

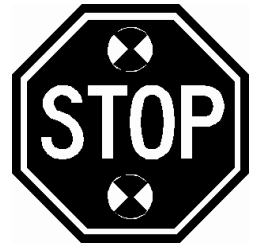
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Installation and Operation of the HB4000 System see below for Horn and Dome light options

Basic Installation

1. Mount the HB4000 on the dash where it is clearly visible to the driver. Drill a 1/2 hole, insert grommet and feed wire harness into the electrical panel.
2. Connect red wire to fused constant +12 volts.
3. Connect black wire to good clean ground.
4. Connect orange wire to ignition switched +12 volts.
5. Connect yellow wire to flashing lights +12 volts activation signal.
6. Decide where to connect brown wire as described on page 2.
7. Tie back any unused wires grey, white, blue and purple.

UNIQUE TO INDUSTRY! Operational Features available on each HB 4000

***Wire up your HB4000 this way to activate the following desired feature:

- A) Function A (Default): emits a driver alert warning in all modes.
- B) Function B: The timed horn alarm will activate in 60 seconds, when the operator fails to push the rear disarm switch, with the engine off.

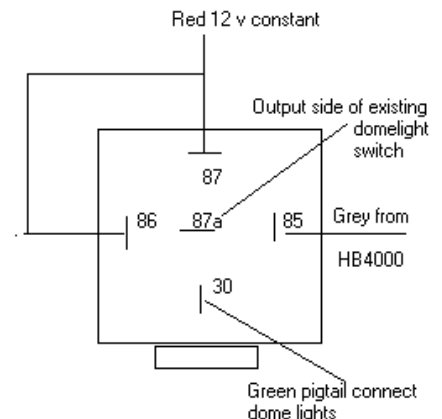
Connect the blue wire to the existing horn relay ground activation point.

- C) Function C: Horn will alarm immediately when the door is opened, with engine off and rear disarm NOT pushed. Install new switch in front door activation handle mechanism, so the output of the switch is grounded when the side passenger exit door is opened. Connect white wire to switch.

***HB4000 will function A, A+B, A+B+C. Special order time changes are available.

Optional Dome Light

1. Mount supplied relay in electrical panel.
2. Connect red pigtail that is connected to relay pins 86 and 87 to constant 12 volts (Same point as HB4000 constant 12 volts).
3. Connect grey wire from HB4000 to relay pin 85.
4. Remove wire from output side of dome light switch and connect this wire to relay pin 30.
5. Connect green pigtail from relay pin 87a to output side of dome light switch.



Definitions

-Constant +12 volts. This would be 12 volts supplied to the hot side of the ignition switch or any 12-volt supply that is constant as long as the battery is installed. Ensure that +12 volts is **NOT** removed when starter solenoid is activated.

-Ignition switch. +12 volts from the switched side of the ignition switch.

- Flashing lights. This is any point that will go to +12 volts when the flashing lights are activated. The 12 volt supply to the stop arm would be ideal. But any other point such as the supply to the flasher motor is acceptable as long as the point is at +12 volts constant when the lights are flashing and the 12 volts is removed when the lights are off.

Disarming signal - Where to connect the brown and purple wires.

The brown wire must be momentarily connected to ground at the rear of the bus to disarm the unit. This can be done by a dedicated push button switch connected to a new wire run to the back of the bus, or by using the existing rear emergency door switch.

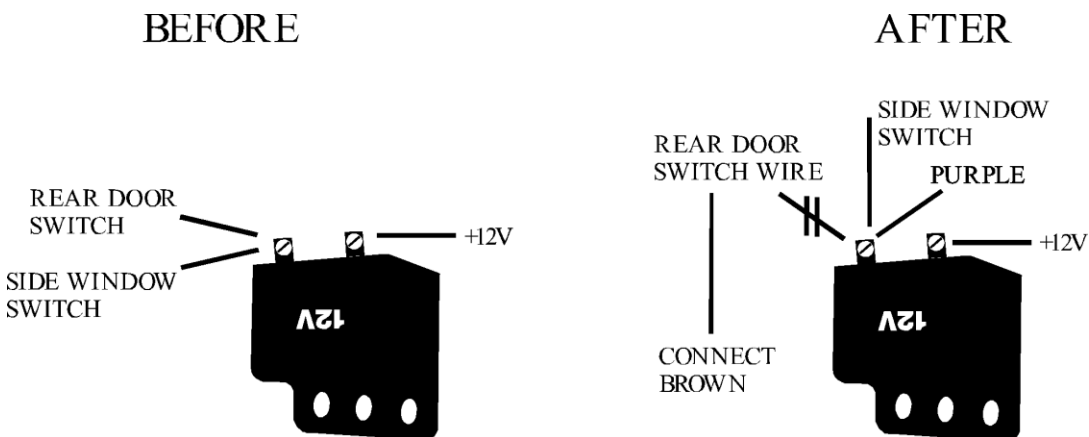
To use the rear emergency door switch the following conditions must be met.

- The bus must have a front buzzer that sounds when the rear emergency door is opened and the ignition is on. It will also have a rear buzzer, but the front one is mandatory.
- The existing connection from the rear door switch to the front buzzer **must not include the side window switches.** The connection from these side window switches (if any) must come up to the buzzer on a separate wire.

If these conditions are met, then perform the following.

1. Locate the front buzzer.
2. Identify the wire coming forward from the rear door switch to the front buzzer.
3. Remove this wire from the buzzer, cut off the existing connector and bare the wire.
4. Connect to the brown wire from Homebound to this bared wire.
5. Connect the purple wire from Homebound to the front buzzer in place of the wire that was removed.

After completing the modification of the front buzzer proceed to the next page. “Do you need a rear buzzer diode?”



Do you need a rear buzzer diode?

Older buses with mechanical buzzers can have a spurious ground problem in that when the ignition is turned off the HB4000 will disarm rather than alarming and requiring the operator to go to the back of the bus. Most recent vehicles with solid-state buzzers do not usually have this problem.

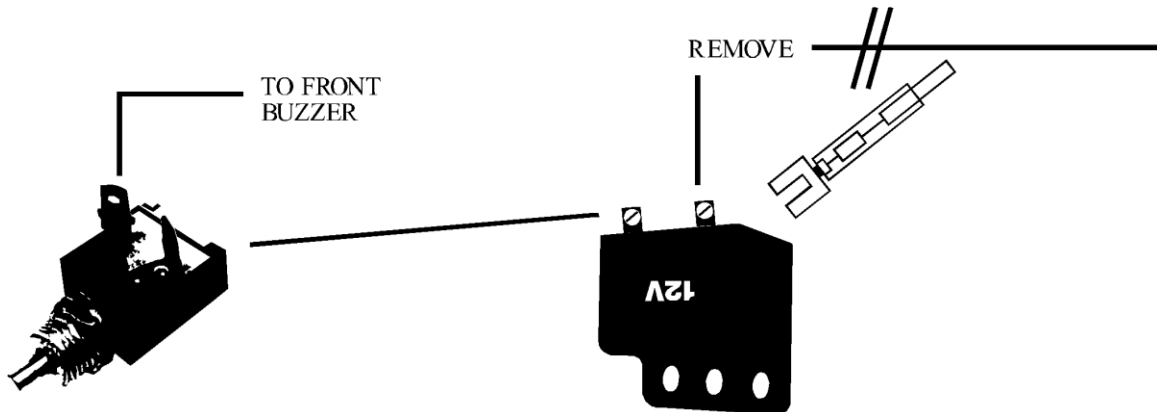
After installing the unit and connecting front buzzer, test the system by following the procedure on Page 4 Item 7 or Page 5 Item 6.

- If the on board buzzer on the HB4000 sounds and can be silenced by activating the rear door switch or dedicated push button switch, then the diode is not required.

-But if the HB4000 deactivates when the ignition is turned off then the diode is required and should be installed as below.

1. Remove the 12-volt feed to rear buzzer when ignition is turned on. **THIS IS THE WIRE THAT IS NOT CONNECTED** to the rear door switch.
2. Cut and bare this wire.
3. Splice this bared wire to the supplied diode coupler with terminal supplied.
4. Connect diode coupler to buzzer, with spade terminal.
5. Modification is complete.

NB This diode is added to the buzzer at the back of the bus **and not** to the buzzer at the front of the bus.



Rear door switch and buzzer

A. REAR EMERGENCY DOOR SWITCH DISARM METHOD

Arming options and test of HB4000 using rear emergency door switch to disarm.

UNIQUE TO BMR MFG. CO. ARMING OPTIONS: (NOTE: unit supplied with 5 minutes timed armed delay)

The HB4000 is armed when both the green and red LEDs are illuminated constantly. The user can have this occur either the first time the flashing lights are activated after the ignition is turned on. **Or** 5 minutes after the first time the flashing lights are activated

after the ignition is turned on. The unit can be switched from one mode to the other at any time. **TO SELECT OR CHANGE ARMING TIME**

- Depress the button on the HB4000 and hold it depressed for 30 seconds. After the 30 seconds and while still holding the button depressed the unit will beep to confirm the change. The green LED will flash to indicate no delay mode. The red LED will flash to indicate 5-minute delay mode.

When the 5-minute delay option is selected, the user may wish to disable the delay for a quick test of the system without the delay. **HOW TO BY-PASS THE DELAY.**

- After the flashing lights are activated depress the button on the HB4000 and hold it depressed until the red LED is on constantly.

Note. Do not hold the button depressed for 30 seconds as this will change the arming mode as described above.

BASIC TEST

1. With ignition turned on, open rear door. Both rear and front buzzers sound.
2. Turn on the ignition switch. The green LED will illuminate constantly.
3. Turn off the ignition switch. The green LED will flash every 10 seconds.
4. Turn the ignition on and activate the flashing lights. If the 5 minute delay option is selected the red LED will flash for 5 minutes after which it will be constantly on. System now armed. If no delay is selected the unit will arm at once.
5. Momentarily press the button on the HB4000. The red LED flashes for 30 seconds and then stays on again.
6. Momentarily press the button on the HB4000 and open rear door within the 30 seconds period with the ignition on. The onboard buzzer sounds and the red LED is extinguished, (Homebound disarmed).

Note. The flashing lights must be off to disarm the HB4000

7. Re-arm the HB4000. Turn off the ignition. Onboard buzzer sounds.
8. With ignition off open rear door. Buzzer silences, (Homebound disarmed).
Basic test of HB4000 is complete.

Optional – Test of front door switch operation

1. Re-arm the HB4000. Turn off ignition. Open front door. Horn blows.
2. Close front door and turn on ignition. Horn, Dome lights (if installed) and HB4000 buzzer turn off.
3. Turn off ignition. Open rear door. HB4000 buzzer silences and dome light (if installed) stays on. Open front door and dome light goes out.

Test of HB4000 with front door switch is complete.

Optional – Test of dome light operation

1. Re-arm the HB4000. Turn off ignition. On board buzzer sounds and dome lights illuminate.
2. Open rear door. Buzzer silences. Dome lights flash on for 45 seconds and then go out.

Dome light test Complete

B. REAR DEDICATED DISARM SWITCH METHOD

Arming options and test of HB4000 using dedicated push button switch at rear of bus. (NOTE: unit supplied with 5 minutes timed armed delay)

ARMING OPTIONS. UNIQUE TO BMR MFG. CO.

The HB4000 is armed when both the green and red LEDs are illuminated constantly. The user can have this occur either the first time the flashing lights are activated after the ignition is turned on. **Or** 5 minutes after the first time the flashing lights are activated after the ignition is turned on. The unit can be switched from one mode to the other at any time. **TO SELECT OR CHANGE ARMING TIME**

- Depress the button on the HB4000 and hold it depressed for 30 seconds. After the 30 seconds and while still holding the button depressed the unit will beep to confirm the change. The green LED will flash to indicate no delay mode. The red LED will flash to indicate 5-minute delay mode.

When the 5-minute delay option is selected, the user may wish to disable the delay for a quick test of the system without the delay. **HOW TO BY-PASS THE DELAY.**

- After the flashing lights are activated depress the button on the HB4000 and hold it depressed until the red LED is on constantly. (approximately 3 seconds) UNIT ARMED.

Note. Do not hold the button depressed for 30 seconds as this will change the arming mode as described above.

BASIC TEST

1. Turn on the ignition switch. The green LED will illuminate constantly.
2. Turn off the ignition switch. The green LED will flash every 10 seconds.
3. Turn the ignition on and activate the flashing lights. If the 5 minute delay option is selected the red LED will flash for 5 minutes after which it will be constantly on. System now armed. If no delay is selected the unit will arm at once.
4. Momentarily press the button on the HB4000. The red LED flashes for 30 seconds and then stays on again.
5. Momentarily press the button on the HB4000 and depress dedicated push button rear switch within the 30 seconds period with the ignition on. The onboard buzzer sounds and the red LED is extinguished, (Homebound disarmed).

Note. The flashing lights must be off to disarm the HB4000

6. Re-arm the HB4000. Turn off the ignition. Onboard buzzer sounds.
7. With ignition off depress rear switch. Buzzer silences, (Homebound disarmed).
Basic test of HB4000 is complete.

Optional – Test of front door switch operation

1. Re-arm the HB4000. Turn off ignition. Open front door. Horn blows.
2. Close front door and turn on ignition. Horn, Dome lights (if installed) and HB4000 buzzer turn off.
3. Turn off ignition. Depress rear switch, HB4000 buzzer silences and dome light (if installed) stays on. Open front door and dome light goes out.

Test of HB4000 with front door switch is complete.

Optional – Test of dome light operation

1. Re-arm the HB4000. Turn off ignition. On board buzzer sounds and dome lights illuminate.
2. Depress rear switch. Buzzer silences. Dome light flash and stay on for 45 seconds then go out.

Dome light test complete.