

# BLOCKsignalling

Specialists in Model Railway Control

Controllers for LED and  
Semaphore Signals

Traffic Light Signals and  
Controllers

Shuttles (DC and DCC)  
available with Acceleration

Station Stop Modules

Points Position Indicators

Capacitor Discharge Units

Power Supplies

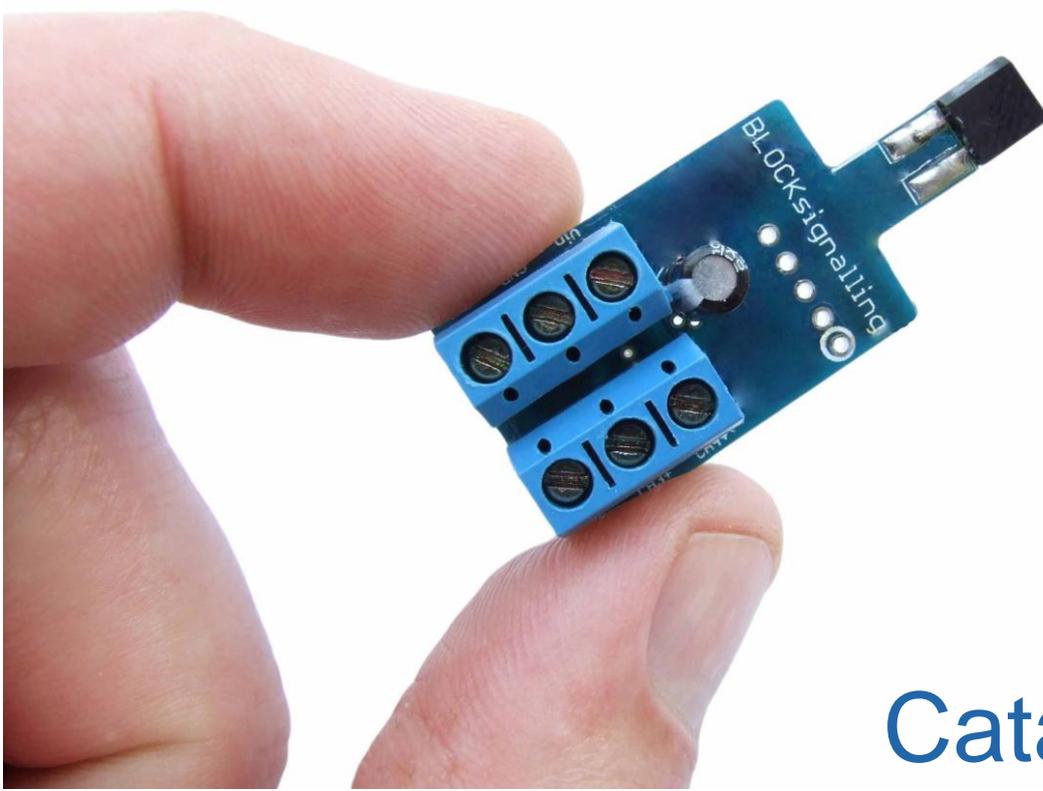
Switches and LEDs

Servo Controllers

Train Detectors (single and  
multi-channel)

Level Crossings with Gates  
and Barriers

DCC Frog Juicers and  
Autoreversers



Short-form  
Catalogue 2016

# Capacitor Discharge Units

Capacitor Discharge Units (CDUs) are used on the majority of layouts which have points.

They are used with solenoid points motors to store the charge required to operate them positively and remove the need to purchase a large or possibly expensive power supply.

All the BLOCKsignalling CDUs below will operate with power supplies up to 16V AC or 25V DC. It is important not to exceed these values.

Also, do not operate with a power supply below 12V AC or 15V DC as the CDU will not provide any advantage at these low voltages.



The CDU1C is suitable for smaller layouts where points are operated individually.



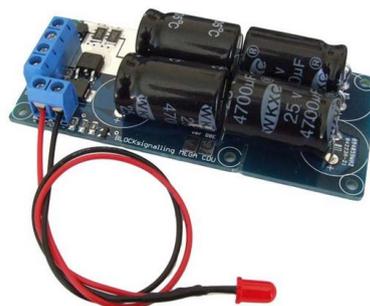
The larger CDU2C is ideal for bigger layouts where several points may be operated at the same time.



For the largest layouts, the CDU4C has plenty of capacity to operate many points at the same time.



The CDU2RL has a built-in led which illuminates when the capacitors are charged to 15V or above. This can be panel mounted.



The CDU4RL is a higher capacity version of the CDU2RL and also has a red Ready led.

## TOP TIPS

Always use generous wire sizes to connect up the points motors.

Runs up to 2m (6ft) use wire size 16/0.2mm. If operating several points at the same time, and using a common return wire, the return wire should be 24/0.2mm.

Runs over 2m (6ft) use wire size 24/0.2mm. If operating several points at the same time, and using a common return wire, the return wire should be 32/0.2mm.

# Traffic Lights

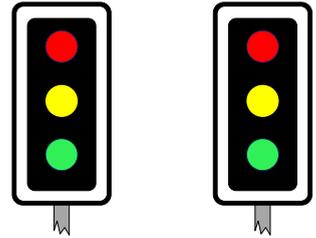
Traffic Lights are a fantastic feature to add to layouts covering virtually any era.

Both our modules have realistic fading to simulate filament lamps which would have existed (this can also be switched off if modern traffic lights are being modelled).

The modules by default show the standard UK sequence of red, red+amber, green, amber, red.

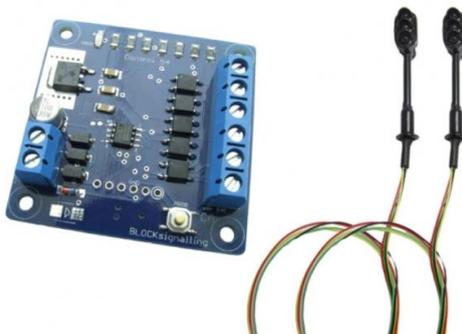
They can also be set to show amber on its own after red if that suits the region you are modelling.

All timings are adjustable, and we have added some presets so you can be up and running almost immediately.

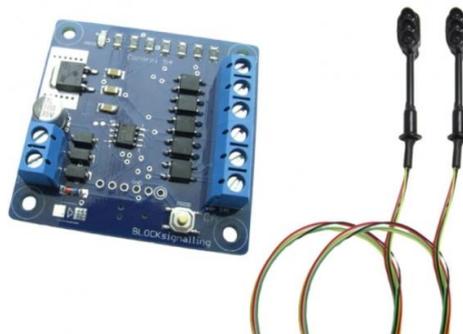


The TLC1A is for common-cathode (common-negative) traffic light signals.

The TLC2A is for common-anode (common-positive) traffic light signals.



The TLS1 Pack contains a TLC2A module and a pair of N-gauge scale traffic lights.



The TLS2 Pack contains a TLC2A module and a pair of OO/HO-gauge scale traffic lights.

Traffic lights with a Black wire are generally wired as common-anode and the black wire is the positive connection !

Our modules do not require the resistor in the wiring of the traffic lights as there is a resistor on the module.

The module input voltage range is 10V to 16V AC or 10V to 25V DC.

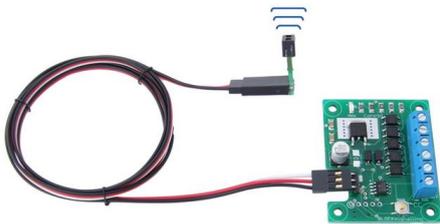
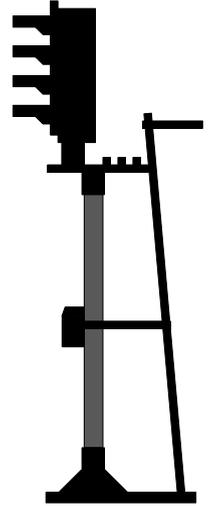
# Led Signal Controllers

Our automated signal controllers are triggered by the train passing over an infra-red sensor which is mounted beneath the track.

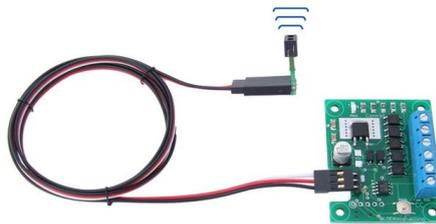
They can be powered from a wide range of voltages, and will regulate the voltage to the led signals so no additional resistors are necessary.

All the signal controllers below feature realistic fading of the leds as they change, so they behave like the filament lamps in the actual signals.

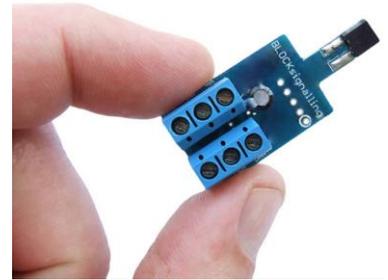
These modules are pre-programmed to drive 4-aspect led signals, and when triggered by the train, they change the signal to red, then yellow, followed by double-yellow, then green. They are easily re-programmed for 3-aspect and 2-aspect led signals.



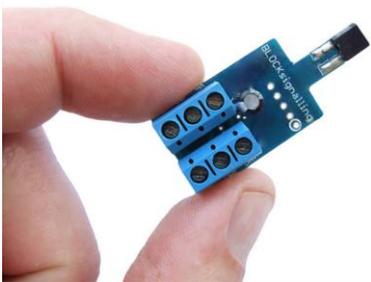
The ASP2A has a pre-wired sensor and is designed for common-cathode led signals.



The ASP2B has a pre-wired sensor and is designed for common-anode led signals.



The super-compact ASP1-NS has the sensor integrated into the module and is designed for common-cathode signals



The super-compact ASP2-NS has the sensor integrated into the module and is designed for common-anode signals

## Common-Cathode or Common-Anode?

With bulbs, wiring up is easy – just connect one wire to one side of the filament and the other wire to the other side.

With leds it is important to wire them the correct way around – they have a positive (anode) and a negative (cathode).

To save on wiring, manufacturers connect the wiring from one side of the leds together in the signal, so you have common-cathode (common-negative) and common-anode (common positive) signals.

Common-cathode signals are made by Eckon, Berko, Traintronics, Train-Tech and Absolute Aspects. Common-anode signals are generally made by manufacturers in mainland Europe, America and Asia.

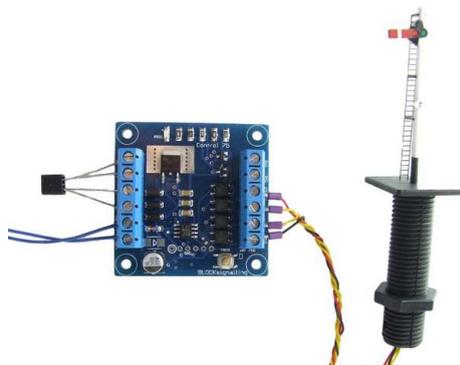
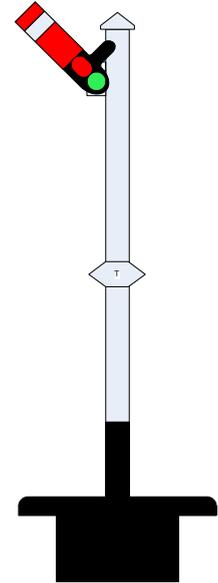
# Semaphore Signal Controllers

Our automated signal controllers are triggered by the train passing over an infra-red sensor which is mounted beneath the track.

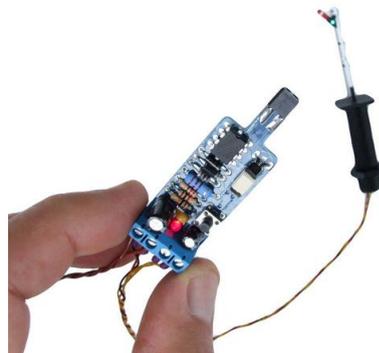
The sensor is mounted in advance of the signal, and whenever it is triggered by a train, these controllers operate the attached signal between danger and clear.

After a set time, the signal is returned to the danger condition.

All the timings can be easily adjusted and the modules can be powered from a wide range of voltages.



The DAP1A module can be located remotely from the sensor and can drive a pair of leds mounted to the control panel to show the status of the signal.



The DAP1-NS is a compact module, with the sensor mounted on the module itself.

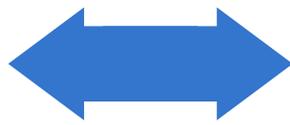
## Installation Tips

Mount the sensor ahead of the signal, so that the train triggers the signal to move from danger to clear as the train approaches.

Signals were left at danger, in case ice build-up froze them in place showing "Clear".

The time between switching between clear and danger can be adjusted. The default period of 5 seconds is generally appropriate.

Signals not included.



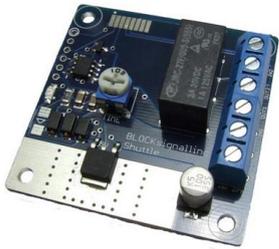
# Shuttle Modules

We love to drive our trains, but sometimes it can add interest to a layout to have trains operating by themselves.

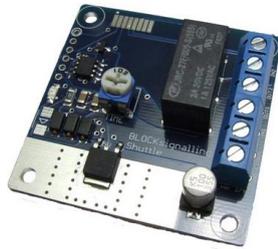
Our range of controllers includes simple shuttles where the polarity of the track voltage is swapped by the module at intervals to reverse the train, and the train is stopped at the end of the track by a diode wired across a track break. There is also a version of this module with random timings for a more realistic timetable !

Some of our shuttle can operate signals, perform station stops, or provide smooth acceleration and deceleration at each stop.

We have recently added a DCC shuttle, so DCC users can have the same functions.



The SS1 is a DC shuttle with simple adjustment on the module for delays of up to 10minutes.



The SS1-R varies the delay on each run to provide a more random timetable.



The SS1A is a fully digital DC shuttle with no moving parts.



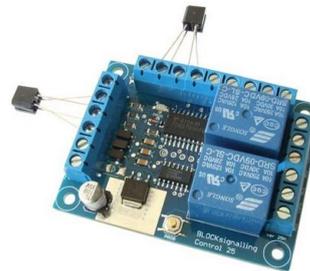
You don't need a separate DC controller with the SS2A, as it has one built-in. Just connect a 12V DC power supply.



The SAS1 can operate 2-aspect signals at the end of the line and provides variable or random delays in either direction.



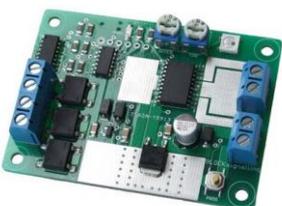
The SAS2-IR uses infrared sensors to detect the train arriving at the end of the line. No track breaks are required.



The SSM1 Station Stop module uses infra-red sensors to detect the train arriving at the station on a loop.



For DCC users, the SDCC1 provides shuttle operation and stations stops, with speed and waiting time adjustable.



Smooth acceleration and deceleration is provided with the SAS2-BR for DC layouts. You can also have station stops.

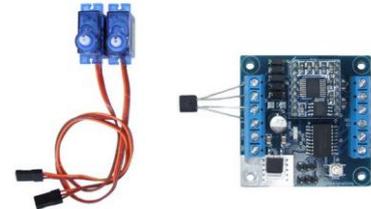
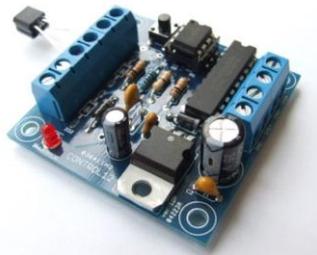
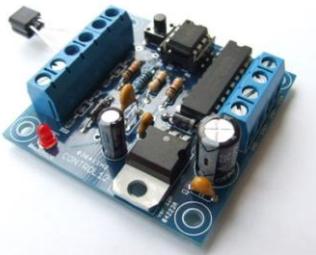
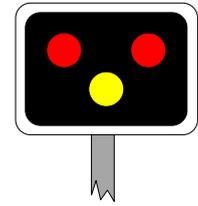
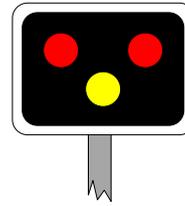
With the SDCC1 and SAS2-BR you can have several station stops on the shuttle line.

You can also uses these controllers on a loop with one or more station stops.

# Level Crossing Modules

Our range of level crossing modules lets you control flashing lights, operate gates or barriers, and have a choice of up to 18 real sound samples of level crossings from around the world.

Our crossing modules are triggered either by an infra-red sensor, or by detecting the loco traction current (DC or DCC).

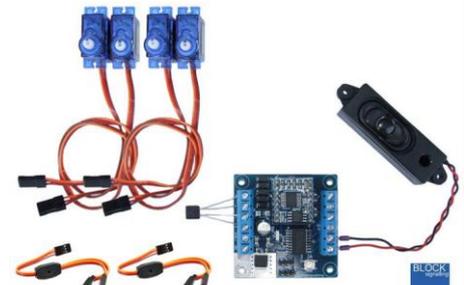
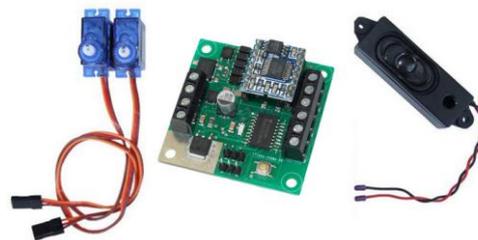
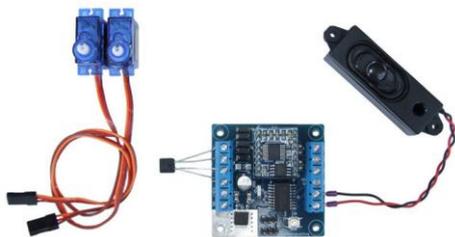


The LCS1 is triggered by the train passing an infra-red sensor and operates the characteristic yellow and red-flashing lights. For common-cathode signals.

The LCS2 provides the same functions as the LCS1 for common-anode signals.

The LCS4 operates attached yellow and red leds when the infra-red sensor is triggered, and plays a real sound sample when the train is detected.

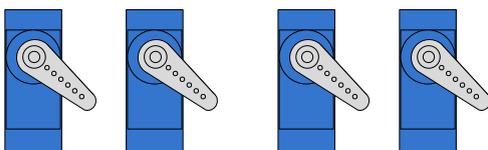
The LCS5 will operate yellow and red leds, and operate gates or barriers when the infra-red sensor is triggered. Servos are included.



The LCS6 will operate yellow and red leds, and play a real sound sample when the infra-red sensor is triggered. It will then operate gates or barriers automatically. Servos are included.

The LCS6B is similar to the LCS6, but is triggered by traction current (DC or DCC). It can operate a multi-track crossing.

The LCS6B4 is identical to the LCS6B, but operates up to 4 gates or barriers.



Leds not included.  
Speaker design may vary.

The sound samples for our level crossings are from around the work including the UK, Germany, Japan, America, etc and include bells, gongs and electronic sirens.

The timings of all crossings are programmable.

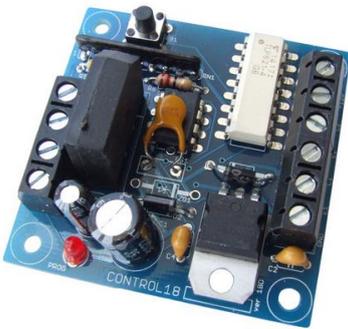
Infra-red triggered crossings can have up to two sensors connected (one supplied with each module as standard).

# Train Detection

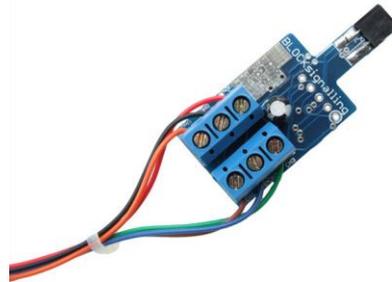
Train detection can be used to provide led indications on a control panel, operate track features, or provide an input to a computer control system.

Our BOD2-RLY is ideal to operate a row of leds on a control panel when a train is detected, to show track occupancy.

The DET-8 uses photocells to provide economical detection at a number of locations around the layout. There are a number of built-in programs for block detection, led signal operation, etc.



Our current operated train detector BOD1 works on DC or DCC layouts and can drive control panel leds, led signals or feed into computer control systems.



The BOD2-NS can drive leds or a small external relay (not included). Works in tunnels.



The BOD2-RLY has a built-in changeover relay which operates when a train passes over the infra-red sensor. Works in tunnels.



The DET-8 offers an economical way of monitoring for trains at up to 8 locations.

Included programs can operate leds signals, can provide set-reset operation for train-in-section indication, and many other programs.

Complete with 9 sensors.



Use infra-red sensing or current sensing inside tunnels.

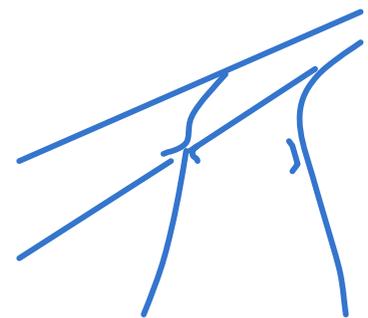
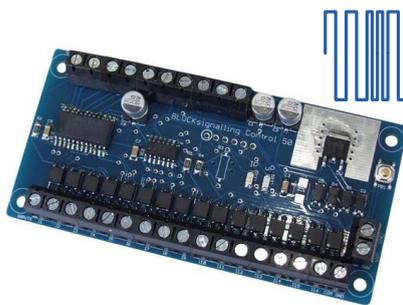
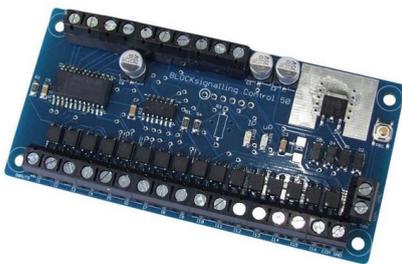
# Accessories

We have developed a number of innovative accessories to make the operation of your layout easier.

Our Points Position Indicators are a popular way of monitoring when solenoid points motors are switched and provide an indication on the control panel of which way the points are set. They remember the position if the power is turned off.

We are expanding our range of dedicated DCC modules, and have started with a Frog Juicer, which is used on DCC layouts to automatically switch the polarity of the points frog to prevent short circuits.

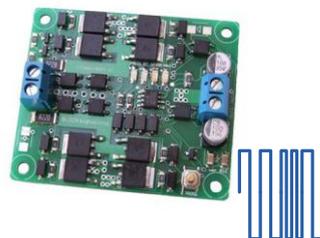
The DCC Autoreverser is also used on DCC layouts to prevent short-circuits, this time where rails of opposite polarities meet, such as at turntables, loops and wyes.



Use the PPI4 on DC layouts where the points motors have a negative common connection.

Use the PPI5 on DCC layouts where the points motors have a positive common connection from the accessory decoder.

Our Points Position Indicators are used to monitor the brief switching pulses to the coils and operate control panel leds.



The FROG1 Juicer automatically switches the frog polarity at sets of points to avoid short circuits.

The REV1 DCC Autoreverser is used to prevent short circuits on DCC layouts at loops, wyes and turntables.

We have packs of 8 red and 8 green pre-wired leds for use with the DET-8 and our PPI modules.