



DZ126Z1

Fits AZL Z PA1 and others

Z Scale
Mobile Decoder
DCC Board Replacement
2 FX3 Functions

Features:

- **Digitrax LocoMotion® System**-Your locomotives look like the real thing. The Digitrax LocoMotion System makes them run like the real thing, too!
Torque Compensation for smooth as silk silent operation.
128 Speed Step operation (14 or 28 steps can also be used).
Momentum with acceleration and deceleration.
Normal Direction of Travel is user selectable.
Switching Speed feature for easier and faster access to yard speeds.
3 Step Speed Tables set start, mid and max voltage for custom control.
28 Step Speed Tables with 256 level resolution for precise control.
- **Scalable Speed Stabilization (Back EMF)** with simple setup & 256 level resolution.
- **SuperSonic** motor drive for silent operation.
- **FX³ Function** outputs for prototypical lighting effects and on/off control:
Constant Brightness Lighting with directional or independent control.
Dynamic and Static Qualifiers operate functions based on direction, FO on or off, loco direction and FO, and whether loco is moving.
Function Remapping for custom function setup.
Master Light Switch turns off all lights & functions with one keystroke.
Advanced Consist Function Controls
- **Bright White LEDs** for added realism.
- **Transponder Equipped** ready for transponding on your Layout.
- **All Mode Programming**, with Operations Mode Read Back-read of CV values on the mainline using compatible Digitrax Transponding detectors.
- **Decoder Factory CV Reset** with or without speed table initialize.
- **Motor Isolation Protection** helps prevent damage to your decoder.
- **Basic, Advanced & UniVersal Consisting.**
- **2 Digit and 4 Digit Addressing.**
- **DCC Compatible.**

Parts List

1 DZ126Z1 Decoder

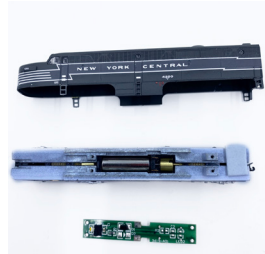
1 Instruction Sheet

Installation Information

For Most Z Scale layouts, Digitrax recommends using 8V DCC for operation, to avoid heat damage to locomotive motors & shells. See the Digitrax Decoder Manual for complete decoder test procedures, installation instructions, programming and technical information. Digitrax manuals and instructions are updated periodically. Please visit www.digitrax.com for the latest versions, technical updates and additional locomotive-specific installation instructions.

Installation Instructions - AZL PA1 Locomotive

1. Remove the front coupler assembly then carefully remove the locomotive's shell from the frame by holding the fuel tank and pulling the body shell up. You can use toothpicks or similar to spread the shell slightly. Note the orientation of the shell to frame for reinstallation. **Figure 1** shows the shell and light board removed from the frame. The rear coupler is not removed.



2. Carefully unscrew and save the 4 small Phillips mounting screws holding the factory light board.
3. Lift the light board gently to release it from the motor wire loop contacts. Be careful not to distort these loops as you lift the light board from the chassis.
4. Inspect the Motor wire loop contacts to make sure they are almost perpendicular (85 – 90 degrees) to the frame top surface and are not damaged. Carefully align these loops if necessary.

Figure 1

5. As shown in **Figure 2** align the DZ126Z1 decoder with the small square black CPU chip upwards and closest to the locomotive front. Align each of the 2 motor wire loop contacts with the holes in the two gold contact pads in the middle of the decoder. Gently press down so both of these wire loops engage into their respective holes.



Figure 2

6. Align the PCB end mount holes with the threaded mount holes on the frame castings. Place two screws at diagonal corners and check the tolerances allow the PCB to be centered with the motor loops correctly engaged.
7. Place the final two corner screws, and tighten all 4 gently, to assure good contact.
8. Place the chassis on a programming track and read the 2 digit address. If the decoder address read fails, check you installation and motor contacts. Set the address you wish to use.
9. Place the frame and decoder on some clean Z track and ensure the decoder motion and LED lights work properly.
10. Replace the front coupler and locomotive shell.

Customizing Your Decoder

Your Digitrax decoder is ready to run and will operate using address 03 with no additional programming. For a more prototypical railroading experience, your decoder can be customized for your specific locomotive by programming some of the Configuration Variables, or CVs, available. See the Digitrax Decoder Manual on the Digitrax web site for more information.

Changing the Decoder Address

The first CV most people change is the decoder address. This allows you to independently control each loco with a unique address. Digitrax decoders are shipped with CV01 (AD2) [the two digit address] set to 03. Following is a brief description of how to change the decoder address with a Digitrax DT602 series throttle. See your throttle Manual or system information for complete programming instructions.

1. Place the loco on the **programming track, not to exceed 16V**.
2. On DT602 throttle press the; MENU then 1 keys to enter Quick Decoder Setup menu.
3. Press the READ key, and all the basic decoder addressing information will be automatically displayed, after the required CV reads are completed.
4. The factory address will show "AD2 ShortAdr= 03" Good reads indicate the decoder is functional and you can then edit the AD2 or AD4 LongAdr address at this point. Press the 1 key for AD2/2 digit addressing or 2 key for AD4/4 digit addressing, and follow the scrolling directions on the DT602 display.

Note: CV29 must also be programmed to enable AD4/Long Adr/4 digit addressing. This is done automatically by the DT600 throttles. See your Digitrax Decoder Manual or system manual for how to set up CV29 and other important CV's.

Digitrax Transponding CV61

The DZ126Z1 Digitrax Transponding feature is controlled by CV61. The initial factory set value is 000 for OFF. To turn on transponding, program CV61 to a value of 002. This allows you to use Digitrax transponding to keep track of your rolling stock. When transponding is enabled, the front light of the locomotive will flicker slightly to indicate transponding signal is being communicated.

FCC Information:

Radio or TV Interference (this information is MANDATED by the FCC) This equipment has been tested by Digitrax and is Declared in Conformity with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Note that any modifications to the equipment not expressly approved by Digitrax voids the user's authority to operate under and be in compliance with CFR 47 rules, as administered by the Federal Communication Commission. Digitrax believes any conscientiously installed equipment following guidelines in this manual would be unlikely to experience RFI problems.

For Canadian Users:

"This digital apparatus does not exceed the Class B limits for Radio noise emission from digital apparatus set out in the Radio Interference Regulation of the Canadian Department of Communications."

Le present appareil numerique n emet pas de bruits radio-electriques dépassant les limites applicables aux appareils numeriques de la classe B prescrites dans le Reglement sur le brouillage radioelectrique edicte par le ministere des Communications du Canada. fonctionnement."

Warranty & Repair

Digitrax gives the a Warranty against material defects for one year from manufacture. Visit www.digitrax.com for instructions for returning items for repair.

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

Digitrax, Inc. reserves the right to make changes in design and specifications, and/or to modify or improve its products without imposing any obligations upon itself to install these changes, additions or improvements on products previously manufactured. The newest features are documented on the product pages of the website.

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