

738A Ademco™ Interface Module

Description

The 738A Ademco™ Wireless Expansion Module allows you to interface Ademco™ 5881 wireless receivers with the DMP XT30/XT50 Series, XR100/XR500 Series, and XR150/XR350/XR550 Series panels. See **Compatibility** on the back page for specific firmware levels. The 738A provides up to 32 supervised, programmable zones of Ademco™ wireless transmitters.

The 738A supports the Armed, Alarm, and Ready to Arm status LEDs on an Ademco™ 5804BD. This requires connecting an Ademco™ 5800TM to an XT30/XT50 panel.

738A Connection

For simple installation, the 738A connects to the panel 4-wire keypad data bus. The 738A can also connect to the on board LX-Bus of an XR100/XR500 or XR150/XR350/XR550 Series panel.

XR100/XR500 Series: connect the 738A directly to the on-board LX-Bus or an LX-Bus Expansion Interface Card, such as a 481. Observe wire colors when making connections.

On an XR150/XR350/XR550 Series: connect the 738A directly to the LX500 - LX900 connectors on the panel.

Note: When programming 738A zones on the LX-Bus™ select **NO** at the Wireless option in the Zone Information section of panel programming.

Mounting to Walls

The 738A is shipped installed in a decorative, high-impact plastic case that mounts directly to walls, backboards, or other flat surfaces. For installation ease, wire entrances are provided on the case back and at each of the ends. The bottom half of the plastic case contains two screw holes for mounting the case on single-gang switch boxes or rings.

Mounting in Enclosures

The 738A can be installed in DMP enclosures using the standard 3-hole mounting configuration.

1. Carefully use a screwdriver to pry the plastic housing off the 738A.
2. Mount the plastic standoffs to the enclosure using the three included Phillips head screws.
3. Insert the screws through the holes on the enclosure exterior side and into the plastic standoffs which mount on the enclosure inside. Tighten the screws into place.
4. After tightening and securing the standoffs onto the enclosure, snap the 738A onto the standoffs.

Wiring Specifications

The maximum wire distance between the Ademco™ wireless receiver and the 738A is 3 feet. Refer to the following LX-Bus and Keypad bus wiring specifications.

1. DMP recommends using 18 or 22-gauge **unshielded** wire for all keypad and LX-Bus circuits. **Do not** use twisted pair or shielded wire for LX-Bus and keypad bus data circuits. All 22-gauge wire must be connected to a power-limited circuit and jacket wrapped.
2. On keypad bus circuits, to maintain auxiliary power integrity when using 22-gauge wire do not exceed 500 feet. When using 18-gauge wire do not exceed 1,000 feet. To increase the wire length or to add devices, install an additional power supply that is UL listed for Fire Protective Signaling, power limited, and regulated (12 VDC nominal) with battery backup.
Note: Each panel allows a specific number of supervised keypads. Add additional keypads in the unsupervised mode. Refer to the panel installation guide for the specific number of supervised keypads allowed.
3. Maximum distance for any one bus circuit (length of wire) is 2,500 feet regardless of the wire gauge. This distance can be in the form of one long wire run or multiple branches with all wiring totaling no more than 2,500 feet. As wire distance from the panel increases, DC voltage on the wire decreases. Maximum number of LX-Bus devices per 2,500 feet circuit is 40.
4. Maximum voltage drop between the panel (or auxiliary power supply) and any device is 2.0 VDC. If the voltage at any device is less than the required level, add an auxiliary power supply at the end of the circuit. When voltage is too low, the devices cannot operate properly.

For additional information refer to the LX-Bus/Keypad Bus Wiring Application Note (LT-2031) and or the 710 Installation Sheet (LT-0310).



Wiring the 738A Module

After properly mounting the 738A, follow the instructions to wire the 738A to the panel.

DMP Bus Header (J1)

For keypad bus operation, connect the provided Model 300 4-wire harness (with one connector) from the **DMP BUS** header (J1) to the panel terminals marked 7, 8, 9, and 10. For LX-Bus operation, connect the provided Model 300 4-wire harness from the **DMP BUS** header (J1) to the 4-wire LX-Bus.

Receiver Header (J3)

Connect the provided Model 300 4-wire harness from the **RECEIVER** header (J3) to the Ademco™ wireless receiver and 5800™ transmitter harness based on the table provided in Figure 1.

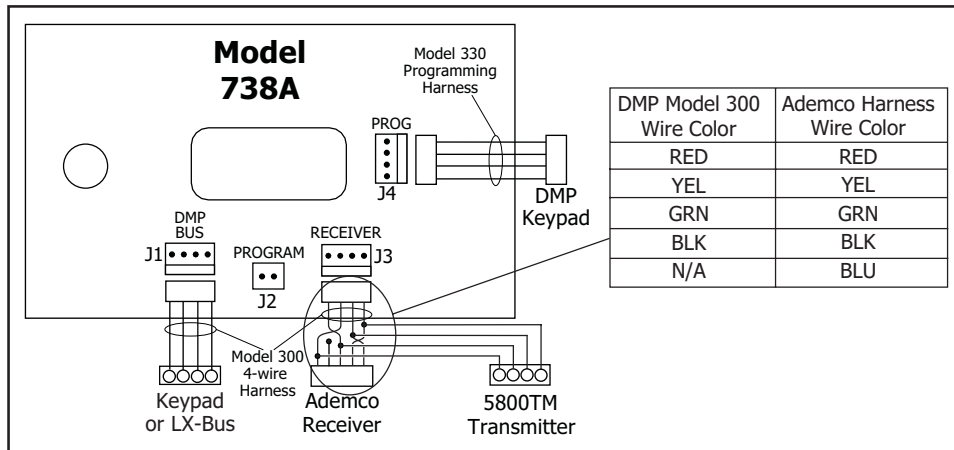


Figure 1: 738A Wiring

PROG Header (J4)

When programming, connect the provided Model 330 dual-ended programming cable from the **PROG** header (J4) to any DMP keypad.

PROGRAM Header (J2)

Place the provided jumper across the **PROGRAM** header (J2) to enter the 738A programming mode. Remove the jumper from the **PROGRAM** header when programming is complete. Place it over one pin for future use.

Compatible Ademco™ Wireless Transmitters and Receivers

Tables 1 and 2 below list current Ademco™ transmitters and receivers that have been tested by DMP and are compatible with the 738A. Other Ademco™ products have not been evaluated by DMP. The 738A module has not been tested by UL.

The number of wireless zones available through the 738A is 32. The 738A can deliver all 32 zones to a DMP panel regardless of the number of zones assigned by the Ademco™ wireless receiver model number. For example, a Model 5881ENL 8-Zone Receiver delivers 32 wireless zones to the 738A.

Note: Dip switches on the 5881 series receiver must be set to zero.

Receiver Model Number	XT30/XT50 Series, XR100/XR500 Series, and XR150/XR350/XR550 Series
5881ENL 8-Zone Receiver	32 Zones
5881ENM 16 Zone Receiver	32 Zones
5881ENH 64-Zone Receiver	32 Zones

Table 1: Ademco Receivers

Supervised	Ademco Type	Unsupervised	Ademco Type
5802MN Miniature Panic Button	BR or UR	5802 Panic Button	BR
5816 Window/Door	RF	5803 3-Button	BR
5817 3-Zone	RF	5804 4-Button	BR
5890 Motion Detector	RF	5804BD 4-Button *	BR

* Note: For use with XT30/XT50 Series panels.

Table 2: Ademco Transmitters

Ademco™ 5800TM Transmitter Module

The 738A supports the Armed, Alarm, and Ready to Arm status LEDs on an Ademco™ 5804BD. This requires connecting an Ademco™ 5800TM to an XT30/XT50 panel. When a 5800TM is connected as shown in Figure 1, the panel Armed, Alarm, and Ready to Arm status displays on the Ademco™ 5804BD Wireless Key LED and sounder. Table 3 describes the LED and sounder operation. Refer to the Ademco™ 5804BD Installation Instructions for proper button operation.

LED	LED Condition	Sounder	System Status
Red	ON Steady	2 Beeps	Armed Away
		3 Beeps	Armed Stay or Instant
	Flashing	Pulsing	Fire Alarm
		Steady	Armed, Burglary Alarm
Green	ON Steady	1 Beep	Disarmed, Ready to Arm
	Flashing	Silent	Disarmed, Not Ready to Arm

Table 3: LED and Sounder Operation

Ademco™ 5804BD Panic Buttons

Note: For use with XT30/XT50 panels. When programming the 5804BD into the panel, you must manually enter the transmitter ID number in Zone Information.

Use 5804BD buttons A and C to send a panic signal to the DMP panel. Press the A and C buttons at the same time for two seconds to send a Zone 19 Panic signal to the central station receiver. The zone name information sent to the receiver contains the first address number that the 738A is answering.

Programming

738A

Programming

Connect a Model 330 Programming Cable from the J4 **PROG** header to any DMP Security Command® keypad set to address 1. Place the jumper across the J2 **PROGRAM** header. The 738A immediately enters programming mode. Press the **COMMAND** key to continue.

Note: While in programming mode, all communication to the panel stops.

INIT ALL? NO YES

Initialization

Select **YES** to reset all programming options to the factory default. Select **NO** to maintain all programming options at their current settings.

BUS: *KYPD LX

Panel Bus Type

Select the type of connection from the panel to the 738A. Choose either keypad bus or LX-Bus™ connection. Press the **COMMAND** key to accept the selection. An asterisk displays to the left of the bus type selected.

HOUSE ID: 01

House ID

Select a number from 01 to 31 for the House ID. Enter a leading zero for numbers below ten. The factory default is 01. The same House ID number must be programmed into any 5804BD Wireless Key transmitters to receive Armed, Alarm, and Ready to Arm status. Refer to the Ademco™ 5804BD Installation Instructions to enter the House ID.

ZONE? TEST ADD

Zone Test or Add

Select **ADD** to program new zones into the system or select **TEST** to perform a zone test on existing zones. When performing a Zone Test, the 5881 receiver signal gain is reduced by 50%. When adding new zones to the system, select **TEST** after adding zones to perform the Zone Test on new zones.

TRIPS END

Zone Test Trips Counter

When **TEST** is selected, the Zone Test Trips Counter displays the number of times any programmed zone trips (alarm/short) during the Zone Test. The keypad buzzer sounds for 1 second each time a programmed zone trips. Select **END** to stop the Zone Test and display any failed zones.

Note: When the keypad is removed from the 738A, the 5881 receiver signal gain automatically returns to 100%.

ZONE: XX -FAIL

Zone Test Fail

The zone number of any zone that failed to trip at least once during the test displays for four seconds and the buzzer sounds for one second. The next failed zone displays. Press the COMMAND key to advance to the next failed zone (x x = zone number).

ZONE NO:

Zone Number

After selecting ADD, enter a wireless transmitter zone number to be programmed into the 738A at the Zone Number option. This zone number must correspond to a zone number programmed into the panel. Press the COMMAND key to accept the zone number.

When the 738A is connected to the keypad bus and any wireless input zones for a particular address are programmed (Ex: 11-14 = Addr 1), the 738A responds to polls for this address. Other devices, such as keypads, cannot use this address.

Address	Zone Numbers	
	XT30/XT50 Series	XR100/XR500 Series and XR150/XR350/XR550 Series
1	11 to 14	11 to 14
2	21 to 24	21 to 24
3	31 to 34	31 to 34
4	41 to 44	41 to 44
5	51 to 54	51 to 54
6	61 to 64	61 to 64
7	71 to 74	71 to 74
8	81 to 84	81 to 84

Table 4: Keypad Bus Zones

	XR100/XR500 LX-Bus 1-5 and XR150/XR350/XR550 (LX500-LX900)				
	Panel Zone Range				
	LX-Bus 1 (LX500)	LX-Bus 2 (LX600)	LX-Bus 3 (LX700)	LX-Bus 4 (LX800)	LX-Bus 5 (LX900)
1	501	601	701	801	901
2	502	602	702	802	902
3	503	603	703	803	903
...
16	516	616	716	816	916
17	517	617	717	817	917
18	518	618	718	818	918
...
32	532	632	732	832	932

Table 5: LX-Bus Zones

*UN RF UR BR

Transmitter Type

Enter a transmitter type by pressing the Select key that corresponds to the type of transmitter used. An asterisk appears to the left of the transmitter type chosen. Default is UN. Press the COMMAND key to accept the selection. Refer to the installation instructions provided with the Ademco™ transmitter for additional information.

UN = Unused Zone UR = Unsupervised Transmitter
RF = Supervised Transmitter BR = Button Transmitter

When a transmitter reed switch, contact, or button is in a faulted condition, the corresponding panel zone is **SHORTED**. When the transmitter tamper is in a faulted condition, the corresponding panel zone is **OPEN**.

Note: Supervised transmitters need to report to the 738A at least once every 12 hours. If not, the DMP panel indicates that the zone is missing.

LEARN ID? NO YES
TRANSMIT NOW

Transmitter Identification Number

Select **YES** to enter Learn ID programming. The keypad displays **TRANSMIT NOW**. For the 738A to learn the transmitter identification number, the transmitter input (reed switch or contact) must be activated (tripped) and restored. The first activation beeps the program keypad once. Within four to eight seconds after the first activation the transmitter input must be tripped and restored a second time. The keypad beeps twice. The keypad displays the “learned” transmitter identification number (ID). To accept this number press the COMMAND key.

ID: _ _ _ _ _ _ _

Select **NO** to manually enter the transmitter identification number. At the ID: _ _ _ _ _ _ _ display, enter the seven-digit transmitter number, found below the bar code on the label attached to your Ademco™ transmitter. Press the COMMAND key to accept the number.

Note: When programming a 5804BD, you must manually enter the Transmitter ID Number.

INPUT NO: _

Transmitter Input Number

Enter a number (1 to 4) to identify the transmitter input zone. When the transmitter ID is “learned,” the keypad displays the zone input number. Refer to the Ademco™ Transmitter installation instructions for zone input information. Default is 1. Press the COMMAND key to accept the number. The display returns to **ZONE NO:** for programming the next transmitter.

ALREADY ZONE: XX

Transmitter Already Learned

This display indicates the transmitter has previously been learned as a zone and continuously displays until the Back Arrow or COMMAND key is pressed. Pressing the Back Arrow key returns programming to **TRANSMIT NOW** to allow a different transmitter to be learned. Pressing the COMMAND key returns programming to **ZONE NO:**.

Exit Programming

Remove the jumper from the **PROGRAM** header (J2) to exit the 738A programming mode. Place the jumper over one pin for future use. Remove the Model 330 cable and the DMP keypad from the **PROG** header (J4). After exiting the programming mode, all zone states report to the panel as **NORMAL**. **Always test and verify all zones for proper communication.**

738A LED Operation

The green LED on the 738A Module indicates data transmission to the Command Processor™ panel.

- On:** There are no transmitters programmed.
- Off:** The 738A is not being programmed, or the 738A is not responding to the panel.
- Flashes:** The 738A is transmitting data to the panel, or it is being programmed.

Specifications

Primary Power 12 VDC
Current Draw 75mA
Dimensions 3" W x 5.5" H x .75" D

Ademco™ is a registered trademark of Honeywell Security and Electronics.

Panel and Firmware Version Compatibility

XR150/XR350/XR550 panels
XR100/XR500 panels version 119 or higher
XT30/XT50 panels version 101 or higher

Certifications

FCC Part 15



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