stores dialing string into the select dialing string memory location) PRN (0-19);(dialing string)

RLD List Request of Delayed Call Numbers (Display a numbered chart of delayed numbers and the delay periods)

RLF List Request of Forbidden Numbers (Lists numbers blacklisted during modem operations according to country setting procedures)

RLI List Request of Identification Numbers

RLN List Request of Stored Numbers (Dialing Strings)

Indications

CFI Call Failure Indication (Sends message followed by coded failure reason)

AB No Dialtone or call abort timer expired.

CB Local Circuit busy (phone off-hook)

ET BUSY (engaged) tone detected

FC Requested number on Forbidden call list (no call attempted)

NT Ringback detected or stopped & call abort timer expired

RT Ringback detected & call abort timer expired

CNX Connect (maybe be followed by a code to show speed of connection)

DLC Delayed Call (returns code with length of call delay)

INC Incoming Call (sent when ring signal is detected)

INV Invalid Command (issued if command is invalid or unable to be executed)

LSD List of Delayed Call Numbers (returned in response to RLD)

LSF List of Forbidden Numbers (returned in response to RLF)

LSI List of Identification Numbers (returned in response to RLI)

VAL Valid Command (sent if command is executed & no other response occurs)

S Registers

S0 Number of Rings to Auto Answer (0 to 255) (0 is disable & default)

S1 Number of Rings before last answer.

S2 Escape Code character (0 to 255) (default is 43 "+")

S3 Carriage Return character (0-127) (default is 13)

S4 Line Feed character (0-127) (default is 10)

S5 Backspace character (0-32) (default is 8)

S6 Time to Wait before Blind Dial (2-255 seconds) (default is 2)

(Applies only in X,X1, or X3 dialing mode)

- S7 Time to Wait for Carrier (1-255 seconds) (default is 50)
- S8 Pause Time for Comma Dial Command (0-255 seconds) (default is 2)
- S9 Time to Wait Before Recognizing Carrier (1-255 1/10 seconds) (Default is 6)
- S10 Delay from Lost Carrier to Hang Up (1-255 1/10 seconds) (Default is 14, Modem assumes carrier always present if set to 255)
- S11 DTMF Tone Duration/Spacing (35 to 102 1/100 seconds) (Default is 95)
- S12 Escape Code Guard Time (0 to 255 1/50 seconds) (0 to disable, the default is 50)
- S13 Reserved
- S14 Bit Mapped Option Status Codes

Bit(Dec)

- 0 (1) Reserved
- 1 (2) Command echo (En)
 - 0 Disabled (E0)
 - 1 Enabled (E1 default)
- 2 (4) Quiet Mode (Qn)
 - 0 Send result codes (Q0 default)
 - 1 No result codes (Q1)
- 3 (8) Result codes (Vn)
 - 0 Numeric (V0)
 - 1 Verbose (V1 default)
- 4 (16) Reserved
- 5 (32) Dial Mode
 - 0 Tone (T default)
 - 1 Pulse (P)
- 6 (64) Reserved
- 7 (128) Carrier Mode
 - 0 Answer
 - 1 Originate

S15 Reserved

S16 Diagnostic Test Mode setting -Bit Mapped (default 0)

- | | | | |
|---|----------|-----------|---------------|
| 0 | &T1 | 0 Disable | 1 Enable |
| 1 | Not Used | | |
| 2 | &T3 | 0 Disable | 1 Enable |
| 3 | &T4/&T5 | 0 Off | 1 In progress |
| 4 | &T6 | 0 Disable | 1 Enable |
| 5 | &T7 | 0 Disable | 1 Enable |
| 6 | &T8 | 0 Disable | 1 Enable |
| 7 | Not Used | | |

S17 Reserved

S18 Test Mode Timer (0-255 seconds, 0=Runs endlessly)

S19 Reserved

S20 Reserved

S21 Bit Mapped Option Status Codes

Bit(Dec)

- 0 (1) Set by &Jn command but ignored otherwise
 - 0 &J0 (default)
 - 1 &J1
- 1 (2) Reserved
- 2 (4) CTS Mode (&Rn)
 - 0 CTS always on (&R0)
 - 1 CTS follows RTS (&R1 default)
- 3 (8) & 4 (16) DTR behavior (&Dn)
 - 0,0 &D0 (default)
 - 1,0 &D1
 - 0,1 &D2

1,1 &D3
 5 (32) DCD (RLSD) behavior (&Cn)
 0 &C0 (Default)
 1 &C1
 6 (64) DSR behavior (&Sn)
 0 &S0 (Default)
 1 &S1
 7 (128) Long space disconnect (Yn)
 0 Y0 (Default)
 1 Y1

S22 Bit Mapped Option Status Codes

Bit(Dec)

0 (1) & 1 (2) Speaker volume (Ln)
 0,0 Low (L0)
 1,0 Low (L1)
 0,1 Medium (L2 default)
 1,1 High (L3)

2 (4) & 3 (8) Speaker control (Mn)
 0,0 Disabled (M0)
 1,0 On until carrier (M1 default)
 0,1 ON Always (M2)
 1,1 On during handshake (M3)

4 (16), 5 (32), & 6 (64) Dialing Mode / Result Codes (Xn)
 0,0,0 X0
 1,0,0 Reserved
 0,1,0 Reserved
 1,1,0 Reserved
 0,0,1 X1
 1,0,1 X2
 0,1,1 X3
 1,1,1 X4 (Default)

7 (128) Reserved

S23 Bit Mapped Option Status Codes

Bit(Dec)

0 (1) Grant RDL
 0 RDL not allowed (&T5)
 1 RDL allowed (&T4 default)

1 (2), 2 (4), & 3 (8) Assumed DTE Rate
 0,0,0 0-300 bps
 1,0,0 600 bps
 0,1,0 1200 bps
 1,1,0 2400 bps (Default)
 0,0,1 4800 bps
 1,0,1 9600 bps
 0,1,1 19200 bps
 1,1,1 38400 bps or higher

4 (16) & 5 (32) Assumed DTE parity
 0,0 Even
 1,0 Reserved
 0,1 Odd
 1,1 None (default)

6 (64) & 7 (128) Guard tone (&Gn)
 0,0 None (&G0 Default)
 1,0 550 Hz (&G1)
 0,1 1800 Hz (&G2)

1,1 Reserved

S24 Sleep Inactivity Timer (0-255 seconds 0 default/disable) Number of seconds before modem enters sleep mode without either DTE or phone line activity.

S25 Delay to DTR (0-255 1/100 seconds, 5 default)

S26 RTS/CTS Delay (0-255 1/100 seconds, 1 default) (Sync mode only)

S27 Bit Mapped Option Status
 Bit(Dec)
 0 (1), 1 (2), 3 (8) Sync/Async Mode Selection (&Mn/&Qn)
 0,0,0 &M0/&Q0
 1,0,0 &M1/&Q1
 0,1,0 &M2/&Q2
 1,1,0 &M3/&Q3
 0,0,1 &Q4
 1,0,1 &Q5 (Default)
 0,1,1 &Q6
 2 (4) Leased line control (&Ln)
 0 Dial-up line (&L0 default)
 1 Leased line (&L1)
 4 (16) & 5 (32) Internal Sync clock select (&Xn)
 0,0 Internal (&X0 default)
 1,0 External (&X1)
 0,1 Slave (&X2)
 6 (64) CCITT/Bell Mode (Bn)
 0 CCITT (B0)
 1 Bell (B1 US default)
 7 (128) Reserved

S28 Bit Mapped Options
 Bit(Dec)
 0 (1) V.23 split screen (\Wn)
 0 Disabled (\W0 default)
 1 Enabled (\W1)
 1 (2) V.23 split screen direction
 0 75Tx (%F0 default)
 1 1200Tx (%F1 default)
 2 (4) V.23 half-duplex
 0 Disabled
 1 Enabled (%F3)
 3 (8) & 4 (16)
 Pulse dialing mode (&Pn)
 0,0 &P0 (Default)
 1,0 &P1
 0,1 &P2
 1,1 &P3
 5 (32) Reserved
 6 (64) Reserved
 7 (128) Reserved

S29 Flash Dial Modifier Time (0-255 Unit 10 ms, 0=disable 70=default)

S30 Inactivity Timer (0-255 Unit 10 sec, 0=disable {default})
 In Reliable mode any data transfer resets timer.
 In Normal mode only sent data resets timer.

S31 Bit Mapped Options
 Bit(Dec)
 0 (1) Reserved
 1 (2) Auto Mode Selection
 0 Disabled (N0)

- 1 Enabled (N1 default)
- 2 (4), 3 (8) Error Correction Result Code (Wn)
 - 0,0 DTE Speed only (W0 default)
 - 1,0 Full Reporting (W1)
 - 0,1 DCE Speed only (W2)
- 4 (16) Reserved
- 5 (32) Reserved
- 6 (64) Reserved
- 7 (128) Reserved
- S32 XON Charactor (0-255, Default 17)
- S33 XOFF Charactor (0-255, Default 19)
- S36 Negotiation Failure Treatment (0-7 7 is default)
 Fallback options when S48=128 or error correction link fails:
 Bits 0-2
 - 2 1 0 (Dec)
 - 0,0,0 (0) Disconnect
 - 0,0,1 (1) Establish Direct connection
 - 0,1,0 (2) Undefined
 - 0,1,1 (3) Establish Normal connection
 - 1,0,0 (4) Establish MNP connection if possible, else Disconnect
 - 1,0,1 (5) Establish MNP connection if possible, else Direct Mode
 - 1,1,0 (6) Undefined
 - 1,1,1 (7) Establish a MNP connection if possible, else Normal Mode
- Bits 3-7 Reserved
- S37 Forced Single Carrier Rate (0-1,5-21 0 is default)
 - 0 Carrier Rate at the rate the last AT command was issued.
 (If rate is above highest carrier rate, then the highest carrier rate the modem supports is used.)
 - 1 300 bps (Bell 103 / V.21)
 - 2-4 Undefined
 - 5 1200 bps (Bell 212A / V.22)
 - 6 2400 bps (V.22bis)
 - 7 1200/75 bps (V.23)
 - 8 4800 bps (V.32)
 - 9 9600 bps (V.32)
 - 10 12000 bps (V.32bis)
 - 11 14400 bps (V.32bis)
 - 12 7200 bps (V.32bis)
 - 13-14 Undefined
 - 15 14400 bps (V.FC)
 - 16 16800 bps (V.FC)
 - 17 19200 bps (V.FC)
 - 18 21600 bps (V.FC)
 - 19 24000 bps (V.FC)
 - 20 26400 bps (V.FC)
 - 21 28800 bps (V.FC)
- S38 Delay Before Forced Disconnect (0-255 seconds, default 20)
 - 0-254 Delay in seconds from H command, or DTR toggle ON or OFF (if modem is set to follow DTR), before modem disconnects.
 - 255 Modem send data out of buffer until completed or connection is lost.
- S39 Flow Control
 - 0 None &K0
 - 3 RTS/CTS &K3
 - 4 XON/XOFF &K4
 - 5 Transparent XON/XOFF &K5

6 RTS/CTS & XON/XOFF &K6

S40 Bit Mapped Option Status Codes

Bit(Dec)

0 (1) MNP Extended Services (-Kn)
 0 Disable (-K0)
 1 Enable (-K1)

1 (2) Power Level Adj. for Cellular Use)Mn
 0 Auto Adj.)M0 default
 1 Force Adj.)M1

2 (4) MNP Link negotiation speed (*Hn)
 0 At highest rate (*H0 default)
 1 At 1200 bps (*H1)

3 (8), 4 (16), & 5 (32) Break Handling (\Kn)
 0,0,0 \K0
 1,0,0 \K1
 0,1,0 \K2
 1,1,0 \K3
 0,0,1 \K4
 1,0,1 \K5

6 (64) & 7 (128) MNP Block size (\An)
 0,0 64 (\A0)
 1,0 128 (\A1)
 0,1 196 (\A2)
 1,1 256 (\A3)

S41 Bit Mapped Option Status Codes

Bit(Dec)

0 (1) & 1 (2) Compression Selection (%Cn)
 0,0 Disabled (%C0)
 1,0 MNP 5 (%C1)
 0,1 V.42bis (%C2)
 1,1 MNP 5 & V.42bis (%C3)

2 (4) Auto Retrain (%En)
 0 Disable (%E0 default)
 1 Enable (%E1)

3 (8) Modem to Modem Flow Control (\Gn)
 0 Disable (\G0 default)
 1 Enable (\G1)

4 (16) Block mode control (\Ln)
 0 Stream (\L0 default)
 1 Block (\L1)

5 (32) Reserved

6 (64) Reserved

7 (128) Reserved

S46 Protocol Selection (136 or 138) (Affects v.42/v.42bis mode)

136 Disable Compression

138 Enable Compression (default)

S48 v.42 Negotiation (0,7,128)

0 Disable Negotiation, proceed with LAPM

7 Enable Negotiation (default)

128 Disable Negotiation, fallback per S36 setting

S80 Soft-Switch Functions (Bit Mapped Options)

Bit (Decimal Value)

0 (1) Reserved (Always 1)

1 (2) Reserved

2 (4) Reserved

- 3 (8) Answer (0) / Originate (1)
- 4 (16) Reserved
- 5 (32) Command Mode AT (0) / V.25bis (1)
- 6 (64) Remote Configuration Disabled (0) / Enabled (1)
- 7 (128) Callback Security Disabled (0) / Enabled (1)
- S82 LAPM Break Handling Options (3,7,128)
 - 3 Expedited: Modem sends break immediately & data integrity is maintained before and after break.
 - 7 Destructive: Modem sends break immediately & data being processed by each modem at that time is destroyed.
 - 128 In sequence: Modem sends break in sequence with transmitted data & data integrity is maintained before and after the break
- S86 Report Connection Failure Cause Code
 - 0 Normal disconnect
 - 1-3 Undefined Error Code
 - 4 Carrier loss
 - 5 No error correction at other end
 - 6 No response to feature negotiation
 - 7 This modem is ASYNC only, other is SYNC
 - 8 No framing technique in common
 - 9 No protocol in common
 - 10 Bad response to feature negotiation
 - 11 No sync information from remote
 - 12 Normal hangup initiated by remote
 - 13 Retransmission limit reached
 - 14 Protocol violation occurred
 - 15-255 Undefined Error Code
- S95 Extended Result Code Control (default sum is 0)
 Each bit set high in this register enables the corresponding result code regardless of the W command setting.
 Bit (Decimal Value)
 - 0 (1) CONNECT XXXX result code gives DCE to DCE rate instead of local DTE to DCE rate.
 - 1 (2) Append /ARQ to verbose CONNECT result code if protocol is NONE
 - 2 (4) Enable CARRIER XXXX result code
 - 3 (8) Enable PROTOCOL XXXX result code
 - 4 (16) Undefined
 - 5 (32) Enable COMPRESSION result code
 - 6 (64) Undefined
 - 7 (128) Enable RINGING result code for ringback detection
- S109 V32/V32bis Negotiation Rate Selection (default sum is 62)
 (MNP10 disabled automatically {-K0} if S109 not equal to 62)
 Each bit set high in this register enables the corresponding rate as a valid rate to be used during rate negotiation.
 Bit (Decimal Value)
 - 0 (1) Unused
 - 1 (2) 4800 bps
 - 2 (4) 7200 bps
 - 3 (8) 9600 bps
 - 4 (16) 12000 bps
 - 5 (32) 14400 bps

- 6 (64) Unused
- 7 (128) Unused
- S110 V32/V32bis/VFC Mode & Rate Negotiation Control
 - 0 Normal V32 mode without rate renegotiation (no V32bis/VFC)
 - 1 Normal V32bis mode without rate renegotiation (no VFC)
 - 2 V32bis mode with rate renegotiation (no VFC)
 - 3 V32bis mode with rate renegotiation starting with the lowest rate set in S109 and working up one defined rate at a time toward the highest rate set in S109 (based on %Q level at each rate prior to stepping up.) (If the modem steps back down, it will also follow the S109 settings.) (No VFC)
 - 4 V32 or VFC (No V32bis)
 - 5 V32bis/VFC without V32bis rate renegotiation
 - 6 V32bis/VFC with rate renegotiation {Default}
 - 7 V32bis/VFC with V32bis connections working like mode 3 above.
- S190 Minimum "GOOD" EQM (see %Q) Time (10-255 seconds) (60 default)
V32, V32B, & VFC connections are affected. S190 sets the minimum period the EQM (%Q) level must be "GOOD" before attempting to "fall forward" to a higher rate.
- S191 EQM Automatic Rate Adaption Bias (0-255, Zero Bias 128, Default 130)
This adjustment affects VFC operation. The bias offset is summed with the EQM(%Q) reading to determine the carrier rate to select during initial train and re-trains. (%Q reading is NOT affected)
-Positive bias (values above 128) tends to DECREASE the initial carrier rate for a given connection.
-Negative bias (values below 128) tends to INCREASE the initial carrier rate for a given connection.
- S192 Special Function Control
Bit (Decimal Value)
 - 0 (1) Silent Answer Snoop Mode (1 is Default when SA mode is enabled)
 - 0 "Standard" Full CNG (1100Hz tone for 500ms +/-15%, then a 3000ms +/-15% period w/o a 1100Hz tone longer than 100ms. "Snoop" occurs for 3 seconds after each ring, and for 12 seconds after the last ring.)
 - 1 "Fast" CNG Tone Only (1100Hz tone for 500ms +/-15%. "Snoop" occurs for 3 seconds after each ring, and for 5 seconds after the last ring. Voices, Music, or Signals containing 1100Hz for 500ms may cause false detection.)
 - 1 (2) Reserved
 - 2 (4) Reserved
 - 3 (8) Reserved
 - 4 (16) Reserved
 - 5 (32) Reserved
 - 6 (64) Reserved
 - 7 (128) Reserved
- S201 Cellular Transmit Level / Configuration Status Codes
Bit (Decimal Value)
 - 0 (1) Initial Cellular Power Level Bit 1 of 5 (Set by @Mn Command)
 - 1 (2) Initial Cellular Power Level Bit 2 of 5 (Set by @Mn Command)
 - 2 (4) Initial Cellular Power Level Bit 3 of 5 (Set by @Mn Command)
 - 3 (8) Initial Cellular Power Level Bit 4 of 5 (Set by @Mn Command)
 - 4 (16) Initial Cellular Power Level Bit 5 of 5 (Set by @Mn Command)
 - 5 (32) Compromise Equalizer Enable Command (Set by :En Command)
 - 6 (64) Reserved
 - 7 (128) Reserved

S202 Remote Access Escape Character (0-255, Default 170)

SCn=n Telephone Signal Cadence Settings (Defaults change with country code)
Each register "pair" holds the value for each setting. To set a value, divide the setting by 256. The integer value goes in the second (high byte) register, while the remainder (low byte) goes in the first. (A setting of 516 for the Phase 1 Minimum BUSY ON Time period would convert to 2 with a remainder of 4, and could be set by sending AT SC0=4 SC1=2 to the modem.) Settings are in 1/100ths of a second. Entries are listed as follows Minimum ON Time (2 bytes), Maximum ON Time (2 bytes), Min. OFF Time (2 bytes), Max. OFF Time (2 bytes), Number of valid signal cycles to occur before the signal is accepted as valid (1 byte). Some country codes specify a two PHASE cadence pattern (On-Off in one pattern followed by a different On-Off pattern) for some signals, and in such cases, the "PHASE 2" entries would have NON-ZERO values (the US country code setting only supports single PHASE cadence patterns or patterns that just repeat the same On-Off pattern over and over.)

(Listed default values are for the United States values)

SC(0-8) PHASE 1 BUSY

Minimum ON Time = 42 (SC0=42 SC1=0)

Maximum ON Time = 58 (SC2=58 SC3=0)

Minimum OFF Time = 42 (SC4=42 SC5=0)

Maximum OFF Time = 58 (SC6=58 SC7=0)

Number of Cycles = 4 (SC8=4)

(In the US SC0=22 & SC4=22 allows CONGESTION ("FAST" BUSY signals to be detected as a BUSY signal.)

SC(9-17) PHASE 1 RINGBACK

Minimum ON Time = 90

Maximum ON Time = 300

Minimum OFF Time = 290

Maximum OFF Time = 460

Number of Cycles = 1

SC(18-26) PHASE 1 CONGESTION

Minimum ON Time = 22

Maximum ON Time = 28

Minimum OFF Time = 22

Maximum OFF Time = 28

Number of Cycles = 4

SC(27-35) PHASE 1 DIALTONE 1

Minimum ON Time = 0

Maximum ON Time = 0

Minimum OFF Time = 0

Maximum OFF Time = 0

Number of Cycles = 1

SC(36-44) PHASE 1 DIALTONE 2

Minimum ON Time = 0

Maximum ON Time = 0

Minimum OFF Time = 0

Maximum OFF Time = 0

Number of Cycles = 1

SC(45-53) PHASE 2 BUSY

Minimum ON Time = 0

Maximum ON Time = 0

Minimum OFF Time = 0

Maximum OFF Time = 0
 Number of Cycles = 1
 SC(54-62) PHASE 2 RINGBACK
 Minimum ON Time = 0
 Maximum ON Time = 0
 Minimum OFF Time = 0
 Maximum OFF Time = 0
 Number of Cycles = 1
 SC(61-71) PHASE 2 CONGESTION
 Minimum ON Time = 0
 Maximum ON Time = 0
 Minimum OFF Time = 0
 Maximum OFF Time = 0
 Number of Cycles = 1
 SC(72-80) PHASE 2 DIALTONE 1
 Minimum ON Time = 0
 Maximum ON Time = 0
 Minimum OFF Time = 0
 Maximum OFF Time = 0
 Number of Cycles = 1
 SC(81-89) PHASE 2 DIALTONE 2
 Minimum ON Time = 0
 Maximum ON Time = 0
 Minimum OFF Time = 0
 Maximum OFF Time = 0
 Number of Cycles = 1

Connection Result Codes:

Numeric Verbose

0	OK	
1	CONNECT	(300 bps)
2	RING	
3	NO CARRIER	
4	ERROR	
5	CONNECT 1200	
6	NO DIALTONE	
7	BUSY	
8	NO ANSWER	
9	CONNECT 0600	
10	CONNECT 2400	
11	CONNECT 4800	
12	CONNECT 9600	
13	CONNECT 7200	
14	CONNECT 12000	
15	CONNECT 14400	
16	CONNECT 19200	
17	CONNECT 38400	
18	CONNECT 57600	
19	CONNECT 115200	
22	CONNECT 1200/75	(Models with v.23 support only)
23	CONNECT 75/1200	(Models with v.23 support only)
24	DELAYED	
32	BLACKLISTED	

33 FAX
 35 DATA

 40 CARRIER 300
 44 CARRIER 1200/75 (Models with v.23 support only)
 45 CARRIER 75/1200 (Models with v.23 support only)
 46 CARRIER 1200
 47 CARRIER 2400
 48 CARRIER 4800
 49 CARRIER 7200
 50 CARRIER 9600
 51 CARRIER 12000
 52 CARRIER 14400 (Either V.32bis or V.FC)
 53 CARRIER 16800
 54 CARRIER 19200
 55 CARRIER 21600
 56 CARRIER 24000
 57 CARRIER 26400
 58 CARRIER 28800

 59 CONNECT 16800
 61 CONNECT 21600
 62 CONNECT 24000
 63 CONNECT 26400
 64 CONNECT 28800

 66 COMPRESSION: CLASS 5 (MNP 5)
 67 COMPRESSION: V.42BIS (BTLZ)
 69 COMPRESSION: NONE

 70 PROTOCOL: NONE
 77 PROTOCOL: LAP-M (V.42)
 80 PROTOCOL: ALT (MNP)
 81 PROTOCOL: ALT - CELLULAR (MNP 10)
 200 RINGING
 +FC +FCERROR

288 EXTERNAL DISPLAY CODES

Red LED's

OH Off Hook
 RD Receiving Data
 SD Sending Data
 TR Terminal Ready (Follows DTR per &Dn setting)

Green LED Display PANEL

AA Auto Answer (RI displayed during ring)
 CD Carrier Detected
 DC Data Compression in use
 DI Dialing
 FX FAX MODE
 LP LAPM Error Correction in use.
 M2 MNP2 Error Correction in use.

M3 MNP3 Error Correction in use.
M4 MNP4 Error Correction in use.
M5 MNP5 Data Compression in use.
M10 MNP10 Mode is use.
OK Modem Powered Up Correctly and Ready for Use.
RE Receive Error
RI Ring Indicator
RT Retrain in progress
TE Transmit Error
TM Test Mode in use.
VF V.Fast Class
3 300 bps connection
12 1200 bps connection
24 2400 bps connection
48 4800 bps connection
72 7200 bps connection
96 9600 bps connection
120 12000 bps connection
144 14400 bps connection (VF displayed if in V.FC mode)
168 16800 bps connection
192 19200 bps connection
216 21600 bps connection
24 24000 bps connection (VF would also be displayed, while
2400bps mode displays only 24.)
26 26400 bps connection
28 28000 bps connection

Encoded Optional Feature List (ATi10)

NOTE -> These codes are being added to SupraFAXModem ROMs, but in some cases not all codes have been added that are supported by a given product, and codes have been assigned for features not yet available.

Code	Feature	Functions/Commands/Codes Added
101	Fax CLASS 1	Normal CLASS 1 FAX Command Set
104	Fax CLASS 2	Normal CLASS 2 FAX Command Set
105	Fax CLASS 2.0	Normal CLASS 2.0 FAX Command Set
107	Fax CLASS 3	Normal CLASS 3 FAX Command Set
115	CCITT v.17 (14.4 Fax)	Adds 12k & 14.4k fax operation
120	Worldwide PSTN Support	%TTnn PTT Cert. Test Signals
	*NCn	Country Config.
	*Zn	
121	CCITT v.23	%Fn
		Adds These Result Codes:
		Numeric Verbose
		22 CONNECT 1200TX/75RX
		23 CONNECT 75TX/1200RX
		44 CARRIER 1200/75
		45 CARRIER 75/1200
122	CCITT v.25bis Command Set	See list above
123	Blacklisting	*B Display Blacklisted #'s
		*D Display Delayed #'s
		Adds These Result Codes:

		24	DELAYED
		32	BLACKLISTED
124	Access Security		*C Enb. Sec. Acc. & Req.PW
		*E	Exit Sec. Access
		*L	List PW & CB directories
		*P	Stores PassWords
		*R	Request Sec. Acc. Mode
140	CCITT v.32bis (14.4 Data)		Adds 7200, 12k, & 14.k carriers
141	Silent & Adaptive Answer		+FAE=n
		+FAA=n	> CLASS 2 units only <
142	Caller ID		#CID=n
143	MNP 10		-B Forced FB to 1200
		-Cn	MNP Mode Control
		-Kn	MNP10 Control
		-Qn	FB to v.22/v.22bis
)M	Tx level control
		*H0	MNP10 Link Neg.
144	MNP "Cellular"		In Docs if a Supported Feature
146	Enhanced Configuration Display	\S	Enhanced Display Codes
147	V.FC 28.8k Maximum Carrier Rate		
148	Volume Gain Control		-Ln
		+Ln	
149	V.FC 24.0k Maximum Carrier Rate		
151	Enhanced Rate Control		S109, S110, %G
152	RPI-Rockwell Protocol Interface		
160	Voice Downloadable		
161	ADPCM Voice ROM		
162	MACE Voice ROM		
170	Handset Support		
171	Headset Support		
180	16550 emulation mode		
181	SupraSmart		
190	AMD Flash ROM		
191	ATMEL Flash ROM		

--- WARNING ---

The following commands are accepted by some models, but are ONLY for internal use at Supra. (Supra's staff cannot assist you in regard to these commands, and under no case should you attempt use or adjust these settings.):

```

ATS91=x
ATS92=x
ATS99=x
AT*F

```

These commands are quite powerful and can cause unpredictable or total lack of operation. (In many cases, service at Supra would be required to restore normal operation.)

