Displaying Messages on Your TV

You can use HomeVision's video system to display messages on your TV. You can do this with commands in your schedule, or by sending serial commands from an attached computer. This article shows how to do both.

We recommend that you first read the video chapter of the owner's manual to ensure you understand how the video system works. If you want to send the commands from a computer, you should also read the serial protocol documentation.

Displaying Messages In Your Schedule

These video commands display the message "Happy Birthday" in the center of the TV screen for 30 seconds:

```
Video: Start internal video mode
Video: Set cursor row to 5
Video: Set cursor column to 6
Video: Display text "Happy Birthday"
Wait 0:00:30.00 with timer #1 (TV message timer), Then:
   Video: Stop video mode
End Wait
```

That's really all there is to it. You start the video system, position the cursor, then write the message. You can shut off the screen using a Wait Timer as shown here, with infrared signals, or a number of other means. You could also display the message overlayed onto incoming video, blink certain characters, change the character size, and much more.

Displaying Messages With Commands Over The Serial Interface

Step 1) Start the video system. The following command initializes it for internal video (text displayed on a solid color background):

```
,L0701  <carriage return>
```

The following command initializes it for external video (text overlayed on the incoming video):

```
,L0700  <carriage return>
```

Note that both of these commands also clear the screen and place the cursor in the top left corner of the screen.

Step 2) Position the cursor. Use the following command to set the cursor to a different row:

```
,L01XX  <carriage return>

where XX is the row number (1 to 11) in Hex format (01 - 0B).
```

Use the following command to set the cursor to a different column:

```
,L02XX  <carriage return>
```

where XX is the column number (1 to 24) in Hex format (01 - 18).

Step 3) Write the characters. Use the following command to display a single character:

```
,L0CXX  <carriage return>
```

where XX is the ASCII code for the desired character in Hex format. For example:

CHARACTER	XX VALUE
0	30
1	31
9	39
A	41
B	42

This command can only send a single character. Therefore, you must loop through the message transmitting one character at a time. The cursor automatically moves after a character is written, so you don't have to reposition the cursor.

If you are using the version 2.4 PROM or later, you can use a special command to write up to 14 characters at a time. This command starts with the letter "d", the second character indicates the number of characters to write (1 to 14, in hex), followed by the 14 characters (14 characters must be included even when writing fewer to the screen). This example uses two commands to display "Happy Birthday Joan":

```
,dEHappy Birthday
,d5 JoanXXXXXXXXX                {last 9 characters can be anything}
```

Probably the greatest difficulty when writing to the screen is if the message extends beyond one line. You'll have to figure out where to break the line so it doesn't split a word in two.

Step 4) When you're done, use this command to shut off the video system:

```
,L0702  <carriage return>
```