Item Number 36-550

E-Z COMMAND®

Specification

Technical Data

"Silent drive" operation: current carrying capacity	
of the decoder in sum	1.0 A
motor output	0.9 A
Normal operation:	
current carrying capacity	
of the decoder in sum	1 A
motor output	1 A
function output A and B	150 mA
function output C	500 mA
function output D	150 mA
addresses	1 - 9999
speed steps	14, 27, 28, 128
dimensions	31.5 x 16.0 x 3.8 mm

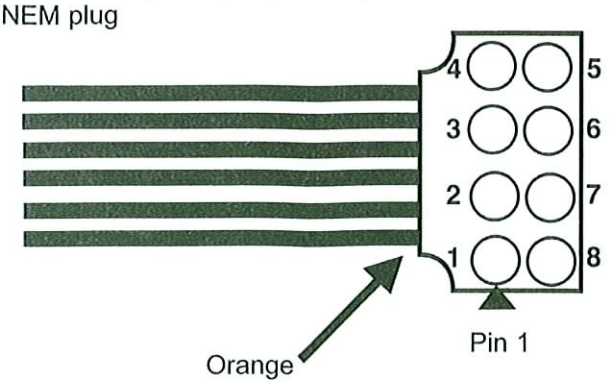
Features

- Selectable "Silent Drive" high frequency motor operation reduces noise
- Acceleration and deceleration separatley adjustable
- Programming on main
- Multi unit capability (advanced consisting)
- 2 function outputs A and B may be configured in many ways: depending on direction (FO), output A forward active, output B reverse active or individually, output A reacts on FO, output B reacts on F1; outputs can be dimmed Marslight, Gyrolight, Strobe, Double Strobe.
- Function outputs D and C: mapping to F1 through F8; blinking; Ditchlight
- Operation on standard DC systems (analogue operation) possible. This feature can be disabled.
- With NEM652/NMRA plug

The pin allocations of the NEM652 plug:

PIN	Meaning	Wire Colour
1	Motor terminal 1	Orange
2	Function output B (rear headlight)	Yellow
3	Function output C	Green
4	Left rail pickup	Black
5	Motor Terminal 2	Grey
6	Function output A (front headlight)	White
7	Function positive common	Blue
8	Right rail pickup	Red

Function output D (Purple wire) is not connected to the NEM plug



Getting Started

The Bachmann ***E-Z COMMAND*** locomotive decoders can be used with standard digital control with an NMRA conformance seal. If in doubt, ask the system suppliers.

Note the maximum current-carrying capacity of the outputs must not be exceeded. Exceeding this will destroy the decoder! The parts of the locomotive decoder must not on any account touch the metal components of the chassis or the body of the locomotive. This could cause a short-circuit within the locomotive decoder which might destroy it.

Never wrap the locomotive decoder in insulating tape, as this prevents the necessary air circulation around the decoder. Instead, put insulating tape or something similar around the metal components of the locomotive. By doing so you can avoid unintentional short-circuits without depriving the decoder of air. Use double-sided adhesive-tape to affix the decoder.
Locomotives equipped with ***E-Z COMMAND*** decoders must not be run using powered overhead line (catenary) either on conventional DC control or DCC control This could subject the locomotive to double the voltage and this would destroy the decoder.

The current carrying capacities noted in the technical data above may not be exceeded.
Before installing a ***E-Z COMMAND*** Decoder, check the loco in normal DC operation to make sure that it works as it should before modifying the locomotive.
Replace worn wheel contacts, motor brushes and blown bulbs. Only a locomotive that is mechanically OK will function properly with a locomotive decoder.

Installation of the 36-550

These decoders come with a NEM652 / NMRA medium plug. To install the decoder simply remove the dummy socket in your locomotive and install the decoder plug. To ensure the headlights work properly you must align the plug properly. Pin 1 of the plug connects to the orange wire. Ensure this is aligned to pin one of the locomotive. If the plug is installed backwards the lights will not work. Be careful when installing or removing the plug so that the pins do not become bent or broken.

Follow the ***E-Z COMMAND*** instructions to change the decoder address.
The decoder has advanced programmable functions using suitable equipment, but it will operate as supplied. Do not worry if you do not understand all of the functions of the decoder. For advice, please call the Service Department on 01455 841756 or e-mail via *www.bachmann.co.uk*

These guidance notes apply only to Bachmann decoders with a blue identity label.

PLEASE NOTE that except for allocating address and direction, ***E-Z COMMAND*** is unable to program decoder CVs

Programming the decoder
(Not applicable to *E-Z COMMAND*)

The locomotive address, acceleration and deceleration delay, and all other features of the locomotive decoder can be changed as often as desired by reprogramming. The features are "stored" permanently in special locations even when the operational voltage is switched off. These locations are called "configuration variables" or simply CV. The configuration of the values is done electronically, which means that it is not necessary to open the locomotive again after the decoder has been installed.
On delivery the decoder is programmed for operating with the basic address 03, 28 running notches and an internal speedline. The decoder can be used immediately on purchase with these basic configurations. All configurations can, of course, be changed.
Example to turn 'Silent Drive' feature on, set CV50 to a value of 8

Testing the installation on equipment other than Bachmann *E-Z COMMAND*.

Place the locomotive on the programming track (without its housing) and read the address. Ex-works, the decoder is programmed to the address 03. If you have connected the decoder correctly thus far you should now be able to read the address. If you are not able to do so it is possible that you have made a mistake when connecting the cables. Do not subject the loco to full running track power until you obtain the correct "03" address read-out. Check the cable connections and change them as required. You should now be able to send your locomotive on its first test run on your layout.

GUARANTEE

Bachmann Europe Plc will remedy any defect or malfunction occurring on this product during a six month guarantee period from date of purchase.This guarantee does not extend to defects or malfunctions caused by damage or unreasonable use.

If a claim is made within the six month guarantee period, in the first instance, return the product to your dealer. In the event of your problem not being satisfactorily resolved, return the product, with a brief explanatory note describing the fault(s), to the Service Department at Bachmann Europe Plc with proof of purchase

This guarantee is quoted in addition to all legal rights of the purchaser under the sale of goods act, and shall expire six months from date of purchase. Under no circumstances shall Bachmann Europe Plc, be responsible for any consequential damages arising in regard to any Bachmann product.

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List of supported CVs
Bits are counted beginning with '1'

CV	Min-Max		CV Definition	Deft
1	1-99		Locomotive address	3
2	0-31		Starting voltage	1
3	1-255		Acceleration delay	1
4	1-255		Deceleration delay	1
7	-		Version number	46
8	-		Manufacturer ID	101
17			Extended address, high byte	0
18			Extended address, low byte	0
19	1-99		Multi unit (consist) address	0
29	Bit		Decoder configuration 1	6
	1	'0'	Direction normal	0
		'1'	Direction inverted	
	2	'0'	14/27 speed steps	
		'1'	28/128 speed steps	1
	3	'0'	Loco operates in digital mode only	
		'1'	Loco operation possible on DC & DCC	
	4		Always 0	0
	5	'0'	Factory pre-set speed curve is used	0
		'1'	User defined speed curve is used	
	6	'0'	Decoders uses CV1 as addresses	0
		'1'	Decoder uses CV17 and CV18 as addresses	
	7-8		Always 0	0
50	Bit		Decoder configuration 2	0
	1		Not used	0
	2		Not used	0
	3	'1'	Brake momentum on DC operation if CV29 is not set	0
	4	'1'	Silent drive switch on	0
		'0'	Silent drive switch off	
	5-8		Not used	0
51	Bit		Configuration function output A	
	1	'0'	Function outputs A and B react directionally	0
		'1'	A and B react independantley: A to F0 & B to F1	
	2		Dimming function output A, only effective if bit 3 is set	
		'0'	Function output A is always dimmed if bit 3 is set	0
		'1'	and bit 1=0: dimming switched with F1	
			and bit 1=1: dimming switched with F4	
	3	'1'	Function output A can be dimmed	
	4		Not used	
	5	'1'	Gyrolight	0
	6	'1'	Marslight	0
	7	'1'	Strobe	0
	8	'1'	Double strobe bits 4-8 only effective if bit 1 is set	0
			If more than one bit is set, the higher one is effected	
52	0 - 255		Dimming F-output A, 0 is dark 255 is max brightness	64
53	Bit		Blinking Function outputs C and D	
	1	'1'	Output C blinks if active	0
	2	'1'	Output D blinks if active	0
	3	'1'	Ditchlight	0
	4-8		Not Used	
54	Bit		Function assignment for output C if Ditchlight,	
			this function switches Ditchlight on and off	
	1	'1'	Output C is controlled by F1	1
	2	'1'	Output C is controlled by F2	0
	3	'1'	Output C is controlled by F3	0
	4	'1'	Output C is controlled by F4	0
	5	'1'	Output C is controlled by F5	
	6	'1'	Output C is controlled by F6	0
	7	'1'	Output C is controlled by F7	0
	8	'1'	Output C is controlled by F8	0
55	Bit		Function assignment for output D same as CV54	2
			effective on output D	
56	0-255		Blinking Rate for outputs C & D frequency in Hz=	15
			1/0.016* (1+CV56)	
57	Bit		Configuration function output B	
	1		Not used	0
	2		Bits 2-8 as CV51, effect on output B	
58	0-255		Dimming function output B,0 is dark,255 is max	64
			brightness	
67 to 94	0-255		Values for user defined speed curve	

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