E-Z COMMAND®

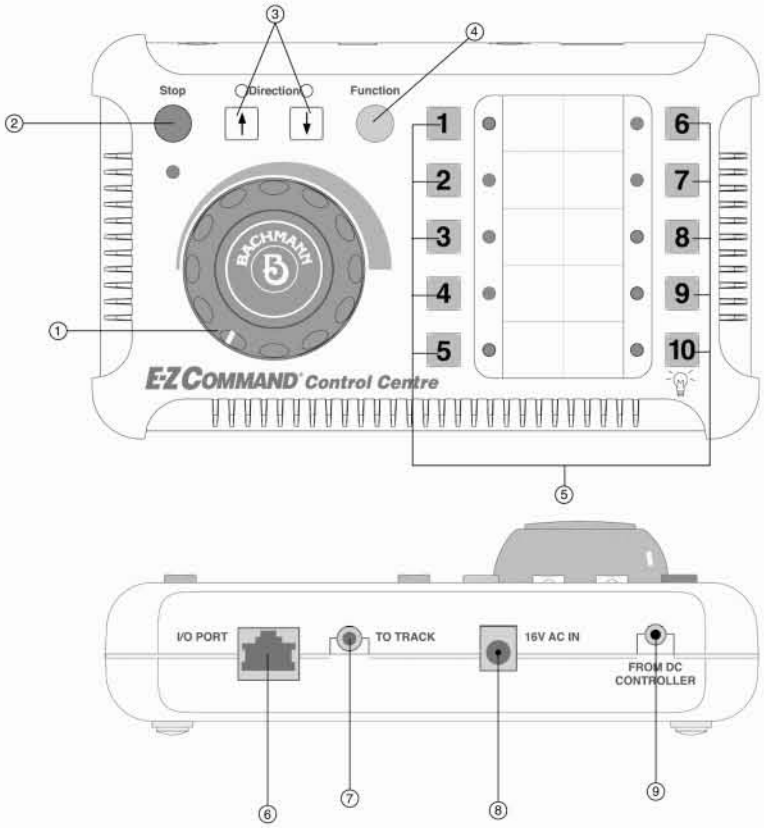
Digital Command Train Control System

USERS MANUAL

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 selection

6) X-Bus socket
To connect further devices

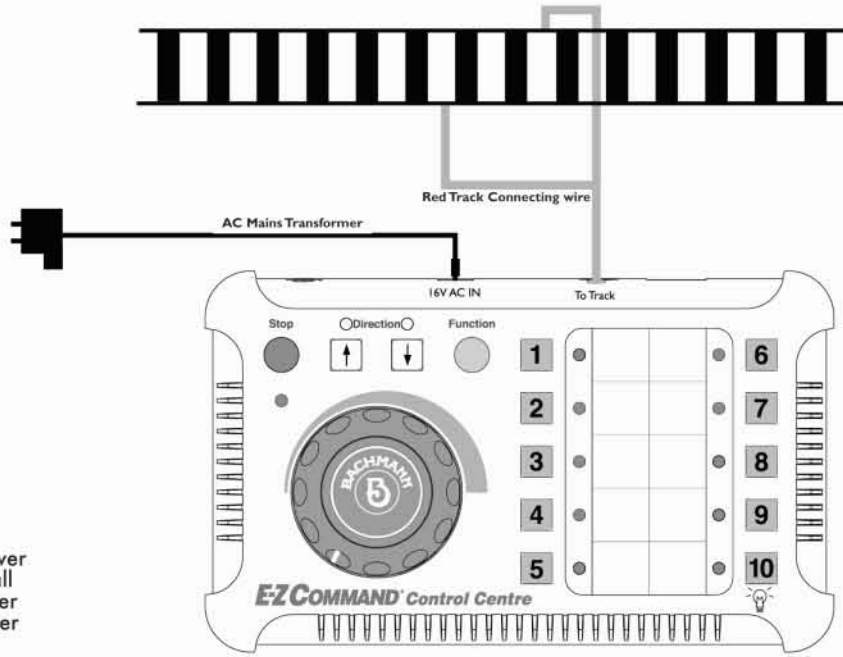
7) Track output

8) 16v AC input socket

9) Analogue input
From DC controller Item No. 46605

QUICK START

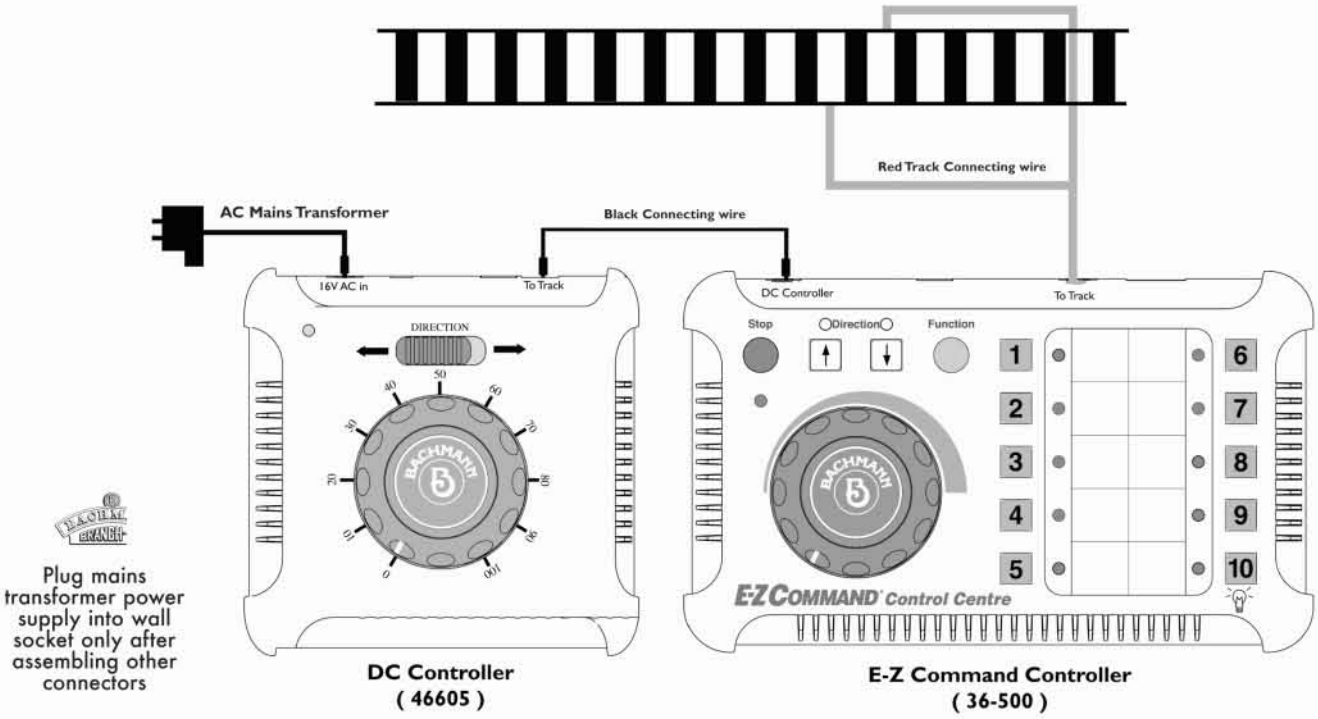
How to connect *E-Z COMMAND* Controller to your track *(REF 1)*



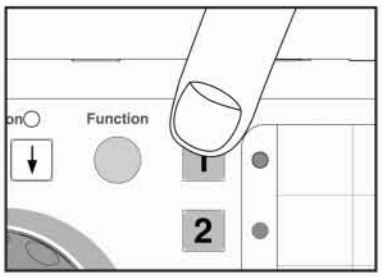
Plug mains transformer power supply into wall socket only after assembling other connectors

E-Z Command Controller
(36-500)

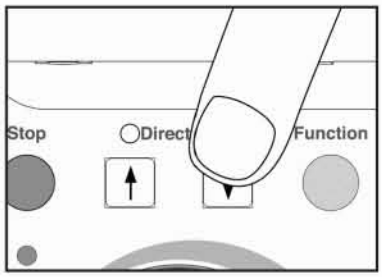
How to connect additional DC controller *(REF 2)*



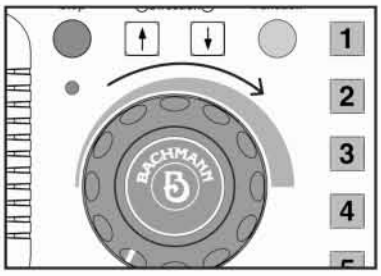
To start running a Digital locomotive it's as easy as **1 – 2 – 3** with ***E-Z COMMAND.***
To connect to an existing layout, remove all DC controllers and connect the ***E-Z COMMAND*** unit. Switch any section/ isolation switches you have to "on" so that the track on the whole layout is live.



1) Select loco address

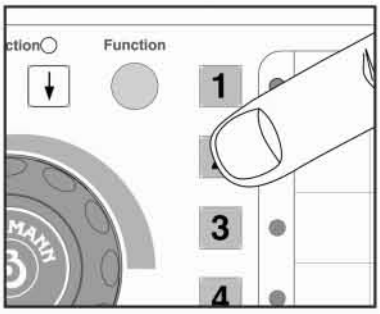


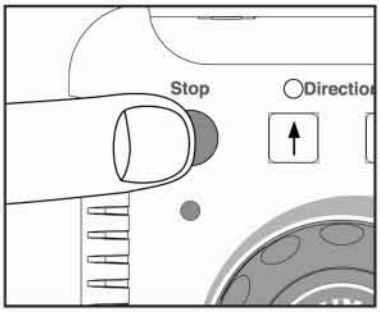
2) Select direction of travel



3) Turn speed control knob

The default address for new decoders is 3, however the twin locomotive digital sets are supplied with the locomotives coded to **1** ("Stuart") and **2** ("Greg") In the Diesel freight set, the locomotive is programmed to **3.**





4) To run a second locomotive at the same time as locomotive number 1 i.e. Greg *(code 2)* press the number 2 button. At this point the locomotive number **1** will carry on
running at the last speed and direction setting, (we call this running in background).
To start locomotive number **2** turn the speed control knob clockwise.
The locomotive should now start to move. If you wish to change the direction of locomotive number **2** follow the instructions in part (2). At any time you wish to change the speed of locomotive **1** press number 1 button and then locomotive number **2** will run in background mode.
The 1 amp transformer supplied will run two locomotives at any one time.

5) 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 knob is set to.

REFERENCE

If you already have a standard DC locomotives *(without DCC Decoders fitted)* you can still run them as part of your Digital train system, however only ONE DC locomotive should be run at any one time.
To run a DC locomotive press the number (10) button, this will then activate the DC locomotive. To drive the DC locomotive follow the procedure in the same way as you would a digital locomotive. *(Refer to Quick start)* If a digital locomotive is already running it will run in background mode, if you start your DC locomotive first and then wish to run a digital locomotive the DC locomotive will then run in background mode.

Programming a train to an address button

If you are using a locomotive with a decoder from a supplier other than Bachmann, check that it supports "programming on the main". Locomotives that do not support this feature should be removed from the layout during programming operation. By default, a new decoder-fitted locomotive will have an address of 3.

1. Press address button 3. *(ie its existing address)*
2. Activate the locomotive by running a short distance.
3. Keeping button 3 depressed, press STOP button, release both buttons - the Power LED is now flashing quickly.
4. Press the address button for the address the locomotive is to be coded to - the locomotive moves slightly to indicate its response and the power LED is now flashing slowly.
5. Press the **STOP** button.
6. Programming is now completed.

Programming 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:

1. Press current address button.
2. Activate the locomotive by running a short distance.
3. Keeping address button depressed, press STOP button, release both buttons- the Power LED is now flashing quickly.
4. Press the direction button you wish to be the forward running to be assigned to.
5. Press loco address button.
6. Press the **STOP** button.
7. Direction programming is now completed.

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 lights function 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.

Digital and analogue

The unit can operate Nine digital trains on addresses 1 to 9, and one analogue as address 10 or alternatively, using Bachmann item 46605 DC Analogue controller as a plug-in, ten digital trains can be used as addresses 1 to 10 and one analogue train is controlled separately by the 46605 DC controller.

Running 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 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.

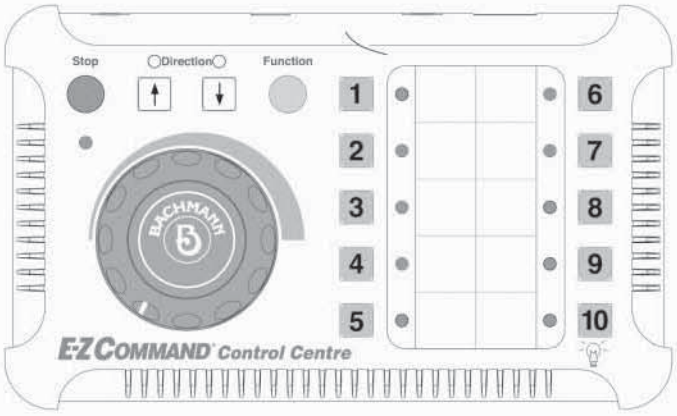
The limit of multiple train operation is the power available at the track. The 1 amp power unit has enough power to
operate two trains simultaneously.

Fault finding

My train won't work!
Check:

- All wiring is correctly installed as the diagram REF 1, 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



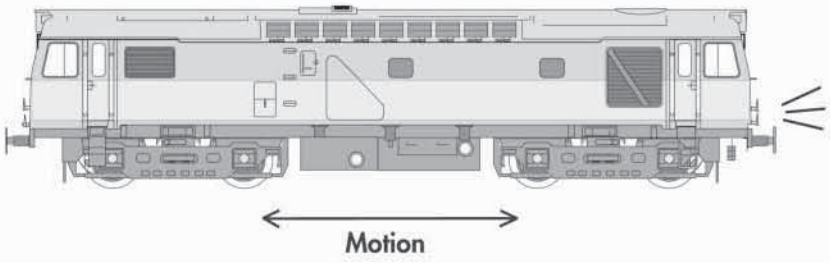
Command unit converts control knob and button inputs into digital commands.
It mixes them with AC power and feeds the track

Decoder with individual address on locomotive responds to commands sent to it.

Decoder outputs

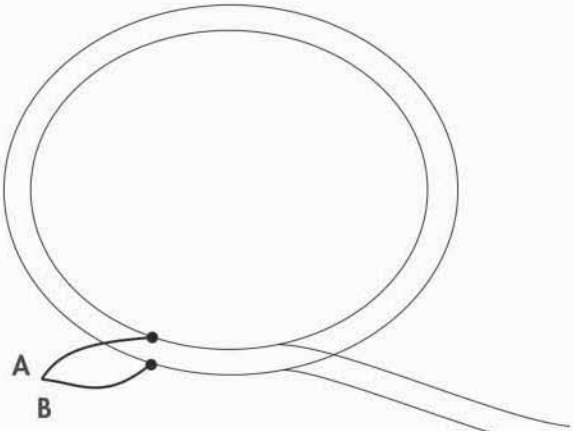
- Power the motor in response to speed control knob setting.

- Power lights and functions in response to function buttons



Wiring your layout

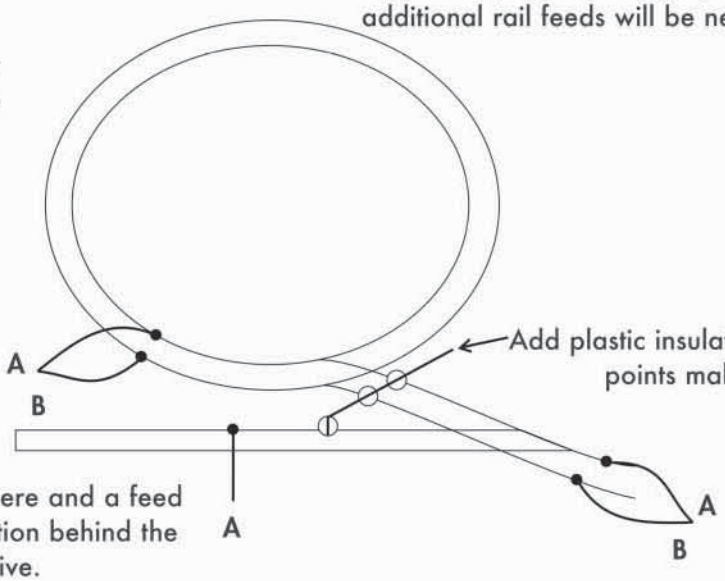
Oval of Track



On a simple layout, place your power connector on the track so that sidings etc, can all be fed from your chosen location

Most points made by major manufacturers are 'Self isolating' - when thrown against a train in a siding, they act as an electrical switch too, and the train stays put. The point works to put both rails in the siding to the same polarity so there is no circuit. On a DCC layout, you will want to have all your track live so that your train light etc, can be used when loco is not moving.
To do this, you need to make sure that there is power to every section of track, and you will find that additional rail feeds will be needed. *See diagram below.*

Connect the wires from your ***E-Z COMMAND*** output to the rails one to feed to rail '**A**' and one to feed rail '**B**'



Add plastic insulating joiners where two points make a crossover

Add a plastic rail joiner here and a feed to the rail so that the section behind the point can be live.

Add another power feed for this section of track.

Do and Dont's

• **Never** connect any other controller to the same section 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 electronic 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 46605 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.

• When using a 46605 DC controller with the ***E-Z COMMAND*** the power is always connected through the 46605 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.

• Do not run locos with coreless motors under DCC without fitted decoders under address. Be careful when running other conventional DC locos

• A 10000 Hz hum is heard from locos not fitted with decoders under DCC control. Any lights will all be lit and are not contollable in DCC mode.

Please direct technical support, and warranty enquiries to the Bachmann helpline on: 0870 7519990 or via the website: www.bachmann.co.uk Further information on DCC is available on the website

YOUR GUARANTEE

By this consumer guarantee, Bachmann Europe Plc, guarantees the product to be free from defects in materials and workmanship for a period of 1 (ONE) year from the time of its original purchase.
If during this period of guarantee the product proves defective due to improper materials or workmanship, Bachmann Europe Plc, will without charge for labour or parts, repair or (at Bachmanns discretion) replace the product or its defective parts upon the terms and conditions set below. Bachmann reserves the right (at their sole discretion) to replace spare parts of defective products or to replace low cost products with either new or refurbished spare parts or products.

CONDITIONS

1. This guarantee will be granted only when the original invoice or sales receipt *(indicating the date of purchase, product type and dealers name)* is presented together with the defective product.
Bachmann Europe Plc reserves the right to refuse the free-of-charge guarantee service if the above document cannot be presented or if the information contained in it is incomplete or illegible.
2. This guarantee will not reimburse nor cover the damage resulting from adaptations or adjustments which may be made to the product, without the prior written consent of Bachmann Europe Plc , in order to confirm to the national or local technical or product was originally designed and manufactured.
3. This guarantee covers none of the following:
a) Periodic maintenance and repair or replacement of parts due to normal wear or tear.
b) Any adaption or changes to upgrade the product from its normal purpose as described in the instruction manual, without the prior consent of Bachmann Europe Plc.
c) Transport costs, home service transport costs and all risks of transport relating directly or indirectly to the guarantee of the product.
d) Damage resulting from:
1. Misuse, including but not limited to *(a)* failure to use the product for its normal purpose or in accordance with Bachmann Europe Plc's instructions on the proper use and maintenance, and *(b)* installation or use of the product in a manner inconsistent with the technical or safety standards in force in the country where it is used.
2. Repair done by non-authorised Service stations or Dealers, or the customer themselves.
3. Accidents, lighting, water, fire, improper ventilation or any cause beyond the control of Bachmann Europe Plc.
4. Defects of the system into which this product is incorporated.
5. This guarantee does not affect the consumer's statutory rights under applicable national national laws in force, nor the consumer's rights against the dealer arising from their sales/purchase contract.

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