THE SERIES 830 SYSTEMS

- The 830E Enhanced Color Billboard System

- The 830 Color Billboard System

OPERATIONS GUIDE

Video Data Systems

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Release: September 1997

SERIES 800 POWER UP INSTRUCTIONS

ALL SERIES 800 SYSTEMS CONSIST OF:

Character Generator Chasis

> 1 rack unit height with rack mounts
>
> NTSC composite video output from BNC PROGRAM OUT connector
>
> Editing is real time, visible on PROGRAM OUT line output
>
> EDIT BNC output for preview
>
> Memory, date and time backed up by internal battery

External Power Supply

> Wall outlet type
>
> Plugs into the 5-pin DIN plug marked POWER at rear of chasis

Keyboard

> 101-key IBM type
>
> Plugs into 5-pin DIN port at front of chasis marked KEYBOARD

CONNECTIONS

1. Rack mount or place on secure flat surface.

2. Connect cable from PROGRAM OUT BNC connector to modulator or a video monitor. This is "line output."

3. Connect cable from EDIT BNC to a preview monitor (optional). This is a preview output.

4. Plug keyboard connector into KEYBOARD input on front of chasis.

5. Plug power supply in POWER input on rear and into wall outlet. Power LED on front should illuminate immediately. *There is no power switch.*

A blue background with a yellow cursor should be active.

There could be a series of messages running on the screen. To terminate the messages, press **Queue End** on the lower right portion of the keyboard.

THE UNIT IS READY FOR USE.

To get up and running quickly, refer to the QUICK START GUIDE. To get the most of out the unit, learn its complete operation by reading the detailed

VIDEO DATA SYSTEMS' SERIES 830

QUICK START GUIDE

Use this guide to get up and running fast with any System 830 Series unit.
The steps to follow to get a message composed, saved and run are described in short form.

WHAT THE SYSTEM NEEDS

Message Pages: *Pages created for display. They must be stored in memory as specific page numbers before they can be run on the system.*

A Queue: *Created to run one or more stored message pages automatically. Queues also run crawls over message pages.*

CREATING AND STORING A MESSAGE PAGE

1. Press **Clear Page**.

    This sets all parameters to the system defaults (a standard condition). Bright blue background, yellow font color, and font style one will be activated.

2. Compose a message page using the keyboard as any typewriter or computer keyboard.

3. Press **Store** to save the page so it can be recalled at any time or used in a queue.

    The system responds with: Save Page Number:

                                    The system specifies the current page number.

4. Press **Enter** to store the message into the current page number.

    The page can be stored as any page number typed in before pressing **Enter**.

CREATING AND RUNNING A QUEUE FOR AUTOMATIC PAGE DISPLAY

1. Create the message pages to be displayed and store them as individual page numbers.

2. Press **Set Queue**. The prompt   Seq #   Page: Dwell: appears.

3. Specify 1 as Seq # (using ↑ ↓), the number of the queue's first message page as Page # (using **Page Up**, **Page Down**), and the page display time in seconds as Dwell (using ← →).

    Press ↑ to get to the next Seq # and repeat this process for all pages entered in the queue, specifying a sequence number and dwell for each page based on where it

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must appear in the queue and for how long.

4.   Press **Enter** to end the queue definition.

5.   Press **Queue Start** to run the queue.

6.   Press **Queue End** to end the queue.

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RUNNING A MESSAGE PAGE WITH A CRAWL

Displaying a crawl is only possible when a queue is running. When a crawl has been created and

         defined by the crawl parameters, it automatically begins when a queue starts.

A crawl is defined by specifying: Which message page is the crawl message
                                                      Where on the screen the crawl should be
                                                      How fast the crawl should go

Creating and Defining the Crawl

1.   Press **Shift Clear Page** and create the crawl message (making sure to use color background).

        This clears the page and activates a single-line message mode to create a message specifically as a crawl. The right ( ) and left ( ) arrow buttons move the message right and left as necessary to get it in and out of view on screen.

3.   Press **Store**, specify the page number to store the crawl as (not the same as any valid message already in the system), and then press **Enter**.

4.   Press **Clear Page** when the crawl is stored to exit the single-line message mode.

5.   Press **Ctrl T**. At the Page to be crawled: prompt specify the crawl's page number. Press **Enter**. This defines the crawl created as the one to run when a queue is started.

6.   Press **Ctrl E**. Specify the crawl screen position at the Top of crawl line = prompt. Type in 208 to define the bottom of the screen, and press **Enter.**

        For screen position, the lower the value, the higher on screen the crawl will appear. The value 160 specifies the top of the screen.

7.   Press **Shift Speed** to specify medium crawl speed. (**Speed** is slow, **Ctrl Speed** is fast)

Creating and Running a Queue with the Active Crawl

8.   Use already existing message pages or create and store a message page or pages over which the crawl will appear.

        Have no copy at or below the point on the pages where the crawl will appear.

9.   If there is already a queue defined, it can be used. Otherwise, create one by pressing **Set Queue**. The prompt Seq # Page: Dwell: appears.

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10.   Specify 1 as Seq # (using   ), the number of the queue's first message page as Page # (using **Page Up**, **Page Down**), and Dwell as 5 (for queues with more than one page, using   ). Press   to get to the next Seq # and repeat this process for all pages desired in the queue. Press **Enter** when queue definition is complete.

11.   Press **Queue Start** to start the queue, which displays the message pages with the crawl running.

> For queues with multiple pages and Dwell time of 5, each page stays on screen for 5 seconds with the crawl running continuously over each page.

12.   Press **Queue End** to end the queue.

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INTRODUCTION

The Series 830 and 830E (Enhanced) Color Billboard Systems are standalone color background and color character billboard systems. The 830 types its black and white characters over any of eight background colors. The 830E, the enhanced member of the 830 Series, delivers 16 font and 16 background colors. Both units have crawl capability.

The 830 system has 99 pages of memory while the 830E is upgraded to 224 pages. As standalone billboard systems, the Series 830 systems do not support keying over genlocked incoming video.

The Manual

This manual details the complete operation of both members of the Series 830 family.

The keyboard for the Series 830 systems is a standard 101-button QWERTY-style computer keyboard. (QWERTY is an acronym made from the letter buttons starting on the upper left of any keyboard - q, w, e, r, t, y.) Video Data Systems has modified the keyboard by putting specific system function names on some standard keys.

When functions and the buttons that enable them are discussed, the actual buttons to press are indicated in **Bold** using the exact wording from the button itself. The word "button" is used rather than "key" so as not to confuse the key capability of the system with the pressing of a button.

Use this manual. It is designed to help anyone get to the explanation of any function quickly and understand it completely.

The manual doesn't only detail what to do, for complex functions it explains why it is done that way. This fosters better understanding of the process.

The Contents page is designed to work as a mini Quick Reference Guide. The buttons to press to enable a function are called out in parentheses next to the function section designation. This can remind someone of what buttons to press without their having leaf through the manual. Check it out. It is helpful.

1. GETTING STARTED

Follow the SERIES 800 POWER UP INSTRUCTIONS in the front of this manual to get the system up and running. The system will be ready for use immediately.

There will be an active background color and a selected font style, height and color. These active attribute selections are factory set system defaults. Defaults are recalled any time a page of information is cleared using the **Clear Page** button.

The system defaults include:

Font	1
Background Color	Blue
Character Color	Yellow (White for 830)
Upper Additional Spaces	0
Lower Additional Spaces	0

Each of the defaults will be discussed in greater detail later.

Of course, the defaults will not be what is wanted all the time. The system gives the user the flexibility to create customized screens of information to suit specific needs. The choices used for customizing what is built are always available with a few keystrokes.

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2. CHOOSING AND USING ATTRIBUTES

Among the set of thirteen buttons above the alphanumeric keyboard are the functions that select the various attributes of color, font and various sizing parameters available to an operator for composing a screen.

2.1   Background Color (BKGND COLOR)

Pressing the **BKGND COLOR** (BACKGROUND COLOR) button is the *only way to select background color.*

The button cycles or steps through the sixteen background choices in a specific order.

Each time **BKGND COLOR** is pressed, the background color changes to the next choice.

Pressing **Shift BKGND COLOR** steps in the reverse direction through the choices. So if a color is passed, it can be accessed by going back to it.

The color choices in the sequence are:

1.	Black	9.	Black (830E only)
2.	Blue	10.	Bright Blue (Default) (830E only)
3.	Red	11.	Bright Red (830E only)
4.	Magenta	12.	Bright Magenta (830E only)
5.	Green	13.	Bright Green (830E only)
6.	Cyan	14.	Bright Cyan (830E only)
7.	Dull Yellow	15.	Yellow (830E only)
8.	White	16.	White (830E only)

A selected background color begins *at the cursor position* and continues to the end of the page or until another change is specified.

If the cursor is in the home position (upper left of the screen) when the first color change is made, the whole screen will change to that color. If the cursor is anywhere else, only the portion of the screen after the cursor will be affected.

If a screen already has two active background colors and a third is specified between the first two, the new color fills the screen only up until the beginning of where the last color begins.

Background color requires at least one blank character space between color changes. As a result, background color changes can not be made on a character by character basis. So to create background color changes within a single word (such as having each letter with

its own background color), the word must be typed out with spaces between its letters.

Using **BKGND COLOR** an operator can easily create:

- line-by-line color backgrounds
- word-by-word color backgrounds
- words with multiple background colors

2.2   Character Color (**CHAR COLOR**)

Color characters are only available on the 830E system.

Pressing **CHAR COLOR** (CHARACTER COLOR) changes the color of screen characters. It *does not change the color of already typed characters, it determines the color of the next character typed* and all following characters until another change is specified.

Character color can be changed as often as on a character by character basis.

The colors available for characters are the same sixteen colors as are available for background color in the system.

There is no way to preview what the selected color is when **CHAR COLOR** is pressed. The new color will be active but it won't be seen until the next character is typed. So if a change is made, type a character to test out what was selected. If it is not the color desired, backspace to kill the character, make another choice and repeat the process until the desired color is active.

Pressing **Shift CHAR COLOR** steps backwards through the color choices.

If the character color selected is the same as the current background color, typed characters may not be visible on screen. Borderless characters will simply blend   in with the background, much like the proverbial white cat in a snowstorm. Only   characters typed with a black border will be seen, but they will appear empty   since their interior matches the background.

2.3   Font Selection (**FONT**)

There are four internal fonts, or type styles, in the standard system configuration. Three are proportionally spaced and one is fixed pitch.

The fonts are different sizes and heights. Therefore, each will allow a different number of

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characters per average line of text and each will adjust the row spacing to suit its character height. When more than one font is selected on a row, the tallest font determines the row spacing.

Font 1 is the default and is a Geneva style. That means it is a basic type style with no swirling edges or fancy curves. It allows about 28 characters per average line of text.

Font 2 is a Clarendon style font. That means it is a fancier font with some swirling edges and curves. It allows about 28 characters per line.

Font 3 is a heavy Modern style font. It is thick and broad and comes only in upper case letters. It allows about 17 characters per line.

Font 4 is a small fixed pitch font and allows exactly 41 characters per line.

Pressing the **FONT** button cycles or steps through the font selections in the Font 1, 2, 3, 4 order. The selection is *active from the current cursor position until another font change selection is made.* So if no other selection is made, the currently selected font will remain in effect for the rest of the page.

Font changes can be made as often as on a character by character basis.

To see what font is selected when pressing the **FONT** button, type a character. If that is not the desired font, backspace, press **FONT** again and type a character. Repeat the process until the font desired is active.

2.3A   Resetting to the Default Font

The current font selection can be reset at any time to the system default of Font 1 (Geneva) by pressing **Ctrl FONT**. That is a faster way to get to that selection than using the **FONT** button and testing to see if Geneva is active.

2.4   Border Selection (BORDER)

The **BORDER** button selects the style for the selected font. Style of a font can be defined as whether characters will be black, white, colored, and whether or not characters will have black borders.

Each time **BORDER** is pressed, *all characters on a screen will immediately change to the new character style selection.*

Whichever style is active is active on a system-wide basis. That means not only for the whole current page, but for anything on any page until another style change is made.

Border is not a parameter that is stored with a page. It is a status that is what it is based on the current selection. So when any page is recalled to the screen, its characters immediately take on the currently active border selection.

2.4A   Border Selection for Fonts

The **BORDER** button cycles through the three style choices for character display.

Since the 830 system does not support color characters, white is substituted for color in the following descriptions for that system.

Style 1 is color characters as specified by the **CHAR COLOR** function.

Style 2 is black characters.

Style 3 is color characters as specified by the **CHAR COLOR** function with a black border. This style is the system default.

2.5   Flashing Characters

The **FLASH** button activates the parameter that causes screen characters to flash on and off continuously.

FLASH is actually an ON/OFF toggle for the flash function based on cursor position. Each time **FLASH** is pressed, everything after the cursor flashes if it hadn't been or stops if it had been.

2.5A   Flash Example

One way to make **FLASH** operation clear is to construct an example.

A basic operation for **FLASH** is *to make only one selected word on the screen flash.*

To do this:

1.Position the cursor at the beginning of the word that must flash.

2.Press **FLASH**.

All characters beginning at the cursor position to the end of the screen will begin flashing, which includes much more than the desired effect. But that's okay, the process isn't completed yet.

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3.Move the cursor to the beginning of the word following the one that is supposed to be flashing.

4.Press **FLASH**.

Everything from the cursor position to the end of the screen stops flashing. That leaves only the original word flashing.

2.6   Background Space (UPPER BKGND SPACE, LOWER BKGND SPACE)

Background space is defined in the System 830 series as the amount of color background above and below a character in any given row. The amount of color background above a character in a row is the upper background space and the amount below a character in a row is the lower background space.

The upper and lower background spaces for any row can be increased or decreased independently of each other with the **UPPER BKGND SPACE** and **LOWER BKGND SPACE** buttons. So, for instance, a row can be designed to have a high ceiling of color above the characters and very tight floor of color below the characters.

Since the color of the upper/lower background is the last color used on a row, if a new color is specified at the beginning of the next row, that next row will be a different color than the one above. This can be done to alternate row colors, giving the message color separators for each row.

2.6A   Upper Background Space Adjustment

Pressing the **UPPER BKGND SPACE** button increases the color background space above the characters on the current cursor row and the rows below. Any change made affects the rows below it until the point where another change has been specified.

If anywhere after a change another is made, all rows below the new change follow it, leaving everything above it alone.

Each time **UPPER BKGND SPACE** is pressed the affected space increases up until its allowed maximum is reached.

Pressing **Shift UPPER BKGND SPACE** decreases the color background space   above the characters, effectively working as the reverse of **UPPER BKGND   SPACE**.

2.6B   Resetting to the Default Upper Background Space (Ctrl UPPER BKGND SPACE)

Pressing **Ctrl UPPER BKGND SPACE** resets the upper background space to its default state. This will affect the current row and all rows below until the point where another

change has been specified.

2.6C   Lower Background Space Adjustment

Pressing the **LOWER BKGND SPACE** button increases the color background space below the characters on the current cursor row and the rows below. Any change made affects the rows below it until the point where another change has been specified.

If anywhere after a change another is made, all rows below the new change follow it, leaving everything above it alone.

Each time **LOWER BKGND SPACE** is pressed the affected space increases up until its allowed maximum is reached.

Pressing **Shift LOWER BKGND SPACE** decreases the color background space below the characters, effectively working as the reverse of **LOWER BKGND SPACE**.

2.6D   Resetting to the Default Lower Background Space (Ctrl LOWER BKGND SPACE)

Pressing **Ctrl LOWER BKGND SPACE** resets the lower background space to its default state. This will affect the current row and all rows below until the point where another change has been specified.

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3.   CURSOR MOVEMENT: GETTING AROUND THE SCREEN

Getting around a screen efficiently is a somewhat overlooked skill. Everybody knows that pressing and holding a cursor arrow button will move the cursor in a desired direction and eventually it will get to the place intended. Eventually isn't really good enough. There are better ways to get around the screen built into every System 800 series unit and getting to know them takes little time now and saves a great deal of time later -- not to mention a great deal of frustration.

The cursor control buttons are among the two small button clusters centered between the alphanumeric keypad and the larger cluster on the right side of the keyboard. They include the **Home** and **End** buttons, and, of course, the cursor direction arrow buttons.

3.1   Home Button

Pressing the **Home** button *always moves the cursor to the upper left corner of the current screen* -- the home position. This is standard computer screen terminology.

The home position is a good reference point for any number of situations and it is good to know that it is always available at the touch of the **Home** button.

3.2   End Button

Pressing the **End** button at any time will *move the cursor immediately to the next character position after the last thing typed on the current page* -- the end of the typed material on the page. The last thing typed does not have to be a character, it could be a space or a return.

This is a helpful function. If at any time typing is interrupted to change something in the middle of a page, when the change is completed it is easy to get back to where typing had left off -- **End** takes the cursor right there.

3.3   Cursor Direction Arrow Buttons (6, 7, 8, 9)

The cursor direction arrow buttons move the cursor in the direction of the arrow: right (**6**), left (**7**), up (**8**) or down (**9**).

Using the up (**8**) and down (**9**) arrows is an efficient way of getting to higher or lower rows of text. A quick push of these buttons moves one row and holding them down sets

the cursor in constant motion until the buttons are released.

One quick push of the right (**6**) or left (**7**) arrow buttons move the cursor one character position. Holding them down sets the cursor in constant motion until the button is released. And that's why people tend to use these buttons to take the cursor across a row of text from one word to several words away from where the cursor rests, or even worse, from one end of the row to the other.

There are better ways to do this.

3.3A   Moving One Word At A Time (Ctrl Arrow (**6** or **7**))

Pressing Ctrl right arrow (**6**) moves the cursor to the beginning of the next word.

Holding down Ctrl and pressing the right arrow (**6**) button several times will take the cursor quickly across the screen to the right, resting on the beginning of words all the way along.

Press Ctrl left arrow (**7**) to move the cursor to the beginning of the previous word.

Holding down Ctrl and pressing the left arrow (**7**) button several times will take the cursor quickly across the screen to the left, resting on the beginning of words all the way along.

It is far more efficient to get to the beginning of a specific word in a row with these functions than it is by sending the cursor across with just the arrow because more often than not the word desired will be passed and then the cursor will have to be taken the other way to get back to it.

3.3B   Moving Directly to a Margin (Shift Arrow (**6** or **7**))

Pressing Shift right arrow (**6**) moves the cursor directly to the right margin of the current row.

Pressing Shift left arrow (**7**) moves the cursor directly to the left margin of the current row.

Clearly, these are the best ways to get the cursor to the side of the screen desired.

3.4   Space Bar and Backspace Button (7)

The **Space Bar** and **Backspace** button should not be left out of the discussion of cursor movement since they are used often when typing and editing.

Obviously, the **Space Bar** is used to space between words when typing. But it works

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differently depending on the typing mode that is active (See: 5.1 Typing Mode (Insert Over/Write Button)).

In Character Insert Mode, the **Space Bar** causes the cursor to push all characters to the right as it moves, creating a space at the cursor position.

In Overwrite Mode, **Space Bar** makes the cursor wipe a character off the screen as it moves right, which makes it a destructive cursor movement in that mode.

Backspace is right above the **Enter** button and has an arrow on it pointing to the left. Do not confuse it with the left arrow button in the cursor direction arrow cluster, it works very differently (and has a longer stem on its arrow).

Backspace is always a destructive cursor movement button, which means it *destroys any character that is in the way as it moves the cursor backwards.* Quite different than the left arrow button that simply moves the cursor left leaving everything alone.

Only use **Backspace** when characters to the left of the cursor must be wiped off the screen.

3.5   Turning the Cursor On and Off (TOGGLE CURSOR)

The **TOGGLE CURSOR** button is one of the buttons in the thirteen-button cluster above the alphanumeric keypad.

Pressing **TOGGLE CURSOR** removes the visible cursor from the screen.

The cursor is still active and message creation and editing can still be done. The cursor will simply not be visible, which means when typing is interrupted it will be difficult to know where the cursor resides. Of course, typing another character will reveal its location.

Pressing **TOGGLE CURSOR** when the cursor is invisible returns it to the screen.

4. GETTING TO THE PAGE DESIRED

Messages or screens of information are created on any of 99 pages available in the system. These pages always exist, whether any information has been typed into them or not. As a result, it is possible to step through or call up to the screen any page in the system at any time.

There are several ways to get a desired page on screen for message creation or editing.

4.1   Using the Page Up and Page Down Buttons

Pressing **Page Up** calls the next *numerically higher* page to the screen. So if the current page is 1 and the desired page is 3, pressing **Page Up** twice gets page 3 on screen.

Pressing **Page Down** calls the next *numerically lower* page to the screen. So if the current page is 3 and the desired page is 1, pressing **Page Down** twice gets page 1 on screen.

Either one of the page movement functions is a reasonable way to get to a desired page providing that it is within a short range away from the current page. If the current page is very far from the page that must be called up -- say the current page is 11 and the page that must be called up is 52 -- then **Page Up** is a very inefficient way to get to page 52.

4.2   Using the Edit Button

The best way to get to a page that is far from the current page is by using the **Edit** button. **Edit** instantly recalls a specified page from memory to the screen.

To use Edit:

1.Press **Edit**.

The system responds with:

<p style="text-align:center">Edit Page Number:</p>

and specifies the current page number.

2.Specify the desired page number by *typing in the desired numbers with the numeric buttons.*

If an incorrect number is typed, press **Esc** (Escape) or **Backspace** and make a correction.

(Another way to specify the desired page is to use the up (**8**) and down (**9**) arrows, which will increase or decrease the displayed number. But that is not much different than using **Page Up** and **Page Down**, so why bother?)

3.Press **Enter**.

The specified page will appear on screen. If nothing had been stored on the recalled page, the screen will come up blank.

Don't be confused by the name **Edit**. Just because that function is used to get a page on screen for editing does not mean changes have to be made. The button simply gets a page on screen. It could just as easily have been called Recall.

4.2A   Identifying the Current Page on Screen (Ctrl Edit)

There is no visible indication of what page is currently on screen.

To find out the page number of the page on the screen, press **Ctrl Edit**. A prompt appears:

Current Page = xx

Kill the function with **Enter** or **Esc**.

5. CREATING AND EDITING MESSAGES

Creating a page is really an editing process itself because nothing starts out perfect. Editing involves changing what is on screen to what is really wanted on screen. There are many tools available in the system to make this process as easy as possible.

5.1   Typing Mode (Insert Over/Write Button)

There are two modes in which typing is done with the system, the Insert Mode and the Overwrite Mode. They are selected with the **Insert Overwrite** button.

In the Insert Mode, which is the default, each character typed is inserted in a row at the cursor position and all following characters move to the right to make room for it. When the row is filled to capacity, the row will not accept any additional characters -- basically, if something else is typed, it is ignored and the cursor moves down to the next line.

In the Insert Mode, typing a character will never destroy another character.

In the Overwrite Mode, each character typed is placed at the cursor position. If there already is a character there, that character will be overwritten by the new one. This is a destructive typing mode.

In either mode, when the cursor reaches the right margin it will move to the next line.

It should be noted that there are two kinds of "spaces". The **Space Bar** inserts a space character that is the width of the number 0 of the currently selected font. Moving to the right with the right arrow key beyond already existing text inserts a narrow space equal to about 1/3 the width of a **Space Bar** character.

5.2   Inserting and Deleting Spaces, Characters and Rows (Insert and Delete Buttons)

The **Insert** button adds a narrow space at the current cursor position. The cursor remains at rest but all characters to its right move one narrow space to the right. **Insert** only affects the characters on the row where the cursor resides.

Shift Insert causes an entire row to be inserted. If the cursor is in the middle of a row and **Shift Insert** is pressed, all text from the cursor position to the end of the row is brought down to a new row beginning at the new row's left margin. All rows of text below are moved down to make room for the new row.

When this is done repeatedly, there will be a point at which the maximum number of rows is reached and the button will have no further effect.

It is also possible that some rows will move down below the visible bottom level of the screen but still be considered valid rows. This could happen if the selected height for rows is very high. The rows out of sight below the screen can be brought up by deleting some above them or lowering the row height.

The **Delete** button deletes a space or character at the current cursor position. The cursor remains at rest but all characters to its right move one space to the left. **Delete** only affects the characters on the row where the cursor resides.

After all text on a row to the right of the cursor is deleted a character at a time with **Delete**, the next time **Delete** is pressed all the text from the line below moves up to fill the empty space. This could result in more text coming up than can fit in the space from the cursor position to the right margin.

If this happens, some of the moved up text will be unseen -- as if it is hanging off screen to the right. Position the cursor at the right margin and press **Shift Insert**. A new row will be inserted below that will accommodate the extra text.

Shift Delete will delete everything on the row where the cursor resides. All rows below move up as a result.

Ctrl Delete will delete all text from the cursor position to the right margin.

5.3   Justifying and Centering Text (Left Just, Ctr, and Right Just Buttons)

The **Left Just** button left justifies all text on the current cursor row. That means it positions the first word of text at the left margin with all text following it.

The **Right Just** button right justifies all text on the current cursor row. That means it positions the last word of text at the right margin with all text ahead of it.

Ctr centers all text on the current cursor row.

All of the above three buttons used with Shift will cause the whole page to adopt the selected function -- Left justify a whole page, right justify a whole page or center a whole page.

Note:Centering or right justifying text over a color background can cause an unwanted effect if done in the incorrect manner -- See: 2.1B Centering or Right Justifying Text with Background Color.

5.4   Clearing a Page (Clear Page Button)

The **Clear Page** button does just what its name suggests, it clears the entire contents of the current page. Every parameter that defines the page is reset to its default state. The defaults are:

Font	1
Background Color	Blue
Character Color	Yellow (White for 830)
Upper Additional Spaces	0
Lower Additional Spaces	0

A good reason to use **Clear Page** is to wipe out an unwanted message from a page before creating a new one. It is better to work in a clean area with known settings to avoid any unseen and unwanted settings that might get in the way.

If a message is cleared by mistake, don't panic. If it had been stored in memory, it is still there and can be recalled using the **Edit** button.

If a message has not been stored in memory before it is cleared with **Clear Page**, it is lost.

6. STORING MESSAGES INTO MEMORY (Store Button)

When a message is completed it must be stored into system memory with the **Store** button for later recall and use.

To store a message into memory:

1.Press the **Store** button.

The system responds with:

Save Page Number:

The system specifies the current page number.

2.To store the message into the current page number press **Enter**.

That suggests that it could be stored as any page, and it can. Just because the message was created with the current page number active does not mean that that message is tied to that page number.

The number specified in that Save Page Number: prompt defines what page number that message should be stored as, and any valid page number in the system is possible. The desired number can be typed in, or get to a higher number with the up arrow (**8**) and to a lower number with down arrow (**9**).

If the page specified (even if it's the current page) already has stored text in it, the system will ask if that text should be overwritten by the new text. That is a safeguard to prevent any mistakes. Respond with Y for Yes to confirm.

If the message on a page is not stored, the message on the page will be lost as soon as another page is brought to the screen.

That goes for an edited page as well. If changes are made to a page after it has been stored, it must be stored again or the changes will be lost when another page is brought to the screen.

Any time there is not enough memory to hold an entire message, the portion that does not fit will be lost. And if there is no memory at all when a message is being stored, an error message will indicate that.

7. CREATING A QUEUE FOR AUTOMATIC PAGE DISPLAY

A queue is the basic way the system displays pages. Once needed pages are created and stored, an order is determined for displaying them. A queue is then created that calls up the desired pages in the predetermined order for a predetermined display time (called dwell).

The buttons that define and run a queue are in the keypad at the right of the keyboard.

7.1   Setting Up a Queue (Set Queue Button)

The **Set Queue** button is where a queue is defined. It does not matter what page is displayed when building a queue. When **Set Queue** is pressed the system prompts:

Seq #   Page: Dwell:

Seq #

Seq # defines where in the queue's order a specified page will appear. If it will be the third page shown, its sequence number is 3.

When the function is activated, the Seq # displayed will be the next one in order. To change it, go to a higher number with the up arrow (**8**) and to a lower number with the down arrow (**9**).

If a sequence order number is skipped, it will not make a difference when the queue is run. So a sequence of 1, 2, 3, 5, 6, is valid and it will run in that order.

Page:

Page: is the page that will be displayed as the specified sequence element. Any page number can be used that has something stored into it. An empty page is invalid and will be skipped over when the queue is run. And a page can be repeated any number of times in a queue.

When the function is activated the current page will be specified as the Page #. To select a different page, go to a higher page number with **Page Up** and to a lower page with **Page Down**.

Dwell:

Dwell is how long a displayed page will remain on screen until the next page is called up. Dwell time is specified in number of seconds from 1 to 239, and each page in the queue can have a different dwell time.

Specify the dwell time by going to a higher number with the right arrow (**6**) and to a lower number with left arrow (**7**).

When all parameters are specified, press **Enter** or **Esc**. The queue is ready for use as soon as it has one page in it.

A queue does not have to be created in the same sequence that it will play back.   That means that the first page entered into a queue does not have to be specified as Seq # 1, it could be Seq # 3. Then a page could be specified as Seq # 1 and finally a page specified as Seq # 2. When the queue is run, the pages will be displayed in the Seq # order of 1, 2, 3 just as desired.

7.1A   Clearing the Queue (Ctrl Set Queue)

Only one queue can exist in the system at one time. As a result, when a queue is no longer wanted and a new one is about to be built, it is a good idea to clear the current one out of the system first.

Then there won't be any remnants from the old one to get in the way of the new one -- such as unwanted pages from the old one appearing in the new one.

To clear the queue out of the system, press **Ctrl Set Queue**.

7.2   Starting and Ending a Queue (Queue Start and Queue End Buttons)

To start a queue, press the **Queue Start** button.

The default condition is for a queue to run in an endless loop.

To end a queue, press the **Queue End** button.

When a queue is ended with the **Queue End** button, the last page displayed remains on screen.

For units that genlock and key messages over incoming video, when a queue is ended, the key is disabled, removing the keyed message from the video.

If a queue is running a crawl message when **Queue End** is pressed, the crawl continues until the last character moves off the screen to the left.

7.2A   Setting a Queue Repeat Number (Ctrl Queue End)

Rather than have a queue repeat itself in an endless loop, a number can be specified to define how many times it should be repeated.

To define a repeat number press **Ctrl Queue End** and type in the number desired. When **Queue Start** is pressed, the queue will run the specified amount of times   and end as described above.

To reset the queue back to an endless loop, define a repeat value above 128.

7.3   Stepping Through a Queue Manually (Next Queue Entry Button)

To step through a queue manually, press **Next Queue Entry**.

The first page in the queue will be called to the screen and will stay there until the button is pressed again. When the last entry in the queue has been displayed, the next page to be called up will be the first page in the queue.

Obviously, with this function the dwell time for each page in a queue is defeated.

Using **Next Queue Entry** is a good way to look through a queue that has been built to see if it is exactly what was wanted. It is also a way to switch through a queue manually on line, rather than use the dwell timings used when the queue was created.

To get back to normal editing mode, press **Queue End**.

7.4   Inserting or Deleting Queue Entries

A page can be inserted into or removed from an already existing queue at any point in the queue. This would be done for any number of reasons, the simplest being that once a queue is created it becomes obvious that it would be better with or without a particular page.

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To add a new page to the sequence of a queue:

1.Press **Set Queue**.

This brings up the system prompt where the queue is defined by Seq # (the place in the queue's numerical order), Page: (the message page assigned that place in the order) and Dwell: (how long the page will stay on screen).

2.Step through the queue with the up (**8**) and down (**9**) arrows to the sequence number where a new page must be added. (It will be added before the indicated sequence number).

3.Press **Insert**.

The Seq # number displayed remains but Page: number and Dwell: go blank.

3.Specify the new page number using **Page Up** and **Page Down**, and specify the dwell time desired using the right arrow (**6**) and left arrow (**7**).

4.Press **Enter**.

The page that had originally been specified as that Seq # has moved up in the queue by one Seq #, as have any following pages.

To delete a page from the sequence of a queue:

1.Press **Set Queue**.

This brings up the system prompt where the queue is defined by Seq # (the place in the queue's numerical order), Page # (the message page assigned that place in the order) and Dwell (how long the page will stay on screen).

2.Step through the queue with the up (**8**) and down (**9**) arrows to the Seq # of the page that must be deleted.

3.Press **Delete**.

The displayed Page # value is removed from the queue. It is replaced by the page that had come after it, essentially decreasing that page's Seq # by one. The sequence number for all following pages in the queue are lowered by one number since a page has been removed before them.

Understand that the page removed from the queue *is removed only from the queue. It still remains in system memory* as a valid page that can be called up at any time and displayed and edited.

7.5   Removing a Specific Page From a Queue (Dequeue Page Button)

Rather than having to find a specific page in a queue to remove it with the **Delete** button, **Dequeue Page** will delete a page from a queue based on its page number.

Since a page can be used multiple times in a queue, when a page that appears many times in a queue is no longer wanted, several pages must be removed.

Dequeue Page deletes all occurrences of a specified page from a queue.

To use Dequeue Page:

1.Press **Dequeue Page**.

The system displays the current page number for dequeuing.

If that is not the desired page, specify the desired page by number, or by scrolling up and down in number with the up (**8**) and down (**9**) arrows.

2.Press **Enter** when the desired page number is displayed.

All occurrences of that page in the queue are deleted.

7.6   Timed Removal of a Specific Page From a Queue (End Time Button)

A page can automatically be removed from a queue based on date and time by using the **End Time** button. This is important for timely removal of dated material from a queue.

The page removed from the queue *is removed only from the queue. It still remains in system memory* as a valid page that can be called up at any time and displayed and edited.

To specify a page for timed removal:

1.Press **End Time**.

The system prompts for the information it needs:

Page: Date: Time:

The current page will be displayed next to Page.

2.If the page number desired is not displayed, use **Page Up** and **Page Down** to specify the page that must be removed. **Home** calls up the first page in memory and **End** calls up the last page in memory.

3.Specify the date of the current month that is the target for the page removal by using the **Insert** and **Delete** buttons.

4.Specify the time of the selected day that is the target for the page removal. Use the up (**8**) and down (**9**) arrow buttons for hour selection (in 24-hour clock time) and the right (**6**) and left (**7**) arrow buttons for minutes.

5.Press **Enter** or **Esc** to complete the process.

All occurrences of the page specified will automatically be deleted from the queue on the date and time specified.

7.6A   **Removing All End Times From the System (Ctrl End Time)**

When *all specified end times* need to be removed from the system, press **Ctrl End Time**. This is not a selective parameter that will allow some end times to remain while removing others.

7.7   **Automatic Queue Start Based On Clock Time (Shift Queue Start)**

A queue can be automatically started once or a multiple of times at specific minutes past the hour every hour of the day. The amount of times the queue repeats itself each time it starts is also programmable.

Pressing **Shift Queue Start** will initiate the time-dependent queue, but first all the parameters for start time, start interval and repeat value must be defined.

The start time in minutes past the hour is specified at the Queue sync minute: prompt called up by pressing **Ctrl S**. Type in the value desired or use the up (**8**) and down (**9**) arrow buttons to get to it.

The interval in minutes between starts of the queue is specified at the Queue cycle interval: prompt called up by pressing **Ctrl D**. Type in the value desired or use the up (**8**) and down (**9**) arrow buttons to get to it.

The amount of times a queue will repeat itself each time it is started is specified at the Times to run queue: prompt called up by pressing **Ctrl Queue End**. Type in the value desired.

The best way to illustrate the process is to create a step-by-step time-dependent queue start example.

7.7A   Automatic Queue Start Example

The following example describes how to build a timed queue start that will run a queue at the top of the hour and every fifteen minutes after that. Each time the queue runs it will repeat itself twice.

A timed queue is not selective as to which hour of the day the queue is run. It runs every hour at the specified minute after the hour. That means that the timed queue example will have the queue run every fifteen minutes every hour of the day until stopped with **End Queue**.

1.Press **Ctrl S.**

This calls up the Queue sync minute: prompt where the Queue Sync Time is set. That is
        simply the minute past the hour for the queue's first run.

2.Type in 0.

This defines the first occurrence of the queue as 0 minutes past the hour.

If it was to begin at ten minutes past the hour, the value would be 10. If a number larger
        than 59 is specified, the system will reject it and use 0.

3.Press **Enter**.

The system accepts the value and the prompt is removed from the screen.

4.Press **Ctrl D**.

This calls up the Queue cycle interval: prompt, where the minutes between queue starts
        are specified.

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5.Type in 15.

This specifies an interval between queue starts as fifteen minutes. Any number greater
than 59 will be rejected by the system and it will use 59.

6.Press **Enter**.

The system accepts the value and the prompt is removed from the screen.

7.Press **Ctrl Queue End**.

This calls up the Times to run queue: prompt. It specifies how many times the queue will
repeat itself each time it runs.

8.Type in 2.

This specifies that the queue should repeat twice each time it is run. Numbers from 128
and greater will cause the queue to repeat continuously.

9.Press **Enter**.

The system accepts the value and the prompt is removed from the screen.

The time-dependent queue is started with **Shift Queue Start** and ended with **Queue End**.

8. CRAWLING A MESSAGE ACROSS THE SCREEN

A crawl is only possible when a queue is running. There is no actual button or series of keystrokes that turn on a crawl. When a crawl has been defined by the crawl parameters, it automatically happens when a queue starts.

Any stored message can be selected to be crawled across the screen. Only one message can be crawled at a time.

All crawls are repeated in an endless loop.

When a queue is stopped with **Queue End**, the crawl will stop as well. It will not get any additional characters and those already on screen will continue moving to the left until they are off screen.

When a message is selected to be crawled, its background color, font, character color and row height attributes become part of the crawl.

Attributes can be changed specifically for a crawl with commands that will be discussed in this section.

Any message selected to crawl on a System 830 must have a color background to be a valid crawl.

8.1   Defining the Crawl

A crawl is defined by telling the system:

> - Which message page should be crawled
> - Which scan line on the screen the crawl should run on
> - How fast the crawl should move

Once these parameters are set, they will remain active for all subsequent crawls unless they are changed. That allows a standard crawl format to be used. Of course, the page specified can be changed to define new messages to be crawled.

8.1A   Specifying the Message to be Crawled (Ctrl T)

To select the message page that will be crawled, press **Ctrl T**.

The Page to be crawled: prompt appears displaying the last page number that was specified as a crawl.

To specify a different page, type in the number or use the up (**8**) or down (**9**) arrow

buttons to get to the page number. An invalid number, such as one above the highest fixed message number, will be rejected and the original number will be retained.

Press **Enter** to complete the function.

To abort the function at any time, press **Esc**. The original number will be retained.

8.1B   Specifying the Crawl Screen Position (Ctrl E)

The position on the screen for a crawl is defined by the scan line number where the top of the crawl will appear. Scan lines may not mean much to some people, but just remember that the top of the screen is line 0 and the bottom is about line 250. So basically, the higher the line number, the closer to the bottom of the screen.

When preparing a text page on which a crawl will appear, be careful not to leave any text at or below the position on the screen where the crawl will appear or it will not be seen since the crawl position defines the last portion of the screen where text can appear.

To specify where on the screen the crawl should appear, press **Ctrl E**.

The Top of crawl line = prompt appears displaying the currently specified scan line number.

To specify a different scan line number, type it in or use the up (**8**) or down (**9**) arrow buttons to get to the number.

A good line choice is 208, which positions the crawl near the bottom of the screen. The minimum acceptable scan line value for a crawl is line 160.

Press **Enter** to complete the function.

To abort the function at any time, press **Esc**. The original scan line number will be retained.

The system only wants numbers divisible by eight. So it will change a number selection to the nearest number divisible by eight. Don't pay too much attention to this and just work in round numbers. An invalid number, such as one too large, will be rejected and the original number will be retained.

8.1C   Specifying the Crawl Speed (Speed Button)

There are three speeds at which a crawl can run: Slow, Medium and Fast.

Pressing the **Speed** button selects Slow.

Pressing **Shift Speed** selects Medium.

Pressing **Ctrl Speed** selects Fast.

The best speed to use is Medium. Speed changes can be made while the crawl is running to see how the speeds work with the message.

The last crawl speed selected remains in effect even if power is interrupted.

8.1D   Specifying the Crawl Row Height (Ctrl R)

Crawl row height is how high the crawl area is on the screen including the background and characters.

The default value is 32 scan lines per field. This gives an acceptable height that should probably be left alone. If a crawl screen position of 208 is used, the crawl background will continue to the bottom of the screen.

To select a different height for the crawl row, press **Ctrl R**.

The Size of crawl line = prompt appears displaying the current value.

Specify a different value by typing it in or by using the up (**8**) or down (**9**) arrow buttons to get to the number.

The system only wants numbers divisible by four. So it will change a number selection to the nearest number divisible by four. Don't pay too much attention to this and just work in round numbers. An invalid number, such as one too large, will be rejected and the original number will be retained.

Press **Enter** to complete the function.

To abort the function at any time, press **Esc**. The original number is retained.

8.2   Creating a Message As a Crawl (Shift Clear Page)

As explained above, any message saved in a page can be used as a crawl. While that is a powerful feature, it also presents unexpected problems if the message wasn't designed as a crawl.

For instance, the spacing between words might suit the page but not a crawl. And lines of information could be separated in such a way as not to be translatable for an acceptable crawling message.

There is a better way to create a message if it is known beforehand that it will be used as a crawl.

When **Shift Clear Page** is pressed it activates a single-line message mode at the top of the cleared page. Typing can only be done on this single line. As typing continues beyond the margins, the message crawls off screen to the left just as a crawl would. So the message is created specifically as a crawl.

The right (**6**) and left (**7**) arrow buttons move the message right and left as necessary to get it in and out of view on screen.

Save the crawl message using the **Store** function while the message is still on screen. At the Store Page Number: prompt specify a page number for the crawl message and press **Enter**. That page number is important.

Be sure to specify the crawl message page number as the page to be crawled using the **Ctrl T** function.

8.3   Controlling a Crawl in Progress

When a queue is running and a crawl is in progress on screen, the active crawl can be stopped, resumed or aborted as desired.

8.3A   Stopping a Crawl (STOP CRAWL Button)

To stop a crawl that is in progress, press **STOP CRAWL**, the rightmost button above the alphanumeric keypad.

The current crawl will run through its complete message and crawl totally off screen to the left.

8.3B   Resuming a Stopped Crawl (Shift STOP CRAWL)

After a crawl has been stopped by pressing **STOP CRAWL**, if the queue is still running, the crawl can be restarted by pressing **Shift STOP CRAWL**.

8.3C   Aborting a Crawl (Ctrl STOP CRAWL)

A crawl can be aborted at any time by pressing **Ctrl STOP CRAWL**.

There is a significant difference between stopping a crawl with **STOP CRAWL** and aborting a crawl with **Ctrl STOP CRAWL**. An aborted crawl stops adding characters to its message when **Ctrl STOP CRAWL** is pressed, leaving the message incomplete. All characters already on screen will crawl completely off to the left.

If the crawl is started again with **Shift STOP CRAWL**, it will start at the beginning of its message.

8.4   Disabling the Crawl

What really makes a crawl happen every time a queue is run is the fact that a page number has been specified to be crawled using the **Ctrl T** function. So logically, if no page number is specified, or a page that is blank is specified, there will be no crawl.

To disable the crawl, press **Ctrl T**. Specify 0 as the page number and press **Enter**.

That always works. Specifying a blank page would also, but that requires remembering which pages are blank. And they may not remain blank.

8.5   Crawling a Message Over a Blank Screen

It might be assumed that since a crawl is only possible when a queue is running that there must always be some other information on screen with the crawl. That is not the case.

Given the fact that a queue must be running for a crawl to appear, why not create a queue that has no information in it except a background color?

To create this effect:

1.Select a page on which to work and press **Clear Page**.

The page is cleared, resetting all attributes to their default conditions.

2.Specify the desired background color by cycling through the choices with **BKGND COLOR**.

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3.Press **Store**.

The store prompt displays the current page number.

4.Press **Enter**.

The color background is stored as a valid stored message page.

5.Press **Ctrl Set Queue**.

This clears the current queue out of the system.

6.Press **Set Queue**.

The   Seq #   Page: Dwell: prompt appears.

7.The number of the message page just created should appear as the Page #. If it does not, get it there with the **Page Up** and **Page Down** buttons.

Verify that the Seq # is 1 since the queue being defined will have only this single sequence page.

Dwell time does not matter because there is only one page in the queue.

8.Press **Enter** to complete the queue definition.

9.Press **Ctrl T**.

This brings up the crawl page definition prompt.

10.Define the desired page as the crawl.

11.Press **Enter** to complete the crawl page definition.

When the queue is started with **Queue Start** the empty screen with background color (or incoming video) will appear and the crawl will move across the screen.

8.6   System Fixed Messages for Crawling

There are a minimum of seven messages already in the system for use when needed. They are emergency or condition-related messages. Additional messages of this type are available as options.

The fixed messages are numbered 100 through 106. They are:

Message #100:   This is a test of the Video Emergency Alert System. If this was an emergency you would be able to get further information from this video channel. This is a test.

Message #101:   Please stand by for an emergency message.

Message #102:   Please stand by for an emergency weather bulletin.

Message #103:   Testing   Testing   Testing

Message #104:   Please tune to another channel for further emergency information.

Message #105:   We are having technical difficulties with the audio for this broadcast, please be patient.

Message #106:   We are having technical difficulties with the video for this broadcast, please be patient.

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9. DISPLAYING TIME AND DATE ON SCREEN (TIME TOKENS)

The current time and date can be displayed anywhere on screen as part of a message page.

When the message is composed, the place on the page where the time and date is wanted is indicated by the placement of tokens, which are special characters that tell the system where to generate the desired information when the page is displayed as part of a queue.

That means that *whenever the page is on screen for composition or editing, the time and date will not appear -- just the tokens will appear.*

When the queue containing the message with time and date specified is run, the time and date will be displayed.

Creating the desired time and date information is a simple matter of using the needed combination of tokens. The tokens and what they display are:

> %X   Two-Digit Year (ie. 93)
> %Y   Full Year (ie. 1993)
> %L   Month Name Abbreviated
> %D   Date of Month
> %W   Day of Week Abbreviated
> %H   Hour of Day
> %T   GMT Hours
> %M   Minutes
> %S   Seconds

An example of tokens for a full time and date display would be:

> %L %D, %Y %H:%M:%S

Putting on screen:

> Jan 31, 1998 11:30:58

Notice that spacing and additional characters are important. Space between token elements the same way as spacing is desired between the displayed elements. And insert commas and colons where they should appear in the display.

When using the GMT time setting for hours, the difference between local time and GMT can be set by pressing **Shift KEY ON** and entering a number (maximum 12 hours).

9.1   Time Countdowns

There are two types of countdowns available in the system.

The time-of-day based countdown counts down from current clock time to a specified goal clock time within the same day. The countdown indicates how long it will be until the goal time of day is reached.

The elapsed-time based countdown counts down from a specified amount of time to zero. The countdown indicates how long it will be until zero, when the specified amount of time will have passed.

The countdowns are displayed on screen with the use of tokens in a similar manner to how time and date displays are created. Only one type of countdown can be active at any one time in the system.

9.1A   Time-of-Day Based Countdown

The goal of a time-of-day countdown is the time that is being counted to. The difference between that time and the current time of day is the countdown value at any given time during the countdown. When the goal is reached, the display will reach 00:00:00.

To specify the time-of-day countdown goal, press **Ctrl G**.

The goal must be specified in 24-hour clock time, hours, minutes and seconds. When the function is activated a prompt will appear with the last time value specified. To specify the goal value desired, use the following buttons (upper and lower case as indicated):

h	Increase Hours
H	Decrease Hours
m	Increase Minutes
M	Decrease Minutes
s	Increase Seconds
S	Decrease Seconds

Press **Enter** to accept the value specified. To abort the function, press **Esc**.

The countdown display on screen can include the difference between the goal time and the time of day in hours, minutes and seconds, or any combination of those elements.

To display the desired countdown elements on screen, the following tokens are   used:

  %A   Difference between goal time and current time in hours

  %B   Difference between goal time and current time in minutes

  %C   Difference between goal time and current time in seconds

To specify the goal time on the page, use the token

     %Ghh:mm:ss

in that exact format.

The %Ghh:mm:ss token can be used to specify different goal times on different pages, so that the %A, %B, %C tokens appearing on those pages will display different countdowns.

9.1B Elapsed-time Based Countdowns

The goal of an elapsed-time countdown is the amount of time that is being counted down from. The difference between the goal amount of time and how long it will be until it is reached is the countdown value at any given time during the countdown. When the goal is reached the display will reach 00:00:00.

To specify the elapsed-time countdown goal, press **Ctrl C**.

The goal must be specified in 24-hour clock time, hours, minutes and seconds. When the function is activated, a prompt will appear with the last time value specified. To specify the goal value desired, use the following buttons (upper and lower case as indicated):

      h   Increase Hours
      H   Decrease Hours
      m   Increase Minutes
      M   Decrease Minutes
      s   Increase Seconds
      S   Decrease Seconds

Press **Enter** to accept the value specified. To abort the function, press **Esc**.

The countdown display on screen can include hours, minutes and seconds, or any combination of those elements.

To display the desired countdown elements on screen the following tokens are used (all three being total hours, minutes and seconds):

%A   Difference between goal hours and current hours

%B   Difference between goal time and current minutes

%C   Difference between goal time and current seconds

When using an elapsed-time countdown, only one elapsed-time goal can be specified.

An elapsed-time countdown will not run based on a goal time specified for a time-of-day countdown.

10. SETTING THE INTERNAL SYSTEM CLOCK (Ctrl Time)

The internal system clock holds time and date information. It has battery backup that keeps it running even when power is off. It should not normally need resetting but it should be checked periodically to insure that any clock dependent functions will trigger at the right time.

The clock takes into account leap years when they are applicable. And it can operate in either standard or military format as described below.

To set the clock, press **Ctrl Time**.

Each of the time and date defining elements in the prompt that appears on screen must be stepped through until the desired setting is reached. Use the following commands to set each element:

For Setting Time

> Ctrl H Hours
> Ctrl M Minutes
> Ctrl S   Seconds

For Setting Date

> Ctrl Y Year
> Ctrl L Month
> Ctrl D Date
> Ctrl W Day of Week

The time shown on the screen updates each second. There may be a delay between when a button is pressed to change a value and the appearance of the changed parameter.

Press **Enter** or **Esc** to exit the setting mode.

The system clock can run in either standard or military time format.

To select standard time format (the system default), press **Ctrl]**.

To select military time format, press **Ctrl [**.

When in military time format all numbers less than 10 will have a leading 0.

11. SYSTEM RESET

The system can be reset by an operator two ways.

A soft reset brings the system back to its power-on condition, *RETAINING ALL SYSTEM MEMORY*. Basically, this will safely reset the system, clearing out any minor operational glitches that may be occurring while protecting all stored messages, queues, crawl parameters, etc.

To soft reset the system, press **left Ctrl, left Alt, right Ctrl** simultaneously.

A complete system reset *CLEARS ALL SYSTEM MEMORY*, meaning all stored messages, all queue information, etc. will be lost. It could be considered a first birthday condition, bringing it back to its original manufacturer defaults.

To perform a complete system reset, press and hold **left Ctrl and left Alt** simultaneously, and then press **right Alt**.

The system resets to:

Font	1 (Geneva)
Mode	White Characters with Black Border
Key	Off
Queue	Cleared
Page Memory	Cleared
Echo	Off
Time Display	Standard Format

After either reset, the screen will be blank and data input will be locked out for about one second.

The system will reset itself and clear out its memory if it detects any invalid system parameters or memory during the internal system checks it performs on itself during power down and power up.

12. CREATING A STANDARD PAGE FORMAT

It is common practice for users of billboard type systems to establish a standard page format that they use each time they create a message. That way there is a consistent look to their output, including color background, font color and style, current time display, etc.

This does not mean that each time a message page is created all those same choices must be made from scratch. Using a little ingenuity and some of the standard system functions, creating a standard format page is practically an automated process.

And this goes for most any user requirement that is particular to their application of the system. There may not be a dedicated function for something, but that doesn't mean it can't easily be done once the system capabilities are understood.

So creating a standard page format is just one example of what the system can do when operators use it to its best advantage.

12.1   Standard Page Format Example

This will not be a step-by-step example giving every button that must be pressed because each function involved is described in detail elsewhere. Rather, the thrust of the example is the logic involved in figuring out how to do it.

1.Create a page format that will serve as the standard.

It can have text that must appear on every page, time tokens for time display, anything that will be wanted. Or it can be a blank screen with color background but with the font and style desired active so that when typing is done later those choices will be there.

2.Store the page as page 99 (or page 224 on a 830E with expanded memory).

This page will not be used to display messages. It is being stored as page 99 (or 224) to put it someplace out of the way where it will remain undisplayed but *available to be used as a palette for creation of other pages that will be displayed with messages*.

3.When a new message page must be created in the standard format, call up page 99 (or 224) either with **Edit** or with **Page Up** or **Page Down**.

This automatically sets up the screen in the already established format.

4.Store the page as another page number.

That creates a new message page retaining all the format choices. It also leaves page 99 (or 224) the way it was, to be used again in the creation of other pages.

5.Compose the message on the new page as required.

6.Store the completed message again with **Store** to save the message on the formatted page.

The new page is now ready to be used.

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13. MISCELLANEOUS - MEMORY STATUS AND SOFTWARE VERSION
(Ctrl ? and Ctrl V)

Memory Status

To see how much memory is available in the system for message page creation, press **Ctrl ?**.

The information appears on the bottom of the screen. To remove it from the screen, press any button.

Software Version

To see what version of software is installed in the system, press **Ctrl V**.

A prompt will appear on the bottom of the screen similar to:

(c) VDS 09/22/97 1704

Press any key to remove the version prompt from the screen.

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