

WELDON - V-MUX SYSTEM

THE V-MUX SYSTEM

V-MUX is a complete electrical control system. The power distribution units (nodes) reduce wire harness bundles and electrical control hardware. Our software introduces advanced control features not available in conventional wiring systems. V-MUX works in many applications providing you with a generous amount of flexibility and control over your electrical system. The combination of hardware and software make up the V-MUX system.

A MULTIPLEX OVERVIEW

Multiplexing allows your electrical system to be divided into zones with:

- Reduced electrical connections
- Reduced crimps
- Reduced vehicle weight
- Simplified harness
- On-board diagnostics



WHY MULTIPLEX?

- 1948 average car wiring: 10 lbs, 150 ft, 35 connectors, 75 terminals, 55 wires.
- 1994 average car wiring: 165 lbs, 5280 ft, 300 connectors, 2000 terminals, 1500 wires.
- 1998 Automobile manufacturer reduced connectors 25%, splices 92%, size 15%, weight 65% via multiplexing.
- 1999 in one application V-MUX system reduced connectors 25%, splices 75%, relay interlock junctions 80 to 90%, "one input cuts out 5 park brake relay points".

WHAT WILL V-MUX DO FOR ME?

- Provide short and open circuit detection
- Eliminate electromechanical relays
- On-board service information
- On-board diagnostics
- Reduce splices by 80-90%
- Increase reliability and minimize downtime
- Simplify troubleshooting and repairs

THE V-MUX ADVANTAGE

- Peer to peer system – each node holds its own program
- Each node enables load shedding and sequencing
- Dimming controls
- The OEM can configure all of the displays/screens
- Reverse polarity protection
- Easy to use, Windows® based programs
- Training and support provided
- Modules operate from -40° to +85° C.
- EMC testing to 100V/meter
- Exceed most SAE, NFPA, NMEA and RVIA standards for electronics
- 100% solid-state technology



WHAT IF I WANT TO MAKE UPGRADES OR CHANGES?

The System Designer™ software allows the OEM to configure the vehicle, any changes are made at the OEM level. The OEM can email or remote download the update to the vehicle.

V-MUX VS. OTHERS

MASTER SLAVE (Other Systems)

- Master holds all the configurations for slaves
- Master tells slaves what outputs to turn on
- Master goes down – others can't do much Peer-to-Peer
- Peer-to-Peer: Nodes all hold their own configurations, if one node goes down the rest are ok. Advantage V-MUX!

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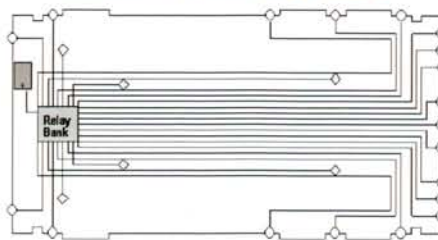
Example of a V-MUX system in school bus:

V-MUX Incorporates:

- Operators console
 - Switches
 - Messages
 - Lamp or electrical faults
 - Vehicle safety
 - System status
 - Automatic safety interlocks
 - Interior/exterior lighting
 - Integrate child check-out procedure system
 - On-board diagnostics
- Simplified troubleshooting
- Electrical control of:
 - Warning lamps
 - Stop arm
 - Crossing gate
 - Daytime running lights
 - Heat/fan speed



Traditional Wiring



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