Introduction

Congratulations on your purchase of an Electronic Message Center. The Message Center's EZ KEY II operation provides you with simple message entry and a wide variety of message features.

EZ KEY II is straight-forward and flexible. In fact, if you use the AUTOMODE, you can program your Message Center in just four simple steps. The AUTOMODE displays your message in several pre-programmed ways or **modes**. Then, as you become more familiar with the basic operations, you can use more sophisticated features such as creating your own graphics, forming multiple files, setting ON/OFF time periods, and different display modes.

Please take a few moments to read this manual and experiment with the EZ KEY II operations. Then start programming your own messages. If you need assistance, contact your sales representative.

Thank you for purchasing an Electronic Message Center!

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EZ KEY II Startup

Connect your Electronic Message Center to the power supply (transformer) and then plug the power supply (transformer) into a standard electrical outlet. If applicable, insert the 14 pin connector plug (on the attached keyboard cord) into the slot on the message center. Your Electronic Message Center is now ready to operate.

Beginning on page 2, you will find keyboard operation tips. Step-by-step instructions for Beginner, Intermediate and Advanced programming techniques begin on page 4. Programming notes and tips accompany each section. Please read chapter one, Beginner Programming, to obtain a basic understanding of Electronic Message Center operations.
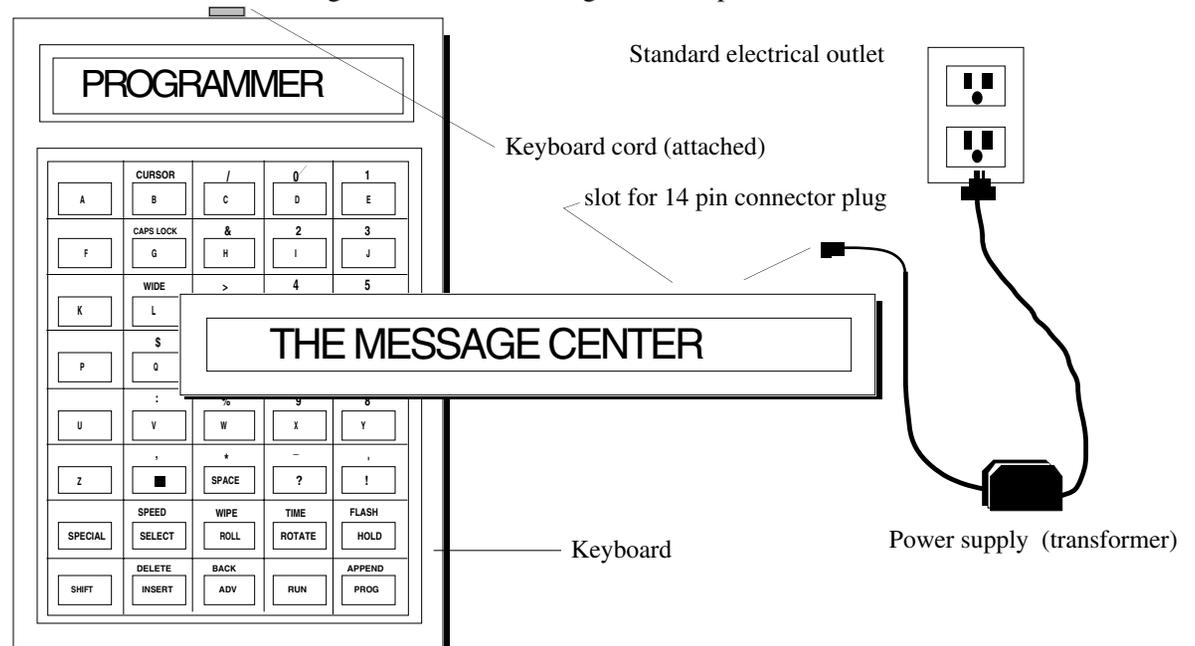
1

Keyboard Operation

Refer to the accompanying illustration to familiarize yourself with the keyboard functions. Please note that most keys have two functions and some have three. The most commonly used characters are placed on the main keys and the other characters are located above them. Not all available functions appear on the printed keyboard.

The keyboard operates similar to a typewriter keyboard. If the character directly above the main key is desired, press and hold down the ⌐SHIFT⌐ key (lower left hand corner) and press the main character key. If the character on the main key is desired, simply press the key. No ⌐SHIFT⌐ key is needed. The ⌐CAPS LOCK⌐ key only works with the 26 main letters. It does not work with the number keys or other key options.
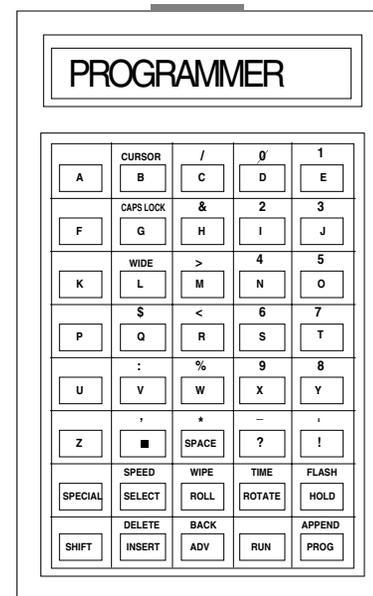
After all your desired messages have been entered into the Message Center and the messages are running, the keyboard can be detached. Without the keyboard, the messages cannot be altered thus providing you with an easy message security system.

PROGRAMMER

A	CURSOR B	/ C	0̸ D	1 E
F	CAPS LOCK G	& H	2 I	3 J
K	WIDE L	> M	4 N	5 O
P	$ Q	< R	6 S	7 T
U	: V	% W	9 X	8 Y
Z	, ■	* SPACE	– ?	' !
SPECIAL	SPEED SELECT	WIPE ROLL	TIME ROTATE	FLASH HOLD
SHIFT	DELETE INSERT	BACK ADV	RUN	APPEND PROG

Understanding the Cursor

A reference to **cursor** is made throughout the documentation. A **cursor** appears at the beginning of a message in the Programming mode and the upper left corner when programming DOTS pictures. Activated (lit) LED's (single or multiple depending on sign and function), indicate the cursor.
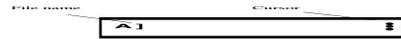
When editing your message in the Programming mode, an invisible cursor allows you to make changes at the farthest right hand position. References within this manual to *position your cursor for editing* means the changes must be made at this farthest right hand position. See Revising and Editing Messages on page 17 for additional information.

1

Beginning Programming

To program your first message, follow these steps:

Step 1. Press [PROG]. PROG TEXT FILE A is displayed.

Step 2. Using the keyboard, type [H] [E] [L] [L] [O] and a carriage return ([SPECIAL] and then [■]) to create two lines. Then type [W] [O] [R] [L] [D]. [AUT] HELLO E WORLD is displayed. [AUT] refers to AUTOMODE. See page 8 for additional information about using Automode.

Step 3. Press [RUN]. END MESSAGE HERE ? Y/N or, END HERE ? Y/N is displayed.

Step 4. Press [Y] or [RUN]. The message is displayed with the words HELLO and WORLD alternating through the various different formats. Note that the message is automatically centered.

HELLO

Beginning Programming, continued

☞ NOTE

The message prompts may vary depending on the Message Center you are using. Some prompts may be abbreviated such as DEL for DELETE on both the sign and in this documentation.

For most examples in this manual, you will start the example by creating a new file in the Programming mode. However, some examples use messages you previously programmed or have you combine several earlier sections.

The prompt END MESSAGE HERE? Y/N or, END HERE? Y/N allows you to end the message by pressing [Y] for YES or continue the message by pressing [N] for NO.

Remember, if you change a file (message) while in the Programming mode, you MUST go to the end of the file first before pressing [RUN]. This will prevent loss of your message. To advance to the end of a file, press [APPEND] ([SHIFT] and [PROG]) Then press [RUN] and [Y], or press [RUN] twice.

If you do not specify a filename, your entry is automatically saved as **File A**, the default file, if you press [RUN] twice. New entries not specified as a different file, automatically copy over the previous message in the default file, **File A**. See Text Files and Multiple Files on page 27 for more information.

The filename, when displayed, appears in the left hand corner of the screen.

To start over at any time during the steps in this manual, go to PROG TEXT FILE A by pressing [PROG] at least once and possibly twice. PROG TEXT FILE A is displayed.

1

Correcting Programming
Mistakes while Entering Messages

Correcting programming mistakes is easy. For example, if you wanted to enter the word HELLO but you accidentally typed HEELO, you would use the [SHIFT] and [ADV] keys to activate the [BACK] key. The [SHIFT] key functions just like a typewriter [SHIFT] key. To practice correcting a mistake, follow these steps:

Step 1. Press [PROG]. PROG TEXT FILE A is displayed.

Step 2. Using the keyboard, type [H] [E] [E] [L] [O].
[AUT] HEELO is displayed.

Step 3. Press [BACK] ([SHIFT] and [ADV]). [AUT] HEEL is displayed.

Step 4. Press [BACK] ([SHIFT] and [ADV]). [AUT] HEE is displayed.

Step 5. Press [BACK] ([SHIFT] and [ADV]). [AUT] HE is displayed.

Step 6. Press [L]. [AUT] HEL is displayed. (By pressing [L] you replace the incorrect E.)

Step 7. Press [ADV]. [AUT] HELL is displayed.

Step 8. Press [ADV]. [AUT] HELLO is displayed.

Step 9. Press [RUN]. END MESSAGE HERE Y/N or, END HERE? Y/N is displayed.

Step 10. Press [Y] or [RUN]. The message is displayed.

HELLO

Correcting Programming
Mistakes after Messages are Running

Correcting programming mistakes after your message is running is also easy. Using the example from the previous section, follow these steps:

Step 1.   Repeat steps 1 - 2 and 9 - 10 from the previous section. HEELO is displayed.

Step 2.   Press PROG . PROG TEXT FILE A is displayed.

Step 3.   Press ADV . The cursor is displayed at the far right of your screen. A] (filename) appears at the far left.

Step 4.   Press ADV . [AUT] is displayed.

Step 5.   Press ADV . [AUT] H is displayed.

Step 6.   Press ADV . [AUT] HE is displayed.

Step 7.   Press L . [AUT] HEL is displayed. (By pressing L you replace the incorrect E.)

Step 8.   Press ADV . [AUT] HELL is displayed.

Step 9.   Press ADV . [AUT] HELLO is displayed.

Step 10.   Press APPEND (SHIFT and PROG), if needed, to advance to the end of the message.

Step 11.   Press RUN twice. The message is displayed.

HELLO

1

Using Automode

Automode is an automatic display mode that requires no programming. If you do not program a mode, your Message Center randomly displays your messages in more than 15 different modes. To use Automode, follow these simple steps:

Step 1.   Press ⌐PROG⌐. PROG TEXT FILE A is displayed.

Step 2.   Using the keyboard, type
⌐A⌐ ⌐U⌐ ⌐T⌐ ⌐O⌐ ⌐M⌐ ⌐O⌐ ⌐D⌐ ⌐E⌐.
[AUT] AUTOMODE is displayed.

Step 3.   Press ⌐RUN⌐ twice. The message is displayed in Automode.

> **AUTOMODE**

☞ NOTE

To learn more about selecting specific modes including Automode, see pages 12 and 14-15.

Manual Mode Selection

A **manual mode** is the mode you select to display your message. For example, **Roll**, **Rotate** and **Flash** are three of the many available modes. If you do not program a mode, your message is automatically displayed in Automode. To program a specific mode, follow these steps:

Step 1. Press [PROG]. PROG TEXT FILE A is displayed.

Step 2. Press [HOLD]. [HLD] is displayed. [HLD] is an abbreviation for HOLD. [HLD] indicates the **current mode selection**. [HLD] will not appear within the message when displayed.

Step 3. Using the keyboard, type [M] [Y] [SPACE] [M] [E] [S] [S] [A] [G] [E].
[HLD] MY MESSAGE is displayed.

Step 4. Press [RUN] twice. The message is displayed. However, because you selected HOLD, the message stays on the screen.

MY MESSAGE

1

Changing Modes

To return your file to the Automode function from a specific mode, or change to other modes, follow these steps:

Step 1. Press [PROG]. PROG TEXT FILE A is displayed.

Step 2. Press [ADV]. The cursor is displayed at the far right of your screen. A] (filename) appears at the far left.

Step 3. If you want to use Automode, you'll need to replace the [HLD] HOLD mode. Because the HOLD mode abbreviation is 3 characters and in this example it appears at the beginning of the message, you can simply select a new mode such as Roll or Flash. For example, select Flash ([SHIFT] and [HOLD]). [FLS] is displayed. See pages 12 and 14-15 for specific descriptions of available modes. See page 18 for information about the editing keys.

Step 4. Remember, if you change a file, you must go to the end of the file before pressing [RUN]. Press [APPEND] ([SHIFT] and [PROG]), to advance to the end of the message.

Changing Modes, continued

Step 5.   Press RUN twice. The message is displayed in the Flashing mode.

MY MESSAGE

☞ NOTE

If the mode you are changing appears within a message (not at the beginning), use the ADV or BACK (SHIFT and ADV) keys to position your editing point at the farthest right hand side of the sign.

If the mode or message you are entering contains more characters than the item you are changing, press INSERT before entering the new item or press INSERT to re-enter the missing part of your message. For example, use INSERT if you replace the FLASH mode [FLS] with the SPECIAL 4 mode [SPC] 4. Note that [SPC] 4 contains four characters and [FLS] contains 3 characters.

To change a mode, simply repeat the above steps and enter a different mode. Additional modes are explained on pages 12 and 14-15.

Remember, if you change a file, you MUST go to the end of the file. To advance to the end of a file, press APPEND (SHIFT and PROG). Then press RUN and Y , or press RUN twice. The file will end wherever RUN is pressed.

1

Display Modes

The Message Center has many different display modes. The following is a list of basic modes and a description of what they do. To change modes see Changing Modes on pages 10-11. To change the speed of the modes see Message Enhancements Options on page 19. Remember to use the [SHIFT] key as needed.

Mode	Display
Flash	Makes the message flash. [FLS]
Hold	Holds the message for several seconds. [HLD]
Roll Up Roll Down Roll Left Roll Right Roll In Roll Out	Rolls the previous message off the display while rolling the new message on. After pressing [ROLL], any of the six roll directions (up, down, left, right, in, out) can be selected by pressing [SELECT]. An arrow indicates the direction the message will roll. [RL⊥]
Rotate	Rotates the message from right to left horizontally across the display. In many cases, the Rotate mode will also need a Trailing mode of Rotate. See page 20 for additional information. [ROT]
Wipe Up Wipe Down Wipe Left Wipe Right Wipe In Wipe Out	Wipes a new message over the current message. After pressing [WIPE], any of the six wipe directions can be chosen by pressing [SELECT]. An arrow indicates the direction the message will wipe. [WI⊥]

☞ NOTE

Other display modes are available by using the [SPECIAL] key. For more information, see pages 14-15. Remember, to change a mode, follow the steps in Changing Modes on pages 10-11.

The Special Key

The [SPECIAL] key is used to display additional characters and character parameters not shown on the keyboard. To practice using the [SPECIAL] key and the additional effects, use these keys when selecting modes for your messages. To make mode changes, see Changing Modes on pages 10-11. Remember to use the [SHIFT] key as needed.

Keys	Description
Half Space [SPECIAL] and then [SPACE]	Creates a half space in a message.
Carriage Return [SPECIAL] and then [■]	Creates a carriage return. This starts a new line for all modes except Rotate. For example, use a carriage return to display your messages in multiple lines or to display one word at a time.
¢ symbol [SPECIAL] and then [$]	Creates a ¢ symbol in a message.
Date [SPECIAL] and then [D]	Inserts the date into the Message Centers message.

1

The Special Key Modes

To use these modes you press the [SPECIAL] key and then the appropriate key, as in the previously mentioned modes. Remember to use the [SHIFT] key when pressing a number key. Use these keys when selecting modes for your messages. To make mode changes, see Changing Modes on pages 10-11. Also, remember all mode abbreviations are either 3 or 4 characters, [AUT] [SPC]ø. Use the [INSERT] and [DELETE] keys to adjust the mode spacing, as needed, within your message. Abbreviations appear in the individual mode descriptions. Remember to use the [SHIFT] key as needed.

Mode and Keys	Display Description
Automode [SPECIAL] and then [A]	Turns on the Automode function. The Message Center automatically selects modes for the message. [AUT]
Twinkle [SPECIAL] and then [Ø]	Creates an oscillating twinkling effect. [SPC]ø
Sparkle On [SPECIAL] and then [1]	Sparkles a new message over the current message. The message holds on the screen if the entire message can be displayed at one time and no additional message follows. [SPC]1
Snow [SPECIAL] and then [2]	Writes a new message over the current message with a snowing effect. [SPC]2

The Special Key Modes, *continued*

Remember to use the [SHIFT] key as needed.

Mode and Keys	Display Description
Interlock [SPECIAL] and then [3]	Alternates rows of dots and interlocks the message into the center of the display from each side. [SPC]3
Switch [SPECIAL] and then [4]	Slides the characters of the message off the display in different directions. The first character slides up, the next down, etc. [SPC]4
Slide Across [SPECIAL] and then [5]	Slides the message onto and across the display from the right to the left, one character at a time. [SPC]5
Spray On [SPECIAL] and then [6]	Sprays the message onto and across the display from the right to the left. [SPC]6
Starburst On [SPECIAL] and then [7]	Explodes the message in starbursts onto the display. [SPC]7
Scroll [SPECIAL] and then [ROTATE]	Continuously moves the message to the top of the display. [SCR]

You have completed the EZ KEY II Beginner Programming section. To learn about the Message Center's advanced features, continue with the next section.

Revising and Editing Messages

The Electronic Message Center has several editing keys to aid in making revisions to your message. Note that all changes made to your message must take place at the far right of the screen. To edit a message, follow these steps:

Step 1. Press `PROG`. PROG TEXT FILE A is displayed.

(Although in the previous examples you have worked with only one file, if you later create multiple files and need to edit a file other than file "A", you would press `SELECT`. PROG TEXT FILE ? is displayed. Continue to press `SELECT` until the filename of the desired file appears. For example, PROG TEXT FILE B. Then continue with the next step. See Text Files and Multiple Files on page 27, and Viewing and Editing Existing Files on page 29 for more information.)

Step 2. Press `ADV`. A] is displayed at the left of the screen and | is displayed on the right of the screen. A] represents the filename, and | represents the cursor.

Step 3. Press `ADV`. Depending on your sign and the previously stored message, the mode selected, such as [FLS], is displayed.

Step 4. Continue to press `ADV` until you reach the part of your message that you want to edit. For example, if you wanted to insert the word TEST before the word MESSAGE (previous one-line example), position your cursor before the second M, press `INSERT` and type `SPACE` `T` `E` `S` `T` `SPACE`.

Step 5. Press `APPEND` (`SHIFT` and `PROG`) to advance to the end of the message.

Step 6. Press `RUN` twice. The revised message is displayed.

MY TEST MESSAGE

2

Revising and Editing Messages, continued

To make additional revisions use the following keys:

Editing Keys   Description

Insert   Inserts all entries after the last character on the right.
[INSERT]   One letter, one word, a mode or as much information
                            as you need can be inserted. To avoid writing over any
                            part of your message, leave insert activated until you are
                            finished editing. Press [INSERT] again to cancel the
                            insert function. Also use [INSERT] when replacing a 3
                            character mode with a 4 character mode such as [AUT]
                            for [SPC]4. Remember to use [SPACE] as needed.

Delete   Removes the last character or mode on the right.
[SHIFT] and [INSERT]   Also use to delete the extra character when replacing
                            a 4 character mode with a 3 character mode such as
                            [SPC]4 for [AUT].

Append   Advances to the end of the message when you are in
[SHIFT] and [PROG]   the file Programming mode or displays the default
                            filename.

Auto-Advance   Automatically advances your message until you
[SPECIAL] and then [ADV] press any key (except [SHIFT]) to stop. Then use
                            [ADV] and [BACK] to locate the exact position of
                            the desired change.

Auto-Back   Automatically backspaces your message until you
[SPECIAL] and then [BACK] press any key to stop.

☞ NOTE

Auto-Advance and Auto-Back always begin or end at the current position in
the message. If no key is pressed, it stops at the beginning or end of the message.

2

Message Enhancement Options
Time, Date, Character Width, Upper/Lowercase Letters, and Display Speed

The following keys are useful for making additional edits and message enhancements. Remember you must be in the Programming mode when you make changes. Also, make sure to use INSERT when making an enhancement change in the middle of a message. Remember, you must go to the end of the file first before pressing RUN . See Revising and Editing Messages on pages 17-18 to review the steps for editing a message.

Enhancement Keys	Description
Time SHIFT and ROTATE	Displays the time of day within a message. (To set the master time/day clock, see page 22.)
Date SPECIAL and then D	Displays the date within a message. (To set the master date, see page 24.)
Wide SHIFT and L	Produces wide characters. [WID] is displayed. To return to regular characters, press the same keys again.
Caps Lock SHIFT and G	Shifts between upper and lowercase letters. No reference to the CAPS LOCK being on/off appears in the Programming mode.
Display Speed SHIFT and SELECT	Displays [SP] for display speed. Press SELECT to change speed. [SP1] is the slowest speed and [SP5] is the fastest. If no speed is chosen, the display speed automatically defaults to [SP4].

2

Trailing Mode Message Enhancements

The Trailing mode is a mode that is entered at the end of or a section of a message if a particular effect is desired. No character keys follow the mode unless you are starting a new section of your message. The Trailing mode affects the message that was entered before it. All modes can be used as a Trailing mode except the following: Condensed Rotate, Scroll, Slide, Snow and Spray. To practice a Trailing mode message enhancement, follow these steps:

Step 1. Press ⬜ PROG ⬜. PROG TEXT FILE A is displayed.

Step 2. Press ⬜ HOLD ⬜. [HLD] is displayed.

Step 3. Using the keyboard, type ⬜ H ⬜ ⬜ E ⬜ ⬜ L ⬜ ⬜ L ⬜ ⬜ O ⬜.
[HLD] HELLO is displayed.

Step 4. Press ⬜ ROTATE ⬜. [ROT] is displayed.

Trailing Mode Message Enhancements, continued

Step 5.   Press ⬛ RUN ⬛ twice. The word HELLO is displayed on the screen for several seconds, and then rotates off to the left.

HELLO

HELLO

ELLO
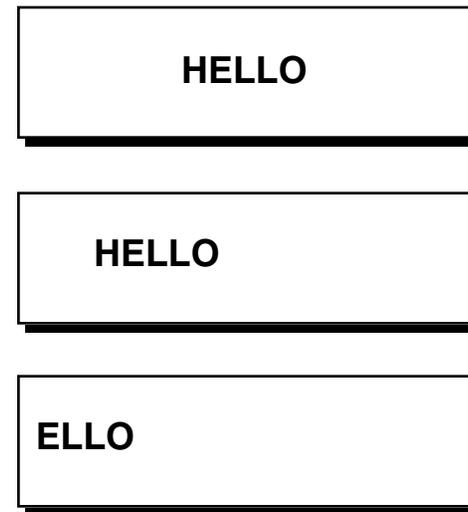
☞   NOTE

You may substitute any other mode for steps 3 and 4 if desired. See pages 12 and 14-15 for a review of the available modes. However, note that not all special modes can be used as Trailing modes.

2

Setting the Master Time and Day

The Message Center, once programmed, continuously remembers the time unless it is unplugged or interrupted by a loss of power. However, models equipped with battery-backed clocks continue to keep time even after the loss of power. To set the internal time, (not display), follow these steps:

Step 1. Press [PROG]. PROG TEXT FILE A is displayed.

Step 2. Press [BACK] ([SHIFT] and [ADV]). PROG DOTS FILE A is displayed.

Step 3. Press [BACK] ([SHIFT] and [ADV]). SET TIME is displayed.

Step 4. Press [ADV]. SET TIME USING D, H & M appears for a few seconds. Then the currently programmed day and time is displayed. (If the power has been interrupted, the day or time displayed may be incorrect.)

Step 5. Press [D] until the DAY desired is displayed.

Step 6. Press [H] until the HOUR desired is displayed.

Step 7. Press [M] until the MINUTES desired is displayed.

Step 8. Press [PROG]. PROG TEXT FILE A is displayed.

Step 9. Press [RUN] twice to display the message you programmed previously.

☞ NOTE

To convert the currently displayed time to display military time, press [SELECT] while you are in the time Programming mode. Then press [H] to adjust the hours. Press [SELECT] again to return the display time to the normal mode.

2

Displaying the Time in Your Message

Displaying the time anywhere within your message is simple. However, you must be in the text file or Programming mode when placing the time. To insert the time in your message, follow these steps:

Step 1.   Press [PROG]. PROG TEXT FILE A is displayed.

Step 2.   Press [ADV] until [HLD] is displayed.

Step 3.   Press [INSERT] to avoid writing over a previous entry. INSERT is displayed.

Step 4.   Press [TIME] ([SHIFT] and [ROTATE]) and [SPACE].

Step 5.   Press [APPEND] ([SHIFT] and [PROG]), if needed, to advance to the end of the message.

Step 6.   Press [RUN] twice. The message, with the time, is displayed.

2:37 PM HELLO

2

Setting the Master Date

The Message Center, once programmed, continuously remembers the date unless it is unplugged or interrupted by a loss of power. To set the internal date, (not display the date), follow these steps:

Step 1.   Press ⬚ PROG ⬚. PROG TEXT FILE A is displayed.

Step 2.   Press ⬚ BACK ⬚ (⬚ SHIFT ⬚ and ⬚ ADV ⬚). PROG DOTS FILE A is displayed.

Step 3.   Press ⬚ BACK ⬚ (⬚ SHIFT ⬚ and ⬚ ADV ⬚). SET TIME is displayed.

Step 4.   Press ⬚ BACK ⬚ (⬚ SHIFT ⬚ and ⬚ ADV ⬚). SET DATE is displayed.

Step 4.   Press ⬚ ADV ⬚. SET DATE USING D, M & Y appears for a few seconds. Then the currently programmed date is displayed. If the power has been interrupted, the date displayed may be incorrect.

Step 5.   Press ⬚ D ⬚ until the DATE desired is displayed.

Step 6.   Press ⬚ M ⬚ until the MONTH desired is displayed.

Step 7.   Press ⬚ Y ⬚ until the YEAR desired is displayed.

Step 8.   Press ⬚ PROG ⬚. PROG TEXT FILE A is displayed.

Step 9.   Press ⬚ RUN ⬚ twice to display the message you programmed previously.

Displaying the Date in Your Message

Displaying the date anywhere within your message is simple. However, you must be in the text file or Programming mode when placing the date. To insert the date in your message, follow these steps:

Step 1.   Press [PROG]. PROG TEXT FILE A is displayed.

Step 2.   Press [ADV] until [HLD] is displayed.

Step 3.   Press [INSERT] to avoid writing over a previous entry. INSERT is displayed.

Step 4.   Press [SPECIAL] and then [D].

Step 5.   Press [APPEND] ([SHIFT] and [PROG]), if needed, to advance to the end of the message.

Step 6.   Press [RUN] twice. The date is displayed within the message.

APRIL 5, 1991

Advanced Programming 3

Text Files and Multiple Files

EZ KEY II is capable of creating separate text files and storing multiple files. However, each message file must be assigned a single character name, such as "B" or "1". Most keys can be used as a filename except the control keys such as [PROG] and [SELECT], plus [0], [?], [CAPS LOCK], [CURSOR] and [WIDE]. A maximum of 150 files (75 text files and 75 DOTS files) can be stored internally in each Message Center at one time. You can then run each file separately, together and/or according to the time of day. To create a file, follow these steps:

Step 1. Press [PROG]. PROG TEXT FILE A is displayed.

Step 2. Press [SELECT]. PROG TEXT FILE ? is displayed.

Step 3. Because you have previously been programming in file "A", type in a single character filename, such as "B" to create a new file and to avoid writing over the information already stored in file "A". Remember, filenames can be only one character in length. At the left of the display, B] indicates the filename you are currently programming.

3

Text Files and Multiple Files, continued

Step 4.   Using the keyboard, type [N] [E] [W] [SPACE]
[F] [I] [L] [E]. [AUT] NEW FILE is displayed.

Step 5.   Press [RUN] twice. The message stored in file "B" is displayed.

NEW FILE

☞ NOTE

To create additional text files, repeat the steps above for each new file.
Remember, each file must have a different one character name or you will
erase an existing file.

When PROG TEXT FILE A is displayed, this refers to the default file or **File A** .
You cannot delete the default file (file A). However, if you do not specify a
filename, your entry is automatically saved as File A when you press [RUN]
twice. New entries not specified as a different file automatically copy over the
previous message in the default file, file A.

If you press [RUN] twice after creating a new or editing an existing file, the
file you just worked with will be the only file displayed. To run a sequence of
files, see page 31 for more information.

Viewing and Editing Existing Text Files

To view or edit existing text files, follow these steps:

Step 1.   Press [PROG]. PROG TEXT FILE A is displayed.

Step 2.   Press [SELECT]. PROG TEXT FILE ? is displayed.

Step 3.   Press [SELECT]. PROG TEXT FILE B, C, etc. (filename) is displayed. A filename is displayed each time you press [SELECT]. The filenames are displayed in the order that they were originally programmed.

Step 4.   Repeat step 3 as needed. The Message Center will sequence through all existing filenames. If no files other than the default file exist, PROG TEXT FILE A is displayed. If you do not want to edit a file, go to step 8.

Step 5.   If you want to edit a selected file, press [ADV] to display the file in the Programming mode. A] is displayed at the left of the screen and | is displayed on the right of the screen. A] represents the filename, and | represents the cursor.

Step 6.   Continue to press [ADV] until you reach the part of your message that you want to edit. Make your edits. Remember, to use [INSERT] and [DELETE] as needed. Also, all edits must be made at the farthest right hand position of the sign.

Step 7.   Remember to press [APPEND] ([SHIFT] and [PROG]) to advance to the end of the message before the next step. See Revising and Editing Messages on page 17 for more information.

Step 8.   Press [RUN] twice. The previously programmed file(s) are displayed.

☞ NOTE

Remember, when PROG TEXT FILE A is displayed, this refers to the default file or **File A** . You cannot delete the default file (file A). However, if you do not specify a filename, your entry is automatically saved as File A when you press [RUN] twice. New entries not specified as a different file automatically copy over the previous message in the default file.

3

Displaying a Single Existing File

To display a single existing file on your Message Center, follow these steps:

Step 1. Press ⌷PROG⌷. PROG TEXT FILE A is displayed.

Step 2. Press ⌷RUN⌷. RUN or TIM is displayed at the far left. You do not need to program a specific run time for this example, thus you should use RUN. Press ⌷SELECT⌷ to switch between RUN and TIM, if necessary.

Step 3. Using the keyboard, type the one character filename of the message you want to display. For example, type "B". The FILENAME is displayed to the far right of RUN. Remember, to display a specific file, you must have created the file previously. Files that do not exist cannot be programmed into the RUN command.

Step 4. Press ⌷RUN⌷. The file you selected in step 3 is the only message displayed. If you want to display a single file at a specific time, see page 34 for more information.

3

Programming the Run Sequence of Your Files

To display a file or multiple files, follow these steps:

Step 1. Press [PROG]. PROG TEXT FILE A is displayed.

Step 2. Press [RUN]. RUN or TIM is displayed at the far left. If you do not need to program specific run times for individual files, use RUN. However, if you do want to program specific times, use TIM. Press [SELECT] to switch between RUN and TIM. Note, when you use TIM, you must also program the specific run times for each file. For this example, use RUN. See page 36 for more information about pre-programmed time slots.

Step 3. Using the keyboard, type the one letter filename of the message you want to display first. For example, type "B". The FILENAME is displayed to the far right of RUN. Then type "A" after "B". "A" represents your second message. Your display order should now read RUN   BA.   Remember, to run multiple files, you must have created the files previously. Files that do not exist cannot be programmed into the RUN command.

Step 4. Repeat step 3 until you have all your files entered in the desired order.

Step 5. Press [RUN]. All the files that you entered are displayed in the order programmed.

☞ NOTE

To change the display order of your files without losing the files from memory, just reprogram the run sequence.

No other information may be entered while you are in the run sequence.

To advance or backspace within the run sequence, use [ADV] or [BACK] ([SHIFT] and [ADV]) or [APPEND] ([SHIFT] and [PROG]).

3

Checking Your Run Sequence Order

To check the display order of your files, follow these steps:

Step 1. Press PROG . PROG TEXT FILE A is displayed.

Step 2. Press RUN . RUN or TIM is displayed at the far left. If you do not need to program specific run times for individual files, use RUN. However, if you do want to program specific times, use TIM. Press SELECT to switch between RUN and TIM.

Step 3. To just check the run sequence, you should use RUN. Press and hold ADV until no additional filenames are displayed. Then release ADV .

Step 4. Press RUN once. All the files you entered are displayed in the order programmed.

Deleting Text Files from the
Message Center's Memory

To delete a text file or multiple files, follow these steps:

Step 1.   Press ⬚ PROG . PROG TEXT FILE A is displayed.

Step 2.   Press ⬚ SELECT . PROG TEXT FILE ? is displayed.

Step 3.   Press ⬚ SELECT . PROG TEXT FILE B, C, etc. (filename) is displayed.

Step 4.   Repeat step 3 until the desired filename is displayed.

Step 5.   Press ⬚ DELETE (⬚ SHIFT and ⬚ INSERT). DEL TEXT FILE B, C, etc.? (filename) Y/N is displayed.

Step 6.   Press ⬚ Y to delete the file. PROG TEXT FILE ? is displayed. If you press ⬚ N to cancel the delete request, PROG TEXT FILE B, C, etc. (filename) is displayed.

Step 7.   Press ⬚ SELECT to continue deleting files or press ⬚ RUN twice to redisplay the message sequence. Files you delete will not be displayed, even if they have been entered into a run sequence.

☞ NOTE

When PROG TEXT FILE A is displayed, the A always refers to the default file. You cannot delete the default file (file A).

3

Assigning Time Slots to Individual Text Files

To assign a specific period of time a message should be displayed, such as the time of day or the day itself, follow these steps:

Step 1. Press [PROG]. PROG TEXT FILE A is displayed.

Step 2. Press [SELECT]. PROG TEXT FILE ? is displayed.

Step 3. Press [SELECT]. PROG TEXT FILE B, C, etc. (filename) is displayed if the file has been previously created.

Step 4. Repeat step 3 until the desired filename is displayed.

Step 5. Press [TIME] ([SHIFT] and [ROTATE]). TEXT FILE B, C, etc. (filename) ON ALWAYS is displayed unless the ON ALWAYS has been changed previously. (ON ALWAYS is the default time.)

Step 6. Continue to press [D] (day) to select a desired ON time. For example, by pressing [D] until TEXT B ON MON is displayed, you set the ON time day(s) for Monday. The available ON days are as follows:

ON ALWAYS	ON MON	ON THU	ON SUN
ON NEVER	ON TUE	ON FRI	ON MO - FR
ON DAILY	ON WED	ON SAT	ON WKEND

Step 7. Press [H] (hour) to select the hour that you want your display to start. Note, the Message Center's internal clock is a 24 hour clock. The A.M. and P.M. selections are not available. For example, if you want to start your display at midnight, select 0:00, 1:00 for 1:00 am, 13:00 for 1:00 pm and so on.

If you want to have your sign on ALL DAY for a specific day, press [D] (day) to select a day. Then, press [H] until ALL DAY appears (after 23:00). You can also use ON DAILY (from step 7) above with ALL DAY.

3

Assigning Time Slots to Individual Text Files, continued

Step 8. Press ⌐ M ⌐ (minute) to change the minutes. Note, minutes can only be programmed in 10 minute intervals such as 5:10, 5:20, 5:30, 5:40 and 5:50.

Step 9. To set an OFF time, press ⌐ SELECT ⌐. Then use ⌐ D ⌐, ⌐ H ⌐ and ⌐ M ⌐ to set the desired time. Remember, to set an OFF time, you must have set an ON time for the same file. The available OFF days are as follows:

OFF MON   OFF WED   OFF FRI   OFF SUN
OFF TUE   OFF THU   OFF SAT

If the ON DAY is set to MON - FRI, WKEND or DAILY you cannot set a different OFF DAY. These selections will turn off automatically after their assigned time slot is over. Additionally, you cannot set an OFF DAY for ALWAYS or NEVER.

Step 10. Repeat steps 1 - 9 for each file needing a time slot.

Step 11. Press ⌐ PROG ⌐ twice to exit the time slot Programming mode. PROG TEXT FILE A is displayed.

Step 12. Press ⌐ RUN ⌐ twice to redisplay the message sequence.

> ☞ NOTE
>
> Remember to enter the filename in your run sequence to display the file. See page 31-32 for more information or page 36 if you are using multiple files at pre-programmed time slots.
>
> The same keys are used to set the OFF and ON times.
>
> If you do not assign an ON time, the Message Center assigns ON ALWAYS as the run time. The ON ALWAYS mode starts the Message Center at the time assigned and runs continuously thereafter.

3

Programming Multiple Files to Run at Pre-Programmed Time Slots

To program the Electronic Message Center to run multiple text files in the order and time slots you want them displayed, follow these steps:

Step 1.   Make sure you have previously assigned time slots to the appropriate text files. If needed, see page 34 for information about assigning time slots to files.

Step 2.   Press ⌞ PROG ⌟. PROG TEXT FILE A is displayed.

Step 3.   Press ⌞ RUN ⌟. RUN or TIM is displayed at the far left. Because you have programmed your files to run at specific times, use TIM. Press ⌞ SELECT ⌟ to switch between RUN and TIM, if needed.

Step 4.   Using the keyboard, type the filenames of the files you want to display. For example, TIM   BC.

Step 5.   Repeat step 4 until the preferred files have been entered in the desired order. When you use the TIM command, the sign reads the assigned display time of each individual file.

Step 6.   Press ⌞ RUN ⌟. All the files you entered are displayed in the order programmed at the assigned time slot.

☞   NOTE

You will not be able to assign a run time to a file that has not been created.

Examples of files and time slots include:
TEXT A ON ALWAYS, TEXT B ON DAILY 14:00, and TEXT C ON MO - FR 2:00.

To display DOTS files at a specific time, they must be incorporated in a text file. See Using DOTS Files within Text Files on page 45 for more information.

Drawing Pictures with DOTS

The Message Center has the capability of storing pictures drawn with the DOTS option. To create a DOTS picture file, follow these steps:

Step 1.   Press [PROG]. PROG TEXT FILE A is displayed.

Step 2.   Press [BACK] ([SHIFT] and [ADV]). PROG DOTS FILE A is displayed.

Step 3.   Press [SELECT]. PROG DOTS FILE ? is displayed.

Step 4.   Press [X] or any other letter to establish a name for the DOTS file. (Or press [ADV] to automatically store the picture in the DOTS default file, file A.) A FLASHING DOT (the cursor) is displayed in the upper left corner of the display. Remember, DOTS files are in a separate category within the Message Center's internal memory, thus you can have a DOTS file and a TEXT file with the same one character name, such as "C" or "1".

☞ NOTE

The size of a DOTS picture can be varied. However, the size must be changed before you begin drawing your DOTS. See page 40 for more information about changing the DOT picture size.

3

Drawing Pictures with DOTS, continued

Step 5.   Use the following keys to create a DOTS picture. The arrow on each key in the
            following illustration represents the direction the cursor moves when the key is
            pressed. Several of the keys have the same function. For example, either [A] or
            [D] could be used to move the cursor UP. However, when inserting or deleting a
            DOT, you would use either [INSERT] or [SHIFT] depending on the function.

            See the next page for additional key information. Then continue with Step 6 on
            page 41.

3

Drawing Pictures with DOTS, continued

Infrared and Plug-In Keyboard

INSERT alternated with F , A , K , P , or C , D , E , H , J , M , N , O .

Draws new DOTS or removes existing DOTS in the directions as listed on the previous page. Move the cursor by pressing the appropriate direction key. Then press INSERT to add or delete a single DOT. You must continue to alternate between the direction key and the INSERT key to add or delete each individual dot. See below for information about drawing solid lines.

SHIFT

Press and hold the direction key and the SHIFT key at the same time to draw or delete a line.

INSERT

On the plug-in keyboard only, as an added alternative, you can also press and hold the direction key and the INSERT key at the same time to draw a line.

Drawing Pictures with DOTS, continued on next page

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3

Drawing Pictures with DOTS, continued

Function Keys

| Z | Asks you if you want to CLEAR DOTS ? To clear the entire DOTS picture, press | Y | for YES or | N | to cancel the CLEAR DOTS ? option. |

| ! | Changes the DOTS picture drawing area by moving the starting point in from the left by one dot increments, thus making the drawing area (and DOTS picture) smaller. Remember to change the size before starting your DOTS picture.

| ? | Changes the DOTS picture drawing area by moving the starting point back to the left by one dot increments, thus returning the drawing area (and DOTS picture) to a larger size. Remember to change the size before starting your DOTS picture.

Drawing Pictures with DOTS, continued

Step 6.   Press ⬛ RUN ⬛. END MESSAGE HERE ? Y/N, or END HERE ? Y/N is displayed.

Step 7.   Press ⬛ RUN ⬛ or ⬛ Y ⬛. PROG DOTS FILE X is displayed.

Step 8.   Press ⬛ ADV ⬛. The DOTS picture is displayed.

Step 9.   Press ⬛ PROG ⬛ until PROG TEXT FILE A is displayed.

☞ NOTE

The DOTS picture drawing area cannot be made larger than the display nor smaller than five dots wide.

The ⬛ ! ⬛ and ⬛ ? ⬛ keys work only when the flashing cursor is in the upper left corner of the display.

The ⬛ ! ⬛ and ⬛ ? ⬛ keys change the size of the DOTS picture drawing area and erase all previous file contents. To avoid DOTS file programming problems, select the DOTS drawing area before programming begins.

The cursor blinks faster when it passes over or stops on a DOT that has already been turned on. This feature helps you identify the DOTS that have already been activated.

When drawing DOTS pictures on Message Centers, you should not use more than 50% of the LEDs or the incandescent lamps at one time. Using more than the suggested 50% will cause your message center to reset.

3

Creating Multiple DOTS Files

To create multiple DOTS files, follow these steps:

Step 1.   Press ⸢ PROG ⸥. PROG TEXT FILE A is displayed.

Step 2.   Press ⸢ BACK ⸥ (⸢ SHIFT ⸥ and ⸢ ADV ⸥). PROG DOTS FILE A is displayed.

Step 3.   Press ⸢ SELECT ⸥. PROG DOTS FILE ? is displayed.

Step 4.   Using the keyboard, type a filename such as "F".   A FLASHING DOT is displayed in the upper left corner of the display.

Step 5.   Create a DOTS picture by following the steps in the previous section. The DOTS picture is displayed.

Step 6.   Press ⸢ RUN ⸥. END MESSAGE HERE ? Y/N, or END HERE ? Y/N is displayed.

Step 7.   Press ⸢ RUN ⸥ or ⸢ Y ⸥ for YES. PROG DOTS FILE F (filename) is displayed.

Step 8.   Press ⸢ ADV ⸥. The DOTS picture is displayed.

Step 9.   Repeat steps 1 - 8 for each DOTS file created.

Step 10.   When you have completed your DOTS picture, press ⸢ PROG ⸥ until PROG TEXT FILE A is displayed.

Step 11.   Press ⸢ RUN ⸥ twice. The previous message is displayed.

☞ NOTE

Be sure to give each DOTS file a different name or you will copy over an existing file.

Viewing and Editing Existing DOTS Files

To view an existing DOTS file, follow these steps:

Step 1.   Press [PROG]. PROG TEXT FILE A is displayed.

Step 2.   Press [BACK] ([SHIFT] and [ADV]). PROG DOTS FILE A is displayed.

Step 3.   Press [SELECT]. PROG DOTS FILE ? is displayed.

Step 4.   Press [SELECT]. PROG DOTS FILE B, C, etc. (filename) is displayed.

Step 5.   Repeat step 4 as needed. The Message Center will display all the existing filenames in the order they were originally programmed. If no files exist, PROG DOTS FILE A is displayed.

Step 6.   Press [ADV]. The DOTS FILE B, C, (filename) is displayed.

Step 7.   If desired, use the steps in Drawing Pictures with DOTS on pages 37 - 41, to edit your DOTS picture.

Step 8.   To edit another DOTS picture, press [PROG] until PROG DOTS FILE A is displayed and then repeat steps 4 - 7.

Step 9.   When you have completed viewing or editing your DOTS pictures, press [PROG] until PROG TEXT FILE A is displayed.

Step 10.   Press [RUN] twice. The previous message is displayed.

3

Displaying a DOTS File

The Message Center can be programmed to display a DOTS file on the screen. To display a DOTS file, follow these steps:

Step 1. Press [PROG]. PROG TEXT FILE A is displayed.

Step 2. If you do not want to write over the current file A, press [SELECT] until PROG TEXT FILE ? is displayed. Then type a filename such as "D". [D] appears.

Step 3. Select the desired MODE. The [MODE] is displayed.

Step 4. Press [SPECIAL]. SPECIAL is displayed.

Step 5. Press [P]. [MODE] [DOT] A is displayed.

Step 6. Press [SELECT] until the desired DOTS filename appears. [MODE] [DOT] FILENAME B, C, etc. is displayed.

Step 7. Press [RUN]. END MESSAGE HERE ? Y/N, or END HERE ? Y/N is displayed.

Step 8. Press [RUN] or [Y] for YES. The DOTS FILE is displayed.

Step 9. Press [PROG] once to return to PROG TEXT FILE A.

☞ NOTE

Remember, to display or assign a time slot to a DOTS file, the file must be placed into a text file as in the steps above.

Using DOTS Files with Text Files

To put DOTS files into text files, make sure the DOTS file has been previously created, then follow these steps:

Step 1.   Press ⌷ PROG ⌷. PROG TEXT FILE A is displayed.

Step 2.   Press ⌷ SELECT ⌷. PROG TEXT FILE ? is displayed.

Step 3.   To select a previously programmed file, press ⌷ SELECT ⌷.   PROG TEXT FILE B, C, etc. (filename) is displayed. Or, to create a new file, type a new filename such as "T" and then type your message. If you create a new file, a MODE must precede any DOTS file entry. See Text Files and Multiple Files on page 27 for more information.

Step 4.   If you have created a new file, select the desired MODE.   The [MODE] is displayed.

If you selected a previously programmed file, press ⌷ ADV ⌷. C] (filename selected) is displayed at the far left.

Step 5.   Decide on the location of the DOTS file within the TEXT file, by pressing ⌷ ADV ⌷ or ⌷ BACK ⌷ (⌷ SHIFT ⌷ and ⌷ ADV ⌷), to position the insertion point at the far right of the screen.

Step 6.   If you are placing the DOTS file within the text, press ⌷ INSERT ⌷. INSERT and possibly part of your file is displayed.

Step 7.   Press ⌷ SPECIAL ⌷. SPECIAL is displayed.

Step 8.   Press ⌷ P ⌷. [DOT] A is displayed.

Step 9.   Press ⌷ SELECT ⌷ until the desired DOTS filename is displayed, such as [DOT] B.

3

Using DOTS Files within Text Files, continued

Step 10.   Press ⌑INSERT⌑ again to cancel the insert mode.

Step 11.   Press ⌑APPEND⌑ (⌑SHIFT⌑ and ⌑PROG⌑), if needed, to advance to the end of the message.

Step 12.   Press ⌑RUN⌑ twice. The message is displayed.

3

Deleting Existing DOTS Files

To delete DOTS files from memory, follow these steps:

Step 1. Press PROG . PROG TEXT FILE A is displayed.

Step 2. Press BACK (SHIFT and ADV). PROG DOTS FILE A is displayed.

Step 3. Press SELECT . PROG DOTS FILE ? is displayed.

Step 4. Press SELECT . PROG DOTS FILE B, C, etc. (filename) is displayed.

Step 5. Press DELETE (SHIFT and INSERT). DEL DOTS FILE (filename) ? Y/N is displayed.

Step 6. Press Y to delete a file or N to cancel the delete request. PROG DOTS FILE ? is displayed.

☞ NOTE

Remember, DOTS FILE A cannot be deleted. DOTS FILE A is the default file.

3

Clearing the Memory

To clear the entire memory of your Message Center, follow these steps:

Step 1. Press ⌷ PROG ⌷. PROG TEXT FILE A is displayed.

Step 2. Press ⌷ BACK ⌷ (⌷ SHIFT ⌷ and ⌷ ADV ⌷) until CLEAR MEMORY is displayed.

Step 3. Press ⌷ ADV ⌷. WARNING! is displayed momentarily. Then CLEAR ALL? Y/N is displayed. Press ⌷ Y ⌷ for YES if you want to clear everything in memory. If you press ⌷ N ⌷ for NO, PROG TEXT FILE A is redisplayed.

Step 4. By pressing ⌷ Y ⌷ for YES, the memory is automatically cleared and PROG TEXT FILE A is redisplayed.

International Characters

International characters are included in the EZ KEY II program. To display a character from the International Character Set shown below, press the corresponding keyboard character key and then press [SELECT] until the desired International Character is displayed. The available characters are as follows:

A	A Ä Å Æ
a	a æ â ä à å á ᵃ
C	C ç
c	c ç
E	E É
e	e é ê ë è
i	i î ï ì í
N	N Ñ
n	n ñ
O	O Ö
o	o ô ö ò ó º °
U	U Ü
u	u ü û ù ú
y	y ÿ
$	$ ¢ £ ¥ Pt ƒ
?	? ¿
!	! ¡

3

Self Test Program

The Message Center can perform a self test program to determine if all columns of LEDs or incandescent lamps are functioning properly. The test program also provides you with a quick and easy way to clear the Message Center of all information currently stored in memory. To use the test program, follow these steps:

Step 1. Press [PROG]. PROG TEXT FILE A is displayed.

Step 2. Press [BACK] ([SHIFT] and [ADV]) until SET TIME is displayed.

Step 3. Press [ADV] until the DAY and TIME is displayed.

> **STOP** The Message Center's memory will be cleared of any previously stored messages when you run the Self Test Program. However, if you press [R] immediately after entering TEST the memory will not be cleared. The test will continue until you press [PROG].

Step 4. Using the keyboard type [T] [E] [S] [T]. Remember to press [R] immediately after TEST to save the memory, if desired. A number of diagnostics are displayed repeatedly until the test is discontinued.

Step 5. Press [PROG] to cancel the test program.

Message Retention

All Electronic Message Centers, including those without a battery-backed clock, will retain files for approximately one month after a power interruption without access to power. However, to ensure sufficient charging time, the Electronic Message Center must be plugged into a power source for at least eight hours prior to a power interruption. If the unit is plugged into a power source for only a short time, the unit's message retention time will be shorter.

When power is restored to the unit, the previously stored messages will be displayed automatically. However, the master clocks on models without battery-backed clocks must be reset. Units with battery-backed clocks will not be affected. Units with battery-backed clocks will retain the time when power is lost. See Setting the Master Time and Day on page 22 for more information.

3

Troubleshooting

If a problem occurs during operation of your Message Center, consult the following list of common problems for a solution. If you continue to experience difficulties with your display, please contact your sales representative.

Problem

The desired file(s) do not appear on the Message Center.

Possible Solutions

1. Press [PROG] to see if PROG TEXT FILE A appears.

2. Make sure that the Message Center is plugged into a live outlet.

3. Make sure that the AC Adapter is securely inserted into the Message Center.

4. Make sure that a message has been entered into the Message Center.

5. In case of a power failure, especially electrical storms, unplug the Message Center and let it sit for a few seconds. Then replug the unit.

6. Make sure that file run times are on and that the filename is in the run sequence table.

Troubleshooting, continued

Problem

Keyboard does not operate properly.

Possible Solutions

1. Make sure that the keyboard connector is securely inserted into the Message Center. It should be inserted approximately 1/8 of an inch. Note, the connector can be inserted in only one direction. The small raised portion located on the middle of the connector should fit easily into the slot on your unit. (Keyboard connector is not applicable to the 790i Incandescent Message Center.)

2. Make sure that you pressed [PROG] prior to entering information into the Message Center. If multiple files have been programmed, [ADV] must be pressed when the desired filename is displayed.

Problem

Part of a mode appears in your message when displayed or the mode does not operate properly.

Possible Solution

Remember, all mode abbreviations are either 3 or 4 characters. Use the [INSERT] and [DELETE] keys to adjust the mode spacing, as needed within your message. See page 18 for more information.

3

Troubleshooting, continued

Problem

All or part of a message has been lost.

Possible Solutions

1. After making a revision, make sure that you always advance to the end of a message file before pressing ⬚ RUN ⬚ twice. To advance to the end of a message file press ⬚ APPEND ⬚ (⬚ SHIFT ⬚ and ⬚ PROG ⬚).

2. If you do not specify a filename, your entry is automatically saved as File A. If you make a second entry after the first and do not specify a different filename, the second message is automatically copied over the first message in file A, the default file.

3. Make sure to use ⬚ INSERT ⬚ when inserting a new mode or text to an existing message.

Troubleshooting, continued

Problem

You would like to run a blank screen to the Electronic Message Center.

Possible Solution

Step   1. Press PROG .   PROG TEXT FILE A is displayed.

Step   2. Press HOLD and then SPACE .

Step   3. Press RUN twice. The display runs a blank screen. If you want the space to be stored in a particular filename, make sure to save it in an unused file.

Problem

The Message Center resets when displaying or drawing DOTS pictures.

Possible Solution

You cannot use more than 50% of the LEDs or Incandescent lamps at one time. See page 41 for more information.

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