

M1DBH Data Bus Hub Installation

The M1DBH is pre-assembled on a 3" structured wiring plate (ELK-SWP3), which mounts inside any ELK Structured Wiring Enclosure. Four (4) black push-pin style fasteners mount the plate to the enclosure. If desired, the board may also be removed from the plate and mounted with double faced tape.

1. Connect the +VKP, Data A, Data B, and Neg data bus terminals from the M1 board to the top four (4) input terminals on the M1DBH board using a (4) conductor cable.
2. Pull Category 5 Cable (CAT5) from each data bus device to the control.
3. Terminate each CAT5 data bus cable with an RJ45 plug using the appropriate crimping tool. Use the 568A wiring standard (see wire color code below). **Note: RJ45 plugs are not included with the M1DBH due to the great variety of brands and terminating tools which are subject to dealer preference.**
3. Following the color codes used in step 2 and the wiring diagram below, connect the CAT5 cable at each device. The Pos & Neg wires connect singularly to the Pos & Neg terminations (flying lead wires or terminals) of the keypad, zone expander, etc. However the data A & B lines are connected to the device along with a "return" wire so that the data returns back to the M1DBH, which is then used to feed the next device. Effectively, this puts the data lines in a series circuit so that the control communicates with each device in a progression or "daisy chain" fashion. The very 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.
4. Place each data bus cable into its own RJ45 jack on the M1DBH board starting with J1. If there are more than 9 data bus cables, add a second M1DBH and connect the short CAT5 jumper (included) from J9 on the previous M1DBH board to J1 on the next M1DBH board. This leaves 8 jacks on the first M1DBH and 8 on the second or a total of 16 potential jacks (ports). Additional M1DBH boards may be connected for more cables.
5. Place the EOL resistor terminating plug (included) into the first unused jack. This plug places a 120 Ohm resistor across the A & B data return lines coming from the last wired device, effectively terminating the bus.
6. To connect more than 9 data bus runs, additional M1DBH unit(s) may be connected together in a daisy chain fashion. This connection requires a "crossover" cable to be made using two (2) RJ45 connectors and a short length of CAT5 wire. See diagram on back. Plug one end of the "crossover" cable into connector J9 on the first M1DBH. Plug the other end into connector J1 on the next M1DBH.

Data Bus Hub ELK-M1DBH

APPLICATION:

The **ELK-M1DBH** is the ideal way to connect multiple home run cables to the M1 Control. It is designed for CAT5 or CAT6 cables with RJ45 plugs on the ends. The M1DBH does all the work of series connecting the data lines (A & B) and provides a clean, organized method for managing the data bus wires.

ELK
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Data Bus Hub ELK-M1DBH



FEATURES:

- Designed For Multiple Home Run Cables
- Internally Connects Data A & B Lines From Previous Device In to Next Device Out
- Provides up to Nine (9) Data Bus Connections
- Multiple Hubs May be Connected for Expansion
- EOL Bus Termination Can Be Done On-Board, RJ45 Terminating Resistor Plug Included
- Mounting Plate for Structured Wire Boxes

SPECIFICATIONS:

- Input Connections: Elevator Screw Terminals
- Output Connections: RJ 45 8-Pin Jacks
- Mounting Plate Dimensions: 6.5" x 3" x .5"
- Circuit Board Dimensions: 5" x 2.5"

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Instructions Printed On Inside

The ELK-M1DBH Data Bus Hub is the ideal way to connect multiple home run cables to the M1. It accepts CAT5 or CAT6 cable with RJ45 plugs on the ends. The M1DBH does the work of series connecting DATA lines A & B and provides a clean, organized method for managing the data bus wires. Data bus termination is done at the hub with an RJ45 Terminating Plug (included) placed into the first unused jack.

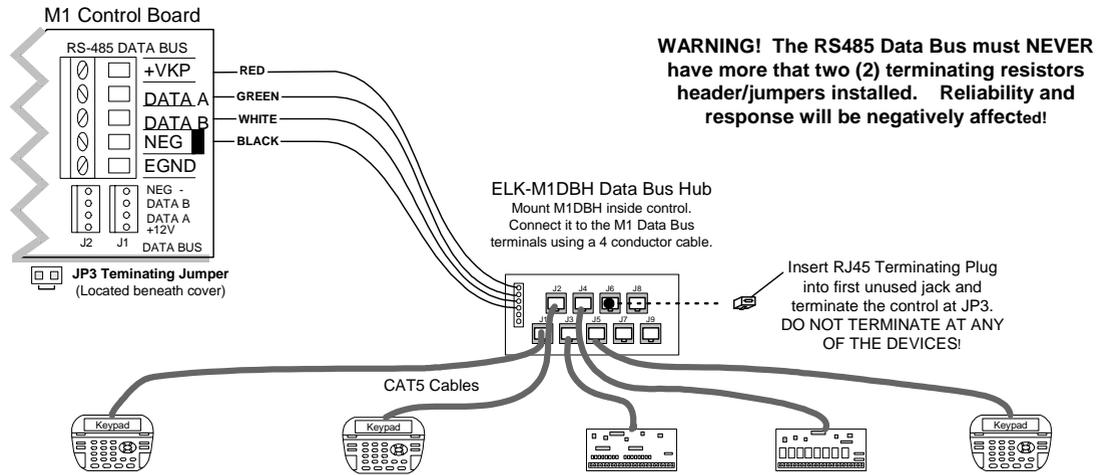
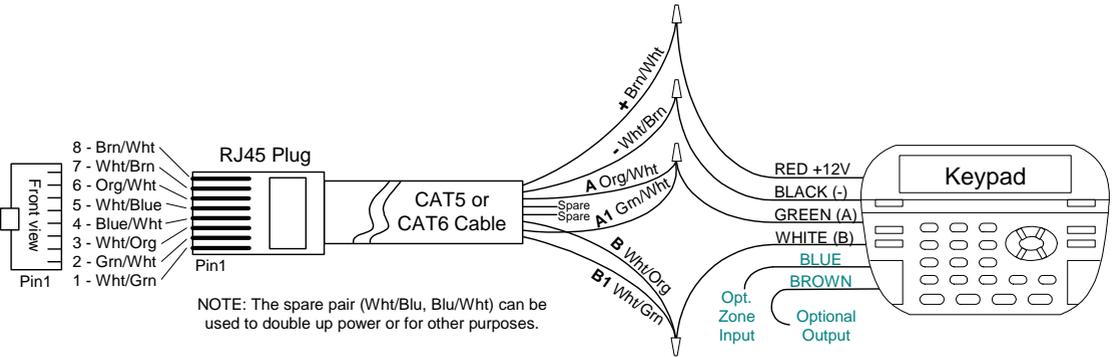


Diagram for Daisy Chain Connection of Data Bus Devices Using ELK-M1DBH And CAT5 Cables.

Maximum "TOTAL" Length of the M1 RS-485 Data Bus should NOT exceed 4000 feet. When calculating the total length, figure the length of each home run to the M1DBH times 2 (x 2) since the data lines run out and back. Maximum number of data bus devices varies by control.)



Color Code and Connections of CAT5 or CAT6 Data Bus Cable from Keypad to Data Bus Hub

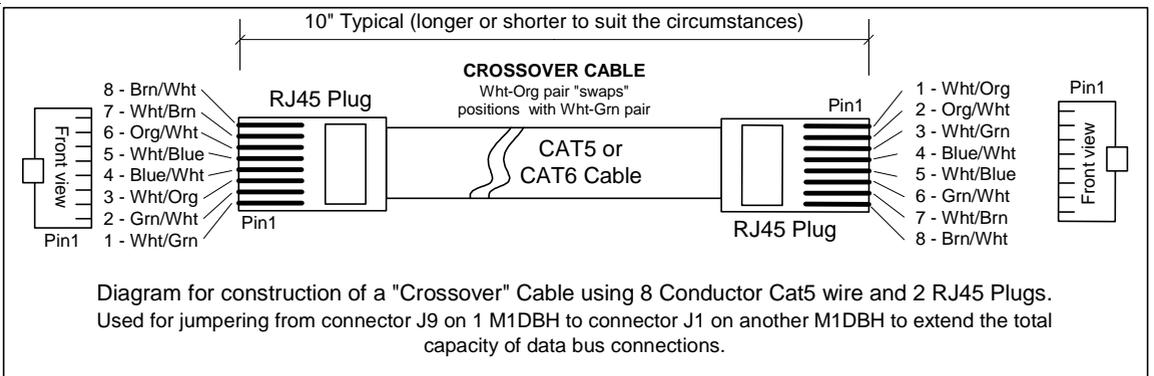


Diagram for construction of a "Crossover" Cable using 8 Conductor Cat5 wire and 2 RJ45 Plugs. Used for jumpering from connector J9 on 1 M1DBH to connector J1 on another M1DBH to extend the total capacity of data bus connections.