

D2000 Series Keypad Diagnostics

Putting the Keypad into the Diagnostics Mode

The panel sends SERVICE START and SERVICE END messages upon entering and exiting Diagnostics Mode.

1. Lock the Standby Switch down.
2. Press the [1] key on the keypad.
3. Enter your “Installer” passcode. The default Installer passcode is 654321. The default passcode length is three, so if you have not changed the default entries, press [6] [5] [4].

If the passcode you’ve entered is valid, the keypad’s display scrolls the functions that are available.

Now that you’re in...

When you select a function, the system displays messages informing you of test status. Once inside a function, press the [Clear] key to return to the previous level.

Bell Test

The Bell Test powers the external bell with the burglar pattern for 2 sec.

- Press the [1] key. The display shows:

```
TESTING BELL The Bell Test  
times out after 2 seconds.
```

Battery Test

The Battery Test causes the panel to run on the battery only, for 4 min. During this time, if the voltage drops below 12.2 V, the trouble tone sounds and the low battery condition appears in the Check System mode (Key 4).

When the Battery Test is started, a Low Battery report or a Missing Battery report will be sent, if programmed.

- Press the [2] key. The display shows:

TESTING BATTERY

MAY TAKE 4 MIN.

The test times out in approximately 4 min., and the results are displayed. If the battery is good, the display shows:

BATTERY TEST

PASSED

Press the [Clear] key to return to the main menu.

If the battery is bad, the display shows:

BATTERY TEST

FAILED

Press the [Clear] key to return to the main menu.

Communication Test

The Communication Test sends a test report to the receiver. If the report fails to be acknowledged after all dialing attempts, the panel goes into Communications Failure.

- Press the [3] key. The display shows:

TESTING PHONE

MAY TAKE 10 MIN.

The test times out in approximately 10 min., and the results are displayed. If the phone line is good, the display shows:

PHONE TEST
PASSED

Press the [Clear] key to return to the main menu. If the phone line is bad, the display shows:

PHONE TEST
FAILED

Press the [Clear] key to return to the main menu.

RF Programming

RF Programming does not apply to “E” version panels.

Before RF Points can be added, the D208 Receiver must be connected to the panel and powered.

It is possible to encounter RF receiver errors when attempting these operations. An example would be programming the point code for Point 10 as an RF point using a receiver on address 8, when there is no receiver connected to address 8. When you attempt to add Point 10, the system is unable to communicate to a receiver. In this event, you see the display:

NO REPLY RCVR 8
PRESS CLEAR

After pressing the [Clear] key, the display returns to the RF menu.

1. Press the [4] key to display the RF programming menu.

2. The display scrolls the three RF menu options:

TO ADD POINTS

PRESS 1

TO TEST POINTS

PRESS 2

TO REMOVE POINTS

PRESS 3

3. To exit the RF Programming menu and return to the diagnostics menu, press the [Clear] key.

Adding RF Points

Adding RF Points does not apply to “E” version panels.

To add a point, you must have previously given it an RF point code (digits 4 and 5).

1. In the RF menu, press [1] to Add Points. If there are points (yet to be added) whose point codes have been programmed as RF, the keypad displays the first one to be added (in this example, Point 1 is the first point programmed as an RF point):

ADD POINT 1

PRESS *

To scroll the remaining RF points, press the [C] key repeatedly. If there is only one RF point, it will be continually re-displayed.

If there are no points programmed as RF points, or all programmed points have already been added, the display shows the following.

NO PTS TO ADD!

PRESS CLEAR

After pressing the [Clear] key, the system returns to the RF menu.

2. Press the [*] key to select the point displayed. The display shows:

ACTIVATE
POINT 1

3. Press the tamper switch on the sensor you want to add as Point 1. When the transmission is received, the point is added and the display shows:

POINT 1 ADDED
PRESS CLEAR

If the sensor was added into some other point, or two points were inadvertently programmed to the same sensor loop, the display shows the following (in this example, the sensor was previously added as Point 2, although it could be any point number):

DUPLICATES PT 2
PRESS CLEAR

Press the [Clear] key and repeat the procedure using a sensor that was not already added, or check point programming to assure that two points were not assigned to the same location (see digit 4 and 5 of point code).

4. Pressing the [Clear] key returns the display to the next RF point to be added:

ADD POINT 2
PRESS *

5. Pressing the [Clear] key again returns the display to the RF menu.

Testing RF Points

Testing RF Points does not apply to “E” version panels.

To test a point, it must be added.

1. In the RF menu, press [2] to Test Points. If there are RF points that were added, the first one is shown.

TEST POINT 1
PRESS *

To scroll the remaining added points, press the [C] key repeatedly. If there is only one added point, it is continually re-displayed.

If no RF points are added, the display shows the following:

NO PTS ADDED!
PRESS CLEAR

2. Press the [*] key to select the point displayed. The display shows:

TESTING POINT 1
ROUNDS: 00

3. To begin the test, trip the sensor on the point you are testing (in this case, Point 1), and listen for and count the beeps from the keypad. The beeps indicate rounds of data sent from the sensor when tripped. Each sensor sends eight rounds per each trip. The counter next to the word "ROUNDS" is incremented once for each round received.
4. The number of rounds (beeps) can be used to determine whether a sensor is in a good location or not. Intrusion and other types of sensors (doors/window, shock, PIR & sound sensors, smoke/heat sensors, portable panics) have the following validation:

7 to 8 rounds = Acceptable

6 or fewer rounds = Poor or Unacceptable

The testing procedure is slightly different for RF keypads. Rather than relying on the count of rounds transmitted, position the keypad where it will likely be used, and press any key. If you hear a beep, and the function associated with the key is performed by the panel, the location is a suitable one for keypad operation.

5. Pressing the [Clear] key ends the test and returns the display to the next point to be tested (if any):

```
TEST POINT 2  
PRESS *
```

6. Pressing the [Clear] key again returns the display to the RF menu.

Removing RF Points

To remove a point, it must be previously added.

1. In the RF menu, press [3] to Remove Points. If there are RF points that were added, the first one appears in the display (in this example, Point 1 is the first point programmed as an RF point):

```
REMOVE POINT 1  
PRESS *
```

To scroll the remaining added points, press the [C] key repeatedly. If there is only one RF point, it will be continually re-displayed.

If there are no added RF points, the display shows the following.

```
NO PTS ADDED!  
PRESS CLEAR
```

After pressing the [Clear] key, the system returns to the RF menu.

2. Pressing the [*] key removes the point displayed.
The display shows:

POINT 1 REMOVED
PRESS CLEAR

3. If the [Clear] key is pressed and there are more added RF points, the display shows the next added point:

REMOVE POINT 2
PRESS *

You can continue to remove as many added RF points as you want.

4. If there are no more added RF points, the display shows:

NO PTS ADDED!
PRESS CLEAR

Pressing the [Clear] key returns the display to the RF menu.

5. When you've finished removing points, press the [Clear] key to return to the RF menu.

Point Status

The Point Status function displays the electrical state of all points. The state of each point is shown in the system's display. Points that are not programmed are displayed as normal.

1. Press the [5] key. The display shows the status of Points 1 and 2:

POINT 1 NORMAL
POINT 2 OPEN

2. Press the [*] key repeatedly to scroll the remaining points. Points may be Normal, Open, or Short:

POINT 3 SHORT

POINT 4 OPEN

3. Press the [Clear] key to exit this test.

Relays

The Relays function can activate either of the two external relay outputs.

1. Press the [6] key to enter the Relays function.
2. Hold the [1] key to turn on relay 1. The relay stays on as long as key 1 is held down. Follow the same procedure to test relay 2.
3. Press the [Clear] key to exit this test.

Power Supply Status*

The Power Supply Status function performs four different tests on the power supply and battery.

Obtained readings are + or - 200mA / 200mV.

1. Press the [7] key. The display shows:

POWER SUPPLY

...To display Fire Alarm Load

2. Disconnect the battery.
3. Press the [1] key.

The bell and external relays activate and the display shows:

FIRE ALARM LOAD

LESS THAN ### MA

4. Use the scale on the following page to verify that the current consumption is less than 860 mA:

* Most panels do not include the Power Supply Status function.

Maximum Fire Alarm Load	860 mA
	732 mA
	605 mA
	477 mA

Max Normal Supervisory Load	350 mA
	222 mA
	95 mA

5. If current consumption is more than 860 mA, the display will show:

FIRE ALARM LOAD
MORE THAN 860 MA

6. Press the [Clear] key.
7. Reconnect the battery.

...To display the Minimum Battery Voltage

2. Make sure the battery is connected.
3. Press the [2] key.

The panel automatically disconnects AC, and the display shows the lowest battery voltage during the test and gives an acknowledge tone after 1 min.:

MIN BATT VOLTAGE
##.# VOLTS

4. Verify that the battery does not drop below 13.2 V within the minute.

Minimum Battery Voltage after 1 min.	13.7 V
	13.2 V
	12.7 V
Read Battery Voltage	12.2 V
	11.7 V
	11.2 V
	10.7 V
	10.2 V

5. Press the [Clear] key.

...To Read Battery Voltage

2. Make sure the battery is connected.
3. Press the [4] key. The battery voltage displays:

BATT VOLTAGE
##.# VOLTS

4. Verify that the battery is above 11.7 V.
5. Press the [Clear] key.

...To display Normal Supervisory Load

2. Disconnect the battery.
3. Press the [5] key. The display shows:

NORMAL LOAD
LESS THAN ##.# AMPS

4. Verify that the current consumption is less than 350 mA.
5. Press the [Clear] key.
6. Reconnect the battery.

To exit the Power Supply Status function, press the [Clear] key again.

Programming

Function 8 is the Keypad Programming Mode. For complete instructions on programming from the keypad, see the *Program Entry Guide*.

System Trouble

This diagnostic check is available in the user's Check System (Key 4) mode.

1. Press the [Clear] key to exit the Diagnostic Mode. The display shows:

SYSTEM TROUBLE
PRESS 4 TO VIEW

2. Press the [4] key. The display shows:

CALL FOR SERVICE

3. Hold the [5] key. The display scrolls through the trouble messages:

LOW OR MISSING
BATTERY

STAND-BY SWITCH
LOCKED

AUX PWR TRBL
TERMINAL

BELL PWR TRBL
TERMINAL

RCVR # TAMPER

RCVR # TROUBLE
2111 (No Signals)

RCVR # TROUBLE
1211 (Jammed)