Cobalt Analog, ADfx and a 3-way with LED warnings for illegal routes

Furthest diamond frog is same as point frog

Frog Wiring

The same principle applies to AD-4, 6 and 8 accessory decoders

(The AD-2fx is omitted for clarity)

Power in

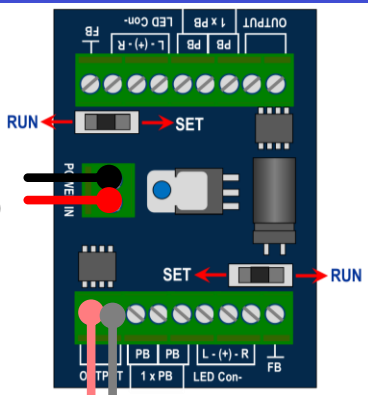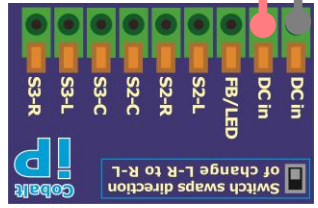From the track or track bus

LEFT ROUTE

STRAIGHT ROUTE

RIGHT ROUTE

② S3-R S3-L S3-C S2-C S2-R S2-L FB/LED DC in DC in
Cobalt iP
Switch swaps direction of change L-R to R-L

DCP-CB1iP or CB1 Omega

Switch swaps direction of change L-R to R-L
Cobalt iP
① DC in DC in FB/LED S2-L S2-R S2-C S3-C S3-L S3-R

From the track or track bus

Power in

As shown, the wiring assumes that this is the orientation of the Cobalts

The orientation of the Cobalt will affect the wiring. If the frog is the wrong polarity, swap **S2-L** and **S2-R**

Originally drawn for Ian M

Furthest diamond
frog is same as
point frog

ADfx Wiring

OUTPUT | 1 x PB | LED Con-
FB | PB | PB | L - (+) - R | FB

RUN → SET
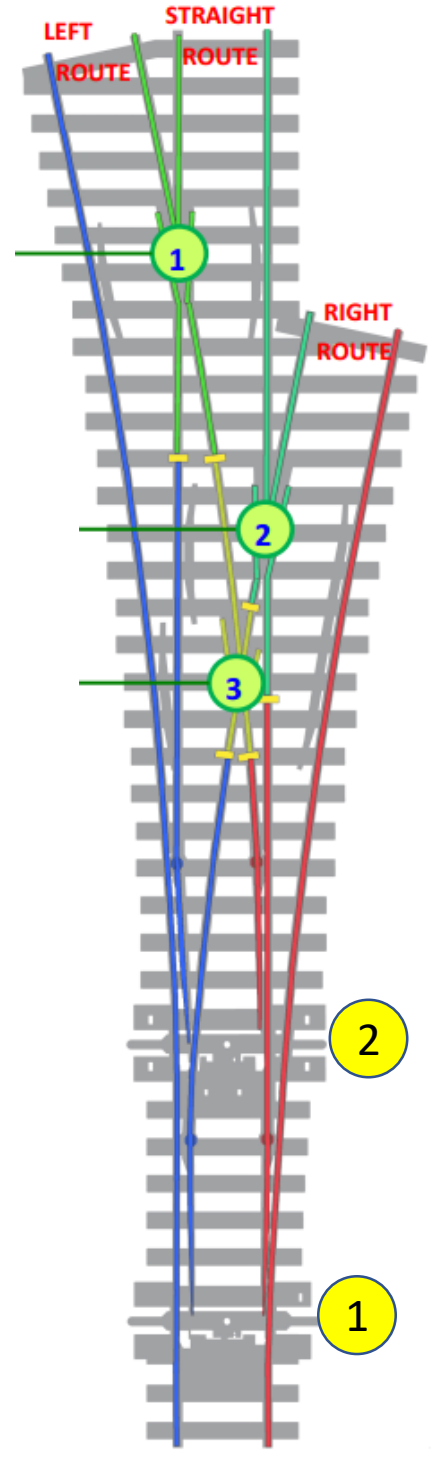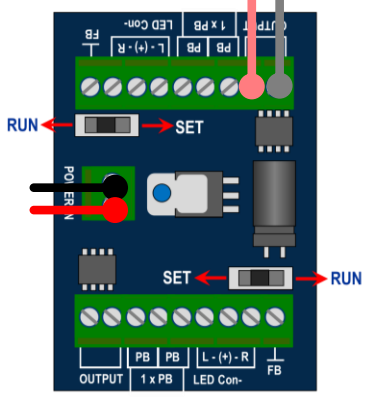
From DCC Power bus
(Track Bus or Accessory Bus)

POWER IN

SET ← RUN

PB | PB | L - (+) - R | FB
OUTPUT | 1 x PB | LED Con-

S3-R | S3-L | S3-C | S2-C | S2-R | S2-L | FB/LED | DC in | DC in

2

Cobalt **iP**
Switch swaps direction
of change L-R to R-L

LEFT
ROUTE

STRAIGHT
ROUTE

1

RIGHT
ROUTE

Track Power input to
S2-L & S2-R and Frog
power on both Cobalts
omitted for clarity

2

Switch swaps direction
of change L-R to R-L

Cobalt **iP**

DC in | DC in | FB/LED | S2-L | S2-R | S2-C | S3-C | S3-L | S3-R

1

3

OUTPUT | 1 x PB | LED Con-
FB | PB | PB | L - (+) - R | FB

RUN → SET

POWER IN

SET ← RUN

PB | PB | L - (+) - R | FB
OUTPUT | 1 x PB | LED Con-

2

1

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Furthest diamond frog is same as point frog

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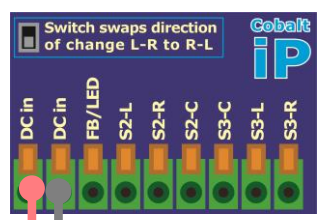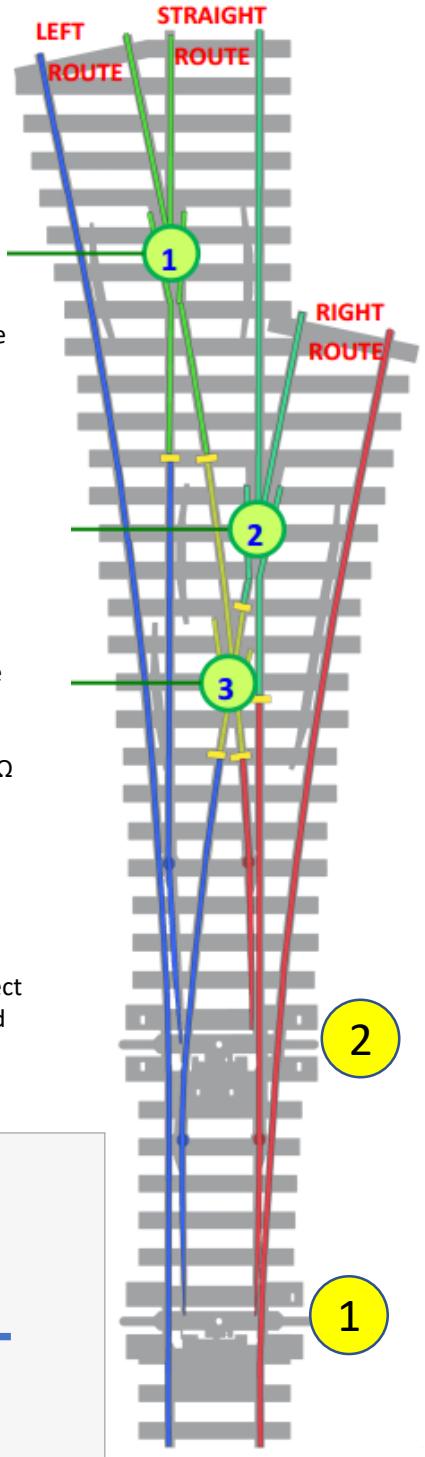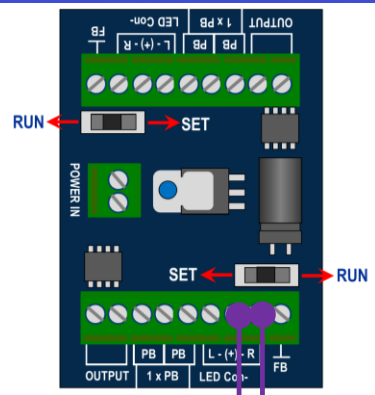
LED Wiring

All previous wiring omitted for clarity

LEFT ROUTE **STRAIGHT ROUTE**

RIGHT ROUTE

On both LED outputs, move this wire to the other (unused) connector if the LED does not illuminate when that turnout is set to AHEAD.
Both AHEAD = Two Greens

2

3kΩ

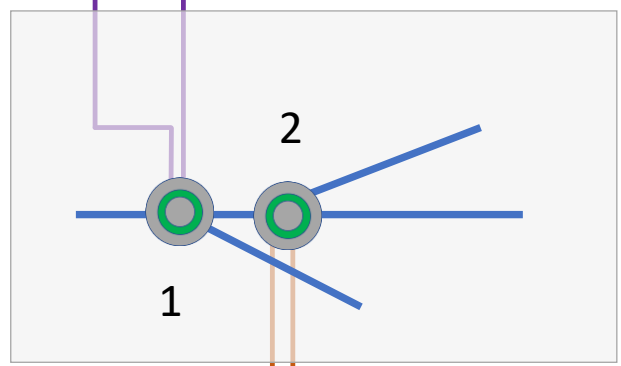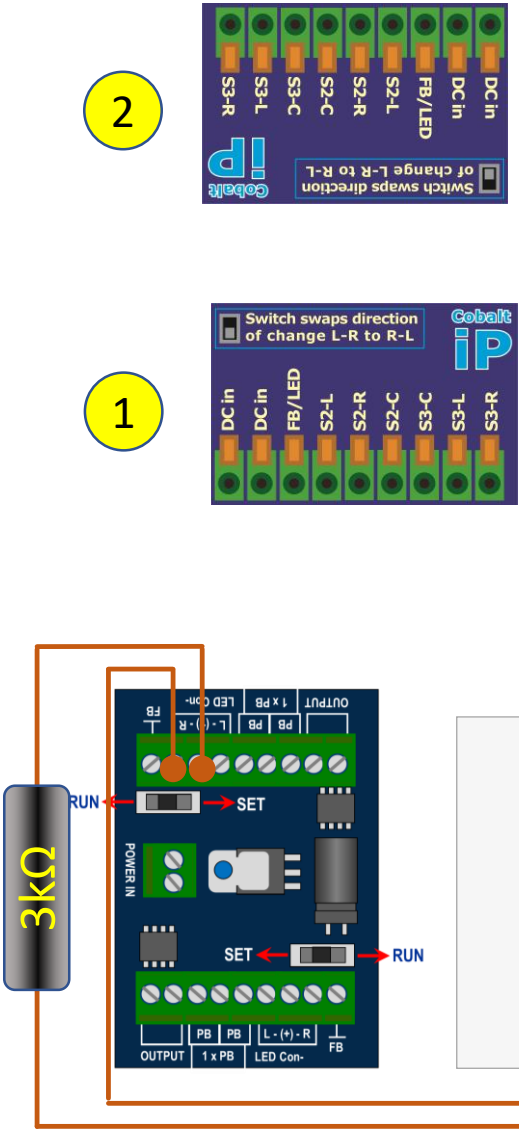Resistor values are indicative – adjust for brightness but never less than 1kΩ

1

The centre LED output is positive and so must connect to the positive lead of the LED

3kΩ

2

1

Green LED illuminates if it is OK to that change turnout

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