

# **SPROG DCC**

## ***SPROG 3 DCC Decoder Programmer User Guide Supplement***



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## Introduction

SPROG 3 is a DCC decoder programmer and command station interface for connection to the USB port of a personal computer or similar device. SPROG 3 is supported by the free JMRI software (<http://www.jmri.org>) and <http://wiki.rocrail.net/doku.phpRocrail> also free.

SPROG 3 is also capable of operating a medium size layout, supplying up to 2.5 Amps. An even larger layout can be driven by using an external booster.

**Read this document in conjunction with the SPROG llv4 User Guide available from the SPROG DCC website or on the optional software USB stick.**

**This Supplement covers SPROG 3 specific information only:**

- **Hardware Features and Specification**
- **USB driver installation.**
- **Track output current limit**
- **Firmware updates (bootloader)**

## Features

- Booster stage supplying up to 2.5 Amp to track
- Programs virtually **all** NMRA compliant DCC decoders
- No extra hardware required for programming sound decoders (e.g. QSI, Soundtraxx)
- Easy to use graphical interface with DecoderPro
- USB interface for easy connection to PC
- USB activity LED shows communication with the PC
- Power LED flashes when programming track power is live

## Specification/Operating Conditions

Parameter	Minimum	Nominal	Maximum	Units
DC Input supply voltage	10V Note 1		20V	V
Vin supply current – not programming		50		mA
Vin supply current – programming		300 Note 2		mA
Vin supply current – Operating Layout			2.6 Note 3	A
Operating Temperature Range		25		°C
Output Load - programming			250 Note 2	mA
Output Load – Operating Layout			2.5 Note 3	A

### Notes:

1. Minimum supply voltage depends upon the requirements of the decoder being programmed. In general it is safer to use as low a voltage as possible in case of problems with a newly installed decoder.
2. SPROG 3 will remove track power if output current exceeds 250mA as measured 100ms after applying power. Surge current during decoder power-up may be considerably greater than this.
3. To ensure correct operation of the SPROG 3 current limit, the power supply must be capable of sustaining greater than 2.5 Amp.
4. SPROG 3 is protected against reverse polarity connection of the power supply but will not work unless the polarity is correct.

*Table 1 Specification/Operating Conditions*

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**!** SPROG 3 is not protected against track and power connections being interchanged.

Installation

### ***Install SPROG 3 USB drivers***

Driver requirements and installation procedures vary with operating system and SPROG model. In addition to the SPROG II User Guide please consult the appropriate driver installation documents on the SPROG DCC Ltd website.

If installing drivers from the optional USB stick, when prompted to browse to the driver directory, browse to the USB\sprog3\inf directory.

## **The SPROG Console**

Operation of the SPROG console is as described in the SPROG IIv4 User Guide with the exception of the Current Limit setting.

### ***Current Limit***

Set the current limit for the SPROG 3 track output when using a SPROG 3 throttle, or when connected in Command Station mode. The maximum current limit is 2499mA or 2.499 Amps.

## **Firmware Updates**

Be sure you have a valid SPROG 3 programming file before attempting a firmware update. Do not use a SPROG II file.