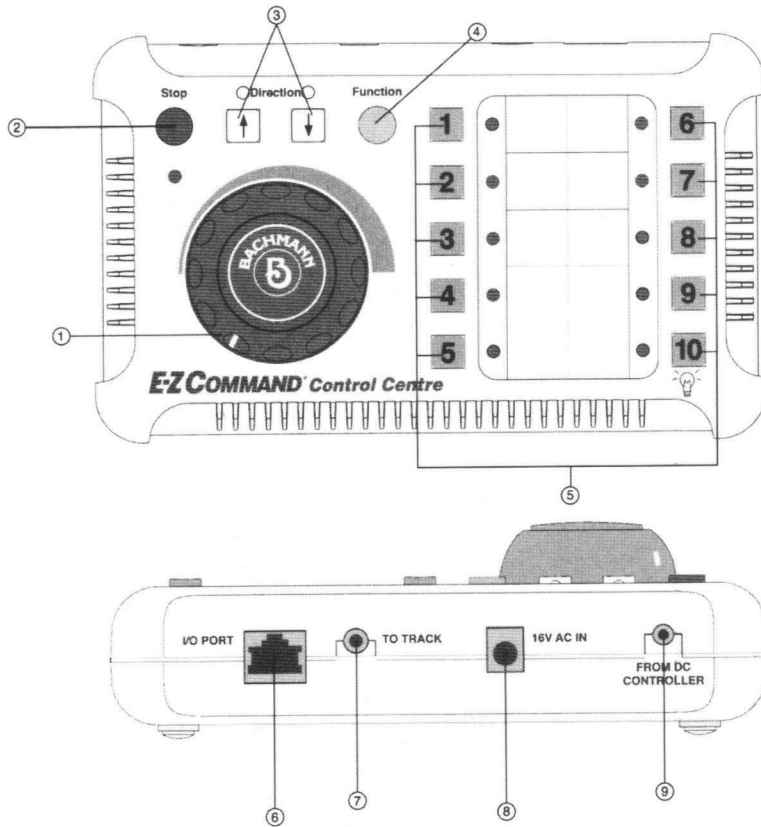# E-Z COMMAND®

Digital Command Train Control System

USER MANUAL

E-Z Command is able to operate a locomotive without a decoder (on **ADDRESS 10**) by adjusting the **DCC** signal - it does not operate **DC**. Please exercise caution running a locomotive without a decoder. Do not leave stationary. Do not use locomotives with small motors (eg. small **OO** or any **N** scale) without decoders, as damage to motors may result.

E-Z COMMAND®

Thank you for purchasing Bachmann E-Z COMMAND Digital Controller. In the following pages we aim to explain how to get the best from your E-Z COMMAND Digital Controller and enjoy the total freedom of running your new model layout using (DCC) Digital Command Control. The manual is divided up into two sections, we advise you to read the first section called Quick Start, which will enable you to set up your E-Z COMMAND controller and enjoy running trains quickly and easily. Within the reference section you will find many useful tips on how to program different sections of the E-Z COMMAND Digital Controller.

E-Z COMMAND Controller in Detail

1) Speed Control

2) Stop Button

3) Direction Control
LED indicates current direction

4) Function Control

5) Locomotive Address and Function Buttons
LED indicates current direction

6) X-Bus Socket
To connect E-Z Command Companion

7) Track Output

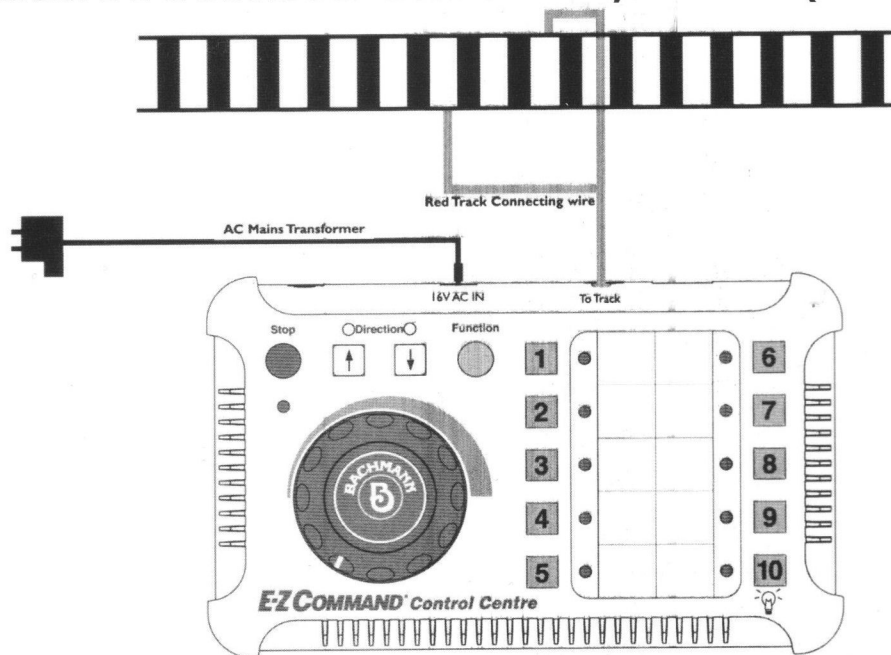**8) 16v AC Input Socket**

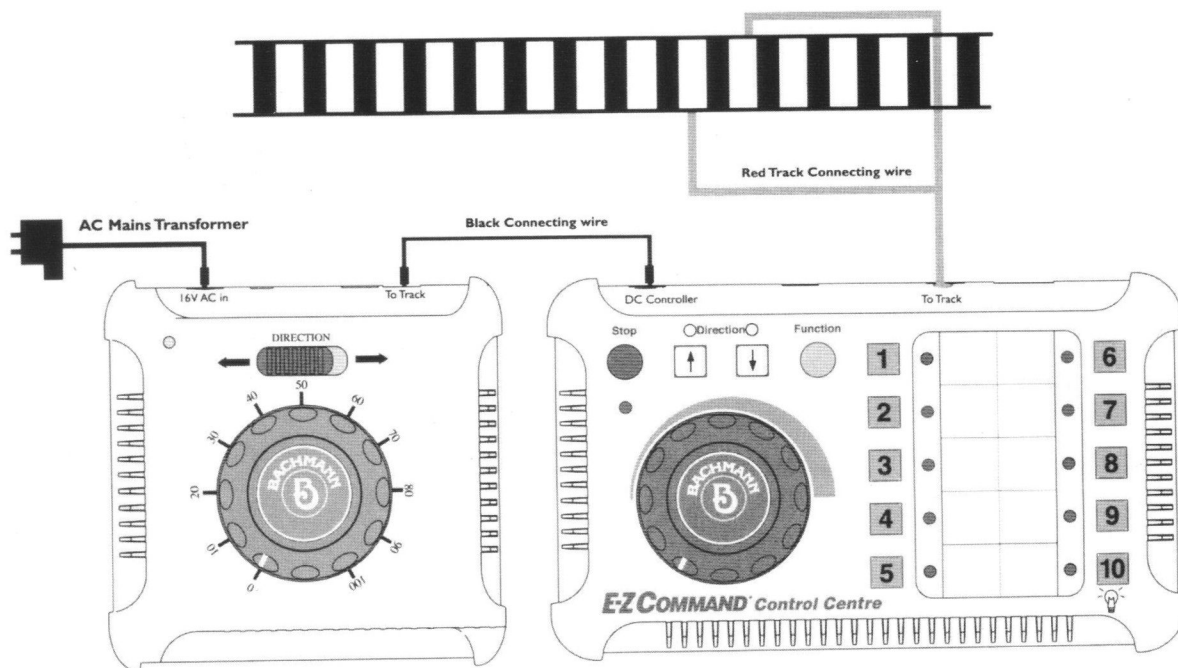**9) Analogue Input**
From DC controller

QUICK START
How to connect E-Z COMMAND Controller to your track (REF 1)

⚠️ **Plug mains transformer power supply into wall socket only after assembling other connectors**

AC Mains Transformer

Red Track Connecting wire

16V AC IN   To Track

E-Z Command Controller
(36-500)

How to connect additional DC Controller (REF 2)

Red Track Connecting wire

AC Mains Transformer   Black Connecting wire

16V AC in   To Track   DC Controller   To Track

DIRECTION

50
40   60
30   70
20   80
10   90
0   100

BACHMANN

Stop   ○Direction○   Function

↑   ↓

1   6
2   7
3   8
4   9
5   10

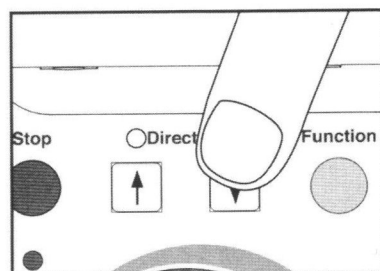BACHMANN

E-Z COMMAND Control Centre

To start running a digital locomotive is as easy as **1 - 2 - 3** with **E-Z COMMAND**.
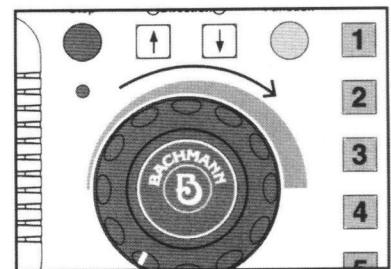To connect to an existing layout, remove all DC controllers and connect the E-Z COMMAND unit. Switch any section/isolation switches to "ON" so that the track on the entire layout is live.

on○   Function

↓   1
          2
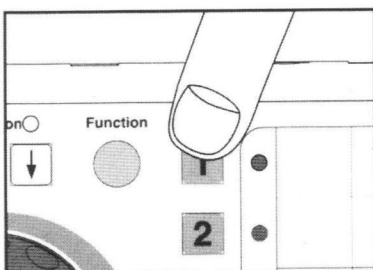
1) Select loco address

Stop   ○Direct   Function

↑   ▼

2) Select direction of travel

↑   ↓   1
   2
BACHMANN   3
          4

3) Turn speed control dial

Select loco address.

Most Decoders have a default address of 3. Select (address 3) and turn the dial. A second train given another address can also be run.

Select (address 4) to run a loco with address 4. Loco 3 stays running at its selected speed and direction in background until reselected.

At any time you need to cut the power to the track, press the stop button. However, when the stop button is pressed again, the locomotives will resume current speed and direction. The selected locomotive will run at the speed that the speed control dial is set to.

ction○   Function

↓   1
          3
          4

Stop   ○Direction

↑
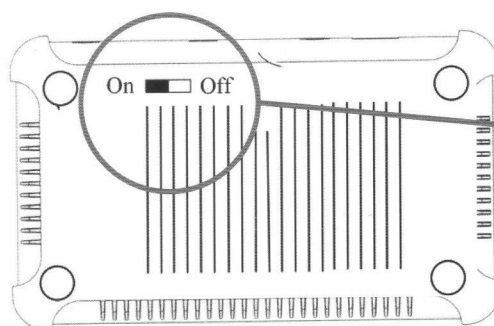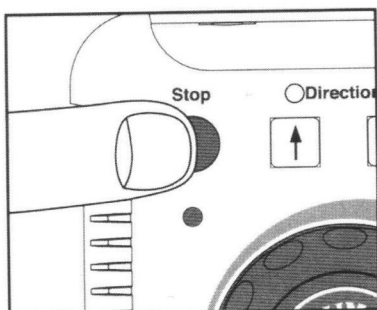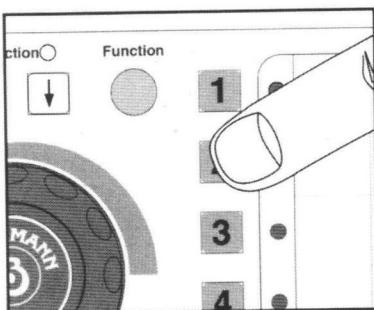
On ▬▭ Off

Location of ON/OFF switch can be found on the underside of unit

REFERENCE FAQ

How do I set an address to a decoder?
• Remove other locomotives from track (SEE TECHNICAL NOTES)
• Select and run the locomotive
Keeping address button depressed, press **STOP** button, release both buttons - the power LED will now flash quickly.
• Press new **ADDRESS** - Locomotive moves and LED flashes slowly
• Press **STOP**

I don't know the decoder address?
• Start the address programming with any **ADDRESS + STOP** - LED will flash quickly
• Now place the locomotive on the track
• Press new **ADDRESS** - locomotive moves and LED flashes slowly
• Press **STOP**

TOP TIP: For address programming, disconnect the E-Z Command Controller from the layout and attach to separate piece of track for the purpose.

How do I programme direction of running?
On Digital Systems, forward and reverse are relative to the locomotive and not the track as in a DC system. It is possible to select the direction that the train will move as 'forwards' by following these instructions -
• Press current **ADDRESS** button
• Activate the locomotive by running a short distance
• Keeping address button depressed, press **STOP** button, release both buttons - the power LED will now flash quickly
• Press the direction button that you would like to be assigned for forward running
• Press locomotive address button
• Press **STOP**
• Direction programming is now complete

How do I work the functions?
• Press the yellow **FUNCTION** button. The button toggles the function mode on and off.
• The flashing LEDs adjacent to the 1-10 buttons indicates the train under control.
• **F10** switches the basic light functions on and off.
• **F1** to **F8** control further functions on customer fitted advanced specification decoders.
• Control of speed and direction of the selected locomotive is still possible.

Can I use digital and analogue trains?
The unit can operate nine digital trains on addresses 1-9 and one OO/larger scale analogue (without a decoder) as address 10. Alternatively, you can also use Bachmann item 36-560 as a plug-in. Ten digital trains can be used as address 1 to 10 with the E-Z Command Controller (36-500) and one analogue train can be controlled separately by 36-560.

WARNING: DO NOT RUN AN ANALOGUE N SCALE MODEL (WITHOUT A DECODER) ON A DCC SYSTEM AS IT CAN RESULT IN TERMINAL DAMAGE TO THE MODEL.

How do I run multiple trains?
One train can be started and left running, whilst control is moved to a second. The first will run in 'background' on the settings it was given. Control may be moved back to the first train by pressing the button for its address, the second train then runs in the background.

'Double Heading' is possible by allocating the same address to two locomotives. When one engine is running forwards and the other in reverse (example: BR Class 20 Diesels in 'nose to nose' arrangement) one engine must be set in reverse as in the programming instructions above.

Remember, the system relies on you to prevent crashes. Pressing the **STOP** button cuts power to the track but trains will resume their existing speeds and direction when the **STOP** button is pressed for a second time.

The limit of multiple train operation is the power available to the track. The 1 amp power unit has enough power to operate two trains simultaneously.

My train will not work!
Check:
• All wiring is correctly installed as the diagram (REF 1) in the Quick Start section.
• The transformer is plugged onto the wall socket and switched on - red LED on unit is on constantly.
• The correct train is selected on the address button.
• The **STOP** button is not pressed. If so, the red power LED will be flashing.

How E-Z Command Works
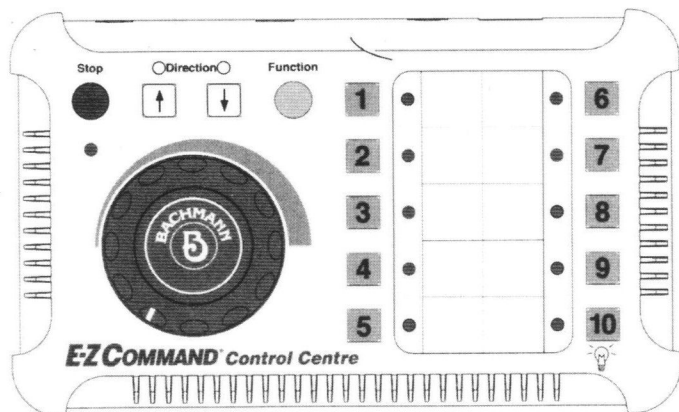
Command unit converts control knob and button inputs into digital commands. It produces a digital signal and feeds the track.

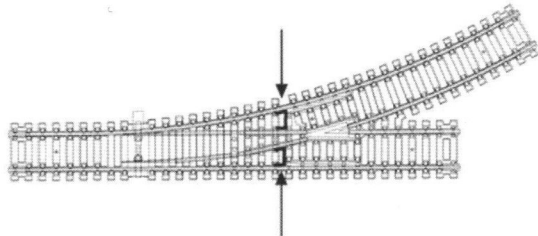Decoder with individual address on locomotive responds to commands sent to it.
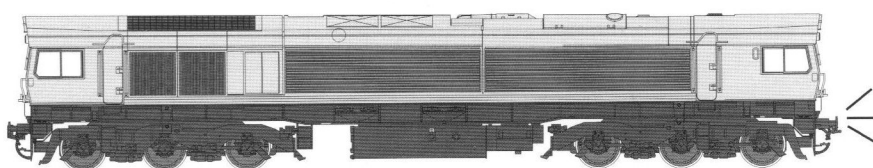
Decoder Outputs
- Power the motor in response to speed control knob setting.
- Power lights and functions in response to function buttons.

Motion

Wiring your Layout

For best results a DCC layout should have all track live. Details of how to wire a layout can be found in various books on the subject sold by model shops and book stores. However, a simple solution for a train set or small layout is to put a staple in the location, indicated on each point to carry power across the whole layout.

Technical Notes

E-Z Command uses an unusual feature called 'SERVICE MODE PROGRAM LOCK' which allows decoders supporting the feature to be programmed on a shared service track. Decoders not supporting this must be removed.

The decoder sold as 36-552 and fitted to Bachmann Branchline Junior locomotives and USA DCC On Board product lines have a decoder supporting the feature.

Expand with E-Z Command Companion 36-510 and control a second train with your E-Z Command system.

Do's and Dont's

• Never connect any other controller to the same section of track at the same time as an E-Z COMMAND unit. Separate 'power districts' can be created using separate units but they must be double isolated so that no train can bridge the join between sections.

• Never use an electric track cleaner alongside your **E-Z COMMAND**.

• Decoder fitted locomotives will run on a DC controlled layout, but don't use a feedback type DC controller.

• DC locomotives can be run with **E-Z COMMAND** as either loco 10 or with the 36-560 DC controller as an 'add on'. As there is a constant AC on the track we recommend that you do not leave a DC locomotive stationary on the layout for extended periods. A hum will be heard from locos not fitted with decoders under DCC control. Any lights will all be lit and are not controllable in DCC mode.

• When using a 36-560 DC controller with the **E-Z COMMAND** the power is always connected through the 36-560 DC controller as shown in the wiring diagram (REF 2).

• Only plug a Bachmann **E-Z COMMAND** device, or other device specifically approved by Bachmann, into the X-Bus socket. Other devices may have the same connector but are not necessarily compatible.

• Bachmann **E-Z COMMAND** will work with any DCC standard locomotive decoder. However, only 'third generation' decoders support 'programming on the main' that is required for the programming by **E-Z COMMAND**. Check with your decoder instructions and remove any locomotive that does not have an appropriate decoder from the track during programming.

• Only use the Bachmann supplied wall transformer with **E-Z COMMAND**.

• Disconnect mains transformer from the wall when not using **E-Z COMMAND**.

• No capacitor must be connected across the running tracks (sometimes done for TV interference suppression). Some power clips or feeds have these within them.

**Please direct technical support and warranty enquiries to : 01455 841756
or via the website: www.bachmann.co.uk
Further information on DCC is also available on the website.**

BACHMANN EUROPE PLC: CONSUMER WARRANTY

The product that this certificate is enclosed with has a Warranty for 12 months from the date of purchase against faulty materials or workmanship subject to the following conditions. During this period such defects that occur will be repaired or defective parts replaced free of charge

1. This Warranty applies only if the item was purchased from an authorised retailer of Bachmann Europe plc ('Bachmann') within the European Union / EEA. This Warranty does not confer any rights other than those expressly set out above and does not cover any claims for consequential loss or damage. The Warranty is offered as an additional benefit and does not affect your statutory rights as a consumer.

2. For claims under this Warranty, the product must be returned to Bachmann at the owners expense and risk directly to Bachmann Europe plc, Moat Way, Barwell, Leicestershire LE9 8EY with evidence of the purchase date in form of retailer receipt /invoice accompanied by a letter or Service Request form setting out the date and place of purchase, giving a brief explanation of the problem that has led to the claim. It is essential that the claim reach the above address on or before the last day of this Warranty period. Late claims will not be considered.

3. The benefits of this Warranty are available only to the initial retail purchaser of the product for the time of ownership of the product or expiry of the warranty period whichever should come first and are not in any way transferable to another

4. The Warranty does not extend to cover damage resulting from misuse or careless handling, accidental damage, wear and tear, or use on a voltage supply other than that stamped on the product as appropriate.

5. The Warranty may be considered void if repairs have been attempted other than by Bachmann staff.

6. The Warranty is on the original product in its entirely and does not extend to individual components removed from the product. In respect of train sets the warranty applies to motorised units and controllers only

7. In the event that Bachmann chooses to replace a product it will be with the nearest appropriate model of its choice.

8. Bachmann reserves the right to decline service to any model that has been fitted with a decoder after manufacture.

9. In the case of a Bachmann DCC Sound Decoder Fitted model a seal secures the decoder in place. Removal of this will void the Warranty.

10. Bachmann will not be held responsible for damage to or loss of an aftermarket decoder fitted to a model submitted for service under the warranty

11. The fitting of a Bachmann decoder with a current Warranty shall not be deemed to change the position with regard to a product that is otherwise outside its own Warranty. It may be necessary to change decoder settings during service

12. Bachmann's liability under this Warranty will in no case exceed the price paid for the product as originally manufactured

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www.bachmann.co.uk

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