BXPA1

All Scales

LocoNet DCC Occupancy Detector with Transponding and Auto-Reversing Power Management for 1 Detection Section, Transponding Zone, and Power Sub-District

Features:

- Automatic reversing for one reversing section or sub-district.
- DCC Occupancy Detection for 1 Auto-Reversing Section letting you know when equipped rolling stock is in a detection section on your layout.
- Integrated Transponding Zone lets you know the location of transponder-equipped locos or rolling stock.
- Intelligent Automatic short-circuit and over-current power management, improves reliability by avoiding most booster shutdowns.
- Connects to LocoNet to transmit Detection Section occupancy, Transponding and track power information.
- Detects most powered locomotives in a Detection Section.
- Detects rolling stock equipped with resistor wheel sets.
- Identify where specific rolling stock is on your layout with Digitrax transponder-equipped locos and rolling stock.
- Plug and Play with Digitrax DCC systems.
- LED indication of Detection Section occupancy, Transponding, power status, and reversing section status.
- Additional connections for opto-isolated occupancy detector output, manual power control, and remote status indicator.
- Easy-connect pluggable track wire terminal blocks can plug-in straight or at right angles.
- Operations Mode Read Back allows you to read CV values of decoders equipped with transponders when on track.
- Firmware update capability via IPL over LocoNet.

Parts List

1 BXPA1   1 LocoNet Cable
1 Instruction Sheet

Digitrax Manuals and Instructions are updated periodically. Please visit www.digitrax.com for the latest version of all manuals.

Introduction

The BXPA1 is a combination DCC Auto-Revereser, occupancy detector, Transponding detector, and intelligent power manager. It is designed to make transponding implementation easy and provide advanced DCC track management by communicating all state information to LocoNet. It is recommended that you familiarize yourself with Digitrax Detection, Transponding, and Auto-Reversing section wiring before installing the BXPA1. Additional documentation is available at www.digitrax.com

BXPA1 Installation Notes

The BXPA1 is only compatible for use with Direct Home Layout wiring and requires a LocoNet compatible system for Detection/Transponding Reporting.

The BXPA1 can be located for convenience and ease of installation.

Ensure that booster and track feeds are sufficient to carry currents and detect short circuits. We recommend at minimum 14AWG bus lines and 22AWG feeder connections up to the rails.

It is recommend that Zero Stretching be disabled.

BXPA1 Installation

1. Power down your Digitrax LocoNet System.
2. Determine an appropriate mounting location for your BXPA1.
3. Mount the BXPA1 in the appropriate location. The BXPA1 is equipped with removable screw terminals for easy wiring once the unit is mounted.
4. Connect "INA" to the Rail A terminal on the booster that will be powering the reversing section.
5. Connect "INB" to the Rail B terminal on the booster that will be powering the reversing section.

    Note: Rail A and Rail B should consistent between all Power Districts, you may need to switch the Rail A and Rail B connections in the above steps.
6. Connect "OUTA" to the Rail A for the reversing section.
7. Connect "OUTB" to the Rail B for the reversing section.
8. Connect to LocoNet via the LocoNet port using a known good LocoNet Cable. The BXPA1 must be connected to LocoNet to function Properly.
9. For use with DCS51 command stations turn the trip speed pot counter clockwise until reliable auto-reversing is achieved.

Turning on your system and configuring the BXPA1

Once you have installed your BXPA1, there are several tests you should perform to ensure that the BXPA1 is properly functioning.

Power on your Digitrax System and the section of your layout where the BXPA1 is connected. Using a small piece of wire or some other conductor short the "INA" and "INB" terminals together the booster connected to the BXPA1 should reliably shut down.

Test the auto reversing section by shorting across the tracks connected to "OUTA" and "OUTB". If the Booster powering the BXPA1 shuts down during these tests you will need to lower the resistance of your wiring.

For additional Detection and Transponding Testing, please visit www.digitrax.com/advancedBXPA1

Setting BXPA1 Board ID

Setting up your Board ID for your BXPA1 should be carefully considered. Each BXPA1 automatically assigns its Detection Section and Transponding Zone based off the BXPA1's Board ID. The BXPA1 supports board addresses 001-256.

To set your BXPA1 Board ID:
1.   Ensure that your BXPA1 is properly connected and powered on.
2.   Press the ID button until the ID LED and OPS LED begin alternating slowly flashing alternating RED and GREEN
3.   Connect a Digitrax throttle to the BXPA1 LocoNet port. (This can only be done with a Digitrax LocoNet throttle or equivalent software).
4.   Go into SWITCH mode on the throttle. Select the switch number that corresponds to the board address you want to set and issue a closed "c" command to set the board address. The board address is changed as soon as you issue the SWITCH command.
5.   Once the Board ID is set the ID LED will go back to solid green.
6.   You may press the ID button a second time to exit ID mode.

Please see your specific throttle manual for details on how to issue SWITCH commands.

Advanced BXPA1 Setup

For additional setup information and setup instructions for external connections please visit www.digitrax.com/advancedBXPA1

Warranty & Repair

Digitrax gives a one year *"No Worries" Warranty* against manufacturing defects and accidental customer damage on all Digitrax command stations, boosters, throttles, decoders, power supplies and layout control devices.

That's it! A simple, straightforward warranty with no tricky language!
Visit www.digitrax.com for complete warranty details and instructions for returning items for repair.

Please return warranty items directly to Digitrax - DO NOT return items to place of purchase.

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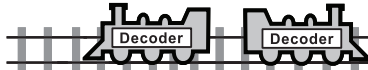
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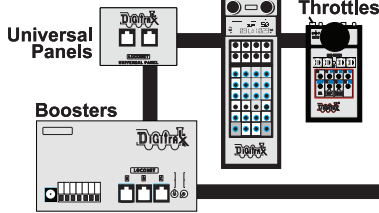The Digitrax Difference

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