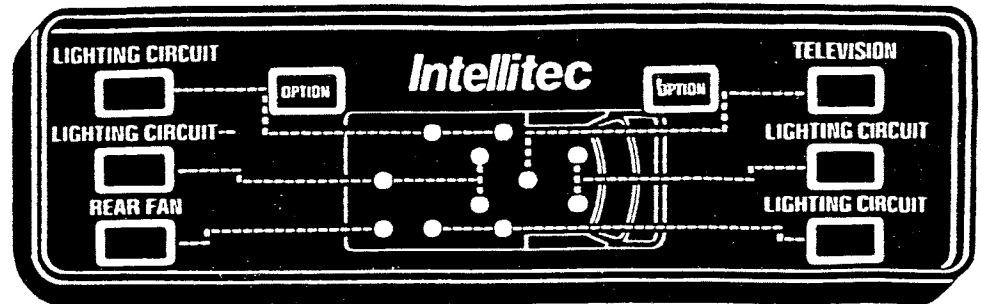


**INTELLITEC**

**WIRING SCHEMATICS**

# Van Multiplex™

## INTELLITEC INTRODUCES THE NEXT GENERATION MULTIPLEX ELECTRICAL SYSTEM FOR USE IN CONVERSION VANS



Today's vans are including an ever-increasing number of electrical features each requiring additional wiring that further compounds the wiring installation and reliability. Intellitec has developed, and is now producing, the first multiplexed electrical system for use in conversion vans. This system is intended to replace the conventional wiring and switching components that have historically been used.

### New Electrical System Features

The new INTELLITEC van electrical system is a first in the industry. It provides a number of customer-pleasing features never offered before by any other system. These features come standard with the system and do not require additional modules or special wiring.

Following are important customer features in this new system:

- **Automatic Interior Light Delay** – keeps the interior lights on up to 30 seconds after closing the doors. They will go off immediately when the ignition switch is turned on.
- **Automatic Load Shut-Off** – interior lights, TV and rear air conditioner fan turn off when ignition switch is turned off.
- **Control of Rear Heat/Air Fan** – the speed is controlled by the system to provide 3 speeds and off. Fan is inoperative while the ignition is off.
- **Load Operation Without Keys** – allows the interior lights and TV to operate without the key in the ignition. This will allow their use during prolonged outings.

- **Automatic Courtesy Lights** – allows interior lights to turn on when doors are opened regardless of setting of their local on/off switch.
- **Multi-Point Control** – provides control of all the interior lighting and rear fan speed from the front overhead panel as well as multiple locations in the rear of the van.
- **Centralized Control** – the switching, fusing and communication functions are all located in the central distribution panel. If a failure occurs, this panel can be tested and replaced, if necessary. The remote switch panels offer redundant switching to make failure analysis easier.
- **Automatic One-Half Hour Load Shut-Off** – Loads turned on without a key will automatically turn off one-half hour after all doors have been closed.
- **Low Voltage Protection** – the interior lights and TV will automatically be turned off when the battery voltage drops below 11.5 volts. The system will remain inoperative until the battery voltage rises above 12 volts.
- **High Voltage Protection** – if the battery voltage rises above 21.5 volts for any reason (i.e., runaway alternator or jump-starting) the TV and lights will be turned off to avoid damage.
- **Four Minute Light Timer** – when the doors of the vehicle are left open for more than four minutes, the interior courtesy lights will automatically turn off to avoid battery drain.

### Additional Modules

The INTELLITEC Multiplex System is flexible in its ability to add features and functions as the need arises.

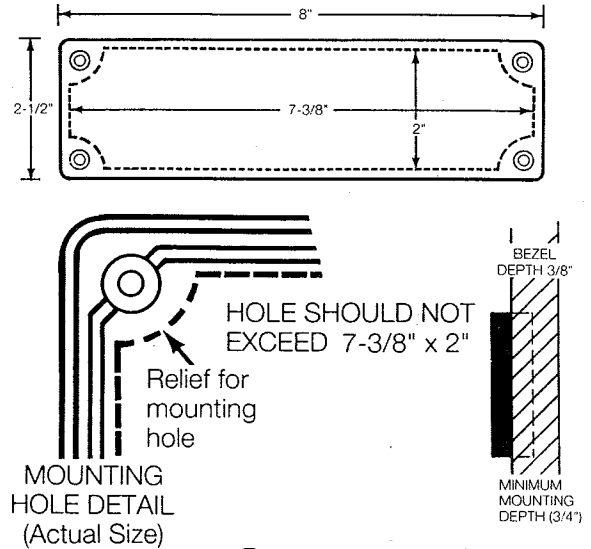


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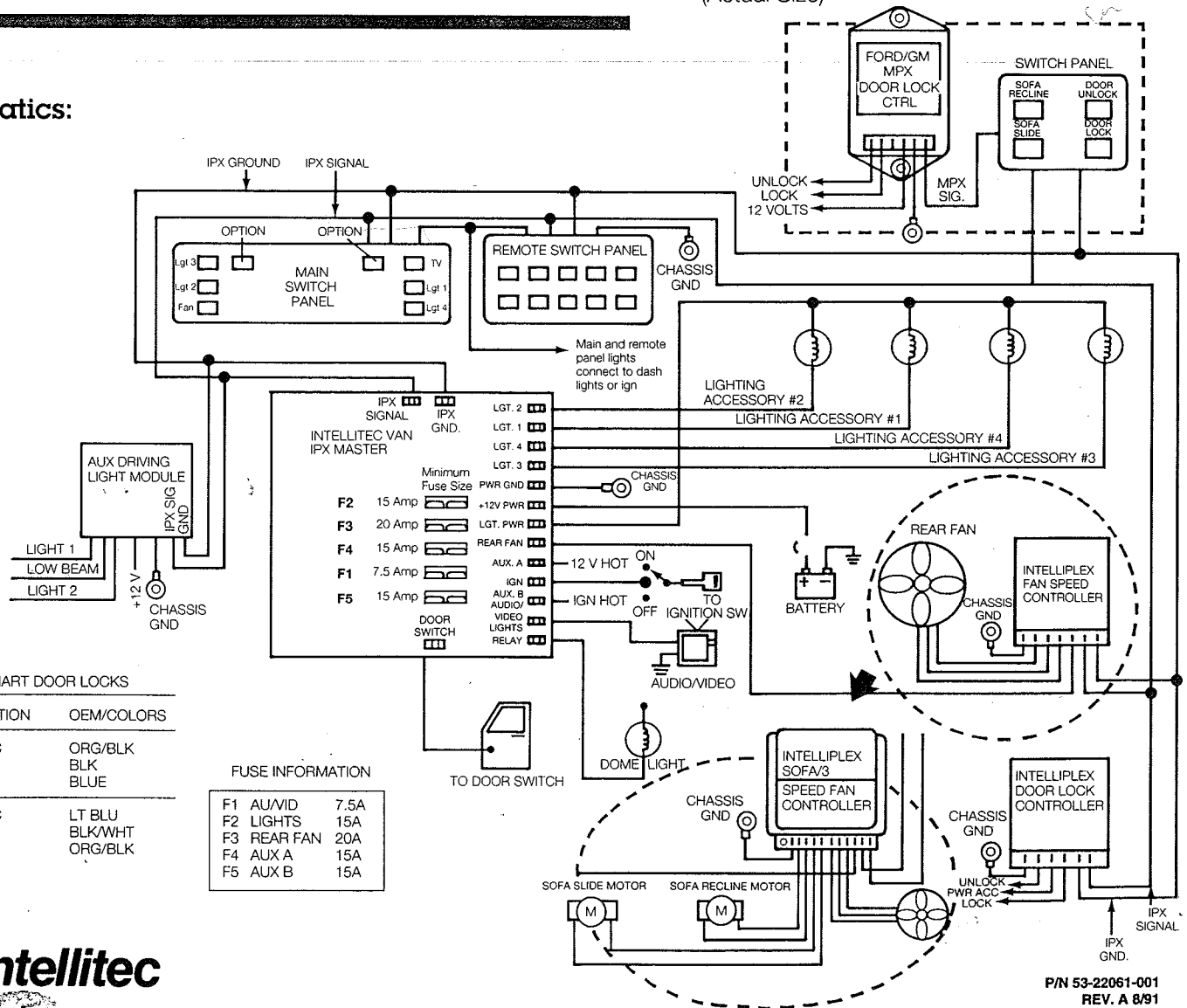
# Van Multiplex™

## Specifications:

Operating Voltage	10.0 to 16.0 Volts DC
Operating Temperature	-40.0 F to +185.0 F (-40.0 C to +85.0 C)
Interior Light Time Delay System Shutdown	20 to 40 Seconds Approximately 1 hr. after ignition is shut OFF and all doors are shut.
Maximum Current Ratings	
Input to Master	30.0 Amps
Lighting Circuits	15.0 Amps Total (5.0 Amps each of 4 Circuits)
Audio/Video	7.5 Amps
Rear Fan	20.0 Amps
Aux. A (Constant Hot)	15.0 Amps
Aux. B (Ign. Hot)	15.0 Amps



## Schematics:



COLOR CHART DOOR LOCKS			
MAKE	DESIGNATION	OEM/COLORS	
GM	PWR ACC UNLOCK LOCK	ORG/BLK BLK BLUE	
	FORD	PWR ACC UNLOCK LOCK	LT BLU BLK/WHT ORG/BLK

FUSE INFORMATION		
F1	AU/VID	7.5A
F2	LIGHTS	15A
F3	REAR FAN	20A
F4	AUX A	15A
F5	AUX B	15A



P/N 53-22061-001  
REV. A 8/91

1992 MULTIPLEX

18GA Yellow Signal

18GA Brown Signal Impulse

J4  J3   
 IPX SIG IAX SIG  
 GND

J8   
 LGT2  
 J7   
 LGT1  
 J16   
 LGT4  
 J9   
 LGT3  
 J2   
 PWR GND  
 J1   
 12V FWR  
 J6   
 LGT PWR  
 J10   
 REAR FAN  
 J11   
 AUX A  
 J13   
 IGN  
 J12   
 AUX B  
 AUDIO  
 J5   
 VIDEO  
 LIGHTS  
 J15   
 RELAY

FUSE INFORMATION

- F2 LIGHTS 15 AMP
- F3 REAR FAN 20 AMP
- F4 AUX A 15 AMP
- F1 AUDIO/VIDEO 7.5 AMP
- F5 AUX B 15 AMP

MAXIMUM FUSE SIZE

J14   
 DOOR  
 SWITCH

JP1   
 FORD  
 C.M.

10 GA. Purple

10 GA. Red

10 GA. White

10 GA. Orange

10 GA. Black/White

18 GA. Blk/Orp Rear A.C. Light GR

18 GA. Blk/Red Middle A.C. Light GR

OPTION

18 GA. Blk/Ylw Indirect Light GR

14 GA. White Around

10 GA. Red Main Power

18 GA. Wht/Ylw Light Power

12 GA. Red Rear Fan

18 GA. Wht/Red Radio Indirect Lighter Power

14 GA. Orange Ignition Power

14 GA. Orange Illumination display vanity

16 GA. RFD TV & VCP Radio-Rear Antenna

18 GA. Blk/Wht Courtesy Switch Ground

10 GA. Purple

10 GA. Red

10 GA. White

10 GA. Orange

10 GA. Red

10 GA. White

10 GA. Orange

10 GA. Black/White

10 GA. Red

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# 1992, 93 MULTIPLEX WIRE CHART

COMPONENTS	COLOR CODING
C GM POWER SOURCE :	10 GA. RED - CONSTANT HOT (J1)
D DODGE POWER SOURCE :---	14 GA. ORANGE - IGNITION HOT (J12)
F FORD POWER SOURCE :	
S1 MASTER SWITCH PANEL	18 GA. YELLOW - IPX SIGNAL (J4) 18 GA. BROWN - IPX GROUND (J3) 14 GA. ORANGE - IGNITION HOT (J12)
S2 SIDE CARGO DOOR SWITCH PANEL	18 GA. YELLOW - IPX SIGNAL (J4) 18 GA. BROWN - IPX GROUND (J3) 14 GA. ORANGE - IGNITION HOT (J12) 18 GA. GRAY - MPX DOOR LOCK SIGNAL (S2, S4, L)
S3 REMOTE SWITCH PANEL	(SAME AS S1)
S4 POWER SOFA/DOOR LOCK SWITCH PANEL	(SAME AS S2)
1 FRONT AIRCRAFT LIGHTS	18 GA. WHITE - CONSTANT GROUND (G) 18 GA. BLACK/WHITE - COURTESY GROUND (J15) 18 GA. WHITE/YELLOW - LIGHT POWER (J6)
CENTER AIRCRAFT LIGHT	18 GA. BLACK/RED - SWITCHED GROUND (J7) 18 GA. BLACK/WHITE - COURTESY GROUND (J15) 18 GA. WHITE/YELLOW - LIGHT POWER (J6)
3 REAR AIRCRAFT LIGHTS	18 GA. BLACK/ORANGE - SWITCHED GROUND (J8) 18 GA. BLACK/WHITE - COURTESY GROUND (J15) 18 GA. WHITE/YELLOW - LIGHT POWER (J6)
I INDIRECT LIGHTS	18 GA. BLACK/YELLOW - SWITCHED GROUND (J9) 18 GA. WHITE/RED - LIGHT POWER (J11)
DS DOME SWITCH	18 GA. VIOLET - COURTESY IMPULSE (J14)
M LIGHTED VISOR VANITY MIRROR	14 GA. ORANGE - IGNITION HOT (J12) 16 GA. WHITE - CONSTANT GROUND (G)
R 12 VOLT RECEPTICAL	18 GA. WHITE/RED - POWER (J11) 18 GA. WHITE - CONSTANT GROUND (G)
HP HEADPHONE JACK	14 GA. WHITE - CHASSIS GROUND (G) 22 GA. WHITE - AUX RADIO - LEFT (AR, HP) 22 GA. BLACK - AUX RADIO - RIGHT (AR, HP) 22 GA. BLUE - TV - (TV, HP) 22 GA. GREEN - TV + (TV, HP)

18 GA. Yellow Signal

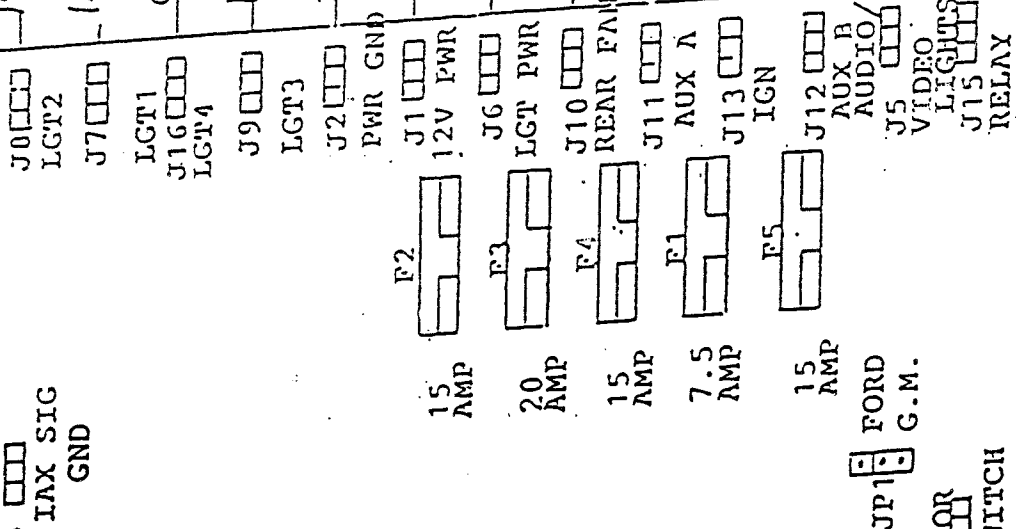
18 GA. Brown Signal Impulse

J4  J3   
IPX SIG IAX SIG  
GND

MAXIMUM FUSE SIZE

FUSE INFORMATION

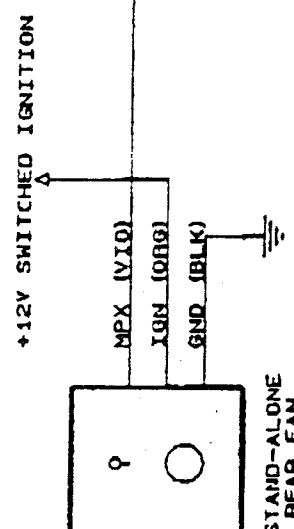
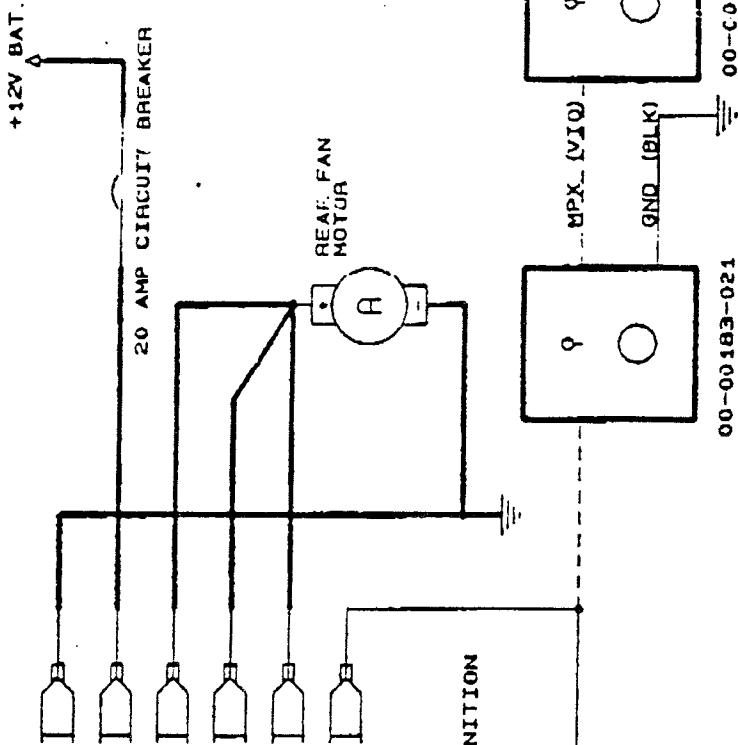
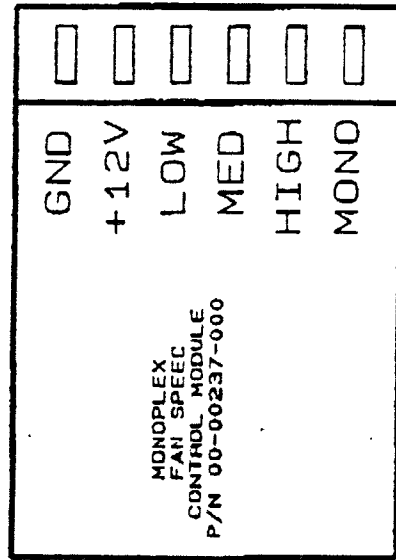
- F2 LIGHTS. 15 AMP
- F3 REAR FAN 20 AMP
- F4 AUX A 15 AMP
- F1 AUDIO/VIDEO 7.5 AMP
- F5 AUX B 15 AMP



- 14 GA. White/Blue Rear A.C. Light GR
- 14 GA. White/Orange Middle A.C. Light GR
- OPTION
- 14 GA. White/Black Indirect Light GR
- 14 GA. White Around
- 10 GA. Red Main Power
- 14 GA. Orange Light Power
- 12 GA. Red Rear Fan
- 14 GA. Red Radio Indirect Lighter Power
- 16 GA. Blue Ignition Power
- 16 GA. Blue Illuminator Display Unity
- 14 GA. Brown TV/ACP Radio Power
- 18 GA. White/Green Courtesy Switching

18 GA. GND Activates dome light

— :2AWG (MIN)  
 — :8-20AWG



NOTES:

1. The rear fan will only run when +12V is applied to the "12V SWITCHED IGNITION" input on the MPX switch.
2. Each time the switch is pressed the rear fan module steps from "off" to "high", "high" to "med", "med" to "low", and "low" to "off". The LED indicator is lit whenever power is being delivered to the rear fan motor.

INTELLITEC ELECTRICAL SYSTEMS BY BRUNSWICK	
131 N. EISENHOWER LN	
LOMBARD, ILLINOIS 60146	
(708) 238-9010	
Title	
WIRING DIAGRAM STANDALONE REAR FAN SW	
Size	Document Number
A	53-22079-000
REV	B
Date:	March 20, 1992 Sheet
	of

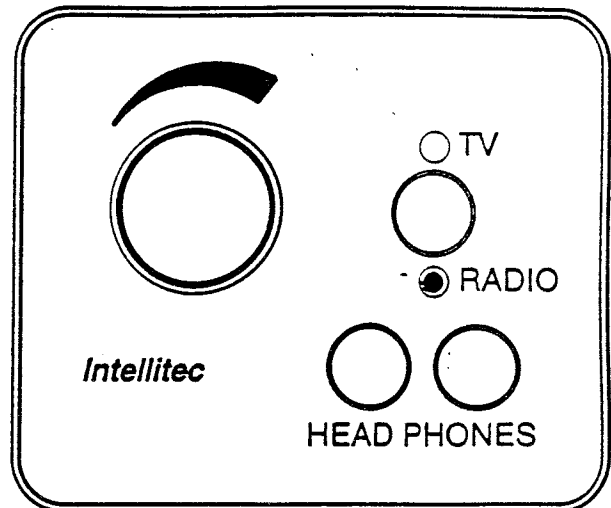
# Van Headset Source Selector

**INTELLITEC'S VAN HEADSET SOURCE SELECTOR (HSS)** allows the passengers in the rear of the van to listen to either the rear radio or the television set utilizing a pair of headphones.

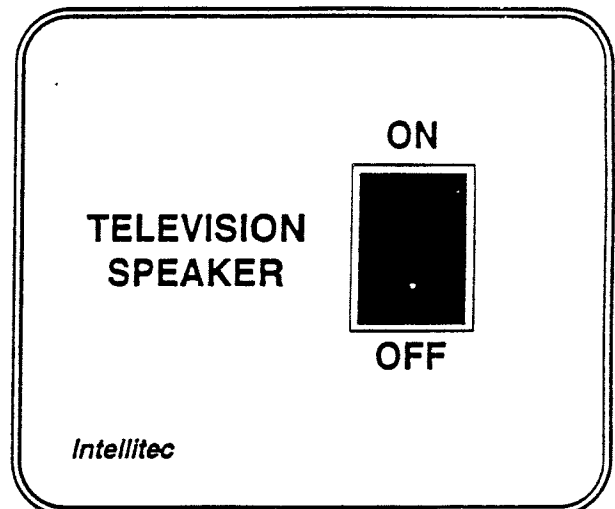
Each station comes equipped with two 1/4" headphone jacks, a rotary volume control, and a selector switch with an indicator to choose between the rear radio and the TV.

**Installation:** The unit comes equipped with two, four-pin plugs. The first plug is for the inputs from the TV and the rear radio. The second plug is for "daisy chaining" the output to the other Headset Source Selectors (HSS) in the vehicle. See the wiring diagram on the back of this page.

Intellitec also offers three cables that can be utilized with this system. The first is an Audio/Video to Van HSS Pigtail. This cable is only necessary on the first HSS. The second and third cables connect one HSS to another. Their lengths are 6 feet and 25 feet. The 6 foot cable connects units on the same side of the van, while the 25 foot cable connects units mounted on opposite sides of the van.



**VAN HEADSET SOURCE SELECTOR**



**TV SPEAKER SWITCH**

A companion component to the Van HSS, is Intellitec's **TV SPEAKER SWITCH**. This switch allows the user to turn a remote TV speaker on and off.



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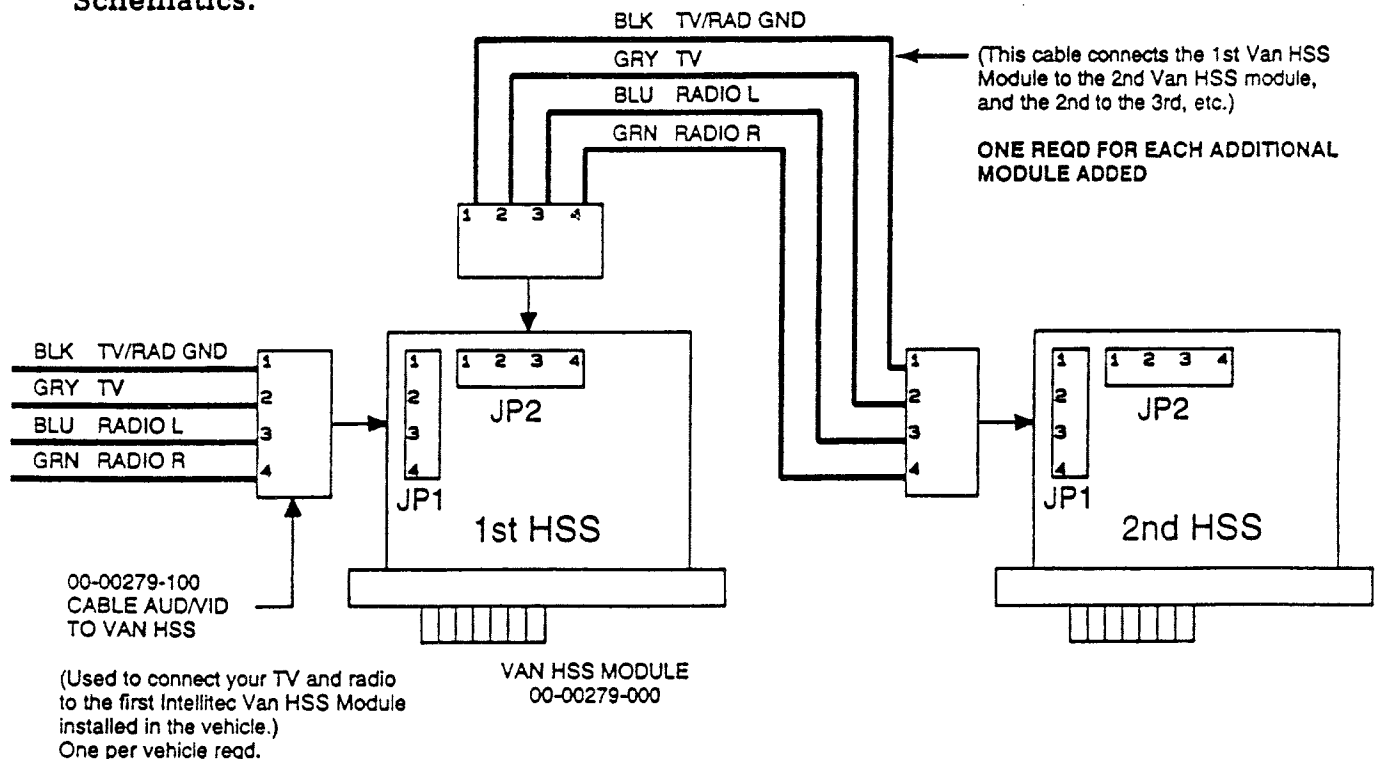


# Van Headset Source Selector

## Specifications:

Part Number	HSS 00-00279-000
Part Number	Speaker Switch 00-00289-000
Cable Part Number	HSS Audio/Video 00-00279-100
	HSS 6 FT. 00-00279-206
	HSS 25 FT. 00-00279-225

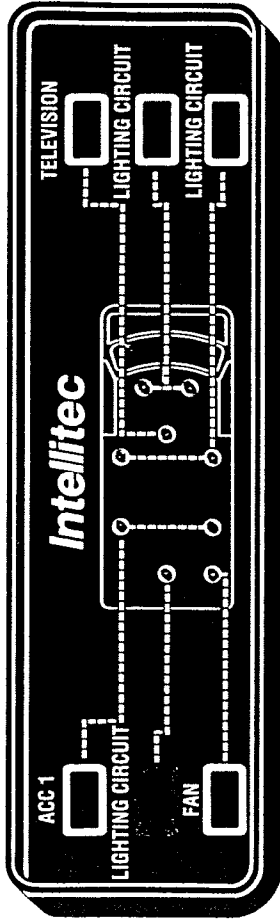
## Schematics:



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P/N 53-22086-00  
REV. A 7/92

**Van Monoplex™**



# OWNER'S GUIDE

**Intellitec**  
3110 Woodcreek Drive  
Downers Grove, Illinois 60515  
(708) 971-8500 / 1-800-251-2408

Brochure P/N 53-22065-000  
Rev. A 10/90

# VAN MONOPLEX ELECTRICAL SWITCHING SYSTEM

## INTRODUCTION

This van is equipped with the latest, state-of-the-art electrical switching system. This system has a number of automatic features designed to make the use of your vehicle more enjoyable and trouble free. Please take a few minutes to read this manual so you can understand and fully use them.

## AUTOMATIC INTERIOR LIGHT DELAY

The Automatic Interior Light Delay feature turns on certain interior lights when the doors are open and keeps them on for up to thirty seconds after the doors are closed, or until the ignition switch is turned on. This feature provides additional convenience and security lighting when entering or leaving the vehicle. The indicator lights on the Main Switch Panel will not come on for this function.

## OVERHEAD PANEL

The switch is located near the front of the van. It has a series of buttons and indicators that are used to control various electrical functions in the van.

## REMOTE SWITCH PANELS

The REMOTE SWITCH PANELS are located in the rear of the vehicle to allow the passengers control of the various switched functions. These buttons operate in the identical manner as the buttons on the MAIN SWITCH PANEL. Turning on the various functions from the REMOTE SWITCH PANELS will cause the indicators to light on the MAIN SWITCH PANEL.

LIGHT CIRCUIT

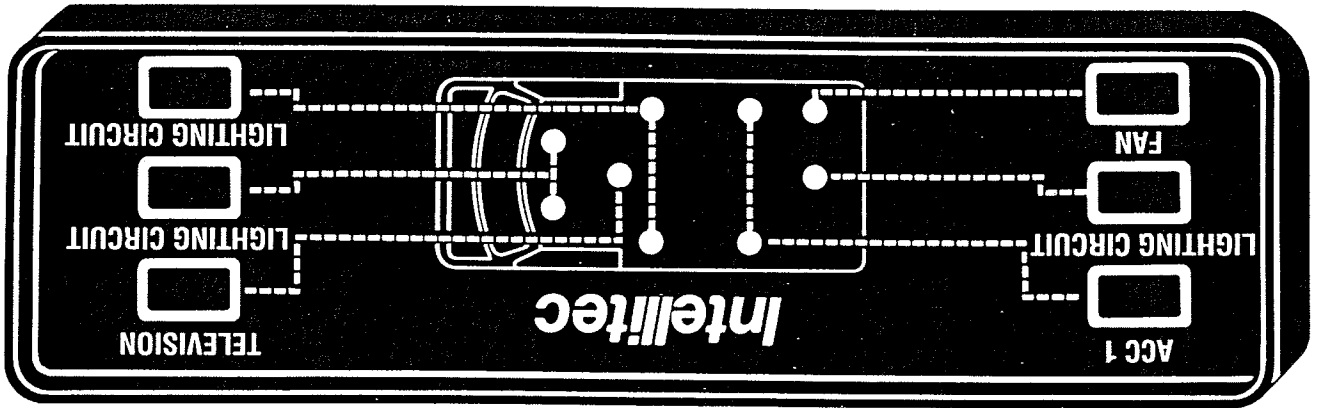


## LIGHT BUTTONS

The three light buttons are used to turn on the various lights within the van. Momentarily pressing these buttons will turn the lights on and off. The lights will automatically turn off when the ignition switch is turned off, to prevent inadvertent discharge of the battery. If desired, the lights can be turned on again by simply pressing the appropriate light buttons.

The various light indicators will only be on when the lights have been turned on by one of the switches. Some of the lights will turn on when the doors or the van are opened, but the indicators will not turn on for this function.

The lights will automatically be turned off approximately one hour after the ignition switch is turned off and the doors are closed, to prevent inadvertent discharge of the battery. If desired, they can be turned on again, by simply pressing the button. They will turn off again one hour later.



Note: The particular overhead panel installed in your conversion may vary from the one shown. Depending on the system requirements the overhead panel may have four, five or six buttons controlling functions. Please refer to your overlay to assist you in determining these functions.

## Van Monoplex System Configurations

REAR FAN



### REAR FAN BUTTON

When the ignition switch is turned on, the rear heating and air conditioning fan will be off. Momentarily pressing the FAN button runs the fan at high speed. A second press will run the fan at medium speed. A third press will run the fan at low speed. A fourth press will turn the fan off. Successive presses will repeat the sequence.

The FAN indicator will be on when the fan is operating at any speed.

The fan will go off when the ignition switch is turned off. Pressing the FAN switch when the ignition is off will momentarily light the indicator, but the fan will not operate.

TELEVISION



### TELEVISION BUTTON

The TELEVISION button is used to turn on the television and other optional entertainment devices. Momentarily pressing the button will turn the television on and off. The television will automatically turn off when the ignition switch is turned off, to prevent inadvertent discharge of the battery. If desired, the television can be turned on again by simply pressing the TELEVISION button.

The television will automatically be turned off approximately one hour after the ignition switch is turned off and the doors are closed, to prevent inadvertent discharge of the battery. If desired, the television can be turned on again, by simply pressing the button. It will turn off again one hour later.

ACC 1



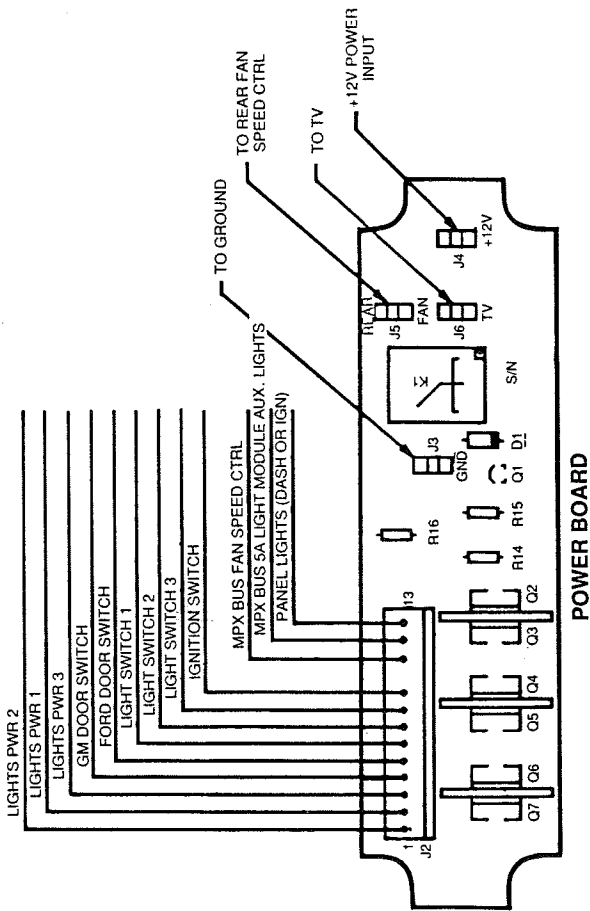
### ACC 1 BUTTON

This button is used to control an optional 5 Amp. power circuit. An additional set of lights is usually controlled from this button. Please refer to the Lighting Circuit button for additional information on operation of this button.

## TROUBLESHOOTING GUIDE

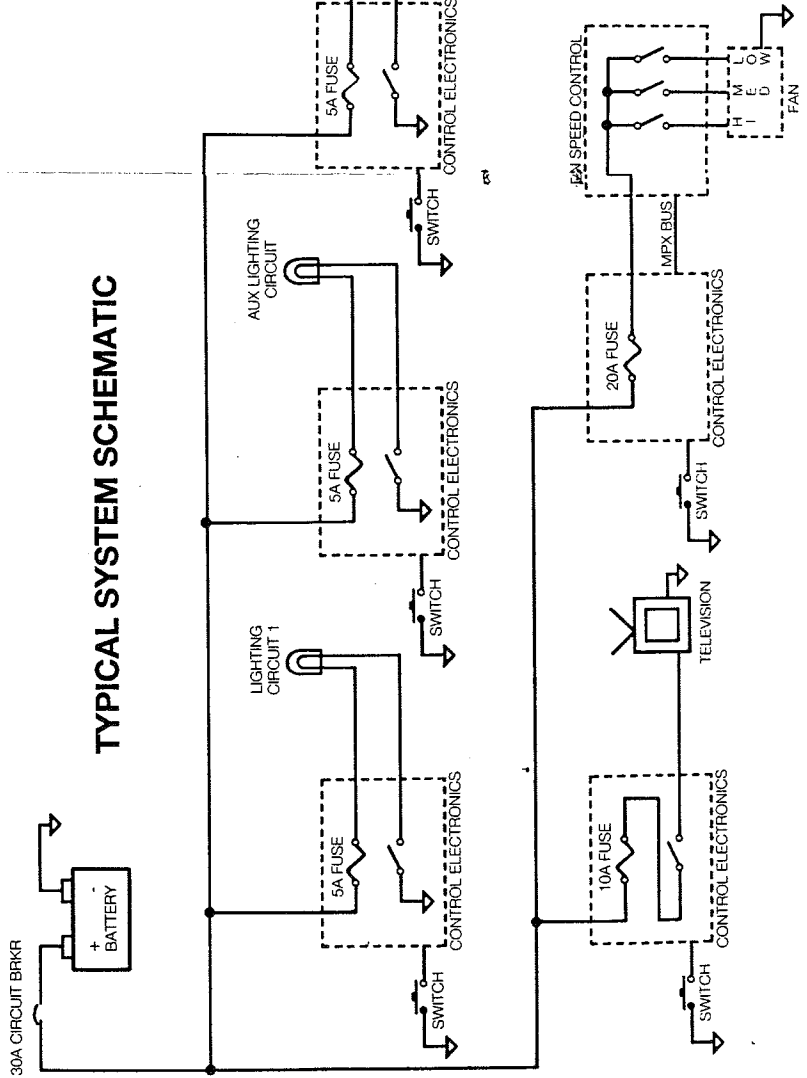
Problem	Cause	Solution
Lights stay on after doors are shut.	Lights are on the Light Delay Circuit.	Inspect door switches. Lights will go off after approx. 30 Sec. or when the ignition is turned ON.
Circuit indicator LED on Overhead Panel not illuminated but circuit lights are on.	Lights on the delay circuit.	Same as above.
Everything goes off (When vehicle ignition is turned OFF).	All circuits shut off with the key.	This is a feature to prevent dead batteries.
Everything goes off (Vehicle parked ignition OFF).	One hour time limit has been reached.	Press functions desired. 1 hr. timer will restart.
Circuit indicator LED on Overhead Panel illuminates when button is pressed but circuit does not operate and indicator goes off after button is pressed a second time. (All circuits except Rear Fan).	Burned out lamp in circuit or blown fuse. Lamp turned off at fixture base.	Check lamps and/or fuses.
Rear Fan circuit indicator LED illuminates when button is pressed but will not stay on after button is released. (Vehicle Ignition OFF).	Fan circuit will only operate with the ignition in the ON position.	Turn ignition ON. If problem still exists then check the 20 Amp. Fan fuse.

# WIRING DIAGRAM



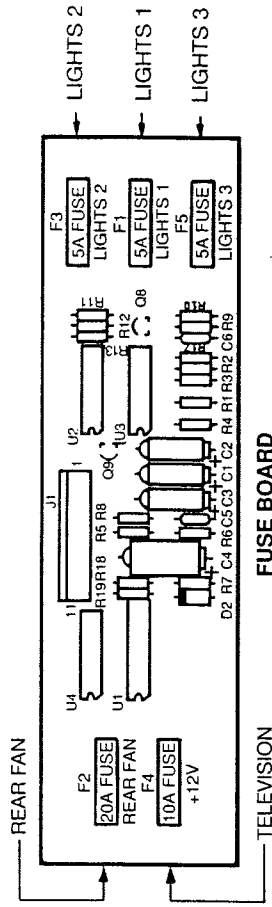
POWER BOARD

# TYPICAL SYSTEM SCHEMATIC



## NOTES:

1. Door switch connects to power board as follows:
  - a. GM and CHRYSLER vehicles connect to J2-PIN4
  - b. FORD vehicles connect to J2-PIN5
2. Monoplex panel lighting options:
  - a. For constant brightness connect J2-PIN13 to ignition J2-PIN9
  - b. For variable brightness connect J2-PIN13 to dash light dimmer switch
3. LIGHTS 1 and LIGHTS 2 have 30 second delay after door closes
4. LIGHTS 3 is not controlled by door switch



FUSE BOARD