



## NUMERIC DISPLAY OPERATION

# OPERATING INSTRUCTIONS FOR NUMERIC DISPLAYS

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### Contents

Introduction .....	3
Navigation .....	4
IR Remote.....	4
Push Buttons (Manual Control) .....	4
Current Count .....	5
IR Remote.....	5
Push Buttons (Digit Set Menu).....	5
Behavior (Settings Menu) .....	6
IR Remote.....	6
Push Buttons .....	6
Address .....	7
Count Increment .....	7
Decimal Point Location .....	8
Count Direction.....	8
Count Frequency.....	8
Display Type (Display with > 4 Digits) .....	9
Brightness.....	9
The Count Window (Advanced Usage) .....	9
Start Day.....	9
Start Hour.....	10
Start Minute .....	10
End Day .....	10

End Hour .....	10
End Minute.....	10
Current Time (Time Menu) .....	11
IR Remote.....	11
Push Buttons .....	11
Time Settings.....	11
Month of the Year (M) .....	11
Day of the Month (d) .....	11
Year (####) .....	11
Day of the Week.....	11
Hour (H).....	11
Minute (m) .....	11
Seconds (S) .....	11
Quick Start: Most Common Configuration. ....	12
Network Control .....	13
Settings.....	13
Appendix A: Display Type Setting .....	14

# Introduction

The operation and functionality of all Cousign numeric displays is the same despite a number of different options for digit height. These instructions provide details about the various configuration options available.

Programming of the sign is separated into three menus.

## **Digit Set Menu**

This menu is only necessary when programming the current count using the pushbuttons on circuit board. This menu is not relevant when using the IR remote control.

## **Settings Menu**

Set counting behaviors such as how often the display counts, by how much, in what direction, and on what days.

## **Time Menu**

Configure the current time of day. Setting the current time ensures your display counts at the appropriate time. For example, a day counter will roll over at midnight.

When the display is powered on it will enter normal operation mode. Normal operation is signaled by scrolling “counting” across the display from left to right. Once the scrolling has finished the current count will be displayed and count behavior is active. From normal operation you may enter the programming menus in sequence to make adjustments available in each menu. Before entering a menu, the current menu title scrolls across the display before the first setting is displayed.

**NOTE:** These instructions apply to all displays running firmware version 8.X. To check the current version of firmware running on your displays, watch the displays when power is applied. The startup sequence will scroll COUSIGN X.X where X.X is the firmware version.

## Navigation

Menus are selected in sequence. For example, to access Settings menu from Normal Operation you must first enter the Digit Set Menu, and then enter the Settings Menu. While all settings can be configured with the circuit board push buttons or IR remote, some differences exist in how menus and settings are accessed. Refer to the control specific notes below entitled [IR Remote](#) and [Push Buttons](#) for specific instructions.

When entering a menu, the menu title will scroll across the screen.

Sequence	Menu	Title (Scrolled Text)
0	Normal Operation	Counting
1	Digit Set Menu	Set Digit
2	Settings Menu	Settings
3	Time Menu	Set Time

### IR Remote

**DEVICE SELECT:** A single IR Remote allows you to control all displays on your sign. To navigate between displays on your sign **PRESS** the **NEXT** and **PREV** buttons in the device select area of the remote control. The currently selected display will Flash.

The IR remote control offers a more direct route to setting various values and settings. Please see the [IR remote](#) control instructions at each step for more information.

To move from one menu to the next **PRESS** the **PROGRAM** button.

To adjust a setting, **PRESS** the **UP** or **DOWN** buttons.

To move to the next setting within a menu **PRESS** the **RESET** button.

**PRESS** – Push the button and release quickly. No options require you to hold the button of the IR remote down for extended periods.

### Push Buttons (Manual Control)

**DEVICE SELECT:** Use the push buttons on the display you wish to modify.

Functionality of some buttons is dependent on how long the button is pushed before released.

**QUICK PRESS** – Push the button and release quickly.

**LONG PRESS** – Push the button and keep it depressed for at least **THREE** seconds, then release.

To move from one menu to the next **LONG PRESS** the **RESET** button.

To adjust a setting, **QUICK PRESS** the **UP** or **DOWN** buttons.

To move to the next setting within a menu **QUICK PRESS** the **RESET** button.

# Current Count

## IR Remote

The current count can be set directly with the number buttons on the remote. The digit set menu is not required when using the remote control to configure the display.

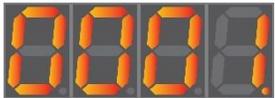
1. Select the display you wish to modify. **PRESS** the **NEXT** button in the device select section of the remote. The currently selected display will flash.
2. Repeat step 1 until the display you wish to modify flashes.
3. Enter the current count using the **NUMBER BUTTONS** on the remote.
4. When your desired count is displayed **PRESS** the **ENTER** button to save the count. The display will flash to signify the count has been saved.

## Push Buttons (Digit Set Menu)

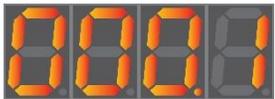
Setting the current count with the pushbuttons is done via the Digit Set Menu. To enter the digit set menu, on the display you wish to adjust **LONG PRESS** the **RESET** button. 'Set diGit' will scroll across the display, and the decimal point at the far right of the display will illuminate.



**QUICK PRESS** the **UP** or **DOWN** buttons to adjust the value.



Once selected **QUICK PRESS** the **RESET** button to move to the next digit.



Repeat this process until all digits have been correctly set and your count is displayed.



Example Entry to set the current count to 21.

When the most significant digit (far left) has been set, **QUICK PRESS** the **RESET** button again to return to normal operation.

**NOTE:** Zero's to the left of your number will be blanked automatically when returning to normal operation. For displays with more than 4 digits, the behavior is the same. Simply adjust the additional digits as required and **QUICK PRESS** the **RESET** button to move to the next.

## Behavior (Settings Menu)

The settings menu allows you to define the counting behavior of the display. You can define how much to count, when, and in what direction to count. To configure these settings first enter the Settings Menu. To enter the Settings Menu, follow the instructions below for your control type.

**NOTE:** When possible a visual aid will be displayed to the left side of the display to signal the current setting. The aids shown below appear on 4 digit displays. If your display has more than 4 digits, these key's may be altered slightly. The order of the settings is the same regardless of digit count, and legibility improves as digit count allows. **FOR EXAMPLE:** A four-digit display will show an 'i' for the count increment visual aid. On an eight-digit display this becomes 'inc'.

### IR Remote

1. Select the display you wish to modify. **PRESS** the **NEXT** button in the device select section of the remote. The currently selected display will flash.
2. Repeat step 1 until the display you wish to modify flashes.
3. **PRESS** the **PROGRAM** button to enter Digit Set Menu.
4. **PRESS** the **PROGRAM** button to enter Settings Menu. 'SettingS' will scroll across the display.
5. Follow the setting specific instructions for [IR Remote](#) for each setting below.

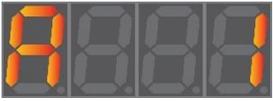
### Push Buttons

To set the count behavior settings of your display use the push buttons on the display you wish to modify.

1. **LONG PRESS** the **RESET** button. You will enter the Digit Set Menu.
2. **LONG PRESS** the **RESET** button to enter the Settings Menu. 'SettingS' will scroll across the display.
3. Follow the setting specific instructions for [Push Button](#) for each setting below.

Review the details for each setting below and set accordingly. Your signs' displays are configured at build time and should not typically need to be adjusted.

## Address



In order for the IR remote and network controllers to work properly, each display must be assigned a unique address to help differentiate it from all other connected displays. **Setting multiple displays on your sign to the same address will prevent the remote from properly controlling them.**

**NOTE:** These unique addresses will be programmed at the factory, please do not modify this setting unless instructed to do so. If you have multiple displays configured with the same address, your remote will stop functioning. In this case use the pushbuttons on the duplicate display(s) to define unique addresses. Once a unique address is defined for each display, the remote will begin to function properly again.

The address setting is the first setting in the menu. You will know you are setting the Address for the display when a "A" is displayed on the far left of the display.

### IR Remote

**PRESS** the **UP** or **DOWN** buttons to adjust the value. When the desired setting is displayed, **PRESS** the **RESET** button to move to the next option.

### Push buttons

**QUICK PRESS** the **UP** or **DOWN** buttons to adjust the value. When the desired setting is displayed, **QUICK PRESS** the **RESET** button to move to the next option.

## Count Increment



The count increment defines by how much your display should count each time that it counts. In most all cases this value should be set to 1, meaning each time it counts it will add or subtract 1 to or from the current count.

**NOTE:** Setting the increment to 0 will disable counting.

### IR Remote

**PRESS** the **UP** or **DOWN** buttons to select the desired value. When finished **PRESS** the **RESET** button to move to the next option.

### Push buttons

**QUICK PRESS** the **UP** or **DOWN** buttons to select the desired value. When finished **QUICK PRESS** the **RESET** button to move to the next option.

## Decimal Point Location



The decimal point location setting allows you to light the decimal point at a specific location on the display. This is helpful when statically displaying prices or fractions of a number.

### IR Remote

**PRESS** the **UP** or **DOWN** buttons to select the desired value. When finished **PRESS** the **RESET** button to move to the next option.

### Push buttons

**QUICK PRESS** the **UP** or **DOWN** buttons to select the desired value. When finished **QUICK PRESS** the **RESET** button to move to the next option.

## Count Direction



The count direction setting defines the direction in which the display will count at each interval. A value of **UP** will add the count increment to the current count, **dn** will count down by subtracting the count increment from the current count, and **OFF** will disable counting.

### IR Remote

**PRESS** the **UP** or **DOWN** buttons to select the desired value. When finished **PRESS** the **RESET** button to move to the next option.

### Push buttons

**QUICK PRESS** the **UP** or **DOWN** buttons to select the desired value. When finished **QUICK PRESS** the **RESET** button to move to the next option.

## Count Frequency



The count frequency setting defines how often the display should count. A value of **dAY** will count once a day at midnight. This is the frequency at which your count increment will be added to or subtracted from the current count. **Hour** will count at the top of every hour, **Min** will count at the top of every minute, **SEC** will count every second, **Mon** will count every month, and **WEE** will count once per week.

### IR Remote

**PRESS** the **UP** or **DOWN** buttons to select the desired value. When finished **PRESS** the **RESET** button to move to the next option.

### Push buttons

**QUICK PRESS** the **UP** or **DOWN** buttons to select the desired value. When finished **QUICK PRESS** the **RESET** button to move to the next option.

## Display Type (Display with > 4 Digits)

The display type setting allows you to configure different display modes for the display.

**NOTE:** If your display is 4 digits this menu option will not appear and you will be taken directly to the brightness setting.

For Displays longer than 4 digits please see [Appendix A: Display Type Setting](#) for further details.

## Brightness



The brightness setting adjusts the light intensity of the display.

### IR Remote

**PRESS** the **UP** or **DOWN** buttons to select the desired value. When finished **PRESS** the **RESET** button to move to the next option.

### Push buttons

**QUICK PRESS** the **UP** or **DOWN** buttons to select the desired value. When finished **QUICK PRESS** the **RESET** button to move to the next option.

## The Count Window (Advanced Usage)

**IMPORTANT NOTE:** The last 6 settings in the settings menu define the counting window. These settings apply only to advanced configurations and in most cases should **not be modified** from the default values.

The counting window is the window of time the display will be allowed to count. If your goal is to **count once a day, seven days a week, keep these settings at their default values.** In this most common use case, your count window is set to Sunday 00:00 → Saturday 23:59 which leaves the display counting for the entire week.

**USE CASE:** Calculating man hours worked.

Say you have 10 employees and you want to count total man hours worked. Your shift runs from 9:00AM to 5:00PM on Monday thru Friday. To track this, you would configure your count frequency to hour, and your count increment to 10 (10 employees). You would set your Count Window to start on Monday at 9:00AM and end at Friday 5:00PM. This would result in a display that counts up by 10 every hour starting on Monday at 9AM and stops counting on Friday at 5PM. No counting would be performed outside of these times.

## Start Day



**DEFAULT VALUE:** Sun = Sunday

The start day setting defines on what day of the week the display will start counting. This setting is useful if you only want to count on work days. In the case where you wish to count Monday to Friday, this setting should be set to Mon=Monday. Valid values are Sun=Sunday, Mon=Monday, tuES=Tuesday, Wed=Wednesday, thur=Thursday, Fri=Friday, Sat=Saturday.

## Start Hour



**DEFAULT VALUE:** 0 = 00:MM = Midnight

The start hour defines the hours component of the start time. The time at which the display will start counting. This setting is useful if you are counting man hours worked. In the case where you wish to count from 9:00AM to 5:00PM, this setting should be set to 9 = 9AM. Valid values are 0=Midnight → 23=11PM.

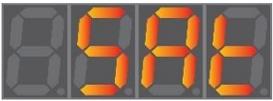
## Start Minute



**DEFAULT VALUE:** 0 = HH:00

The start minute defines the minutes component of the start time. In the case where you wish to count minutes from 9:30AM to 5:45PM, this setting should be set to 30. 9:30AM. Valid values are 0 → 59 = HH:00 → HH:59.

## End Day



**DEFAULT VALUE:** Sat = Saturday

The end day setting defines on what day of the week the display will stop counting. This setting is useful if you only want to count on work days. In the case where you wish to count Monday to Friday, this setting should be set to Fri=Friday. Valid values are Sun=Sunday, Mon=Monday, tuES=Tuesday, Wed=Wednesday, thur=Thursday, Fri=Friday, Sat=Saturday.

## End Hour



**DEFAULT VALUE:** 23 = 23:MM = 11PM

The end hour defines the hours component of the end time. The time at which the display will stop counting. This setting is useful if you are counting man hours worked. In the case where you wish to count from 9:00AM to 5:00PM, this setting should be set to 17 = 5PM. Valid values are 0=Midnight to 23=11PM.

## End Minute



**DEFAULT VALUE:** 59 = HH:59

The end minute defines the minutes component of the end time. In the case where you wish to count from 9:30AM to 5:45PM, this setting should be set to 45. 5:45PM. Valid values are 0 → 59 = HH:00 → HH:59.

## Current Time (Time Menu)

To ensure your display updates at the appropriate time each day (midnight in the case of day counters) you'll need to set the current time. To enter the Time Menu. Follow the instructions below for your control type.

**NOTE:** For signs with multiple displays, setting the time for one display is sufficient. When the time is set on a display it is broadcast automatically to all other displays to ensure they are in sync.

### IR Remote

1. **PRESS** the **PROGRAM** button to enter Digit Set Menu.
2. **PRESS** the **PROGRAM** button to enter Settings Menu.
3. **PRESS** the **PROGRAM** button to enter Time Menu. 'Set Time' will scroll on the display.
4. Follow the setting specific instructions below.

### Push Buttons

1. **LONG PRESS** the **RESET** button. You will enter the Digit Set Menu.
2. **LONG PRESS** the **RESET** button to enter the Settings Menu.
3. **LONG PRESS** the **RESET** button to enter the Time Menu. 'Set Time' will scroll on the display.
4. Follow the setting specific instructions below.

## Time Settings

### Month of the Year (M)

The current month. Valid values are 1 = January → 12 = December. **PRESS UP/DOWN** to adjust the value. When finished **PRESS RESET** to move to the next option.

### Day of the Month (d)

The current day of the month. Valid values are 1 → 31. **PRESS UP/DOWN** to adjust the value. When finished **PRESS RESET** to move to the next option.

### Year (####)

The current year. Valid values are 2000 → 2099. **PRESS UP/DOWN** to adjust the value. When finished **PRESS RESET** to move to the next option.

### Day of the Week

The current day of the week. Valid values are Sun, Mon, tuES, Wed, thur, Fri, Sat. **PRESS UP/DOWN** to adjust the value. When finished **PRESS RESET** to move to the next option.

### Hour (H)

The current hour of the day. Valid values are 0 → 23. Where 0 is Midnight, 12 is noon, and 23 is 11PM. **PRESS UP/DOWN** to adjust the value. When finished **PRESS RESET** to move to the next option.

### Minute (m)

The current minutes past the hour. Valid values are 0 → 59. **PRESS UP/DOWN** to adjust the value. When finished **PRESS RESET** to move to the next option.

### Seconds (S)

The current seconds past the minute. Valid values are 0 → 59. **PRESS UP/DOWN** to adjust the value. When finished **PRESS RESET** to save the time and broadcast it to all connected displays. Normal operation will resume.

## Quick Start: Most Common Configuration.

### Configure your display to count up once each day, seven days a week.

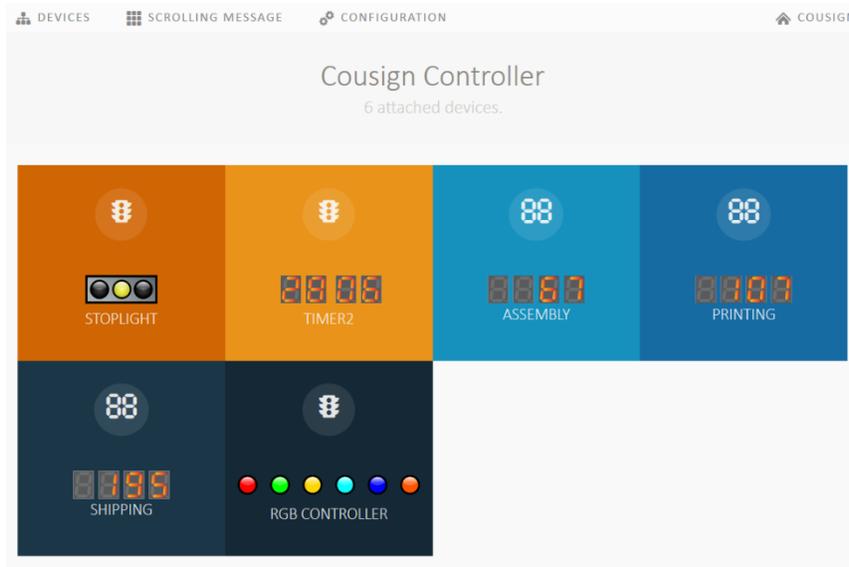
Your display will arrive preconfigured for this option with the correct address defined. To restore the factory defaults for your display, follow the steps below.

1. Apply power to the sign. 'COUSIGN X.X' will scroll across the screen, followed by 'Counting'
2. **PRESS NEXT** in the device select area of the remote control.
3. Repeat Step 1 until the display you wish to program flashes one time.
4. Enter your current count using the number pad buttons on the remote. The display will update with each button push to show your entry.
5. Press **ENTER** to save the changes. Your display will Flash.
6. **PRESS PROGRAM** to enter the Digit Set Menu
7. **PRESS PROGRAM** to enter the Settings Menu. 'Settings' will scroll across the display.
8. **PRESS UP/DOWN** to adjust the unique address of this display. This setting is configured at the factory. When in doubt do not change it. **PRESS RESET** to move to the next option.
9. **PRESS UP/DOWN** to adjust the count increment. This setting should be set to 1. **PRESS RESET** to move to the next option.
10. **PRESS UP/DOWN** until no decimal points are lit. **PRESS RESET** to move to the next option.
11. **PRESS UP/DOWN** until the count direction setting reads **UP**. **PRESS RESET** to move to the next option.
12. **PRESS UP/DOWN** until the count frequency setting reads **dAY**. **PRESS RESET** to move to the next option.
13. **PRESS UP/DOWN** to adjust the brightness. **PRESS RESET** to move to the next option.
14. **PRESS UP/DOWN** until the start day reads **Sun**. **PRESS RESET** to move to the next option.
15. **PRESS UP/DOWN** until the start hour (Sh) setting reads **0**. **PRESS RESET** to move to the next option.
16. **PRESS UP/DOWN** until the start minute (Sn) setting reads **0**. **PRESS RESET** to move to the next option.
17. **PRESS UP/DOWN** until the end day setting reads **Sat**. **PRESS RESET** to move to the next option.
18. **PRESS UP/DOWN** until the end hour (Eh) setting reads **23**. **PRESS RESET** to move to the next option.
19. **PRESS UP/DOWN** until the end minute (En) setting reads **59**. **PRESS RESET** to save settings and return to normal operation.
20. **PRESS PROGRAM** to enter the Digit Set Menu
21. **PRESS PROGRAM** to enter the Settings Menu
22. **PRESS PROGRAM** to enter the Time Menu. 'Set Time' will scroll across the display.
23. **PRESS UP/DOWN** to adjust the current month. 1 (January)→12(December). **PRESS RESET** to move to the next option.
24. **PRESS UP/DOWN** to adjust the current day of the month. 1→31. **PRESS RESET** to move to the next option.
25. **PRESS UP/DOWN** to adjust the current year. **PRESS RESET** to move to the next option.
26. **PRESS UP/DOWN** to adjust the current day of the week. **PRESS RESET** to move to the next option.
27. **PRESS UP/DOWN** to adjust the current hour of the day. 0 (Midnight)→23(11PM). **PRESS RESET** to move to the next option.
28. **PRESS UP/DOWN** to adjust the current minute. 0→59. **PRESS RESET** to move to the next option.
29. **PRESS UP/DOWN** to adjust the current seconds. 0→59.
30. **PRESS RESET** to save the current time, broadcast it to all connected devices, and return to normal operation.

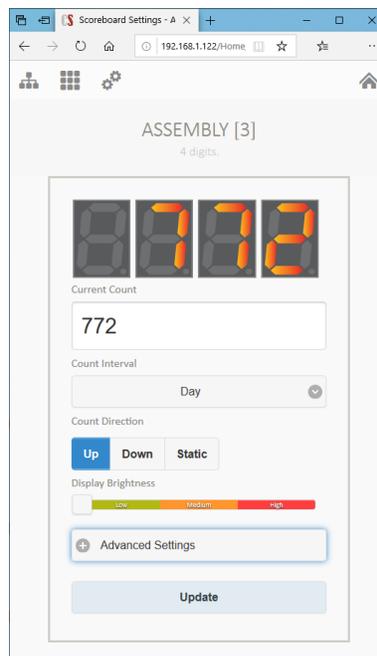
Programming your sign is complete. It will count up once per day (at midnight) from the current number displayed.

# Network Control

If your sign is outfitted with a network controller you can make all of these changes more efficiently via the network controller webpage. Your numeric display(s) will be shown in the device list.



Click on the device to configure it.



## Settings

All of the settings detailed in this document can be set via the web interface. Make your selections and click **Update** to save your changes.

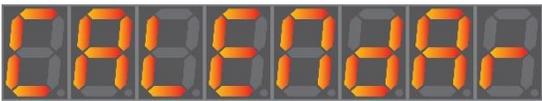
# Appendix A: Display Type Setting

If your display is longer than 4 digits you will see an option to set the display type. The display type allows you to choose the type and format of the data to be displayed.

**NOTE:** These options may be limited based on number of digits. If an option is not displayed, it does not apply to your display.



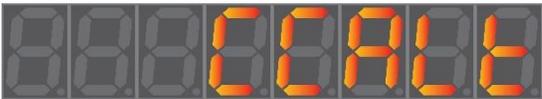
Display the current count and update it according to the various other programming options selected such as direction, increment, etc.



Ignore the count, and display the current date in MM-dd-YY or MM-dd-YYYY depending on available digits.



Ignore the count, and display the current time in HH mm SS format



Alternate between Clock and Calendar every 30 seconds.



Display the current count followed by hours, minutes, seconds, with no firmware based spacing.

**NOTE:** This mode is used for configurations using digits larger than 2.3" where digit spacing is accomplished with a hardware spacer.



Display the current count followed by hours, minutes, seconds. Space with a lit dash between hours/minutes and minutes/seconds.



Display the current count followed by hours, minutes, seconds. Space with a lit dash between days/hours, hours/minutes and minutes/seconds.