



DG7128

Fits many G and larger scale locomotives

G Scale

High-capacity Mobile decoder
7 Amp/7 Amps Peak
12 FX7 Functions, 300ma Output

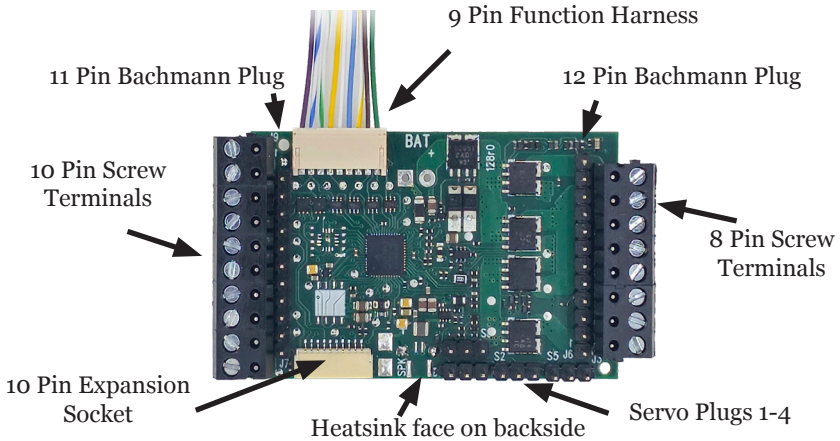
Features:

- High current motor drive capacity. Suitable for G scale locomotives with total motor stall current up to 7 amps, including multiple motors.
- Primary 8-Pin and 10-pin screw terminal 3.5mm plugs for for wiring track, motor and function control, allows decoder to be moved between different locomotives.
- Secondary 11-pin/12-pin 0.1" pitch headers for some compatible DCC Plug AristoCraft and Bachmann locos.
- Digitrax FX7 Functions-Control lights and functions for prototypical lighting effects and on/off control.
- Series 8/7 XF7 Enhanced Decoder Features.
- XF7 4 onboard 9G Servo plugs, with capability for controlling 6 more servos.
- XF7 variable PWM function lead capability for lighting control.
- Firmware may be user updated using a Digitrax USB equipped Command Station with Sound Loader software in decoder IPL mode.
- Digitrax LocoMotion® System – Lets your trains run like the real thing!
- 2 Digit and 4 Digit Addressing.
- Basic, Advanced & UniVersal Consisting.
- SuperSonic motor drive for quiet operation.
- Direct and Operations Mode programming.
- Program CVs using any Digitrax Compatible Control system without having to buy any extra equipment. Decoder Reset by CV8, with or without speed table reset.
- Transponder Equipped ready for transponding ID on your layout.
- Power-on Motor Isolation Protection, helps prevent damage to your decoder.
- Adjustable Over temperature shutdown to protect decoder.
- Heatsink installation option to remove heat, allowing higher ambient temps and current loads before over temp shutdown.
- DCC Compatible.
- FCC Part 15, Class B RFI compliant.
- Operates on DCC track voltage 9V minimum. to 22V maximum.

Parts List:

1 DG7128 7 Amp Mobile Decoder
1 Instruction Sheet
1 9-pin Function Connector Harness

Figure 1: DG7128 Decoder Layout



Quick Installation Instructions: Visit www.digitrax.com for complete installation and technical updates. Refer to **Figure 1** for the decoder layout.

To install using Screw Terminals, follow these steps:

1. Isolate the locomotive motor(s) wires from the track feed wires. *Motor connections must be isolated from the track feed or other voltages.* Refer to **Figure 2** for decoder connections.
2. Connect the Isolated Motor and Track Connections to the appropriate screw terminals as shown in **Figure 2**
3. Connect the function wires that are to be used for e.g. lights to connections designated in **Figure 2**. Screw Terminal or Function Harness connections may be used. Some functions are only available on the function harness.

To install using Bachmann/AristoCraft Plug, follow these steps:

1. Remove any Jumper connections/boards from the Locomotive socket. Verify the connections for your locomotive match the connections specified in **Figure 3**.
2. Plug the decoder into the sockets verifying that the 12 and 11 pin plugs are in the correct orientation and position. Incorrect alignment can result in non-warrantable decoder damage.
3. Connect any additional function wires from the function harness that are to be used for e.g. lights.

Installation Notes:

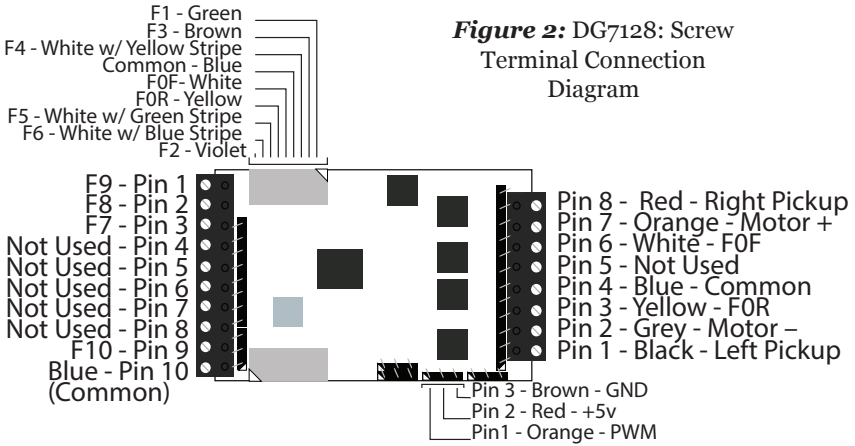
- *Insulate any unused wires so they cannot short to the locomotive frame or track power.*
- *Be sure to use current setting resistors with LED lamps. Refer to locomotive documentation for any lamp requirements.*
- *Backwards servo plug installation should not result in damage*
- *Additional Series 7 and 8 feature configuration info available at www.digitrax.com*
- *Additional heatsink may be installed to assist with heat dissipation.*

Customizing Your Decoder:

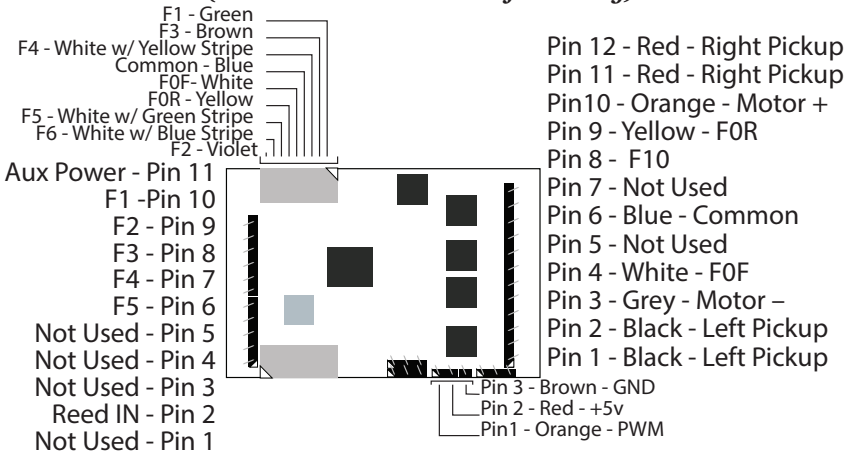
This decoder will initially operate at factory default address 03. For customizing, the following CV table gives the common CVs used by this decoder. Reading CV8 on a programming track, or Digitrax Mainline Operations mode will return CV8 = 129, confirming the decoder is functional.

See the Digitrax web site for more information on programming CVs.

CV#	Control Usage	Range	Default
1	2 Digit Address	1-127	03
2	Vstart	0-255	0
3	Acceleration Rate	0-32	0
4	Deceleration Rate	0-32	0
5	Vhigh	0-255	255
6	Vmid	0-255	128
7	Product ID- Series8 standard mobile decoder		209
8	Manufacturer ID- Digitrax		129
9	Motor Drive frequency in KHz	4-50	0->16
10	Motor feedback voltage trim	32-127	0->64
11	Packet timeout, in seconds. 0= Off	0-60	6
17/18	4 Digit Address		0000
19	Consist 2 digit Address	1-127	0
29	Decoder Primary Configuration		2
33-46	Function to Output Lead mapping		
49	FX setting White/FoF lead	0-255	0
50	FX setting Yellow/FoR lead	0-255	0
51	FX setting Green/F1 lead	0-255	0
52	FX setting Violet/F2 lead	0-255	0
65	Kick Start	0-255	0
66	Forward Trim	0-255	127
67-94	Speed Table	0-255	
95	Reverse Trim	0-255	127
113	FX setting F3 lead	0-255	0
114	FX setting F4 lead	0-255	0
115	FX setting F5 lead	0-255	0
116	FX setting F6 lead	0-255	0
120	Decoder type- 7amp wired		87
248	Decoder Temp/Shutdown in deg F	100-196	196
253	IPL download version		>4



**Figure 3: DG7128: Bachmann/ AristoCraft Connection Diagram
(Screw Terminals Omitted for Clarity)**



Warranty & Repair

Digitrax gives a one year *Warranty* against manufacturing defects for this product. Visit www.digitrax.com for instructions for tech support and returning items for repair.

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



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Excepted

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Need Support?

helpdesk.digitrax.com

DG7128



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