



INSTRUCTION MANUAL: Connecting Cobalt - Model by Model

Click on any image to be linked to more information

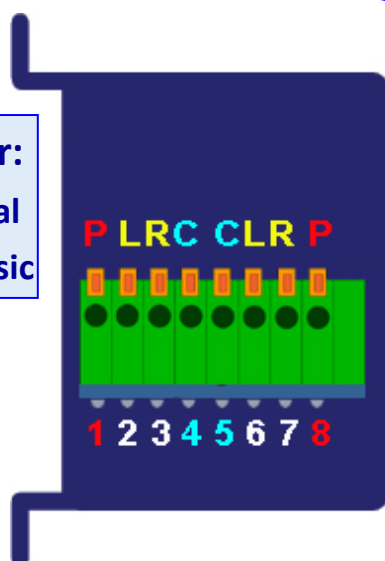
The Evolution of Cobalt - the original cobalt range

Cobalt turnout/point motors were first released in June 2010.

- The original Cobalt Classic (DC-analog) motor was sold from June 2010 to approximately August 2014.
- The original Cobalt Digital motor was sold from mid-2011 to approximately December 2014.

Both of these models went through several minor changes during their life, however, all changes were internal issues. None were external and they had no effect on connection.

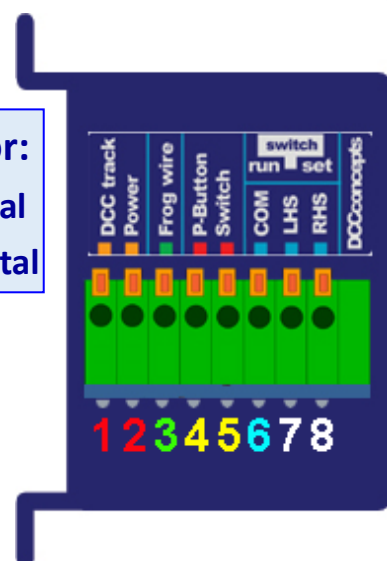
Wiring for:
The original
Cobalt Classic



Cobalt Classic wiring. Input voltage must be 9 to 12v DC. Please use a regulated DC power supply & NOT the 12v uncontrolled output of a train-set transformer which will be closer to 16 volts when under light loads.

- (1) Power input, 9~12v DC regulated
- (2,3) Left and right contacts, switch 1
- (4) Common, switch 1
- (5) Common, Switch 2
- (6,7) Left and right contacts, switch 2
- (8) Power input, 9~12v DC regulated

Wiring for:
The original
Cobalt Digital



Cobalt Digital wiring. Input voltage must be 12~14.5 v DCC or 10 to 13v DC. If using DC please use a regulated DC power supply & NOT the 12v uncontrolled output of a train-set transformer which will be actually be 16 volts under light load.

- (1,2) Power input, DC or DCC
- (3) Frog Power or common, switch 1
- (4) Normally-off push button switch A
- (5) Normally-off push button switch B
- (6) Common, Switch 2
- (7,8) Left and right contacts, switch 2

Warranty: Original Cobalt Digital and Cobalt Analog.

All Cobalt motors are supplied with a "Lifetime Warranty" for the original owner. This is managed by DCCconcepts directly after the initial warranty period (dealer responsibility) has passed.

Lifetime Warranty is offered only to the initial purchaser and is not transferable, however DCCconcepts care about all Cobalt owners, so we continue to hold good levels of spare parts for all Cobalt models and variants.



INSTRUCTION MANUAL: Connecting Cobalt - Model by Model

The Evolution of Cobalt – the 2014 Cobalt Ω omega

Cobalt Ω Omega turnout/point motors were first released in October 2014.

- Totally re-tooled inside and out, they are super-quiet and VERY voltage tolerant
- They now have 3x SPDT switches and a voltage range-change switch.

This is a very positive evolution of an already excellent product. It is versatile, simple to use and super reliable. It is of course 100% compatible with the original Cobalt and can be mixed and matched with them.

Quick summary: Cobalt Ω omega

Control: Cobalt Ω Omega is simply controlled by reversing the DC power to Terminals 1 and 2.

Voltage: An input voltage selector switch allows you to choose between two voltage ranges, 6~12v and 12~18v DC.

Power: Cobalt Ω Omega draws a very small amount of power. (between 12 and 25mA depending on the voltage you supply to it. More V = higher draw).

DCC control: We very strongly recommend that you use only the DCCconcepts AD-2fx, AD8fx or AD-HP Accessory decoders, as most other supposedly “stall motor” decoders we tested are weak and cannot reliably power 2 Cobalt Ω Omega for a crossover.

If you are changing from solenoids and already have 3-wire DCC accessory decoders, most of them can still be used to power Cobalt our SDC Adapters.

Installation: Cobalt Ω Omega is exceptionally quick and easy to install. There is no need to solder as all connectors are top quality spring connections.

Cobalt Ω Omega is provided already centred and ready to install. All mounting hardware including screws and a high quality custom-cut foam pad are already in the pack when you buy them.

The throw-bar is 0.8mm spring steel wire.

Do not use standard cutters for this as they will be damaged. If you do not have hardened cutters then use a file or a cut-off disc in a motor tool to cut.

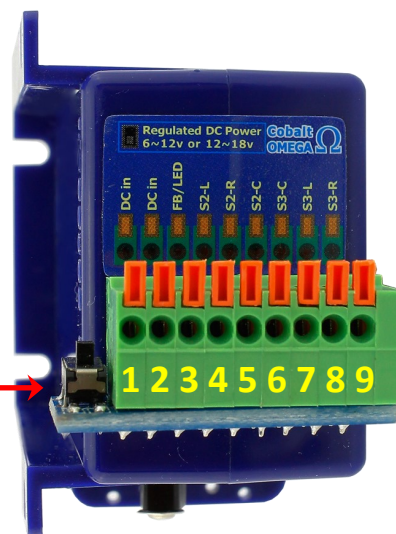
Warranty: the 2014 Cobalt Ω omega

All Cobalt turnout/point motors are supplied with a “Lifetime Warranty” for the original owner. This warranty will be directly managed by DCCconcepts once the initial “dealer responsibility” warranty period has passed.

Lifetime Warranty is offered specifically to the initial purchaser and it is not transferable, however DCCconcepts care about all Cobalt owners, so we always provide help & hold good levels of spare parts for all Cobalt models and variants.

The new
Cobalt Ω
(Omega)

SW1



Cobalt Ω Omega Connections

(SW1) Voltage range Switch

- (1,2) Power input terminals, 6~18v DC
- (3) Feedback~LED connection. This is also the SPDT common for Switch 1 and is directly related to T1 & T2. It can also be used for relay power/signals too)
- (4,5) Left and right contacts, switch 2
- (6) Common, Switch 2
- (7) Common, Switch 3
- (8,9) Left and right contacts, switch 3





INSTRUCTION MANUAL: Connecting Cobalt - Model by Model

The Evolution of Cobalt – the 2014 Cobalt iP Analog

Cobalt iP Analog turnout/point motors were first released in October 2014.

- Totally new inside and out, they are Super-quiet and VERY voltage tolerant
- Cobalt iP Analog has 3x SPDT switches and a switch that lets you quickly flip operating direction.

This is a sophisticated product that takes control to the next level, with super-low current draw between uses and a very wide 7~23v input power tolerance. It is very versatile, simple to use and super reliable.

Quick summary: Cobalt iP Analog

Control: Cobalt iP Analog is simply controlled by reversing the DC power to Terminals 1 and 2.

Voltage: Intelligent power control allows you to use it with any DC voltage level between 7 and 23 volts

Power: Cobalt iP Analog draws a very small amount of power when static (between 3 and 5mA depending on the voltage) When changing, it peaks for less than 2 seconds @ average 35mA current draw).

DCC control: We very strongly recommend that you use only the DCCconcepts AD-2fx, AD8fx or AD-HP Accessory decoders, as most other supposedly “stall motor” decoders we tested are too weak and cannot reliably power 2 Cobalt iP Analog for a crossover.

If you are changing from solenoids and already have 3-wire DCC accessory decoders, most of them can still be used to power Cobalt our SDC Adapters.

Installation: Cobalt iP Analog is exceptionally quick and easy to install. There is no need to solder as all connectors are top quality spring connections.

Cobalt iP Analog is provided already centred, ready to install. If you use it with our AD-2fx or AD-8fx decoders, both “auto centering” & “flip the direction” commands are available (Detailed in the manual).

All mounting hardware including screws and a high quality custom-cut foam pad are already in the pack when you buy them. The throw-bar is 0.8mm spring steel wire. Do not use standard or track-cutters for this wire as they will be damaged.

Warranty: the 2014 Cobalt iP Analog

All Cobalt turnout/point motors are supplied with a “Lifetime warranty” for the original owner. This warranty will be directly managed by DCCconcepts once the initial “dealer responsibility” warranty period has passed.

Lifetime Warranty is offered specifically to the initial purchaser and it is not transferrable, however DCCconcepts care about all Cobalt owners, so we always provide help & hold good levels of spare parts for all Cobalt models and variants.

The new
Cobalt iP
(Intelligent
Power)
Analog

SW1



Cobalt iP Analog Connections

(SW1) “Flip change direction” switch

(1,2) Power input terminals, 7~23v DC

(3) Feedback~LED connection. This is also the SPDT common for Switch 1 and is directly related to T1 & T2. It can also be used for relay power/signals too)

(4,5) Left and right contacts, switch 2

(6) Common, Switch 2

(7) Common, Switch 3

(8,9) Left and right contacts, switch 3





INSTRUCTION MANUAL: Connecting Cobalt - Model by Model

The Evolution of Cobalt – the 2014 Cobalt iP Digital

Cobalt iP Digital turnout/point motors were first released in October 2014.

- Totally new inside and out, they are Super-quiet and VERY voltage tolerant
- Cobalt iP Analog has 3x SPDT switches & a clever “Set/run” switch that makes changing its address easy.

This is a classy product with DCC built-in that takes control to the next level, with very low current draw between uses and a wide 9~23v input power tolerance. It is very versatile, simple to use and super reliable.

Quick summary: Cobalt iP Digital

Control: Cobalt iP Digital has an in-built DCC decoder and can also be changed using switches too.

Voltage: Intelligent power control allows you to use any DC or DCC voltage level between 9 and 23 volts

Power: Cobalt iP Digital draws a very small amount of power when static (between 3 & 5mA depending on the voltage) When changing, it peaks for less than 2 seconds @ average 35mA current draw).

DC or DCC control: Cobalt iP Digital has a full DCC decoder built-in and is compatible with all DCC systems but its wiring is VERY simple because it can also be operated by simple push button switches so it will appeal to DC users who hate soldering too!

Addressing: Cobalt iP Digital is easy to address. Set the switch to learn, act as if you are already changing a turnout at the address you want and that's it, Its done! Return it to run mode and run some trains!

Installation: Cobalt iP Digital is very quick and easy to install with no need to solder as all connectors are top quality spring connections.

Cobalt iP Digital is provided already centred and ready to install. It also includes some clever “auto centering” & “flip the direction” commands (detailed in the manual) All mounting hardware including screws & a high quality custom-cut foam pad are already in the pack when you buy them. The throw-bar is 0.8mm spring steel wire. Don't use standard track-cutters for this... they'll be damaged.

Warranty: the 2014 Cobalt iP Digital

All Cobalt turnout/point motors are supplied with a “Lifetime warranty” for the original owner. This warranty will be directly managed by DCCconcepts once the initial “dealer responsibility” warranty period has passed.

Lifetime Warranty is offered specifically to the initial purchaser and it is not transferrable, however DCCconcepts care about all Cobalt owners, so we always provide help & hold good levels of spare parts for all Cobalt models and variants.

The new
Cobalt iP
(Intelligent
Power)
Digital

SW1



Cobalt iP Digital Connections

- (SW1) “Set Address / Run” switch
- (1,2) Power input terminals, 9~23v DC/DCC
- (3) FROG / FB & LED connection. This is the common terminal of a high power SPDT Switch and is directly related to T1 & T2. It's usually use is frog power. It can be used for relays/signals too)
- (4,5) Left and right contacts, SPDT switch #2
- (6) Common for in-built SPDT switch #2
- (7) Left Push-button switch (momentary)
- (8) Common for Left and right PB switch
- (9) Right Push-button switch (momentary)

