

## Train Tech overview - ask for free catalogue

**Signal kits** - OO/HO low cost easy to make signals for DC

**Sensor Signals** - easy automatic block signalling - DCC or DC

**Smart Lights** - small effects built in - DC/DCC - just 2 wires:  
Arc welding • Emergency vehicle • TV • Fire effect • Party disco

**Automatic Coach Lights** - motion - no pickups or wiring:  
Older Warm White • Modern Cool White • Tail Light • Spark Arc

**Automatic Tail Lights** - motion - easy, no wires - lantern LED:  
Flickering flame oil lamp • Modern Flashing • Constant light

**Track Tester** - quickly tests DC polarity or DCC - N-TT-HO-OO

**SFX+ Sound capsules** - no wires! - real trains - DC or DCC  
Steam • Diesel • DMU • Passenger coach • Shunted stock

**Buffer Light** - clip in lights for buffer stops - N or OO - DC/DCC

**LFX Lighting effects** - DC/DCC - screw terminals - with LEDs:  
Home & Shop lighting • Welding • Flashing Effects • Fire

**Traffic Lights** - fully assembled - just connect to DC or DCC

**Level Crossings** - assembled - N & OO versions - DC / DCC

**DCC fitted signals** - slide in the track - easy one touch setup:  
2 aspect • 3 aspect • 4 aspect • Dual head • Feathers • Theatre

**DCC Point Controllers**

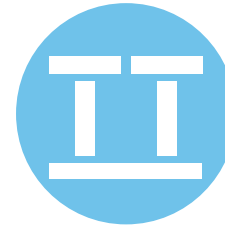
**DCC Signal Controllers**

**LEDs**

**Tools etc**



COMPREHENSIVE CATALOGUE FREE ON REQUEST  
[www.train-tech.com](http://www.train-tech.com)

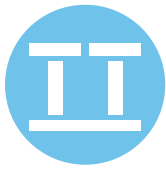


**Train-Tech**  
Model Technology Made Easy

**LC10P - Pair OO/HO  
Level Crossing Light & Sound set  
9-16 volts DC & DCC compatible**

[www.Train-Tech.com](http://www.Train-Tech.com)

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**Please handle carefully & read these instructions fully before installing!!**

## Contents list:

- Level Crossing light assembly x 2
- Mounting cap: x 2
- Speaker x 1
- Peco Level crossing kit x 2
- Sample length of solid core wire 1/0.6mm
- Instruction guide

## Introduction

The Train-Tech level crossing with light and sound is available in both OO and N gauge and both singles and pairs include two appropriate scale Peco static barrier kits so that single working crossings have a 'dummy' barrier opposite.

They are designed to be easy to fit, requiring just a 10mm hole in the baseboard and wiring for most standard options is solder free featuring single solid core wire which just plugs in.

They can be powered from either DCC or from 9-16 volts maximum smooth DC (smooth DC means capacitor smoothed DC available on some controllers or power units such as the Gaugemaster WM4)

## Control

The Crossing Lights & Sounds can be controlled in a number of ways which are detailed on these pages:

- Manual Control using a conventional switch and powered from 9-16V DC (page 3)
- Manual Control and power from DCC - use a DCC accessory command or PC to turn on and off (page 4)
- Manual Control using Mimic switch with lights using a single wire link - power from DC or DCC (page 5)
- Automatic control using a Track Sensor or Sensor Signal for one direction working - DC or DCC (page 6)
- Automatic control using 2 Track Sensors/Sensor Signals for bi-directional working - DC or DCC (page 7)

**Caution - only ever connect with all power turned off and ensure you never touch any other connections or components otherwise permanent damage will result.**

## Troubleshooting

This product is designed to be easy to fit and use but here are a few tips which may help should you have problems following installation. Remember only wire and install with all power turned OFF.

- Flickering lights or sound when powered from DC?

Check that the DC is really smooth DC and not rough from a crudely rectified AC. Train-Tech offer a low cost capacitor smoothing unit to convert rough DC to smooth DC called SM1 and also Gaugemaster make a good quality 12V regulated and smooth power unit ideal for model railway electronics, part No WM4.

- Intermittent automatic operation?

If using Track Sensors or Sensor Signals powered using the slide in track fingers check that they are making good contact with the rails and that the sensor is close to but not touching the rail.

- Cannot program control by DCC?

The level crossings work on DCC Accessory addresses, not loco addresses so check your DCC controller can control DCC accessories and make sure the controller is set to Accessory mode before you set up.

- Problems plugging in wires to the sockets?

The sockets fitted to the Level Crossings, Track Sensors etc are designed to be used with single core wire 1/0.6mm gauge or similar, as per sample supplied. Do not use stranded wire as this will not fit properly and stray strands may not go into the socket and touch other contacts or components causing damage.

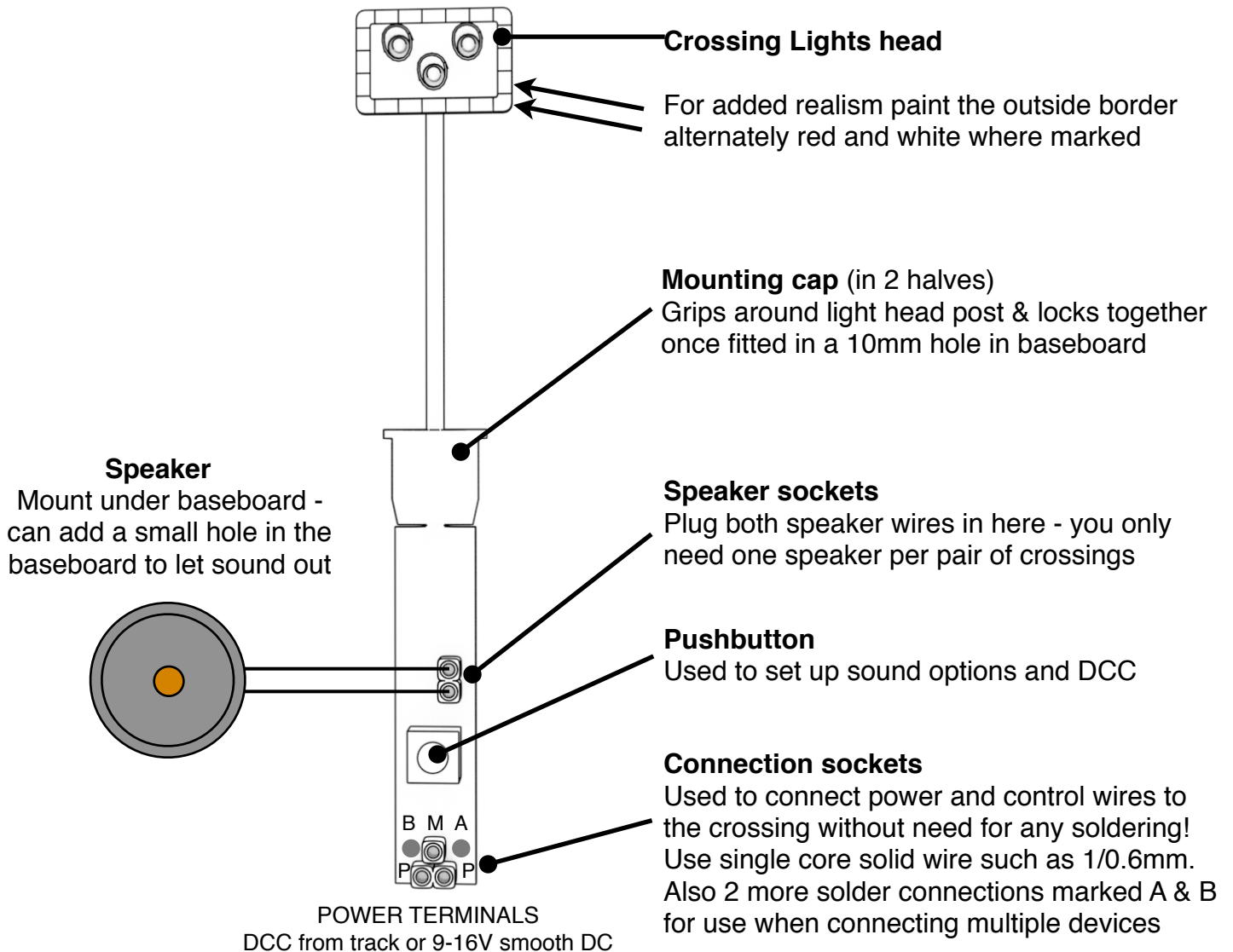


## • Installing the Train-Tech Level Crossing

Firstly, before installing or connecting your Level Crossing **SWITCH OFF ALL POWER!**

All of these instructions apply the same to both the OO and N gauge versions of the Level Crossing as they are identical except for the size of the crossing lights head and the Peco kits.

The picture below shows you what all of the parts do and the instructions to power and control your crossing are on the following pages - choose the appropriate page for your power system & layout.

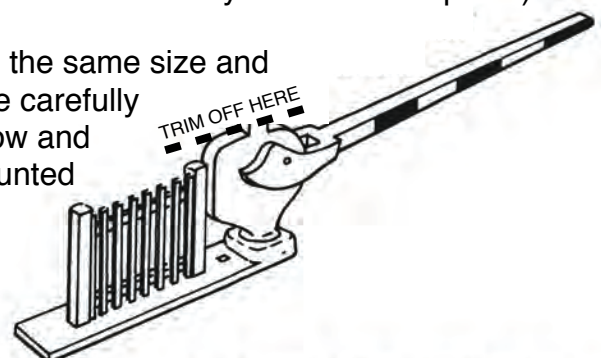


## • Peco Level Crossing Barrier kits

Your Level Crossing kit includes either the Peco LK-51 OO/HO gauge or NB-51 N gauge barrier kits to finish your model. Both Single and Pair sets of crossing lights include 2 Peco barriers so that on Single sets you have a dummy non-functioning barrier to fit on the opposite side of the crossing. (additional Peco LK-51 or NB-51 kits are available from model railway stockists if required)

The Train-Tech Crossing light head is designed to be the same size and height as the Peco kit head, so the Peco head can be carefully cut off using modelling cutters as the dotted lines show and the Train-Tech barrier light head and post can be mounted adjacent to the barrier and gate.

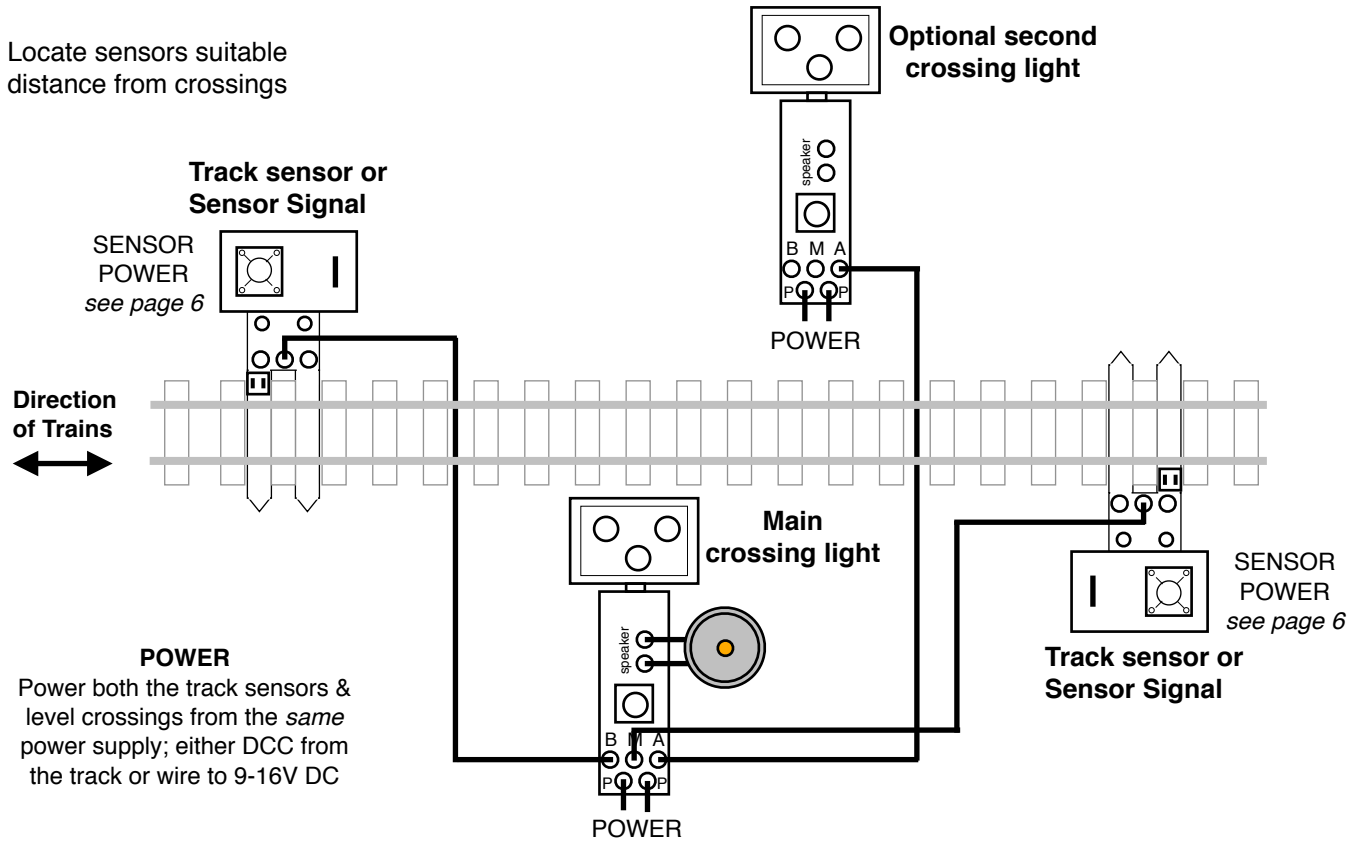
On single barrier sets leave the Peco head attached on the 'dummy' side of the crossing - you can paint the Peco head black to match the Train Tech head if you wish.



## • Automatic Control: Single Track crossing - both directions

If you have a single track level crossing which has trains going in either direction (single line working) you will need 2 sensors so that you can trigger the crossing lights from either direction. Below shows how to wire a single or pair of crossing lights to 2 Track Sensors or Sensor Signals:

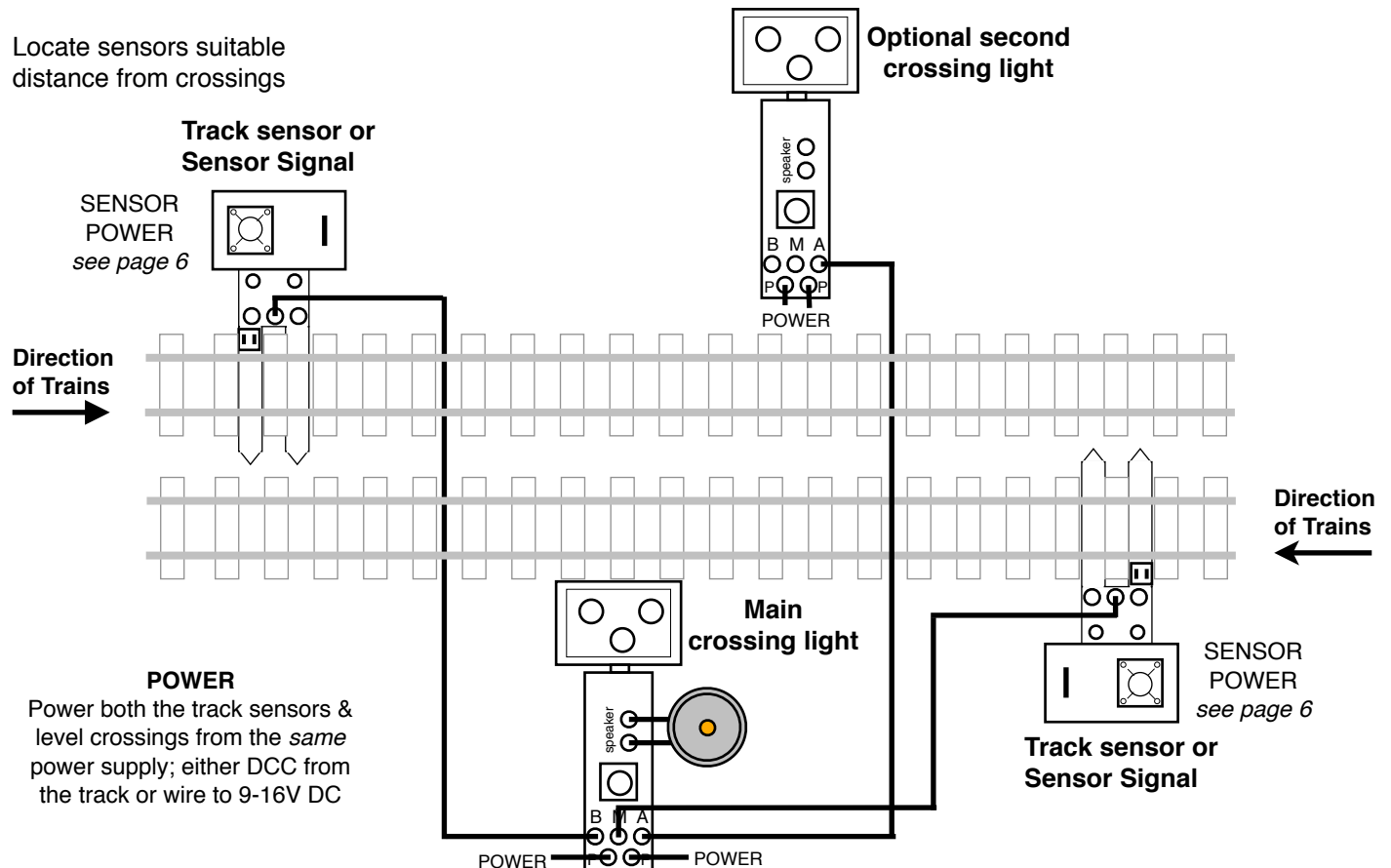
Locate sensors suitable distance from crossings



## • Automatic Control: Double track crossing

Most double track crossings comprise one Up and one Down Line so you need to trigger the level crossing from opposite sides on each track. The drawing below shows how to wire a single or pair of crossing lights to a Track Sensor or Sensor Signal on each track, one for each direction:

Locate sensors suitable distance from crossings



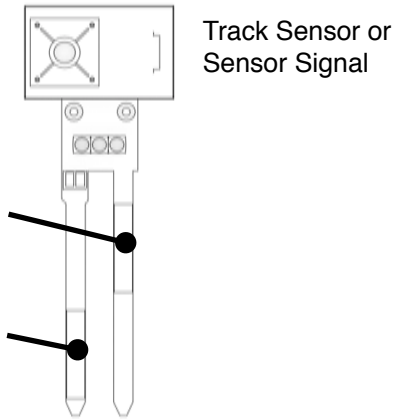
# • Automatic control: Single Track - working one direction

As well as controlling the Level Crossing manually by a switch or DCC you can also control it from either a Track Sensor or Sensor Signal, so that when a Train approaches the crossing automatically comes on and stays on until the train has passed! A track sensor works just like a Sensor signal except that it has no signal head or post, only the sensor in a base unit. The sensor should be powered by the same power as the Level Crossing which can either be Digital DCC or Analogue 9-16 Volts DC and one wire links from the middle socket of the Sensor to the middle socket of the Level Crossing as below.

If used on DCC a Track Sensor or Sensor Signal can either be clipped straight into some types track in the power clip slots (eg Hornby or Bachmann) but if not the slide-in fingers can be cut off and the two connections shown wired to either DCC or 9-16 Volts DC - see below.

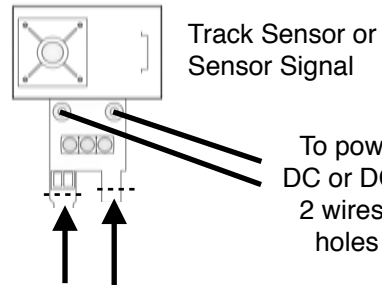
## Power by sliding sensor into track - for DCC

If using DCC you can power the sensor from the track by sliding these two 'fingers' under the rails into the slots in some types of track, like a power clip. **ensure good connections!**

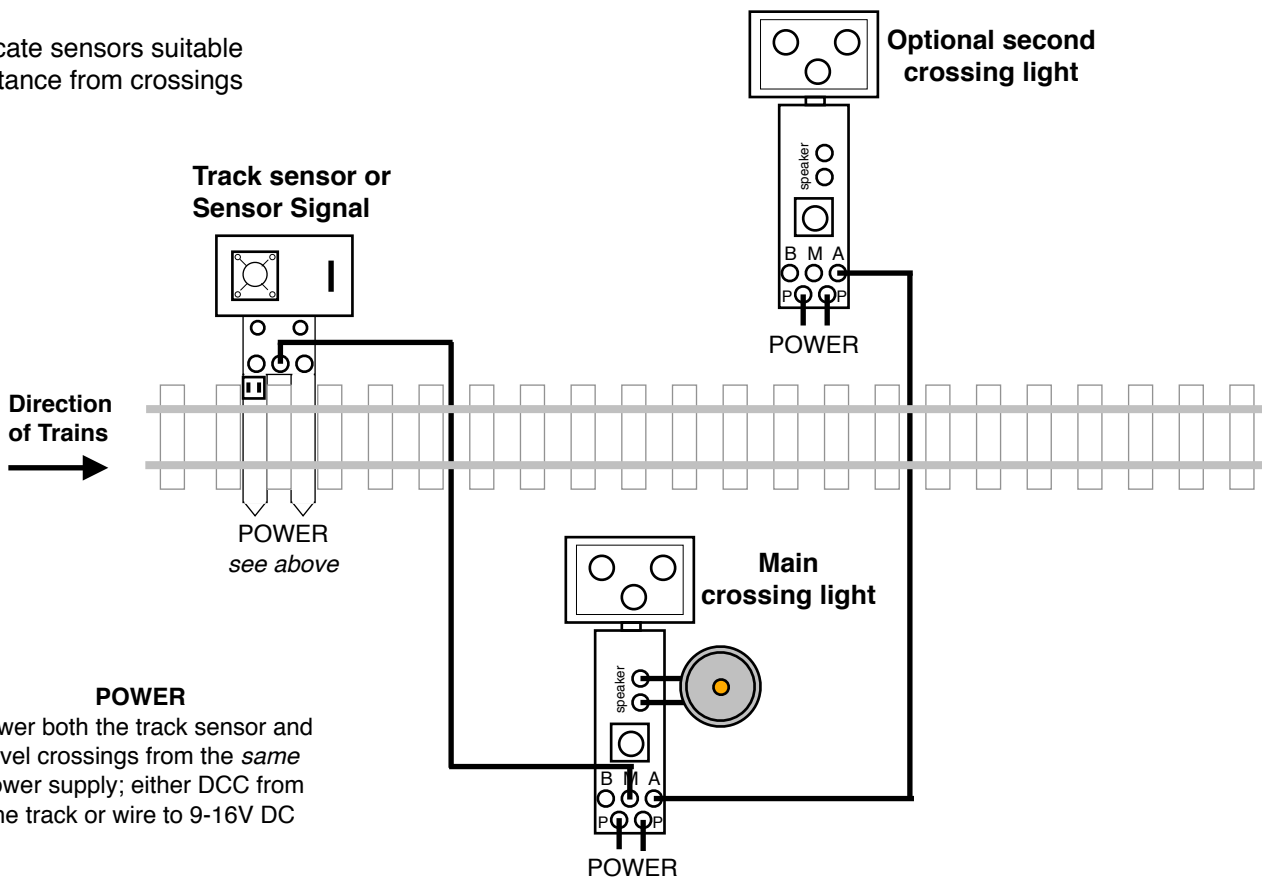


## Power by wiring to sensor - for DC or DCC

To power using DC or DCC solder 2 wires into the holes shown. Cut off the two fingers with sharp cutters where marked - - -



Locate sensors suitable distance from crossings



**POWER**  
Power both the track sensor and level crossings from the *same* power supply; either DCC from the track or wire to 9-16V DC

**Using Track Sensors with N Gauge:** The Track sensor is designed primarily for OO gauge track, however in tests we have found that it can be used with N gauge if the fingers are removed, some parts of sleepers trimmed and the sensor is placed close to (but not touching) the rail.

## • Controlled and powered by Analogue DC using a switch

This section covers powering the Level Crossing(s) from regular DC and controlling it using a conventional switch. It requires a smooth DC supply of between 9 and 16 volts maximum, (or a 9 volt battery if preferred). The 'smooth' means that it needs to be a true DC and not just part rectified AC which sometimes comes from a train controller. If you do not think you have a suitable power source then we suggest the Gaugemaster GMC-WM4 which is a good quality 12 Volt smoothed and regulated power supply designed for model railway electronics such as this.

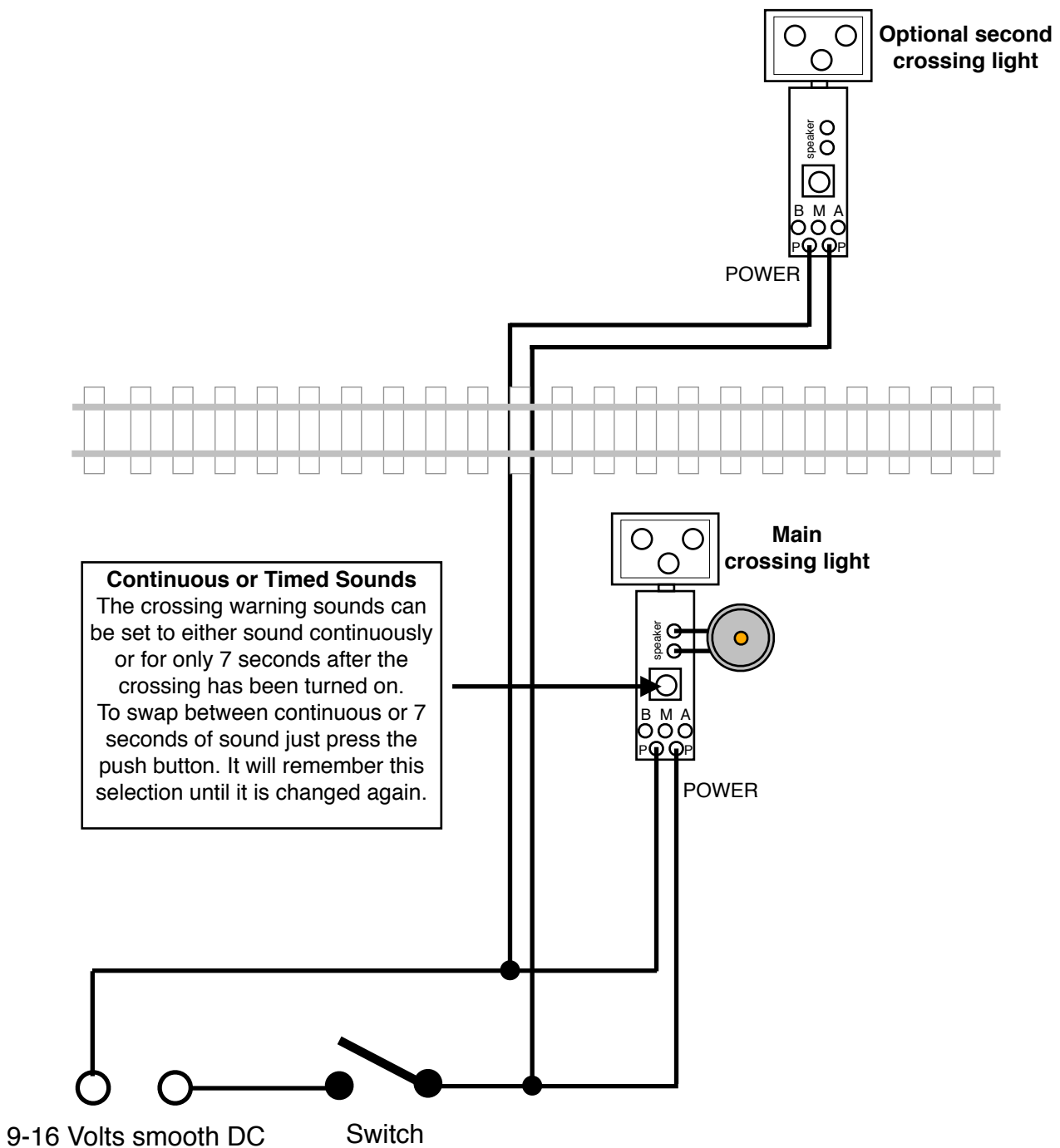
The switch can be almost any low power switch to operate the crossing, including push button, slide or toggle type, and pairs of crossings can be wired and controlled together as shown below.

Note that polarity is not important so the + and - can be made to either connection.

We recommend all connections are made using solid single core wire which simply plugs into the sockets (not stranded wire as stray whiskers can short to other components.)

**Caution - Only make connections with ALL POWER OFF and ensure you never touch any other metal terminals or components otherwise permanent damage will result.**

**Never use AC or any voltage over 16 volts DC - if in doubt check supply with a voltmeter.**



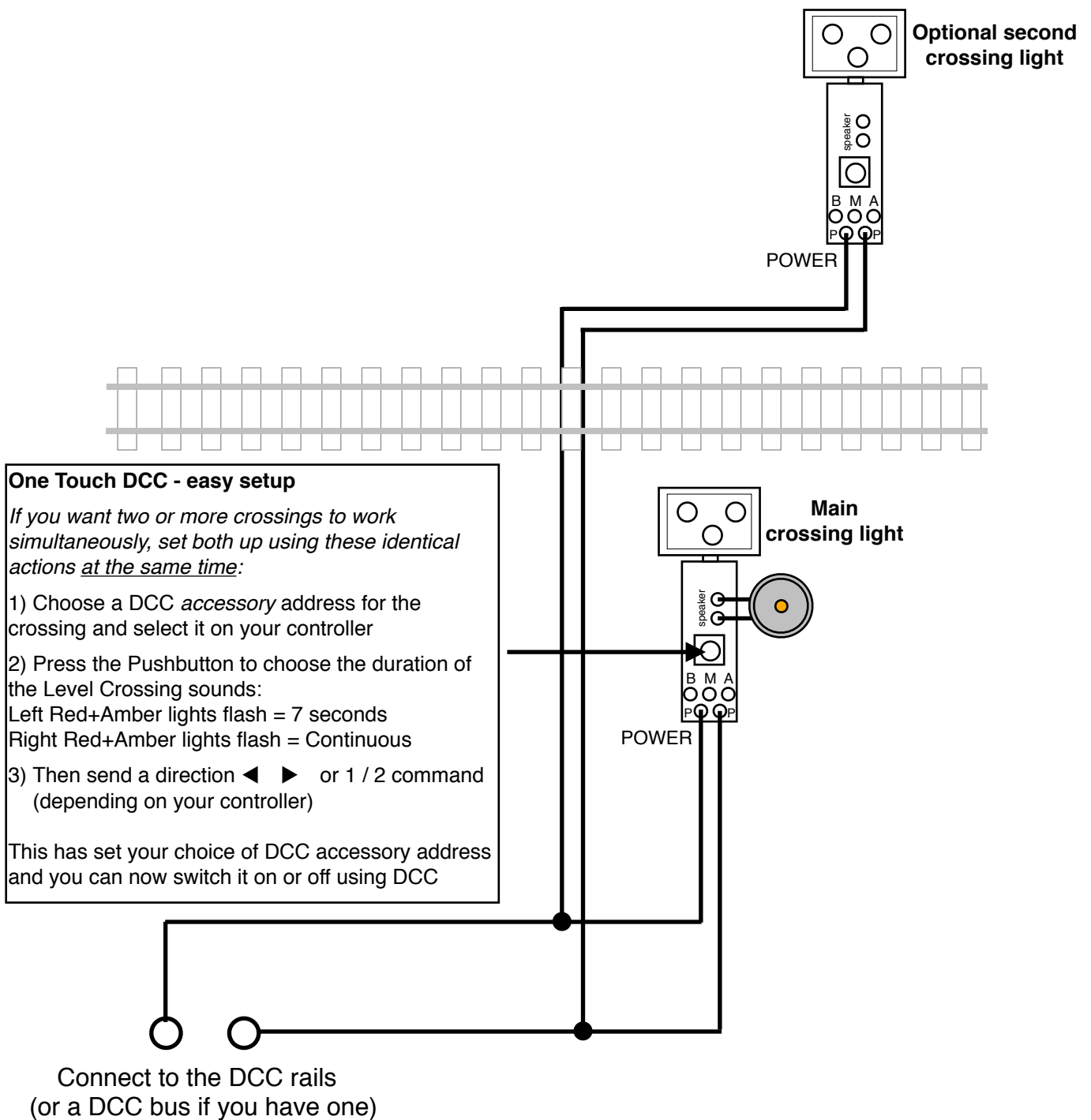
# • Control and power by Digital DCC

This section shows powering and controlling the Level Crossing(s) from Digital DCC. Most DCC controllers or PC based systems should be compatible as long as they are capable of controlling DCC **accessory** addresses (as opposed to only DCC locomotive addresses).

Setup is easy using Train-Tech One Touch DCC; Just choose an accessory address on your controller or PC, press the Learn button on the Crossing and finally send a direction or 1 or 2 command from your controller to set it up (commands vary between controllers - see instructions) You can choose whether the crossing sound is continuous or just lasts 7 seconds - see below.

We recommend all connections are made using solid single core wire which simply plugs into the sockets (not stranded wire as stray whiskers of wire can short to other components.)

**Caution - Only make connections with ALL POWER OFF and ensure you never touch any other metal terminals or components otherwise permanent damage will result. Never use AC or any voltage over 16 volts DC - if in doubt check supply with a voltmeter.**



## • Control using a Mimic Switch - powered from DC or DCC

As well as manually controlling a crossing using DCC or a switch on DC you can also control it with a Mimic Switch mounted on your control panel. The Mimic has the added feature that as well as controlling the crossing it also has an LED which mimics the crossing lights with an amber light followed by flashing red light on the top multicolour LED (as supplied with every Mimic switch). Control of the crossing lights is by a single wire from the Mimic Switch to the Crossing light and the Mimic switch should simply powered from the same power supply as the crossing, either 9-16V DC or DCC. If powered by DCC the crossing can be controlled by both the Mimic switch and DCC. Two or more Crossing lights may be connected together using a single wire soldered to the solder pads marked A on each crossing being linked - take care as they are small solder pads and you must take care not to touch any other connection or component - always connect with power OFF!

**Caution - only connect with all power off and ensure you never touch any other connections or components otherwise permanent damage will result.**

**Never use AC or any voltage over 16 volts DC - if in doubt check supply with a voltmeter.**

