A quick look at the operations of the
Matrix Programmable Controller by

# Marlin
## controls

## Manual Control &
## Programmable Features

Presets

Channels

Relays

Events

Room Assignments

Controller Locks

Astronomical Clock

Photocell

System Configuration

And More...

# Matrix Overview

# Manual Override Operations

# Programmable Features

## Events

## Skipping Relay Events

## Holidays

# Basic Programmable Features (Cont'd)

## Zones

## External Inputs

## System Configuration

# *introduction*

Welcome to the Manual, the guide to everything Matrix. Let us begin with understanding what this controller can do. The Matrix Programmable Controller allows you to control and automate your Marlin Controls lighting system. Using the Matrix, you can quickly and easily:

+ Recall presets and switch relays On or Off
+ Set a schedule to automatically recall presets and switch relays
+ Use a photocell to automatically recall presets and switch relays based on the amount of available sunlight.
+ Create a unique lighting system using the many other functions

This manual will show you how to navigate through the menus and around the keypad and also how to operate the Matrix so that you can completely utilize its features.

# *lighting lingo*

If this is your first run-in with a Matrix then you'll need to start with a crash course on the vernacular used in the lighting world. Those are "preset", "fade rate" and other words that clearly mean something to a lighting expert, but may mean squat to you.

***Dimmers*** are devices used to control or "dim" specified areas of your lighting. They are sometimes referred to as channels.

***Fade rate*** refers to the length of time, usually in seconds, that dimmers take to raise or lower lighting from their current levels to the levels of a recalled preset.

***Light level*** refers to the brightness of lights controlled by a dimmer measured from 0% to 100%, where 0% represents total darkness and 100% represents maximum brightness.

***Passwords*** provide protection for the Hercules functions and come in two levels:

> ***User Password*** allows access to the user level to perform any of the manual override functions, such as recalling presets and turning relays on or off manually.

> ***Operator Password*** allows access to the operator level, which has the same functionality as the user level and additionally allows you to set, preview, and delete time & photocell events, as well as several other functions in the Program Mode.
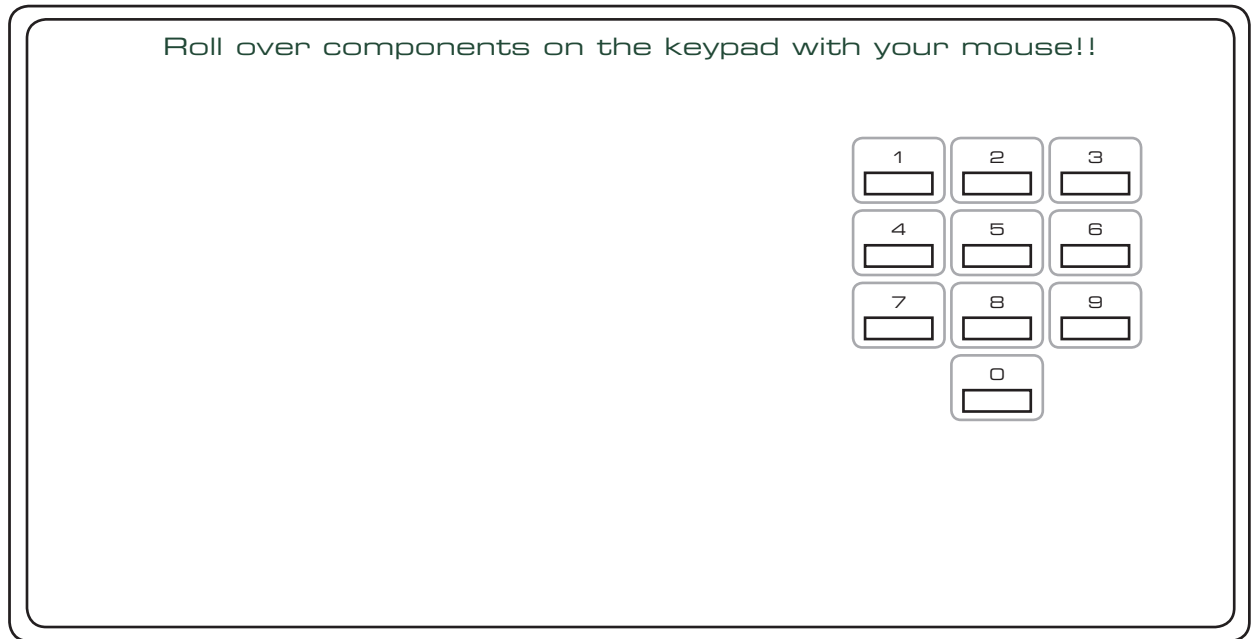
***Photocell*** is a physical device, usually installed outdoors, which measures the amount of sunlight. The reading is sent to the Hercules, which can automatically recall a preset or switch relays when a specified photocell reading is received.

***Preset*** is a saved set of light levels and fade rates for every channel of lighting being controlled by the system; sometimes called a "scene". By creating presets, you can quickly call up light settings for different times of day or different occasions. Night setting, Day setting, and Clean Up setting are all examples of possible presets.

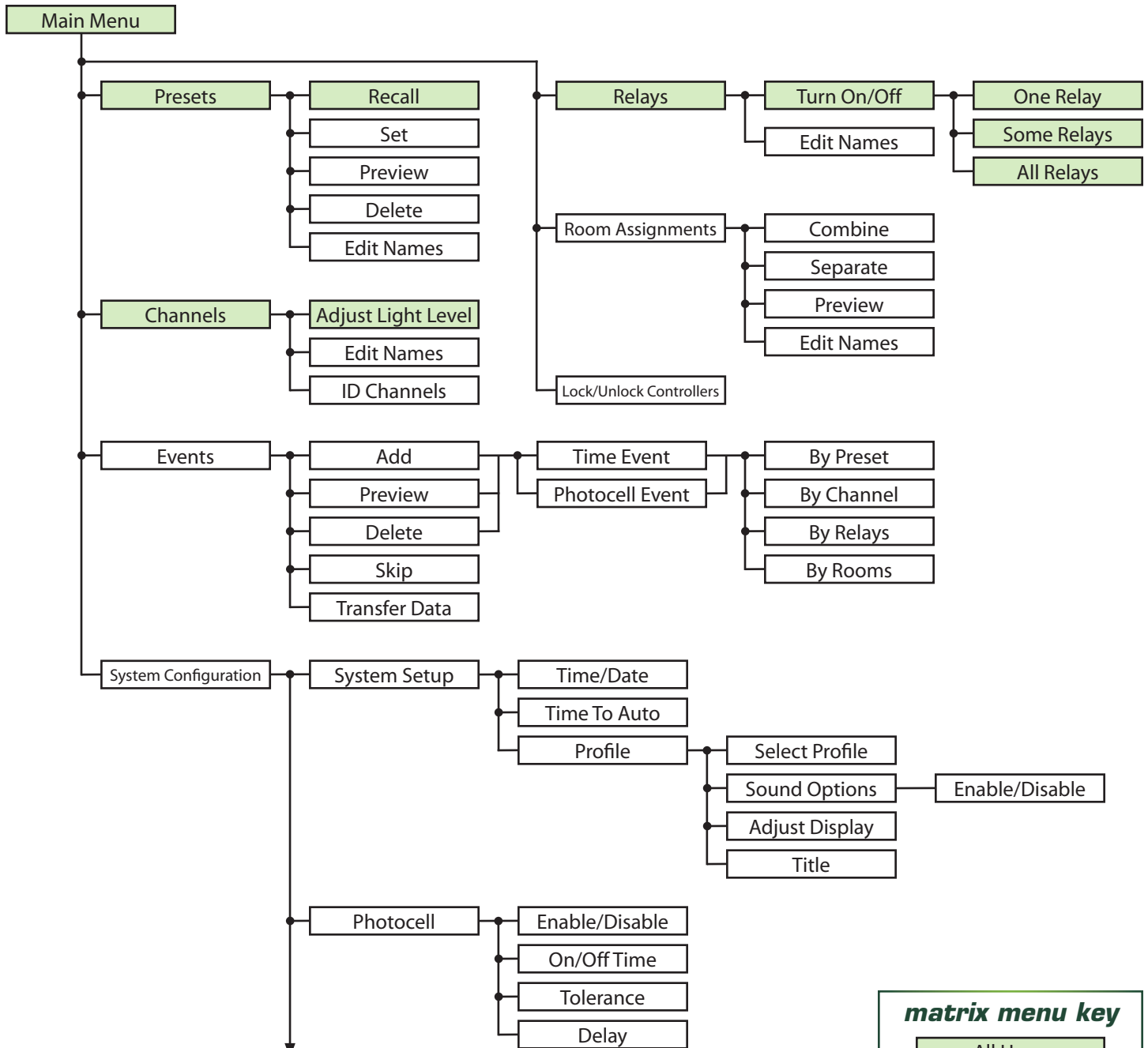***Relays***, like dimmers, control specified areas of your lighting, but are only for switching On and Off.

***Zones*** are relays that have been grouped together to control a larger area with one controller.

**Marlin** controls

# matrix keypad layout

Roll over components on the keypad with your mouse!!

| 1 | 2 | 3 |
|---|---|---|
| 4 | 5 | 6 |
| 7 | 8 | 9 |
|   | 0 |   |

1.  LCD Display - 4x20 characters

2.  Menu/Home Button - Press to enter or exit the main menu of programming mode

3.  OFF Button/ON Button - Press to recall the OFF/ON presets or to turn relays OFF/ON

4.  Up/Down Button - Press to scroll through lines of text or menu options

5.  Left/Right Button - Press to move the cursor through text

6.  LED Indicator - Indicator for power and communication

7.  Escape Button - Press to cancel a selection or go back to the previous menu

8.  OK Button - Press to make selections or enter data

9.  Numerical Keys - Use to enter alphanumerical data

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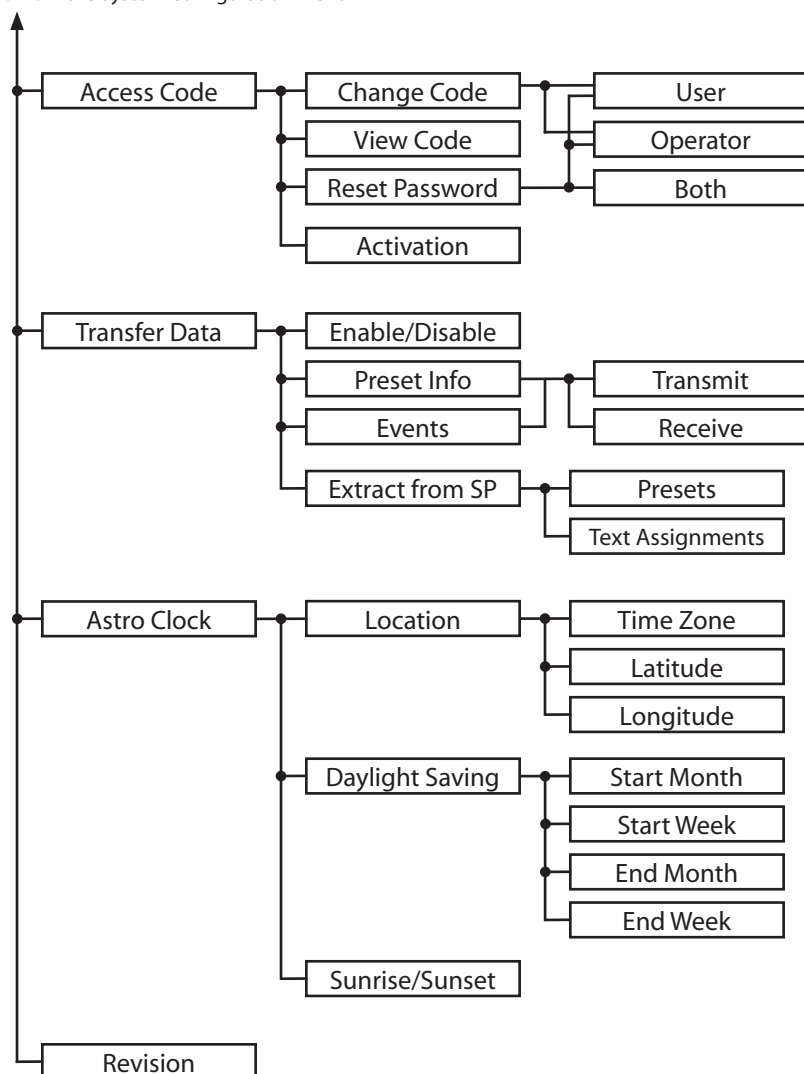c o n t r o l s

# matrix menu layout

**Main Menu**

- **Presets**
  - **Recall**
  - Set
  - Preview
  - Delete
  - Edit Names
- **Channels**
  - **Adjust Light Level**
  - Edit Names
  - ID Channels
- Events
  - Add
    - Time Event
      - By Preset
      - By Channel
      - By Relays
      - By Rooms
    - Photocell Event
  - Preview
  - Delete
  - Skip
  - Transfer Data
- System Configuration
  - System Setup
    - Time/Date
    - Time To Auto
    - Profile
      - Select Profile
      - Sound Options
        - Enable/Disable
      - Adjust Display
      - Title
  - Photocell
    - Enable/Disable
    - On/Off Time
    - Tolerance
    - Delay

- **Relays**
  - **Turn On/Off**
    - One Relay
    - **Some Relays**
    - **All Relays**
  - Edit Names
  - Room Assignments
    - Combine
    - Separate
    - Preview
    - Edit Names
  - Lock/Unlock Controllers

Continued on the next page

**matrix menu key**

| All Users |
| Operator Only |

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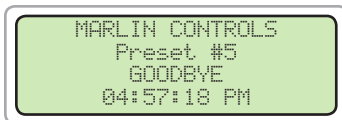
# matrix menu layout *part II*

Continued from the System Configuration Menu

| Access Code | → | Change Code | → | User |
| | | View Code | | Operator |
| | | Reset Password | | Both |
| | | Activation | | |

| Transfer Data | → | Enable/Disable | | |
| | | Preset Info | → | Transmit |
| | | Events | | Receive |
| | | Extract from SP | → | Presets |
| | | | | Text Assignments |

| Astro Clock | → | Location | → | Time Zone |
| | | | | Latitude |
| | | | | Longitude |
| | | Daylight Saving | → | Start Month |
| | | | | Start Week |
| | | | | End Month |
| | | | | End Week |
| | | Sunrise/Sunset | | |

| Revision |

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# enter main menu



```
MARLIN CONTROLS
   Preset #5
    GOODBYE
   04:57:18 PM
```

1.  Press the Menu/Home button to enter the Main Menu

```
 Enter Password To
 Access Menu Option
 Password = _____ ?
```
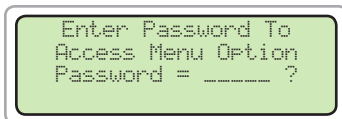
2.  Use the Numeric Keypad to type a three-digit User password or a four-digit Operator Password

```
 Enter Password To
 Access Menu Option
 Password = ***__ ?
```
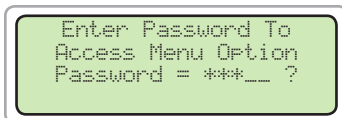
3.  Press the OK button to enter the password

## example:

Enter main menu as a user

MENU/HOME + 1 2 3 + OK

**Marlin** controls

# recall a preset <span style="float:right">*all users*</span>

```
      MAIN MENU
1. Presets
2. Channels
3. Relays
```
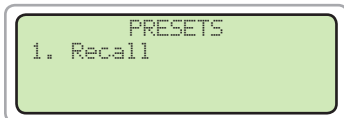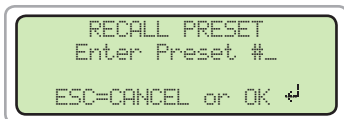
1. Enter into the Main Menu (see **enter main menu section**) and then use the Numeric Keypad to make your selection - Press "1" to select Presets

```
      PRESETS
1. Recall
```

2. Press "1" to select Recall.  (Note:  This will be the only option available to Users in the Presets Menu)

```
    RECALL PRESET
    Enter Preset #_

  ESC=CANCEL or OK ↵
```

3. Select the number of the preset to be recalled and press OK to perform the recall

# example:

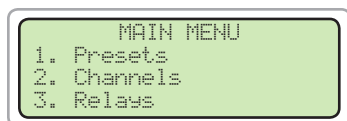| Enter main menu as a user | [MENU/HOME] + [1] [2] [3] + [OK] |
|---|---|
| Recall preset #5 | [1] + [1] + [5] + [OK] |

**Marlin** controls

# light level adjustment

```
        MAIN MENU
1. Presets
2. Channels
3. Relays
```
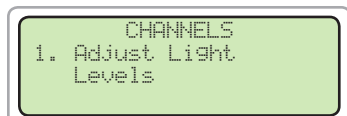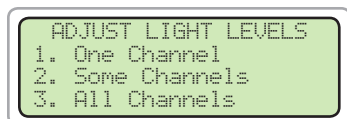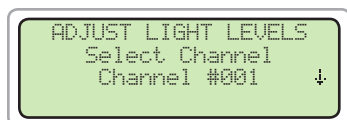
1. Enter into the Main Menu (see **enter main menu section**) and then use the Numeric Keypad to make your selection - Press "2" to select Channels

```
        CHANNELS
1. Adjust Light
   Levels
```

2. Press "1" to select Adjust Light Levels (Note: This will be the only option available to Users in the Channels Menu)

```
 ADJUST LIGHT LEVELS
1. One Channel
2. Some Channels
3. All Channels
```

3. Press "1" to select One Channel

```
 ADJUST LIGHT LEVELS
    Select Channel
    Channel #001    ↓
```

4. Select a channel or use the Up/Down button to scroll through the channels. Press OK when the desired channel is selected

```
 ADJUST LIGHT LEVELS
    Channel #2

    Light Level 050%↕
```
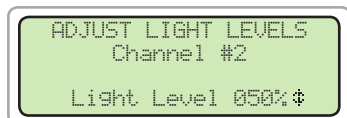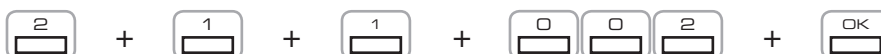
5. Indicate a light level or use the Up/Down button to raise and lower the selected light level. Press OK when the desired light level is selected

## example:

| | | | |
|---|---|---|---|
| Enter main menu as a user | [MENU HOME] + | [1] [2] [3] + | [OK] |
| Select Channel #2 to adjust | [2] + [1] + [1] + | [0] [0] [2] + | [OK] |
| Adjust Channel #2 to 50% | | [5] [0] + | [OK] |
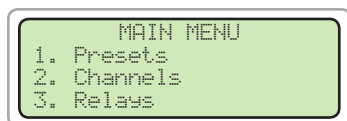
# turn relays on & off

```
        MAIN MENU
1. Presets
2. Channels
3. Relays
```
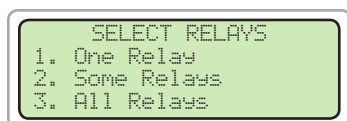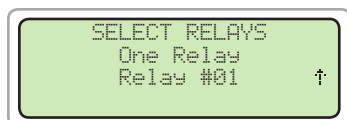
1. Enter into the Main Menu (see **enter main menu section**) and then use the Numeric Keypad to make your selection - Press "3" to select Channels

```
        RELAYS
1. Turn ON/OFF
```

2. Press "1" to select Turn ON/OFF.  (Note: This will be the only option available to Users in the Relays Menu)

```
     SELECT RELAYS
1. One Relay
2. Some Relays
3. All Relays
```

3. Press "1" to select One Relay

```
    SELECT RELAYS
      One Relay
      Relay #01      ⇧
```

4. Select a relay or use the Up/Down button to scroll through the relays.  Press OK when the desired relay is selected

```
    SELECT RELAYS
    Relay #1 OFF

      Off/On
```

5. Use the OFF and ON buttons to turn the selected relay on or off.  Press OK when the relay is in the desired state

## example:

Enter main menu as a user      [MENU HOME] + [1][2][3] + [OK]

Turn all relays ON      [3] + [1] + [3] + [ON] + [OK]

**Marlin** controls

# programming presets
## setting a preset

```
      MAIN MENU
1. Presets
2. Channels
3. Relays
```
1. Enter into the Main Menu (see **enter main menu section**) and then use the Numeric Keypad to make your selection - Press "1" to select Presets

```
      PRESETS
1. Recall
2. Set
3. Preview
```
2. Press "2" to select Set

```
    SET PRESET
   Enter Preset #_

  ESC=CANCEL or OK ↵
```
3. Indicate the number of the Preset to set

```
    SET PRESET
1. One Channel
2. Some Channels
3. All Channels
```
4. Indicate whether one channel, some channels or all channels should be affected by this preset

```
    SET PRESET
    Preset #1
   Some Channels
 From #__    to__?
```
5. Indicate the channel or channels to be affected by this preset (Note: If you selected All Channels this step is skipped)

```
    Preset #1
  Channels #1 to 5
  Light Level ___%  ↑
  Fade Rate ___ sec
```
4. Indicate the light level and the fade rate to be applied to the specified channels for this preset

```
    SET PRESET
    Preset #1
   Transmission
    Complete
```
5. Wait for the transmission of the data to the system. A message will indicate when the transmission has been completed.

**Marlin** controls

# programming presets
## preview presets

```
        MAIN MENU
1. Presets
2. Channels
3. Relays
```

1. Enter into the Main Menu (see **enter main menu section**) and then use the Numeric Keypad to make your selection - Press "1" to select Presets

```
        PRESETS
1. Recall
2. Set
3. Preview
```

2. Press "3" to select Preview

```
     PREVIEW PRESET
1. By Preset
2. By Channel
```

3. Press 1 to view the preset for all channels; press 2 to view the preset by a specific channel

```
     PREVIEW PRESET
     Enter Preset #_

  ESC=CANCEL or OK ↵
```

4. Indicate the preset to preview

```
      Preset #3
      Channel #1      ↓
   Light Level 050%
   Fade Rate 000 sec
```

5. Use the Up/Down button to scroll through the channels and view the preset levels for each

```
      Preset #3
      Channels #4     ↓
   Light Level 050%
   Fade Rate 000 sec
```

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