

### Mounting

The M1DBH can be mounted with double faced foam tape or with the included 3" structured wiring plate (ELK-SWP3). The SWP3 plate fits ELK's Enclosures and many other brands of structured wiring boxes.

### Connections

1. Connect the M1DBH to the +12V, Data A, Data B, and Neg screw terminals on the M1 Control using a dedicated 4 wire, 22 gauge min. cable.  
- An optional ELK-W018B ribbon cable may be used if the M1DBH is less than 24" from the M1 Board.
2. Run a separate CAT5 (Category 5) cable to each data bus device or drop location.  
- Terminate the CAT5 cable at the M1 DBH location using a RJ45 plug and the appropriate crimping tool. Follow the 568A wiring standard. (see color code on back of page) **Note: RJ45 plugs are not included with the M1DBH due to the variety of brands and terminating tools available.**
- At each device location connect/splice the CAT5 to the terminals or flying leads of the device using the 568A standard per the wiring diagrams shown on the back page. The Pos & Neg wires connect singularly to the Pos & Neg terminations. The data A & B lines are will be a three (3) way splice since each data line must be fed back to the M1DBH to be used for feeding the next connected device. This effectively puts the data lines in a series circuit so that the control communicates with each device in a progression or "daisy chain" fashion. The end of this daisy chain (which will be the two return wires from the last data bus device) requires a terminating resistor (see step 5). This is very important due to the high speed of the M1's RS-485 data bus communications.
3. Plug each data bus cable into it's own RJ45 jack on the M1DBH board starting with J1. Do not skip over empty positions.
4. Insert the included EOL resistor terminating plug in the unused jack that follows the last data bus cable. This plug terminates the data bus with a 120 Ohm resistor across the A & B data return lines coming from the last wired device.
5. Two or more M1DBH Hubs may be connected in a straight (single) daisy chain to increase the allowed number of data bus home runs. A RJ45 Crossover cable must be constructed to feed from the first unused port of one M1DBH to port J1 on the next M1DBH. **Caution: NEVER attempt to multi-spoke M1DBH's off one another! They may only be interconnected in a single daisy chain fashion. Never exceed the 4,000 ft. max. bus distance. The length of each CAT5 home run must be calculated as DOUBLE.**



## Data Bus Hub ELK-M1DBH

### APPLICATION:

The ELK-M1DBH is the ideal way to connect multiple data bus home runs to the M1 Control. It utilizes 8 conductor CAT5 type cables terminated with RJ45 plugs. The M1DBH daisy chains (in series) the data lines (A & B) of each home run and provides a clean, organized method for managing the data bus wires.

### FEATURES:

- Accommodates 9 Data Bus Home Run Cables
- Data lines A & B are series connected on-board between each connected home run
- Two or more M1DBH Hubs may be connected in a straight (single) daisy chain to increase the number of home runs
- Simple EOL Bus Termination Via RJ45 Terminating Resistor Plug (Included)
- Flexible Mounting Options

## Data Bus Hub ELK-M1DBH



### SPECIFICATIONS:

- 6 Position Screw Terminal Input
- 4 Position Quick Connect (J10) - For Use With ELKW018B Cable Assembly
- Data Bus Outputs: RJ 45 8-Pin Jacks
- Circuit Board Dimensions: 5" x 2.5"
- Mounting Plate Dimensions: 6.5" x 3" x .5"

Features or Specifications subject to change without notice.

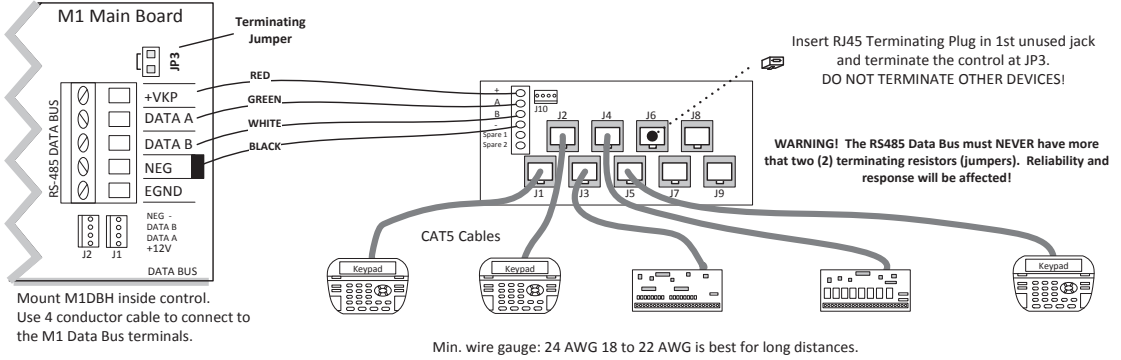
**Instructions Printed On Inside**



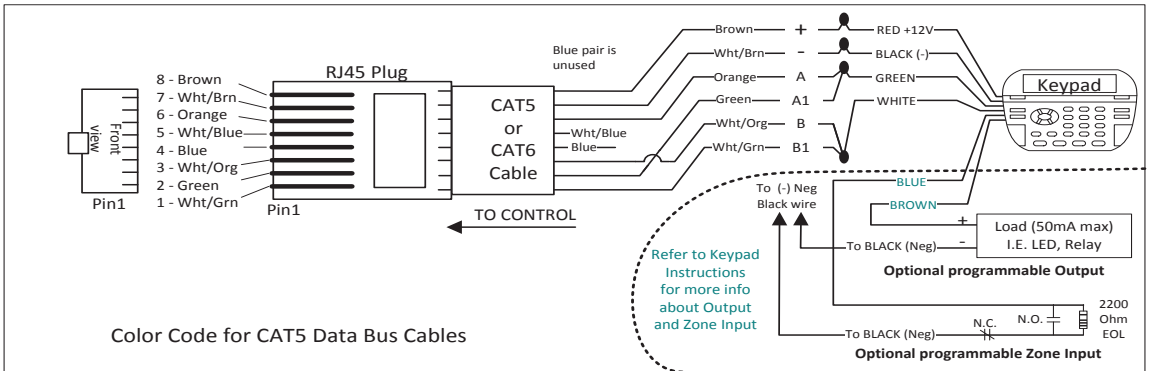
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## ELK-M1DBH Data Bus Hub connected to M1 Main Control

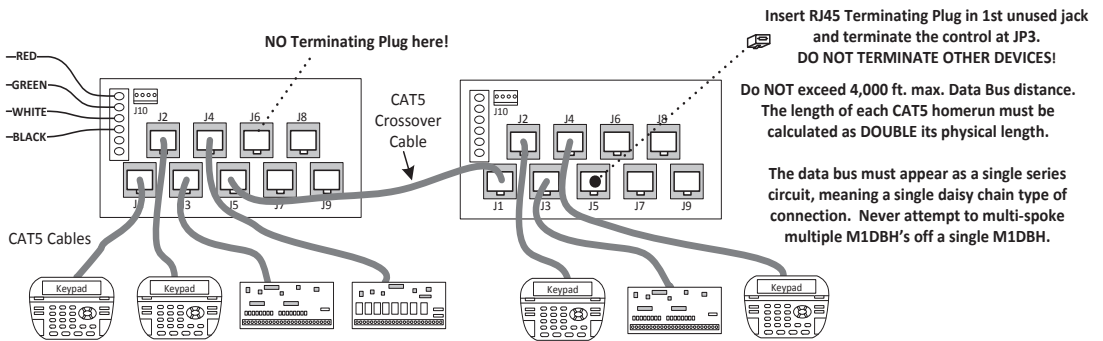
The ELK-M1DBH Data Bus Hub is great for new installations where it is possible run multiple CAT5 homerun cables. The RJ45 jacks allow neat and organized connections. A third wire pair is used to return the DATA lines back from each device where they are used to feed the next adjacent jack. The result is the M1DBH circuitry daisy chains the devices by series connecting the DATA lines A & B. Termination is accomplished with a plug-in RJ45 terminator (supplied).



**NOTE: RS-485 Data Bus Max. wire length is 4000 ft. Total.** Each CAT5 homerun from the M1DBH must be calculated as double the running distance since the Data A & B lines travel out and then back (A1 & B1) where they are used to feed the next homerun.



## Proper (allowed) method for Daisy Chaining two or more ELK-M1DBH Data Bus Hubs



A Crossover cable (diagram below) must be plugged into the first unused port of the first M1DBH to port J1 on the next M1DBH.

