

# IMPORTANT

## HORNBY DECODERS - LIMITED WARRANTY

Hornby Decoders are manufactured to a professional standard and if fitted and operated correctly should return years of trouble free use.

However, if within the first year of purchase your decoder fails to function, even if the damage is accidental Hornby will repair or replace the decoder without charge. A cash refund alternative will not generally be offered. In the event of a malfunction the faulty decoder should be reported in the first instance to the Hornby Customer Care Department and arrangements will be made for its return to Hornby minus the product to which it was fitted, however we will require proof of purchase. The customer will be liable for Postage and Packing charges when returned to Hornby

The above does not affect your statutory rights.

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## Before you start, please read these guide notes regarding fitting your TTS decoder.

### General Installation Note.

The process involved in fitting any TTS decoder to any DCC ready locomotive is nearly the same as fitting any non-sound DCC decoder to a locomotive. In most cases, there will be a speaker mounting position already in place.

The TTS decoder in this pack may be fitted to **any** locomotive that can physically accommodate it.

**Please note. The locomotive motor must not draw more than 500mA when continuously running.**

Since the original launch of TTS equipped locomotives, all locomotives in each locomotive series will be ready to accept a TTS decoder. e.g. Any Class 37 locomotive released after the initial TTS fitted Class 37 (R3289TTS) will be designed to accommodate a TTS decoder. However, some locomotives designed or launched pre the "TTS period" etc will possibly need some minor modification when fitting a TTS decoder. See below for more information.

**Hornby Railroad Steam Locomotives** may require some modification in order to accommodate a TTS decoder. The speaker and TTS decoder are usually mounted in the tender. Connections will need to be made from the TTS decoder in the tender to the electric motor which is located in the locomotive body. In some cases, the tender weight may require some modification in order to accommodate the decoder.

**Hornby High detailed Steam Locomotives.** These locomotives are generally equipped with a loco/tender wiring harness and will usually accommodate a TTS decoder without any modification. However, in some cases, the tender weight may need to be modified in order to fit the speaker.

**Hornby non-TTS series diesels.** Fitting a TTS decoder will possibly involve mechanical modifications to accommodate speaker enclosure etc.

**Decoder Insulation.** We recommend using a single layer of sellotape to insulate the decoder. This type of tape allows good heat dissipation and is less bulky than the usual heat shrink type solutions.

**TTS decoder and Speakers.** The TTS decoder is supplied with a speaker connected. In some cases, there will be a speaker baffle box supplied with the kit, that can be used if it can be accommodated within the speaker mounting area.

**Other Speakers.** Some enthusiasts will want to use their own speaker arrangements. This is OK provided that the speaker used is rated at no less than 8Ω in impedance at a power of 1W.

**When using a different speaker or if you need to extend the speaker wiring please do not disconnect the current wiring at the circuit board, always disconnect the wires at the speaker end and make your new connections to the free wires.**

**Decoder Sockets.** The TTS decoder is designed to be plugged directly into the standard 8 pin socket found in a DCC ready locomotive. Some locomotives have 21 pin connection arrangements. Please use a suitable adaptor to adapt the 8 pin plug connection on the decoder to suit.

**No Socket?** If no socket is available on the locomotive to accommodate a DCC decoder, then the TTS decoder will need to be hardwired to the locomotive's wiring. This will require a degree of electrical skill/knowledge involving soldering. Also some mechanical work may be required. It may be advisable to consult a specialist DCC decoder fitting service.

If you choose to carry out your own installation much information and advice can be found on the DCC forums and other internet sources. In some cases, a degree of model making skill is required in order to fit the TTS decoder. If you require assistance after reading these notes, please consult your dealer for further advice and/or a decoder fitting service.

