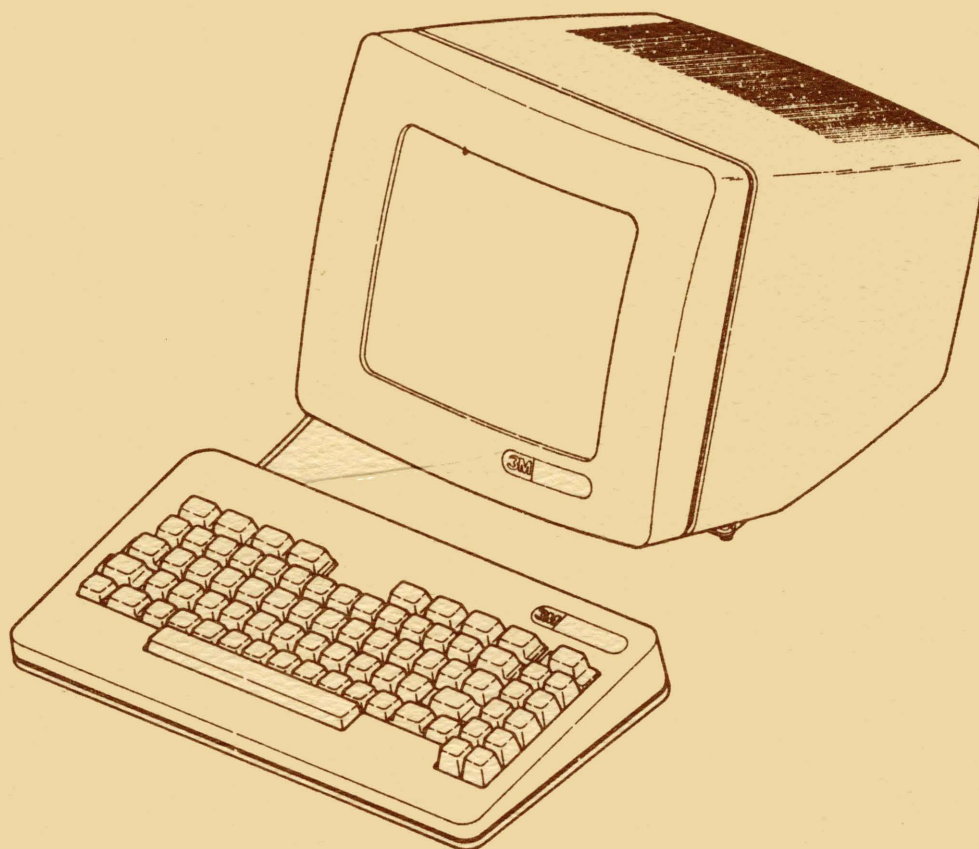


Whisper Screen Communications Terminal



Operator's Guide

3M

The FCC Wants You to Know...

This equipment generates, uses and can radiate radio frequency energy. If not installed and used properly, that is, in strict accordance with the manufacturer's instructions, it may cause interference to radio and television reception.

It has been type tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a business installation. However, there can be no guarantee that interference will not occur in a particular installation.

If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- * Reorient the receiving antenna
- * Relocate the terminal with respect to the receiver
- * Move the terminal away from the receiver
- * Plug the terminal into a different outlet so that the terminal and receiver are on different branch circuits

If necessary, you should consult with the dealer or an experienced radio-television technician for additional suggestions. You may find the following booklet, prepared by the Federal Communications Commission, to be helpful: "How to Identify and Resolve Radio-TV Interference Problems".

This booklet is available from the US Government Printing Office, Washington, DC 20402. Stock Number 004-000-00345-4.

Warning

This equipment has been found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules. Only devices (computers, printers, modems, etc.) which comply with the Class A and B limits may be attached to this equipment. Operation with devices which do not comply with FCC Rules is likely to result in interference to radio and TV reception.

Dear Customer:

The 3M Whisper Screen Communications Terminal makes electronic mail and on-line data base systems easy to use. This teleterminal allows you to quickly obtain the information you need to operate a successful business from various electronic information publishers, and to send and receive messages which will keep you in touch with your business customers.

This manual is your guide to the Whisper Screen. You will probably find the information you need most often in Chapters 2 through 6, where information is provided as a series of "tasks" you can perform with the Whisper Screen. Chapter 7 summarizes this information in a convenient form as a list of "steps" (press this key, now press that key, etc.). Several appendices are included to provide additional details of operating the Whisper Screen, but you will probably only need to refer to them once or twice. In just a very short time, you'll know all you need in order to send and receive information using your Whisper Screen.

Thank you.

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CHAPTER 1: INTRODUCTION

The Whisper Screen Communications Terminal sends and receives information over normal telephone lines. By pressing a few keys you can call a computer to gather information on anything from stock prices to recent solar energy research, or even send a message you just created using the Whisper Screen's simple message editor. The Whisper Screen can also edit messages, control an external printer, or act as a computer terminal.

Features

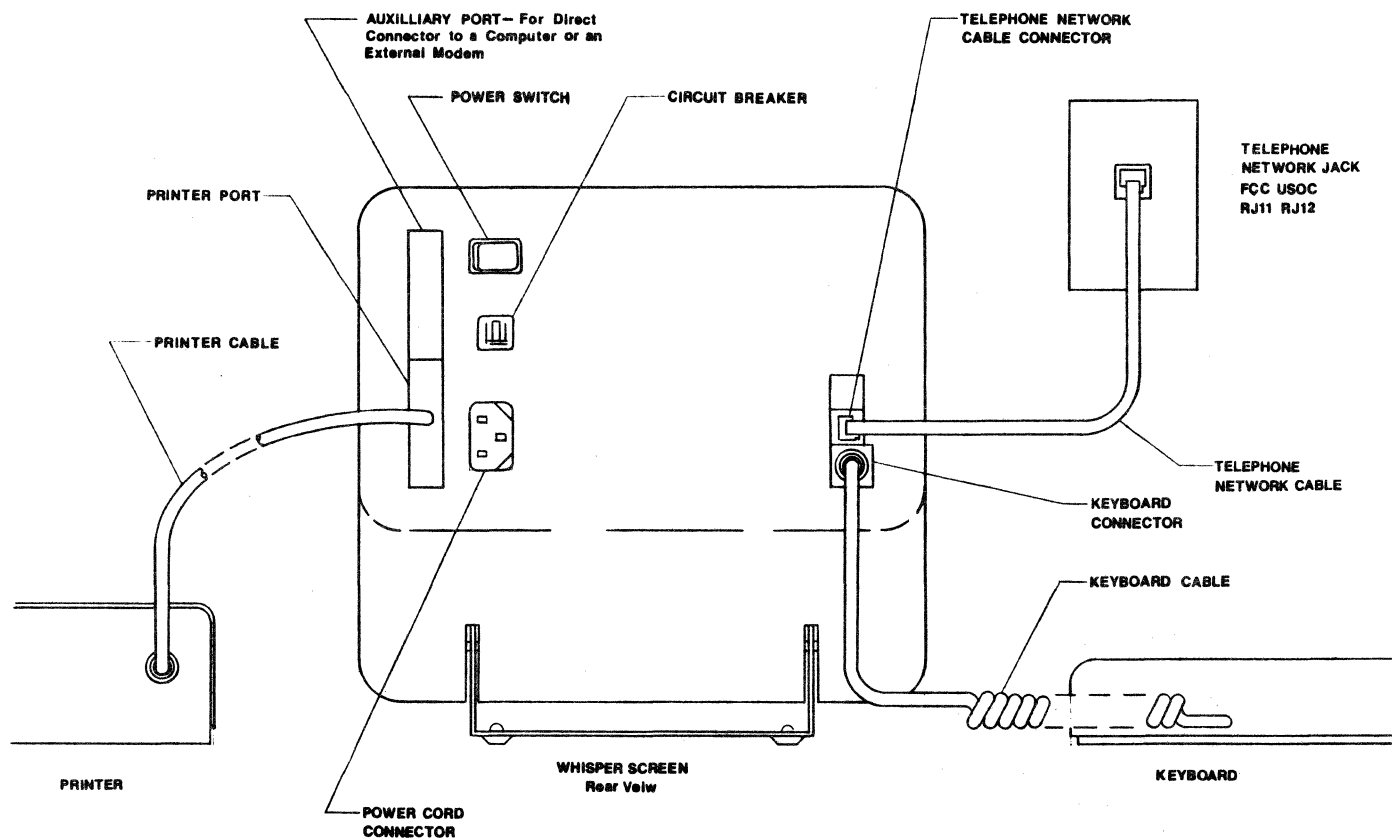
- * One-button calling
- * Automatic dialing at a specified time
- * Automatic log-on
- * Automatic log-off
- * Programmable function keys
- * Built-in modem
- * Easy-to-use message editor
- * Four stored terminal configurations
- * Displays 24 lines of 80 characters on the screen
- * Soft Key labels and Status Window on 25th line (24th line used to display an "Expanded Status Line" in Local mode)
- * 14-number Directory and 12 Function Strings may be programmed by a remote terminal or computer, as well as modified by the user

The Model 1922 Whisper Screen has a built-in modem compatible with Bell 212A and Bell 103 modems (1200 and 110/300 bps) which allows it to connect directly to a telephone line and communicate with other systems. There is also a built-in Auxiliary Port: to use the Auxiliary Port you must connect an external modem or computer system, as explained in Appendix B at the back of this guide.

Connecting to Power and Phone Lines

Even though your Whisper Screen is easily installed and operated, please take a few moments to read through these instructions and the accompanying illustrations.

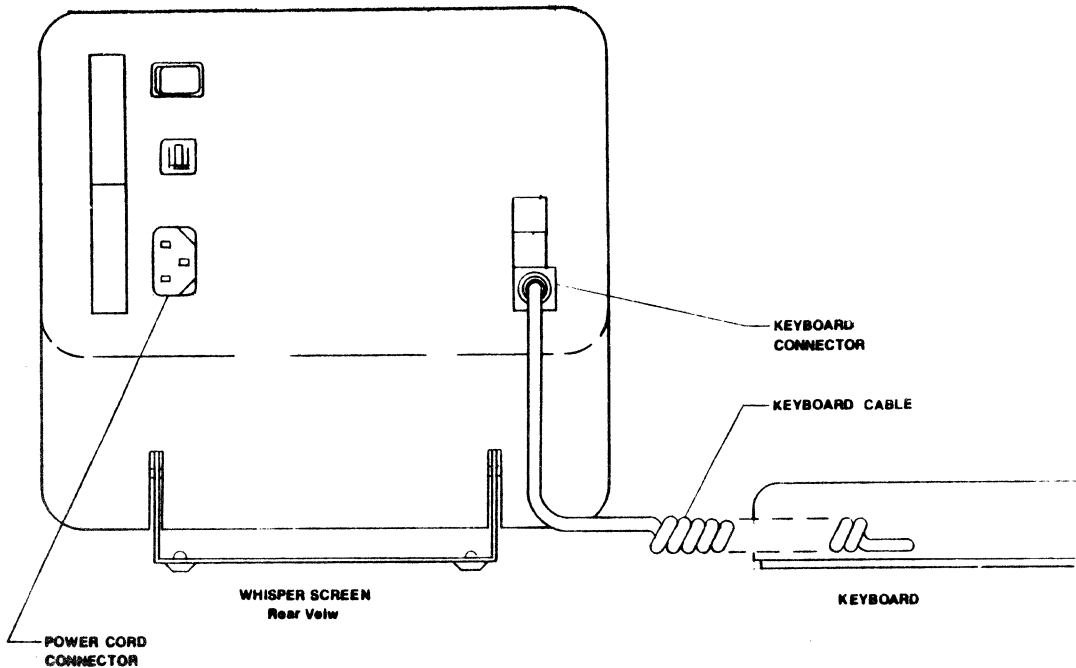
1. Choose a convenient location for your Whisper Screen, preferably on a level surface within 6 feet of both the Telephone jack and electrical power outlet. If you plan to connect a printer, make sure there is sufficient room for all three components -- keyboard, monitor, and printer.



2. Be sure your Whisper Screen and (optional) Whisper Printer are switched OFF before plugging any cables into them.

...Connections

3. Insert the keyboard cable into the only circular connector on the back of the Whisper Screen.



4. Plug the detachable power cord supplied with the Whisper Screen into the socket on the back of the Whisper Screen before plugging the other end into a grounded, properly polarized, three-prong 117-volt electrical outlet to prevent the hazard of severe personal electrical shock and possible damage to this equipment. If this type of outlet is not present where you wish to use the Whisper Screen, you should have a licensed electrician install one (including a grounding conductor, if necessary). Do not defeat the purpose of the grounded power cord by removing the grounding prong or by using a two-prong adapter plug.

CAUTION

To assure safe operation, the Whisper Screen must **ONLY** be operated using the polarized power cord supplied by 3M. Use of a non-polarized power cord may result in severe personal electrical shock, damage to the Whisper Screen, or unpredictable product performance.

As with all high-quality electronic devices, you should not remove the power cord from either the equipment or the wall outlet while the equipment is in an ON condition: using the Power Switch to turn the equipment OFF before removing the power cord is recommended since the "wiggling" of the power cord can result in power transients and other "electrical noise" which might interfere with the Whisper Screen's electronic memory.

Sometimes, the location where you wish to use your Whisper Screen may be subject to electric power surges and spikes (temporary increases in line voltage which can be caused by lightning or when heavy electric loads are switched on and off), or radio-frequency/electro-magnetic interference ("RFI/EMI"). Electrical noise is an extremely common problem on power lines and may be caused by lightning discharges from a flash occurring up to several miles away, fluorescent lighting, grounding faults, or utility switching. In such cases, you may improve the performance of the Whisper Screen by purchasing and installing a well-designed spike/surge suppression and noise filtration device: your dealer or system supervisor can assist you in choosing the proper commercially available product for your power problem.

A voltage sag, also called a "brownout" or "line dip", is another type of power disturbance which is becoming more frequent: a recent Bell Telephone Laboratory study found that approximately 87% of the power problems at their computer sites were voltage sags, 7% were voltage spikes, 5% were black-outs, and 1% were voltage surges. Voltage sags are utility drops in the line voltage and occur when extraordinarily heavy demands for power are made by consumers, or when large motors are started up within your building (for example, refrigerator or air conditioning compressors). While your light bulbs may flicker or glow a little less brightly and your office coffee pots may perk a cooler cup of coffee, these effects of a voltage sag cause little damage. High quality electronic devices, such as your Whisper Screen, have a much narrower tolerance for low voltage. A 5 or 10 volt drop may not cause problems, but any greater drop in voltage can cause unpredictable product performance including, but not limited to:

- * Corruption of message memory or auto-dial directories and custom Function Strings
- * False or garbled data during transmission or printout
- * Disconnection from the telephone communications link

To protect your communications from interruptions caused by voltage sags, you may find that the purchase and installation of a well-designed Power Line Conditioner or Stabilizer (sometimes called a "ferroresonant transformer") may improve the performance of your Whisper Screen when your electric power is prone to brownouts. Other devices, usually called Uninterruptible Power Supplies (abbreviated as "UPS") may allow you to continue operating for a few minutes in the complete absence of electrical power (a "blackout"), but these are relatively expensive devices for normal telecommunications requirements of businesses.

Electrical Safety

"What Is Grounding And What Does It Do?"

CAUTION

Electrical grounding in your Whisper Screen is an important safety benefit that protects YOU, your equipment and building. It should never be bypassed! The grounding system under properly installed and maintained conditions does not carry current. Its function is to carry current if something goes wrong. Remember, there is only one purpose for grounding and that is safety.

You have probably noticed that your Whisper Screen's power cord plug has a third blade or grounding pin. The two blades along with the pin are commonly called "U" ground. The "U" comes from an imaginary curved line drawn through the three pins. Your Whisper Screen can be plugged into any receptacle that looks like the following and is the proper size:



Rated 15 amp,
120 volts AC
NEMA 5-15R*



Rated 20 amp,
120 volts AC
NEMA 5-20R*

* National Electrical Manufacturers' Association (NEMA)
standards for 2 pole - 3 wire grounding receptacles.

CAUTION

NEVER cut off the grounding pin on the Whisper Screen power cord plug and then insert it into a two prong wall receptacle, nor should you use an ungrounded extension cord. If you do this, you have no safety grounding for your equipment. This is a serious violation of electrical safety practices and can be hazardous to YOU, your equipment and your surroundings.

"How does the circuit breaker in my Whisper Screen work, and what does it protect?"

CAUTION

The circuit breaker in your Whisper Screen is not designed to protect people. It will protect equipment and property.

...Connections

The circuit breaker is a thermally-activated device; that is, a rise in the equipment's operating temperature will "trip" the circuit breaker. It is designed to protect equipment against overloads and short circuits and thus prevent fires.

If the Whisper Screen should ever draw too many amps (current) or watts (power), there will be a heat rise in the Whisper Screen's circuit breaker which causes it to activate. The fuse or circuit breaker in your building which protects the electrical circuit into which your Whisper Screen is connected (called the branch circuit) may also activate.

CAUTION

If the flexible power supply cord is accidentally cut while the Whisper Screen is plugged into an electric power outlet, the resulting short circuit or ground fault will not be sensed by the circuit breaker in the Whisper Screen. This is because the circuit breaker in the Whisper Screen is electrically downstream of the cord cut.

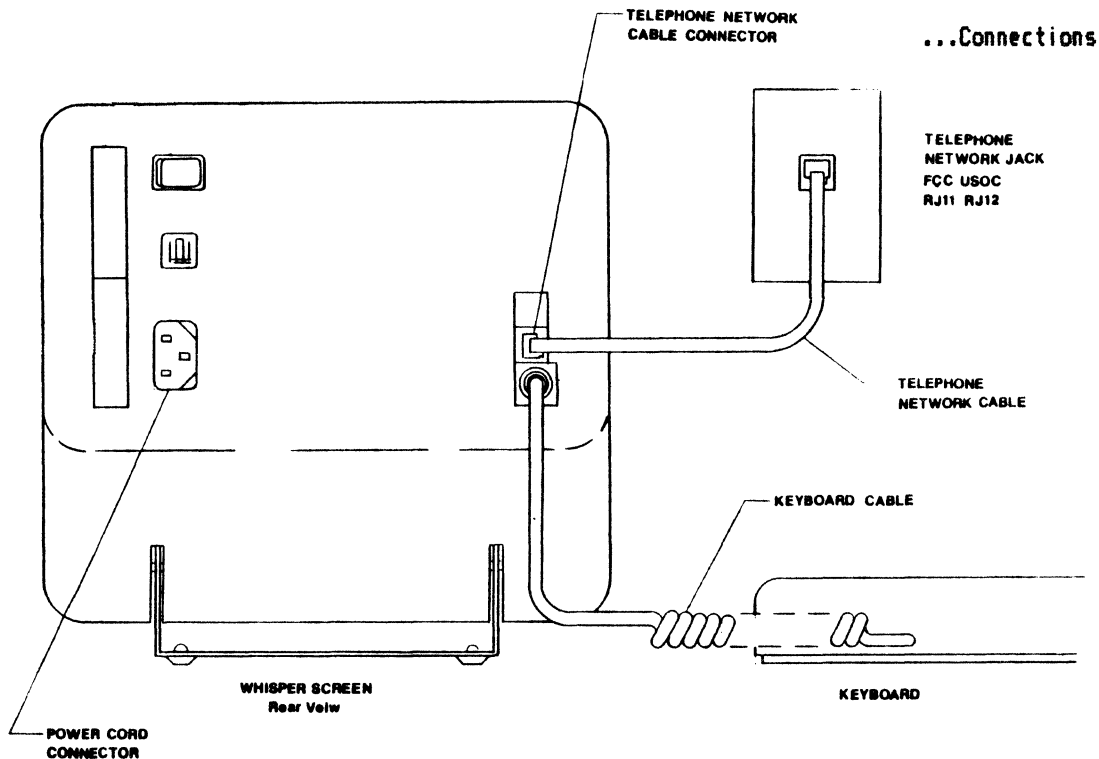
"Will my Whisper Screen circuit breaker always react faster than my service panel circuit breaker or fuse?"

CAUTION

There is no guarantee that your Whisper Screen's circuit breaker will activate prior to the branch circuit protection. Although well within safety limits, the manufacturing tolerances on circuit breakers are variable. Furthermore, circuit breaker reaction times versus current levels are subject to surrounding temperature and humidity conditions.

"What should I do if the circuit breaker in my Whisper Screen activates?"

When the circuit breaker activates, the curved switch located at the rear of the Whisper Screen (between the power switch and the power cord connector) will "pop" up. Immediately turn the Whisper Screen's power switch OFF, unplug the Whisper Screen's power cord from the wall receptacle and allow the Whisper Screen to cool for several minutes. Press the curved circuit breaker button until it locks into place. Plug the Whisper Screen's power cord into the wall receptacle again and only then should you turn the Whisper Screen's power switch ON. If the circuit breaker activates again, switch OFF the Whisper Screen, unplug the power cord, and call for service.



5. The Whisper Screen is designed for direct connection to a single-line, USOC RJ-11C modular telephone jack: that is, a physical connection is made to the telephone network using standardized plugs and jacks rather than an acoustic connection using an existing telephone set. Please refer to Appendix D at the end of this guide for instructions about notifying the local telephone company that you wish to connect a device to the telephone network. To use the Whisper Screen as a terminal linked directly to a computer or an external modem, use an appropriate cable connected to the Whisper Screen's "AUX.PORT" (a 25-pin RS-232C connector). Again, please refer to Appendix B at the end of this guide or see your system supervisor for assistance.

CAUTION

CONNECT THE WHISPER SCREEN ONLY TO USOC RJ-11C MODULAR TELEPHONE JACKS. DO NOT connect your Whisper Screen to any electronic key telephone system. If you do, you may severely damage the Whisper Screen, requiring you to pay for costly repairs and replacement parts. You may also damage the electronic telephone system, for which you may be charged repair costs by the telephone system supplier. 3M is not liable for such damage.

While all modular jacks look alike, they may not have the same pin assignment. Make sure the modular jack you intend to use with your Whisper Screen follows the standard pin assignment for single-line USOC RJ-11C miniature 6-position 2-conductor jacks.

Electronic Key Telephone Systems often use jacks which look like USOC RJ-11C modular jacks, but which do not follow the standard pin assignments: they may also have extra signals which can damage the Whisper Screen.

MAIN MENU

Press: F1 to CREATE a new message
F4 for MESSAGE Index
F5 to SET-UP the Terminal Options
F8 for AUTO-DIAL Screen

Received Messages: 0
Memory Available: 24 Messages; 21,800 Characters

8:00 AM CONFIG A - OFFLINE
CREATE MESSAGE

LOWER CASE 4.00
A c SET-UP DIAL

6. After your Whisper Screen is located where you wish to use it and connected to both the USOC RJ-11C modular Telephone jack and a grounded, properly polarized, three-prong 117-volt electrical outlet, switch the power ON to display the Main Menu. The power switch is on the back of the terminal; a red bar is visible on it when the switch is ON. The terminal may need a few seconds for the display to become visible. If the Main Menu Screen shown above fails to appear, please refer to Appendix A (Maintenance) at the end of this guide or ask for help from one of the following: your system supervisor, the dealer from whom you purchased the Whisper Screen, or the 3M National Service Center.

The tilt of the CRT display can be adjusted simply by grasping the enclosure and moving it vertically. The non-glare surface of the video display in your Whisper Screen together with proper positioning of the unit can reduce reflections from overhead lighting.

...Connections

7. The Whisper Screen was designed to operate continuously, every day. To obtain the full benefit of your Whisper Screen's automatic answer and transmission features, you must leave the Whisper Screen plugged into a grounded, properly polarized, three-prong 117-volt electrical outlet and powered ON all the time. As an added benefit to you for having the Whisper Screen continuously powered, all of your Whisper Screen's important information (messages, telephone numbers, function strings, and configurations) will be retained for up to 14 days in the event of a power failure.

Although the Whisper Screen is designed for continuously powered operation in one location, it can be transported from one place to another without loss of your directory, function strings or messages provided it has been plugged into an electric power outlet with the power switch turned ON for at least 72 hours (three days) before being moved in order to last up to 14 days without power; this is especially important the first time you use the Whisper Screen, since the battery inside the Whisper Screen needs time to become recharged after shipment from a dealer.

IMPORTANT!

The first time you use the Whisper Screen it is necessary to leave it switched ON for 72 hours (three days). This will recharge the battery inside the Whisper Screen which helps it memorize phone numbers and messages. The battery will also need charging if the Whisper Screen hasn't been switched ON for two weeks or more.

Every time the Whisper Screen is switched ON, you begin recharging the internal battery. Every time you switch the power OFF, it drains some of the battery's charge. If you leave the Whisper Screen switched off for longer periods of time than it is switched on, it will eventually completely discharge the battery: it is hard to predict just when this will happen due to small variations from battery to battery. Therefore, you should leave the Whisper Screen switched on for at least 72 hours (three days) every two calendar weeks.

Terminology

If you are not already familiar with communications terminals, you may at first be confused by "control codes" or "control characters": these are non-printing characters which are used to control communication between terminals and computers. In this manual, we will represent and refer to these characters by generally recognized abbreviations and acronyms. For example, all of the following refer to the Carriage Return control code: Control-M, CR, 015-Octal, 0D-Hex, 13-Decimal, and [CONTROL][M]. The square brackets around a word or letter are used to indicate that you should press the key(s) to generate the code: [CONTROL][M] means press the [CONTROL] key first, hold it down and simultaneously press the [M] key.

MAIN MENU

Press: F1 to CREATE a new message
F4 for MESSAGE Index
F5 to SET-UP the Terminal Options
F8 for AUTO-DIAL Screen

Received Messages: 0

Memory Available: 24 Messages; 21,800 Characters

8:00 AM CONFIG A - OFFLINE
CREATE ☐ ☐ MESSAGE

LOWER CASE 4.00
A c SET-UP ☐ ☐ DIAL

CHAPTER 2: USING THE WHISPER SCREEN

You certainly don't need to know how to use a computer to use a Whisper Screen. The Whisper Screen is very powerful, but it's also quite simple. Creating a message takes only a few sensible steps, and sending a message can be as easy as pressing two keys! The Whisper Screen even remembers the last activity involving a message, so you can quickly find and read the last message received by your Whisper Screen or return to a message you haven't quite finished creating.

This chapter describes some basic concepts about the way the Whisper Screen works. The following chapters discuss how to use the Whisper Screen to create a message, send a message, call a computer service or teleterminal, and read a message which has been stored in memory. Chapter 7 summarizes these discussions by listing the keystrokes necessary to perform various activities with your Whisper Screen. The information presented in the following chapters assumes that your Whisper Screen's Terminal Options (the internal directory, function strings and configuration groups) have been previously customized by your system supervisor, your dealer, or a computer service. If your Whisper Screen is not already "set-up", you should still read this chapter first to become familiar with how the Whisper Screen will operate. Then you can manually set-up the Terminal Options using the information presented in Chapter 8 of this guide.

Under most conditions, the Whisper Screen will still remember the custom directories, function strings, and terminal options, plus any messages in memory, if AC power is removed for up to 14 days. But just to be safe, you should keep a printed copy for your records in case the directories, function strings or terminal options are accidentally erased or changed -- see the section on Periodic Maintenance in Appendix A for details.

Overview of the Whisper Screen

The Whisper Screen works with Screens and Soft Keys. A Screen is everything you see at one time on the 25-line by 80-column CRT display. The Screen will usually present some information which you can change, or actions you can take, by pressing one of the Soft Keys. The 25th line is reserved for displaying the Soft Key labels.

The first thing the Whisper Screen should display after switching the power switch ON is the Main Menu Screen, shown at the start of this chapter. A menu is a convenient way to organize and simplify frequently used activities, such as creating a message or looking at the Message Index to decide which auto-answer received message to read first. The menu choices are selected using one of the eight Soft Keys.

MANUAL DIAL

CONF G A-D Soft Keys 1 thru 4 Select Terminal Configuration

0-9 Digits to Dial
* or # Special Dial Symbols (Tone Dial Only)
! Mask Characters from View
~n~ Pause n Seconds
CTL D (\$) Wait for Dial Tone (up to 5 seconds)
CTL P (π) Enable Pulse Dialing
CTL T (Δ) Enable Tone Dialing

Press DIAL to Call: 5555-1212

12:48 PM CONFIG A - OFFLINE
CONFIG A CONFIG B CONFIG C CONFIG D

LOWER CASE PRINTER 4.00
A C HELP AUXPORT DIAL EXIT

Soft Keys are the wider, brown keys in the top row of the keyboard, marked [F1] through [F8], which take on new or different meanings depending upon which Screen you are viewing: the current definitions (Labels) of the Soft Keys are displayed at the bottom of each Screen as a row of words inside bright rectangles. The labels are often abbreviated because they can only be seven characters long (to fit inside the rectangles). A Soft Key labeled HELP is included in some Screens to provide brief explanations of what the Soft Keys can do, or details about the various fields displayed in a Screen; you may only need to refer to this Operator Guide for more detailed discussions.

SET-UP MENU

Press: F1 to create or change an Auto-Dial Directory
F4 to create or change a Function String
F5 to change or restore the Terminal Options
F8 to EXIT

11:45 AM CONFIG A - OFFLINE
DIR ☐ ☐ FUNCT'N

LOWER CASE 4.00
A c OPTIONS ☐ ☐ EXIT

Menus can also simplify activities that aren't done very often, such as customizing the Whisper Screen for a particular use. The Set-Up Menu provides access to the Directory, Function Strings, and Terminal Options screens. The Directory is a list of up to 14 frequently called numbers and associated interactive log-on sequences, usually for electronic mail or information services, but the directory could just as easily be used to store the numbers of 14 teleterminals to which you frequently send messages. Function Strings are frequently used phrases or commands which you might find convenient to send by pressing just one key. The Terminal Options control some of the finer details of communicating with various computers and teleterminals. You can create your own custom computer log-on sequences, function strings, and terminal configuration options (based on the information provided in later chapters and your prior experience with a service); or you might be able to use one of the sample log-ons and configurations provided in this manual for selected services.

The Whisper Screen has four built-in Configuration Groups. These were carefully chosen to allow communication with typical computer services and other teleterminals. Each Group is easily customized if the default (factory-set) values are incorrect for communication with a particular computer or terminal you wish to call. Most Whisper Screen owners rarely need to change the default values since they work well for most activities:

- Group A is used for calling a typical 1200 baud computer system
- Group B is used for calling a typical 1200 baud teleterminal
- Group C is used for calling a typical 300 baud computer system
- Group D is used for calling a typical 300 baud teleterminal

Why have more than one Configuration Group in the first place? Since there are two commonly used speeds, 30 and 120 characters per second, at least two Groups should be provided. Then, there are subtle but important differences between the communication requirements of teleterminals and computers. It really is an unnecessary bother to answer a lot of technical questions every time you want to send a message or call a computer service. If some of the more technical aspects of establishing a communications link are set-up once and then remembered whenever they are needed, it results in faster and easier operations: two or three keystrokes are usually all that's needed to start doing something useful with your Whisper Screen. If you don't need one of the default Configuration Groups, but instead communicate frequently with a computer or teleterminal having special communication requirements, then you can customize that Group.

Here is where a feature of the Whisper Screen can really simplify your communications activities. It's possible for someone who is familiar with the ways you want to use the Whisper Screen to customize it for you by down-loading an appropriate set of auto-dial directories, function strings, and terminal configuration options: that is, they can send a "message" which is treated in a special way by your Whisper Screen's built-in intelligence. Once you have determined that the down-loaded directories and function strings operate to your satisfaction, you can protect them from further modification. Then, just about the only reason you'll have for using the Set-Up Menu is to adjust the time for Daylight Saving Time, and once every few months to prevent the Whisper Screen's internal clock from gaining or losing too many seconds!

It may help you to think of the Whisper Screen's electronic memory as being organized into 24 message "envelopes", plus two "scratch pads" on which you write custom Function Strings and Auto-Dial Directories. Just like conventional paper envelopes, information about the message "inside" is written on the "outside" of the "electronic envelopes". This information may be just a label and a value for the right margin, or it may include an Auto-Dial Directory as an "address" and a transmit time to activate the Delayed Auto-Send feature. This information is collectively called a Message Header. Messages you receive are automatically assigned the label RCVD MSG by the Whisper Screen, while those you create are initially labeled USER MSG: later you can change these message labels to a 10-letter word or phrase which is more descriptive of the message contents.

AUTO-DIAL

1	EZ-Send	B	5555-1212	Tymnet Local Access <Send Message>
2	Dow	C	5555-1212	via Uninet
3	MCImail	A	5555-1212	Local Access Number
4	EZ-Link	B	5555-1212	Local Tymnet Access <Log-On>
5	On-Tyme	A	5555-1212	Local Tymnet Access
6	HomeOfc	B	5555-1212	Direct Dial <Poll for Messages>
7	HomeOfc	B	5555-1212	Direct Dial <Send Message>

PRESS: **SHIFT** KEY FOR DIRECTORIES 8 - 14
NEXT KEY FOR MANUAL DIAL

8	TelMail	A	5555-1212	Telenet Access to Telenail
9				
10				
11				
12				
13				
14				

8:20 AM CONFIG A - OFFLINE

EZ-Send Dow MCImail EZ-Link

LOWER CASE 4.00

A c On-Tyme HomeOfc HomeOfc EXIT

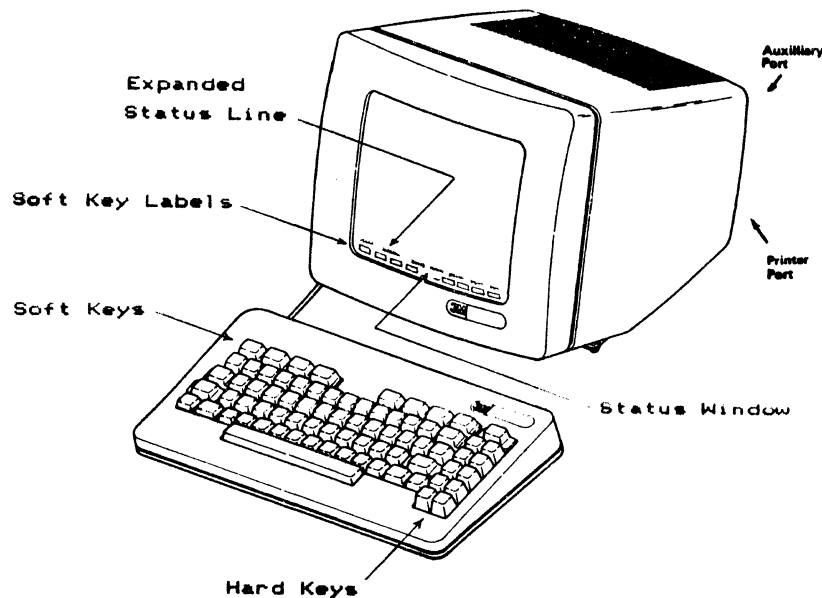
Status Window and the Expanded Status Line

Each Screen shows a series of eight bright rectangles in two groups of four across the bottom of the display: these are the Soft Key labels mentioned in the previous section. Between the two groups of Soft Key labels is the Status Window where the Whisper Screen will display information that helps you know what it is trying to do.

There are actually several parts to the Status Window, including an Expanded Status Line which appears on the twenty-fourth line of most screens (unless you are communicating with a computer or terminal, or editing a message). The Local Status Field appears on the twenty-fifth line, immediately to the right of the first group of four Soft Key labels, and is used to display short, usually self-explanatory messages up to 12 characters long (such as "DISCONNECTED", "WAITING", "invalid key" or "can't modify") which relate to the current Screen display: that's why it is called "Local". To the right of the Local Status Field there is a group of four underlined letters (e.g., "A*cP" or "B C ") which provide clues to the overall condition of the Whisper Screen; the term Global Status Field applies to these letters. The twenty-fourth line of the Screen is frequently used to display expanded meanings of the letters, along with the time of day and your Whisper Screen's Software Revision Level, a "computerese" term which is used to collectively identify certain features present in your particular Whisper Screen¹. Eventually, you will be able to recognize the patterns of the letters and their meanings even when the Expanded Status Line is not displayed.

- A The first Global Status character indicates which of the four terminal configurations is currently in effect -- A, B, C, D. The Whisper Screen's default or "power-up" configuration is A. Terminal configurations control things like the data rate and whether the [RETURN] key sends pure carriage returns or also adds a line feed. The Expanded Status Line reinforces the meaning of this Global Status character by displaying CONFIG A.
- * The communications status of the Whisper Screen is shown by the second character of the Global Status Field: the * means you are On-Line, while no symbol at all means you are Off-Line. The Expanded Status Line reinforces the meaning of this Global Status character by displaying OFFLINE (or ONLINE, when that is appropriate).
- C To help determine the status of the [CAPS LOCK] key on the keyboard, the third character of the Global Status Field tells whether upper or lower case letters will be generated when an alphabetic key is pressed: C means upper case (capitals), while c means lower case. Whenever you hold down the [SHIFT] key, this Global Status character changes temporarily to remind you that the [SHIFT] key can be used in a way that is slightly different from that of an office typewriter. For example, when the [CAPS-LOCK] key would normally cause an upper case letter to be generated, pressing the [SHIFT] key and an alphabetic key will "shift" you down to lower case for as long as you continue to hold the [SHIFT] key down: this is indicated by the third Global Status character changing from C to c. This special feature of the Whisper Screen can be useful when communicating with some computers. The Expanded Status Line reinforces the meaning of this Global Status character by displaying UPPER CASE or LOWER CASE.
- P The last position in the Global Status field is used to indicate the state of the Whisper Screen's printer port. The letter P will appear whenever you take a "snap shot" of the screen using the [PRINT SCREEN] key and disappear after the last character of a screen print has been sent to the printer. When the [F7] PRINT Soft Key is pressed (Off-Line) to send an entire message to the Printer Port, a P will appear until the last character in the message has been sent to the printer. The third way that a P can appear is when the Printer Port has been switched ON by pressing the [F7] PRINTER Soft Key (On-Line): it will disappear when the port is switched OFF. The Expanded Status Line reinforces the meaning of this Global Status character by displaying PRINTER.

¹ From time to time, 3M makes improvements in product performance which may result in either physical or functional changes to the product. To provide prompt assistance and accurate information, 3M's Service Representatives need to know which version of software is being used by your Whisper Screen. When this manual was written, the Software Revision Level was 4.00; in general, this manual will apply to Whisper Screens having Software Revision Levels in the range 4.00 through 4.99, inclusive.



Hard Keys

On the right side of the keyboard are a number of keys dedicated to specific uses. These are called Hard Keys. For example, the [NEXT] key is used Off-Line to display another related screen whenever you see something like "PART 1 of 3" or "PART 2 of 2"; it is also used On-Line to display another group of your custom Function Strings. If you press the [NEXT] key when the "last" Screen is displayed, the "first" Screen will appear: this allows you to "cycle" through all of the related Screens using just one key. The [PRINT SCREEN] key prints a copy of the screen (when a printer is connected to the Whisper Screen); and [HERE IS] sends an identifier code from your terminal to another terminal. The functions of these Hard Keys don't change, though within some screens they won't all work.

The four arrow keys at the lower right corner of the keyboard are called Cursor Control Keys. The cursor is a small flashing or solid rectangle the size of a single character which shows where the next character you type will be displayed. The Cursor Control keys are used to position the cursor at the point in a message where you want to make some changes. Normally, the Cursor Control keys move the cursor one character or line, but you can "increase" the distance the cursor moves left or right by simultaneously holding down the [SHIFT] or [CONTROL] keys: [SHIFT][←] or [SHIFT][→] lets you move a "word" at a time, while [CONTROL][←] or [CONTROL][→] "jumps" to the beginning or end of a line.

Another important use of the Cursor Control keys is selecting which item in the message "header" you want to change (such as the Label or Delayed Auto-Send Time): the [↑] and [↓] keys move a pointer, ">", and cause several characters to become highlighted (dark characters on a brighter green background), while the [←] and [→] keys move left and right within a highlighted field. The Cursor Control keys are also used On-Line when the Message Selection Window is displayed to choose which message should be sent. (Some very specialized computer applications may use the Cursor Control keys: please refer to the user guide for your particular computer service for an explanation of their use.)

MAIN MENU

Press: F1 to CREATE a new message
F4 for MESSAGE Index
F5 to SET-UP the Terminal Options
F8 for AUTO-DIAL Screen

Received Messages: 0

Memory Available: 24 Messages; 21,800 Characters

8:00 AM CONFIG A - OFFLINE
CREATE ☐ ☐ MESSAGE

LOWER CASE 4.00
A c SET-UP ☐ ☐ DIAL

The Main Menu Screen offers single key access to three frequently used activities plus access to the Set-Up Menu. It is the first Screen you'll see after turning the power ON, as well as the one you'll see after finishing most activities and whenever the Whisper Screen is "idle".

This screen displays the amount of memory available in terms of characters and unused messages. Also displayed is the number of automatically received messages which you haven't yet read. Notice that the current time, according to the Whisper Screen's internal clock, is displayed in the lower left corner of the Expanded Status Line.

- [F1] CREATE Pressing this key creates a new message using the lowest numbered empty message envelope, automatically labeling the new message as USER MSG. You will be given an opportunity to change the right margin in case you plan to send this message to a Terminal which cannot accept a normal 80-character line. Once the right margin is correct, just start typing! When you are through creating the message, you can press another Soft Key to send it. For a discussion of creating a message, see Chapter 3.
- [F4] MESSAGE Pressing this key displays one of the two "Parts" of the Message Index Screen (Chapter 6) and highlights the last message which was created, sent, received or edited. The Whisper Screen assumes that if your last activity was creating a message which wasn't sent, then you might want to resume working on that message. If it was sent, then you might want to print it or delete it to make room for new messages. If a message was received and stored in memory, then you might like to read it or print it. You can still select another message or use any of the other Message Index options, such as edit, modify the message header, send, or delete.
- [F5] SET-UP Pressing this key takes you to the Set-Up Menu Screen shown in Chapter 8 to customize the Whisper Screen for your communication requirements. If your system supervisor or dealer has already done this for you, you can begin using the Whisper Screen right away!
- [F8] DIAL Pressing this key displays the Auto-Dial Screen shown in Chapter 5: you can select one of 14 auto-dial/auto-log-on Directories, or manually dial a less frequently called phone number. Generally, this Soft Key would be used when you want to call a computerized information utility such as Dialog or Dow Jones News Retrieval, or retrieve your electronic mail from services such as MCI Mail and Western Union's EasyLink.

CHAPTER 3: CREATING A MESSAGE

The Whisper Screen uses an electronic memory for storing all of the information it needs to remember. Usually, some memory will be needed to store your Directory and the custom Function Strings you use when calling a computer service. The memory which remains can be used to store one very large message, or as many as 24 individual messages. Each message is identified by a number, 1 through 24, and can even be given a label for easier identification.

CREATE MESSAGE

Number1

LabelUSER MSG

Right Margin80

Press F5 to change right margin

or

Start typing

01% FULL

A

C

RT MRGN

EXIT

When you elect to create a new message from the Main Menu, the Whisper Screen automatically performs a couple of steps for you. First, it finds the lowest unused message number and automatically assigns the Label USER MSG to it: you can change it later if you like. Then, it sets the Right Margin to the value selected in Options Part 1 but offers you a chance to change it using the [F5] Soft Key before you start typing the text of your message. Once you start typing, the Compose Mode is automatically entered. The total percentage of memory used will be displayed in the Status Window: every time you use another percent of memory, this number will change.

Once you start typing, the "Create Message" Screen is replaced by the "Compose Mode" Screen. Instead of only two Soft Key labels, you now have six -- three on the left-hand side of the Screen and three on the right-hand side.

- * You may "set" and "clear" tab stops using [F1] and [F2].
- * You may "print" the entire text of the message using [F7].
- * You may "exit" the message editor and return to the Message Index Screen using [F8].
- * You may leave the compose mode and "revise" a previously typed portion of the message using the [F3] Key, or you can use one of the cursor control keys: [↑], [↓], [←], [→] or [HOME].
- * You may use the [F5] key to "send" a message which you have finished composing.

SET TAB CLR TAB REVISE ☐

A c SEND ☐ PRINT EXIT

It isn't necessary to press the [RETURN] Key at the end of a line because the Whisper Screen uses a feature called word wrap: the message editor will automatically move any word which doesn't completely fit on the current line to the beginning of the next line without splitting the word into meaningless fragments. The message editor automatically puts a soft return in place of a space character at the end of every line when you don't press the [RETURN] Key. You only need to press the [RETURN] Key to mark the end of a paragraph or the end of a line of columnized figures: this is called a hard return because you actually pressed the [RETURN] Key. Later, we will show how this feature allows you to experiment with different message formats by changing the Right Margin after a message has already been created.

You can store any ASCII character as part of a message, including all thirty-three ASCII Control Characters, plus three special characters unique to 3M's line of communications terminals: "ϕ", local stop; "⌘", one-second pause; and "≡", send-answerback. Some of these characters should be used with caution because they could cause unexpected results.

ENQUIRY

Control-E, or "Who-Are-You?", is used to obtain the identification of a distant terminal and could cause a "collision" between the text of your message and the return of the distant terminal's answerback. Therefore, always include a few one-second pause characters (generated by [CONTROL][⌘]) immediately after any Control-E which you are including in your message as a request for the distant terminal or computer to send its answerback.

ESCAPE

This character in particular can create problems while sending, especially if the Whisper Screen uses a Terminal Configuration with the Local Echo (Duplex) Option set to ON (Half) or if the remote computer "echoes" the ESCAPE character back to the sending terminal. Be careful with this character or you could end up sending confusing commands to the Whisper Screen or to the distant computer or terminal.

LOCAL STOP

If you include this character in a message which is intended for automatic sending or for polling, any characters after the Local Stop character ([CONTROL][;]) will be "blocked" from transmission. This can be used to your advantage as well as to your disadvantage, since you could "block" sensitive information at the end of a pollable message if you want to retain the original message in memory but don't wish the complete text to be transmitted when polled.

X-OFF

Control-S or DC3 (Device Control 3) can be very useful in messages which need to be sent using the start-stop protocol which originated with paper tape readers, but it can also prevent the remainder of a message from being transmitted until the Whisper Screen receives an X-ON (Control-Q, or DC1 = Device Control 1): the Local Status Field will display the status message "RESTRAINED" if a message sent the X-OFF character. Eventually, the Inactivity Disconnect Option will cause the Whisper Screen to hang up if the Whisper Screen does not receive the X-ON control character within the value specified for that parameter.

X-ON

Control-Q or DC1 (Device Control 1) can result in a conflict if the terminal which receives the X-ON character interprets it as a command to transmit a message (e.g., terminals with polling capabilities, such as Whisper Screens and Whisper Writers, or others equipped with automatic tape readers)

Once you start typing, the "Create Message" Screen is replaced by the "Compose Mode" Screen. Instead of only two Soft Key labels, you now have six -- three on the left-hand side of the Screen and three on the right-hand side.

- * You may "set" and "clear" tab stops using [F1] and [F2].
- * You may "print" the entire text of the message using [F7].
- * You may "exit" the message editor and return to the Message Index Screen using [F8].
- * You may leave the compose mode to "revise" a previously typed portion of the message using the [F3] key, or you can use one of the cursor control keys: [↑], [↓], [←], [→], or [HOME].
- * You may use the [F5] Key to "send" a message which you have finished composing.

When you leave the "Compose Mode" and enter the "Revise Mode", six new Soft Key labels will appear -- two Soft Key labels, PRINT and EXIT, will be carried over from the "Compose Mode".

- ** You may move to the "top" or "bottom" of the message using [F1] and [F2].
 - ** You may Delete one or more characters using [F5].
 - ** You may Delete one or more lines or partial lines using [F6].
 - ** You may Delete all the text between the current cursor position and the end of the message using [F7].
 - ** You may Insert characters or lines between previously typed text.
- TOP BOTTOM INSERT DEL-TXT A C DEL-CHR DEL-LNE PRINT EXIT

If you discover an error in the text you've already typed, the first step in making corrections is to press the [↑] or [←] Cursor Control key to move the cursor in the direction of the mistake. This causes the Whisper Screen to automatically leave the Compose Mode and enter the Revise Mode: a new set of Soft Key labels will appear, ones which are appropriate to revising text. When the cursor is positioned where you want it, minor errors can be corrected by overtyping the wrong characters. You may delete characters, lines, or all of the text from the cursor position to the end of the message by pressing the corresponding labeled Soft Key. When you have finished revising the message, you can quickly position the cursor at the end of the message by pressing the BOTTOM Soft Key. When you resume typing, you'll automatically enter the Compose Mode again.

The Whisper Screen has a character-oriented editor rather than a line-oriented one. This means that it is very efficient at storing messages with the least amount of wasted memory: an empty "line" of text requires only one character of memory, not 80, and short lines take up only as many characters as are actually displayed -- the blank spaces at the "end" of a line don't actually exist in memory. It also means that in Revise Mode, the cursor is prevented from entering an area in which there isn't any text: a "space" character is text, but text stops at the end of a "line".

- [↑] Moves the cursor up one line. If the cursor is on the first line of a "paragraph", then pressing this key places the cursor in column 1 of the previous line. If the cursor is on the first line of the message, then pressing this key places the cursor in column 1.
- [↓] Moves the cursor down one line. If the cursor is on the last line of a "paragraph", then pressing this key places the cursor in column 1 of the next line. If the cursor is on the last line of the message, then pressing this key places the cursor after the last character in the last line.
- [←] Moves the cursor one column to the left. If the cursor is in the first column of a line, then pressing this key places the cursor after the last character in the previous line.
- [→] Moves the cursor one column to the right. If the cursor is in the last column of a line, then pressing this key places the cursor in column 1 of the next line.
- [SHIFT][←] Moves the cursor to the first character of the previous word. If the cursor is in the first column of a line, then pressing this key places the cursor after the last character of the previous line.
- [SHIFT][→] Moves the cursor to the first character of the next word. If the cursor is already on top of the first character in the last word on a line, then pressing this key places the cursor after the last character on the same line.
- [CONTROL][←] Moves the cursor to the first character of the line. If the cursor is already on top of the first character of a line, then pressing this key places the cursor on top of the first character of the previous line.
- [CONTROL][→] Places the cursor after the last character of the line. If the cursor is already at the end of a line, then pressing this key places the cursor after the last character on the next line.

Once you start typing, the "Create Message" Screen is replaced by the "Compose Mode" Screen. Instead of only two Soft Key labels, you now have six -- three on the left-hand side of the Screen and three on the right-hand side.

- * You may "set" and "clear" tab stops using [F1] and [F2].
- * You may "print" the entire text of the message using [F7].
- * You may "exit" the message editor and return to the Message Index Screen using [F8].
- * You may leave the compose mode to "revise" a previously typed portion of the message using the [F3] key, or you can use one of the cursor control keys: [↑], [↓], [←], [→], or [HOME].
- * You may use the [F5] key to "send" a message which you have finished composing.

When you leave the "Compose Mode" and enter the "Revise Mode", six new Soft Key labels will appear -- two Soft Key labels, PRINT and EXIT, will be carried over from the "Compose Mode".

- ** You may move to the "top" or "bottom" of the message using [F1] and [F2].
- ** You may Delete one or more characters using [F5].
- ** You may Delete one or more lines or partial lines using [F6].
- ** You may Delete all the text between the current cursor position and the end of the message using [F7].

**

☐ ☐ ☐ ☐ DELETE ? A c ☐ YES ☐ NO

Because deletion is a destructive action, the Whisper Screen will give you a chance to "undo" any delete command. Each time you press DEL-CHR or DEL-LNE, the characters or lines to be deleted will appear as dark characters on a green background: you can use the [↶] key to "undo" a few characters, or you can press [F8] to CANCEL the entire deletion. The highlighted characters are deleted if you press any key except [↶] or [F8]. When you press DEL-TXT, the Whisper Screen displays a prompt in the Status Window ("DELETE ?") and redefines the Soft Keys so that you can answer either YES or NO: press [F6] to confirm that you really want to delete all of the text between the cursor and the end of the message, or press [F8] to "undo" the deletion.

Once you start typing, the "Create Message" Screen is replaced by the "Compose Mode" Screen. Instead of only two Soft Key labels, you now have six -- three on the left-hand side of the Screen and three on the right-hand side.

- * You may "set" and "clear" tab stops using [F1] and [F2].
- * You may "print" the entire text of the message using [F7].
- * You may "exit" the message editor and return to the Message Index Screen using [F8].
- * You may leave the compose mode to "revise" a previously typed portion of the message using the [F3] key, or you can use one of the cursor control keys: [↑], [↓], [←], [→], or [HOME].
- * You may use the [F5] key to "send" a message which you have finished composing.

When you enter the "Insert Mode", the Soft Key labels change back to the ones displayed in the "Compose Mode" but all previously typed text to the "right" of the cursor is temporarily blanked from the Screen as a further indication that you are in the "Insert Mode".

SET TAB CLR TAB REVISE ☐

A c SEND ☐ PRINT EXIT

So far we've mentioned the Compose and Revise modes. The Whisper Screen has one other edit mode which is closely related to the Compose mode. In fact, the same Soft Key labels are used for both modes. The Insert mode allows you to do everything you could do in the Compose mode, but the characters you type when you're in the Insert mode will appear between the characters which were already composed. When the INSERT Soft Key is pressed, any characters to the right of the current cursor position will temporarily disappear, along with any lines of text below the cursor. When you press the REVISE Soft Key, the word-wrap feature really becomes useful: the previously composed text is restored to the screen and reformatted (up to the first "hard return") so that the maximum number of complete words will fit on every line.

Tab stops can be changed while you are typing in the Compose or Insert modes simply by pressing the [F1] SET-TAB or [F2] CLR-TAB soft keys. Tab stops can also be preset in Options Part 1.

MESSAGE INDEX - PART 1 of 2							
	Label	Rt Mrgn	Delayed Dir	Auto-Send Time Retry	---Polling--- ? Code Nbr	Date / Time	Mem Used
1	USER MSG	80					04%
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

Memory Available: 23 Messages; 20,900 Characters

Press the NEXT Key for more messages

8:15 AM CONFIG A - OFFLINE LOWER CASE 4.00
 CREATE SEND DELETE A C MOD HDR EDIT PRINT EXIT

Once you have finished creating a message, there are just three things left to do: you can print the complete message, you can put the message aside and perhaps work on another message, or you can send the message. The first two choices are available in all three edit modes as Soft Keys [F7] and [F8]. However, you can only SEND the message when you are within the Insert or Compose modes, or when the message is highlighted in the Message Index Screen.

CHAPTER 4: SENDING A MESSAGE

The Whisper Screen was developed to help you communicate quickly and (we hope) easily with computer systems and other teleterminals. The previous chapter described how a message is created and revised using the message editor. This chapter shows how a message is sent.

The easiest way to send a message from the Whisper Screen is to create it (as described in the previous chapter) and then immediately send it:

- 1) From the Main Menu Screen, press [F1] to CREATE a new message. This message will automatically be assigned the label "USER MSG". Compose your message and revise it (if necessary).
- 2) Press [F5] to SEND it.

AUTO-DIAL AND SEND

1	EZ-Send	B	\$555-1212	Tymnet Local Access <Send Message>
2	Dow	C	\$555-1212	via Uninet
3	MCImail	A	\$555-1212	Local Access Number
4	EZ-Link	B	\$555-1212	Local Tymnet Access <Log-On>
5	On-Tyme	A	\$555-1212	Local Tymnet Access
6	HomeOfc	B	\$555-1212	Direct Dial <Poll for Messages>
7	HomeOfc	B	\$555-1212	Direct Dial <Send Message>

PRESS: SHIFT KEY FOR DIRECTORIES 8 - 14
NEXT KEY FOR MANUAL DIAL

8	TelMail	A	\$294-9119	Telenet Access to Telemail
9				
10				
11				
12				
13				
14				

8:20 AM CONFIG A - OFFLINE

EZ-Send Dow MCImail EZ-Link

LOWER CASE 4.00

A c On-Tyme HomeOfc HomeOfc EXIT

- 3) Select the destination from the phone numbers displayed in the Auto-Dial And Send Screen by pressing one of the Soft Keys. If the number you wish to call is not listed in your directory, press the [NEXT] Key and manually dial the phone number: [F5] is a HELP Soft Key which explains the meanings of various special characters you may need when dialing a phone number.

MANUAL DIAL AND SEND

CONFIG A-D Soft Keys 1 thru 4 Select Terminal Configuration

0-9 Digits to Dial
 * or # Special Dial Symbols (Tone Dial Only)
 ! Mask Characters from View
 ~n~ Pause n Seconds
 CTL D (S) Wait for Dial Tone (up to 5 seconds)
 CTL P (π) Enable Pulse Dialing
 CTL T (⊕) Enable Tone Dialing

Press DIAL to Call: 5555-1212

8:21 AM CONFIG A - OFFLINE
 CONFIG A CONFIG B CONFIG C CONFIG D

LOWER CASE 4.00
A c HELP AUXPORT DIAL EXIT

- 4) When the number has been dialed and any automatic interactive log-on is finished, a Message Selection Window will appear at the bottom of the Screen. The message you just created is automatically selected: that is, its label will be highlighted by a bright rectangle.

P:800.00.1

Service: Mail

Connection requested ...

<Host Connected>

Please Log On: ID 78 USERNAME

Password? #####

Command: Compose

1	USER MSG	7		13		19	
2		8		14		20	
3		9		15		21	
4		10		16		22	
5		11		17		23	
6		12		18		24	

String1 String2 String3 String4

A*c SEND EXIT PRINTER DCONN

- 5) If required, type any commands to prepare the computer service or teleterminal to receive a message. You may also use your custom Function Strings before sending the message, but they are unavailable while a message is actually being sent.

...Sending

P:800.00.1

Service: Mail

Connection requested ...

<Host Connected>

Please Log On: ID 78 USERNAME

Password? #####

Command: Compose
700,2345; 700,2389; 700,2454+
Once you start typing, the "Cre

1	USER MSG	7		13		19	
2		8		14		20	
3		9		15		21	
4		10		16		22	
5		11		17		23	
6		12		18		24	

☐ ☐ ☐ ☐ XMITTING A*c STOP CANCEL PRINTER DCONN

- 6) Press [F5] to start sending your message. The Status Window shows that the Whisper Screen is "XMITTING" and the text of your message should appear in the top part of the Screen.
- 7) When the message has been sent, type any commands needed by the computer service or teleterminal and then hang-up: hold the [SHIFT] key down and press [F8].

There are other ways to send a message which are almost as easy, including one which automatically sends the message as part of an interactive log-on sequence with a computer service: your dealer or system supervisor may even have customized your Whisper Screen with such a Directory for you to use. In that case, the first three steps listed above are generally all that you need to do: everything else can be done automatically! The Whisper Screen is even capable of waiting until midnight (or any other time you might prefer) before automatically sending a message: all it needs is a properly designed automatic interactive log-on sequence. (Sample log-ons for use with the Whisper Screen's Delayed Auto-Send feature are provided for Western Union's EasyLink service on pages 79, 80, and 102).

There will probably be times that you want to compose a message but don't want to send it just yet. When you press the [F8] Soft Key to EXIT from the message editor, the Message Index Screen is displayed (see page 22 in the previous chapter). Notice that there is also a SEND Soft Key in the Message Index, but it is assigned to the [F3] Soft Key position (instead of [F5] as it was in the Compose and Insert Modes of the message editor). Sending a message hours or even days after it was first created is just as easy as sending it immediately:

- 1) From the Main Menu Screen, press [F4] to return to the Message Index Screen.

MESSAGE INDEX - PART 1 of 2

	Label	Rt Mrgn	Delayed Dir	Auto-Send Time	Retry	---Polling--- ? Code Nbr	Date / Time	Mem Used
1	USER MSG	80						04%
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								

Memory Available: 23 Messages; 20,900 Characters

Press the NEXT Key for more messages

8:15 AM CONFIG A - OFFLINE

LOWER CASE PRINTER 4.00

CREATE SEND DELETE

A C MOD HDR EDIT PRINT EXIT

- 2) Use the [↑] or [↓] keys to select the message you want to send.
- 3) Press the [F3] Soft Key: the Auto-Dial And Send Screen will appear just as if you had created the message only moments before.

AUTO-DIAL AND SEND

1	EZ-Send	B	555-1212	Tymnet Local Access	<Send Message>
2	Dow	C	555-1212	via Uninet	
3	MCImail	A	555-1212	Local Access Number	
4	EZ-Link	B	555-1212	Local Tymnet Access	<Log-On>
5	On-Tyme	A	555-1212	Local Tymnet Access	
6	HomeOfc	B	555-1212	Direct Dial	<Poll for Messages>
7	HomeOfc	B	555-1212	Direct Dial	<Send Message>

PRESS: **SHIFT** KEY FOR DIRECTORIES 8 - 14
NEXT KEY FOR MANUAL DIAL

8 TelMail A 555-1212 Telenet Access to Telemail
 9
 10
 11
 12
 13
 14

8:20 AM CONFIG A - OFFLINE LOWER CASE 4.00
 EZ-Send Dow MCImail EZ-Link A c On-Tyme HomeOfc HomeOfc EXIT

- 4) Select the destination from the phone numbers displayed in the Auto-Dial And Send Screen by pressing one of the Soft Keys.

MANUAL DIAL AND SEND

CONFIG A-D Soft Keys 1 thru 4 Select Terminal Configuration

0-9 Digits to Dial
 * or # Special Dial Symbols (Tone Dial Only)
 ! Mask Characters from View
 ~n~ Pause n Seconds
 CTL D (S) Wait for Dial Tone (up to 5 seconds)
 CTL P (P) Enable Pulse Dialing
 CTL T (T) Enable Tone Dialing

Press DIAL to Call: 5555-1212

8:21 AM CONFIG A - OFFLINE LOWER CASE 4.00
 CONFIG A CONFIG B CONFIG C CONFIG D A c HELP AUXPORT DIAL EXIT

If the number you wish to call is not listed in your directory, press the [NEXT] key and manually dial the phone number.

- 5) When the number has been dialed and any automatic interactive log-on is finished, a Message Selection Window will appear at the bottom of the Screen. The message you chose to send (in the Message Index Screen) is automatically selected: that is, its label will be highlighted by a bright rectangle.

P:800.00.1

Service: Mail

Connection requested ...

<Host Connected>

Please Log On: 1D 78 USERNAME

Password? #####

Command: Compose

1 USER MSG 2 3 4 5 6	7 8 9 10 11 12	13 14 15 16 17 18	19 20 21 22 23 24
-------------------------------------	-------------------------------	----------------------------------	----------------------------------

String1 String2 String3 String4
A*c SEND EXIT PRINTER DCONN

- 6) If required, type any commands to prepare the computer service or teleterminal to receive a message. You may also use your custom Function Strings before sending the message, but they are unavailable while a message is actually being sent.

P:800.00.1

Service: Mail

Connection requested ...

<Host Connected>

Please Log On: ID 78 USERNAME

Password? #####

Command: Compose
 700,2345; 700,2389; 700,2454+
 Once you start typing, the "Cre

1 USER MSG 2 3 4 5 6	7 8 9 10 11 12	13 14 15 16 17 18	19 20 21 22 23 24
-------------------------------------	-------------------------------	----------------------------------	----------------------------------

XMITTING
A*c STOP
CANCEL
PRINTER DCONN

- 7) Press [F5] to start sending your message. The Status Window shows that the Whisper Screen is "XMITTING" and the text of your message should appear in the top part of the Screen.
- 8) When the message has been sent, type any commands needed by the computer service or teleterminal and then hang-up: hold the [SHIFT] key down and press [F8].

Remember, you can send a message by pressing as few as three keys once it is created or selected:

- * SEND (either [F5] when composing or [F3] at the Message Index) to display the Directory
- * One Soft Key in the Auto-Send Screen which corresponds to the labeled Directory you want to use
- * [F5] to actually begin sending the text once the communications link is established

CHAPTER 5: DIALING A COMPUTER SERVICE OR TELETERMINAL

Sending a message isn't the only way you can use the Whisper Screen. If you use an electronic mail service, you probably have to check your mailbox periodically for any messages which have been delivered since the last time you called. Several computer services provide specialized data bases offering comprehensive information which can be helpful to just about any business; they may even maintain an electronic appointment calendar or a computerized "tickler" file for important reminders in addition to offering some form of electronic mail.

The previous section described how to send a message once it has been created and revised using the message editor. This section shows how to call a computer service, use the custom Function Strings, and manually receive information into memory. Once you have the information in memory, the last section in this chapter will show you how to read it.

Here is the easiest way to call a computer service from your Whisper Screen:

MAIN MENU

Press: F1 to CREATE a new message
F4 for MESSAGE Index
F5 to SET-UP the Terminal Options
F8 for AUTO-DIAL Screen

Received Messages: 0
Memory Available: 24 Messages; 20,800 Characters

8:00 AM CONFIG A - OFFLINE

LOWER CASE 4.00

CREATE MESSAGE

A c SET-UP DIAL

- 1) From the Main Menu Screen, press [F8] to begin the DIAL sequence.

AUTO-DIAL

1	EZ-Send	B	5555-1212	Tymnet Local Access <Send Message>
2	Dow	C	5555-1212	via Uninet
3	MCImail	A	5555-1212	Local Access Number
4	EZ-Link	B	5555-1212	Local Tymnet Access <Log-On>
5	On-Tyme	A	5555-1212	Local Tymnet Access
6	HomeOfc	B	5555-1212	Direct Dial <Poll for Messages>
7	HomeOfc	B	5555-1212	Direct Dial <Send Message>

PRESS: **SHIFT** KEY FOR DIRECTORIES 8 - 14
NEXT KEY FOR MANUAL DIAL

8 TelMail A 5555-1212 Telenet Access to Telemail
 9
 10
 11
 12
 13
 14

8:20 AM CONFIG A - OFFLINE LOWER CASE 4.00
 EZ-Send Dow MCImail EZ-Link A c On-Tyme HomeOfc HomeOfc EXIT

- 2) Select the destination from the phone numbers displayed in the Auto-Dial Screen by pressing one of the Soft Keys. In order to sign-on automatically, the computer service must be listed as one of the 14 phone numbers in your directory.

MANUAL DIAL

CONFIG A-D Soft Keys 1 thru 4 Select Terminal Configuration

0-9 Digits to Dial
 * or # Special Dial Symbols (Tone Dial Only)
 ! Mask Characters from View
 ~n~ Pause n Seconds
 CTL D (S) Wait for Dial Tone (up to 5 seconds)
 CTL P (P) Enable Pulse Dialing
 CTL T (T) Enable Tone Dialing

Press DIAL to Call: 5555-1212

8:21 PM CONFIG A - OFFLINE LOWER CASE 4.00
 CONFIG A CONFIG B CONFIG C CONFIG D A c HELP AUXPORT DIAL EXIT

If the number you wish to call is not listed in your directory, press the [NEXT] key and manually dial the phone number.

MODEM SETUP - PLEASE WAIT
OFF HOOK
WAITING FOR DIAL TONE
DIALING 5551212
WAITING FOR CONNECT
RINGING
RINGING
CONNECTED

A c DCONN

- 3) A Call Progress Screen is displayed while the number is being dialed. Until the distant teleterminal or computer answers, the only Soft Key available to you is [F8], DCONN.

P:800.00.1
Service: Mail
Connection requested ...
<Host Connected>
Please Log On: ID 78 USERNAME
Password? #####

A*c CANCEL PRINTER DCONN

- 4) When the distant teleterminal or computer answers, a Log-On Screen is displayed if you used one of the 14 Auto-Dial Directory entries. Three Soft Keys are available to you while the Whisper Screen automatically performs the interactive log-on: [F6] to CANCEL the remainder of the log-on but remain on-line; [F7] to "toggle" the PRINTER port ON or OFF; and [F8] to disconnect (DCONN).

```
P:800.00.1
Service: Mail
  Connection requested ...
  <Host Connected>
Please Log On: ID 78 USERNAME
  Password?  #####
Command:
```

User F1 User F2 User F3 User F4

A*c RCV MSG SND MSG PRINTER DCONN

- 5) When the number has been dialed and the interactive log-on is finished, the first four of your custom Function Strings will appear in the left-hand group of Soft Key labels. The right-hand group of Soft Key labels allow you to receive a message ([F5]), send a message ([F6]), toggle the Printer Port ON or OFF, and disconnect when you are through communicating.

```
P:800.00.1
Service: Mail
  Connection requested ...
  <Host Connected>
Please Log On: ID 78 USERNAME
  Password?  #####
Command:
```

User F5 User F6 User F7 User F8

A*c RCV MSG SND MSG PRINTER DCONN

- 6) Pressing the [NEXT] Key displays the next four custom Function Strings in the left-hand group of Soft Key labels. The right-hand group of Soft Key labels changes slightly: the Printer Port can still be toggled ON and OFF, and you can still disconnect, but instead of sending or receiving a message you can use [F5] to view the Message Index. This allows you to delete one or more older messages which might be necessary to make room for receiving new information.

...Dialing

P:800.00.1

Service: Mail

Connection requested ...

<Host Connected>

Please Log On: ID 78 USERNAME

Password? #####

Command:

User F9 UserF10 UserF11 UserF12

A*c RCV MSG SND MSG PRINTER DCONN

- 7) The last four custom Function Strings are displayed when you press the [NEXT] key a second time. One of the right-hand group of Soft Key labels changes, too: instead of looking at the Message Index, some of the Terminal Configuration Options can be adjusted while you are on-line by pressing the [F5] SET-UP Soft Key to display the Set-Up Menu Screen.
- 8) The first four custom Function Strings reappear when you press the [NEXT] key for the third time. As you can see, the [NEXT] key is quite useful in organizing the power of the Whisper Screen.

AUTO-DIAL

AUTO-DIAL

1	EZ-Send	B	6555-1212	Tymnet Local Access <Send Message>
2	Dow	C	6555-1212	via Uninet
3	MCImail	A	6555-1212	Local Access Number
4	EZ-Link	B	6555-1212	Local Tymnet Access <Log-On>
5	On-Tyme	A	6555-1212	Local Tymnet Access
6	HomeOfc	B	6555-1212	Direct Dial <Poll for Messages>
7	HomeOfc	B	6555-1212	Direct Dial <Send Message>

PRESS: **SHIFT** KEY FOR DIRECTORIES 8 - 14
NEXT KEY FOR MANUAL DIAL

8	TelMail	A	6555-1212	Telenet Access to Telemail
9				
10				
11				
12				
13				
14				

8:20 AM CONFIG A - OFFLINE LOWER CASE 4.00
EZ-Send Dow MCImail EZ-Link A c On-Tyme HomeOfc HomeOfc EXIT

The Auto-Dial Screen shows the phone numbers for terminals, computers, and services with which your Whisper Screen has been set up to communicate. The Screen is organized as two groups of seven directories: pressing the [SHIFT] Key highlights the alternate group of directories and causes the Soft Key Labels to change and reflect the alternate group's Labels. You can also use the [NEXT] Key to manually dial a number which is not called very often. The creation of directory entries is described in Chapter 8. You may EXIT to the Main Menu Screen by pressing Soft Key [F8].

AUTO-DIAL

- [F1] ... [F7] Pressing one of the 7 Soft Keys [F1] through [F7] causes the Whisper Screen to dial the terminal, computer or service shown in the label for that key. The display is cleared and the progress of dialing is reported on the Auto-Dial Call Progress Screen.
- [F8] EXIT Pressing this Soft Key takes you back to the Main Menu Screen.
- [NEXT] Displays the Manual Dial Screen shown on page 36. Press this key if you want to dial a phone number which is not listed in your Auto-Dial Directory or if you wish to use the Auxiliary Port without performing a log-on.

MANUAL DIAL

MANUAL DIAL

Press DIAL to Call: 555-1212
(or type a new number)

8:21 PM CONFIG A - OFFLINE
CONFIG A CONFIG B CONFIG C CONFIG D

LOWER CASE 4.00
A c HELP AUXPORT DIAL EXIT

This Screen lets you dial phone numbers for computers or terminals which do not require an interactive log-on. You may redial the last phone number (displayed in the bright rectangle) just by pressing the [F7] DIAL Soft Key, or dial a new number simply by typing the digits of the new phone number and pressing either the [RETURN] key or the [F7] DIAL Soft Key.

Certain characters have special meanings within a phone number: \$, %, ^, ~, #, *, !, and the digits from 0 to 9; the [F5] HELP Soft Key provides a brief explanation of these symbols, which are further explained on pages 37 and 38. Other alphabetic characters and symbols can be included in the phone number field if desired (provided they fit within the 36 character field length).

The Current Terminal Configuration (displayed in the Expanded Status Line) is used unless you select a new one by pressing one of the CONFG Soft Keys [F1] through [F4] before typing or dialing the number.

After the [F7] DIAL Soft Key is pressed, the Call Progress Screen is displayed: the progress of your call is shown as a series of short messages. You may cancel the call and return to the Manual Dial Screen via the Call Progress Screen's DCONN Soft Key, [F8].

MANUAL DIAL

[F1]	CONF6 A	Selects Group A as the Current Terminal Configuration.
[F2]	CONF6 B	Selects Group B as the Current Terminal Configuration.
[F3]	CONF6 C	Selects Group C as the Current Terminal Configuration.
[F4]	CONF6 D	Selects Group D as the Current Terminal Configuration.
[F5]	HELP	Press this key to display the Help Window for an explanation of characters which have special meanings in the phone number field and the effect of the four CONF6 Soft Keys.
[F6]	AUXPORT	Allows the Whisper Screen to communicate with a computer system or external modem through the Auxiliary Port. The left-hand group of four Soft Keys displays the first four of your custom Function Strings.
[F7]	DIAL	Press this key to dial the number displayed on the Screen.
[F8]	EXIT	Press this Key if you want to return to the Auto-Dial Screen
	BACKSPACE	Deletes the character to the left of the blinking cursor.
		Moves cursor to the left but does not delete the character.
		Moves cursor to the right but does not delete the character.
[RETURN]		Press this key to dial the number displayed on the Screen.
[CONTROL][T]	⌞	Forces the presently effective Dial Type to be TONE for the rest of the digits, even if it was specified as PULSE in Options Part 1.
[CONTROL][P]	⌞	Forces the presently effective Dial Type to be PULSE for the rest of the digits, even if it was specified as TONE in Options Part 1.
[CONTROL][D]	§	Waits up to 5 seconds for a dial tone; when detected, the next group of digits will be dialed using the Dial Type last in effect (determined by either Options Part 1 or the last "forced" Dial Type).
[SHIFT][8]	*	Tone dials the special * tone but only if the presently effective Dial Type is TONE; it is ignored if Dial Type is PULSE.
[SHIFT][3]	#	Tone dials the special # tone but only if the presently effective Dial Type is TONE; it is ignored if Dial Type is PULSE.
Tilde	~	Used in pairs to indicate time delays. For example, ~2" means pause for two seconds and resume dialing. Dialing will resume after the indicated time even if no dial tone is present.
[SHIFT][1]	!	Used to make the phone number invisible (when it appears the next time you enter the manual dial screen). For example, §§555-1212 ~5~§!12345! 999-555-1212 will become §§555-1212 ~5~§!.....! 999-555-1212 the next time you return to the Manual Dial Screen.

How to Manually Dial a Number

- Step 1: From the Main Menu Screen, press the [F8] DIAL Soft Key: this takes you to the Auto-Dial Screen.
- Step 2: From the Auto-Dial Screen, press the [NEXT] Key: this takes you to the Manual Dial Screen.
- Step 3: If you believe that the Current Configuration (listed in the Expanded Status Line as CONFIG X) is not compatible with the terminal or computer you wish to call, select the appropriate Configuration using Soft Keys [F1] through [F4].
- Step 4: If there is no current phone number displayed, or you want to call a new number, type in a new number.
- Step 5: Press the [F7] DIAL Soft Key to begin dialing. The Manual Dial Screen is replaced by the Call Progress Screen: the steps to complete your call will appear as a series of short messages.

The Screen will change from Call Progress to the On-Line Screen which displays your first four custom Function Strings (page 33) when the Whisper Screen is ready to communicate with the distant computer or terminal.

Sample Phone Number Formats

- 1) Direct dialing from a single-line business or residential phone:

555-1212

This sequence immediately dials the number using TONE or PULSE dialing (determined by the Dial Type listed in Options Part 1).

- 2) Dial "9" for an outside line through a PBX:

9 555-1212

This sequence waits up to 5 seconds for dial tone then dials 9 (using the Dial Type selected in Options Part 1), waits up to 5 seconds for another dial tone then uses PULSE dialing for the number. This allows the Whisper Screen to use tone dialing within a key telephone system but still work on the less expensive pulse dialing (also known as "rotary") lines for local area calls.

- 3) Direct dialing using an Alternate Long Distance carrier:

555-1212 ~5~ 9!.....!900-555-1212

This tandem dialing sequence waits up to 5 seconds for a dial tone then dials the number using PULSE dialing (regardless of the Dial Type specified in Options Part 1). After a 5-second pause to allow for ringing and answering, there is another 5-second wait for a dial tone: if a steady tone is not detected within the time allowed, the call is automatically cleared. (Usually, the Alternate Long Distance services will answer on the first or second ring -- if you have problems, try a 10-second pause for ringing and answering.) The exclamation points will hide your assigned billing code: it will be sent as tones, as will the 10-digit phone number, but the billing code will appear on the Call Progress Screen as a string of periods instead of the actual digits..

CHAPTER 6: READING A MESSAGE

Since sending a message from your Whisper Screen takes only three basic steps, it should be just as simple to read any message which was recorded into memory. Before we go into the exact steps necessary to read a message, it may help to explain why the same message number is not always highlighted when you press the MESSAGE Soft Key in the Main Menu Screen.

The Whisper Screen "remembers" the last message number which had any activity. An activity may be any of the following:

- * Creating a new message
- * Deleting a message
- * Sending a message
- * Modifying a message header
- * Editing a previously created message
- * Printing a message
- * Receiving a message

When you press the [F4] MESSAGE Soft Key in the Main Menu Screen, the last active message is the one that will be highlighted: that is, a pointer (">") will appear to the left of the Label and the entire line of information about that message will be brighter than any of the other messages listed in the Index.

MESSAGE INDEX - PART 2 of 2

	Label	Rt Mrgn	Delayed Dir	Auto-Send Time Retry	---Polling--- ? Code Nbr	Date / Time	Mem Used
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24	RCVD MSG	<>				R2 NOV 12 10:30 PM	04%

Memory Available: 19 Messages; 18,500 Characters

Press the NEXT key for more messages

12:36 PM CONFIG A - OFFLINE

CREATE ☐ SEND DELETE

LOWER CASE

A c MOD HDR EDIT

4.00

PRINT EXIT

This ability to remember the last activity does have its limits, though: the Whisper Screen cannot "retrace" its steps through all of the previously active messages. To help you determine the order of some activities, the Message Index Screen does have a place to store the date and time when a message is polled, or automatically sent or received; messages which are created, edited, and manually sent or received don't get stamped with a date and time.

If you created or edited a message after the last auto-answer message was received, then you will have to use the [↑] or [↓] cursor control keys and possibly the [NEXT] key to find an auto-answer message. Auto-answer received messages are labeled RCVD MSG; an unread message will have a special Identifier (R2) in front of the Date and Time that it was received. Once you read or print an auto-answer received message, the special R2 Identifier will disappear. Remember, manually recorded messages are also labeled RCVD MSG, but they don't get stamped with the date and time; this helps distinguish between manually and automatically received messages.

The Main Menu Screen will display the number of messages which you haven't yet printed or "read". One of these auto-answer messages may well be the last active message, especially if it was received while you were away from the terminal. If so, when you press the MESSAGE Soft Key in the Main Menu Screen, the last auto-answer message will be highlighted.

You may have noticed that most of the Received Messages have higher message numbers than the messages you Create. This is because the Whisper Screen works from both "ends" of its memory, filling it up towards the middle, sort of like burning a candle at both ends! Usually, Part 1 of the Message Index will list the messages you CREATE while Part 2 will list the messages you RECEIVE (manually or automatically). However, unless you perform a little housekeeping and delete old messages you no longer need to keep in memory, you may find that the received messages "overflow" Part 2 and start appearing in Part 1! Also, if you create more than 12 messages, some messages will have to be indexed in Part 2 because no more than 12 messages can be listed at one time.

MESSAGE INDEX - PART 1 of 2									
	Label	Rt Mrgn	Delayed Dir	Auto-Send Time	Retry	---Polling--- ? Code Nbr	Date / Time	Mem Used	
1	USER MSG	72						03%	
2	USER MSG	80						03%	
3	Brnch Rpt	80						04%	
4	Price Chng	80				YES 02	P2 NOV 12 10:30 PM	04%	
5									
6									
7									
8									
9									
10									
11	RCVD MSG	<>					R2 NOV 13 2:25 AM	05%	
12	RCVD MSG	<>					R2 NOV 12 11:45 PM	15%	
Memory Available: 6 Messages; 5,400 Characters									
Press the NEXT key for more messages									
10:20 AM	CONFIG A - OFFLINE					LOWER CASE	4.00		
CREATE	☐ SEND	DELETE					A c MOD HDR EDIT	PRINT	EXIT

The Whisper Screen automatically calculates the amount of memory used for each message and displays it in terms of an approximate percentage of the total memory used: this number is intended to be used only as an indicator of relative size so that you can see which messages use the most memory when it comes time to delete some existing messages to make room for new ones. (The total may exceed 100% if you add the percentages of all messages, especially if there are many very short messages which show only "01%".)

Now that you've found the message you want to read, you must decide how you want to read it: on the screen, or printed on paper. Most people prefer to scan a message and print it later, or maybe not at all if it's something they don't want to keep as a permanent copy. To scan the message, just press the [F6] EDIT Soft Key in the Message Index Screen. The first 24-lines of text will appear on the screen.

Your Answerback

Sender's Answerback

This is an Auto Answer Received Message. Your answerback will usually appear at the beginning of the message if you use the "Default" Answer Configuration (Group B) or another Configuration Group in which the "Local Echo (Duplex)" Option is set to "ON (Half)".

Notice that the "Right Margin" appears as a dashed vertical line: this is done to remind you that the "Word Wrap" feature has been de-activated to allow the message to be forwarded EXACTLY as it was received, including any lines which may have been intentionally sent with more than 80 characters on a line. You can use the Message Header Modification Screen to change the Right Margin value to 69, 72 or 80 if the terminal to which the message will be forwarded has any restrictions on the number of characters which may be received on one line.

Sender's Answerback

Your Answerback

TOP BOTTOM INSERT DEL-TXT

A C DEL-CHR DEL-LNE PRINT EXIT

You can quickly "page" through the text of a message by pressing the [NEXT] Key: the "next" 24 lines of text will appear on the screen each time it is pressed. Two Soft Keys, [F1] and [F2], will take you directly to the TOP and BOTTOM of the message. You may also use the Cursor Control keys to "scroll" through the message. The [←] and [→] Cursor Control keys normally move one character at a time, but you can move to the first character in the next (or previous) word by holding down the [SHIFT] key when you press one of these keys, and you can move all the way to the end (or beginning) of a line by pressing one of these keys while holding down the [CONTROL] key.

The Whisper Screen records every character it receives, except NULL and DELETE characters: these characters just take up extra memory without adding any value to the message, and often make a message more difficult to read. Some strange-looking characters may appear in a message: these are control codes and the most commonly seen ones are "LF" (Line Feed) and "BS" (BackSpace), although you may also see "SH" (Start of Header), "ST" (Start of Text), "ET" (End of Text), and "ET" (End of Transmission) from some computerized message systems. You can use the CHR-DEL Soft Key to remove unwanted control codes or normal characters from a message, such as you might see when someone tries to erase an error by using his terminal's [⏮] or Backspace key. When you PRINT a received message, most control codes will be "invisible". However, the "LF" code will translate into an extra Line Feed, and "BS" will cause your Whisper Printer (and may cause other printers) to backspace and overtype part of a word.

Notice that the right margin is visible on the screen as a series of short vertical lines. This indicates that the word-wrap feature is deactivated (that is, every "line" ends with a Hard Return) and that it is possible for the message to contain a "line" in which there are more than 80 characters since the last Hard Return. It is not very often that you will receive such a long line, but they will not "fit" within the maximum 80-column width of your Whisper Screen's display. When this happens, a word may be "split" between two lines.

Your Answerback

Sender's Answerback

This is an Auto Answer Received Message. Your answerback will usually appear at the beginning of the message if you use the "Default" Answer Configuration (Group B) or another Configuration Group in which the "Local Echo (Duplex)" Option is set to "ON (Half)".

You may occasionally see a word which is "split" between two lines like this: do
n't worry
it will appear as a "whole" word once you change the "Right Margin" from "<" to 69, 72, or 80 columns (you will do this in the "Message Header Modification" Screen). While the word will be "whole", it may be all by itself (an "orphan") on a line. This is usually caused by one or more "Line Feed" characters at the beginning of the line: the message will PRINT normally, but when you look at the message before printing it, the `␣` character takes up one of the positions on the line. Sometimes, though, it can be caused by a "lost" carriage return character due to noise affecting the communications line, or even by someone who "forgot" to press the return key while sending a message!

Sender's Answerback

TOP BOTTOM INSERT DEL-TXT A C DEL-CHR DEL-LNE PRINT EXIT

NOTE:

Messages which have been received into memory, whether manually or automatically, will not have a definite Right Margin until the message header information is modified: this is indicated in the Message Index Screen by the special "<" symbol for an unlimited Right Margin. If you get a MARGIN ERROR Status Message when you try to EDIT a message, it is because the message contains an unbroken "word" or string of characters which exceeds the maximum number of characters permitted for that Right Margin setting. Go back into the Message Header Modification Screen and restore the Right Margin to "<" from its present setting of 69, 72, or 80; return to the Message Index Screen and press [F6] to EDIT the message and break up the "word" into shorter "syllables".

If you need to forward a message to a Telex terminal or other teleterminal which cannot accept 80-character lines, you may change the value of the Right Margin in the Message Header Modification Screen. Usually, this will result in one or two "orphan" words after every normal appearing line of text: if you find this to be distracting or otherwise objectionable, you may use the editor to reformat the message by first inserting a space and then deleting the Hard Return at the end of each "orphan" line.

MESSAGE INDEX - PART 2 of 2									
	Label	Rt Mrgn	Delayed Dir	Auto-Send Time	Retry	---Polling--- ? Code Nbr		Date / Time	Mem Used
13	X								
14	RCVD MSG	<>						R2NOV 12 11:07 PM	04%
15									
16									
17	RCVD MSG	<>						R2NOV 12 8:23 PM	02%
18	RCVD MSG	<>						R2NOV 12 4:00 AM	04%
19	RCVD MSG	<>						R2NOV 12 12:30 AM	05%
20	RCVD MSG	<>						R2NOV 11 8:45 PM	03%
21	RCVD MSG	<>						NOV 11 10:39 AM	05%
22	RCVD MSG	<>						NOV 11 4:00 AM	05%
23									
24	RCVD MSG	<>						NOV 10 10:30 PM	04%

Memory Available: 12 Messages; 11,300 Characters

Press the NEXT key for more messages

10:23 AM CONFIG A - OFFLINE LOWER CASE 4.00

CREATE ☐ SEND DELETE A c MOD HDR EDIT PRINT EXIT

To summarize, here are the steps for reading any message.

- 1) From the Main Menu Screen, press [F4] to view the Message Index Screen.
- 2) If required, use the [↑] or [↓] Cursor Control keys to highlight a different message in one "Part" of the Message Index, or use the [NEXT] key to display the other "Part".
- 3) Press [F6] to EDIT or "preview" a message. Use the Cursor Control keys, the [NEXT] key, or the TOP and BOTTOM Soft Keys to move around within the message.
- 4) If desired, press the [F7] Soft Key to PRINT the entire message or use the [PRINT SCREEN] key (while "reading" the message) to print a single 24-line "page".

MESSAGE INDEX - PART 2 of 2									
Label	Rt	Delayed	Auto-Send	---Polling---		Date / Time	Mem		
	Mrgn	Dir	Time	Retry	? Code Nbr		Used		
13	RCVD MSG	<>				R2 NOV 12 11:40 PM	03%		
14	RCVD MSG	<>				R2 NOV 12 11:07 PM	04%		
15	RCVD MSG	<>				R2 NOV 12 10:30 PM	01%		
16	RCVD MSG	<>				R2 NOV 12 10:19 PM	01%		
17	RCVD MSG	<>				R2 NOV 12 8:23 PM	02%		
18	RCVD MSG	<>				R2 NOV 12 4:00 AM	04%		
19	RCVD MSG	<>				R2 NOV 12 12:30 AM	05%		
20	RCVD MSG	<>				R2 NOV 11 8:45 PM	03%		
21	RCVD MSG	<>				NOV 11 10:39 AM	05%		
22	RCVD MSG	<>				NOV 11 4:00 AM	05%		
23	RCVD MSG	<>				NOV 10 11:53 PM	02%		
24	RCVD MSG	<>				NOV 10 10:30 PM	04%		

Memory Available: 6 Messages; 5,400 Characters

Press the NEXT key for more messages

10:20 AM CONFIG A - OFFLINE LOWER CASE 4.00

CREATE ☐ SEND DELETE A c MOD HDR EDIT PRINT EXIT

This Message Index Screen shows the Message Headers for the second group of twelve stored messages. Most of the Auto-Answer Received Messages will be listed on this Screen starting with the last "empty" Message and "filling up" towards Message 1 on Part 1. These messages are automatically assigned the label RCVD MSG until you modify the label in the Message Header Modification Screen (shown on page 46).

Part 1 of the Message Index is displayed by pressing the [NEXT] key.

To read a message, use the [F6] EDIT Soft Key; to print a message, use the [F7] PRINT Soft Key. Reading or printing an Auto-Answer Received Message removes the "R2" identifier from the Date/Time Stamp in the Message Header.

It may help you to think of the Whisper Screen as having 24 envelopes for storing messages. Just like paper envelopes, certain information is needed on the "outside" to get the message delivered or to let you know something about the contents of the envelope. In the Whisper Screen, this information consists of several items, but the first four listed below are the ones you will encounter most often.

- ** An identifying label, automatically assigned when you first create a message but later you can change it to something unique.
- ** A value for the right margin which you can set-up in Part 1 of the Terminal Options, but which can be adjusted if necessary before you start typing the text of the message.
- ** An approximation of the amount of memory used for that message.
- ** The date and time when the message was received, sent or polled (or when Polling or Delayed Auto-Send failed).
- * The directory, transmit time, and number of retries for messages scheduled for Delayed Auto-Send.
- * Whether or not a message may be polled, and any special security code used to prevent unauthorized callers from receiving sensitive information.

MESSAGE INDEX SCREEN

- [F1] CREATE Pressing this key results in the same sequence of events as pressing CREATE in the Main Menu Screen. It is not used for reading a message.
- [F3] SEND Displays the Auto-Dial And Send Screen (page 27). You may select a predefined directory to use for dialing or you may choose to manually dial a number which is not in your directory. You may need to EDIT an auto-answer received message before forwarding it to another teleterminal.
- [F4] DELETE Use this key to erase the highlighted message. The Whisper Screen will request a confirmation in the Local Status Window ("DELETE ?"): answer YES by pressing [F6] or NO by pressing [F8].
- [F5] MOD HDR Displays the Message Header Modification Screen shown on page 46. Use this key if you want to change the automatically assigned message label or right margin. This key also allows you to prepare the highlighted message for Delayed Auto-Sending or Polling (please refer to the chapter on Advanced Topics for additional information).
- [F6] EDIT If the highlighted message contains at least one character, then the text is displayed along with the Revise Mode Soft Key labels (see page 41).
- If a received message is empty (that is, the Mem Used column indicates 01% but there was no actual text received) then the Create Message Screen will be displayed when you try to read it; the automatically assigned Label RCVD MSG will be displayed along with that particular message number. If you do not type any characters to "create" a message in response to the prompt but only press the [F8] Soft Key to EXIT, the Whisper Screen will display the Message Index Screen and prompt you to delete the message: since it was empty, you should answer YES by pressing the [F6] Soft Key.
- [F7] PRINT Transfers the entire text of the highlighted message to an attached printer: you can cancel printing the remainder of a message by pressing the [F7] Soft Key again while the Expanded Status Line still shows the Status Message PRINTER in the lower right corner of the Screen.
- [F8] EXIT Leaves the Message Index and displays the Main Menu Screen.
- [NEXT] Displays Part 1 of the Message Index if Part 2 is currently displayed, or Part 2 if Part 1 is visible: the message selection pointer will highlight the message at the top of the list.
- PRINT
SCREEN Prints the Message Index which is currently visible on the Screen. You can cancel an unfinished screen print by pressing the [PRINT SCREEN] key again while the Expanded Status Line still shows the Status Message PRINTER in the lower right corner of the Screen.
- [↕] Cursor Up Moves the message selection pointer up one line and highlights that message. If the top message in the list is highlighted, then pressing this key highlights the bottom message.
- [↕] Cursor Down Moves the message selection pointer down one line and highlights that message. If the bottom message in the list is highlighted, then pressing this key highlights the top message.

MESSAGE HEADER MODIFICATION

Assign a new message label simply by typing over the existing one

Delayed Auto-Send uses 'Directory', 'Transmit Time', and '# of Retries'

Unrestricted Polling uses 'Polling (Y/N)?'

Selective Polling uses 'Polling (Y/N)?' and 'Polling Code'

Number	1
>Label	USER MSG
Right Margin	72

Directory
Transmit Time
of Retries

Polling (Y/N)?
Polling Code

12:37 PM CONFIG A - OFFLINE
INS-CHR DEL-CHR SAVE

LOWER CASE 4.00
A c ERASE HELP CANCEL

A message consists of two parts: the actual Text and an automatically generated Message Header, a sort of "envelope" with information about the message. This Message Index Screen lets you change parts of the Message Header. Related parts of the Message Header are grouped together on the Screen. Since the Delayed Auto-Send and Polling features of the Whisper Screen are covered in the chapter on Advanced Topics, we will limit our present discussion of this Screen to modifying the automatically assigned label and the right margin.

Notice that some of the information which was present on the Message Index Screen is not displayed on the Message Header Modification Screen: that information was automatically determined by the Whisper Screen, such as the percentage of memory used for a message and its header. The number of times the message has been successfully polled or the most recent time that the message was sent, received, polled, or unsuccessfully sent or polled, is automatically cleared when you "SAVE" a modified message header.

MESSAGE HEADER MODIFICATION

- [F1] INS-CHR Inserts a "space" character between the cursor and the character to its left: the characters to the right of the cursor shift one space to the right.
- [F2] DEL-CHR Deletes the character under the flashing cursor.
- [F4] SAVE Press this key when you're done modifying a header. The display will return to the Message Index Screen and the header modifications will be stored in memory. Saving a header erases any previous Time/Date Stamp and activity identifier (R2, S2, P2, or U2).
- [F5] The label of this key depends upon the field which is currently highlighted.
 - ERASE Erases everything within the Label field to the right of the flashing cursor, including the character under the cursor.
 - MODIFY Allows you to select one of four choices for the Right Margin in the message editor: 69, 72, 80, or <> (unlimited, or no margin)
- [F6] HELP Displays the Help Window for the highlighted field.
- [F7] Not used.
- [F8] CANCEL Exits the Message Header Modification Screen without altering the current header information. Part 1 or Part 2 of the Message Index Screen is displayed, highlighting the unchanged message header.
- [NEXT] Not used.
- [◀] Erases the character to the left of the cursor.
- [↑] Moves the pointer UP to select and highlight the field you wish to work with.
- [↓] Moves the pointer DOWN to select and highlight the field you wish to work with.
- [←] Moves the cursor left one column.
- [→] Moves the cursor right one column.

CHAPTER 7: QUICK GUIDE TO USING THE WHISPER SCREEN

This chapter presents the information from the previous five chapters as a series of very brief steps to accomplish specific tasks. Also presented is a "preview" of sending a message using the Delayed Auto-Send feature which will be covered in greater detail in the chapter on Advanced Topics.

- * Creating a Message in Memory
- * Printing a Message In Memory
- * Sending a Message (using the Manual Dial And Send Screen)
- * Sending a Message (using the Auto-Dial And Send Screen)
- * Sending a Message From the Keyboard
- * Sending a Message From Memory (Using the Delayed Auto-Send Feature)
- * Recording a Message Into Memory
- * "Reading" a Message In Memory

Creating a Message in Memory

1. From the Main Menu Screen, press [F1] **CREATE**.
2. <Optional> Press [F5] to change the right margin.
3. Type your message, revising it if necessary.
4. Press [F8] to **EXIT** when you have finished creating the message.

<Optional> Press [F7] to **PRINT** the entire message.
5. Use the Message Index Screen's Soft Keys to choose what to do next:
 - * Press [F3] to **SEND** the message now
 - * Press [F1] to **CREATE** another message right away.
 - * Press [F5] to change the automatically assigned Label "USER MSG", set the message for Delayed Auto-Send, or set the message for Polling
 - * Press [F8] to go back to the Main Menu Screen.

Printing a Message In Memory

1. From the Main Menu Screen, press [F4] to display the Message Index Screen: the last active message is highlighted.
2. <Optional> Find the message you want to print by using [↑] or [↓] to highlight the message label; use the [NEXT] key to display the other part of the Message Index.
3. Press [F7] to **PRINT** the message: the full text of the message will be routed to a printer which is attached to the Printer Port of your Whisper Screen.
4. <Optional> Find another message you want to print using the [↑], [↓], or [NEXT] keys and repeat Step 3 above.
5. Press [F8] to return to the Main Menu Screen.

**Sending a Message (using the
Manual Dial And Send Screen)**

- 1A. You may **SEND** a message immediately after you **CREATE** it by pressing **[F5]** within the Message Editor. The "Auto Dial And Send" Screen is displayed first: press the **[NEXT]** key for the "Manual Dial And Send" Screen.

OR

- 1B. From the Main Menu Screen, press **[F4]** to display the Message Index Screen: the last active message is highlighted.

<Optional> Find the message you want to send by using **[↑]** or **[↓]** to highlight the message label; use the **[NEXT]** key to display the other part of the Message Index.

Pressing **[F3]**, **SEND**, displays the "Auto-Dial And Send" Screen: press the **[NEXT]** key for the "Manual Dial And Send" Screen.

2. <Optional> Select one of the 4 Terminal Configuration Options Groups by pressing one of the left-hand Soft Keys.
3. <Optional> Press **[F5]** to display the Help Window for an explanation of special dialing characters.
4. Press **[F7]** to **DIAL** the last phone number you entered, or type a new number then press **[F7]** to **DIAL**.
5. Call progress messages will be displayed until the Whisper Screen is "CONNECTED" or until it determines that the number dialed is "BUSY". The Whisper Screen will hang up if there is no answer within 45 seconds (about 8 rings).

6. The 24 message labels of the Message Selection Window appear in the lower third of the display after the Whisper Screen is "CONNECTED". The label of the message you selected is brighter than the rest.

<Optional> Exchange answerbacks with the distant teleterminal: hold down the **[CONTROL]** key and touch the letter **[E]**, wait for the recipient's answerback before pressing the **[HERE IS]** key to send your own terminal identification.

OR

Type the appropriate responses for an interactive computer log-on.

7. When the distant terminal or computer is ready to receive your message, press the **[F5]** key to **SEND** the message whose label is brighter than the rest.

If necessary, you may **CANCEL** the transmission once it has begun by pressing **[F6]** or you may temporarily suspend transmission by pressing the **[F5]** key (which is relabeled **STOP** while the message is sending). You may press the **[F5]** key again to **RESUME** sending the message.

8. <Optional> When the message has been completely sent, you may send another message on the same connection by using the cursor control keys to highlight the desired message label and then press the **[F5]** key again.
9. Hold down the **[SHIFT]** key and press **[F8]** to disconnect.

Sending a Message (using the Auto-Dial And Send Screen)

- 1A. You may **SEND** a message immediately after you **CREATE** it by pressing [F5] within the Message Editor. The "Auto Dial And Send" Screen is displayed first: press the Soft Key associated with the "Label" for the computer service or teleterminal you want to call.

OR

- 1B. From the Main Menu Screen, press [F4] to display the Message Index Screen: the last active message is highlighted.

<Optional> Find the message you want to send by using [↑] or [↓] to highlight the message label; use the [NEXT] key to display the other part of the Message Index.

Pressing [F3], **SEND**, displays the "Auto-Dial And Send" Screen: press the Soft Key associated with the "Label" for the computer service or teleterminal you want to call.

2. Call progress messages will be displayed until the Whisper Screen is "CONNECTED" or until it determines that the number dialed is "BUSY".
3. After the Whisper Screen is "CONNECTED", the set of three "log-on progress" Soft Key labels (**CANCEL**, **PRINTER**, **DCONN**) corresponding to [F6], [F7] and [F8] will be displayed until the interactive log-on is complete, at which time your custom Function String labels will appear in the left-hand group and a different set of "command" Soft Key labels will appear in the right-hand group.
- 4A. IF your auto-dial interactive log-on does not include the internal command to send the message, then the Message Selection Window (24 message "labels" arranged in four columns) will appear in the lower third of the display after the Whisper Screen is "CONNECTED". The label of the message you selected in Step 1 will be brighter than the rest.

When the distant terminal or computer is ready to receive your message, press the [F5] key to **SEND** the message whose label is brighter than the rest.

OR

- 4B. IF your auto-dial interactive log-on was designed to do so, the Whisper Screen can automatically start sending the message in response to a specific prompt from the computer service.

<Note: When a message is automatically sent as part of the interactive log-on, the Message Selection Window is not displayed at the end of the log-on.>

5. If necessary, you may **CANCEL** the transmission once it has begun by pressing [F6], or you may temporarily suspend transmission by pressing the [F5] Key (which is relabeled **STOP** while the message is sending). You may press the [F5] Key again to **RESUME** sending the message.
6. <Optional> When the message has been completely sent, you may send another message on the same connection by using the cursor control keys to highlight the desired message label and then press the [F5] Key again.

<Note: When a message is automatically sent as part of a log-on, the Message Selection Window will not be visible in the bottom third of your display. Pressing [F6] when the Soft Key is labeled **SND MSG** will display the 24 labeled messages: the last message you sent or created will be brighter than the rest.>

7. Hold down the [SHIFT] Key and press [F8] to disconnect.

Sending a Message From the Keyboard

1. From the Main Menu Screen, press [F8] to display the Auto-Dial Screen.
2. Press the Soft Key associated with the "Label" for the computer service or teleterminal you want to call.

OR

Press the [NEXT] Key for the Manual Dial Screen.

- A. <Optional> Select one of the 4 Terminal Configuration Options Groups by pressing one of the left-hand Soft Keys.
 - B. <Optional> Press [F5] to display the Help Window for an explanation of special dialing characters.
 - C. Press [F7] to DIAL the last phone number you entered, or type a new number then press [F7] to DIAL.
3. Call progress messages will be displayed until the Whisper Screen is "CONNECTED" or until it determines that the number dialed is "BUSY".
 4. After the Whisper Screen is "CONNECTED", your custom function string labels may appear, or you may see the set of three "log-on progress" Soft Key labels (CANCEL, PRINTER, DCONN) in [F6], [F7] and [F8] until the interactive log-on is complete.

5. <Optional> Exchange answerbacks with the distant teleterminal: hold down the [CONTROL] Key and touch the letter [E], wait for the recipient's answerback before pressing the [HERE IS] Key to send your own terminal identification.

OR

Type the appropriate responses for an interactive computer log-on.

6. Type your message when the distant teleterminal or computer is ready to receive.

<Optional> You may also use any of your Whisper Screen's 12 custom Function Strings: press the [NEXT] Key until the label of the Function String you want to use appears in the left-hand group of Soft Key labels then press the corresponding Key, [F1] - [F4].

7. <Optional> Exchange answerbacks again.

OR

Type any "disconnect" commands required by the network or computer service you are using.

8. Hold down the [SHIFT] Key and press [F8] to disconnect.

**Sending a Message From Memory
(Using the Delayed Auto-Send Feature)**

1. From the Main Menu Screen, press [F4] MESSAGE to display the Message Index Screen.
2. Press [F5] MOD HDR to display the Message Header Modification Screen.
3. <Optional> Type a new Label for the Message: you may use up to 10 letters or symbols, except control characters.
4. <Optional> Press [↵] to highlight the Right Margin value. Press [F5] to MODIFY the displayed value for the Right Margin. You have four choices:
 - 69 For International & Domestic Telex destinations
 - 72 For Domestic Telex II (TWX) destinations
 - 80 For most 300 and 1200 baud DDD Terminals and computers
 - <> For special applications requiring longer than 80 character lines
5. Press [↵] to highlight the Directory field. Type the number of the Directory you want to use for sending this message.

NOTE: You must include the number (1-14) of a previously defined Directory or the message cannot be sent. This Directory's log-on must include the special "Send Message" command: >00 is used in the log-on sequence to indicate when the message should be sent.
6. Press [↵] to highlight the Transmit Time field. Press [F3] to schedule the message for transmission when the time is 12:00 PM ("MIDNITE"). OR, you may schedule the message to be sent at another time: set the HOUR and MINUTE by pressing [F1] and [F2] until the desired time appears in this field.

NOTE: All times are based on the Whisper Screen's internal clock, which may gain or lose several seconds each month. You should periodically check the Whisper Screen's internal clock against a standard time source, such as the hourly time tone broadcast by many radio stations.
7. <Optional> Press [↵] to highlight the # of Retries field. You may choose up to 9 retries if the first attempt to send is not successful: the time between retries is 30 minutes and cannot be shortened or increased.

NOTE: The Message Index Screen Date/Time field indicates an unsuccessful attempt to send a message by placing a special indicator "U" in front of the date and time of the unsuccessful attempt.
8. Press [F4] to SAVE the changes you have made to the Message Header: the Message Index Screen will display the Directory, Transmit Time, and optional retries under the heading "Delayed Auto-Send".
9. Press [F8] to return to the Main Menu Screen.

Recording a Message Into Memory

1. Once you have established communications with the distant teleterminal or computer service, the first set of Soft Key labels will appear on the bottom line of the "On-Line Send/Receive" Screen. The left-hand group of Soft Key labels will show the first four labels for your custom Function Strings. The right-hand group of Soft Key labels will show the following:

RCV MSG SND MSG PRINTER DCONN

[F5] [F6] [F7] [F8]

NOTE: If you do not see these labels on the right-hand side of the Screen, press the [NEXT] Key once or twice until they do appear.

2. Press [F5]: the Message Selection Window will appear at the bottom of the "Message Recording" Screen. Some text at the top of the Screen may disappear or "scroll up" in order to make room for the Message Selection Window.
3. <Optional> Use the "Arrow Keys" at the lower right corner of your keyboard to select a specific message number ("envelope") rather than the automatically selected "empty" message.
4. Press [F6]: the Soft Key label changes from RECEIVE to CANCEL and any new information received (or sent) by your Whisper Screen is recorded into memory.
5. <Optional> Type the command(s) required by the distant teleterminal or computer system which causes it to start sending the information you want to record.
6. When last of the information you want to record has been received, press [F6] to CANCEL further recording.
7. Press [F5] to EXIT from the "Message Recording" Screen: the Soft Key labels of the "On-Line Send/Receive" Screen are restored, including the first four labels of your custom Function Strings.

"Reading" a Message In Memory

1. From the Main Menu Screen, press [F4] to display the Message Index Screen: the last active message is highlighted.
2. <Optional> Find the message you want to "read" by using [↑] or [↓] to highlight the message label; use the [NEXT] Key to display the other part of the Message Index.
3. Press [F6] to display the first 24 lines of the message: "reading" a received message is just like "EDITing" one you created except you won't be making any changes to it.
4. Use the [NEXT] Key to "page" through the message 24 lines at a time.

OR

Hold down the [↓] "Arrow Key" at the lower right corner of your Keyboard to "scroll" through the message a line at a time.

5. When you have finished reading the message, press [F8] to EXIT.
6. <Optional> Press [F7] to PRINT the message: the full text of the message will be routed to a printer which is attached to the Printer Port of your Whisper Screen.
7. <Optional> Press [F4] to DELETE the message you have just read. The Whisper Screen's Status Window displays a brief prompt, "DELETE ?":
 - * press [F6] to respond YES if you want to confirm your request
 - * press [F8] to answer NO if you change your mind.
8. <Optional> Find another message you want to "read" using the [↑], [↓], or [NEXT] Keys and continue with Step 3 above.
9. Press [F8] to return to the Main Menu Screen.

CHAPTER 8: CUSTOMIZING YOUR WHISPER SCREEN

This chapter covers some fairly technical information about your Whisper Screen. Most Whisper Screen owners only need to read the section covering "OPTIONS PART 1 of 3" and copy one or more of the Sample Directories and selected Function Strings provided for representative computer services. More ambitious owners may find the information in the section covering Parts 2 and 3 of the Options will help them to communicate with computer services for which no Sample Directory is provided.

Some Whisper Screen owners may never need to refer to this section at all since their Whisper Screens have been "downloaded" with the proper Terminal Options (Configuration Groups, Directories, and Function Strings) by their system supervisor, dealer, or computer service. The Terminal Options are stored in a part of your Whisper Screen's electronic memory which you can protect from further "downloading" by typing an asterisk (*) or the letter "Y" in the protected field of Directories and Function Strings; use the MODIFY Soft Key to protect a Configuration.

Under most conditions, the Whisper Screen will still remember the custom directories, function strings, and configurations, plus any messages in memory, if AC power is removed for up to 14 days. But just to be safe, you should keep a printed copy of your directories, function strings, and configurations in a secure place in case this information is lost due to an extended absence of AC power -- see the section on Periodic Maintenance in Appendix A for details.

From the Main Menu Screen, press [F5] to display the Set-Up Menu Screen, shown on the next page.

SET-UP MENU			
Press:	F1	to create or change an Auto-Dial Directory	
	F4	to create or change a Function String	
	F5	to change or restore the Terminal Options	
	F8	to EXIT	
11:45 AM	CONFIG A - OFFLINE	LOWER CASE	4.00
DIR	FUNCT'N	A c OPTIONS	EXIT

The Set-Up Menu Screen is intended to organize and simplify a group of related activities which customize the Whisper Screen for a particular user. You may choose to create or change an Auto-Dial Directory or a Function String. In addition, you can customize a group of Terminal Configuration Options, or you can restore them to their factory default values.

There is also a "hidden" choice, needed only to resolve rare communication problems, but which could be confusing to someone who has not read the manual. The Monitor Mode, activated and deactivated by simultaneously pressing the [SHIFT] and [F6] keys, can be useful in identifying normally invisible control characters which your interactive log-on should be looking for, or ones which may be causing your log-on to fail. When Monitor Mode is active, the text appears on the screen as solid 80-character lines: all control characters become visible and, most significantly, Carriage Return and Line Feed no longer cause the cursor to move to the first position of the next line. If you activate the Monitor Mode and call a computer or teleterminal using a Terminal Configuration Group in which the Local Echo (Duplex) Option is set to ON (Half), the characters you send will appear as green symbols on a black background while the characters you receive will appear as black symbols on a bright green background. Monitor Mode remains activated until you turn it off by pressing [SHIFT][F6] again in the Set-Up Menu Screen, but it is automatically deactivated when power is switched OFF.

SET-UP MENU

- [F1] DIR Displays the Directory Screen shown on page 74. Use this Key if you want to change the directory.
- [F4] OPTIONS Displays the Options Part 1 Screen shown on page 60. Use this Key if you want to change one of the Terminal Configuration Groups which control communication.
- [F5] FUNCT'N Displays the Functions Screen shown on page 86. Use this Key if you want to create, modify, or delete a function string.
- [SHIFT][F6] Activates or deactivates a "hidden" Soft Key. Simultaneously pressing these two keys will toggle the Monitor Mode ON or OFF: the Local Status Window displays "Mon Mode ON" or "Mon Mode OFF" as a confirmation.
- [F8] EXIT Returns to the Main Menu Screen.
- [NEXT] Not used.
- PRINT
SCREEN Prints the Set-Up Menu choices, plus the Expanded Status Line. You can cancel an unfinished screen print by pressing the [PRINT SCREEN] key again while the Expanded Status Line still shows the Status Message PRINTER in the lower right corner of the Screen. This can be useful with printers which communicate at slower speeds or ones which do not have an internal buffer.

SET-UP MENU

Press: F1 to create or change an Auto-Dial Directory
F4 to create or change a Function String
F5 to change or restore the Terminal Options
F8 to EXIT

12:05 PM CONFIG A - OFFLINE LOWER CASE PRINTER 4.00
DIR ☐ ☐ FUNCT'N Mon Mode ON A c OPTIONS ☐ ☐ EXIT

OPTIONS PART 1 of 3 - COMMON

>Auto Answer Incoming Calls?	YES
Auto Answer Received Data	MEMORY
Auto Answer Configuration	B
Brightness	10
Right Margin in Editor	80
Printer Baud Rate	9600
Printer Word Format	8+NONE+1
Printer Xon/Xoff Handshake	OFF
Dial Type	TONE
Time	NOV 1, '84 11:59.03 AM

Tabs 1 2 3 4 5 6 7 8

123456789012345678901234567890123456789012345678901234567890

T

CONFIG A - OFFLINE

☐ ☐ RESET ☐

LOWER CASE 4.00

A c DEFAULT MODIFY ☐ EXIT

The Whisper Screen's Terminal Options are divided into three parts: Part 1 controls options which are common to all four Terminal Configuration Groups, detailed in Parts 2 and 3.

The first Option Screen displays a number of auto-answer, display, and printing details. Most of these options will be set once and then left that way, but a few might be changed more frequently:

- * Most Whisper Screen owners prefer to always "Auto Answer Incoming Calls", but sometimes you might not want to be interrupted while preparing a message.
- * The "Brightness" may need adjusting if you move the Whisper Screen.
- * The "Time" may need monthly adjustments to make sure the internal clock doesn't gain or lose too many seconds.

All options in this first Screen may be changed while you are on-line, but the only option really worth changing would be the Brightness. However, you cannot use the RESET Soft Key on-line to reset all four Groups of communication options since that would probably disrupt the communications link already established between your Whisper Screen and another teleterminal or a computer.

The [↑] and [↓] cursor control keys are used to select an Option. Each time the [F6] Soft Key is pressed, it toggles the displayed value to the next greater value until the maximum value is displayed. The next time the key is pressed, the cycle starts over at the lowest value.

If you press [F6] to MODIFY the Time field, all eight of the soft key labels are redefined, as shown on page 64.

The tab stop settings can be changed either here or when you are creating a message. Here, they are indicated by "T" characters above the row of "column numbers": pressing MODIFY will either put a "T" in that position (set tab) or erase a "T" in that position (clear tab).

OPTIONS PART 1 OF 3 - COMMON

- [F3] RESET This Soft Key is used only when the you want to reset ALL three parts of the Terminal Configuration Options back to their factory default values. To prevent an accidental reset, you must also answer a prompt which reminds you that all Global and Group Configuration Options will be affected (see page 63). To change just one or two options you should use [F5]. You cannot RESET the Terminal Configuration Options while you are communicating with another teleterminal or a computer since this could disrupt the communications link already established.
- [F5] DEFAULT Restores the factory default value to the highlighted option. Use this Key when you want to reset the value of a single option.
- [F6] MODIFY Changes the displayed value for the highlighted option each time you press the Key. Pressing this Key when the Time field is highlighted redefines the soft Key labels (see page 64).
- [F8] EXIT The Group identified in the Expanded Status Line (CONFIG x) becomes the current configuration when EXIT is pressed. The display will change to show the Set-Up Screen on page 58.
- [NEXT] Displays the Options Part 2 Screen shown on page 66.
- PRINT
SCREEN Prints a copy of the Configuration values.
- [↑] Moves the pointer UP to select and "highlight" the next option to modify.
- [↓] Moves the pointer DOWN to select and "highlight" the next option to modify.
- [←] Used only in setting Tab Stops; moves cursor LEFT.
- [→] Used only in setting Tab Stops; moves cursor RIGHT.
- [SPACEBAR] Used only in setting Tab Stops; moves cursor RIGHT and "clears" a Tab Stop.
- [T] Used only in setting Tab Stops; "sets" a Tab Stop and moves the cursor RIGHT one position.
- CLEAR
SCREEN Used only in setting Tab Stops; "clears" all Tab Stops and positions cursor in Column 1.

PART 1 OPTIONS EXPLAINED

Option: AUTO ANSWER INCOMING CALLS?

Values: YES, NO

PURPOSE: Determines whether or not the Whisper Screen will answer an incoming call.

YES Causes the Whisper Screen to auto-answer after 1 ring

NO Causes the Whisper Screen to ignore all incoming calls.

Option: AUTO ANSWER RECEIVED DATA

Values: MEMORY, PRINTER, BOTH

PURPOSE: Determines whether incoming messages will only be stored in MEMORY, only displayed on the Screen and any (optional) attached PRINTER, or will be BOTH printed and recorded. Also determines whether or not the Whisper Screen will continue to auto-answer incoming calls if the memory becomes full: BOTH allows continued answering, but MEMORY must be available or the Whisper Screen will not answer. If received data is only to be stored in MEMORY, the "Message Index Screen" must show at least 500 characters available or the Whisper Screen will not answer an incoming call. The minimum requirement of 500 characters translates into slightly more than one minute at Telex speed, and should provide enough clues to identify the sender of a partial message.

Option: AUTO ANSWER CONFIGURATION

Values: A, B, C, D

PURPOSE: Determines the configuration group options which will be active when the Whisper Screen auto-answers an incoming call. Group B is recommended since the factory default settings of the options provide optimum communications with teleterminals.

Option: BRIGHTNESS

Values: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15

PURPOSE: Determines the level of screen brightness used both on- and off-line. Adjust the value to one which is comfortable for viewing.

0 = almost invisible, 10 = default value, 15 = maximum brightness

Option: RIGHT MARGIN IN EDITOR

Values: 80, 69, 72, <>

PURPOSE: Provides a convenient way to set a value for the right margin whenever you CREATE a message. If you normally send messages to Telex destinations, you should set the Right Margin to 69. If you normally send messages to other teleterminals, you should set the Right Margin to 72 or 80. No right margin may be selected for special applications, but then you will not have the benefit of word wrap and must end each "line" with the [RETURN] Key.

PART 1 OPTIONS EXPLAINED

Option: PRINTER BAUD RATE

Values: 110, 300, 600, 1200, 2400, 9600

PURPOSE: Determines the baud rate for the Printer Port.

NOTES: If you are using a slower baud rate for the printer than for the "COMM SOURCE", the transmitted character rate will automatically slow down to no more than the printer is capable of supporting. To avoid this bottleneck during transmission, you should use the fastest baud rate at which your printer is capable of receiving. The 3M Whisper Printer Model 1912, operating at the factory default setting of 9600 baud, will not exhibit this peculiarity even though it is only a 40-cps printer: its 2000-character buffer is usually enough for short messages sent or received using flow control.

Option: PRINTER WORD FORMAT

Values: 8+NONE+1, 8+EVEN+1, 8+ODD+1, 7+EVEN+2, 7+ODD+2, 7+EVEN+1, 7+ODD+1, 8+NONE+2

PURPOSE: Determines the format of data sent to the Printer Port: the first digit sets the number of Data Bits (8 or 7); Parity is generated to create an EVEN or ODD number of "1's" in the Data Bits, or the parity bit may be omitted entirely (NONE); the last digit sets the number of Stop Bits (1 or 2).

Option: PRINTER XON/XOFF HANDSHAKE

Values: OFF, ON

PURPOSE: Determines the printer "busy" handshake for the Printer Port: OFF is a "Hardware" handshake using the CTS line in the Printer Port (pin 5), while ON is a "Character" handshake using the Rx Data line in the Printer Port (pin 3) for XON/XOFF flow control.

Option: DIAL TYPE

Values: TONE, PULSE

PURPOSE: Forces modem to use the specified dial type for the initial dial digit(s), until the next INVERTED-T "⌞" or PI "⌘" (command characters for Tone or Pulse, respectively).

Option: TIME

Values: MONTH, DAY-of-Month, DECADE, YEAR, HOUR, MINUTE, 12/24

PURPOSE: Allows you to synchronize the Whisper Screen's internal clock to local time in order to use the Auto-Send feature.

Option: TABS

Values: Set or Clear tab stop at any of the 80 positions

PURPOSE: To set or clear horizontal tab stops for use within the Editor and on-line. Use the [←] and [→] (left and right cursor keys) to position the cursor at the desired tab position, then use the [F6] MODIFY Soft Key to "toggle" a tab stop ON or OFF at that position. You may also use the [SPACEBAR] to simultaneously "clear" a tab stop and advance the cursor one space to the right. The [T] key simultaneously "sets" a tab stop and advances the cursor one space to the right. The [CLEAR SCREEN] key may be used to clear all of the tab stops at once.

SETTING THE TIME AND DATE

OPTIONS PART 1 of 3 - COMMON

Auto Answer Incoming Calls?	YES
Auto Answer Received Data	MEMORY
Auto Answer Configuration	B
Brightness	10
Right Margin in Editor	80
Printer Baud Rate	9600
Printer Word Format	8+NONE+1
Printer Xon/Xoff Handshake	OFF
Dial Type	tone
>Time	NOV 1, '84 12:00.00 PM

Tabs 1 2 3 4 5 6 7 8

123456789012345678901234567890123456789012345678901234567890

T

4.00

CONFIG A - OFFLINE

MONTH DAY DECADE YEAR

LOWER CASE

A c HOUR MINUTE 12 / 24 START

Once you press the [F6] soft key to MODIFY the Time parameter in Options Screen #1, all eight of the soft key labels are redefined and the clock's seconds are reset to zero.

Each time one of the soft keys is pressed, it "toggles" the displayed value to the next greater value until the maximum value is displayed. The next time the key is pressed, the cycle starts over at the lowest value.

Pressing the [F8] soft key STARTs the Whisper Screen's internal clock using the date and time currently displayed in the field: there is no way to "cancel" changes you have made and restore the original date and time. The soft key labels for Options Screen #1 are restored.

- [F1] MONTH Changes the month of the year.
- [F2] DAY Changes the day of the month.
- [F3] DECADE Changes the decade.
- [F4] YEAR Changes the units digit of the year.
- [F5] HOUR Changes the hour.
- [F6] MINUTE Changes the minute.
- [F7] 12 / 24 Selects the format in which the time will be displayed: 12-hour (AM/PM) or 24-hour (universal).
- [F8] START Exits the modification mode, starts the clock, and restores the Soft Key labels on page 60.

RESETTING ALL CONFIGURATION OPTIONS

Do You Really Want to Reset ALL
Group and Common Configuration
Options (except TIME and TABS)
to Their Factory DEFAULT Values?

CONFIG A - OFFLINE

LOWER CASE

4.00

☐ ☐ ☐ ☐

RESET ALL? A C ☐ YES ☐ NO

This Screen offers you an opportunity to change your mind about resetting ALL of the Terminal Configuration options to their factory default values. RESETTNG THE TERMINAL OPTIONS IS FINAL: you cannot "undo" it after you press the YES Soft Key.

The ability to reset all of the Terminal Configuration options can be both useful and dangerous. It is dangerous because it can destroy your carefully chosen options for custom configurations, but it can be useful to get the Whisper Screen back to a set of configurations which will work with most terminals and computer systems.

The Time, Tab settings, and Answerbacks are the only options not altered if you press the YES Soft Key.

- | | | |
|------|-----|--|
| [F6] | YES | Confirms that you want to reset ALL of the Terminal Configuration options back to their factory default values. Remember, once this key is pressed the action is FINAL and cannot be "undone"! After resetting the Terminal Configuration options, the Options Part 1 Screen is displayed again. |
| [F8] | NO | Cancels the reset action. The Options Part 1 Screen is displayed again without resetting the Terminal Configuration options. |

OPTIONS PART 2 of 3 - GROUPS

CONFIGURATION GROUP A Default = Calling a typical 1200 baud computer

>Protect this Group?	NO
Auto-Dial Comm Source	INT.MODEM
Modem Originate Baud Rate	1200
Auto-Answer Baud Rate	1200/300
Aux.Port Baud Rate	9600
Transmit Character Rate	NORMAL
Local Echo (Duplex)	OFF (Full)
Transmit Flow Control	XON/XOFF
Receive Flow Control	XON/XOFF
Comm Data Bits	8
Comm Stop Bits	1
Comm Parity	NONE
Check Received Parity?	NO

12:01 PM CONFIG A - OFFLINE
LOWER CASE 4.00

CONFIG A CONFIG B CONFIG C CONFIG D
A c DEFAULT MODIFY ☐ EXIT

Parts 2 and 3 of the Option Screens let you change some specific technical details of communication. The options and values listed on this screen apply to only one of the four Configuration Groups which the Whisper Screen can memorize. Select the Configuration Group you wish to modify by pressing one of the first four Soft Keys.

Only certain values are acceptable for the options listed; the MODIFY key lets you select one value among those that are permitted. Each time the [F6] soft key is pressed, it toggles the displayed value to the next greater value until the maximum value is displayed. The next time [F6] is pressed, the cycle starts over at the lowest value. The DEFAULT key restores the factory setting to a specific option.

You may not change to a different Configuration Group when you are already communicating with another terminal or computer service because this would generally prevent you from continuing to communicate with that terminal or service. There are also certain parameters which cannot be modified once you are On-Line, specifically the first 4 options (after "Protect this Group?") listed on this Screen:

- * "Auto-Dial Comm Source"
- * "Modem Orig Baud Rate"
- * "Auto-Answer Baud Rate"
- * "Auxport Baud Rate"

OPTIONS PART 2 OF 3 - GROUPS

- [F1] CONFIG A Displays Configuration Group A's values for the options listed on this screen.
- [F2] CONFIG B Displays Configuration Group B's values for the options listed on this screen.
- [F3] CONFIG C Displays Configuration Group C's values for the options listed on this screen.
- [F4] CONFIG D Displays Configuration Group D's values for the options listed on this screen.
- [F5] DEFAULT Restores the factory default value to the highlighted option. Use this key when you want to reset the value of a single option.
- [F6] MODIFY Selects one of the choices for the highlighted option each time you press the key.
- [F8] EXIT The Group identified in the Expanded Status Line (CONFIG x) becomes the current configuration when EXIT is pressed. The display will change to show the Set-Up Screen on page 58.
- [NEXT] Displays the Options Part 3 Screen shown on page 70.
- PRINT
SCREEN Prints a copy of the Configuration values.
- [↑] Moves the pointer UP to select and "highlight" the next option to modify.
- [↓] Moves the pointer DOWN to select and "highlight" the next option to modify.

OPTIONS PART 2 of 3 - GROUPS

CONFIGURATION GROUP B Default = Calling a typical 1200 baud terminal

```

>Protect this Group?          NO
Auto-Dial Comm Source         INT.MODEM
Modem Originate Baud Rate     1200
Auto-Answer Baud Rate         1200/300
Aux.Port Baud Rate            9600
Transmit Character Rate        NORMAL
Local Echo (Duplex)           ON (Half)
Transmit Flow Control          XON/XOFF
Receive Flow Control           XON/XOFF
Comm Data Bits                 8
Comm Stop Bits                 1
Comm Parity                     NONE
Check Received Parity?         NO
  
```

12:01 PM CONFIG B - OFFLINE
CONFIG A CONFIG B CONFIG C CONFIG D

LOWER CASE 4.00
B c DEFAULT MODIFY ☐ EXIT

PART 2 OPTIONS EXPLAINED

- Option:** PROTECT THIS GROUP?
Values: YES, NO
Purpose: Determines whether or not a remote teleterminal can change this Configuration Group once it has been customized.
- Option:** AUTO-DIAL COMM SOURCE
Values: INT.MODEM, AUX.PORT
PURPOSE: Determines whether the modem or RS-232C port will be used by an "Auto-Dial" Directory to transmit and receive data.
- Option:** MODEM ORIGINATE BAUD RATE
Values: 110, 300, 1200
PURPOSE: Selects the Originate-Mode bits-per-second speed at which the terminal communicates with a distant terminal through the internal modem.
- Option:** AUTO-ANSWER BAUD RATE
Values: 1200/300, 1200/110
PURPOSE: Selects the auto-answer bits-per-second speed at which the terminal communicates with a distant terminal through the modem in 103 or "Low-Speed" mode; 1200 bps is always used when communicating through the modem in 212A or "High-Speed" mode.
- Option:** AUXPORT BAUD RATE
Values: 50, 75, 110, 134.5, 150, 200, 300, 600, 1200, 1800, 2400, 4800, 9600
PURPOSE: Selects the bits-per-second speed at which the terminal communicates through the AUX.PORT (Auxiliary Port).
- Option:** TRANSMIT CHARACTER RATE
Values: 6.6, 10, 20, 30, 60, NORMAL
PURPOSE: Allows the user to select an average character rate for transmission which is LESS than the maximum character rate possible at the selected "MODEM ORIGINATE BAUD RATE" or "AUXPORT BAUD RATE". Reducing the Transmit Character Rate affects only the data you send from memory or keyboard: you can still receive data at the maximum permitted by the applicable baud rate option.
- Option:** LOCAL ECHO (Duplex)
Values: ON (Full), OFF (half)
PURPOSE: Controls whether the Whisper Screen displays the data which it is transmitting directly (ON) or indirectly (OFF).
- NOTES:** This is frequently called "HALF or FULL DUPLEX", but that is not completely accurate. Setting LOCAL ECHO (Duplex) to "ON (Half)" causes all data transmitted by the Whisper Screen, from whatever source (keyboard, memory, log-on sequences, function strings, etc.), to be DIRECTLY visible on the video screen. Setting LOCAL ECHO (Duplex) to "OFF (Full)" causes all of the data transmitted by the Whisper Screen, from whatever source, to be visible on the video screen only by INDIRECT means, such as "echo-plex" in which data sent from a Whisper Screen is "echoed-back" by the receiving device.

PART 2 OPTIONS EXPLAINED

Option: TRANSMIT FLOW CONTROL

Values: XON/XOFF, NONE

PURPOSE: Selects the type of flow control the Whisper Screen should respond to when it is TRANSMITTING.

XON/XOFF Specifies that the "stop" character will be DC3 (XOFF= 13-Hex) while the "resume" character will be DC1 (XON=11-Hex). Generally, this type of flow control will be used when sending messages from memory: the receiving device will send the XOFF character whenever data is arriving faster than the receiving device can process it, and will send the XON character when it is again able to receive data.

A DC3 "stop" character included as part of a message created in the Message Editor will be sent, and will also cause the transmission of that message to be suspended if the "LOCAL ECHO (Duplex)" option is set to "ON (Half)".

If a DC3 "stop" character is "accidentally" sent to the Whisper Screen, it may seem as though the keyboard is ignoring whatever you type. You may press [CONTROL][Q] to clear this "stop" condition.

NONE Specifies that no flow control will be used when transmitting.

Option: RECEIVE FLOW CONTROL

Values: XON/XOFF, NONE

PURPOSE: Selects the type of flow control the Whisper Screen should use to regulate RECEIVED (incoming) data.

XON/XOFF Specifies that the "stop" character will be DC3 (XOFF= 13-Hex) while the "resume" character will be DC1 (XON=11-Hex). Generally, this type of flow control will be used when the Whisper Screen is temporarily unable to accept more incoming data: the Whisper Screen will send the XOFF character when characters arrive faster than they can be processed, and will send the XON character when it is again able to receive data.

NONE Specifies that no flow control will be used when receiving.

Option: COMM DATA BITS

Values: 7, 8

PURPOSE: Selects the number of data bits used to send and receive ASCII characters.

Option: COMM STOP BITS

Values: 1, 1.5, 2

PURPOSE: Selects the data word stop bits used to send and receive ASCII characters. This option only affects the TRANSMITTED stop bits: the actual number of RECEIVED stop bits will not matter to your Whisper Screen.

Option: COMM PARITY

Values: ODD, EVEN, MARK (1), SPACE (0), NONE

PURPOSE: Selects the data parity used to communicate with the distant computer or teleterminal.

Option: CHECK RECEIVED PARITY?

Values: YES, NO

PURPOSE: Determines whether or not the Whisper Screen checks RECEIVED characters for parity errors. If you select YES, a DASH (-) will be substituted for the character when a parity error is detected.

OPTIONS PART 3 of 3 - GROUPS

CONFIGURATION GROUP C Default = Calling a typical 300 baud computer

>Return Key Transmits	CR
Backspace Key Transmits	BS
Line Length (Typing On-Line)	NORMAL
Margin Bell	ON
Hot Zone	OFF
Auto New Line on CR	NO
Inactivity Disconnect - Minutes	30
Long Space Disconnect	ON
Active Answerback	1
Answerback 1	Primary Whisper Screen Identifier
Answerback 2	Secondary Whisper Screen Identifier

12:02 PM CONFIG C - OFFLINE

CONF G A CONF G B CONF G C CONF G D

LOWER CASE 4.00

C C DEFAULT MODIFY EXIT

This Screen is a continuation of the previous Option Screen, controlling additional technical details of communication. Just as in Part 2, the options and values listed on this screen apply to only one of the four Configuration Groups which the Whisper Screen can memorize. Select the Configuration Group you wish to modify by pressing one of the first four Soft Keys.

Only certain values are acceptable for the options listed; the MODIFY key lets you select one value among those that are permitted. Each time the [F6] soft key is pressed, it toggles the displayed value to the next greater value until the maximum value is displayed. The next time [F6] is pressed, the cycle starts over at the lowest value. The DEFAULT key restores the factory setting to a specific option.

You cannot alter the text of the Answerbacks using any of the soft keys on this Screen because an Answerback is frequently used for billing purposes: your system supervisor, dealer, or computer service knows how to change your Answerback. Normally, you should not change the Active Answerback for a Configuration Group since this may prevent you from communicating with computers or other terminals on a controlled network (such as Telex II).

All options listed on this Screen may be changed if necessary while you are On-Line. However, you may not change to a different Configuration Group when you are already communicating with another terminal or computer service because this would generally prevent you from continuing to communicate with that terminal or service.

OPTIONS PART 3 OF 3 - GROUPS

- [F1] CONFIG A Displays Configuration Group A's values for the options listed on this screen.
- [F2] CONFIG B Displays Configuration Group B's values for the options listed on this screen.
- [F3] CONFIG C Displays Configuration Group C's values for the options listed on this screen.
- [F4] CONFIG D Displays Configuration Group D's values for the options listed on this screen.
- [F5] DEFAULT Restores the factory default value to the highlighted option. Use this key when you want to reset the value of a single option.
- [F6] MODIFY Selects one of the choices for the highlighted option each time you press the key.
- [F8] EXIT The Group identified in the Expanded Status Line (CONFIG x) becomes the current configuration when EXIT is pressed. The display will change to show the Set-Up Screen on page 58.
- [NEXT] Displays the Options Part 1 Screen shown on page 60. The Group identified in the Expanded Status Line (CONFIG x) becomes the current configuration when you EXIT from Options Part 1.
- PRINT
SCREEN Prints a copy of the Configuration values.
- [↑] Moves the pointer UP to select and "highlight" the next option to modify.
- [↓] Moves the pointer DOWN to select and "highlight" the next option to modify.

OPTIONS PART 3 of 3 - GROUPS

CONFIGURATION GROUP D Default = Calling a typical 300 baud terminal

>Return Key Transmits CR/LF
Backspace Key Transmits BS

Line Length (Typing On-Line) 80
Margin Bell ON
Hot Zone OFF
Auto New Line on CR NO

Inactivity Disconnect - Minutes 30
Long Space Disconnect ON

Active Answerback 1

Answerback 1 Primary Whisper Screen Identifier
Answerback 2 Secondary Whisper Screen Identifier

12:02 PM CONFIG D - OFFLINE
CONFIG A CONFIG B CONFIG C CONFIG D

LOWER CASE 4.00
D C DEFAULT MODIFY ☐ EXIT

PART 3 OPTIONS EXPLAINED

Option: RETURN KEY TRANSMITS
Values: CR, CR/LF, CR/TIME, CR/LF/TIME
PURPOSE: Determines the ASCII Control Character(s) which will be transmitted to a remote device when the [RETURN] key is pressed; when a "soft" or "hard" return is sent from a Message in memory; or when the "N" marker is sent from a Directory Log-On or Function String. The value of this option DOES NOT AFFECT the Control-M "Carriage Return" character which may be transmitted from a function string or log-on sequence, or a [CONTROL][M] sent manually from the keyboard.

CR Causes the ASCII Control Character CARRIAGE-RETURN to be transmitted.

CR/LF Causes the ASCII Control Characters CARRIAGE-RETURN plus LINE-FEED to be transmitted.

CR/TIME Causes the ASCII Control Character CARRIAGE-RETURN to be transmitted, followed by ONE-QUARTER SECOND of TIME DELAY.

CR/LF/TIME Causes the ASCII Control Characters CARRIAGE-RETURN plus LINE-FEED to be transmitted, followed by ONE-QUARTER SECOND of TIME DELAY.

Option: BACKSPACE KEY TRANSMITS
Values: BS, DELETE
PURPOSE: Determines which ASCII Control Character will be transmitted to a remote device when the [] (BACKSPACE) key is pressed. The value of this option DOES NOT AFFECT a Control-H "Backspace" character which may be transmitted from a message memory, function string or log-on sequence.

BS Causes the ASCII Control Character BACK-SPACE (08-Hex) to be transmitted.

DELETE Causes the ASCII Control Character DELETE (7F-Hex) to be transmitted.

Option: LINE LENGTH (TYPING ON-LINE)
Values: 80, 69, 72, NORMAL
PURPOSE: AFFECTS ONLY TRANSMITTED LINE LENGTHS -- DOES NOT AFFECT RECEIVED LINE LENGTHS: received characters may be displayed in all 80 columns.

- (1) Automatically restricts to 69, 72, or 80 the number of characters which can be TYPED from the keyboard on a single line of the Whisper Screen before it generates local "beeps" for each new key typed -- you may "backspace" to erase a word fragment and/or manually press the [RETURN] key to advance to the next line.
- (2) Allows unlimited line lengths when typing from the keyboard when the value of this option is defined as "NORMAL".
- (3) The Message Header "Right Margin" field overrides this option.

Option: MARGIN BELL
Values: ON, OFF
PURPOSE: Provides an audible warning to the operator when the Whisper Screen is on-line and the cursor is at or near the end of the screen line. The audible warning is NOT transmitted to either the modem or the auxiliary port, and the warning is sounded locally regardless of the value of the LOCAL ECHO option.

PART 3 OPTIONS EXPLAINED

Option: HOT ZONE

Values: ON, OFF

PURPOSE: Enables you to type conversational messages without needing to press the [RETURN] key at the end of every line when connected to other terminals or to a computer. The first space character you type within the "Hot Zone" (the last eight positions of a line, based on the "LINE LENGTH" option) will be treated as though you had pressed the [RETURN] key: if the word you are typing is longer than 8 characters, then the Whisper Screen will beep once for every character you type until you send either a [CONTROL][M] or press the [RETURN] key.

Option: AUTO NEW LINE ON CR

Values: NO, YES

PURPOSE: Determines whether or not the Whisper Screen automatically appends a Line Feed character to each Carriage Return character RECEIVED by the Whisper Screen. This does NOT affect what the Whisper Screen TRANSMITS when you press [CONTROL][M] or the [RETURN] key.

Option: INACTIVITY DISCONNECT - MINUTES

Values: 30, 45, 60, OFF, 3, 7, 15

PURPOSE: Selects a time period after which the Whisper Screen will automatically disconnect if no characters are sent or received. This helps to avoid large connect time charges when you are not present during a call and something disrupts the expected sequence of communications. Turn this option OFF if you expect a long delay between your request and a computer's response and you don't mind paying for the connect-time charges.

NOTE: This is different from the PLUS SIGN used as a special command character in the Function Strings and Directory log-ons: the "wait timeout" enabled by the PLUS SIGN is a fixed 5-minute timer which starts when the log-on or function string starts checking received characters for a match with the specified character or string.

Option: LONG SPACE DISCONNECT

Values: ON, OFF

PURPOSE: Some computer/modem combinations are only able to disconnect properly after sending a long space signal to the distant terminal. Select "OFF" to enable the Whisper Screen to ignore a long space disconnect signal (600 msec of continuous spacing condition).

Option: ACTIVE ANSWERBACK

Values: 1, 2

PURPOSE: Selects one of two down-loaded answerbacks to be used as the response to a received ENQuiry control code. The two choices are displayed beneath this option as Answerback #1 and Answerback #2.

NOTES: The terminal will display an empty field (40 inverse video spaces) for an unprogrammed Answerback.

Your Whisper Screen will NOT transmit anything in response to receipt of the ENQuiry character unless the answerback has actually been programmed.

Because answerbacks are generally used for billing purposes, a special programming sequence is necessary: your dealer or system administrator knows how to "download" the answerback(s).

DIRECTORY		
1	Auto #1*	5555-1212 You can include text with Phone Number
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
Memory Available: 18,500 Characters		
9:21 AM CONFIG A - OFFLINE ☐ ☐ ☐ DELETE LOWER CASE PRINTER 4.00 A c ☐ MODIFY ☐ EXIT		

Use the Directory Screens to make additions, deletions, and changes in the Directory. Use the [↑] and [↓] cursor control keys to select a particular entry before you try to MODIFY or DELETE it.

There are four main components to a Directory Entry: an identifying Label, a terminal Configuration, a Phone Number to be dialed, and an interactive Log-On. Instead of typing frequently used log-on procedures, we hope you will find it more convenient to store them once as labeled directory entries and send them by pressing a single Soft Key.

- [F4] DELETE Use this key to remove an entry from your Directory. Move the pointer, by using the [↑] and [↓] keys, to highlight the directory entry you want to erase. Then press [F4] to display the soft key labels for the Directory Deletion Screen (opposite page)
- [F6] MODIFY Displays the Directory Modification Screen, shown on page 76. Press this key if you want to create or change a directory entry.
- [F8] EXIT Displays the Set-Up Menu Screen.
- [NEXT] Not used.
- PRINT
SCREEN Prints a copy of the screen display.
- [↑] Moves the pointer up to select and highlight a directory entry.
- [↓] Moves the pointer down to select and highlight a directory entry.

DIRECTORY DELETION

DIRECTORY

1	Auto #1*	A	555-1212 You can include text with Phone Number
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			

Memory Available: 18,500 Characters

9:21 AM

CONFIG A - OFFLINE

LOWER CASE

4.00

☐ ☐ ☐ ☐ DELETE ?

A c ☐ YES

☐ NO

This Directory Screen lets you permanently erase one of the fourteen labeled entries in your Directory. Select the directory entry you want to erase by using the soft keys in the previous Directory Screen (page 74). If the Status Field says "DELETE ?", then pressing the [F6] YES Soft Key will erase the highlighted directory entry. Press the [F8] NO Soft Key if you accidentally chose the wrong directory entry or if you have changed your mind and don't want to erase the highlighted entry after all.

- [F6] YES Confirm your request to delete the highlighted directory entry by pressing this key. After deletion, the Soft Key labels on page 75 are restored.
- [F8] NO Press this key to cancel your request to delete the highlighted directory entry. The Soft Key labels on page 75 are restored.

DIRECTORY MODIFICATION

1 **Auto #1** **A**

§555-1212 You can include text with Phone Number
&[User Id:]USER&[Password:]PASSWORD&
[Text:]00^[Print Copy?]=YES^[Command:]BYE^~5^I

0-9 Digits to Dial
* or # Special Dial Symbols (Tone Dial Only)
! Mask Characters from View
^~ Pause n Seconds
CTL D (S) Wait for Dial Tone (up to 5 seconds)
CTL P (P) Enable Pulse Dialing
CTL T (T) Enable Tone Dialing

Number	1	
Label		Auto #1
Protected		*
Configuration		A
Phone Number		§555-1212 You can include text with Phone Number &[User Id:]USER&[Password:]PASSWORD& [Text:]00^[Print Copy?]=YES^[Command:]BYE^~5^I
Log-on		§555-1212 You can include text with Phone Number &[User Id:]USER&[Password:]PASSWORD& [Text:]00^[Print Copy?]=YES^[Command:]BYE^~5^I

9:21 AM CONFIG A - OFFLINE
LOWER CASE PRINTER 4.00

INS-CHR DEL-CHR ☐ SAVE
A c ERASE HELP ☐ CANCEL

The Directory Modification Screen lets you enter, change, or erase the information in one entry of your Directory. Use the [↑] and [↓] cursor control keys to move the 'pointer' (">") and highlight the field you wish to change. Part or all of the Phone Number and Log-On fields can be 'masked' from view.

The Label field will accept any printing character except the "Double Quote" (""): the Whisper Screen will display the status message "invalid key" for this character; it will also ignore any control characters you type.

The Protected field is used to enable or disable the Whisper Screen's down-load programming capability for this entry in your Directory. Pressing the [Y] or [*] keys when this field is highlighted prevents any remote terminal or computer from changing or even reading this entry. Leaving the field "blank", pressing the [N] key, or pressing the ERASE soft key, allows special computer systems to change or create a directory entry for you and to read this entry to verify that it was correctly down-loaded.

The Configuration field will only accept upper and lower case "A", "B", "C", or "D" symbols because those are the names of the four configurations the Whisper Screen can memorize.

The Phone Number field accepts dial digits and special symbols: press the HELP soft key for additional information. If you don't need all 48 positions for your phone number, you can use the remaining space for extra text (which couldn't fit into the Label field): attempting to type the Double Quote character or any Control Code will result in the Status Message "invalid key".

The Log-On field consists of two 48-character 'subfields' to allow the creation of very long interactive log-on sequences: press the HELP soft key for additional information.

You may change any one or all five fields, but you can only work on one directory entry at a time. To work on a different directory entry you will have to return to the main Directory Screen, shown on page 74, and move the pointer to highlight another directory entry.

DIRECTORY MODIFICATION

- [F1] INS-CHR Inserts a "space" character between the cursor and the character to its left: the characters to the right of the cursor shift one space to the right.
- [F2] DEL-CHR Deletes the character under the flashing cursor.
- [F4] SAVE Press this key when you're done MODIFYing an entry. The display will change back to the main Directory Screen (page 74) and the entry will be stored in your Directory.
- [F5] ERASE Erases everything within the highlighted field to the right of the flashing cursor, including the character under the cursor. You must use ERASE in order to make any changes to a Phone Number or Log-On field which uses the exclamation point as a special character to 'mask' part or all of the field from view.
- [F6] HELP Displays the 'Help Window': characters having special meanings within a field are briefly explained.
- [F8] CANCEL Cancels any changes to all fields in this directory entry and displays the Screen shown on page 74, leaving the original entry still in your Directory.
- PRINT
SCREEN Prints a copy of the screen display.
- [←] Erases the character to the left of the cursor.
- [↑] Moves the pointer up one row to select and highlight the field you wish to work with. Pressing this key when the Label field is highlighted moves the pointer to the second 'subfield' of the Log-On field and highlights that field.
- [↓] Moves the pointer down one row to select and highlight the field you wish to work with. Pressing this key when the second 'subfield' of the Log-On field is highlighted moves the pointer to the Label field and highlights that field.
- [←] Moves the cursor left one column.
- [→] Moves the cursor right one column.

AUTO-DIAL/AUTO-LOG-ON DIRECTORIES

The Directory Entries shown in the Auto-Dial Screen allow you to dial a remote terminal or computer system and transmit an initial dialog, usually called a log-on, all at the push of a single key. Each Directory Entry consists of five parts:

Label	up to 7 characters long
Protected	a single character to prevent down-loading and reading of this directory entry
Configuration	a single character to specify which set of terminal configuration options will be used
Phone Number	up to 48 characters long, including special commands for pauses, tone or pulse dialing, etc.
Log-On	up to 96 characters long in two 48-character subfields, describing an automatic interactive dialog with the terminal or computer you're calling

If you're not familiar with the concept of automatic log-on, a brief overview will clarify the instructions which follow. When you call a typical computer system, you are usually required to answer two or three questions to tell the computer who you are and what you want to do. For example:

```
PrivateNet
<Connected>

What is your name?

What is your password?


1-Dec-84 16:10 EST
Welcome to Small Business PrivateNet!
Your last access was at 09:15 EST on 1-Dec-84.

What service do you wish?
```

The log-on field allows you to automate this dialog through commands which will make the Whisper Screen wait until it receives a question mark before sending your name, wait for another question mark before sending your password, etc. Sample Directories for selected computer services follow. The Special Characters used to "pace" an interactive Log-On or Function String are explained at the end of this chapter to create original directories and function strings.

Western Union EasyLink
(Access via WATS or Metropolitan Area Number)

Use this Directory to Log-On completely, including your EasyLink Password. Substitute your EasyLink User Identification for "EIDNNNNN", your EasyLink User Name for "USERNAME", and your EasyLink Password for "PASSWORD". The Exclamation Points will "hide" your password when it is sent; the "Y" in the Protected field will prevent a new directory from being "downloaded" to replace this one (or from being "interrogated"). Use the factory default settings for Configuration Group "B" (1200 baud access) or "D" (300 baud access).

Label	EZ-Log	
Protected	Y	
Configuration	B	
Phone Number	51-800-325-4112	5 = [CONTROL][D]
Log-on	)00 EIDNNNNN USERNAME.!PASSWORD!^	

0 = [CONTROL][Q] ^ = [RETURN]

Use this Directory to Log-On and "SEND" a message using the Delayed Auto-Send feature. Remember, EasyLink allows you to send several messages using "Batch Input": when you "Create" a series of sub-messages in the same "message envelope" you should separate each of the sub-messages with "LLLL" as directed in your EasyLink User Manual. Use the factory default settings for Configuration Group "B" or "D". The Equal Sign at the start of the second Log-On field switches the printer port "ON". The Vertical Bar at the end of the second Log-On field is needed to disconnect.

Label	EZ-Send	
Protected	Y	
Configuration	B	
Phone Number	51-800-325-4112	5 = [CONTROL][D]
Log-on	)00 EIDNNNNN USERNAME.!PASSWORD!^ =0/BATCH^00^MMMM^0^	

0 = [CONTROL][Q] ^ = [RETURN]

Western Union EasyLink
(Access via TYMNET Local Numbers)

Use this Directory to Log-On completely, including your EasyLink Password. Substitute your EasyLink User Identification for "EIDNNNNN", your EasyLink User Name for "USERNAME", and your EasyLink Password for "PASSWORD". The Exclamation Points will "hide" your password when it is sent; the "Y" in the Protected field will prevent a new directory from being "downloaded" to replace this one (or from being "interrogated"). Use the factory default settings for Configuration Group "B" (1200 baud access) or "D" (300 baud access).

Label	EZL-Log	
Protected	Y	
Configuration	B	
Phone Number	555-1212	Local TymNet Access Phone Number § = [CONTROL][D]
Log-on	{A: J [§] ESL [§] 00 EIDNNNNN USERNAME.!PASSWORD! [¶]	

[§] = [CONTROL][H]	[§] = [CONTROL][M]
[¶] = [CONTROL][Q]	[¶] = [RETURN]

Use this Directory to Log-On and "SEND" a message using the Delayed Auto-Send feature. Remember, EasyLink allows you to send several messages using "Batch Input": when you "Create" a series of sub-messages in the same "message envelope" you should separate each of the sub-messages with "LLLL" as directed in your EasyLink User Manual. Use the factory default settings for Configuration Group "B". The Equal Sign at the start of the second Log-On field switches the printer port "ON". The Vertical Bar at the end of the second Log-On field is needed to disconnect.

Label	EZ-Send	
Protected	Y	
Configuration	B	
Phone Number	555-1212	Local TymNet Access Phone Number § = [CONTROL][D]
Log-on	{A: J [§] ESL [§] 00 EIDNNNNN USERNAME.!PASSWORD! [¶] = [¶] /BATCH [¶] 00 [¶] MM [¶] [¶] ¶	

[§] = [CONTROL][H]	[§] = [CONTROL][M]
[¶] = [CONTROL][Q]	[¶] = [RETURN]

MCI Mail

Use this Directory to Log-On completely, including your MCI Mail Password. Substitute your MCI Mail User Name for "USERNAME", and your MCI Mail Password for "PASSWORD". The Exclamation Points will "hide" your password when it is sent; the "Y" in the Protected field will prevent a new directory from being "downloaded" to replace this one (or from being "interrogated"). Use the factory default settings for Configuration Group "A" (1200 baud access) or "C" (300 baud access).

NOTE: You may experience difficulties sending a message if you attempt to access MCI Mail through the Dow Jones News Retrieval Service. This is due to an MCI Mail requirement that your Whisper Screen's "Transmit Flow Control" Option is set to "XON/XOFF", while Dow Jones requires this same option to be set to "NONE". However, accessing Dow Jones through MCI Mail DOES NOT require the "Transmit Flow Control" Option to be set to "NONE" because MCI Mail suppresses the Control Codes which Dow Jones normally sends after every "ENTER QUERY" prompt.

Label	MCImail		
Protected	Y		
Configuration	A		
Phone Number	\$555-1212	Local MCI Mail Access Phone Number	\$ = [CONTROL][D]
Log-on	?[name:]USERNAME?[Password:]!PASSWORD! [RETURN]		
	+ = [CONTROL][+]	[= [CONTROL][M]	

GTE Telemail

Use this Directory to Log-On completely, including your Telemail Password. Substitute your Telemail User Name for "USERNAME", and your Telemail Password for "PASSWORD". The Exclamation Points will "hide" your password when it is sent; the "Y" in the Protected field will prevent a new directory from being "downloaded" to replace this one (or from being "interrogated"). Use the factory default settings for Configuration Group "A" but change the value of the "Transmit Character Rate" Option to "60" since Telemail is not able to accept input at a full 120 characters per second. If you use Configuration Group "C" for 300 baud access, change the value of the "Transmit Character Rate" Option to "20". (NOTE -- Some Telemail Subscribers must respond with "Mail" instead of "Telemail" at the "2" prompt.)

Label	Telmail		
Protected	Y		
Configuration	A		
Phone Number	\$555-1212	Local Telenet Access Phone Number	\$ = [CONTROL][D]
Log-on	?[2]=D1[2]Telemail?[?]?USERNAME?[?]?!PASSWORD! [RETURN]		
	+ = [CONTROL][+]	[= [CONTROL][M]	

OnTyme

Use this Directory to Log-On completely, including your OnTyme Password. Substitute the designated "please log in:" response for "ONTYME", your OnTyme ID for "USERNAME", and your OnTyme key for "PASSWORD". The Exclamation Points will "hide" your password when it is sent; the "Y" in the Protected field will prevent a new directory from being "downloaded" to replace this one (or from being "interrogated"). Use the factory default settings for Configuration Group "A" (1200 baud access) or "C" (300 baud access).

Label	OnTyme
Protected	Y
Configuration	A
Phone Number	555-1212 Local TYMNET Access Phone Number <u>S</u> = [CONTROL][D]
Log-on	(A):ONTYME <u>R</u> [ID?] <u>Y</u> USERNAME <u>R</u> [Key?!] <u>Y</u> PASSWORD! <u>R</u> [ACCEPTED]

R = [CONTROL][M]

Dow Jones News Retrieval Service
(Access via TYMNET Local Numbers)

Use this Directory to Log-On completely, including your Dow Jones Password. Substitute your Dow Jones Password for "PASSWORD". The Exclamation Points will "hide" your password when it is sent; the "Y" in the Protected field will prevent a new directory from being "downloaded" to replace this one (or from being "interrogated"). Use the factory default settings for Configuration Group "C" but change the value of the "Transmit Flow Control" Option to "NONE" since Dow Jones News Retrieval uses the XON and XOFF control characters in a way which prevents normal keyboard entry of commands; you may optionally change the "Modem Originate Baud Rate" to "1200". (NOTE -- Some Dow Jones Subscribers must respond with "DOW2;;" instead of "DOW1;;" to the prompt "please log in:")

Label	DJNS
Protected	Y
Configuration	C
Phone Number	555-1212 Local TYMNET Access Phone Number <u>S</u> = [CONTROL][D]
Log-on	(A): <u>R</u> DOW1;;)?DJNS <u>R</u> <u>Y</u> !PASSWORD! <u>R</u>

R = [CONTROL][R] R = [CONTROL][M] Y = [CONTROL][Q]

Dow Jones News Retrieval Service
(Access via Telenet Local Numbers)

Use this Directory to Log-On completely, including your Dow Jones Password. Substitute your Dow Jones Password for "PASSWORD". The Exclamation Points will "hide" your password when it is sent; the "Y" in the Protected field will prevent a new directory from being "downloaded" to replace this one (or from being "interrogated"). Use the factory default settings for Configuration Group "C" but change the value of the "Transmit Flow Control" Option to "NONE" since Dow Jones News Retrieval uses the XON and XOFF control characters in a way which prevents normal keyboard entry of commands; you may optionally change the "Modem Originate Baud Rate" to "1200".

Label	DJNS		
Protected	Y		
Configuration	C		
Phone Number	555-1212	Local Telenet Access Phone Number	<u>S</u> = [CONTROL][D]
Log-on	<u>R</u> <u>T</u> <u>R</u> <u>I</u> <u>M</u> <u>E</u> <u>S</u> <u>E</u> <u>:</u> <u>D</u> <u>I</u> <u>R</u> <u>E</u> <u>C</u> <u>T</u> <u>O</u> <u>R</u> <u>I</u> <u>E</u> <u>S</u> <u>:</u> <u>D</u> <u>J</u> <u>N</u> <u>S</u> <u>:</u> <u>R</u> <u>T</u> <u>R</u> <u>I</u> <u>M</u> <u>E</u> <u>S</u> <u>E</u> <u>:</u> <u>P</u> <u>A</u> <u>S</u> <u>S</u> <u>W</u> <u>O</u> <u>R</u> <u>D</u> <u>:</u> <u>R</u> <u>T</u> <u>R</u> <u>I</u> <u>M</u> <u>E</u> <u>S</u> <u>E</u> <u>:</u>		
	<u>T</u>	<u>R</u>	<u>D</u>
	<u>T</u> = [CONTROL][+]	<u>R</u> = [CONTROL][M]	<u>D</u> = [CONTROL][Q]

Dow Jones News Retrieval Service
(Access via Uninet Local Numbers)

Use this Directory to Log-On completely, including your Dow Jones Password. Substitute your Dow Jones Password for "PASSWORD". The Exclamation Points will "hide" your password when it is sent; the "Y" in the Protected field will prevent a new directory from being "downloaded" to replace this one (or from being "interrogated"). Use the factory default settings for Configuration Group "C" but change the value of the "Transmit Flow Control" Option to "NONE" since Dow Jones News Retrieval uses the XON and XOFF control characters in a way which prevents normal keyboard entry of commands; you may optionally change the "Modem Originate Baud Rate" to "1200".

Label	DJNS		
Protected	Y		
Configuration	C		
Phone Number	555-1212	Local Uninet Access Phone Number	<u>S</u> = [CONTROL][D]
Log-on	<u>R</u> <u>T</u> <u>R</u> <u>I</u> <u>M</u> <u>E</u> <u>S</u> <u>E</u> <u>:</u> <u>P</u> <u>R</u> <u>O</u> <u>F</u> <u>I</u> <u>T</u> <u>E</u> <u>S</u> <u>:</u> <u>D</u> <u>O</u> <u>W</u> <u>J</u> <u>N</u> <u>S</u> <u>:</u> <u>R</u> <u>T</u> <u>R</u> <u>I</u> <u>M</u> <u>E</u> <u>S</u> <u>E</u> <u>:</u> <u>P</u> <u>A</u> <u>S</u> <u>S</u> <u>W</u> <u>O</u> <u>R</u> <u>D</u> <u>:</u> <u>R</u> <u>T</u> <u>R</u> <u>I</u> <u>M</u> <u>E</u> <u>S</u> <u>E</u> <u>:</u>		
	<u>T</u>	<u>R</u>	<u>D</u>
	<u>T</u> = [CONTROL][+]	<u>R</u> = [CONTROL][M]	<u>D</u> = [CONTROL][Q]

NewsNET
(Access via Tymnet Local Numbers)

Use this Directory to Log-On completely, including your NewsNET Password. Substitute your NewsNET ID for "NETxxxxx", your NewsNET Password for "PASSWORD". The Exclamation Points will "hide" your password when it is sent; the "Y" in the Protected field will prevent a new directory from being "downloaded" to replace this one (or from being "interrogated"). Use the factory default settings for Configuration Group "A" (1200 baud access) or "C" (300 baud access).

Label	NewsNET	
Protected	Y	
Configuration	A	
Phone Number	555-1212	Local Tymnet Access Phone Number § = [CONTROL][D]
Log-on	(A):NET§>>ID NETxxxxx !PASSWORD!§ [---]	
	§	= [CONTROL][M]

NewsNET
(Access via Telenet Local Numbers)

Use this Directory to Log-On completely, including your NewsNET Password. Substitute your NewsNET ID for "NETxxxxx", your NewsNET Password for "PASSWORD". The Exclamation Points will "hide" your password when it is sent; the "Y" in the Protected field will prevent a new directory from being "downloaded" to replace this one (or from being "interrogated"). Use the factory default settings for Configuration Group "A" (1200 baud access) or "C" (300 baud access).

Label	NewsNET	
Protected	Y	
Configuration	A	
Phone Number	555-1212	Local Telenet Access Phone Number § = [CONTROL][D]
Log-on	§(§)=D(§)2C 21566§>>ID NETxxxxx !PASSWORD!§ [---]	
	¶	= [CONTROL][+]
	§	= [CONTROL][M]

NewsNET
(Access via Uninet Local Numbers)

Use this Directory to Log-On completely, including your NewsNET Password. Substitute your NewsNET ID for "NETxxxxx", your NewsNET Password for "PASSWORD". The Exclamation Points will "hide" your password when it is sent; the "Y" in the Protected field will prevent a new directory from being "downloaded" to replace this one (or from being "interrogated"). Use the factory default settings for Configuration Group "A" (1200 baud access) or "C" (300 baud access).

Label	NewsNET	
Protected	Y	
Configuration	A	
Phone Number	\$555-1212 Local Uninet Access Phone Number	\$ = [CONTROL][D]
Log-on	*R+*R):PROF3\$):NET\$>ID NETxxxxx !PASSWORD:Q [-->]	
	+ = [CONTROL][+]	\$ = [CONTROL][M]

Direct Dial to another Whisper Screen
(or compatible teleterminal)

This directory can be used, or adapted, to call another teleterminal, using either the Delayed Auto-Send feature or the "Auto-Dial And Send" Screen. The Equal Sign at the start of the Log-On field switches the printer port "ON". A five second delay is included to allow time for the distant teleterminal to automatically send its answerback. Since some terminals may have an answerback but may not send it automatically when they answer, the log-on sends a Control-E to make sure you have a printed record of the answerback; the five second pause is included to allow time for the distant teleterminal to respond with its answerback. The Dotted Equal Sign is a special command character which causes your Whisper Screen to send its own answerback. The special command ">00" causes the Whisper Screen to send the message at this point during the "log-on". Normally, the answerbacks are exchanged again at the end of a transmission, but you may eliminate final exchange if you wish. The directory log-on concludes with the special command character "I" which causes the Whisper Screen to disconnect.

Label	DDDterm		
Protected	Y		
Configuration	B		
Phone Number	555-1212	Direct Dial Number of the Terminal	$\underline{\underline{E}}$ = [CONTROL][D]
Log-on	555-1212		

$\underline{\underline{E}}$ = [CONTROL][E] $\backslash$ = [RETURN] $\equiv$ = [HERE IS]

FUNCTIONS		
1	MailBox	/MBX
2	ScanMBX	/SCAN
3	Read -	/READ
4	StorMsg	012[95]01
5	X-Off	03
6	X-On	01
7	LineDEL	02
8	Quit!	/QUIT[95]1
9	5Stocks	//CQKJ1,ROK UTX LK CQ BA
10	Disc!	DISC[TIME]~5~1
11	Samples	LIBRARY[--]HELP
12	XOff!	OFF[Wait...]~5~1

Memory Available: 18,500 Characters

1:41 PM CONFIG A - OFFLINE LOWER CASE 4.00

☐ ☐ ☐ DELETE A c ☐ MODIFY ☐ EXIT

Use the Functions Screen Family to add, delete or change function strings. Use the [↑] and [↓] cursor control keys to select a particular function string before you try to MODIFY or DELETE it.

A function string may be a sequence of characters, or it may be one or more commands. Instead of typing frequently used commands, you may find it convenient to store them once as labeled function strings and send them by pressing a single Soft Key: when the Whisper Screen is On-Line, the function strings you've defined will be available in the left-hand group of "On-Line Soft Keys" (four "new" Labels appear each time you press the [NEXT] Key).

[F4] DELETE Use this key to erase a function string. Move the pointer, by using the [↑] and [↓] keys, to highlight the function string you want to erase. Then press [F4] to display the soft key labels for the Function String Deletion Screen (opposite page).

[F6] MODIFY Displays the Function Modification Screen, shown on page 88. Press this Key if you want to create or change a function string.

[F8] EXIT Displays the Set-Up Menu Screen.

PRINT
SCREEN Prints a copy of the screen display.

[↑] Moves the pointer up to select and highlight a function string.

[↓] Moves the pointer down to select and highlight a function string.

FUNCTION STRING DELETION

FUNCTIONS		
1	MailBox	/MBX ^M
2	ScanMBX	/SCAN ^M
3	Read -	/READ
4	StorMsg	012[^M] ^M
5	X-Off	^M
6	X-On	^M
7	LineDEL	^M
8	Quit!	/QUIT ^M [^M]
9	5Stocks	//CQ ^M 0,ROK UTX LK CQ BA ^M
10	Disc!	DISC ^M [TIME] ^M ,~5 ^M !
11	Samples	LIBRARY ^M [-->]HELP ^M
12	XOff!	OFF ^M [Wait...] ^M 5 ^M !

Memory Available: 18,500 Characters

1:41 PM CONFIG A - OFFLINE LOWER CASE 4.00

☐ ☐ ☐ ☐ DELETE ? A c ☐ YES ☐ NO

This Function Screen lets you permanently erase one of the twelve labeled function strings. Select the function string you want to erase by using the soft keys in the previous Functions Screen (page 80). If the Status Field says "DELETE ?", then pressing the [F6] YES Soft Key will erase the highlighted function string. Press the [F8] NO Soft Key if you accidentally choose the wrong function string or change your mind and don't want to erase the highlighted string after all.

[F6] YES Confirm your request to delete the highlighted function string by pressing this key. After deletion, the Soft Key labels on page 86 are restored.

[F8] NO Press this key to cancel your request to delete the highlighted function string. The Soft Key labels on page 86 are restored.

FUNCTION MODIFICATION

FUNCTION MODIFICATION

12

Off!

OFF&(Wait...)~5~!

(Wait for any Rcvd Data)k Wait for character k [k...k] Wait for String k...k + Enable Wait Timeout CTL =(+) Pause 1 Second ~n Pause n Seconds CTL ;(φ) Stop	! Mask Characters from View ^k Send character k \nn Go to Function nn >nn Transmit Message nn @nn...@ Receive Data into Message nn = Toggle Printer Port Disconnect	
---	--	--

Number 12
 Label

Off!

 Protected
 >String

OFF&(Wait...)~5~!

1:41 PM CONFIG A - OFFLINE
 INS-CHR DEL CHR SAVE

LOWER CASE 4.00
 A c ERASE HELP CANCEL

The Function Modification Screen lets you enter, change, or erase the information in one function string. Use the UP and DOWN soft keys or the [↑] and [↓] cursor control keys to move the 'pointer' (>) and highlight the field you wish to change. Part or all of the String field can be 'masked' from view.

The Label field will accept any seven printing characters: the Whisper Screen will display the status message "invalid key" and ignore any control characters you type.

The Protected field is used to enable or disable the Whisper Screen's down-load programming capability for this function string. Pressing the [Y] or [*] keys when this field is highlighted prevents any remote terminal or computer from changing or even reading this function string. Leaving the field "blank", pressing the [N] key, or pressing the ERASE soft key, allows special remote terminals or computers to change or create this function string for you and to read this string and its label to verify that they were correctly down-loaded.

The String field accepts up to 64 characters, and function strings may be 'linked' to each other, allowing you to create even longer strings which can be sent by pressing a single soft key: press the HELP soft key for additional information.

You may change any one or all three fields, but you can only work on one function string at a time. To work on a different function string you will have to return to the main Functions Screen, shown on page 86, and move the pointer to highlight another function string.

FUNCTION MODIFICATION

- [F1] INS-CHR Inserts a "space" character between the cursor and the character to its left: the characters to the right of the cursor shift one space to the right.
- [F2] DEL-CHR Deletes the character under the flashing cursor.
- [F4] SAVE Press this key when you're done MODIFYing a function string. The display will change back to the main Functions Screen (page 86) and the function string will be stored in memory.
- [F5] ERASE Erases everything within the highlighted field to the right of the flashing cursor, including the character under the cursor. You must use ERASE in order to make any changes to a String field which uses the exclamation point as a special character to 'mask' part or all of the field from view.
- [F6] HELP Displays the 'Help Window': characters which have special meanings within a field are explained.
- [F8] CANCEL Cancels any changes to all fields in this function string and displays the Screen shown on page 86, leaving the original function string still in memory.
- PRINT
SCREEN Prints a copy of the screen display.
- [↑] Moves the pointer up one row to select and highlight the field you wish to work with. Pressing this key when the Label field is highlighted moves the pointer to the String field and highlights that field.
- [↓] Moves the pointer down one row to select and highlight the field you wish to work with. Pressing this key when the String field is highlighted moves the pointer to the Label field and highlights that field.
- [←] Moves the cursor left one column.
- [→] Moves the cursor right one column.

CUSTOM FUNCTION STRINGS

For most Whisper Screen users, the Function Strings will serve as a convenient way to send frequently used computer commands.

There are three parts to a Function String:

Label	up to 7 characters long
Protected	a single character to prevent down-loading and reading of this function string
String	up to 64 characters long which may describe either an automatic interactive dialog with the remote terminal or computer, or a frequently used command or word.

If you're not familiar with the concept of automatic interactive dialogs, a brief overview may help you to use Function Strings effectively. After you have completed a manual or automatic log-on, you can send information to the computer system (e.g., electronic mail messages) or retrieve information from the computer system (e.g., quarterly sales performance report). You are usually required to answer a series of questions to tell the computer what you want to do. For example:

```
What service do you wish? EMAIL

SCAN the 2 unread messages in your INBOX? No

Command: DRAFT!

creating workspace for DRAFT message ... one moment please ...

To: NORTHEAST.REPS
CC: NORTHEAST.MGMT
Subject: Quarterly Sales Forecast

Enter text:
```

If you often send messages to "NORTHEAST.REPS" with a courtesy copy to "NORTHEAST.MGMT", a function string would allow you to automate this dialog through a combination of normal text and special command characters. When you press one of the left-hand Soft Keys, the Whisper Screen would send the "EMAIL" request, wait until it receives a question mark before declining the invitation to SCAN the INBOX, wait for the prompt "Command:" before sending the string "DRAFT!", wait for the prompt "To:" before sending the string "NORTHEAST.REPS", and wait for the prompt "CC:" before sending the string "NORTHEAST.MGMT"; you would then type the subject or send a message (created off-line in the Whisper Screen's text editor) which includes the appropriate subject. Sample Function Strings for selected computer services follow. The Special Characters used to "pace" an interactive Log-On or Function String are explained at the end of this chapter so you may create original directories and function strings.

Western Union EasyLink

Label MailBox
Protected N
String /MBXN

N = [RETURN]

Label ScanMBX
Protected N
String /SCANN

N = [RETURN]

The next string doesn't end with the usual "N" symbol so that you can type the number or range of numbers of the message(s) you want to read. Press the [RETURN] key after you type the number(s).

Label Read -
Protected N
String /READ

The next string "opens" a specific message "envelope" and waits for an uncommon pair of control characters to "close" the envelope and stop recording; the Whisper Screen will continue recording until you press the [NEXT] key; until you disconnect (using [SHIFT][F8]); or until the exact character sequence is detected.

Label StorMsg
Protected N
String @i2[PE]@

P = [CONTROL][P] E = [CONTROL][D]

Label X-Off
Protected N
String D₃

D₃ = [CONTROL][S]

Label X-On
Protected N
String D₁

D₁ = [CONTROL][Q]

Label LineDEL
Protected N
String C_N

C_N = [CONTROL][X]

The next String not only sends the command to "quit" EasyLink, it also "looks" for a special character sequence: when the two control characters are detected the Whisper Screen will disconnect from the phone line.

Label Quit
Protected N
String /QUITN[PE]

N = [RETURN] P = [CONTROL][P] E = [CONTROL][D]

MCI Mail

Label Menu
Protected N
String MENUM

M = [CONTROL][M]

Label Help
Protected N
String HELP

P = [CONTROL][M]

Label Create
Protected N
String CREAT

T = [CONTROL][M]

Label Read
Protected N
String READ

D = [CONTROL][M]

The next string "opens" a specific message "envelope" and waits for an uncommon pair of control characters to "close" the envelope and stop recording. By choosing such an uncommon pair, the Whisper Screen will continue recording until you press the [NEXT] key; until you disconnect (using [SHIFT][F8]), or until the exact character sequence is detected. Because MCI Mail uses a Terminal Configuration in which the "Local Echo (Duplex)" Option is not set to "ON (Half)", we can use the flow control characters to temporarily suspend any data coming from MCI Mail during the short time it takes for the Whisper Screen to "open" a "message envelope" and begin recording.

Label StorMsg
Protected N
String S012S[R]S

S = [CONTROL][S] 0 = [CONTROL][Q] S = [CONTROL][P] S = [CONTROL][D]

Label X-Off
Protected N
String S

S = [CONTROL][S]

Label X-On
Protected N
String 0

0 = [CONTROL][Q]

Label LineDEL
Protected N
String X

X = [CONTROL][X]

Telemail

Label Scan
Protected N
String SCAN_␣

_␣ = [CONTROL][M]

The next string doesn't end with the usual "_␣" symbol so that you can type the number or range of numbers of the message(s) you want to read. Press the [RETURN] key after you type the number(s).

Label Read -
Protected N
String /READ

Label Compose
Protected N
String COMPOSE_␣

_␣ = [CONTROL][M]

Label Forward
Protected N
String FORWARD_␣

_␣ = [CONTROL][M]

Label Answer
Protected N
String ANSWER_␣

_␣ = [CONTROL][M]

The next string uses Telemail's distribution list feature. If you send frequent messages to a distribution list (or even to a particular individual) you may benefit by creating a string which includes both the command to compose and the name of the primary recipient(s), plus the names of any "courtesy copy" recipients.

Label D.List
Protected N
String COMPOSE_␣:DISTRIBUTION.LIST_␣:YOUR.NAME_␣

_␣ = [CONTROL][M]

Label X-Off
Protected N
String _␣

_␣ = [CONTROL][S]

Label X-On
Protected N
String _␣

_␣ = [CONTROL][Q]

Label LineDEL
Protected N
String _␣

_␣ = [CONTROL][X]

OnType

Label Scan In
Protected N
String :INQ

Q = [CONTROL][M]

Label ScanOut
Protected N
String :OUTQ

Q = [CONTROL][M]

The next string doesn't end with the usual "Q" symbol so that you can type the five-digit message number (from your ":IN" or "IN OLD" list) which you want to read. Press the [RETURN] key after you type the number.

Label Read -
Protected N
String :READ

Label ReadAll
Protected N
String :READ ALLQ

Q = [CONTROL][M]

Label Memo
Protected N
String :MEMOQ

Q = [CONTROL][M]

Label WordDEL
Protected N
String E_B

E_B = [CONTROL][W]

Label LineDEL
Protected N
String O₁

O₁ = [CONTROL][Q]

Dow Jones News Retrieval Service

Label Menu
Protected N
String //MENUR

R = [CONTROL][M]

Label 5Stocks
Protected N
String //CQRD,ROK UTX LK CQ BAR

R = [CONTROL][M] D = [CONTROL][Q]

Label DJNews
Protected N
String //DJNEWSRD.1/TEL 01R

R = [CONTROL][M] D = [CONTROL][Q]

Label Journal
Protected N
String //WSJR

R = [CONTROL][M]

Label Update
Protected N
String //UPDATER

R = [CONTROL][M]

Label Symbols
Protected N
String //SYMBOLR

R = [CONTROL][M]

Label WrldRpt
Protected N
String //NEWSR

R = [CONTROL][M]

Label Weather
Protected N
String //WTHRR

R = [CONTROL][M]

Label Quit DJ
Protected N
String DISCR(TIME)),~5~|

R = [CONTROL][M]

NewsNET

Label Cmd Lvl
Protected N
String QUIT_Q

_Q = [CONTROL][M]

Label Back
Protected N
String BACK_Q

_Q = [CONTROL][M]

Label Halt
Protected N
String _H

_H = [CONTROL][P]

Label LogOff!
Protected N
String OFF_Q(Wait...))_H

_Q = [CONTROL][M]

Label Samples
Protected N
String LIBRARY_Q(-->)HELP_Q

_Q = [CONTROL][M]

Label NewSrcs
Protected N
String READ PB99_Q

_Q = [CONTROL][M]

Label Prices
Protected N
String PRICES_Q

_Q = [CONTROL][M]

Label Index
Protected N
String INDEX_Q

_Q = [CONTROL][M]

Label Flash
Protected N
String FLASH_Q(-->)NOTICES_Q

_Q = [CONTROL][M]

Label HELP
Protected N
String HELP_Q

_Q = [CONTROL][M]

Special Command Characters for Log-Ons and Function Strings

Thirteen of the 128 possible characters in the ASCII code have special significance to the Whisper Screen and are used as internal commands: without these Command Characters it would not be possible to provide directory log-ons, interactive function strings and "second stage" automatic sign-ons. You may still send these thirteen ASCII characters to a computer, but you must precede them with the circumflex character (^) or they will be interpreted as commands rather than characters to be sent. The thirteen Command Characters are described in detail here, and they are briefly explained in the 'Help Window' available to you by pressing the [F6] HELP Soft Key.

- (The LEFT CURLY BRACKET means that the Whisper Screen should wait for ANY character received from a computer before sending the next character(s) in the log-on or function string. An easy way to remember how to use the Left Curly Bracket might be to think of it as being open to whatever the next character might be, since the left curly bracket has an opening on its right side:
 (WAITED FOR ANY CHARACTER
This would cause the Whisper Screen to wait until it receives ANY character -- it won't care which one -- before it begins to send the sequence:
 WAITED FOR ANY CHARACTER
-)k The RIGHT CURLY BRACKET means that the Whisper Screen should wait for the SPECIFIED character from a computer before sending the next character(s) in the log-on or function string. An easy way to remember how to use the Right Curly Bracket might be to think of it as pointing to the character for which it is waiting, since the right curly bracket has a point on its right side:
)?WAITED FOR QUESTION MARK
This would cause the Whisper Screen to wait for the Question Mark before it begins to send the sequence:
 WAITED FOR QUESTION MARK
- [k...k] The SQUARE BRACKETS surround a word or "string" of characters which must be received EXACTLY as you type them before the next part of the log-on or function string will continue. You can follow the string search by characters to transmit or by another special command character.
 [PASSWORD] will wait for the capitalized spelling while [password] will wait for an all lower case spelling.
- + The PLUS SIGN is used to start a log-on or function string "timer": the next "wait for" command must be received within FIVE minutes or the Whisper Screen will hang up. The "wait for" commands include:
 - (Wait for ANY Received Data
 -)k Wait for Specific Character, k
 - [k...k] Wait for Specific String, k...k
- ⋄ The special DOTTED PLUS SIGN character is generated by [CONTROL][=]. It's used to create a one-second pause in the log-on or function string, just as it does in the Message Editor.
- ~n~ The TILDE or "Squiggly-Line" creates a Time Delay when it brackets a one- or two-digit number: ~3~ means pause for 3 seconds before continuing with the next part of the log-on or function string. The maximum delay is 99 seconds.
- φ The Greek symbol PHI, generated by [CONTROL][;], creates a "local stop" condition in the log-on or function string: the remainder of the string will not proceed until you press the [NEXT] key, although you may continue to receive information and prompts for Keyboard (or automatic) responses from the remote computer system. The Status Message "STOPPED" will remind you that the string has been suspended by the "local stop" character.

- ! The EXCLAMATION POINT can hide selected characters in your log-on or function string by substituting a Period for each character typed between Exclamation Points. After the [F4] Soft Key is pressed to SAVE the log-on or function string,
!password! would print as !.....!
An unpaired exclamation point will display periods in all the remaining positions of the log-on or function string.
- ^ The CIRCUMFLEX character, generated by [SHIFT][6], is used to send one of the special command characters as part of an interactive sign-on response: typing the circumflex immediately in front of a special character causes the Whisper Screen to send that character rather than interpret it as an internal command:
^! sends the exclamation point instead of masking the characters in the string.
^^ sends the circumflex character itself.
- \nn The REVERSE SOLIDUS symbol followed by a two-digit number between 01 and 12 instructs the Whisper Screen to send the numbered function string. YOU MUST REMEMBER TO USE A "0" (zero) IN FRONT OF FUNCTION STRINGS 1 THROUGH 9. This command sequence is intended to form a "link" between one log-on or function string and one or more function strings in a "chain". If a valid function number follows the reverse solidus symbol, that function string is sent and any remaining commands or "normal" characters in the log-on or function string are ignored: therefore, use this command character only when you run out of room in the log-on or string field. The ENTIRE 3-character command sequence must fit within the log-on or string or the attempted "link" will not succeed because the Whisper Screen can't determine which of the nine function strings starting with "0" (or three function strings starting with "1") you wish to send next: the Status Message "Error 10" will be displayed when you try to link with any function string specified by a single digit. DO NOT "LINK" A FUNCTION STRING TO ITSELF -- strange things may happen if you do!
- >nn The GREATER THAN symbol followed by a two-digit number between 01 and 24 instructs the Whisper Screen to transmit the numbered Message. Message number "00" is a special case: it represents whatever message number was created or selected before you pressed the SEND Soft Key. The Whisper Screen will accept a string created with an incorrectly specified message, but will display the Status Message "ERROR 10" when it tries to send the message; the Whisper Screen will still attempt to send the remainder (if any) of the string. Any Message number may be specified, even if it does not really exist: the Whisper Screen will display the Status Message "MSG EMPTY" when it tries to send the message but will continue to send the remainder (if any) of the string.
- @nn...@ The COMMERCIAL AT symbol followed by a two-digit number between 01 and 24 instructs the Whisper Screen to store all characters which are subsequently received (or typed) in the numbered Message. Only one message memory may be "open" at a time, since the commercial at symbol (by itself this time) is also used to "close" a message. You may even continue an interactive dialog after "opening" a message memory: the special command characters are still valid, except for the "Send Message" command sequence ">nn". The message remains "open" until the last character of the log-on or function string, at which time it automatically "closes": if you wish to continue recording after the "end" of the string, use the LOCAL STOP command character ("⌘") or a rare character sequence (e.g., [95]).
Be careful about opening a message memory in one "link" and closing it in another "link" when "chaining" function strings: you could have unexpected results if the "closing" @-symbol in one of the "links" was followed by two digits which you actually wanted to transmit as text!.
- = The EQUAL sign is used to "toggle" the Printer Port ON or OFF as needed during a string: the first occurrence in the string will turn the port ON, the second occurrence will turn it OFF, and the next occurrence will turn it back on, etc..

The VERTICAL BAR symbol is used to send a disconnect command to the Whisper Screen's internal modem. The most common use of this command character is at the end of a string you use to terminate a computer session, e.g., "BYE]" or "LOGOUT]21". This symbol should also be included at the end of a string used to auto-send one or more messages to a computerized message system which requires an interactive sign-off procedure but which doesn't automatically disconnect. The Status Message "DISCONNECTED" confirms that the disconnect command has been performed: any text or command character sequences in the string after the vertical bar will not be sent. (Remember to press the [F8] EXIT soft key to leave the Disconnected Screen.)

Never include a multiple-character command which will not fit entirely within the 64 characters allowed for the Function String field, or within the 48 characters allowed for each of the two Directory Log-on fields.

You can make minor corrections to a string using the [◀] (Backspace) key or the [F1] INS-CHR and [F2] DEL-CHR Soft Keys. However, you must use the ERASE Soft Key to correctly MODIFY a String which includes one or more protected areas. When you have finished making any changes to the field and the entire sequence appears to be correct, press the [F4] SAVE Soft Key to store it in memory.

Control Characters

The Control Characters (Control-A through Control-Z, plus about 7 others) are printed as special two letter abbreviations compressed to fit into the space of a single character. The keyboard locations of some control characters and special graphics characters are not obvious:

F _S	File Separator	[CONTROL][,]
G _S	Group Separator	[CONTROL][-]
R _S	Record Separator	[CONTROL][.]
U _S	Unit Separator	[CONTROL][/]
⏏	Pause One Second	[CONTROL][=]
⏏	Local Stop	[CONTROL][;]

Some users may be familiar with another 3M communications terminal, the Whisper Writer (a thermal teleprinter). The Whisper Writer's keyboard uses the [CONTROL] key and the numeric keys [1] through [0] to generate some of the characters which have special meanings in a function string. Although the Whisper Screen has separate keys for characters which must be generated using the [CONTROL] key in a Whisper Writer, we have included the [CONTROL]-numerics in the Whisper Screen to retain compatibility:

{	Left Curly Bracket	[CONTROL][1]
}	Right Curly Bracket	[CONTROL][2]
[	Left Square Bracket	[CONTROL][3]
]	Right Square Bracket	[CONTROL][4]
	Vertical Bar	[CONTROL][5]
\	Reverse Solidus	[CONTROL][6]
~	Tilde	[CONTROL][7]
`	Grave Accent	[CONTROL][8]
␣	Delete	[CONTROL][9]
␣	Null	[CONTROL][0]

To store a "pure" Carriage Return as part of the function string or directory log-on you must use [CONTROL][M], not [RETURN]: pressing the [RETURN] key will store the "NEW LINE" symbol ($\backslash$). This special symbol will be interpreted according to the value of the "Return Key Transmits" Option at the time it is sent.

CR	sends only a Carriage Return (Control-M).
CR/TIME	sends a Carriage Return plus one quarter second of time delay.
CR/LF	sends both a Carriage Return and a Line Feed (Control-M and Control-J).
CR/LF/TIME	sends both a Carriage Return and a Line Feed (Control-M and Control-J) plus one quarter second of time delay

CHAPTER 9: ADVANCED TOPICS

The Whisper Screen is capable of many unattended operations. Most owners will use the feature which permits the Whisper Screen to auto-answer and record incoming messages into memory, print them on an attached printer, or both. Polling and Delayed Auto-Send are two features which you may find useful, but which require a bit of explanation and experimentation before they can be used effectively.

Delayed Auto-Send

Some owners may find the Whisper Screen's Delayed Auto-Send feature can save them a significant amount of money each month in connect time charges when sending to services which offer discounts for "off-peak" usage (usually beginning after 6:00 PM, 11:00 PM, or 12:00 AM in the user's local time zone). When the time according to the Whisper Screen's internal clock matches the "Transmit Time" in the Message Header, the Whisper Screen will "take control" and send the message using the Directory specified in the same Message Header.

You may continue to use the Whisper Screen for other activities until the actual "Transmit Time". Normally, this causes no conflict since you will usually schedule a Delayed Auto-Send for a time when you are not in attendance at the Whisper Screen (e.g, after normal business hours). If you should happen to be composing a message when the Delayed Auto Send feature is activated, your incomplete message is automatically saved and you may finish working on it after the Whisper Screen is through sending the scheduled message. Therefore, we recommend composing a Delayed Auto-Send message BEFORE setting the "Transmit Time" in its Message Header: if you don't follow this advice, you could find that the Whisper Screen has taken control and sent an unfinished message!

The Directory Log-on sequence used for Delayed Auto-Send must include the special command characters ">00" to actually send the message: since many Whisper Screen users will send messages to electronic mail systems which require a log-on, the Directory Log-on sequence must specify exactly when the message should be sent and any sign-off sequences which may be required. Remember that the Whisper Screen "CREATES" messages in the first unused "message envelope": the special command characters ">00" will refer to a "created" message scheduled for Delayed Auto-Sending so that you won't have to continually change your Directory Log-on. The following Sample Directories for Western Union EasyLink and a Direct Dial Teleterminal illustrate the use of this "dummy" message number.

Label	EZ-Send	
Protected	Y	
Configuration	B	
Phone Number	555-1212	Local Tymnet Access Phone Number § = [CONTROL][D]
Log-on	{A: [ESL]00 EIDNNNNN USERNAME.!PASSWORD!\n=>[BATCH]00[MM]0}	
		§ = [CONTROL][H] § = [CONTROL][M]
		[] = [CONTROL][Q] \n = [RETURN]

Label	EZ-Send	
Protected	Y	
Configuration	B	
Phone Number	\$1-800-325-4112	WATS Access Phone Number \$ = [CONTROL][D]
Log-on	)P,00 EIDNNNNN USERNAME.!PASSWORD!M =)P,/BATCHM)00MNNM)P,1	
	P = [CONTROL][Q]	M = [RETURN]

Label	DDDterm		
Protected	Y		
Configuration	B		
Phone Number	<u>\$</u> 1-900-555-1212 Direct Distance Dial Number		<u>\$</u> = [CONTROL][D]
Log-on	=^5 <u>\$</u> ^5^N <u>L</u> 00 <u>N</u> = <u>\$</u> ^5^I		
	<u>\$</u> = [CONTROL][E]	<u>N</u> = [RETURN]	<u>=</u> = [HERE IS]

NOTE: For the details of the interactive log-ons described above, please refer to the identical Sample Directories in Chapter 8.

A message may be sent and still be listed as "unsuccessful" in the Message Index Screen since a "successful" message is one in which the Log-On is completely finished: this is usually caused by a Log-on success which is still "waiting" for a character when the remote terminal or computer disconnects, or when the Whisper Screen's own "Inactivity Disconnect Timer" runs out and the Whisper Screen disconnects. All Directory Log-ons which will be used with Delayed Auto-Send messages should be carefully tested to ensure that they work as you expect by "scheduling" the delayed auto-send for a time which is a few minutes ahead of the time currently displayed in the Expanded Status Line of your Whisper Screen. Unless the message MUST be delivered by some "deadline", the "# of Retries" should be limited 1 or 2 attempts to avoid multiple messages being sent (and any message charges incurred) by an improperly designed log-on: this is considered "operator error" under the terms of your warranty.

MESSAGE HEADER MODIFICATION

Directory (1 - 14) to use for Automatic Sending

Number	2
Label	DelayedSnd
Right Margin	80
>Directory	1
Transmit Time	12:00 AM
# of Retries	0
Polling (Y/N)?	
Polling Code	

12:37 PM CONFIG A - OFFLINE

INS-CHR DEL-CHR SAVE

LOWER CASE 4.00

A ERASE HELP CANCEL

- [F1] INS-CHR Inserts a "space" character between the cursor and the character to its left: the characters to the right of the cursor shift one space to the right.
- [F2] DEL-CHR Deletes the character under the flashing cursor.
- [F4] SAVE Press this Key when you're done modifying a header. The display will jump to one of the two Message Index Screens and the header modifications will be stored in memory. Saving a header erases any previous Time/Date Stamp and activity identifier (R2, S2, P2, or U2).
- [F5] ERASE Erases everything within the "Directory" field to the right of the flashing cursor, including the character under the cursor.
- [F6] HELP Displays the Help Window for the "Directory" field.
- [F8] CANCEL Exits the Message Header Modification Screen without altering the current header information. Part 1 or Part 2 of the Message Index Screen is displayed, highlighting the unchanged message header.
- [←] Erases the character to the left of the cursor.
- [↑] Moves the pointer UP to select and highlight the field you wish to work with.
- [↓] Moves the pointer DOWN to select and highlight the field you wish to work with.
- [←] Moves the cursor left one column.
- [→] Moves the cursor right one column.

MESSAGE HEADER MODIFICATION

Sends Message Automatically at Specified Time

Number	2
Label	DelayedSnd
Right Margin	80
Directory	1
>Transmit Time	12:00 AM
# of Retries	0
Polling (Y/N)?	
Polling Code	

12:37 PM CONFIG A - OFFLINE

12:37 PM MINUTE MIDNITE SAVE

LOWER CASE 4.00

A c ERASE HELP CANCEL

- [F1] HOUR Allows you to select the hour for the Delayed Auto-Send Transmit Time.
- [F2] MINUTE Allows you to select the minute for the Delayed Auto-Send Transmit Time.
- [F3] MIDNITE The label for this key appears only when the Transmit Time field is highlighted. This key sets the Delayed Auto-Send Transmit Time field to 12:00 AM, midnight, according to the Whisper Screen's internal clock: most services which offer reduced rates usually do so around 6:00 PM, 11:00 PM, or 12:00 AM.
- [F4] SAVE Press this key when you're done modifying a header. The display will jump to one of the two Message Index Screens and the header modifications will be stored in memory. Saving a header erases any previous Time/Date Stamp and activity identifier (R2, S2, P2, or U2).
- [F5] ERASE Erases everything within the "Transmit Time" field.
- [F6] HELP Displays the Help Window for the "Transmit Time" field.
- [F8] CANCEL Exits the Message Header Modification Screen without altering the current header information. Part 1 or Part 2 of the Message Index Screen is displayed, highlighting the unchanged message header.
- [↑] Moves the pointer UP to select and highlight the field you wish to work with.
- [↓] Moves the pointer DOWN to select and highlight the field you wish to work with.

MESSAGE HEADER MODIFICATION

Number of Times Terminal will try to Send
Message if Unsuccessful on First Attempt

Number	2
Label	DelayedSnd
Right Margin	80
Directory	1
Transmit Time	12:00 AM
># of Retries	0

Polling (Y/N)?
Polling Code

12:37 PM CONFIG A - OFFLINE

INS-CHR DEL-CHR SAVE

LOWER CASE 4.00

A c ERASE HELP CANCEL

- [F1] INS-CHR Effectively erases the "# of Retries" field since it "inserts" a space into a single-character field.
- [F2] DEL-CHR Deletes the character under the flashing cursor.
- [F4] SAVE Press this key when you're done modifying a header. The display will jump to one of the two Message Index Screens and the header modifications will be stored in memory. Saving a header erases any previous Time/Date Stamp and activity identifier (R2, S2, P2, or U2).
- [F5] ERASE Erases everything within the highlighted header field to the right of the flashing cursor, including the character under the cursor.
- [F6] HELP Displays the Help Window for the highlighted field.
- [F8] CANCEL Exits the Message Header Modification Screen without altering the current header information. Part 1 or Part 2 of the Message Index Screen is displayed, highlighting the unchanged message header.
- [↑] Moves the pointer UP to select and highlight the field you wish to work with.
- [↓] Moves the pointer DOWN to select and highlight the field you wish to work with.

Polling

Almost any business can benefit from the Whisper Screen's Polling feature. You can "broadcast" general interest information to anyone who calls your terminal: "Take advantage of our REDUCED Quantity Pricing on Widgets during the month of August"; "For Urgent Messages over the holiday weekend, please re-transmit to 900-555-1212"; etc. You can also "restrict" access to a confidential message by requiring a special three-character "polling code" for messages such as these: "John -- Your November Sales Figures are needed by the 5th of December!"; "Mark -- Call me regarding your commission payments"; etc. Some businesses may find that the Whisper Screen's "Poll Once" feature allows them to shift the cost of sending messages to the "home office", since there may be unused WATS capacity which could result in lower overall message costs.

Polling is a feature which works only when the Whisper Screen has automatically answered a call. If you wish to have a printed record of all "polled" messages as they are transmitted, you must connect a printer to the Whisper Screen. In addition, the following Terminal Configuration Options must be set to the values indicated:

Options Part 1 of 3 - Common

Auto Answer Incoming Calls	YES
Auto Answer Received Data	PRINTER (or BOTH)
Auto Answer Configuration	B

Options Part 2 of 3 - Group B

Local Echo (Duplex)	ON (Half)
Transmit Flow Control	XON/XOFF

Options Part 3 of 3 - Group B

Return Key Transmits	CR/LF
----------------------	-------

Auto Answer Received Messages (labeled "RCVD MSG" and "stamped" with the date and time they were received) are not pollable until you modify the Message Header to permit polling: these messages were sent to YOU and may have confidential information. Your received messages may still be sent manually by pressing the [F3] SEND Soft Key in the Message Index Screen, even without modifying the Message Header.

MESSAGE INDEX - PART 1 of 2

	Label	Rt Mrgn	Delayed Dir	Auto-Send Time	Retry	---Polling--- ? Code Nbr	Date / Time	Mem Used
1	USER MSG	72						03%
2	USER MSG	80						03%
3	Brnch Rpt	80						04%
4	Price Chng	80				YES 02	P2NOV 12 10:30 PM	04%
5								
6								
7								
8								
9								
10								
11	RCVD MSG	<>					R2NOV 13 2:25 AM	05%
12	RCVD MSG	<>					R2NOV 12 11:45 PM	15%

Memory Available: 6 Messages; 5,400 Characters

Press the NEXT key for more messages

10:20 AM
CONFIG A - OFFLINE
LOWER CASE
4.00

CREATE ☐ SEND
DELETE
A c MOD HDR EDIT
PRINT EXIT

When your Whisper Screen successfully completes the transmission of a pollable message, the "Polling Nbr" value in the Message Index Screen is increased by 1 and the Date and Time the message was polled is displayed, along with the "polled at" activity identifier "P2". If the telephone connection is broken during polling, the "Polling Nbr" value of an incompletely transmitted message will not be increased, but the Date and Time that the telephone connection was lost will be displayed in the Message Index (along with the "unsuccessful" activity identifier "U2"). The Date and Time fields of other pollable messages which had not been sent before the telephone connection failed will continue to show the last successful activity: their "Polling Nbr" value will not increase.

"Selective" or Restricted Polling

Since the information in some pollable messages may be confidential, your Whisper Screen provides a method which restricts access to a message to those persons who know a mutually agreed three-character "Polling Code". This code may consist of one, two or three printable characters (letters, numbers, and most punctuation marks). However, you may not use the "space" character or the exclamation point (which is used elsewhere in the Whisper Screen to "mask" characters from view). Control characters (including "DELETE") are also prohibited. Over 800,000 polling codes are possible using the 93 permitted characters.

The polling code is sent as the middle of a three-part "Polling Escape Sequence":

- 1) the "Identifying Control Sequence" -- ESCAPE & P
- 2) the "Polling Code" -- c1 c2 c3
- 3) the "Terminator" -- CONTROL-M.

where,

ESCAPE is the ASCII Control Code usually associated with the [ESC] key
 & is the ASCII Character usually associated with the "Shifted" [7] key
 P is the Upper Case ASCII Character "P"
 c1 is the first Polling Code character (mandatory)
 c2 is the second Polling Code character (optional)
 c3 is the third Polling Code character (optional)
 CONTROL-M is the ASCII Control Code usually associated with the [CONTROL][M] and [RETURN] keys

For example, if the polling code is "3m*", then the "polling terminal" (the one originating the call) must send the following to the "polled terminal" (the one which auto-answers):

ESCAPE & P 3 m * CONTROL-M

Spaces must not be used between the characters of the Polling Escape Sequence: they have been used here only to make it easier to visualize the individual characters which form the sequence.

Because this escape sequence must be sent accurately by the polling terminal (they can't even use the "BACKSPACE" key to "erase" an error), it is recommended that the polling terminal store the sequence as a Function String. The Polling Escape Sequence might look like this in a Whisper Screen Function String:

```
Label      PolICd
Protected  Y
String     E&P3m*C
```

E = [ESC] C = [CONTROL][M]

Upon receipt of the Polling Escape Sequence, the following actions occur:

1. The Whisper Screen stops recording the incoming message into memory (if "Auto Answer Received Data" specifies MEMORY or BOTH).
2. Each pollable message which requires the received special polling code is sent.
3. When all "selective" messages have been successfully polled, the Whisper Screen resumes recording any further incoming messages (if "Auto Answer Received Data" specifies MEMORY or BOTH).

"Broadcast" or Unrestricted Polling

When a caller sends your Whisper Screen the ASCII Control Code "DC1" (Device Control 1, also known as X-ON or Control-Q), the following actions occur:

1. The Whisper Screen stops recording the incoming message into memory (if "Auto Answer Received Data" specifies MEMORY or BOTH).
2. Each pollable message which does not require a special polling code is sent.
3. When all "broadcast" messages have been successfully polled, the Whisper Screen resumes recording any further incoming messages (if "Auto Answer Received Data" specifies MEMORY or BOTH).

Some message systems use this type of polling because it simulates a paper tape reader. To avoid extra "broadcasts", you can limit the number of times a message can be polled to "ONCE": only the first caller to "poll" your Whisper Screen will receive the message.

MESSAGE INDEX - PART 1 of 2

	Label	Rt Mrgn	Delayed Dir	Auto-Send Time	Retry	---Polling--- ? Code Nbr	Date / Time	Mem Used
1	USER MSG	72						032
2	DelayedSnd	80	1	12:00 AM	0			032
3	Broadcast	80				YES 00	P2 NOV 12 8:50 PM	012
4	Restricted	80				ONCE 3m* 00		042
5								
6								
7								
8								
9								
10								
11								
12								

Memory Available: 19 Messages; 18,500 Characters

Press the NEXT Key for more messages

12:37 PM CONFIG A - OFFLINE
LOWER CASE 4.00

CREATE ☐ SEND DELETE
A C MOD HDR EDIT PRINT EXIT

MESSAGE HEADER MODIFICATION: Polling (Y/N)?

MESSAGE HEADER MODIFICATION

Y
1
N or blank

Message is Pollable
Message is Pollable Once
Message is NOT Pollable

Number
Label
Right Margin

3
Broadcast
80

Directory
Transmit Time
of Retries

>Polling (Y/N)?
Polling Code

Y

12:38 PM CONFIG A - OFFLINE
INS-CHR DEL-CHR SAVE

LOWER CASE
A c ERASE HELP CANCEL

4.00

- [F1] INS-CHR Effectively erases the "Polling (Y/N)?" field since it "inserts" a space into a single-character field.
- [F2] DEL-CHR Deletes the character under the flashing cursor.
- [F4] SAVE Press this key when you're done modifying a header. The display will jump to one of the two Message Index Screens and the header modifications will be stored in memory. Saving a header erases any previous Time/Date Stamp and activity identifier (R2, S2, P2, or U2).
- [F5] ERASE Erases everything within the "Polling (Y/N)?" field.
- [F6] HELP Displays the Help Window for the "Polling (Y/N)?" field.
- [F8] CANCEL Exits the Message Header Modification Screen without altering the current header information. Part 1 or Part 2 of the Message Index Screen is displayed, highlighting the unchanged message header.
- [←] Erases the character to the left of the cursor.
- [↑] Moves the pointer UP to select and highlight the field you wish to work with.
- [↓] Moves the pointer DOWN to select and highlight the field you wish to work with.

MESSAGE HEADER MODIFICATION

Code you Designate which must be Received to Enable Polling
Leave blank for Unrestricted Polling

Number	4
Label	Restricted
Right Margin	80
Directory	
Transmit Time	
# of Retries	
Polling (Y/N)?	1
>Polling Code	3m*

12:40 PM CONFIG A - OFFLINE
LOWER CASE 4.00

INS-CHR DEL-CHR SAVE
A c ERASE HELP CANCEL

- [F1] INS-CHR Inserts a "space" character between the cursor and the character to its left: the characters to the right of the cursor shift one space to the right.
- [F2] DEL-CHR Deletes the character under the flashing cursor.
- [F4] SAVE Press this key when you're done modifying a header. The display will jump to one of the two Message Index Screens and the header modifications will be stored in memory. Saving a header erases any previous Time/Date Stamp and activity identifier (R2, S2, P2, or U2).
- [F5] ERASE Erases everything within the "Polling Code" field to the right of the flashing cursor, including the character under the cursor.
- [F6] HELP Displays the Help Window for the "Polling Code" field.
- [F8] CANCEL Exits the Message Header Modification Screen without altering the current header information. Part 1 or Part 2 of the Message Index Screen is displayed, highlighting the unchanged message header.
- [◀] Erases the character to the left of the cursor.
- [↑] Moves the pointer UP to select and highlight the field you wish to work with.
- [↓] Moves the pointer DOWN to select and highlight the field you wish to work with.
- [←] Moves the cursor left one column.
- [→] Moves the cursor right one column.

APPENDIX A. Maintenance

Are You Using the Terminal for the First Time?

If this is the very first time after purchase that the Whisper Screen is being used, or if it is being used for the first time in several months, leave the Whisper Screen plugged into an electrical outlet and turned "on" for at least 72 hours (three days) to allow the memory-preserving internal battery to charge fully.

Battery

The battery inside the Whisper Screen powers the circuits that remember your stored directories, functions, configurations, and messages for up to two weeks without AC power. **DO NOT ATTEMPT TO OPEN THE WHISPER SCREEN'S ENCLOSURE:** there are no user-serviceable parts inside. You do not need to replace the battery because it is continually recharged whenever the Whisper Screen is plugged into a polarized, grounded 110 volt AC electrical outlet **AND THE POWER SWITCH IS TURNED ON.**

When your Whisper Screen is new you should leave it turned "ON" for at least 72 hours (three days) to charge the battery. Leaving the Whisper Screen turned on all of the time will ensure that it has a maximum charge for extended power outages. Remember, the Whisper Screen's auto-answer feature cannot operate if it isn't plugged in and turned on. Continuous use will also keep the battery fully charged for those occasions when you need to transport the Whisper Screen for short intervals.

Every time the Whisper Screen is turned on, you begin recharging the internal battery. Every time you turn the power off, it drains some of the battery's charge. If you leave the Whisper Screen turned off for longer periods of time than it is turned on, it will eventually completely discharge the battery: it is hard to predict just when this will happen due to small variations from battery to battery. Therefore, you should leave the Whisper Screen plugged in and turned on for at least 72 hours (three days) every two calendar weeks.

Cleaning

When you think the Whisper Screen case or keyboard looks a little soiled, you may want to clean it. First, turn off the power switch and unplug the power cord from the wall socket. Only then should you wipe the enclosure. You may use either a cloth which has been very lightly dampened with water and a mild detergent, or an anti-static cleaning solution. Don't use solvents and don't dribble water into the keyboard or the screen chassis since this can damage your Whisper Screen and void the warranty.

Periodic Maintenance: Almost Nothing To Do!

Although the Whisper Screen does not need any periodic or preventive physical maintenance (other than occasional cleaning with a dampened cloth), there are some recommendations you can follow which will enable you to achieve the maximum functional performance from the terminal.

First, if you make any changes to the initial or "factory default" values of the Terminal Configuration Options, you should keep an up-to-date printed record of these customized values. Use the [PRINT-SCREEN] Key to take a "snapshot" of all NINE of the "Options" Screens: one "COMMON" Option Screen, four "Part 2 of 3" Option Screens (one for each of the four Groups), and four "Part 3 of 3" Option Screens (again, one for each Group). This will help you reconstruct the exact Configurations you were using if anything (or anyone!) changes some of the options. You can quickly return to the "default" values for all four Terminal Configurations by pressing the [F3] RESET Soft Key in the Screen labeled "OPTIONS PART 1 of 3 - COMMON": these values have been carefully chosen to work with a wide assortment of computer systems and terminals.

Second, keep an up-to-date printed record of your personalized Function Strings: use the [PRINT-SCREEN] Key to take a "snapshot" of the FUNCTIONS Screen. This will help you re-enter any complex function strings in the least amount of time if something (or someone!) changed or erased some of your interactive dialogs. REMEMBER, because most printers cannot display the Whisper Screen's special graphic and control characters, these will be printed only as an underlined space: "fill in the blanks" by hand with the special symbols.

Third, keep an up-to-date printed record of all Directory entries you create: use the [PRINT-SCREEN] Key to take a "snapshot" of the DIRECTORY MODIFICATION Screen for EACH Directory entry... Yes, you may have to do this a total of fourteen times and use a lot of paper, but normally your Directories will not change very often and you can take a "snapshot" of each new or changed Directory as it is created or modified. Think how much time you'll save if you ever have to re-enter a Directory after some curious person has experimented with the DELETE Soft Key using your Whisper Screen? REMEMBER, because most printers cannot display the Whisper Screen's special graphic and control characters, these will be printed only as an underlined space: "fill in the blanks" by hand with the appropriate symbols.

If you follow these guidelines, and keep the printed "snapshots" in a safe place, you should be able to surmount just about any unexpected difficulties in using the Whisper Screen, including such rare but major repairs as replacement of the Main Logic and Memory circuit board, which is where all your Messages plus the Configurations, Function Strings, and Directory entries are stored inside the Whisper Screen.

Troubleshooting

Many operational problems have simple solutions. To save yourself time, check through the following list before calling for service:

1. Did you follow the instructions in this manual, particularly the installation procedures?
 - * Is the Whisper Screen's power cord plugged into a grounded, properly polarized, three-prong 117-volt electrical outlet?
 - * Is the cord damaged in any way? DO NOT USE ANY DAMAGED OR FRAYED CORDS: using a damaged cord may result in severe personal electric shock when operating any electric or electronic equipment.
 - * Does the electrical outlet really have power: will something else work when it is plugged into the same outlet?
2. Does the Call Progress Message "NO TONE DETECTED" appear after "WAITING FOR DIAL TONE" or "DIALING", instead of "RINGING"? Check that your modular phone cable is connected to both the RJ-11C phone line jack and the modular jack on the rear of the Whisper Screen. Check that the modular phone cable is good by using it with a standard modular telephone set: if you can hear dial tone it is probably a good cable.
3. Does the Status Message "NO TONE DETECTED" appear instead of "CONNECTED" after "RINGING" or "WAITING FOR CONNECT"? You could be using the wrong speed (e.g., "Modem Originate Baud Rate is "1200" but the distant terminal only operates at 300 baud), or you could be calling a terminal connected to a modem which is not compatible with the Whisper Screen's internal 212A modem. Some computers have different telephone numbers for 300 baud and 1200 baud: you could be calling a telephone number which accepts only 300 baud terminals (or only 1200 baud terminals) if the "NO TONE DETECTED" Status Message appears instead of "CONNECTED".
4. Does the Whisper Screen fail to answer incoming calls? You may need to change the "Auto Answer Incoming Calls?" option from "NO" to "YES"; you may also need to delete one or more messages if less than 500 characters are available (as shown in the Main Menu Screen).
5. Does the automatic interactive log-on stop unexpectedly? this may be due to a number of possible problems:
 - a) Noise on the line may have garbled a character that the Whisper Screen was "waiting for". Pressing the [NEXT] key will allow the interactive log-on to proceed if the computer is really ready to receive the next part of the log-on sequence.
 - b) The computer service you wish to call may not have any more ports through which to communicate with a new caller. You may try typing the computer's "network address" from the keyboard (and hope that someone will have logged-off in the last few moments) or you may press [SHIFT][F8] (the DCONN Soft Key) to hang up.
 - c) If the modem is "handshaking" but the interactive log-on doesn't seem to have even started, the problem might be that the computer needs a little more time after establishing the connection before it is ready to receive characters. Try increasing the time delay before sending the first character, or the time between the first few characters: this is especially true for networks that use two characters (such as carriage returns) to sense the transmission speed of your terminal.
 - d) The computer service might have to perform some tasks with a higher priority than logging-on new terminals; about the only thing to do in this case is to be patient for as long as you can, or disconnect and call back later.
 - e) The computer service might send an "X-Off" control code to the Whisper Screen: if the "Transmit Flow Control" Configuration Parameter is set to recognize "XON/XOFF", then the log-on cannot proceed because the Whisper Screen interprets the "X-Off" control code as a command to suspend transmission until it receives the "X-On" control code. Press [SHIFT][F8] (the DCONN soft key) to hang up, correct the Configuration used for that Directory, and call the computer service again.

6. Do you have either of the following Custom Calling Services on the phone line to which the Whisper Screen is connected: Call Waiting or Call Forwarding? Call Waiting can cause your data calls to be disconnected, and Call Forwarding can cause your Whisper Screen to "miss" calls (and possibly annoy the person to whom the data call is forwarded!)
7. Does the Whisper Screen keep printing on the same line? Try changing the value of either the "Return Key Transmits" or "Auto New Line" options.
8. Does the Whisper Screen skip lines or double space when displaying data? Try changing the value of either the "Return Key Transmits" or "Auto New Line" options.
9. If you are calling the Dow Jones News Retrieval Service and it appears as if you cannot respond to the "ENTER QUERY" prompt, try setting the "Transmit Flow Control" option to "NONE".
10. Are characters, words, or sections missing from messages you send to a distant terminal or computer system? Try setting the "Transmit Flow Control" option to "XON/XOFF".
11. Are characters, words, or sections missing from messages you receive from a distant terminal or computer system? Try setting the "Receive Flow Control" option to "XON/XOFF".
12. Does the Whisper Screen fail to display characters transmitted from the keyboard or message memory? Try setting the "Local Echo (Duplex)" option to "ON (HALF)".
13. Does the Whisper Screen display two characters for each one transmitted from the keyboard or message memory? Try setting the "Local Echo (Duplex)" option to "OFF (Full)".
14. Does the Whisper Screen display "garbage" characters (or nothing at all)? Disconnect, change the "Modem Originate Baud Rate" (or "Auxport Baud Rate"), and try again.
15. Does an attached printer display "garbage" characters (or nothing at all)? Try changing the "Printer Baud Rate". Review Appendix C (The Printer Port) for additional suggestions.
16. Does an attached printer "lose" characters? Check that the "Receive Flow Control" option is set to "XON/XOFF" and that you have sent any special commands required by the distant computer to enable XON/XOFF flow control. It is also possible that the distant terminal or computer service either cannot or will not respond to XON/XOFF flow control: try having the distant terminal or computer service send the information a few lines at a time.
17. Does the Whisper Screen behave strangely when the air is very dry (low relative humidity) or when you can give yourself a static electricity shock by touching metal or plastic items? Try using anti-static spray on the rug or floor, and consider purchasing a commercially available static discharge floor or table mat (e.g., the 3M Model 9200 First Touch Computer Pad). Sometimes, turning the Whisper Screen power switch "OFF" for a few seconds and then back "ON" can restore normal operation, although the static discharge may have erased your messages, directory entries, and custom function strings.
18. Does the Whisper Screen behave strangely when other electrical appliances turn on? The voltage available to the Whisper Screen at the power outlet may not be sufficient if many other devices are connected to the same building circuit or outlet: plug the Whisper Screen's power cord into an outlet which doesn't power any other devices. Electrical "brown-outs" can also cause the Whisper Screen to act strangely. Usually, normal operation becomes possible again when the power is back to normal levels, although you may need to turn the Whisper Screen's power switch "OFF" for a few seconds and then back "ON".

ERROR CODES

Your Whisper Screen is capable of detecting and reporting certain types of error conditions, using the Status Window to display an "error code". The following explanations may help you understand the cause of the error and how it may be corrected. The error codes are divided into "Recoverable Errors" and "Fatal Errors": you should contact your dealer or the 3M National Service Center whenever a "Fatal Error" code is displayed in the Status Window.

Recoverable Errors

- DIR EMPTY** You have attempted to use the Delayed Auto-Send feature but specified the number of a "Directory" which is empty. The Message Index Screen will show the unsuccessful activity identifier ("U2") next to the Date/Time field.
- MSG EMPTY** You have DIAled a Computer or teleterminal using a Directory which includes the ">00" command: this is a "universal" message number and can only be used to SEND a message you have CREATED or selected in the Message Index Screen.
- ERROR 10** You have included an invalid character in a function or log-on string. The usual cause is an out-of-range message number (greater than 24) as part of a TRANSMIT (>nn) or RECEIVE (2nn...2) sequence.
- ERROR 11** You are missing one of the parameters or delimiters in a multi-character command sequence. The usual cause is "splitting" a command sequence between the first and second parts of a Log-on, or between a Log-on and a "linked" function string:
- | | | | | | |
|---------|------------|-----------|---------|----------|---------|
| String |[MATCH | Character |} | Link to |\1 |
| Search | THIS].... | Search | X... | Function | 0 |
| Send |>0 | Receive |22 | | |
| Message | 1... | Message | 4...2 | | |
- MARGIN ERROR** You have just decreased the Right Margin value of a message from the one which was in effect when you created or received that message. However, the message contains a "word" (that is, an "unbroken" string of characters) which can no longer be displayed on a single line. You must increase the Right Margin value before you can EDIT the message and divide the "word" into smaller "syllables" (less than 69 or 72 or 80 characters long)!
- ERROR E2** Something has disturbed a message in memory so that an unusual graphic character "appears" to be part of a message.

Fatal Errors

- ERROR F1** Something has happened which seriously corrupted the memory used for storing log-ons, directories and terminal configuration options.
- ERROR F2**
- ERROR F3** Something has happened which seriously corrupted the memory pointers used to link one block of memory to the previous and next blocks: sometimes this results in an unexpected "Memory Full" condition.
- ERROR F4** Something has happened which seriously corrupted the memory used for storing log-ons and directories.
- ERROR F5**

Calling For Service

If you are still having trouble with your Whisper Screen, contact the 3M National Service Center for assistance and advice. Their toll-free WATS number is:

1-800-328-5690

(inside Minnesota, call 612-738-6530, collect).

When you call for service, be prepared to answer the following questions:

- 1) Model number on the rear of your Whisper Screen: 1922AB
- 2) Serial number on the rear of your Whisper Screen (2 9 _ _ _)
- 3) Is your terminal having a problem transmitting or receiving, or both?
- 4) What is the name and model or type of terminal, computer or service with which you are trying to communicate?
- 5) What is the telephone number of the terminal, computer or service with which you are trying to communicate?
- 6) Does the same problem occur when communicating with any other terminal, computer or service?

The National Service Center is available to you 24 hours a day, seven days a week to take care of a machine problem in a minimum amount of time. With your help a 3M Service Center Representative will determine if your problem is most likely due to equipment, phone line, or the particular computer system or distant terminal you are calling; and will either solve your problem or advise you concerning the various service options.

The Final Word

Do not attempt to make physical repairs to the Whisper Screen!

There are NO user-serviceable parts inside the Whisper Screen.

Opening or modifying the Whisper Screen will void the warranty.

Whisper Screen Warranty

Warranty - 3M expressly warrants that new 3M Whisper Writers, Printers, Screens and Readers will be free of defective parts and workmanship for a period of ninety (90) days from date of delivery to first end-user. Proof of purchase date may be required with warranty claim.

For covered defects occurring during the warranty period and about which 3M has first received notice during the warranty period, Customer should request warranty service through 3M's National Service Center, 1-800-328-5690 (Alaska & Hawaii 1-800-328-1390, Minnesota - Collect - 612-731-6530).

Factory or Repair Depot Warranty Service: Customer will be authorized to return the unit to 3M's factory or repair depot, at Customer expense, where 3M will repair or replace the defective part(s) or workmanship at 3M's expense with return shipping costs prepaid by 3M.

On-Site Warranty Service: For those products for which 3M offers optional on-site warranty service, Customer may request the National Service Center to schedule on-site service, in which case 3M will provide the necessary replacement parts at its expense and Customer will pay for service labor at 3M's then-current published labor rates for the service performed.

In either case, Customer may be required to provide proof of purchase or delivery date. Customer will be billed for non-warranty service and shipping costs.

Warranty Exclusions - THE FOREGOING EXPRESS WARRANTY IS MADE IN LIEU OF ALL OTHER PRODUCT WARRANTIES, EXPRESS AND IMPLIED, INCLUDING MERCHANTABILITY AND FITNESS AND THOSE ARISING FROM A COURSE OF DEALING OR USAGE OF TRADE. The Express Warranty will not apply to defects or damage incurred during transportation, or due to accidents; neglect; misuse, such as use of harmful or unapproved supplies; alterations; operator error; power surges; failure to properly install, clean, maintain, or repair; improper operating environment; or failure to provide proper utilities. The Express Warranty also will not apply to used or refurbished 3M equipment unless 3M expressly authorizes resale with its original equipment warranty.

Limit of Liability - Fulfillment of 3M's warranty obligation will be Customer's exclusive remedy and 3M's and Seller's limit of liability for any breach of warranty or otherwise. In no event will 3M or Seller be responsible or liable for special, incidental or consequential losses or damages.

APPENDIX B. The Whisper Screen Auxiliary Port

When the Auxiliary Port of your Whisper Screen is used, all features and capabilities are present except that the following Configuration Parameters which control modem actions won't have any effect:

- Auto Answer Incoming Calls?
- Auto Answer Configuration
- Auto Answer Received Data
- Dial Type
- Modem Originate Baud Rate
- Auto-Answer Baud Rate

To use the Auxiliary Port you'll need to hook up to a computer system or an external modem. The RS-232C DB-25S connector on the back of the terminal is designed for this, although it does not support auto-answer modems. The signals and pin assignments for the Whisper Screen Auxiliary Port are as follows:

Pin 1	Chassis Ground
Pin 2	Transmit Data
Pin 3	Receive Data
Pin 4	Request To Send
Pin 5	Clear To Send
Pin 7	Signal Ground

The Directory Entries and Function Strings can be used to log-on to your computer system, or to send commands to an external "smart modem" for manual origination and manual answering of phone calls. The Auxport Baud Rate option must match the baud rate at which your computer system or modem expects to send and receive data; the same is true for the Comm Data Bits, Comm Stop Bits, and Comm Parity options.

APPENDIX C. The Printer Port

This appendix provides detailed installation and operation procedures for using the Whisper Screen with a Whisper Printer (Model 1912). Most of this information will apply to other printers but the user is encouraged to consult the Operator Guide for your specific printer.

The signals and pin assignments for the Whisper Screen Printer Port are identical to those for the Auxiliary Port:

Pin 1	Chassis Ground
Pin 2	Transmit Data
Pin 3	Receive Data
Pin 4	Request To Send
Pin 5	Clear To Send
Pin 7	Signal Ground

Installation:

1. Connect the Whisper Printer to the Whisper Screen using the DTR Handshake Cable (3M stock number 78-8050-8233-2).
2. Verify that the printer options listed in the "OPTIONS PART 1 of 3 - COMMON" Screen are set to the following values which match the factory "default" settings of the Whisper Printer's internal slide switches:

Whisper Screen Configuration Parameters

Printer Baud Rate	9600
Printer Word Format	8+NONE+1
Printer XON/XOFF Handshake	OFF

Whisper Printer Switch Settings

Baud Rate (S3)	9600
TTL/RS232 (S4)	RS232 (Front)
Handshake (S5)	DTR (Upper)

If you are using a slower baud rate for the printer than the one used for the internal modem or auxilliary source, the transmitted character rate will automatically slow down to no more than the printer is capable of supporting. To avoid this bottleneck during transmission, use the fastest baud rate at which your printer is capable of receiving. The 3M Whisper Printer, operating at the factory default setting of 9600 baud, will not exhibit this peculiarity even though it is only a 40-cps printer because it has a 2000-character buffer.

Operation:

You will probably use one or more of the three main methods of sending text to the Whisper Printer:

- * printing the current screen
- * printing an entire message
- * simultaneously printing what is being received.

1. Whenever the [PRINT-SCREEN] key is pressed, the text on the Whisper Screen's display is transferred to the printer's internal buffer in just under two seconds, after which changes to the information on the screen will not affect what is being printed: the actual print time will depend on the number and arrangement of characters on the screen. The Whisper Screen can then be free to perform other tasks, such as scanning more mail or modifying part of a computer program, rather than waiting for the printer to finish.
2. When the [F7] PRINT Soft Key is pressed in the Message Index Screen, the complete text of the highlighted message is sent to the Whisper Printer. The time required to print the message will depend on the length of the message. You may cancel an unfinished print operation by pressing the [F7] Soft Key until the Expanded Status Line message "PRINTER" disappears from the lower right corner of the display: this can be useful with long messages and/or printers which communicate at slower speeds and which do not have any internal buffer. Printers with buffers will continue to print until the buffer is empty, or until the buffer is cleared: the Whisper Printer's buffer is cleared by pressing the lighted pushbutton on the front cover.
3. When the [F7] PRINTER Soft Key is pressed in any of the On-Line Screens, the information being received by the Whisper Screen is displayed on screen and simultaneously sent to the Whisper Printer. Depending on the rate at which characters are arriving at the Whisper Screen, the Whisper Printer may be able to match the received data character for character, or it may need to send "flow control" signals to the Whisper Screen for relaying back to the sender: this will be confirmed by the presence of the "Printer Busy" Status Message when you attempt to type, resulting in periodic pauses in the flow of information appearing on the screen. You may lose characters if the distant terminal or computer service either cannot or will not respond to "flow control" signals. If this happens, you can try requesting the information in smaller amounts (a few lines at a time) with pauses between requests to allow the printer to finish printing.

If you wish to automatically print your auto-answer received messages on your Whisper Printer as each message arrives, you can set the "Auto Answer Received Data" option to "BOTH": even if the Whisper Screen runs out of memory to store new incoming messages, the Whisper Screen will continue to answer incoming calls and print them on the Whisper Printer.

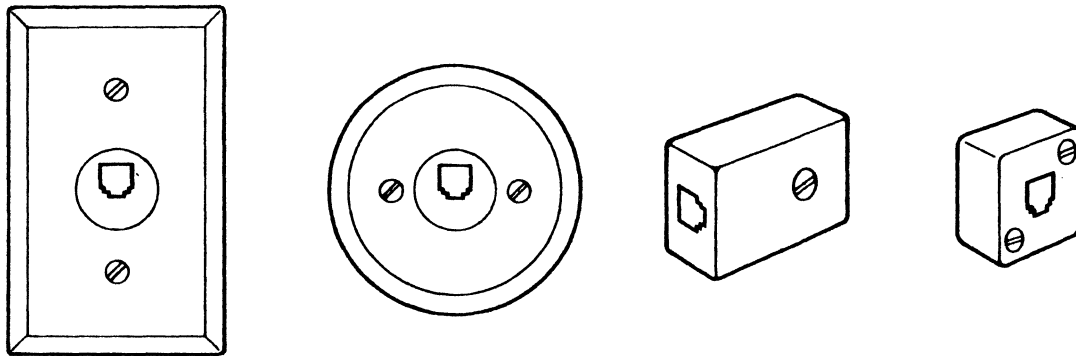
For further operational and technical information on the use of a Whisper Printer, refer to the Operator Guide furnished with each Whisper Printer.

NOTE

Because most printers cannot display the Whisper Screen's special graphics symbols and "compressed" two-character control codes, an "underline" character will be sent to the printer for these symbols and characters when they are used in Messages or the Directory entries and Function Strings. Please write the appropriate control codes or special graphics symbols in the "gaps" which appear in the back-up copies of your Directory Modification and Functions Screens.

APPENDIX D: Standard Connections to Telephone and Telegraphic Networks

Your Whisper Screen Model 1922 connects to the standard telephone network and to the Western Union telegraphic network using the USOC RJ11C modular jack. The following illustration shows some of the possible variations in the physical appearance of this jack.



When no USOC RJ11C single-line modular jack is available, it is possible to connect a Whisper Screen to the telephone or telegraphic network using the USOC RJ45S modular data jack, which may already be installed in your office. If you elect to use an existing RJ45S jack, it is likely that the signal level from your Whisper Screen's internal modem will be lower than that which the network is expecting. This is because the Whisper Screen's modem is not configured to take advantage of the extra-cost features usually associated with RJ45S programmable data jacks. Therefore, 3M advises that you **DO NOT REQUEST THE INSTALLATION OF AN RJ45S DATA JACK** when ordering new telephone service for your Whisper Screen.

1. If you do not have a modular jack, contact your local telephone company or Western Union, depending upon which network you intend to use.
2. FCC regulations require you to notify your local telephone company that you will be connecting your system to the telephone network. You must give the telephone company the FCC Registration Number and Ringer Equivalence: these may be found on page 123 of this manual and are also printed on the serial number label of the Whisper Screen Video Display. This Appendix provides specific information in compliance with FCC regulations.

If you are connecting your system to the Western Union Telex II (formerly TWX) Network, you should notify them that you will be connecting an FCC-registered device.

Telephone Types and Use

Although your Whisper Screen's internal modem will auto-answer and auto-dial on most single-line residential and business telephone systems, whether pulse- or tone-dial, it will be unable to auto-answer if it is connected to any telephone system which does not provide standard "central office" ring signals.

WARNING!

DO NOT CONNECT your Whisper Screen to any electronic key telephone system. If you do, you may severely damage the Whisper Screen, requiring you to pay for costly repairs and replacement parts. You may also damage the electronic telephone system, for which you may be charged repair costs by the telephone system supplier. 3M is not liable for such damage.

Electronic key telephone systems generally use a six- or eight-wire modular connector which may look like a standard USOC RJ11C jack. These electronic jacks DO NOT HAVE THE SAME INTERNAL WIRING and usually employ electronic "addressing" of the telephone sets instead of the "central office" type ringing found on most single line business and residential phone lines (which typically use just two- or four-wire RJ11C or RJ12C modular jacks).

Therefore, 3M advises that you connect your Whisper Screen ONLY to single-line business or residential phone lines. If you MUST connect your Whisper Screen to any private office telephone system, please contact the manufacturer of the phone system for technical advice and assistance with installing a "miniature 6-position 2-conductor jack providing bridged connections to the tip and ring of one line of your telephone system ahead of the key telephone system line circuit for single line registered data equipment transmitting at a fixed level of not greater than -9 dBm with respect to 1 milliwatt."

You may find it necessary or desirable to use a single phone line to alternate between voice and data calls (simultaneous voice and data calls are NOT possible with a Whisper Screen). The simplest method for such alternate use is the insertion of a "duplex modular adapter" into the RJ11C modular jack: these adapters may also be called "Y" or "T" plugs since they provide two RJ11C modular jacks wired in parallel as extensions of a single RJ11C plug. (This adapter will also be helpful if you happen to call 3M's National Service Center for assistance in resolving possible problems with your Whisper Screen, since the service coordinators may be able to run some special tests with your assistance.) You can also order an extension jack installed by the local telephone company. In either case, you must supply the voice telephone instrument.

FCC Information

The following information is provided in compliance with FCC regulations.

Exhibit G

The Federal Communications Commission (FCC) has approved the Novation modem (used in the 3M Whisper Screen Communications Terminal) for direct connection to the telephone network. Under the FCC program, no customer is authorized to repair the terminal. This applies to the terminal both in and out of warranty. If the customer performs such unauthorized repair, the approval of the equipment for direct connection to the phone network will be null and void. If the terminal is still under warranty when unauthorized repairs are performed, the remainder of the warranty period will also be null and void.

In the event of a terminal malfunction, all repairs will be performed by 3M Equipment Service and Support Division (ESSD) Field Service, or an authorized agent of ESSD Field Service. It is the responsibility of the customer to report the need for service to the 3M National Service Center (1-800-328-5690, or in Minnesota 1-612-738-6530).

In the event ESSD Field Service, or an authorized agent, determines that the terminal must be returned for repair, they will furnish instructions for the return of the terminal. If the terminal is out of warranty, a reasonable fee for repairs will be charged.

Exhibit J

The Novation modem used in this 3M Whisper Screen Communications Terminal is approved by the Federal Communications Commission (FCC) as not being harmful to the telephone network when connected directly to the telephone lines.

Read the following instructions carefully to comply with the FCC rules.

1. Your terminal must be connected to the telephone line via standard plugs and jacks.
2. Prior to connecting the terminal to the telephone lines, notify your local telephone company that you have a registered device that you wish to connect to their lines. Give them the FCC Registration Number, the Ringer Equivalence Number, the Manufacturer, and the USOC Jack required to connect the terminal to the telephone line.

FCC Registration Number	--	AU492X-11149-DM-E
Ringer Equivalence	--	0.8 B
Modem Manufacturer	--	Novation, Inc.
Modem Model Number	--	490514 modem card
USOC Jack	--	RJ11C or RJ12C

3. Connect the Whisper Screen to the telephone line by inserting one end of the 7-foot modular phone cord (supplied) into the jack installed by the telephone company and the other end into the jack on the back of the video display enclosure.
4. If the terminal appears to be malfunctioning, it should be unplugged from the telephone jack until it can be determined if your terminal or the telephone line is the source. Contact the 3M National Service Center for verification: if a service coordinator determines that the terminal is malfunctioning, leave the terminal disconnected from the telephone jack until the necessary repairs are performed.
5. There is no reason why the terminal should ever cause harm to the telephone network. If such harm does occur, the phone company will try to give you time to correct the situation without interrupting your service. If it is not feasible to give prior notice, the phone company can temporarily disrupt service, but they must do three things: (1) promptly notify you of the temporary interruption of service, (2) give you time to correct the problem, and (3) inform you of your right to file a complaint with the FCC. You can obtain the procedures for filing such complaints from your local dealer, or if necessary, by writing directly to 3M.
6. Before making changes (consistent with FCC regulations) to its communications facilities, equipment, operations, or procedure, the telephone company must provide you with written notice so that you can arrange for appropriate changes to your equipment in order to receive uninterrupted service.

APPENDIX E: Technical Specifications

VT-52 CONTROL SEQUENCES

The "native" mode of the Whisper Screen emulates the response of the DEC VT-52 terminal to the following escape sequences.

CURSOR CONTROL

1. CURSOR UP Control Sequence: ESC A
The active position is moved upward one position. The horizontal position is not changed, unless the active position is at the top margin of the screen, in which case the active position is moved to Row 1, Column 1 ("Home").
2. CURSOR DOWN Control Sequence: ESC B
The active position is moved downward one position. The horizontal position is not changed.
3. CURSOR RIGHT Control Sequence: ESC C
The active position is moved one position to the right. The vertical position is not changed.
4. CURSOR LEFT Control Sequence: ESC D
The active position is moved one position to the left. The vertical position is not changed.
5. CURSOR HOME Control Sequence: ESC H
The active position is moved to Row 1, Column 1.
6. REVERSE LINEFEED Control Sequence: ESC I
The active position is moved upward one position. The horizontal position is not changed. If the active position is at the top margin of the screen then a 'one line scroll down' is performed.
7. DIRECT CURSOR ADDRESS Control Sequence: ESC Y row column
The cursor is moved to the specified row and column. The row number is sent as a single ASCII code whose value ranges from 20-Hex (#1) to 37-Hex (#24). The column number is sent as a single ASCII code whose value ranges from 20-Hex (#1) to 6F-Hex (#80); any parity bits are ignored.
8. CURSOR POSITION REPORT Control Sequence: ESC ?
Returned Control Sequence: ESC = row column
The row and column numbers of the cursor's current position are returned as single ASCII characters. The row number ranges from 20-Hex (#1) to 37-Hex (#24). The column number ranges from 20-Hex (#1) to 6F-Hex (#80); any parity bits are ignored.

ERASE CONTROL SEQUENCES

1. ERASE TO END OF LINE Control Sequence: ESC K
The current line is erased from the active position to the 80th column. The active position is not changed.
2. ERASE TO END OF SCREEN Control Sequence: ESC J
The current screen is erased from the active position to the 80th column of row 24. The active position is not changed.

MISCELLANEOUS COMMANDS

1. TERMINAL TYPE IDENTIFIER Control Sequence: ESC Z
The Whisper Screen will respond by transmitting the following control sequence:
ESC T 22B 4.nn Mxxx Z c/r

where,

ESC T	is the returned-sequence identifier
22B	is the model identifier (22B= Model 1922BB)
4.nn	is the firmware revision number
Mxxx	is the number of blocks of "free" memory (1 block = 100 characters)
Z	is the current configuration (A, B, C, or D)
c/r	is a carriage return, as the returned-sequence terminator

(Spaces are not part of the Returned Control Sequence, but have been inserted between the parts of the sequence here as an aid to visualization.)

CONTROL CHARACTERS

The following section describes the actions of those control characters (ASCII C0 set, 00-Hex through 1F-Hex plus 7F-Hex) which the Whisper Screen recognizes. Control characters not listed are ignored.

MNEMONIC	HEX	DEFINITION
-----	---	-----
DEL	7F	DELETE. Trapped by "New Line Filter Routine" if received immediately before or after CR or LF.
NUL	00	NULL. Trapped by "New Line Filter Routine" if received immediately before or after CR or LF.
ENQ	05	ENQUIRE (Who-Are-You?). If SENT FROM a Whisper Screen, it is a REQUEST for the distant terminal to send its answerback. If RECEIVED BY a Whisper Screen, it is a COMMAND for the Whisper Screen to send its OWN ANSWERBACK.
BEL	07	BELL. The bell is sounded.
BS	08	BACKSPACE. The cursor is moved one position to the left.
HT	09	HORIZONTAL TAB. The cursor is moved to the next tab stop or to the right margin if there are no further tab stops.
LF	0A	LINE FEED. The cursor is moved down one row. If the cursor is located in the bottom row, a 'one-line scroll-up' is performed.
VT	0B	VERTICAL TAB. The cursor is moved upward one row. If the cursor is located in the top row, a 'one-line scroll-down' is performed.
FF	0C	FORM FEED. The cursor is moved to row 1, column 1 (Home), and the screen is cleared.
CR	0D	CARRIAGE RETURN. The cursor is moved to row 1 of the current line. A carriage return on the bottom line does NOT cause a 'one-line scroll-up' to be performed.
DC1	11	DEVICE CONTROL 1. (X-On, Transmission On.) Used for flow control and polling protocols. Sent from the Whisper Screen, it is a command to the distant host/terminal to resume transmission. Received by the Whisper Screen when it has been preceded by a DC3, it is a command to resume transmission. Received by the Whisper Screen when it is in the Answer Mode, AND HAS NOT BEEN PRECEDED BY A DC3 WHICH SUSPENDED TRANSMISSION, it is a command to transmit all "UNRESTRICTED" pollable messages.
DC3	13	DEVICE CONTROL 3. (X-Off, Transmission Off.) Used for flow control protocol. Sent from the Whisper Screen, it is a command to a distant host/terminal to suspend transmission. Received by the Whisper Screen, it is a command to suspend MEMORY or KEYBOARD transmission.
ESC	1B	ESCAPE. Initiates control sequences.
BREAK	n/a	BREAK (spacing frequency; minimum 250 msec, maximum less than 1.2 second).

ASCII TABLE

ASCII -----	HEX-CODE -----	WHISPER SCREEN KEY(S) -----	SCREEN IMAGE -----	PRINTED IMAGE -----
NUL	00	[SHIFT][NULL/DEL], [CONTROL][0]	NU	-
SOH	01	[CONTROL][A]	SH	-
STX	02	[CONTROL][B]	SX	-
ETX	03	[CONTROL][C]	EX	-
EOT	04	[CONTROL][D]	ET	-
ENQ	05	[CONTROL][E]	EQ	-
ACK	06	[CONTROL][F]	AK	-
BELL	07	[CONTROL][G]	BL	-
BS	08	[CONTROL][H]	BS	-
HT	09	[CONTROL][I]	HT	-
LF	0A	[CONTROL][J]	LF	-
VT	0B	[CONTROL][K]	VT	-
FF	0C	[CONTROL][L]	FF	-
CR	0D	[CONTROL][M]	CR	-
SO	0E	[CONTROL][N]	SO	-
SI	0F	[CONTROL][O]	SI	-
DLE	10	[CONTROL][P]	DL	-
DC1	11	[CONTROL][Q]	D1	-
DC2	12	[CONTROL][R]	D2	-
DC3	13	[CONTROL][S]	D3	-
DC4	14	[CONTROL][T]	D4	-
NAK	15	[CONTROL][U]	NK	-
SYN	16	[CONTROL][V]	SY	-
ETB	17	[CONTROL][W]	EB	-

ASCII TABLE

ASCII -----	HEX-CODE -----	WHISPER SCREEN KEY(S) -----	SCREEN IMAGE -----	PRINTED IMAGE -----
CAN	18	[CONTROL][X]	C _N	—
EM	19	[CONTROL][Y]	E _M	—
SUB	1A	[CONTROL][Z]	S _B	—
ESC	1B	[ESC]	E _C	—
FS	1C	[CONTROL][,]	F _S	—
GS	1D	[CONTROL][~]	G _S	—
RS	1E	[CONTROL][.]	R _S	—
US	1F	[CONTROL][/]	U _S	—
Local Stop	N/A	[CONTROL][;]	φ	—
Pause	N/A	[CONTROL][=]	⌘	—
Here-Is	N/A	[HERE IS]	≡	—
Tone Dial	N/A	[CONTROL][T]	⊥	—
Pulse Dial	N/A	[CONTROL][P]	π	—
Detect DT	N/A	[CONTROL][D]	§	—
SP	20	[SPACE-BAR]		
!	21	[SHIFT][1]	!	!
"	22	[SHIFT][']	"	"
#	23	[SHIFT][3]	#	#
\$	24	[SHIFT][4]	\$	\$
%	25	[SHIFT][5]	%	%
&	26	[SHIFT][7]	&	&
'	27	[']	'	'

ASCII TABLE

ASCII	HEX-CODE	WHISPER SCREEN KEY(S)	SCREEN IMAGE	PRINTED IMAGE
<	28	[SHIFT][9]	<	<
>	29	[SHIFT][0]	>	>
*	2A	[SHIFT][8]	*	*
+	2B	[SHIFT][=]	+	+
,	2C	[,]	,	,
-	2D	[-]	-	-
.	2E	[.]	.	.
/	2F	[/]	/	/
0	30	[0]	0	0
1	31	[1]	1	1
2	32	[2]	2	2
3	33	[3]	3	3
4	34	[4]	4	4
5	35	[5]	5	5
6	36	[6]	6	6
7	37	[7]	7	7
8	38	[8]	8	8
9	39	[9]	9	9
:	3A	[SHIFT][;]	:	:
;	3B	[;]	;	;
<	3C	[SHIFT][,]	<	<
=	3D	[=]	=	=
>	3E	[SHIFT][.]	>	>
?	3F	[SHIFT][/]	?	?

ASCII TABLE

<u>ASCII</u>	<u>HEX-CODE</u>	<u>WHISPER SCREEN KEY(S)</u>	<u>SCREEN IMAGE</u>	<u>PRINTED IMAGE</u>
2	40	[SHIFT][2]	2	2
A	41	[SHIFT][A]	A	A
B	42	[SHIFT][B]	B	B
C	43	[SHIFT][C]	C	C
D	44	[SHIFT][D]	D	D
E	45	[SHIFT][E]	E	E
F	46	[SHIFT][F]	F	F
G	47	[SHIFT][G]	G	G
H	48	[SHIFT][H]	H	H
I	49	[SHIFT][I]	I	I
J	4A	[SHIFT][J]	J	J
K	4B	[SHIFT][K]	K	K
L	4C	[SHIFT][L]	L	L
M	4D	[SHIFT][M]	M	M
N	4E	[SHIFT][N]	N	N
O	4F	[SHIFT][O]	O	O
P	50	[SHIFT][P]	P	P
Q	51	[SHIFT][Q]	Q	Q
R	52	[SHIFT][R]	R	R
S	53	[SHIFT][S]	S	S
T	54	[SHIFT][T]	T	T
U	55	[SHIFT][U]	U	U
V	56	[SHIFT][V]	V	V
W	57	[SHIFT][W]	W	W

ASCII TABLE

<u>ASCII</u>	<u>HEX-CODE</u>	<u>WHISPER SCREEN KEY(S)</u>	<u>SCREEN IMAGE</u>	<u>PRINTED IMAGE</u>
X	58	[SHIFT][X]	X	X
Y	59	[SHIFT][Y]	Y	Y
Z	5A	[SHIFT][Z]	Z	Z
[	5B	[[], [CONTROL][3]	[	[
\	5C	[\], [CONTROL][6]	\	\
]	5D	[] , [CONTROL][4]	]	]
^	5E	[SHIFT][6]	^	^
_	5F	[SHIFT][-]	_	_
`	60	[`]	`	`
a	61	[A]	a	a
b	62	[B]	b	b
c	63	[C]	c	c
d	64	[D]	d	d
e	65	[E]	e	e
f	66	[F]	f	f
g	67	[G]	g	g
h	68	[H]	h	h
i	69	[I]	i	i
j	6A	[J]	j	j
k	6B	[K]	k	k
l	6C	[L]	l	l
m	6D	[M]	m	m
n	6E	[N]	n	n
o	6F	[O]	o	o

ASCII TABLE

<u>ASCII</u>	<u>HEX-CODE</u>	<u>WHISPER SCREEN KEY(S)</u>	<u>SCREEN IMAGE</u>	<u>PRINTED IMAGE</u>
p	70	[P]	p	p
q	71	[Q]	q	q
r	72	[R]	r	r
s	73	[S]	s	s
t	74	[T]	t	t
u	75	[U]	u	u
v	76	[V]	v	v
w	77	[W]	w	w
x	78	[X]	x	x
y	79	[Y]	y	y
z	7A	[Z]	z	z
{	7B	[SHIFT] [, [CONTROL][1]	{	{
	7C	[SHIFT][\], [CONTROL][5]		
}	7D	[SHIFT]] , [CONTROL][3]	}	}
~	7E	[SHIFT][`], [CONTROL][7]	~	~
DELETE	7F	[NUL/DEL], [CONTROL][9]	D _T	—

SPECIFICATIONS

Physical

	CRT	Keyboard
Height	9.5" (240 mm)	1.9" (48 mm)
Depth	10.5" (267 mm)	7.4" (188 mm)
Width	11" (280 mm)	14.1" (358 mm)
Weight	12 lb. (5.5 kg)	2.5 lb. (1.1 kg)

Environmental

Power Requirements 95-135 vac or 47-63 HZ 65 watts maximum
--

Condition	Temperature in °F (°C)	Humidity (Non Condensing)
Operating	32 to 104 (0 to 40)	5 % to 95%
Storage	-40 to 149 (-40 to +65)	5% to 95%

Data Rate:

Modem Port — 110/300 Baud, 1200 Baud
Aux Port — 50, 75, 110, 134.5, 150, 200, 300,
600, 1200, 1800, 2400, 4800, 7200,
9600 Baud
Printer Port — 110, 300, 600, 1200, 2400, 9600
Baud

Display Characteristics:

Screen — 9 inch (diagonal) etched face, bonded
implosion shield
Color — Monochrome, P-31 green phosphor
Display area — 24 rows, 80 columns, 25th row for
soft key and status
Character Cell Size — 12h x 10w dot matrix
Attributes — Underline, reverse video, blink, high-
light, doublewide characters
Displayed Characters —
ASCII GO — printable character set
ASCII CO — control character set

SPECIFICATIONS

Modem:

Communication Method:
Full duplex Asynchronous, 2-wire dial-up telephone line.

Compatibility:
Bell 212A, 1200 Baud
Bell 103, 110/300 Baud

Operating Modes:

Originate and Answer

Transmit Level:

0 to -12 dBm programmable. Internally programmed to -9 dBm.

Carrier Detect Range:

On = -43 dBm
Off = -48 dBm

Receive Dynamic Range:

-10 to -45 dBm

Line Impedance:

600 ohms AC
50 ohms DC

FCC Information:

Registration number — AU492X-11149-DM-E
Ringer Equivalence — 0.8 B
Telephone connection — RJ-11, 12, 13 via modular cable
A/A1 control for Key System telephones

SPECIFICATIONS

Memory

21,800 characters

Edit Features:

Go to top or bottom of message
Go to NEXT "Page" of message
Insert
Delete character, lines, message

Configurations:

Four configurations, locally programmable.

Battery Back-Up:

Rechargeable NiCad battery retains programmed parameters and message memory for 14 days.

WARNING !!!

Before converting your Whisper Screen to Version 4.2.00 Software, be certain that you have a printed record of your current Directories, Function Strings, and Configurations. Do not forget to write in the special command characters (control codes, pause for dial tone, etc.) which cannot be printed directly and are therefore converted to the underline character. Send any Messages which have not been sent and which you do not wish to retype into memory!

When the service technician changes the Software in your Whisper Screen, all information previously stored in memory will be lost!

**It is the responsibility of the
Whisper Screen user to restore
any previously used Directories,
Function Strings, Configurations,
and Messages.**

Whisper Screen

Operator Guide Insert for Model 1922DB (Version 4.2.00 Firmware)

3M is pleased to offer several significant improvements to the performance of your Whisper Screen Model 1922:

- * Receive messages directly to your printer without interrupting message preparation by selecting the new Auto Print option in the Terminal Set-Up configuration. You can even join the call "in progress", should it become necessary.
- * A sophisticated forms package allows you to design your own form for special applications such as invoices and orders, or even use forms which have been developed on other Whisper Screens and "downloaded" into yours!
- * Copy a message from one message envelope into another. You can use this feature to copy standard paragraphs or letters into new messages you compose.
- * Support for additional memory to a maximum of 46,200 characters with the optional Memory Expansion Kit (stock number 78-8050-8342-1)

These improvements do not change the basic operation of your Whisper Screen. Of course, we did have to add another choice in the MAIN MENU so that you could Fill out a Form, and we made a few changes to the position of some Soft Keys to make the Editor easier to use.

Although you do not have to increase the memory in your Whisper Screen by installing the optional Memory Expansion Kit to take advantage of the other improvements, you will probably find that additional memory can be quite useful. The new 4.2.00 firmware will work with any Whisper Screen which has 10000, 21800, or 46200 characters of memory.

NOTE: The Preliminary Operator Guide for Version 4.00 of the Whisper Screen included many illustrations showing the Soft Key labels. Some of the positions of Soft Keys have changed as a result of new features being added to the Whisper Screen. The illustration screens at the end of this pamphlet may be cut out and taped over the old illustrations in the Operator Guide.

Minor Changes

We've taken this opportunity to make a few minor changes in the Whisper Screen as well as the major improvements described in other sections of this guide. We hope that you will find them as useful and convenient to use as the Whisper Screen owners who first suggested them.

(1) The **DISPLAY** Soft Key

Some Whisper Screen owners felt that **DISPLAY** was more descriptive than **EDIT** for the **F6** Soft Key label in the MESSAGE INDEX Screen, especially if all they wanted to do was to "read" a received message without making any changes to it. Therefore, the Soft Key label has been changed but the action of the **F6** Soft Key remains the same: the first 24 lines of the selected message are displayed on the screen; if the message is empty, then the CREATE MESSAGE Screen will appear.

(2) The **SEND** Soft Key

The **SEND** Soft Key is now available at all times when working on a message in the Editor, instead of just when you are in the Insert Mode. We decided to keep the **SEND** Soft Key in one location (**F1**) in both Insert and Revise Modes. To do this, we shifted the **SET TAB** and **CLR TAB** Soft Key labels in the Insert Mode and consolidated the **TOP** and **BOTTOM** Soft Keys in the Revise Mode into a single, alternate action Soft Key labeled **TOP/BTM**. Pressing the **TOP/BTM** Soft Key will position the solid, rectangular cursor at the "TOP" or beginning of the message (column 1, row 1) if it is not already there. If the cursor is presently at the beginning of the message, then pressing the **TOP/BTM** Soft Key will position the cursor at the "BOTTOM" (after the last character in the message).

(3) The **GET MSG** Soft Key

A new Soft Key is available in the CREATE MESSAGE Screen and in the Insert Mode of the Editor, **GET MSG**. Pressing this Soft Key displays the same Message Selection Window that you see in the lower third of the screen when the **SEND MSG** Soft Key is pressed on-line, and the results are very similar. The Soft Keys are blanked except for **F6** and **F8** which are relabeled as **GET MSG** and **CANCEL**, respectively; select the message you wish to "get" (copy) using the [**↑**], [**↓**], [**←**] and [**→**] cursor control keys. When the **F6** Soft Key is pressed, the Message Selection Window disappears and you will see the characters from the selected message being "inserted" into the current message at the position of the cursor. After the last character is inserted, the Whisper Screen remains in the Insert Mode: you can type more characters or even copy another message by pressing the **GET MSG** Soft Key again.

(4) The DISCONNECTED Screen

Since an accidental disconnection can be either a mild annoyance or a major catastrophe, the Whisper Screen was designed to continue displaying the last 24 lines of transmitted or received text on the screen following both accidental and intentional disconnections: this is called the DISCONNECTED Screen, since the Status Window displays "DISCONNECTED". If the information on the screen is important and perhaps impossible for the sender to retransmit, it is still possible to obtain a printed copy of the displayed text by pressing the [PRINT_SCREEN] Key before redialing the terminal or computer service. However, many Whisper Screen owners always activated their optional Printer (connected to the Whisper Screen's Printer Port) whenever they called a computer or other terminal: these owners were irritated by having to press the **F8** Soft Key again to **EXIT** from the DISCONNECTED Screen after they had just pressed the **F8** Soft Key (**DCONN**) to disconnect.

Now, pressing the **F8** Soft Key when it is labeled **CONN** will cause the MAIN MENU Screen to appear if the Printer Port was active (that is, printing received or transmitted text) at the time of disconnection. If the Printer Port was not active, you will still be given a chance to print the last 24 lines of information displayed on the DISCONNECTED Screen.

(5) Minimum Status Message Duration

Some owners noticed that when the Whisper Screen's Status Window indicated it was "WAITING" for a character or was in the midst of a "PAUSE" for some time period as part of a Log-on or Function String, the Status Message "USE SHIFT F8" was not visible when they tried to disconnect by pressing the unshifted **F8** Soft Key. This status message, and others, will now appear for at least one half second before being replaced by any previous Status Message. In addition, the "invalid key" Status Message will be blanked after one and one half seconds.

(6) Downloadable Delayed Auto-Send Retry Interval

The Delayed Auto-Send Retry time interval can be adjusted by an authorized Whisper Screen dealer for any whole-minute interval between 2 minutes and 59 minutes: the Whisper Screen's normal Retry time interval of 30 minutes is generally acceptable to most users. The downloaded Retry interval will remain in effect until you press the **F3** Soft Key in the OPTIONS PART 1 of 3 - COMMON Screen to **RESET** ALL of the Group and Common Configuration Options to their Factory DEFAULT Values, or until the Whisper Screen "forgets" all of its memory because the Whisper Screen was turned off for two weeks or longer and the internal ni-cad battery became discharged.

The Auto-Print Feature: Receiving Messages in "Background"

Some Whisper Screen users prefer all of their received messages to be printed rather than recorded into memory, and do not want to be interrupted while preparing their messages whenever an incoming message is received. If you feel this way, too, then you may want to activate the new Auto-Print feature. Of course, you will need a Whisper Printer or other suitable printer connected to the Whisper Screen (with both power switches 'ON') before you can use this feature.

The Auto-Print feature is selected in the OPTIONS PART 1 of 3 - COMMON Screen:

1. From the MAIN MENU Screen, touch the **F5** Soft Key to display the SET-UP MENU Screen.
2. Touch **F5** again to change the Terminal **OPTIONS**.
3. Touch the [↓] Cursor Key once to highlight the option labeled Auto-Answer Received Data.
4. Touch the **F6** Soft Key twice to **MODIFY** the displayed value from MEMORY to AUTO-PRINT.

With the Auto-Print feature activated, you will no longer be interrupted when the Whisper Screen answers an incoming call. The Whisper Screen still "beeps" and uses the Status Window (between the Soft Key labels on the 25th display line) to let you know the "phone" is "RINGING", but you can ignore the Status Message and keep on preparing a message or customizing a function string without interruption.

When the Whisper Screen detects an incoming call, it displays the "RINGING" Status Message and automatically tests to see whether or not the Whisper Printer (or other external printer) is busy. If the printer is available, the Whisper Screen will cause the printer to advance the paper a few lines and then print "INCOMING MSG - " plus the date and time, based on the Whisper Screen's internal clock, and then answer the incoming call (usually after just one ring). After a connection is established between the Whisper Screen and the calling terminal or computer, the text of the message will be printed as it is received. When the calling terminal disconnects, the Whisper Screen will cause the printer to print "DISCONNECTED -" plus the date and time and then advance the paper a few lines.

What happens if the printer is in use or busy (unable to accept more characters) when the incoming call is detected? Perhaps you pressed the [PRINT_SCREEN] key or the **F7** Soft Key to **PRINT** a very long message just before the Whisper Screen detects an incoming call: who gets control of the printer, your manual ("local") request to print or the automatic ("line") request of the calling terminal? Since the incoming message is relatively more important, the Whisper Screen will cancel the remainder of your "local" printing (remember, you activated the Auto-Print feature). The "local" printing may continue for a while if your printer has an internal buffer (like the Whisper Printer) but the only new characters sent to the printer will be the date/time stamp and the text of the incoming message.

If your printer's buffer was full and it was unable to accept any more characters as a result of your "local" printing, then the printer would have signaled the Whisper Screen that it was busy: while this shouldn't happen very often, if it does, the Whisper Screen won't answer the incoming call until the printer indicates it's no longer busy. The reason for this is that every incoming message must have someplace to print when the call is answered, so the Whisper Screen must continually check the printer's status to make sure that it isn't temporarily or permanently busy because of mechanical or electrical problems.

A Change to the MAIN MENU Wording

Normally, the last choice on the MAIN MENU Screen will read:

"Press F8 for AUTO-DIAL Screen"

When this choice is presented, it means that the Whisper Screen is not presently receiving a message using the Auto-Print feature and that pressing the **F8** Soft Key will display the AUTO-DIAL Screen. However, once the Whisper Screen answers an incoming call using the Auto-Print feature, the last choice on the MAIN MENU Screen will change to:

"Press F8 to JOIN the Call in progress"

The **F8** Soft Key also changes from **DIAL** to **JOIN**. If you need to join a call in progress, get to the MAIN MENU Screen by pressing the **F8** Soft Key to **EXIT** or **CANCEL** whatever you might be doing at the time, and press the **F8** Soft Key when it is labeled **JOIN**. Once the Whisper Screen and calling terminal have established communications, you may leave the Auto-Print mode and join the call in progress: if you try to join the call too soon, the Status Message "Can't Do It" will appear in the Status Window. When you have successfully joined the call in progress, you can "converse" with the calling terminal's operator if desired, or even send a previously prepared message to the

caller. However, when you disconnect from a call you "joined", the normal Auto-Print date/time stamp will not be sent to the printer: you "canceled" the Auto-Print feature for that call by "joining" it. The Auto-Print feature will, however, be automatically reactivated for future calls until you select a different value for the Auto-Answer Received Data Option.

Are There Any Restrictions When Auto-Print is Activated?

Yes, but only a few. The following is a list of the restrictions which you should remember:

- (1) Auto-Print means just that: messages are printed rather than recorded in memory -- if you want to record messages as well as print them, you must select MEM+PRINT for the Auto-Answer Received Data Option.
- (2) Polling for messages in your Whisper Screen is not possible as long as Auto-Print is activated. A caller cannot "poll" your whisper Screen, either for Selective or Broadcast messages -- if your application requires polling, do not activate the Auto-Print feature.
- (3) Downloading or interrogating your Whisper Screen is not possible. A caller cannot change your Whisper Screen's Directories, Functions Strings, or Configurations, nor can Forms be downloaded, as long as Auto-Print is activated. This shouldn't be much of a problem since downloading is usually done shortly after you first set-up the Whisper Screen.

Although the Whisper Screen can't respond to most escape sequences or special control codes, it still responds to the "Who-Are-You" control code by sending it's Answerback.

Differences between AUTO-PRINT, PRINTER, and MEM+PRINT

If you had touched the **F6** Soft Key one more time when you were modifying the Auto-Answer Received Data Option, the displayed value would have changed from AUTO-PRINT to PRINTER. The differences between these two values are:

PRINTER automatically answers a call and displays the incoming message on the screen as it is received and printed; message preparation is interrupted; characters you type on the keyboard will be transmitted to the calling terminal or computer, allowing you to "converse" with the message sender if desired; messages in your Whisper Screen may be polled by the calling terminal; downloading of new Forms, Directories, Function Strings or Terminal Configurations is possible.

AUTO-PRINT automatically answers a call but the incoming message is only displayed on the printer; you may continue message preparation without any interruption; characters you type on the keyboard are not transmitted unless and until you join the call in progress by pressing the **F8** Soft Key from the MAIN MENU Screen; messages in your Whisper Screen cannot be polled by the calling terminal; downloading of new Forms, Directories, Function Strings or Terminal Configurations are not possible.

When Auto-Print was added as a new choice for the Auto-Answer Received Data, it became necessary to change the fourth choice from BOTH to MEM+PRINT and eliminate any possible confusion about what would happen when it was selected. The differences between these two values are:

MEM+PRINT automatically answers a call and displays the incoming message on the screen as it is stored in memory and simultaneously printed; message preparation is interrupted; characters you type on the keyboard will be transmitted to the calling terminal or computer, allowing you to "converse" with the message sender if desired; messages in your Whisper Screen may be polled by the calling terminal; downloading of new Forms, Directories, Function Strings or Terminal Configurations is possible.

AUTO-PRINT automatically answers a call but the incoming message is only displayed on the printer; you may continue message preparation without any interruption; characters you type on the keyboard are not transmitted unless and until you join the call in progress by pressing the **F8** Soft Key from the MAIN MENU Screen; messages in your Whisper Screen cannot be polled by the calling terminal; downloading of new Forms, Directories, Function Strings or Terminal Configurations are not possible.

Forms

Many businesses use forms to communicate information from one office to another. Now you can create forms using the Whisper Screen's easy-to-use text editor, fill in the blanks, file the information in memory, and then transmit it to another teleterminal or computer. Forms can even be transmitted from a Whisper Screen at the "Home Office" for use by other Whisper Screens at "Branch Offices"!

Forms in a Whisper Screen are identified by an asterisk (*) as the first character in a message Label. Without the asterisk, the Whisper Screen will treat a Form as if it were just another message in memory. A Form consists of prompts or labels which usually ask you to fill in certain variable information or data. The variable information is displayed as dark characters inside bright green rectangular fields. Each character of data you type when filling out a Form takes up one space inside these rectangular fields. The labels in a Form are called "protected" fields because you can't change them while filling out a Form, and the data fields will remain even after you erase or delete old variable information from a Form.

Many Forms can fit in a single screen 80 columns wide and 24 lines long. Since some Forms may need to have more than 24 lines, the [NEXT] key is used to advance the Form to the next screen, and ultimately cycle through all of the screens, returning to the first 24 lines of the Form.

Many applications requiring Forms involve sending both the labels and data, which avoids the expense of preprinted forms and allows greater flexibility so that the Form can change as your business requirements change. You can create such forms using the Whisper Screen's own built-in text editor:

1. Type the labels in the position you wish them to occupy on the screen.
2. Use the underline character to create data fields, one underline per character in the field.

This type of form can be characterized by the phrase, "What you see is what you get": the labels are sent, space characters are automatically added at the end of the typed data to fill any unused positions within a field. Many Forms of this type have a single label and data field on each line, although you may be able to fit more than one pair of labels and data fields onto some lines, depending upon the number of characters required for labels and the number of underline characters used to define the data fields.

However, some Forms need to be more sophisticated, sending only the data from a Form, filling unused positions in a field with something other than the space character (or not using any fill character at all), and separating each data field from the next with a single- or multiple-character sequence as required by the particular computer system which receives and processes the data from a Form. In this type of Form, the labels are used merely to prompt the operator to fill in the desired information. Contact your system administrator, authorized Whisper Screen dealer or 3M Sales Representative for assistance in developing specialized forms for networks of Whisper Screens.

Creating a Simple Form

The instructions below outline the steps necessary to create a form using the Whisper Screen's text editor which will send both the labels and the data.

1. From the MAIN MENU Screen, press the **F4** Soft Key to display the MESSAGE INDEX Screen.
2. Press the [**↑**] or [**↓**] cursor control keys, or the [NEXT] key) to highlight an empty message envelope in which you would like to compose the Form.
3. Press the **F5** Soft Key, labeled **MOD HDE**, to display the MESSAGE HEADER MODIFICATION Screen.
4. Type the label for this Form, remembering to use an asterisk (*) as the very first character in the label.

OPTIONAL Press the [**↓**] cursor control key once to highlight the Right Margin field in the Message Header. Press the **F5** Soft Key to **MODIFY** the displayed value to match the requirements for your Form.

5. Press the **F4** Soft Key to **SAVE** this Message Header and return to the MESSAGE INDEX Screen.
6. Press the **F6** Soft Key to **DISPLAY** the CREATE MESSAGE Screen: this is where you will begin to compose the labels and data fields of your Form, just like any other message.

NOTE: By following steps 1-6 above, you can control the order of your Forms in the FORMS SELECTION MENU Screen. If you have only one Form or don't care about the exact order of your Forms, you could skip these steps by simply pressing the **F1** Soft Key to **CREATE** the Form in the next empty message envelope and use the MESSAGE HEADER MODIFICATION Screen to **MODIFY** the label after you have finished developing your Form.

7. Type the Form. Remember that the underline symbol is reserved to indicate a data field: use one underline symbol for each character position in the data field.
8. When you have finished creating your Form, press the **F8** Soft Key to **EXIT** from the text editor.
9. Press the **F8** Soft Key to return to the MAIN MENU Screen.

An Example of a Simple Form

As an exercise, you might want to type the following Form into your Whisper Screen to see just how easy it can be to design a useful Form. Later, we'll practice filling it out to actually see how such a Form "behaves".

A Simple But Possibly Useful Form
Part 1 of 2

Typed by _____
Date: _____

Name - Last: _____ First: _____ Middle: _____
Business Name: _____
Business Type: _____

Home Address: _____ Apt #: _____
City: _____ State: ____ Zip: _____
Telephone - Area Code: ____ Number: _____

Business Address: _____ Suite: _____
City: _____ State: ____ Zip: _____
Telephone - Area Code: ____ Number: _____ Extension: _____

Date of Last Contact: __/__/__ Place: _____
Topic(s) Discussed: _____

Date of Next Contact: __/__/__ Place: _____
Action Items: _____

A Simple But Possibly Useful Form
Part 2 of 2

Comments: _____

Submitted by: _____

Once you have typed this form, **EXIT** from the text editor and, if you haven't already done so, **MODIFY** the label in the MESSAGE HEADER MODIFICATION Screen so that the Whisper Screen will recognize it as a Form: remember, an asterisk as the first character of the label identifies a Form. Return to the MAIN MENU Screen by pressing the **F1** Soft Key to **SAVE** the new label and message header and then pressing the **F8** Soft Key to **EXIT** the MESSAGE INDEX Screen.

Filling Out a Form and Storing the Data

Once a Form has been created or loaded into your Whisper Screen by a distant terminal or computer, you can use the second option in the MAIN MENU Screen to select and then fill out the Form:

1. Press the **F2** Soft Key, labeled **FORM**. The FORM SELECTION MENU Screen will appear, and the last Form used will be highlighted.
2. You may select a different Form using the cursor control keys (the Up, Down, Left and Right "Arrow" keys in the lower right corner of your keyboard).

If there are no Forms in your Whisper Screen when you enter the FORM SELECTION MENU Screen, the Status Window will display the advisory message "NO FORMS", and of course, no Form would be highlighted since none exists.

3. Press the **F5** Soft Key to **SELECT** the highlighted Form.

The Whisper Screen displays each Form just 24 lines at a time. If your Form is longer than 24 lines, the next 24 lines will be displayed when you press the [NEXT] key (in the upper right corner of your keyboard), and will continue to display additional 24-line screens until the end of the Form is reached: pressing the [NEXT] key at the end of the Form will take you back to the first 24 lines.

While you are filling out a form, the [**←**] and [**→**] cursor control keys will move you to the left or right within a single data field, while the [**↑**] and [**↓**] cursor control keys will move you from one data field to the previous or next data field (within a single screen of a Form), respectively. The [HOME] key will always take you to the first field in the first screen of your Form.

When a character is typed in the last position of a data field, the Whisper Screen will emit a short "beep" to remind you that you have reached the end of the field. Either the [TAB] or [RETURN] keys may be used to move to the next data field -- choose the one which seems most convenient for you. (The [↓] cursor control key will also move to the next data field, but if your form is longer than one screen or 24 lines, it will stop at the last field of a screen rather than advancing to the first field on the next screen as [TAB] and [RETURN] would do.)

The Soft Keys used in the Forms Editor are very similar to those in the Revise Mode of the Whisper Screen's Text Editor.

HELP While you are filling out a Form, you can press the **F1** Soft Key to display a HELP screen which briefly explains the action of the other Soft Keys.

FILE Press the **F2** Soft Key when you have completed filling out a form and wish to store the data as a separate message in memory. This takes the place of the **GET MSG** soft key: data cannot be "pulled" into a Form, it can only be "filed" or sent.

INS-CHR If you accidentally omit a character while typing data into a field, you can use the **F3** Soft Key to insert a space between two characters and then type the character which was left out. Since the length of a field in a form is predetermined, inserting data is done on a character-by-character basis.

DEL-TXT The **F4** Soft Key is used rather than the [CLEAR SCREEN] key to delete the old data within a Form.

DEL-CHR You can delete single characters by pressing the **F5** Soft Key: the character under the cursor will be deleted and any characters to the right of the deleted character will move one space to the left. You may also use the [␣] (Backspace) key to delete the character to the left of the cursor.

ERASE Use the **F6** Soft Key to delete all characters from the cursor to the end of a single data field. This is similar to the DEL-LNE Soft Key in the text editor.

PRINT Pressing the **F7** Soft Key will cause the Form data to be printed locally.

EXIT You leave the Form by pressing the **F8** Soft Key.

Most people who use Forms find it convenient to fill out several copies of the Form and store the data in one of the 24 Message Envelopes, rather than send each individual Form as it is filled out, although that is also possible:

1. After filling out a form, you would press the **F2** Soft Key to **FILE** the data.
2. The first time you press this Soft Key after selecting and filling out a form, the Whisper Screen will respond by displaying the **FILING THIS FORM IN MEMORY** Screen and prompt you to use the cursor control keys to select a message in which to store the data from this form: the Whisper Screen will start out by attempting to find an empty message envelope, but if all envelopes are used it will display the Status Message **"NO_EMPTY_MSG"**.

Notice that the number of the message envelope in which the data will be stored is indicated on the display, and that it changes as you use the cursor control keys to highlight other message envelopes.

3. When you have highlighted the message envelope in which you wish to store the data (for example, 12) simply press the **F5** Soft Key, also labeled **FILE**, to transfer the data into that envelope.

The status message **"FILED IN 12"** will appear in the Status Window to confirm that the message was filed, and the Form will once again be displayed.

4. To remove the old data (which you just filed) from the Form, press the **F4** Soft Key, labeled **DEL-TXA**. The effect of this Soft Key is to erase data in several fields, starting with the character beneath the cursor and ending with the last character in the last field of the Form.

In some applications, the data in certain fields may change only on a daily or weekly basis, while the data in others may change with each new copy of the Form (for example, a weekly report of regular and overtime hours for a company's employees). To reduce the amount of re-typing, you may prefer to selectively **ERASE** specific data fields which change, while skipping over the fields that remain constant. You can also change the existing data by overtyping the previously entered data.

5. If you fill out another copy of the Form and then press the **F2** Soft Key to **FILE** it, the Whisper Screen will remember that you had previously chosen envelope 12 and will automatically append the new data to the end of the data you've already stored in message envelope 12.

Filing the data in a specific message envelope can even be an automatic function in more sophisticated forms which include the optional Command Line: the first time you press the **F2** Soft Key to **FILE** the data, the Whisper Screen will automatically store the data in the message envelope specified by the designer of the Form you are using! For more information on the use of the optional Command Line, please refer to the section on Technical Information at the end of this pamphlet.

An Example of Filling Out a Simple Form

This section refers to the "simple but possibly useful" Form which you created in an earlier section using the Whisper Screen's built-in text editor.

1. From the MAIN MENU Screen, press the **F2** Soft Key to begin filling out a **FORM**.
2. Use the cursor control keys to highlight the label of the Form you wish to fill out: **SELECT** the Form by pressing the **F5** Soft Key.
3. This Form will be displayed as two, 24-line screens. Labels will appear as green letters on a dark background while data fields will appear as green, rectangular areas. A flashing cursor will appear in the first position of the first field.

The label associated with the first data field prompts you to type your name. As you type the data into this field, the cursor moves to the right until it reaches the end of the field, at which point the Whisper Screen will sound a short "beep". This sound advises you that the next key you press will overwrite the last character unless you press [RETURN], or [TAB] to move to the next data field, or one of the cursor control keys: the [←] and [→] cursor keys move within a single field, while the [↑] and [↓] cursor keys move between data fields.

Two other keys are useful in moving around within a Form: [HOME] moves the cursor directly to the first position of the first field (on the first screen, in the case of a multi-screen Form), while [NEXT] moves the cursor directly to the first position of the first field in the next screen in a multi-screen Form. Eventually, the [NEXT] key will move the cursor back to the first field on the first screen of a multi-screen Form. In a single-screen Form, the [NEXT] and [HOME] keys will have the same effect, moving the cursor directly to the first data field.

4. Experiment with typing data into the fields of this form.

Use the **INS-CHR**, **DEL-CHR** and **ERASE** Soft Keys as needed to correct any mistakes you might happen to make while entering data within a single field.

Use the **DEL-TXT** Soft Key to delete several data fields with just two keystrokes: the Whisper Screen will prompt you to confirm the deletion since this action is destructive of the data in more than one field. Answer the "DELETE ?" prompt by pressing the **YES** Soft Key or the letter [Y] if you wish to delete everything in the data fields between the cursor and the end of the Form.

5. Press the **F2** Soft Key to **FILE** the data a few times. Remember that you will only need to choose a separate message envelope for storage the first time you file the data after selecting a Form: until you **EXIT** the Form, the Whisper Screen is able to remember where you wanted the data to be stored.

6. **EXIT** the Form by pressing the **F8** Soft Key: the FORM EXIT MENU screen will offer you several possible actions.

You may leave the FORM EXIT MENU Screen and return to the MAIN MENU Screen by pressing the **F8** Soft Key when it, too, is labeled **EXIT**.

You may return to the Form by pressing the **F5** Soft Key when it is labeled **FORM**.

7. You may **DISPLAY** the message envelope in which the data was filed by pressing the FORM EXIT MENU Screen's **F4** Soft Key.

Notice that the filled-out copies of the Form look just like the Form but without the underline symbols! Since this type of form fills the the unused parts of data fields with the space character, proper spacing is maintained between the labels and the data fields. This type of simple Form is useful when the recipient of the form is a person and the data is not being printed on Preprinted Forms.

8. You may send the information you filed in the separate message envelope, or just the data (if any) which was still displayed in the Form when you pressed the **F8** Soft Key to **EXIT**:

Pressing **F2**, labeled **END MSC**, will send the data from the Forms you have filed.

Pressing **F1**, labeled **SEND**, will send ONLY a single copy of the Form. The data which remained in the Form, whether or not it was previously filed, will be sent. If the Form data had been deleted using the Soft Key labeled **DEL-TXT** or by an automatic delete, then the Form itself will be transmitted, complete with underlines for the data fields!

Technical Data

-- Specifications --

Firmware Revision Level: 4.2.00

Terminal Type Identifier returned sequence (Auto-Print inactive):

ESC T 22 B 4.2.00 Mxxx Z c/r

where,

ESC	T	is the returned-sequence identifier
22		is the model identifier (22 = Model 1922XX)
B		is a Firmware Compatibility Index
4.2.00		is the Firmware Revision Number
Mxxx		is the number of blocks of "free" memory (1 block = 100 characters)
Z		is the current configuration (A, B, C or D)
c/r		is a carriage return, as the returned sequence terminator

Terminal Type Identifier returned sequence (Auto-Print active):

ESC T 22 B 4.2.00 c/r

where,

ESC	T	is the returned-sequence identifier
22		is the model identifier (22 = Model 1922BB)
B		is a Firmware Compatibility Index
4.2.00		is the Firmware Revision Number
c/r		is a carriage return, as the returned sequence terminator

A form may consist of some or all of the following parts.

DATA FIELD - Required; defined by the Underline character (). The data field is the area of a form where the user types the variable information when filling out a form. The underline character is used to define a data field during form design in the Whisper Screen's text editor. The underlines are displayed as bright green rectangular fields when the form is being filled out. The maximum length of a field is 80 characters (the width of the screen), but it may be shortened by selecting a Right Margin value of 72 or 69. Any field extending beyond the right margin or the 80th display position is automatically divided into (at least) two fields. This is true even when the Right Margin has been set to <> (UNLIMITED).

FIELD FILL CHARACTER - Optional; defaults to Space character. The form's designer may choose a single character to completely fill the remainder of a data field when the variable information (typed by the user) does not. Some computers may require each field to be completely filled with characters to properly process the information. Common field fill characters include Space, Delete, and Null. Define the field fill character in the Command Line by enclosing it within Tildes, such as ~X~, where X is the designated fill character. If fill characters are not desired, the form's designer must indicate this in the Command Line by typing ~~ (a pair of Tildes with no intervening characters).

If no fill character is explicitly defined, then the Whisper Screen automatically designates the Space character to be the Field Fill Character.

FIELD SEPARATOR - Optional; defaults to no field separator. The field separator is a character or series of characters used to mark the end of the variable data entered for one field. The use of field separators depends on the requirements of the receiving computer or terminal. Common field separators include the Comma and Carriage Return. Field separators can be up to 4 characters in length, and are defined in the Command Line by enclosing the designated character between a pair of Vertical Bar characters, such as |ABCD|.

If no field separator is explicitly defined, then the Whisper Screen will not automatically send an end of field sequence.

Technical Data:

DESIGNING A FORM (continued)

LABEL - Nearly all forms include at least one label. A label identifies a data field and usually prompts the user to fill in some specific information (variable data). A label can also be used to display instructions for filling out particular forms. When labels are sent along with the variable data, they can be used to send instructions to the receiving terminal or computer, such as carriage returns, line feeds, form feeds and tabs. No characters or special symbols are required to define a sequence of characters as being a label. However, the underline character cannot be part of a label since it is already being used to define the data field.

The form's designer can choose, via the Command Line, whether or not labels will be transmitted with the variable data.

LITERALS - Optional; defined by single or double quotes (' or "). A literal is any text within the form that does not change or get erased when someone uses the form, and which is filed and/or transmitted along with variable data that has been entered into the form. Generally, literals are control characters or commands required by a computer to correctly process the variable data within a form. When the form's labels are sent along with the variable data, literals are unnecessary.

The form's designer designates a literal by enclosing one or more characters within a pair of single quote (') or double quote (") characters. Use single quotes when the literal itself includes the double quote character, and use double quotes when it is necessary to send a single quote character as part of the literal.

If the form's designer has chosen, via the Command Line, to transmit just the variable data, then it is possible to specify whether or not the literals will be displayed along with labels when the form is being filled out.

Technical Data:

The Optional Command Line Within a Form

The Whisper Screen automatically assumes the following guidelines for sending and displaying a form, unless the optional Command Line is included at the beginning of a form:

- No field separators are predefined
- The space character is transmitted as the field fill character
- Both labels and variable data are transmitted
- Literals are not used because labels are transmitted with data
- The user must choose the message envelope where the form's information will be filed
- Old data is not automatically cleared from a displayed form after filing.

The command line of a form allows the form's designer to change these standard parameters to match the requirements of a particular system.

The first line of a form is designated as the Command Line and is only visible when a form is being created or modified using the Whisper Screen's built-in text editor. It will not appear when a user fills out the form.

- The Command Line must always start with the asterisk or star character (obtained by touching [SHIFT] and [8] simultaneously) as the very first character on the first line.
- The Command Line codes that follow must be enclosed within parentheses (obtained by touching [SHIFT] and [9] or [SHIFT] and [0] simultaneously), but their order in the Command Line can vary.

A Sample Command Line:

`*(D|R|~~MØ8E)`

This Command Line directs the Whisper Screen to:

- send only data (no labels)
- not display literals while filling out the form
- send Control-M as the field separator
- not send any field fill character
- automatically file the form data in message envelope Ø8
- automatically erase the old data from the form after filing

Technical Data:

**The Optional Command Line Within a Form
(continued)**

1. The letter D causes only the variable data to be transmitted and not the labels in a form.
2. The letter L causes the literals in the form to be displayed while the user is filling out the form. This code will only be effective if the D is also in the Command Line. (Remember -- if labels are transmitted, literals don't really exist.)
3. Field separators are programmable, up to 4 characters in length. To establish a field separator, enclose the desired character sequence within two of the Vertical Bar characters, generated by touching the [SHIFT] and [\] keys simultaneously. For example, if the desired field separator is the two-character sequence Comma and Carriage Return, you would type |,␣| within the Command Line. (You may not use the Vertical Bar itself as the field separator.)
4. To specify a field fill character other than the Space character, type the selected character between a pair of Tildes, generated by touching the [SHIFT] and [~] keys simultaneously. For example, if the desired field fill character is the Number Sign, you would type ~#~ within the Command Line. If no fill character is desired, simply type ~~ within the Command Line. (You may not use the Tilde character itself as the field fill character.)
5. The letter M followed by a two digit number (01 through 24) is used to specify which message envelope will automatically "receive" the data when the **F2** FILE key is pressed. For example, if the desired message envelope is 8, you would type M08 within the Command Line. If a number outside the valid range is specified, the normal FILING THIS FORM IN MEMORY screen will be displayed and the user must manually select one of the 24 message envelopes.
6. The letter E causes the data in a form to be automatically erased after the information has been filed in a message envelope.

FORM SELECTION MENU

A Form is identified by an * as the first character in the label

Select a Form using the cursor control keys
(the cursor will only move to another form)

then

Press: **F5** to SELECT the highlighted form

F8 to EXIT

1 [*Form #1]	7 XXXXXXXXXXXX	13 XXXXXXXXXXXX	19 XXXXXXXXXXXX
2 USER MSG	8 XXXXXXXXXXXX	14 XXXXXXXXXXXX	20 XXXXXXXXXXXX
3 *Form #2	9 XXXXXXXXXXXX	15 XXXXXXXXXXXX	21 XXXXXXXXXXXX
4 USER MSG	10 *Form #3	16 XXXXXXXXXXXX	22 XXXXXXXXXXXX
5 USER MSG	11 FORM DATA	17 XXXXXXXXXXXX	23 FORM DATA
6 XXXXXXXXXXXX	12 XXXXXXXXXXXX	18 XXXXXXXXXXXX	24 RCVD MSG

[____] [____] [____] [____]

A_c_ SELECT [____] [____] [EXIT]

FILING THIS FORM IN MEMORY

Use the cursor keys to select a different Envelope to store the Data

Press: **F5** to FILE this Form in Envelope 21
and return to the Form

F8 to EXIT back to the Form

After an Envelope is selected, each time you press **F2** to FILE the Data from this Form, it will be stored in the selected Envelope (empty Envelopes used to store Data will automatically be labeled "FORM DATA")

1 *FORM 1	7 XXXXXXXXXXXX	13 XXXXXXXXXXXX	19 XXXXXXXXXXXX
2 *FORM 2	8 XXXXXXXXXXXX	14 XXXXXXXXXXXX	20 XXXXXXXXXXXX
3 XXXXXXXXXXXX	9 XXXXXXXXXXXX	15 XXXXXXXXXXXX	21 [____]
4 XXXXXXXXXXXX	10 XXXXXXXXXXXX	16 XXXXXXXXXXXX	22 RCVD MSG
5 XXXXXXXXXXXX	11 XXXXXXXXXXXX	17 XXXXXXXXXXXX	23 RCVD MSG
6 XXXXXXXXXXXX	12 XXXXXXXXXXXX	18 XXXXXXXXXXXX	24 RCVD MSG

[____] [____] [____] [____]

A_c_ FILE [____] [____] EXIT

FORMS HELP

A FORM consists of two parts:

- 1) FIELDS, which contain the data you type while filling in a Form
- 2) LABELS, which identify a Field and usually prompt you to type some specific information

NEXT Displays the next screen of a multi-screen Form

F2 FILE Stores the completed form in a Message Envelope

F3 INS-CHR Inserts a space between characters; cursor does not move

F4 DEL-TXT Deletes all the data from the cursor to the end of a Form

F5 DEL-CHR Deletes the character under the cursor

F6 ERASE Erases data from the cursor to the end of a single Field

F7 PRINT Prints a copy of the current Form

F8 EXIT Leaves the Form; displays a Menu of possible actions

Press: **F8** to EXIT back to the Form

[] [] [] []

A_c_ [] [] [] EXIT

Form Exit Menu (UNFILED) screen - new

FORM EXIT MENU

Press: **F1** to SEND the Form
F5 to go back to the FORM
F8 to EXIT to the MAIN MENU

3:53 AM CONFIG A - OFFLINE LOWER CASE 4.2.00
SEND [] [] [] A_c_ FORM [] [] EXIT

Form Exit Menu (FILED) Screen - new

FORM EXIT MENU

Press: **F1** to SEND just the last copy of the Form
F2 to SEND the MESSAGE in which you filed this Form
F3 to DISPLAY the Message in which you filed this Form
F5 to go back to the FORM
F8 to EXIT to the MAIN MENU

3:53 AM CONFIG A - OFFLINE LOWER CASE 4.2.00
SEND SND MSG [] DISPLAY A_c_ FORM [] [] EXIT

Attempted to Display Form With Unfiled Data - new

WARNING!

DATA IN THIS FORM WILL BE DELETED

[_____] [_____] [_____] [_____] DELETE ? A_c_ [_____] [YES_] [_____] [NO_]

Get Message Screen (NEW)

1 [USER MSG]	7 XXXXXXXXXXXX	13 XXXXXXXXXXXX	19 XXXXXXXXXXXX
2 *FORM 1	8 XXXXXXXXXXXX	14 XXXXXXXXXXXX	20 XXXXXXXXXXXX
3 *FORM 2xxx	9 XXXXXXXXXXXX	15 XXXXXXXXXXXX	21 XXXXXXXXXXXX
4 XXXXXXXXXXXX	10 XXXXXXXXXXXX	16 XXXXXXXXXXXX	22 RCVD MSG
5 XXXXXXXXXXXX	11 XXXXXXXXXXXX	17 XXXXXXXXXXXX	23 FORM DATA
6 XXXXXXXXXXXX	12 XXXXXXXXXXXX	18 XXXXXXXXXXXX	24 RCVD MSG

[_____] [_____] [_____] [_____] A_c_ GET MSG [_____] [_____] CANCEL

MESSAGE INDEX - PART 1 of 2

	Label	Rt Mrgn	Delayed Dir	Auto-Send Time	Retry	---Polling--- ? Code Nbr	Date / Time	Mem Used
1	>FORM DATA	80						01%
2								
3	*QB Form	80						03%
4	*IT Form	80						03%
5	*IU Form	80						05%
6	*MB Form	80						02%
7								
8								
9								
10								
11								
12								

Memory Available: 7 Messages; 20,700 Characters

Press the NEXT key for more messages

7:24 AM CONFIG A - ONLINE LOWER CASE PRINTER 4.2.00
 CREATE [] SEND DELETE A_c_ MOD HDR DISPLAY PRINT EXIT

CREATE MESSAGE Number 2
 Label USER MSG
 Right Margin 80

Press F5 to change right margin

or

Start typing

[] GET MSG [] [] A_c_ RT MRGN [] [] EXIT

Text Editor - Insert Mode Soft Keys (page 18)

SEND GET MSG REVISE SET TAB A_c_ CLR TAB [_____] PRINT EXIT

Text Editor - Revise Mode Soft Keys (page 19)

SEND TOP/BTM INSERT DEL-TXT A_c_ DEL-CHR DEL-LNE PRINT EXIT

Online Screen #2 (page 33)

User-F5 User-F6 User-F7 User-F8

A_c_ MESSAGE FORM

PRINTER DCONN

Online Screen #3 (page 34)

User-F9 UserF10 UserF11 UserF12

A_c_ SET-UP [_____] PRINTER DCONN

78-6970-0847-8

Business Communications Products Division/3M
3M Center
St. Paul, MN 55144

