DS5HS - Outer Distant High Speed Red-Yellow-Green-Yellow Digital DCC Signal

**HANDLE WITH CARE - THIS MODEL IS NOT A TOY AND IS _FRAGILE_!**

This signal incorporates a DCC decoder to enable it to be plugged or wired directly into the track and be controlled by any controller which is able to control DCC accessories. Please read these instructions before fitting your signal.

1 FITTING YOUR SIGNAL

Switch off your DCC controller and power to your Track before fitting signal!

• Locate the power clip slots in the track* and holding the signal **BASE** only, carefully align and push the signal contact fingers into slots. *This may be a tight fit so take great care!*

• Switch on controller and power to the track - the Signal will light.

If the signal does not light at this stage see 'Troubleshooting' below before going further

Power clip slots

Carefully Push contact fingers in between the Power clip slots
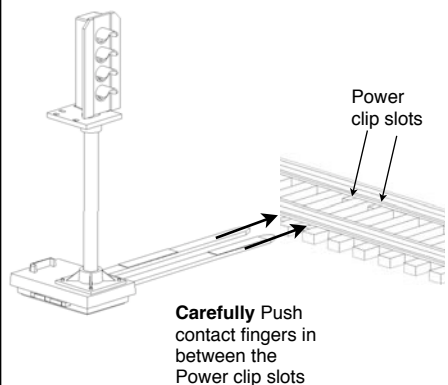
! **Always hold signal by base, never by the post or head!**

2 SETTING THE SIGNAL ADDRESS

You need to choose a DCC address for your signal. Because DCC accessories can only have 2 'directions' your 4 aspect HS signal needs four addresses and so will use both the address you program & the next 3 consecutive addresses, so ensure addresses are unused for any other accessories before programming. For example, if you choose main address 65 the signal will use address 65, 66, 67 and 68.

• Set up your controller to control DCC _accessories_ (refer to your controllers instructions) and set your controller to the main address you choose for your signal.

• To program the signal, use a short link of insulated wire to briefly touch together the 'Learn' contacts until the signal lights flash, then send the ◀ or ▶ 'direction' command from your controller that you want to signal green. The signal will stop flashing, light up green and your signal is now programmed to the address you chose and the next consecutive address.
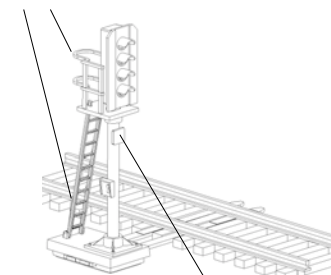
'Learn' Contacts
Touch together contacts under base to program Signal address
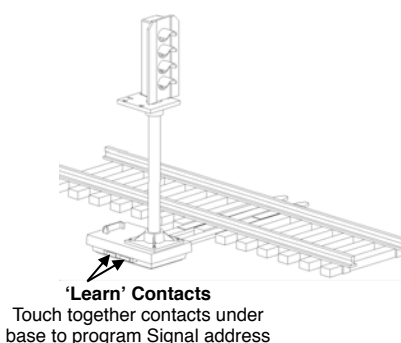
3 CONTROLLING YOUR SIGNAL

Control the signal by setting your controller to the *DCC accessory* address of your signal and sending a 'direction' command from your controller to change the Signal colour (actual terms used for accessory control vary between controllers so please refer to their instructions)

Address (eg 65) ◀ or ▶=Red or Green
Addr+1 (eg 66) ◀ or ▶=Yellow or 2 Yellow
Addr+2 (eg 67) ◀ or ▶=Flashing Green
Addr+3 (eg 68) ◀ or ▶=Flash Yell or Flash 2 Yell

Each signal head can have their own unique address or can be synchronised to other DCC signals or points etc by giving them the same address as each other. Your signal will retain your chosen address unless you change it, which you can do by following step 2.

Extra Details can also be fitted - see below

Tip: The Location board can be used to show the DCC address of your signal to make it easier to identify - you can cut out and glue the address from the table printed below

---

* Wiring to non Hornby or Bachmann fixed Tracks

These signals will only clip directly into standard Hornby or Bachmann tracks which have slots for a power clip. If you do not have this type of track or want to position your signal in a different place you can *carefully* cut off contact fingers where shown and connect wires from the 2 contacts marked X to the nearest DCC track - it does not matter which way round the wires are connected. (NB Peco Streamline flexible track does have deep slots which can work by using packing under fingers)
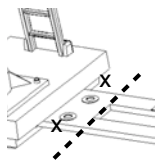
Troubleshooting

Step 2 is the 'One Touch' DCC stage which programs the accessory address into the signal. If it does not work:
• Check that one of the signal LEDs is lit - if not and locos etc run correctly on the same piece of track check the signal contact fingers are clean and tightly fitted between the track sleeper and rail - clean if necessary.
• If a Signal LED is lit double check that your DCC controller is in *accessory* addressing mode - note that this is completely different to Locomotive addresses and will be explained in your controller instructions.
• Try fitting the signal to another section of track (or use pieces of wire to temporarily connect it to another track)
• If these steps fail contact your dealer or DCP support.

Signal design

This signal is our own design and tool and is based on colour light signals in North Norfolk. As well as a range of Digital signals you can also buy various kits based on this signal in 2, 3 or 4 aspect single and dual head designs with LEDs or a basic kit to add your own lights or make up as a dummy signal. Easy to use One-Touch™Digital Signal and Point controllers are also available.

Synchronising with other Signals and Points

Although each signal can have its own unique address, if you wish you can easily synchronise some of your signals and/or points to work together to add basic automation to your layout which can also make it easier to run and more realistic.

For example you may wish to sync a Home and Distant signal together so that the Distant signal automatically changes with the Home signal before it. To do this you simply program both signals with the same DCC address which you can do either by touching the contacts on both signals then programming them at the same time, or doing each individually with the same address.

Note that a Train-Tech Digital signal always goes to Green immediately after programming, making it easier to synchronise multiple signals as all signals have green. Similarly you could sync a Signal to a Point controlled by a Train-Tech DCC Point controller so that the signal is always red when the point is against it and green when it is clear to go. Again you can do this by programming the Point and Signal with the same DCC address.

Computer Control

Some DCC controllers can be connected to a PC to enable computer control of locomotives and accessories like this signal - for more details on what is compatible with your system consult your controller supplier.

Location board labels

These legends can be cut out and glued to the model Location board on the plastic detailing sprue. We suggest you use the DCC address you have programmed into your signal which will make the signal easier to identify and operate.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

AD CA DA ES EN GE GY MY PN NW
ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ

Extra details

The signal is supplied with a kit of plastic parts for you to add extra details like ladder, handrails, phone and location board if you wish. These may be cut from the supports using small cutters or a knife on a cutting mat, but take care as these parts are extremely small and fragile, so we recommend using the following technique to remove them without damage.

We suggest you first remove ladder and main parts by carefully cutting the thicker supports first - after cutting these they should break away from the other parts by gently 'rocking' and you can then trim the fine supports. Parts may be cut from the supports using a knife on a cutting mat or by using precision cutters which can be invaluable for modellers - they are available from model shops or direct from us at www.dcpexpress.com You will also find that fine nose pliers or tweezers are useful both for cutting out and fitting parts. Parts can be glued in place using model adhesives such as Liquid poly or cynoacrylate 'superglue' etc.

We recommend first cutting the thicker supports to release main parts then trimming off the small supports
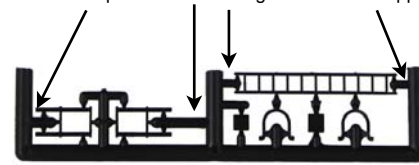
You can use the Location board (small square sign) to show the DCC address of the signal by cutting out and glueing the number from the table printed. You can also weather or paint the signal and add scatter material or ballast etc around the base and fingers, but take care not to cover the Learn or contact fingers and never let water or moisture get into base of the signal as this contains sensitive electronics.

Caution

This product is not a toy but a precision moulded model kit and as such has small parts which may choke or harm a child. Always take care when using tools, electricity, adhesives and paints, especially when children or pets are nearby.

TT Train-Tech
Model Technology Made Easy

www.train-tech.com

One-Touch DCC™ Digital Signals

DCC • WIRE FREE • OO • HO

- Signal with DCC decoder built into base
- Can just plug direct into track – no wires!
- Easy to fit and use – no CV programming!
- Can sync to other signals & points

DS1 Home: Red Ⓡ and Green Ⓖ
DS2 Distant: Yellow Ⓨ and Green Ⓖ
DS3 Home Distant: Ⓡ Ⓨ Ⓖ
DS4 Distant: Ⓨ Ⓖ Ⓨ
DS5 Outer Distant: Ⓡ Ⓨ Ⓖ Ⓨ
DS5HS Outer Dist: Ⓡ Ⓨ Ⓖ Ⓨ (High Speed mainline)
DS6 Dual Head Home: Ⓡ Ⓖ
DS7 Dual Head Distant: Ⓨ Ⓖ
DS8 Stop-Caution: Red Ⓡ and Yellow Ⓨ

DS6/7
DS1/2
Track not included

One-Touch DCC™ Point Controllers

DCC • OO • HO • N • Z
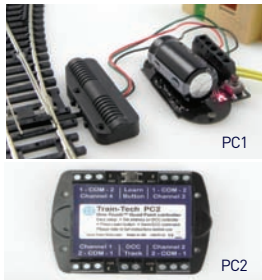
- Control points and uncouplers using DCC
- Easy to use – No CV programming!
- Work with most solenoid point motors
- Just connect 2 wires to nearby DCC rails
- Easy screw terminals – no soldering
- Built in CDU for efficient operation
- Can sync to other points and signals

One-Touch DCC™ Point controllers
PC1 DCC Single Point Controller
PC2 DCC Quad Points Controller
Point motor and track not included

PC1
PC2

Buffer Lights

DC • DCC • WIRE FREE • N • OO • HO

- Add realistic stop light to any siding
- Simply clips onto track – No wires!
- Fits next to most buffer stops & kits
- Or at platform end or free standing
- Low cost, easy to fit and use
- On DCC both lights are on constantly
- On DC one light is on & varies with speed
- Helps bring your layout to life!

BL1 OO/HO gauge Buffer Light
BL2 N gauge Buffer Light

Track and buffer stop not included

Automatic Tail, Firebox, Loco & Coach Lights

Auto • WIRE FREE • ANY GAUGE

- No switch - senses motion & turns on!
- Turns off automatically 4 minutes after stop
- No pickup, wires or soldering - LED plugs in
- Fit in brake vans, coaches, loco, wagons etc
- Runs for ages on small button battery

Single output modules:	Dual output modules:
AL1 Flashing Tail light	**AL21 Flashing + constant**
AL2 Flame Tail / Firebox	**AL22 Flame + constant**
AL3 Constant lighting	**AL23 Sparkarc + constant**
LEDs & battery included	**AL24 Doors open + constant**

Fits in N scale upwards
Rolling stock not included

LFX Lighting Effect Controllers

DC • DCC • ANY GAUGE

- Add lighting effects to your layout
- LEDs screw in – no resistors or soldering
- Powered by either 12-16V DC or DCC:
- On DC the effect is on when powered
- On DCC the effect can be controlled

LFX2 Home & Shop Lighting
Randomly controls lights in houses, shops, stations, pubs
LFX3 Traffic Lights
Controls one pair of timed traffic lights (Tip: You can adapt one of our Signal kits to make traffic lights)
LFX4 Log or Camp Fires
Controls amber, yellow, red LEDs for a realistic fire effect
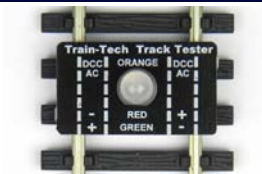**LFX5 Welding effects**
Realistic electric arc welding effects with bright LEDs
LFX6 Quad LED Lighting Controller
Controls 4 sets of LEDs on and off using separate DCC addresses. Directly powers 4 LEDs per output (DCC only)

LFX1 shown with supplied LEDs fitted to a Peco barrier kit - not included

LFX1 Level Crossing Barrier
Controls Amber and Red LED's as seen at level crossings. Can power up to 4 sets of steady amber and flashing red LEDs

Track Tester

DC • DCC • N • OO • HO

- Quickly tests track for power faults
- Low cost and easy to use
- Works on N, TT, OO or HO Track
- Indicates the DC polarity, or DCC, or a fault
- Small enough to check point frogs

TT1 Track Tester

0313

One-Touch DCC™ Signal Controllers

DCC • ANY GAUGE

- Control LED & Semaphore signals by DCC
- Easy to set up & use –No CV programming!
- Easy screw terminals – no soldering
- Can sync to other points & signals

SC1 Dual 2 aspect colour light signals controller
Controls one or two 2 aspect colour light signals. Compatible with Train-Tech SK2, SK3, SK7, SK8 and most other manufacturer's LED signals

SC2 3 or 4 aspect or 2 aspect+route signal control
Controls one 3 aspect or one 4 aspect or one 2 aspect + route signal. Compatible with Train-Tech SK4, SK5, SK6 and most other manufacturer's LED signals
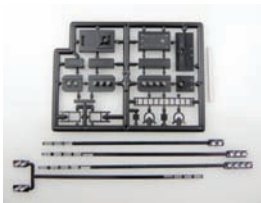
SC3 Dual Dapol OO/N Sempahore signal controller
Controls one or two standard OO or N Dapol motorised semaphore signals by DCC. Signals connect direct to the SC3 - no modifications or power supply needed.

SC2
SC3
Dapol Signals for photo - not included

Self Assembly Colour Light Signal Kits

DC • DCC • OO • HO

- Every kit includes the head, post and base plus detailing kit inc ladder, handrails, etc
- Aluminium 'post' included with each kit
- Low cost – adapt to your own design
- Control by switches or a signal controller

General purpose signal kit:
SK1 Basic kit 2/3/4 aspect & dual heads - no LEDs

Signal kits with LEDs and resistors
SK2 Home 2 aspect kit with Red Ⓡ Green Ⓖ LEDs
SK3 Distant 2 aspect kit with Ⓨ Ⓖ LEDs
SK4 Home Distant 3 aspect kit with Ⓡ Ⓨ Ⓖ LEDs
SK5 Distant 3 aspect kit with Ⓨ Ⓖ Ⓨ LEDs
SK6 Outer Distant 4 aspect with Ⓡ Ⓨ Ⓖ Ⓨ LEDs
SK7 Dual head Home 2 aspect with Ⓡ Ⓖ LEDs
SK8 Dual head Distant 2 aspect with Ⓨ Ⓖ LEDs

The LEDs are pre-fitted onto a long narrow PCB stick to pass through your baseboard. Just attach your signal control wires to PCB

SEE WWW.TRAIN-TECH.COM OR CONTACT DCP FOR FREE COLOUR BROCHURE

Train-Tech
Model Technology Made Easy

DS5HS Outer Distant

Red•Yellow•Green•Yellow
+HS Mainline G•Y Flashing
DCC clip-in signal

- Detailing kit included

- Signal plugs into track - just like a power clip!
- Or connect 2 wires
- DCC Decoder in base

www.Train-Tech.com