

## Dapol Imperium DCC Decoders. Useful Information

**Imperium is Dapol's own brand of decoder.** They have been designed to offer a full range of functions at a reasonable price, complementing the additional features found on Dapol's models (such as independent lighting) as well as operating with other manufacturers models equipped with regular directional lighting or without lighting. Imperium are compatible with all models featuring a standard NEM decoder socket and operate with most motor types.

Imperium decoders are compatible with NMRA and MOROP DCC standards. RailCom is not supported.

### Basic Information

- 1. Decoder features:** All Dapol Imperium decoders share the same features. (For a full feature list and programming information, please refer to the Imperium configuration guide on our website [www.dapol.co.uk](http://www.dapol.co.uk)).
  - Back EMF (BEMF) motor control (Programmable)
  - Directional control of AUX outputs
  - Lighting effects (Dimming, Flicker, Beacon, Strobe etc.)
  - Intermittent (Button control) of the motor for Trams, cranes, etc.
  - Function [output] Mapping. NMRA standard
  - Coach lighting feature (CV59)
  - Standard (CVs 2,6 & 5) & advanced (extended) speed tables
  - Acceleration (CV 3) & deceleration (CV 4) control
  - Advanced consisting (including lighting controls)
  - Decoder lock
- 2. Factory default address** is 3
- 3. Factory Reset:** Write 4 to CV8 to reset the decoders.
  - Note: after reset, all CV's will reset to factory defaults. Please refer to the CV list for default values.
  - **Note:** If, after resetting, the decoder + CV values remain unchanged, it is possible the decoder lock is ON. Set CV15 to ) and CV16 to 1 using the programming track to unlock it. Then attempt to reset again (using the programming track).

### Decoder Types and Specifications

- 1. 860019 21 PIN 6 Function decoders (21MTC/NEM 660/MTX interface Standard).**
  - Function rating:100 Ma.
  - Motor rating: 1.0Amp continuous, 2.0 Amp Peak.
  - **Note:** Aux 3,4,5 & 6 are Logic level outputs (per MTC specification).
  - Note: This decoder has an index pin, check the 'missing' pin in your model aligns with the 'missing hole' in the decoder

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### 2. 860015 Next 18 6 Function decoders (NEM 662)

- Function rating: 100 Ma.
- Motor Rating: 1.0 Amp continuous, 2.0 Amp peak

### 3. Trouble shooting

Every decoder was tested before it was packaged, so you can be sure that the decoder you receive is ready for use when you buy them. If your model ran well before you added the decoder and does not operate as expected after installation please check the decoder is correctly fitted (not misaligned and correctly/fully plugged in). We have included some basic trouble shooting tips below.

#### Nothing happens

- Have you selected the correct address? If it's a new decoder it will be 3. If you cant remember or are not sure, either program a new address using the programming track or reset the decoder which will set the address to 3 again.
- If you do know the address, try reading the decoder on the programming track or replace the decoder with the correct blanking plug to test for loco failure or a short circuit in the wiring. Also check you have not locked your decoder before resetting.

#### Loco runs in reverse

For diesel models, please check that the front of the model is actually the No. 1 end. If the model is still running in reverse then contact your dealer as there may be a wiring error in the model. Alternatively you can ass 1 to the existing value of CV29.

#### Light / functions don't work

Have you turned the lights on with Function 0 (zero) and also tried changing direction?

I have made a mistake with a CV setting

If you cannot remember which CV to correct or the correct setting then reset your decoder (CV 8 = 4). It will then revert to factory default settings.

It looks burnt

This suggests a short circuit in the motor or lighting, incorrect wiring, overload or similar. Unless you are sure what has caused this, do not simply change the decoder for a good one without testing or seeking further advice! (If in doubt, always try a RESET using CV 8).

Each Dapol Imperium decoder is crafted from the best components to offer years of service and pleasure. Each carries a **ten year warranty** against failure in normal use

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