**Documentation**  
  
**Java Model Railroad Interface JMRI with DCC++EX**  
JMRI 'Java Model Railroad Interface' software suite provides a GUI Graphical User Interface Controller for DCC++EX Command Stations. The primary JMRI software applications are;   
 - DecoderPro to read, write & compare decoder CV’s and maintain DCC Engine Rosters  
 - PanelPro to create and maintain Panels, Turnouts, Sensors, Signal Lighting & Routes  
 - OperationsPro to run operating sessions on your model railroad.   
JMRI software is supported on Windows PC’s, Apple PC’s and on Pi microcontrollers.  
  
With experience JMRI users can prepare Routing and Automation sequences for their engines to run either by manual Routing or Autonomously by writing extensive Jython/Python.py scripts and setting them up through a myriad of user-friendly panels and sensors, turnouts & routing tools.   
These scripts can then be placed in GUI buttons on DecoderPro & PanelPro main menus and also displayed as Routing buttons on smartphones with Engine Driver or WiThrottle and other WiFi Throttle App providers.   
**REMOVE this JMRI .py Scripts to Add Custom DCC++EX Buttons (Zip)**  
**Adding DCC++EX ~~Panels and~~ Buttons to JMRI main menus (PDF)**This PDF file provides instruction on how to install a DCC++EX Commands script in JMRI and assign it to a GUI button. You can have the DCC++ EX Command Summary list automatically display through the Script Output Window in DecoderPro. Click on the PDF and then Download, unzip and the use the Commands script below.  
Note; PDF’s work best if viewed through internet browsers like Firefox, Chrome etc.   
  
 [ *Image*] **DCC++EX + JMRI Custom Buttons Install instruction**

[**DCC++ EX Commands 3.1 JMRI Script**](https://dcc-ex.com/_static/documents/DCCEX_Commands_3.1.py.zip) **(Zip)**  
   
  
**DCC++EX & JMRI Software Guides**For a more extensive overview of setting up DCC++EX with JMRI DecoderPro please download and review the   
**DCC++EX 3.1 & JMRI DecoderPro 2.24 Getting Started Guide.pdf** version 1.0   
  
  
**Other Documentation**  
  
**DCC Shortcuts Card**   
A list of DCC Manufacturers ID’s and their CV Reset values  
  
**Stationary Decoder Address Table** (xlsx spreadsheet)  
With DCC++EX’s new linear address function, there is no need to have to convert back and forth between linear addresses and the 2-part address, sub address format. However, if you use the old format or have a decoder to a switch that uses it, this table can come in handy.

[Stationary Decoder Address Table](https://dcc-ex.com/_static/documents/DCCpp-stationary-decoder-addresses.xlsx)