Train-Tech

Model Technology Made Easy

MAIN CATALOGUE

2023 - 2024

For Analogue and Digital Layouts

Designed and Manufactured in the United Kingdom

Signalling

Control

Lighting

Sound

Accessories

Signalling

Control

Lighting

Sound

Accessories

Knowledge Base

For handy tips and tricks visit gaugemaster.com/knowledge to view our knowledge base articles on the Train-Tech range.

*** Export versions available with -EX added to end of part number for non-UK based customers**

There are two main designs of signal currently in use; semaphore signals and colour light signals.

- **Semaphore signals** consist of mechanical arms which go up and down controlled via pulleys to a signal box. Semaphores show 'on' or 'danger' if horizontal. They are 'off' or 'clear' if they are pointing upwards (upper quadrant) or pointing downwards (lower quadrant).

- **Colour Light signals** are made of a number of different coloured electrically powered lights, which are connected to a signal box or control room by electrical wires. A red light means 'on' or 'danger' and a green light means 'off' or 'clear'. Distant signals are signified by a yellow light.

· Main signals

An 'inner home' signal is located on the outside of the station and it is there to protect the station area.
An 'outer home' can be found further down the line before the 'inner home'.
The 'starter' signal can be found at the start of platforms.
The next signal after the 'starter' in the section is the 'advance starter'.
There may be more sections between the advance starter and outer home depending on route length. These signals normally only show a red or green aspect, however a 'distant' can be incorporated. If the signal is at red, 'danger' or 'on', the train must stop. If the signal is at green, 'clear' or 'off', the train may proceed through it. If at yellow, the train may proceed with caution.

· Distant

The purpose of a 'distant' signal is to give the train plenty of time to slow down if the 'home' is at 'danger'. If the 'distant' is yellow or 'on', one of the signals in the block will be at danger. If the signal is green, 'clear' or 'off', the other signals in the block will also be 'clear' or 'off'.
These signals will either show a green or yellow aspect. The driver does not need to stop at these signals as they are only there to tell him what the rest of the signals in the block will be. Distant signals can be incorporated with home signals to create a three aspect.

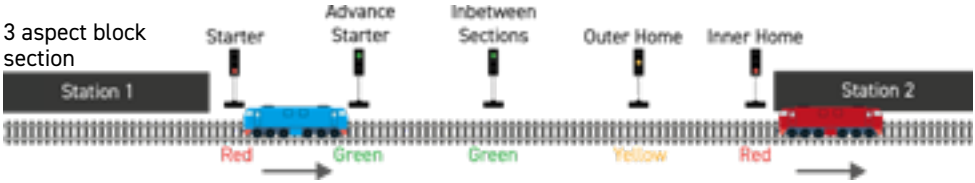
· Route Indication with signals

Signals can also have Route Indicators which tell the driver the route he will be going. There are many variations of Route Indicators, but the main ones are 'Feathers', which are illuminated bars mounted on the top of colour light signals and light up white to show the direction of a route. Also common are 'Theatre' displays; illuminated boxes which display numbers or symbols to indicate a driver's route or the platform number at a station. These can be found either mounted on signals or in the case of theatres, separately as well.

· Signalling your layout

Train-Tech designs and manufactures a wide range of Colour Light Signals and controllers for Semaphore signals, including signals controlled by traditional DC with a switch, by Digital DCC and our Sensor Signals, which work completely automatically just like the real thing.

3 aspect block section



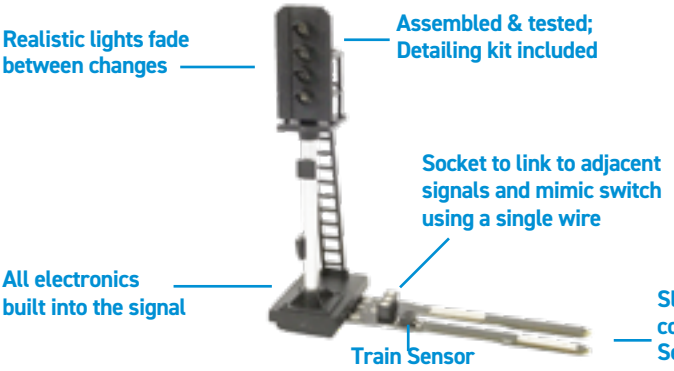
Automatic signalling

Now you can add automatic signalling to your layout in seconds with the OO Sensor Signals range! An infrared sensor is built into every signal to detect any train,w so there are no circuit boards etc. Just clip or wire the signal into your track for fully automatic 2, 3 or 4 aspect signalling, which works just like the real railway! Best of all, they can be powered from both analogue DC as well as digital DCC and are Layout Link compatible*, so easy to link to other Sensor Signals or Mimic switches for control as well as signal and train position indication using just a single wire!

Automatic Train Control using Sensor Signals with the Relay Controller.

- **Sensor Signal detects train and changes signal** until the complete train is safely passed
- When used alone, the signal sequences back to green a few seconds after the whole train has past
- When linked to other Sensor Signals they work together for **fully automatic block signalling**!
- **Fully built ready to use signal** with sensor built into the base - no other circuits or wires!
- **Quick and easy installation** - everything is built into the Sensor Signal!
- Automatic feature can be overidden by a Mimic switch or DCC - a semi-automatic signal
- Link to a Mimic using one wire to **show signal colour and train position** on the control panel
- **On Analogue DC** - take two wires to a regular 12-16V smooth DC supply
- **On Digital DCC** - just slide in or wire straight to the track for automatic or DCC control
- Feathers & theatre indicators can be controlled by DCC or Mimic Switch and if your layout points are controlled by DCC, give the route the same address to light it fully automatically
- Kit of detailing extras included - ladder, handrail, phone etc

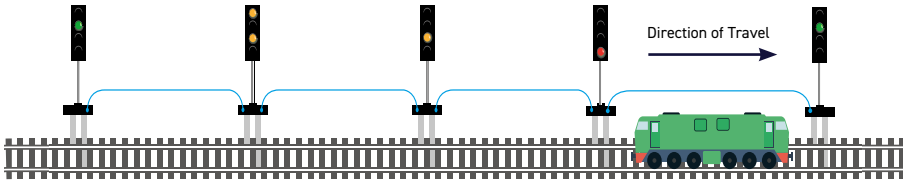
*See Layout Link on page10



A comprehensive instruction booklet is included with every Sensor Signal

Scan to Watch the Video

Sensor signals work exactly like the real railway where signals automatically turn red when a train enters a block section to prevent other trains from entering the same block and preceeding signals automatically change accordingly. All linked using just one wire.

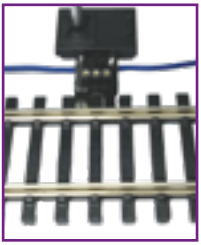


To Power by DCC

Simply slide the signal into suitable track using the power clip holes.

To Power by DC or DCC

Cut off the fingers at the dotted lines and solder 2 wires to the base to power from DCC or a 12-16v smooth DC supply.



Left and Right Feather Route Indicators

Feathers can be controlled on DC and DCC by using a Mimic Switch or by DCC using any accessory address.

They can be given the same DCC address as a point to light them automatically.

Theatre Indicator display

Theatres can be controlled by a Mimic Switch or by any DCC accessory address. It can display one user defined number, letter or character easily made on the 5 x 5 matrix by masking unwanted holes. (note the theatre can only be switched on & off, not changed to show multiple characters)

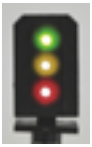
Sensor Signals - Fully Automatic Signals

2 Aspect Home

TTSS1	**Standard**
TTSS1L	with Left Feather
TTSS1R	with Right Feather
TTSS1T	with Theatre

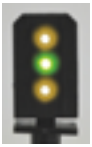
2 Aspect Distant

TTSS2	**Standard**
TTSS2L	with Left Feather
TTSS2R	with Right Feather
TTSS2T	with Theatre



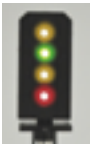
3 Aspect Home Distant

TTSS3	**Standard**
TTSS3L	with Left Feather
TTSS3R	with Right Feather
TTSS3T	with Theatre



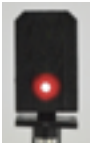
3 Aspect Distant

TTSS4	**Standard**
TTSS4L	with Left Feather
TTSS4R	with Right Feather
TTSS4T	with Theatre



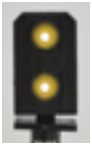
4 Aspect Outer Distant

TTSS5	**Standard**
TTSS5L	with Left Feather
TTSS5R	with Right Feather
TTSS5T	with Theatre



Multi 3 Aspect Signal

TTSS9	**Standard**
TTSS9L	with Left Feather
TTSS9R	with Right Feather
TTSS9T	with Theatre



Multi 4 Aspect Signal

TTSS10	**Standard**
TTSS10L	with Left Feather
TTSS10R	with Right Feather
TTSS10T	with Theatre

Automatic Signal Starter packs

TTSSP1	**TTSSP2**
4 x **TTSS5** Sensor Signals	4 x **TTSS3** Sensor Signals
1 x **TTMS1** Mimic Switch	1 x **TTMS1** Mimic Switch
5m of **TTWP3** wire	5m of **TTWP3** wire

One Touch DCC™ technology - No CV programming!

- Ready to use 00/HO Signals with the DCC Decoder in the base
- Can clip directly into the track - No wiring!
- Unique One Touch DCC™ setting up - No CV programming!
- LEDs fade between changes - just like the real thing
- Kit of detailing extras also included - ladders, handrails, phone etc
- Can be synchronised to other points & signals changing

1 2 3 Easy Setup - Fitting and setting up the signal

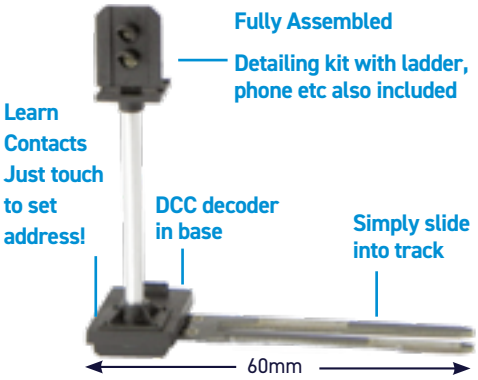
1 Slide signal into the track power clip holes

2 Touch together the two learn contacts

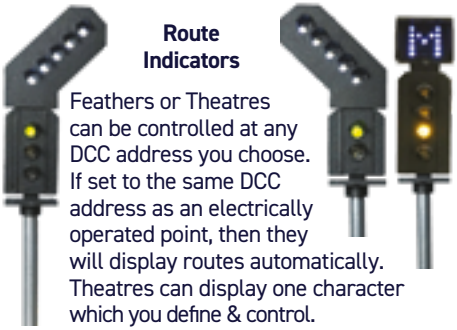
3 Activate desired accessory using your controller

Signals can either clip directly into a number of set tracks (like a power clip) or you can remove the clip and connect to any track or controller with just 2 wires. Our design is modelled on real signals and all of our products are designed and made in the UK. They can be controlled by any DCC controller or PC DCC system which can control accessories and takes seconds to set up! Just choose an accessory address, touch the two hidden learn contacts, then send an accessory command from your controller. Thats it, set up and ready to go!

Feather and Theatre Route indicators are available on any signal with an extra decoder built-in. Just give them the same address as your points and they light automatically when the route is set!



Route Indicators



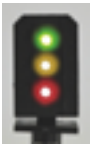
Feathers or Theatres can be controlled at any DCC address you choose. If set to the same DCC address as an electrically operated point, then they will display routes automatically. Theatres can display one character which you define & control.

2 Aspect Home

TTDS1	**Standard**
TTDS1L	with Left Feather
TTDS1R	with Right Feather
TTDS1T	with Theatre

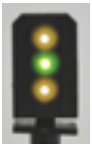
2 Aspect Distant

TTDS2	**Standard**
TTDS2L	with Left Feather
TTDS2R	with Right Feather
TTDS2T	with Theatre



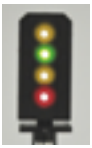
3 Aspect Home-Distant

TTDS3	**Standard**
TTDS3L	with Left Feather
TTDS3R	with Right Feather
TTDS3T	with Theatre



3 Aspect Distant

TTDS4	**Standard**
TTDS4L	with Left Feather
TTDS4R	with Right Feather
TTDS4T	with Theatre

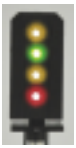


4 Aspect Outer Distant

TTDS5	**Standard**
TTDS5L	with Left Feather
TTDS5R	with Right Feather
TTDS5T	with Theatre

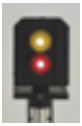
TTDS5HS

4 Aspect O/Distant High Speed Flashing



TTDS8

2 Aspect Caution Approach Signal



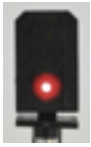
TTDS6 Dual Head Home

TTDS7 Dual Head Distant

Modern 3 & 4 colour Multi Aspect Signals

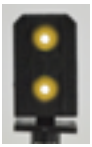
Modern railways have multi aspect signals where a single lens can display red, yellow or green and a 4 aspect dual lens version which can also display double yellows:

Train-Tech offers both types as DCC fitted and like all other DCC signals easy to control using a DCC address of your choice.



Multi 3 Aspect Signal

TTDS9	**Standard**
TTDS9L	with Left Feather
TTDS9R	with Right Feather
TTDS9T	with Theatre

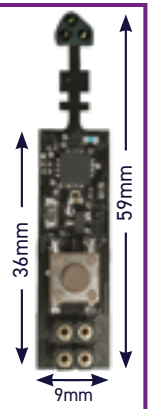


Multi 4 Aspect Signal

TTDS10	**Standard**
TTDS10L	with Left Feather
TTDS10R	with Right Feather
TTDS10T	with Theatre

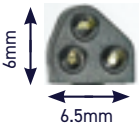
Ground Position Shunt Signals

Ground position signals are mainly used to control shunting movements in sidings or stations. As they are small, we have fitted the electronics underneath so that the signal head can be mounted realistically close to the surface using a single hole (mounting cap supplied).

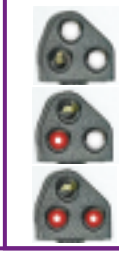


They can be easily controlled by DCC, Mimic switch or by Track Sensor for automatic control. Both red/white and yellow/white variations are available.

Head Size



TTGS1 Red

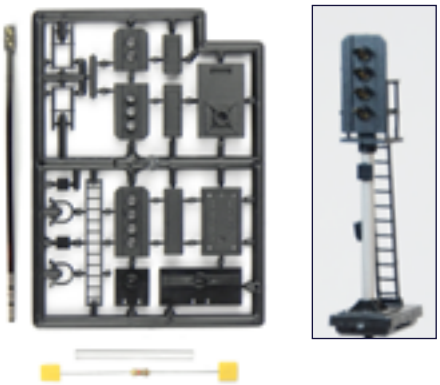


TTGS2 Yellow

A range of self assembly signal kits which can be controlled by DC using standard switches or DCC using a Train-Tech or other DCC decoder.

- OO Self assembly Colour Light Signal kits
- Each kit includes a base, ladder, metal post and detailing kit with hand rails, phone etc
- Low cost – adapt to your own design
- LEDs prefitted and tested - no wires!
- Control by switches or DCC using **TTSC1/TTSC2**
- Automate using **TTSC100**

All signal kits (excluding **TTSK1**) include resistors and LEDs pre-fitted to a long narrow PCB to go through the baseboard - just solder or wrap signal control wires to the LED strip.
The metal post is push fit and the other parts can be added using **DLAD-62** Deluxe Roket Glue.



Signal kit with LED stick, post & details

TTSK1 **Basic Kit only**

Plastic kit and metal post only.
(No LEDs or resistors)

2 Aspect Home Kit

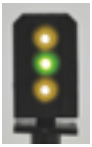
TTSK2	**Standard**
TTSK2L	with Left Feather
TTSK2R	with Right Feather
TTSK2T	with Theatre

2 Aspect Distant Kit

TTSK3	**Standard**
TTSK3L	with Left Feather
TTSK3R	with Right Feather
TTSK3T	with Theatre

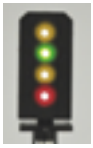
3 Aspect Home Distant Kit

TTSK4	**Standard**
TTSK4L	with Left Feather
TTSK4R	with Right Feather
TTSK4T	with Theatre



3 Aspect Distant Kit

TTSK5	**Standard**
TTSK5L	with Left Feather
TTSK5R	with Right Feather
TTSK5T	with Theatre



4 Aspect Outer Distant Kit

TTSK6	**Standard**
TTSK6L	with Left Feather
TTSK6R	with Right Feather
TTSK6T	with Theatre

TTSK7
2 Aspect Dual Head Home Signal Kit

TTSK8
2 Aspect Dual Head Distant Signal Kit

3 or 4 Multi Aspect signal kit
All LEDs fitted and both head covers included

TTSK9	**3 or 4 Multi Aspect Kit**
TTSK9L	with Left Feather
TTSK9R	with Right Feather
TTSK9T	with Theatre

Signal kits with Feather and Theatre Indicator
Signal kits are now available fitted with left / right feathers and theatre indicators as shown on the previous page and also available as add-on kits for existing signals as below.

Left and Right Feathers
To indicate a direction or route.

Theatre Indicator
It can display one user defined number, letter or character easily made on the 5 x 5 matrix by masking unwanted holes. (It can only be switched on and off, not changed to show other characters).

Theatres and Feathers are also available separately to fit onto other makes of signals and can be controlled by a switch with DC or by a DCC decoder (2 solder connections).

TTLK1
Left Feather add-on Kit
Includes Left Feather LED panel, front & back casing and a resistor

TTRK1
Right Feather add-on Kit
Includes Right Feather LED panel, front & back casing and a resistor

TTTK1
Theatre add-on Kit
Includes Theatre LED panel, base plate, hood/screen and a resistor.

Signal Heads kits are ideal for mounting onto signal gantries or your own signal posts. LEDs are prefitted on a compact board which fits in the head which you wire to a decoder, switch or automatic signal controller. A Feather or Theatre can also be fitted.
(Note: fine soldering is required).

TTSH2	**2 Aspect Home (R•G)** 12 x 10 x 5 mm
TTSH3	**2 Aspect Distant (Y•G)** 12 x 10 x 5 mm
TTSH4	**3 Aspect Home Distant (R•Y•G)** 16 x 10 x 5 mm
TTSH5	**3 Aspect Distant (Y•G•Y)** 16 x 10 x 5 mm
TTSH6	**4 Aspect Outer Distant (R•Y•G•Y)** 20 x 10 x 5mm

Ground Position signal kits are easily mounted through a hole in the baseboard and can be controlled either by a standard switch using DC or by DCC using a DCC decoder.

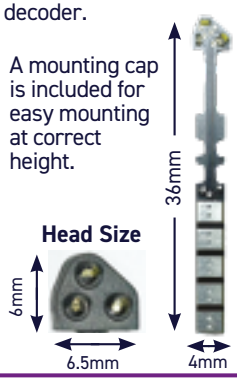
TTGK1 / TTGK2 Original & Modern Red Ground Signal Kit

Includes a panel with red and white LEDs prefitted as shown, casing and resistor. It can be wired to show modern or original colours. Full wiring instructions included.

TTGK3 / TTGK4 Original & Modern Yellow Ground Signal Kit

Includes a panel with yellow and white LEDs prefitted as shown, casing and resistor. It can be wired to show modern or original colours. Full wiring instructions included.

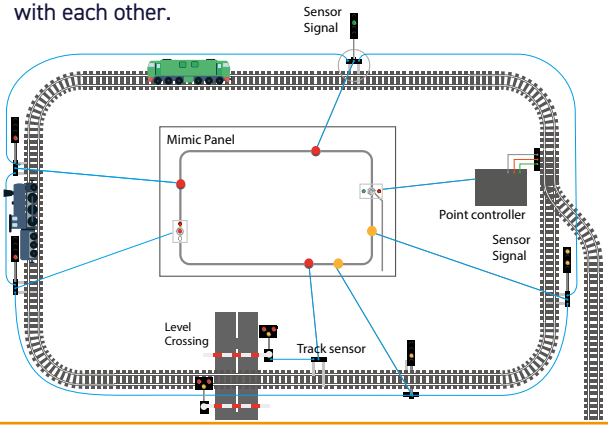
A mounting cap is included for easy mounting at correct height.

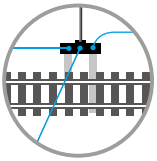


What is Layout Link?

Our Layout Link technology is an easy way of connecting our sensor signals, point controllers and accessories together **with just a single wire!** And whether you run regular analogue DC or digital DCC, it works just as well.
The Train-Tech Layout Link is special 'One Wire' technology. One wire links multiple components, whether they be Signals, Level Crossing Barrier Lights or Relays, together to allow them to talk to and interact with each other.

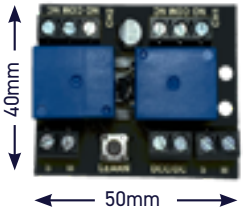
The products which can be linked using Layout Link are shown with the symbol above.





You can now control so much of your layout automatically, just from the passing of a train, the throw of a switch or the changing of a point.

Relay Controller



This is a twin channel Relay controller which can switch high power loads using control signals from Track Sensors, Mimic Switches, Sensor Signals or DCC accessory commands.
Example applications include:

- Start a coal loading conveyor when the train is in position
- Remote control of models from the DCC controller
- Activate a turntable when a train passes a Track Sensor
- Boost Track Sensor outputs to control motors, solenoids, lamps etc.
- Automatic Train Control - see opposite page

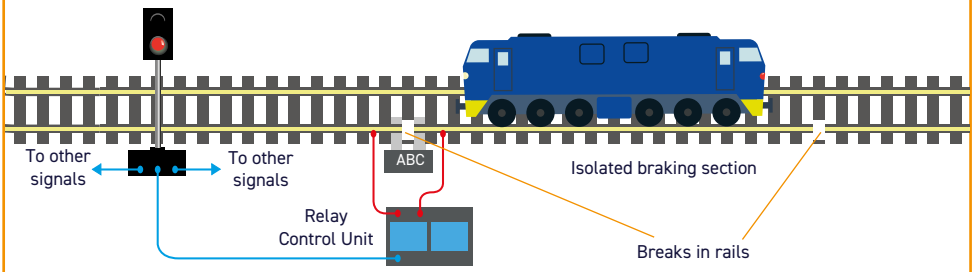
The **TTRL1** works on analogue or digital layouts and is powered directly by DCC or 12-16 Volts smooth DC. When on digital, the relays can also be controlled by DCC accessory addresses which are easily set up using One-Touch DCC. Relays are a great way to switch on and off relatively high power devices such as motors and solenoids because they act like a switch contact and so are safely electrically isolated from other signals.
The Relay Controller incorporates two separate relays, each with single pole changeover contacts which can switch up to 3 amps at 24 volts AC or DC, so can be used to control DC or AC models, including battery models, Faller kits, etc.

TTRL1 **Twin Channel Relay Controller** for DC or DCC with instruction booklet
TTST10 **Track Sensor**

Automatic Train Control using the Relay Controller

Our Sensor Signal system provides completely automatic block signalling - the signal turns red to warn another train against entering the same block. Until now there has been nothing to actually stop another train other than your careful driving, but now you can link a Sensor Signal to the Relay Controller and this will stop a train entering a block if the the signal is red, and automatically start it again when the signal turns green or yellow! This means you can have two or more trains running around a layout (you controlling one if you wish) and they will just follow each other at safe distances obeying signals and never collide, all automatically!

The system will work with standard DC or DCC layouts, but you will need to make an isolated braking section so that the train can be controlled before the signal, with each side of the rail break connected to the Relay Controller with two wires.



As the picture shows, wiring is straightforward with just one wire linking the Sensor Signal to the **TTRL1** and you can link lots of signals together using just one wire and make extra isolated braking sections to build multiple fully automated block sections.

About ABC braking...
DC trains and some DCC trains will just stop in the isolated section, but if you are DCC and your locos are 'chipped' with decoders which incorporates ABC or Assymetrical Braking Control (eg ESU, Zimo etc), you can fit an ABC diode module in the rail break, then these will slowly come to a halt and gradually speed up again once signal clears, complete with slow down brakes and speed up sounds if it is a sound fitted ABC loco!
(Please note: that if the ABC Diode module is fitted, non-ABC fitted locos will not stop automatically in the isolated sections, just controlled from the DCC controller).

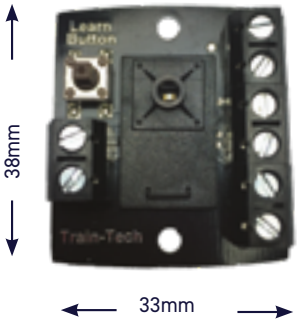
Automatic Train Control - what do you need
Each **TTRL1** Relay controller has two relays, so can link to two Sensor Signals and control two isolated braking sections of track. You can also fit an ABC Diode module to each isolated braking section if running DCC trains which are fitted with ABC modules, see ABC braking section above. You will need to cut the rails to make isolated sections and may find insulated fishplates useful to keep the rails aligned. (eg Peco SL-11)

TTRL1 Twin Channel Relay controller
TTABC1 2x Diode modules

Colour Light Signal Controllers

These Signal Controllers make it easy to wire and control LED colour light signals made by Train-Tech & other manufacturers using DCC.

- Control colour light LED signals by DCC
- One Touch DCC™ button - No programming!
- Screw terminals for wires - no soldering
- Connect directly to the signal LEDs - resistors are built in
- Simple 2-wire connection to track or controller output
- Can synchronise to other Signals & Points



Just connect the signal and wire the DCC terminals of the signal controller to the nearest track. Press the One-Touch DCC Learn button, choose a DCC accessory address and send an accessory command from your DCC controller.
Thats it, all set up!

TTSC1 Dual 2 aspect signal controller

Controls two x 2 aspect LED colour light signals from DCC. Resistors are built into the module so that the signal LEDs can be connected directly to the SC module.

Compatible with:

- Train-Tech **TTSK2, TTSK3, TTSK7** and **TTSK8** 2 aspect signals
- Train-Tech **TTSH2** and **TTSH3** 2 aspect signal head only

Also compatible with other makes of 2 aspect LED signals.

Two **TTSK2** Signal Kits connected to an **TTSC1**

TTSC2 3 or 4 aspect or 2 aspect + route signal controller

Controls one 3 aspect signal, one 4 aspect signal, or one 2 aspect & route LED light signal.

Compatible with:

- Train-Tech **TTSK4, TTSK5, TTSK6, TTSK9** multi aspect signals
- Train-Tech Signal head only **TTSH4, TTSH5, TTSH6.**
- Train-Tech 2 aspect signals with feathers and theatres:
  TTSK2R, TTSK2L, TTSK2T and **TTSK3R, TTSK3L** and **TTSK3T**
  TTSH2 or **TTSH3** Signal head fitted with Feather or Theatre

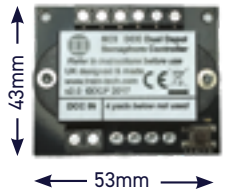
Also compatible with other manufacturer's LED route signals.

Signal with a feather connected to an **TTSC2**

Dapol Orginal Semaphore Signals - OO & N

TTSC3 Dual Dapol Original Semaphore signal DCC controller

The **TTSC3** is designed to specifically control and power one or two Dapol original N or OO gauge semaphore signals. It incorporates two DCC decoders so that each signal has its own DCC address. The **TTSC3** also provides a stable regulated supply from the DCC bus and signals connect directly using existing yellow control and power wires with no modifications or extra power supply required.



TTSC300 Dual Dapol Original signal control with Automation

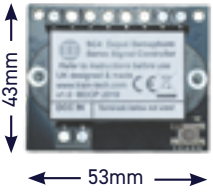
Like the **TTSC3**, the **TTSC300** provides stable power and DCC control of 2 Dapol semaphore signals directly from a DCC track or bus. Additionally the **TTSC300** also has inputs for Track Sensors allowing Semaphore signals to operate automatically as Trains are detected on the track! The **TTSC300** is also Layout Link compatible and may be linked to Mimic Switches and Mimic Lights so that Dapol Semaphore signals can be both controlled and monitored from a Mimic panel. As well as controlling the signals using DCC, the **TTSC300**, Track sensor and Mimic switch can be used on analogue DC as well as digital DCC layouts.

Signal Not Included

Dapol Servo Semaphore Signals - O Gauge Signals and OO Bracket Signals

TTSC4 Dual Dapol Servo Semaphore signal DCC controller

The **TTSC4** is specifically designed to power and control the new Dapol Servo controlled signals which have three wire inputs for each signal. A **TTSC4** can control two servo signals or a twin head servo signal and each can be assigned a DCC accessory address and run independently or together in Home-Distant pairs. It also incorporates a regulated power supply to provide a stable safe voltage for the signals from the standard DCC track supply. Easy and quick to connect, use and setup using One-Touch DCC.



TTSC400 Dual Dapol Servo signal control plus Automation

The **TTSC400** provides all of the regulated power supply and DCC control features of the **TTSC4**, plus two additional inputs for **TTST10** Track Sensors so that Dapol Servo Semaphore Signals can be controlled automatically by the passing of trains! Signals can also be controlled remotely using Mimic switches on a panel. Both Track Sensors and Mimic switches are linked to the **TTSC400** using just a single wire with the Layout Link System, making wiring neat and simple. The **TTSC400** with Track Sensor and Mimic Switches can be used on both DCC and DC layouts.

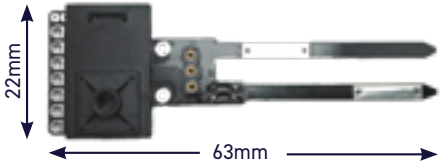
Signal Not Included

Track Sensor+

DC & DCC

ANY GAUGE

The Track sensor incorporates an infrared sensor which detects a train passing over it and controls products in the Layout Link Family. It also has additional outputs for direct connection to LEDs & other non-Layout Link items.



Track Sensor+

A Track sensor is located next to the track and features a built in infrared sensor which senses a train passing and easily links to and controls a range of Layout Link products using just a single wire which plugs in - no soldering required.

Track Sensors can control:

- Trigger the **TTLC10** Level Crossing lights and sounds when a Train approaches
- Control Dapol Semaphore signals automatically using **TTSC300/TTSC400** controllers
- Control a Ground Position shunt signal to change as the train passes sensor
- Link to Mimic Switch/Light to show trains passing, location (ideal for hidden tracks)
- Link to a Sensor Signal to change the following block section (like a dummy signal)
- Trigger sounds on the Sound Track or messages on the Smart Screen

Track Sensor+ features:

The Track Sensor+ features additional solder terminal outputs to link directly to devices such as LEDs, microcomputers (eg Raspberry Pi, Arduino) etc. Outputs can also be boosted to control motors, solenoids etc using a Relay Controller.
Note that Track Sensor can be powered from DCC or 12-16v smooth DC
The 4 outputs function as follows:

- Output stays on as train passes over sensor
- Output pulses as train passes over
- Random flashes as train passes - like sparking
- Turns on then off between alternate trains

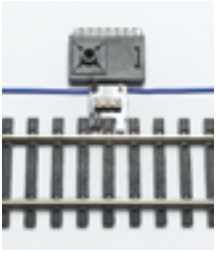
TTST10 **Track Sensor+** complete with LED and instructions

To Power by DCC

Simply slide the Track Sensor into the power clip slots which are included in some types of OO track.

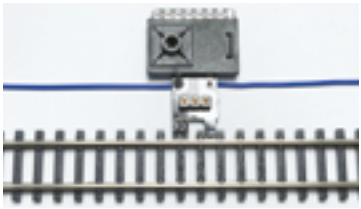
To Power by DC or DCC

Cut off the fingers at the dotted lines and solder 2 wires to the base to power from DCC or a 12-16v smooth DC supply.



Using Track Sensors with N guage

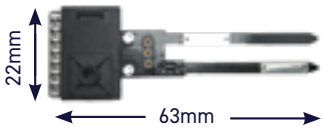
Although Track Sensors are primarily designed for OO/HO gauge track, they can also be located next to N track to operate accessories such as the **TTLCN10** N gauge Level Crossing, Sound Track, Mimic panel etc.



TTSC100 Automatic Colour Light signal controller

The Automatic Colour Light Signal controller is based on our Sensor Signal technology and enables standard LED colour light signals to be wired and controlled automatically. It will operate 2, 3 or 4 aspect colour light signals and also includes an output to control a feather or theatre route indicator using a Mimic switch or DCC.

- Control standard LED colour light signals automatically
- 2, 3 and 4 aspect plus feather / theatre route output
- Link to other automatic signals for block working
- Manual override facility using Mimic Switch or DCC
- Slides directly into some 00 track when used on DCC or remove tabs and wire to 12-16V smooth DC or DCC.



The **TTSC100** is ideal for converting existing LED colour signals to automatic operation, signal gantries, remotely located signals and controlling continental or other non Train-Tech designed signals. Like Sensor Signals, the Automatic Signal Controller can be used on its own or linked to other controllers or Sensor Signals using just one wire to enable fully automatic Block Signalling. The output connection terminals are designed for soldering to the signal wires.

N Gauge: Although primarily designed for 00/HO gauge, it can be located next to N gauge track and connected to N gauge signals.

Gaugemaster N gauge signal **GM270** controlled automatically by a **TTSC100**

Gaugemaster
N Gauge Signals

The Gaugemaster range does a multitude of N gauge signals, which can be controlled by connecting them to the **TTSC1** & **TTSC2**.

Signal Type	Standard	Bulk Pack
2 Aspect Lineside	GM270	BPGM270
2 Aspect Platform	GM271	BPGM271
2 Aspect Head	GM273	BPGM273
3 Aspect Lineside	GM275	BPGM275
3 Aspect Platform	GM276	BPGM276
3 Aspect Head	GM277	BPGM277

Gaugemaster N gauge signal **GM275** controlled automatically by an **TTSC100**

DC & DCC

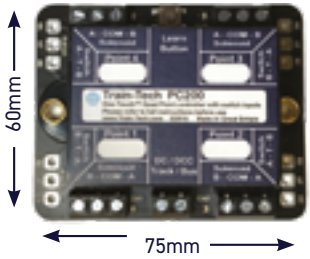
ANY GAUGE

DCC Point Controllers are easy to fit and use controllers which simply connect to your solenoid point motors. This enables them to then be controlled by DCC.

- Connect your points for use on DCC.
- One Touch DCC™ - No complicated programming!
- Screw terminals for solder-free connection.
- 2-Wire connection to your DCC rails.
- Built in CDU for efficient operation.
- Built in powerful CDU for efficient operation.

TTPC200 DCC Point Controller Quad with Route Store/Switching

With DCC Point Controller you have instant control of four outputs. These can be programmed sequentially or separately as desired and all set using the One touch DCC™.



Route Store

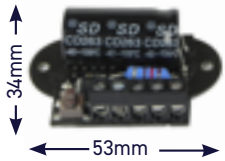
As well as the 4 main DCC addresses, the module can also save multiple routes. By setting an extra address you can control groups of points using a single command, allowing easy setting of routes.

Manual Control

In addition to control by DCC, the module also has 4 switch inputs for manual control of each of the 4 points. You can either use regular switches such as toggles, or you can use our Mimic switches for both control and indication.

TTPC1 Single One-Touch DCC™ Point Controller

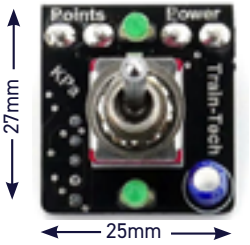
For control of that far away point or the last in a series. Although containing fewer functions, this unit still features a built-in CDU, packing all the punch of its bigger brother. It can also be set with One Touch DCC™.



TTPMS2 Point Motor Switch For 2 Wire Point Motors

The **TTPMS2** has been developed to allow 2 wire DC point motor users such as those using Kato, Piko (G Scale) or LGB, easy connection and operation alongside instant position indication via the supplied LEDs for use on mimic panels.

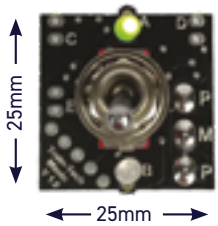
- Visual LED indicator on point status
- No soldering required
- Small and compact
- Interchangeable LEDs



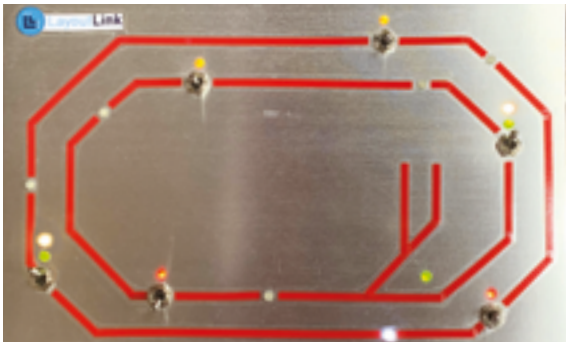
COMING SOON **TTPMS3 Point Motor Switch for Solenoid Point Motors**

Mimic Switches and Lights enable you to make a mimic panel to monitor and control other Layout Link products such as Signals, Points and Level Crossings.
You can even see where trains are by linking to Sensor Signals or Track Sensors around your layout - just like the real thing!
Wiring is very easy thanks to Layout Link, there is just a single wire going between a Mimic and a Sensor or accessory. Multicolour LEDs are supplied with both Mimic Switches and Mimic Lights which can show signal colour as well as occupancy on your mimic panel. LEDs just plug into the LED sockets.

In addition to the 2 LEDs supplied, you can also add 3 others to display various extra functions.



TTMS1 Mimic with Toggle Switch



Example of a Mimic Panel using TTMS1 & TTML1

Mimic Switches

Mimic switches feature a switch, 2 LED sockets and a Layout Link connector.

You can use a Mimic Switch to:

- Manually control Sensor Signal red + route; LEDs show Signal colour and Train location
- Manually control a Semaphore signal with **TTSC300/TTSC400**; LEDs mimic the signal position
- Control an **TTLC10/TTLCN10** Level Crossing; LED mimics the colours of the barrier lights
- Manually control a **TTGS1/ TTGS2** Ground Position Signal; LED mimics signal colour

TTMS1 **Mimic with Toggle switch with 2 plug in LEDs and instructions**
TTMS2 **Mimic with Push Button with 2 plug in LEDs and instructions**

Mimic Lights

Mimic Lights are very similar to Mimic Switches except they have no switch and just display the status or position of Layout Link accessories. Mimic Lights also have a DCC decoder built in and can be set to display the status of *any* type of DCC accessory!

You can use a Mimic Light to:

- Mimic Signal colour & show ttrain location (occupancy) when connected to Sensor Signals
- Show the position and movement of a train over a Track Sensor or Sensor Signal
- Show Signal colour or Semaphore status of DCC signals
- Mimic the colours of the barrier lights

TTML1 **Mimic Light with 2 plug in LEDs and instructions**

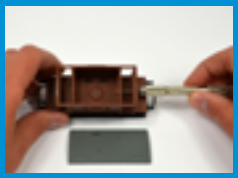
Easy to fit lighting effects for rolling stock & locos

- Tiny module fits most brake vans, coaches, locos, etc
- No switch - senses motion & turns on lighting automatically
- No wires or soldering - LED & battery just clip in
- Fits many gauges: module is 13mm x 22mm x11mm

These small modules incorporate a motion sensor which detects movement of the train and automatically turns on lighting. Various effects including constant light for coaches and headlights, modern flashing tail lights and flickering flame effect for steam firebox or oil lantern tail light which flickers more as the train bumps over the track, just like the real thing! Dual output AL's feature both constant lighting output as well as a second effect such as electric sparks & amber door lights.

N GAUGE: **TTAL1/TTAL2/TTAL3/TTAL4** fits some N gauge using smaller **TTBAT2** 12mm battery & cutting the battery holder.

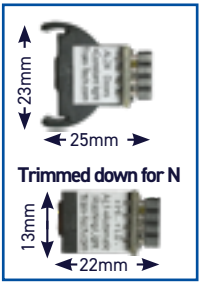
1 2 3 Easy to fit - fitting a TTAL into a brake van



1 Remove roof and drill two small holes for LED

2 Fit module inside, plug in LED & battery

3 Fit roof - LED lights when wagon moves!



Single function AL modules all include LEDs, long life 20mm battery and fitting guide

TTAL1 •
Flashing Tail light
Modern image - with 2 lantern shape LEDs

TTAL2 •
Flickering Tail / Fire
Flame effect with both firebox & lantern LEDs

TTAL3 •
Constant Lighting
For coach, head or cab lighting, includes LEDs

TTAL4 •
Modern Flashing Tail
Authentic 'Dorman' type - 2 flashes per sec

Dual function AL modules all include LEDs, long life 20mm battery and fitting guide

TTAL21 •
Flashing + Constant
Suits modern coaches with a flashing tail light

TTAL22 •
Flickering + Constant
Ideal for a coach with oil type tail lanterns

TTAL23 •
Spark-arc + Constant
Ideal overhead or rail electrics EMUs eg 2BIL

TTAL24 •
Amber door+Constant
Multiple or coach with auto amber door lights

Instant easy lighting for any coach - DC or digital

- Easy to fit in seconds - No wiring!
- No switch - turns on automatically as train moves
- No pickups - works on both regular DC or DCC
- Traditional warm white or modern cool white
- Also with tail light, sparks or door lights effects!
- Lights stay bright and constant with no flickering
- Fit most coaches & multiples and may be cut down
- OO/HO gauge is 220mm long, trimable to 75mm
- N gauge is 100mm long, trimable down to 55mm

The **TTCL21** Coach & Tail light at night

1 2 3 Easy to fit - fitting a coach lighting strip

1 Remove the roof

2 Fit Lighting strip

3 Replace the roof

Each lighting strip is completely self contained with a built-in long life battery and five efficient LED lamps which realistically light any coach! There is no need for a switch as the strip incorporates a small sensor which detects when the train moves and turns on the lights automatically. The lights stay on whilst the train is in motion, then after it stops keeps them on for a few minutes before turning them off so that temporary stops at stations or signals leaves the coach lit.
As well as the standard Lighting strips, there are also dual function versions with an additional effect which also works automatically and comes complete with LEDs for the extra effect which plugs straight into the coach lighting strip so no wires or soldering!

Warm white simulates traditional oil lamps or bulbs. Cool is like modern flourescent or LED

Lighting strip functions	Cool White		Warm White	
	OO	N	OO	N
Standard Light strip •	TTCL1	TTCN1	TTCL2	TTCN2
Flashing Tail Light •	TTCL21	TTCN21	TTCL26	TTCN26
Flickering Tail Light •	TTCL27	TTCN27	TTCL22	TTCN22
Spark-arc Effect •	TTCL23	-	TTCL28	-
Amber Door Lights •	TTCL24	-	TTCL29	-
Constant Tail Light •	TTCL25	-	TTCL30	-
Door Tones •	TTCL34	-	-	-
Faulty flickering tube •	TTCL31	-	TTCL32	-

TTBAT1 - Pack of 3 spare batteries for OO / HO Lights
TTBAT2 - Pack of 3 spare batteries for N / 009 Lights

Multipacks

OO Gauge: Cool White Packs

TTCL100 • - 2 x TTCL1, 1 x TTCL21
TTCL110 • - 2 x TTCL23
TTCL120 • - 1 x TTCL24, 1 x TTCL34

OO Gauge: Warm White Packs

TTCL200 • - 2 x TTCL2, 1 x TTCL22
TTCL210 • - 2 x TTCL28

N Gauge: Cool White Pack

TTCN100 • - 2 x TTCN1, 1 TTCN21

N Gauge: Warm White Pack

TTCN200 • - 2 x TTCN2, 1 x TTCN22

TTCL51 • - London Transport Museum S Stock 1 Car lighting strip (for OO)
TTCL150 • - LTM S Stock 4 Car lighting set - including spark effect & door tones (for OO)

Smart Screen is a real working animated screen in miniature, which you can customise with your own messages to really bring your layout to life! The small display module has everything built inside so you only need to connect 2 wires to DC or DCC power to make it come alive.
The Smart Screen can display multiple screens which can be triggered by a range of different inputs including switches, DCC commands and even Track Sensors which can be used to show a different screen as a train passes over it.

Small and easy
Everything is contained in the Smart Screen so no complicated wiring or circuit boards - just connect 2 wires to a power source and go!

Bring your station alive!
Mounting a Smart Screen on a platform or in a station can add a lot of realism. You can change the displays at the touch of a button, or if you fit one or two Track Sensors next to your tracks it can show appropriate messages for trains arriving or departing completely automatically! You can even display a real time clock on the screen if you wish! And if your layout is DCC you can automatically display different screens for the various routes your points are set to as trains leave the station, there are so many possibilities!

Animated displays; just like the real thing.
Sometimes you may want to display several words or list the various stations your train is stopping at, but they wouldn't normally fit on the screen. However Smart Screen is able to display long messages by scrolling them along the screen automatically. The scrolling bottom line can have over 130 characters and you can store and display up to 10 different message screens!

All aboard!
As well as mounting your Smart Screen on the Station you can also fit it inside a train! You can just connect it to a regular DC power feed to light it up, or if you are running your locos on DCC the Smart Screen has a built-in digital decoder which can be set to monitor the train direction and display a different destinations or messages automatically depending on its direction of travel!

Scan to Watch Video

Setting up your own message screens
Smart Screens come preloaded with a demo display, but you can fully customise your own messages and screens. Although once set up the screen can be powered from DCC or DC, you need to use a DCC controller to set up your own screens and inputs. This is fully explained in the instructions, but if you do not have access to a DCC controller to set it up, ask Train-Tech or your dealer for details of their Smart Screen programming service.

Not just for trains...
Displays are now part of everyday life, so Smart Screens can be used on your layout in places other than trains and stations. They can help bring roads to life with changing screens and if you have a Faller Car system or similar you can automate the screens using magnetic reed switches under the road. You could also fit them in buses or bus stops, or use them in a Stadium to make your dream team scores come true!

Controlling and powering your Smart Screen
Smart Screens can either be powered directly from 8-16 volts smooth DC or from DCC. Different display screens can be set to be controlled by a number of different types of inputs or commands:

- 1 or 2 Track Sensors to show different screens
- 1 or 2 switches, eg button, reed switch
- DCC Accessory - eg point or signal control
- DCC Loco - by direction or Function buttons

Smart Screen OLED display modules - power from DCC or 8-16V smooth DC or 9V battery

TTSD1	Smart Screen - Single pack including wire and instruction booklet
TTSD2	Smart Screen - Twin pack including wire and instruction booklet

Smart Screen Starter Pack Control messages automatically from trains passing -

TTSD10	Smart screen starter pack with Smart Screen, Track Sensor & TTSE2 Enclosure

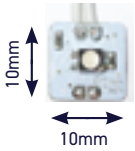
Smart Screen housings These are 3D high resolution printed in black, but may be repainted

TTSE1	Smart Screen enclosure - mount or hang screen in various locations - Pack of 2
TTSE2	Smart Screen enclosure on square mounting post; Right hanging
TTSE3	Smart Screen enclosure on square mounting post; Left hanging for platforms etc
TTSE4	Smart Screen enclosure on round mounting post - Right hanging for platforms etc
TTSE5	Smart Screen enclosure on round mounting post - Left hanging for platforms etc
TTSE6	Double-sided enclosure on round mounting post - houses two Smart Screens back to back

Smart Lights are a new kind of light which you can easily fit inside buildings, trains, vehicles or other parts of your layout which light up your models with the lighting effects of your choice! Each Smart Light is only 1cm square and just 2 wires connect it to almost any low voltage supply. If you have a digital layout you can control it using a simple DCC accessory command (even if it is on board a moving train!), although it is just as easy to power from a 12V smooth DC power pack or a 9 volt battery!

- Just 2 wires! Power by standard 9 -16V DC or a 9 volt battery
- Or power by DCC which can also control some effects
- Just connect and go - no setting up required
- Fitted with self adhesive pad for easy mounting
- Small 1 x 1 x 0.3cm - fits in or under most models including N

How does it work?
Smart Lights incorporate a unique Train-Tech microchip to control a multicoloured LED which can light up any colour or mixture of colours, rather like pixels in a modern TV. The chip contains special software to reproduce all kinds of effects!



Actual Size!

Fitting a TTSL30 Emergency Vehicle Smart Light into an Oxford Police Car

Disassemble the car and carefully drill a hole in the roof underneath the blue light bar.

If the car is metal, insulate interior with insulating tape to prevent short circuits.

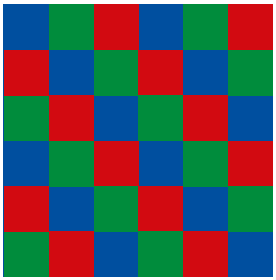
Use Blutack to hold the Smart Light under light bar & to prevent light bleed.

Drill a small hole in the car base and feed the wires through before reassembling.

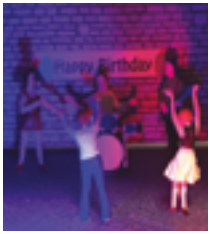
Use the self adhesive pad to easily fix the Smart Light into any building!

Lets make a BBQ!
Mount a Fire effect Smart Light under the top of a pencil rubber casing filled with some cotton wool

For **TTSL10** disco, print some bold colours to make the floor look like its moving!



TTSL10
Party / Disco Lights



Uses a mixture of lighting colours and flashes to simulate a party or disco in a house, night club or pub etc.
See flooring tip on opposite page.

Scan to Watch the Video

TTSL20

Random Lighting

This Smart Light randomly turns on and off simulating the lights in an office, house, station, outbuildings and streets etc.
Adds life to a scene!

Scan to Watch the Video

TTSL30
Emergency Vehicle

Realistic multi-flashing blue or blue and red light which can be fitted under the roof light of an emergency vehicle.
See car fitting guide on opposite page.

Scan to Watch the Video

TTSL40
Real Fire Effect

Flickering shades of amber and yellow flames mixed with the red embers of a fire.
Adds life to a scene!
See BBQ tip on opposite page.

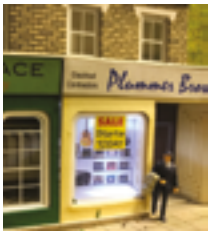
Scan to Watch the Video

TTSL50
Arc Welding Effect

Bright white arc welding flashes followed by a slowly dimming red glow from the weld cooling down. Ideal to bring a shed or industrial scene to life!

Scan to Watch the Video

TTSL60
Television Simulator



Fits inside a house or shop and lights up just like a television with multiple colours and flickering. Add this Smart Light and some people to bring interiors to life!

Scan to Watch the Video

TTSL100 Custom Smart Light

You can set this Smart Light to show your choice of colour, brightness and effect using a DCC controller in accessory control mode. Although it must be set up using DCC, once set up it can be powered by either 9-16v battery / DC or DCC. It has 3 main customisable functions:

- **Colour** - Choose from 14 different colours or an automatic colour cycle
- **Effect** - Choose from 8 different effects inc. constant, flash, flicker, fade.
- **Brightness** - Choose from 9 different brightness levels from 10% to 100%

Set and change an unlimited number of times. It remembers the effect until you change it!

Scan to Watch the Video

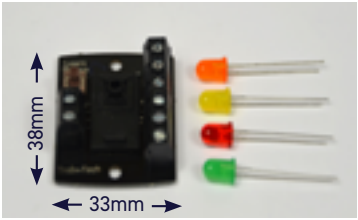
LFX Lighting & Sound Effects for layouts

DC & DCC

ANY GAUGE

The LFX controllers simulate a range of lighting effects which help to bring your layout to life! They are all really easy to connect and use and LEDs for effects are included.

- Easy screw terminals for all connections - no soldering
- Connect LEDs directly - no resistors needed
- Power by 9V battery, 9-16V DC or control using DCC
- LEDs included - just add to your models (not included)



TTLFX1 Level Crossing Barrier Lights
TTLFX1S Barrier Lights PLUS sound

Lights a sequence of amber then alternate flashing red lights.
Two red and an amber LED are included and these can be fitted into a suitable level crossing barrier model such as the Peco LK-51.
An additional set of 9 LEDs are also available which enables working lights to be installed on all sides of the level crossing (see pack **TTLED1**)
TTLFX1S also features a sound generator producing the realistic sounds of a modern level crossing from the speaker included

TTLFX2 Home & Shop Lighting

Randomly switches up to 4 sets of LEDs to light model house, shops, stations, pubs, etc, etc.
4 mixed colour LEDs supplied.
Extra LED set **TTLED2**

TTLFX3 Traffic Light controller

Automatic timed traffic lights - use two **TTLFX3**s on DCC to run an alternate junction.
Extra LED set **TTLED3**
GM384 - Traffic lights kit from Gaugemaster

TTLFX4 BBQ, Log, or camp fires

Very realistic fire effect using amber, red and yellow LEDs. Can be used to make a model of a fire or project a fire effect inside a building
Extra LED set **TTLED4**

TTLFX5 Welding Effects

Realistic welding effect using ultrabright white and red LEDs which simulate arc welding and cooling.
Includes 1 set of LEDs.
Extra LED set **TTLED5**

TTLFX6 Quad LED Lighting controller

Unlike others, this **TTLFX** is DCC only & controls 4 sets of LEDs on & off using DCC addresses you choose or synced with signals, points etc.
Extra LED set **TTLED2**

TTLFX7 Flashing Effects

Simulates multiple flashing effects used on a layout; belisha beacons, emergency services, camera flashs, lightning, sparks, arcing.
Extra LED set **TTLED7**

See all the effects on the Train-Tech YouTube channel - www.Youtube.com/TrainTech

Level Crossing lights & sounds with barriers and fence - N and OO/HO models

These are N and OO scale models of UK style level crossings which are preassembled with lights and sound and come complete with Peco static level crossing barriers and fence as shown in the photo. They are easy to fit, requiring just a 10mm diameter hole drilled in your baseboard and the model is held in place by a special flush Mounting Cap. Electrically these are very easy to wire up as all connections are by push fit single core wires. They can be powered by any 9-16V DC supply, DCC or a 9 volt battery.

Manual or Automatic control

The level crossing lights and sounds can be controlled in a number of ways:

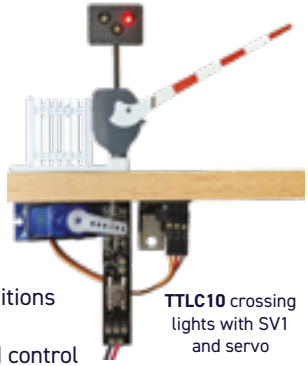
- A switch connected between the power supply and the level crossing.
- Controlled completely automatically by a Track Sensor via Layout Link (page 14)
- Switched by a Mimic Switch connected via Layout Link (page 17)
- If layout is DCC via your controller which is easily set up using a DCC address.

TTLC10	**Level Crossing barrier set with lights and sound for OO/HO - Single**
TTLC10P	**Level Crossing barrier set with lights and sound for OO/HO - Pair**
TTLCN10	**Level Crossing barrier set with lights and sound for N gauge - Single**
TTLCN10P	**Level Crossing barrier set with lights and sound for N gauge - Pair**

Servo Controller

The Servo Controller connects directly to most low power analogue radio control type servos. Servos are versatile low cost control actuators which are ideal for animating layouts:

- Level crossing barriers or gates
- Coal or grain tipper
- Semaphore signal actuator



TTLC10 crossing lights with SV1 and servo

TTSV1 makes it easy to control a servo in a number of ways:

- Train passing a Track Sensor moves the servo to defined positions
- Mimic Switch moves the servo to defined positions
- DCC Controller in loco mode - controls servo using the speed control
- DCC Controller in accessory mode - moves the servo to defined positions

The Servo Controller incorporates a controller, decoder and power supply circuit and can be powered directly from 12-16V smooth DC or from the standard DCC track supply.
The small **TTSV1** has a 3 pin Servo connector to enable a standard servo to be plugged in, plus screw terminals to connect to DC or DCC power, Track Sensor and Mimic Switch.

TTSV1	**Servo Controller**
TTSVS1	**9g Servo**
TTSVP1	**Servo Starter Pack** includes 1x **TTSV1** Servo Controller and 1x **TTSVS1** Servo

Bring your own favourite real life sounds to your layout!

Sound Track is an easy to use portable sound recorder which enables you to record your own sounds, bring back and replay automatically on your layout!

It has 4 separate sound tracks, each of which can be replayed either by a controller command, touch of a button or triggered by a Track Sensor when a Train reaches a particular place.

So now you can have your favourite locomotives whistle played at the Whistle sign, or your own station announcement played automatically when the train comes into the station!

Make the sounds your own

Most model sound systems can only playback preset sounds which someone else has recorded, the majority of which can only be controlled by DCC.

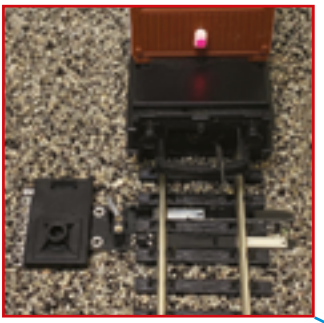
Sound Track enables you to record your own sounds and is really easy to use, with just three buttons to select the track, record and playback. It can be battery powered for recording and playing back sounds on location, then brought back to your layout, connected up and your sounds controlled either by switches, sensors or DCC commands. Sound Track can be used on battery, DC or DCC and stores your recordings indefinately until you decide to re-record. It can also play two tracks at once, so for example you could have the continuous background sound of a station, then a platform announcement coming over as your train comes into the station!

- Records sound tracks using the built-in microphone
- Replays sound tracks from the built in loudspeaker
- 4 sound track stores, each can be upto 35 seconds long
- Lock feature to protect valuable sound tracks
- Capable of playing up to two sounds at the same time
- One track can be continuously looped for background sounds
- 4 screw terminal for connecting switches or Track Sensors
- Powered by DCC, 9-16V smooth DC or internal 9 volt battery
- Portable - size 11.1 x 5.7 x 3 cm

Easy to connect and operate....

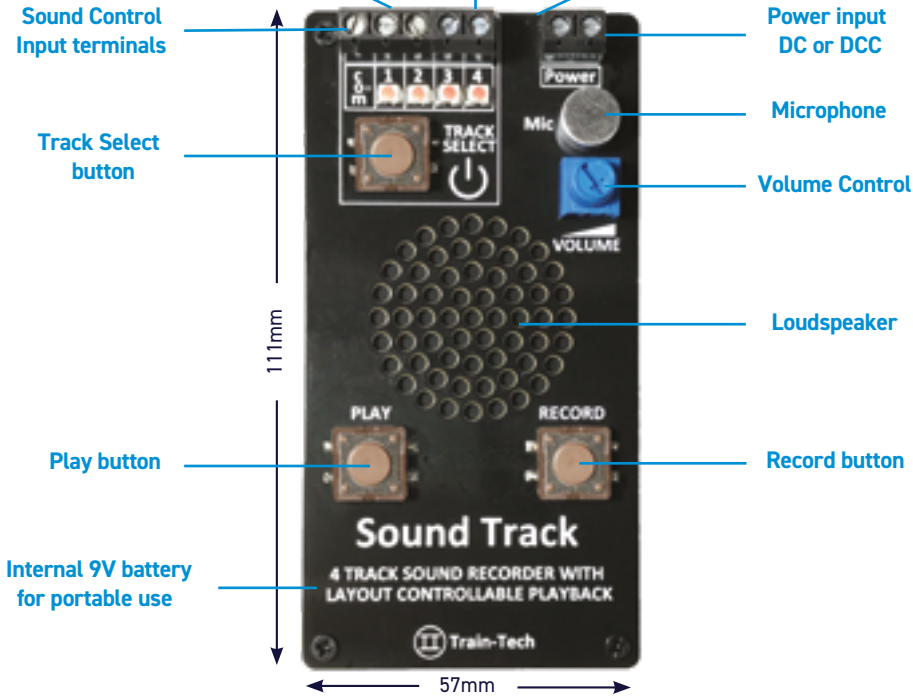
Scan to Watch the Video

Track Sensor sound control



Switch contact sound control

DCC controller sound control



TTSR1 **Sound Track** sound recorder and player, with instruction booklet

A regular 9 volt PP3 type alkaline battery is required for portable operation - not supplied

SFX PLUS Sound capsules for any model train system

ANY GAUGE

DC & DCC

Easy low cost sound which works on *any* railway

- **Easy to fit in seconds** - no connections or switches!
- No pickups or wiring so **works on analogue DC & DCC**
- Self contained capsule - built-in speaker & battery
- **Tiny capsule**: 25mm x 20mm x 12mm approx.
- **Real recorded sounds** from real trains
- Fit capsule into a loco, tender, wagon or coach
- N Gauge fitting guide free online or on request
- Now includes facilities for adjusting volume and fitting an external speaker and battery

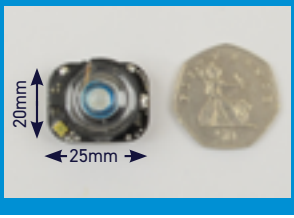
Small enough to fit most locos

including Diesel, Steam or electric

Or fit into tender, wagon or coach

Many modellers like the extra realism which sound can bring to a layout but until now it has been an expensive and complicated feature to add and usually requiring DCC, extra wiring and quite a lot of space.
SFX needs none of this and works in almost ANY train!

We have developed a tiny sound capsule which brings rich real railway sounds from your favourite train! The SFX is completely self contained with a built in speaker and battery which needs no pickups or connections of any kind and so is both easy to fit and works on any train system, including analogue DC or digital DCC.



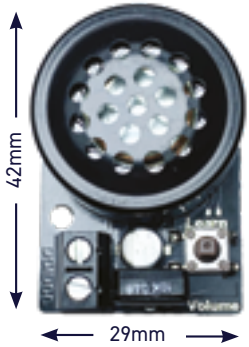
How does it work?
At the heart of each SFX is a microchip containing the real recorded train sounds and a small motion sensor which detects what the train is doing and replays the most appropriate sounds through the tiny loudspeaker. The motion sensor also turns power on and off automatically so that battery life is preserved and there is no need for any switch.

SFX PLUS sound capsules - all supplied with battery, sound tube and fitting guide

TTSFX10 *	Steam Express locomotive - incl chuffs, steam, fireman coaling, whistles
TTSFX20 *	Diesel locomotive - including tickover, turbo, air, horn etc with coasting
TTSFX11 *	Steam Freight locomotive as **TTSFX10** but slower heavy goods or shunting
TTSFX21 *	Diesel locTomotive - as **TTSFX20** but continuous after speed up - no coasting
TTSFX50 *	Diesel Multiple unit - including tickover, guard buzzer, gear changes, horn
TTSFX70 *	Goods freight sounds - including couplings, wheel squeals, buffers
TTSFX80 *	Passenger coaches - including couplings, doors, squeals, guard
TTBAT1	Pack of 3 spare batteries for **TTSFX** sound, coach lighting & **TTAL** products

Scenic Sounds Modules bring life to any layout

Sound can really bring a layout to life and these new modules make it so easy; just connect two wires to the nearest power source, hide the module and turn on.



- Compact sound module with built in loudspeaker
- Real natural sounds specially recorded for these modules
- Easy connections - just two screw terminals for power supply
- Power from 8-16 volts smooth DC for natural random sounds
- Or power from DCC for controlling sounds by DCC or random
- Fits inside a model or under the baseboard
- Built in adjustable volume control

GM780 Lineside

Sounds include

- Point throws
- Semaphore clunks
- Signal rodding
- Trackside sounds

GM781 Station - Steam

Sounds include

- Guards Whistle
- Slamming doors
- Steam loco pulling out
- Station Bell

GM782 Station - Modern

Sounds include

- Door closing beeps
- Guards whistle
- Trains pulling out
- General station noise

GM783 Urban

Sounds include

- Roadworks
- Aeroplane flying over
- Slow moving traffic
- General City noise

GM784 Rural

Sounds include

- Animal noises
- Church bell chimes
- Birdsong
- General country noise

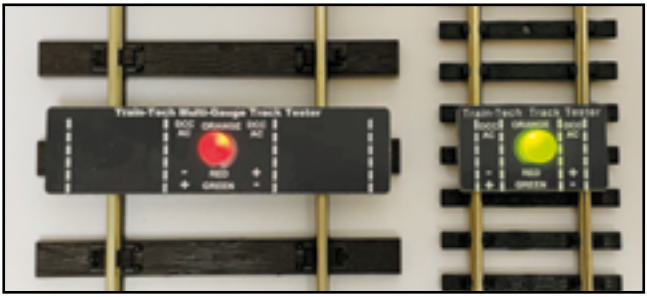
When powered by DC:
Modules play an appropriate background sound with individual sounds played in sporadically.
When powered by DCC:
Modules can play randomly as above or individual sounds can be played on command by DCC; eg Point throw played as a point changes, signal rodding etc

Scenic Sounds modules - power directly from DCC or 8-16V smooth DC

GM780	**Lineside Scenic Sounds module**
GM781	**Station (Steam) Scenic Sounds module**
GM782	**Station (Modern) Scenic Sounds module**
GM783	**Urban Scenic Sounds module**
GM784	**Rural Scenic Sounds module**

Scan to hear Sound Samples

ANY GAUGE



TTTT10+ on O gauge track TTTT1+ on OO track

Track Testers

- Testers for N to G gauge
- Quickly check for faults
- For DC and DCC
- Easy to use
- Low cost
- Checks point frogs
- Improved design

- Very easy to use - just place tester on track and watch the LED:
- Multicolour LED shows DCC (orange), DC polarity (red or green) or power faults
- Improved Plus design now features tough resin sealed circuitry for extended life
- Two Sizes: Classic Track Tester for N to OO and intervening gauges
  Large Multi-Gauge for OO to G and intervening gauges

TTTT1+ **Track Tester Plus** for N / 009 / TT/ H0 /OO and intervening gauges
TTTT10+ **Multi-Gauge Track Tester** for OO / O / G and intervening gauges

Buffer Lights

Buffer stop lights which simply clip into the track either in front or behind buffer stops or free standing. No wiring - lights instantly!

- Adds realistic stop light to any siding
- Low cost and easy to fit in seconds
- Simply clip into the track – No wires!
- Fits in front or behind most buffer stops
- Or use free standing at platform end etc
- On DCC both LEDs light constantly
- On DC one LED lights when track is powered

TTBL1 **OO/H0 Gauge Buffer Light**
TTBL1-10 **10x TTBL1 OO/H0 Buffer Light**

TTBL2 **N/009 Gauge Buffer Light**
TTBL2-10 **10x TTBL2 N/009 Buffer Light**

TTBL3 **O Gauge Buffer Light**

Track and buffer stop not included

Accessories, Batteries, Connectors and Wire

TTBAT1	3x CR2032 batteries for AL / CL / SFX
TTBAT2	3x CR1225 batteries for AL / CN
TTCAP1	10mm Mounting Cap
TTCON1	2x 9v PP3 Battery clips
TTCON2	AA Battery box for 2 x AA's with switch
TTCON3	AA Battery box for 2 x AA's without switch
TTCON4	2x Single AAA Battery holders
TTCON5	50x 1K ohm Resistors
TTCON6	4x 3 Way PCB mount terminal blocks
TTCON7	4x 2-Way PCB mount terminal blocks
TTCON8	4x 2 Way PCB single inline sockets (SIL)
TTCON9	5cm 8ohm speaker for SFX in larger gauges
TTCON10	3x CR2032 battery holders as used on Coach Lights
TTCON11	Battery box with switch for 2 x AAA batteries
TTCON12	6x Pre-wired toggle switch terminals
TTLEDCLIP1	5x Wired LED clips, no soldering, just push in!
TTTS1	2x Double pole 2 position toggle switches
TTTS2	2x Double pole 3 position centre off toggle switches
TTWP1	Fine wire 3x 2m single strand, 2m 24swg tinned wire
TTWP2	5 x 5m 1/0.6mm assorted colours solid core wire
TTWP3	100m reel 1/0.6mm grey solid wire for signals etc

LED Packs

TTLED1	Level Crossing LEDs for **TTLFX1**/**TTLFX1S** (3 x amber 6 x red)
TTLED2	10x 5mm diameter LEDs (2 x red/green/yellow/orange/white)
TTLED3	Traffic Light LEDs for **TTLFX3** (3 x red/yellow/green)
TTLED4	Fire Effect LEDs for **TTLFX4** (2 x red/amber/yellow)
TTLED5	Welding Effect LEDs for **TTLFX5** (2 x white/red)
TTLED7	Ultrabright Emergancy LEDs for **TTLFX7** (2 x blue/orange/white)
TTLED10	10x Subminiature LEDS (4 x red, 2 x yellow/green/orange)
TTLED11	6x Warm white LEDs, resistors & 60cm 24swg tinned wire
TTLED12	6x Cool white LEDs, resistors & 60cm 24swg tinned wire
TTLED13	6x Mixed Headlight, Firebox, Lantern & coach LEDs
TTLED14	10x 3mm red LEDs
TTLED15	10x 3mm green LEDs
TTLED16	10x 3mm white LEDs
TTLED17	10x 3mm yellow LEDs
TTLED18	3x 3mm red/green 2 wire bi-colour LEDs
TTLED19	3x 3mm red/white 2 wire bi colour LEDs
TTLED20	10x 3mm warm white 12v LEDs-prefitted with resistor & wires
TTLED21	10x 3mm cool white 12v LEDs-prefitted with resistor & wires

Train-Tech

Model Technology Made Easy

A **GAUGEMASTER** Brand

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BN18 0BN, United Kingdom

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