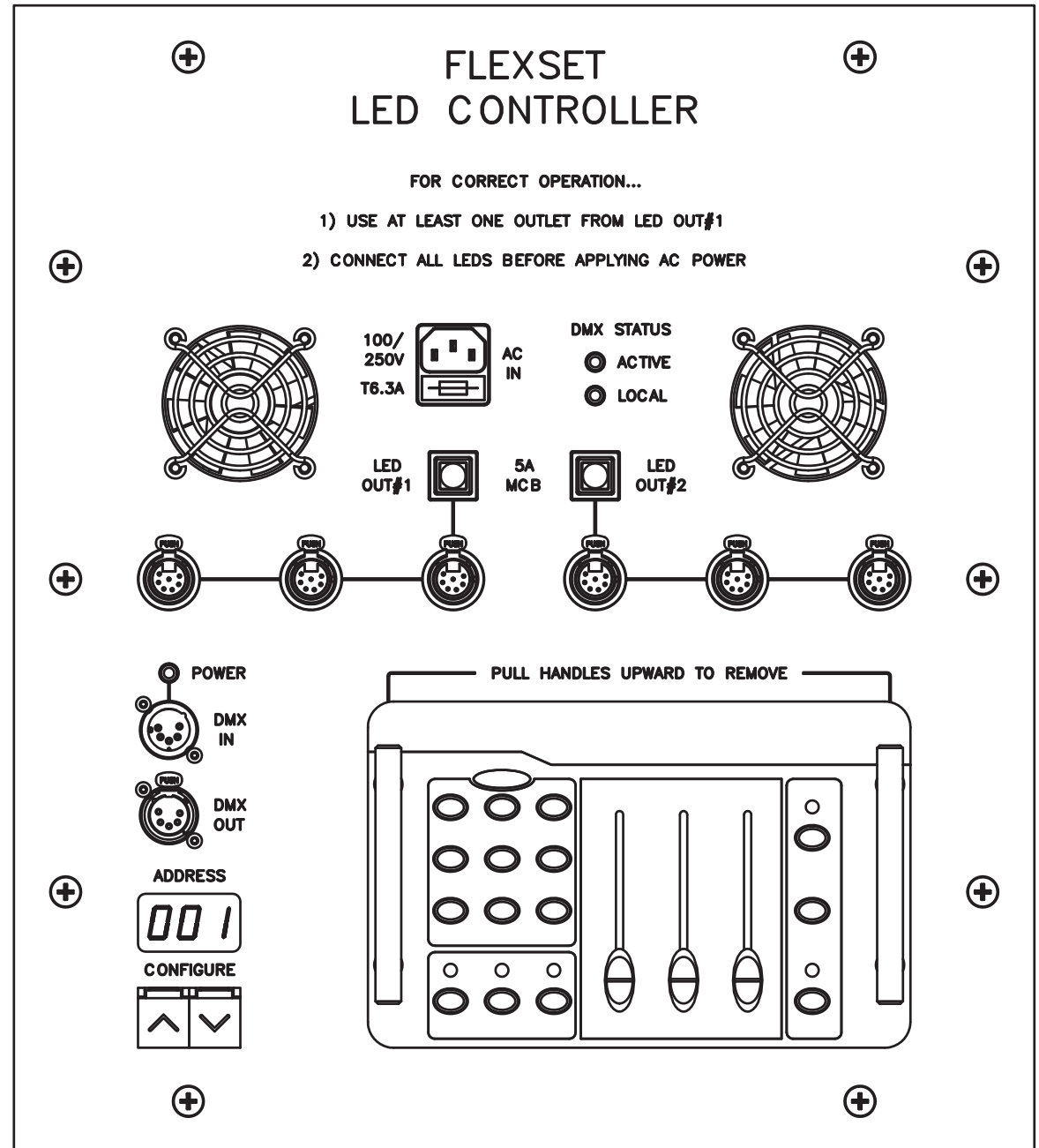




LED Controller

Operational Guide



Understanding the System Hardware

The Status LEDs



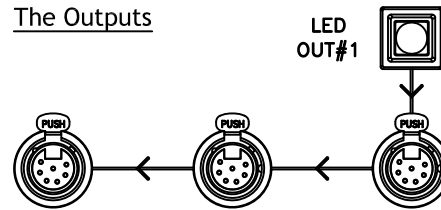
There are three LEDs to indicate significant system status...

'ACTIVE' illuminates on receipt of a valid DMX signal (either from the integrated lighting desk or an external source). Note that this indication is not updated once valid data has been received - i.e. unplugging the data or switching from the internal desk to an external source, will not reset this indication (once set). Cycle the controller power to clear this LED.

'LOCAL' indicates that DMX control will be from the integrated lighting desk (when fitted into the controller); connecting an external DMX source (to the DMX input) extinguishes this signal.

'POWER' serves to warn that the controller is supplying 12V DC to the secondary (normally unused) pins of the DMX input socket. This feed is only present if the integrated lighting desk is removed from its housing. Note that a short DMX M-F isolating lead (with the secondary pins unconnected) is provided with the system, for use should there be any concern over the possible presence of this voltage in relation to third-party devices (however unlikely).

The Outputs



There are two outputs from the internal psu/controller, both of which have a maximum capacity of 5A (approximately 34 x 12" fixtures).

Typically FlexSet columns (dependent on height) are built from seven or eight 12" fixtures, whilst lecterns use four 6" fixtures.

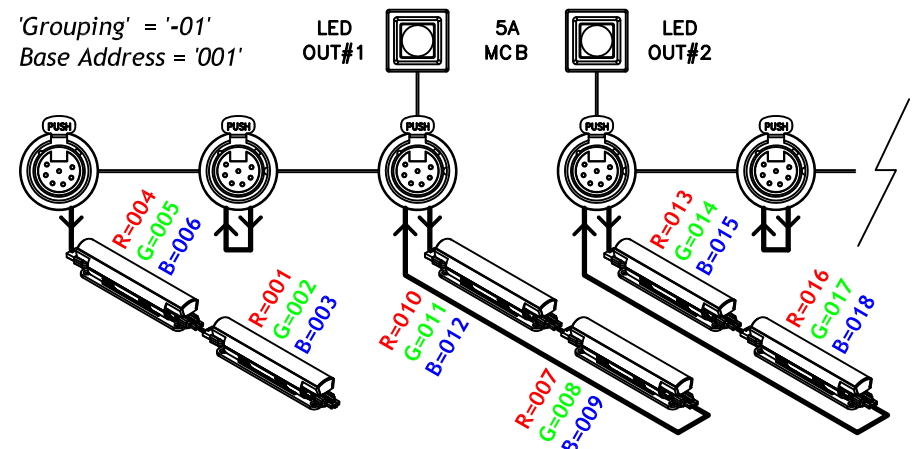
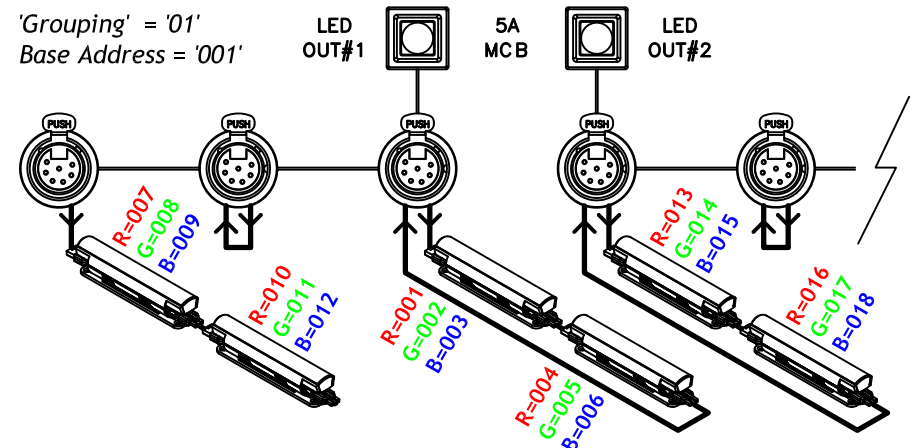
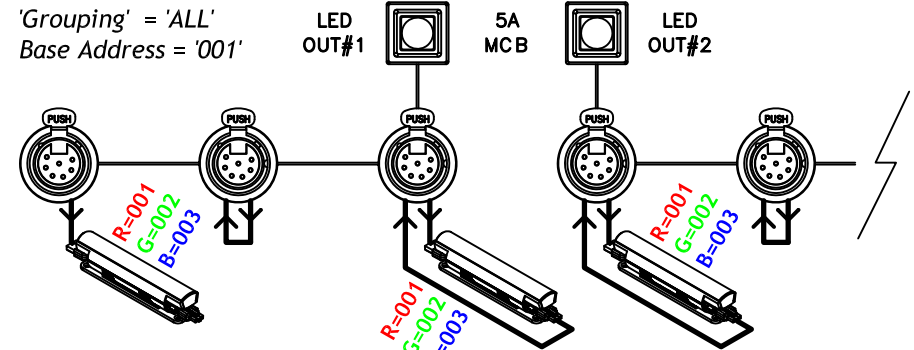
Each output is protected via a resettable MCB and is divided into three socket outlets, for connection of FlexSet LED columns, lecterns etc.

The software protocol (between the controller and the fixtures) is serial; each fixture talks to its neighbour (up & down the connection cables if necessary), and so on, down-the-line.

In simple (i.e. all units - one colour) configurations (e.g. using the integrated lighting desk) the order of the fixtures is irrelevant; However, if a more complex control scenario is required, then the order of connection will need to be considered.

Note that the above close-up drawing of out#1 (out#2 is identical), has been annotated to show the direction of the data flow; It's not necessary to use all of the connections - 'missing' outputs are bridged internally.

DMX Numbering Examples



Configuring the System Software

The FlexSet LED controller uses two buttons (for up/down), together with an associated 3-digit LED display, in order to programme and/or display the following information...

1. The DMX base address
2. The number of fixtures
3. Grouping (to reduce channels)

The configuration is automatically stored in non-volatile memory.

In normal operation, you select different values by pressing and releasing the UP (^) or DOWN (v) arrow buttons. You can also rapidly advance (or retard) the value by holding the appropriate button.

Note there is no 'save' function; all changes are stored (for power-up recall) 'live' i.e. as they are made.

Selecting the DMX Base Address

When the unit is first powered-up (or indeed if the configuration mode has been exited), the display will indicate the DMX base address.

This address will typically be the first fixture on out#1 (unless the grouping is negative), and is the lowest DMX channel the system will respond to (see 'Understanding the System Hardware' for more detail on connecting fixtures).

The DMX base address must be between 001 & 170 (inclusive).

Note that you can always tell if the system is showing the DMX base address (as opposed to the fixture grouping), as the indication will be three numeric digits wide. e.g.

004 (DMX base address #4)

Detecting the Fixtures

N.B. To avoid unexpected results and/or later 'missing' (i.e. unaddressable) fixtures, you must have all the required light units connected before you execute this step.

To detect the fixtures, (i.e. to 'configure' the system), press and hold both the UP (^) and DOWN (v) arrow buttons simultaneously. The system will then enter the configuration mode, indicated as follows...

CFG (for ConFiGuration)

The display will then go blank, whilst the system briefly polls all of the fixtures (first to last), to establish how many units are actually present.

Once all the fixtures have been identified, two 3-digit numbers (showing the poll results) are then briefly displayed.

To clarify (by example)...

116 followed by 208

Means out# '1' has '16' (sixteen) fixtures, whilst out# '2' has '08' (eight) fixtures.

Typically FlexSet columns (dependant on height) are built from seven or eight fixtures, whilst lecterns use four.

After the above information has been presented, the display once again returns to...

CFG (for ConFiGuration)

Grouping Fixtures

Grouping allows you to control how many fixtures respond to each DMX channel; i.e. this allows you to tailor the number of control channels required.

A DMX 'channel' in this context is actually three consecutive addresses (one each for RGB).

To change the grouping, first detect the fixtures (as described earlier), then use the UP (^) and DOWN (v) arrow buttons to select the desired configuration.

The simplest control scenario, (i.e. an identical colour on every fixture), is achieved by setting the grouping to...

ALL

Whilst the most complex scenario (with each channel of every fixture being individually addressable) is achieved by selecting grouping to...

01 or -01

If you have limited control channels available and have (for example) columns built from eight fixtures, groups of eight would be selected...

08 or -08

Note that the negative settings in the above examples reverse the addressing order of out#1 (whilst leaving out#2 unaffected).

As all FlexSet columns are wired identically, the negative settings ensure that physical SL/SR column inversions can be corrected.

The maximum number of groups is twenty or, if less, is limited to the total number of fixtures on out#1.

To exit from fixture grouping (and the configuration mode), press and hold both the UP (^) and DOWN (v) arrow buttons simultaneously.

Using the integrated Lighting Desk

Set DMX Base Address to 001

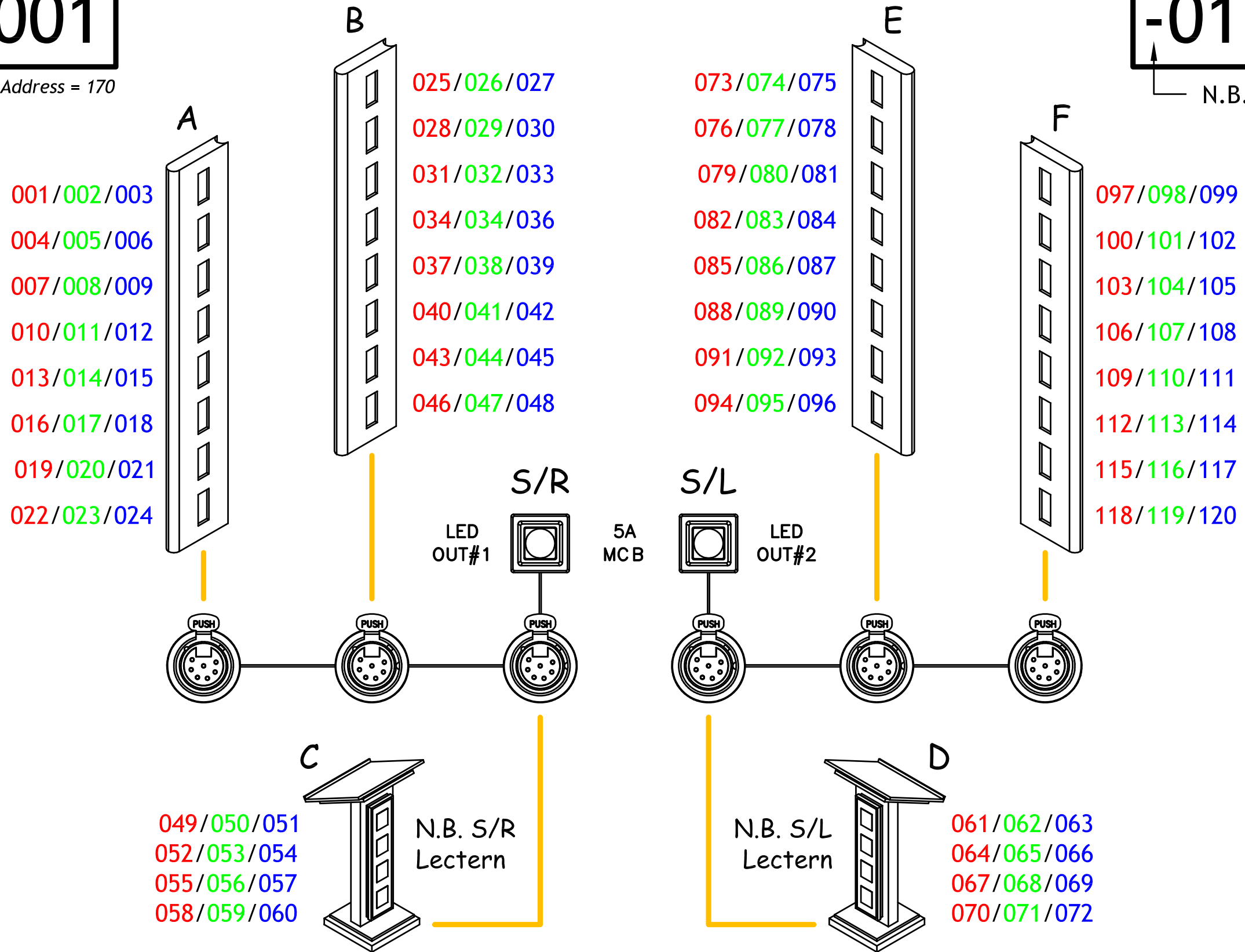
Ensure Grouping is set to ALL

BASE * ADDRESS	001
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* N.B. Maximum Base Address = 170

-01	GROUPING
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N.B. NEGATIVE



Audience View

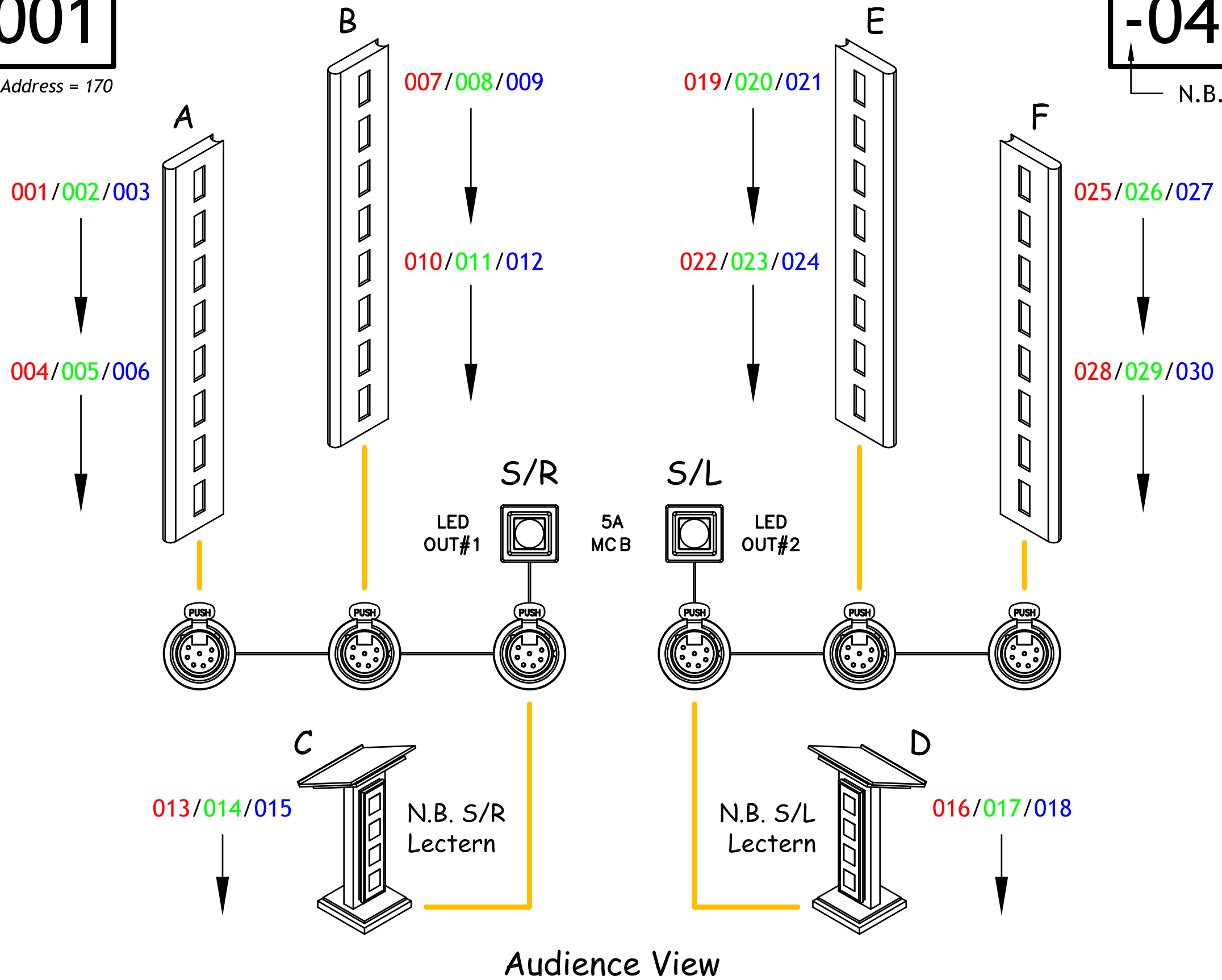
DMX CHANNEL ASSIGNMENT EXAMPLE - USING 10ft (3050mm) - 8 CIRCUIT COLUMNS

BASE * ADDRESS	001
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* N.B. Maximum Base Address = 170

-04	GROUPING
-----	----------

N.B. NEGATIVE

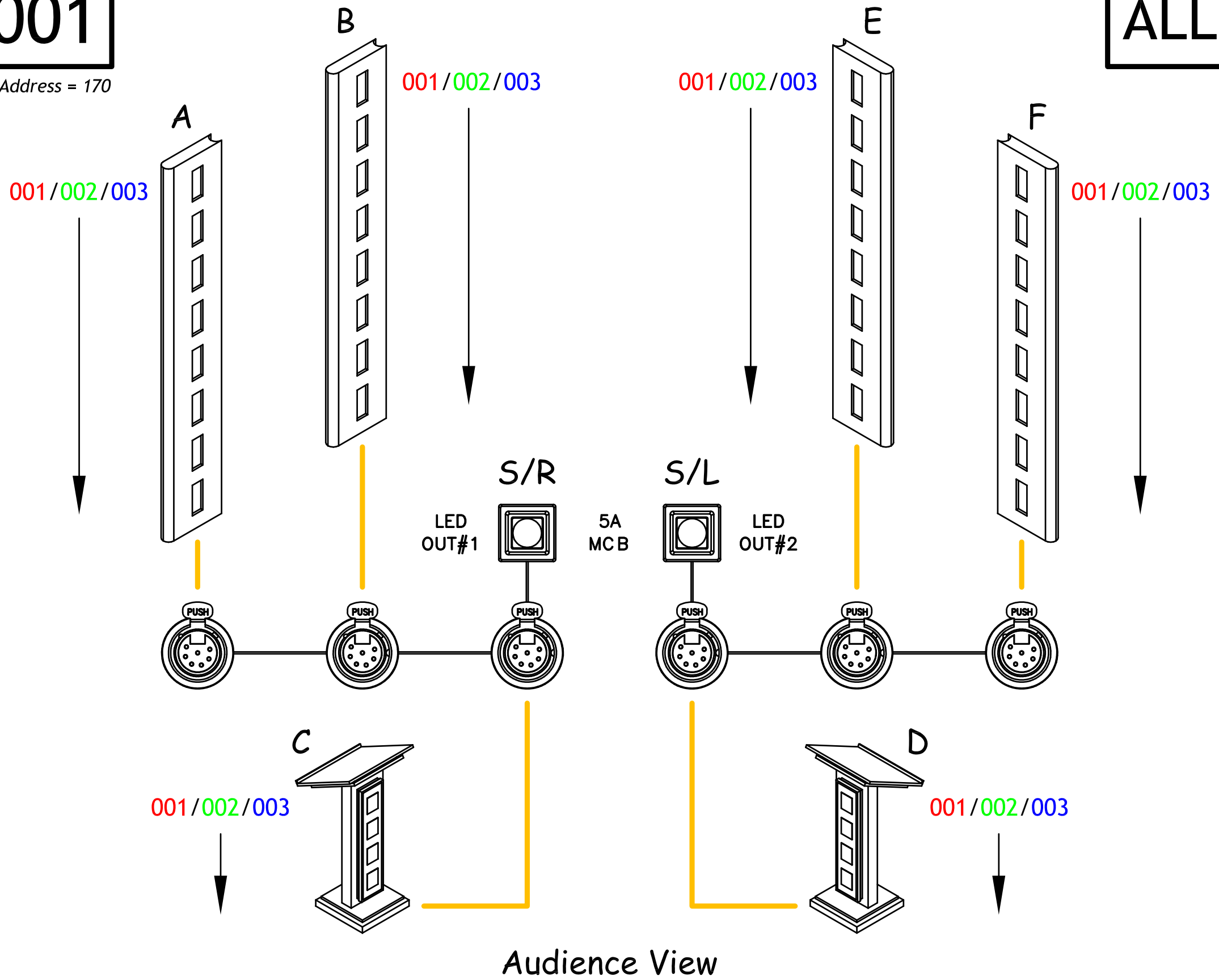


DMX CHANNEL ASSIGNMENT EXAMPLE - USING 10ft (3050mm) - 8 CIRCUIT COLUMNS

BASE * ADDRESS	001
----------------	-----

* N.B. Maximum Base Address = 170

ALL	GROUPING
-----	----------

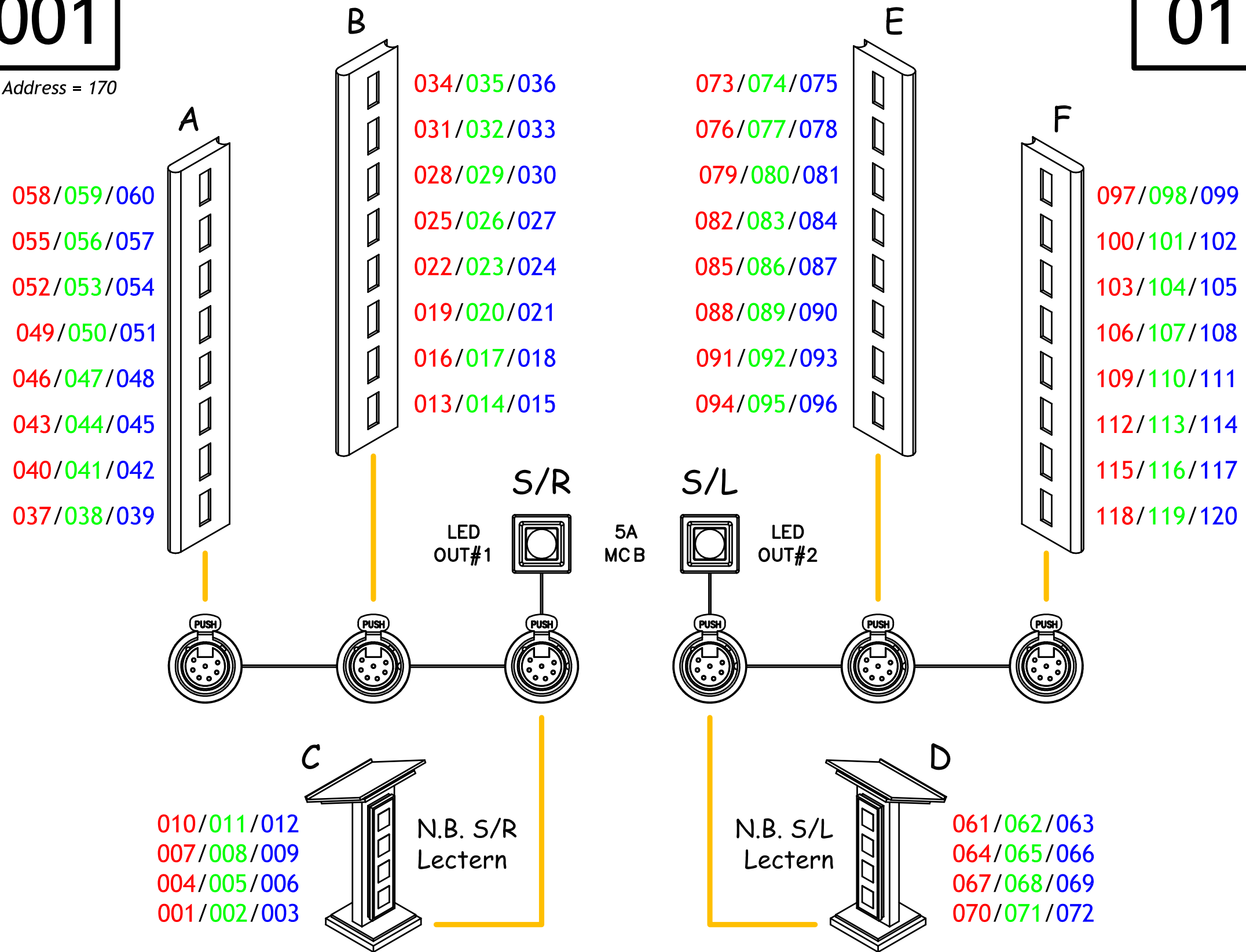


DMX CHANNEL ASSIGNMENT EXAMPLE - USING 10ft (3050mm) - 8 CIRCUIT COLUMNS

BASE * ADDRESS	001
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01	GROUPING
----	----------

* N.B. Maximum Base Address = 170



Audience View

DMX CHANNEL ASSIGNMENT EXAMPLE - USING 10ft (3050mm) - 8 CIRCUIT COLUMNS