

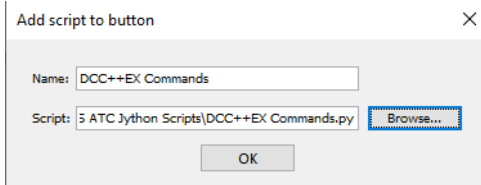
Advanced Features of DecoderPro Roster and Preferences > Start Up

Take a break and grab some Java, Some Tips and Tricks for Tinkerer Level users.

Customize DecoderPro - User Defined Buttons and Scripts

You can add additional custom DecoderPro GUI buttons as seen above that point to and run predefined jyton.py scripts that you have built or previously downloaded from the website. You place them in your C:/User/JMRI/My_JMRI-Railroad.jmri/subfolder/ This example uses DecoderPro 'Add script to button' feature to create a button and display text in the 'Script Output' panel when the button is pressed a Jython script creates a print summary of DCC-EX commands. *Jython* is simply the combined names of *Java & Python*.

DecoderPro main menu Edit> Preferences > Start Up > Add > 'Add script to button'



Enter a button Name: 'DCC-EX Commands'

Download the DCC-EX_Command_4.1.zip file, unzip it and place it in your C:/Users/"name"/My_JMRI_Railroad folder where "name" is the Windows login name.

Browse your PC and point to the folder with the Script in it: C:\Users\Kevin\JMRI\KCS_JMRI_Railroad.jmri\KCS ATC Jython Scripts\DCC-EX_Commands_4.1.py And press OK.

```
DCC-EX_Commands_4.1.py
1 #####
2 # Jython script which prints "DCC-EX 4.1.0 Commands Summary by List & Group"
3 # a derivative of DCC++ author: Gregg Bertram 2015
4 # & of DCC++EX Extended authors: Chris Harlow, Harald Barth & Neil McKechnie 2021-22
5 # Created and customized by Kevin Smith 2021-2022
6 #####
7
8 import jmri
9 #import jarray
10 import java
11 #import javax
12 #import javax.swing
13
14 class Commands(jmri.jmrit.automat.AbstractAutomaton):
15
16     def init(self):
17         print "***** DCC-EX 4.1 Commands List Summary ***** 8-30-2022 *****"
18         print "*****"
19         print " "
20         print "'Single Commands'"
21         print "<1> Number One: Turn Power ON to (Both Main & Programming tracks).\"
22         print "<0> Number Zero: Turn Power OFF to (Both Main & Programming tracks).\"
23         print "<<> Lower case c: Displays the instantaneous current on the MAIN Track.\"
24         print "<<> Upper case E : Command to Store definitions to EEPROM.\"
25         print "<<> Lower case e: Command to Erase ALL (turnouts, sensors, outputs) definitions from EEPROM.\"
26         print \"***[NOTE: There is NO Un-Delete]***\"
27         print "<Q> Upper Case Q : Lists Status of all sensors.\"
28         print "<R> Upper Case R : Read Loco address (programming track only)\"
29         print "<S> Upper Case S : Lists all defined sensors.\"
30         print "<<> Lower case s : DCC++EX Command Station Status & Build Version.\"
31         print "<T> Upper Case T : Lists all defined turnouts.\"
```

[DCC-EX_Commands_4.1](#) download this Command script

Then at startup we'll open the 'Script Output' pane first and then print the new DCC-EX Commands.py file by setting;

Edit> Preferences > Start Up> Add> Perform action> 'Open Script Output Window',

Edit> Preferences > Start Up> Add> Run Script> C:\User folder\ DCC-EX_Commands_4.1.py

When JMRI starts it will automatically Open the Script Output Window and Start DCC-EX_Commands_4.1.py script.

You can also press the [DCC-EX Commands] button & produce the scrollable DCC-EX commands in the Script Output window.

Example DCC-EX Commands by List

```
DecoderPro: All Entries
File Edit Settings Actions DCC-EX OPS DCC-EX PRG Window Help
+ New Loco Identify Help DCC-EX Commands Preferences... Restart JMRI 911 Restart DCC-EX ATC 1204 Tu
Script Output
***** DCC++EX 4.1 Commands List Summary ***** 8-30-2022 *****
'Single Commands'
<1> Number One: Turn Power ON to (Both Main & Programming tracks).
<0> Number Zero: Turn Power OFF to (Both Main & Programming tracks).
<<> Lower case c: Displays the instantaneous current on the MAIN Track.
<<> Upper case E : Command to Store definitions to EEPROM.
<<> Lower case e: Command to Erase ALL (turnouts, sensors, outputs) definitions from EEPROM.
***[NOTE: There is NO Un-Delete]***
<Q> Upper Case Q : Lists Status of all sensors.
<R> Upper Case R : Read Loco address (programming track only)
<S> Upper Case S : Lists all defined sensors.
<<> Lower case s : DCC++EX Command Station Status & Build Version.
<T> Upper Case T : Lists all defined turnouts.
<+> Plus sign Upper case X: Special case to force CS into 'WiFi Connected' mode.
<2> Upper Case Z : Lists all defined output pins.
<#> Show number of supported cabs on the Command Station
<!> Exclamation Point ! EMERGENCY STOP - Stops all locos on the track, leaves power on.

'Track Power Commands'
<1 MAIN> Power On just to the MAIN track.
<0 MAIN> Power Off just to the MAIN track.
<1 PROG> Power ON just to the PROG track.
<0 PROG> Power OFF just to the PROG track.
<1 JOIN> Joins Programming track together with MAIN (ops) track. 1 PROG resets it to Normal

'DIAGNOSTICS'
'D'Commands 1 and 0 and ON and OFF can be used interchangeably in DCC++ EX.
```

Scroll down for DCC-EX Commands by Group

```
DecoderPro: All Entries
File Edit Settings Actions DCC-EX OPS DCC-EX PRG Window Help
+ New Loco Identify Help DCC-EX Commands Preferences... Restart JMRI 911 Restart DCC-EX ATC 1204 Tu
Script Output
***** DCC++EX 4.1 Commands Group Summary ***** 8-30-2022 *****
'Power Management'
<0 MAIN | PROG> Power Off to MAIN or PROG track
<1 MAIN | PROG | JOIN> Power On to MAIN or PROG or JOIN(both)
<<> Current on the Main Track
<<> small 's' DCC++EX Command Station Status & Build Version.
<D RESET> Reboot the Command Station

'CAB Functions'
<1> EMERGENCY STOP All Loco's leave track power On.
<T [ignored]> cab speed 1|0> Throttle speed = or less than 126, direction 1=forward
<- [cab]> Remove one or all cabs from reminders.
<F cab func 1|0> turns engine decoder F0-F68 function-keys ON and OFF
<f cab byte1 [byte2]> legacy functions, see Commands List Summary above
<#> Show number of supported cabs
<D SPEED28|SPEED128> Switch between 28 and 128 speed steps
<M ignored hex1 hex2 [hex3 [hex4 [hex5]]]> Write a DCC packet the MAIN track
<w cab cv value> Write CV on main track
<b cab cv bit value> Write CV bit on main track

'Programming Track'
<D> Read Loco address (on programming track only)
<W cab> write cab address to loco on prog track. short(1-127) & long(128-10293)
<W cv value > Write to CV# a value on prog track
<W cv value callbacknum callbacksub> Legacy version. Callback values are arbitrary
<B cab bit 0|1> Write bit to a cv a value of either 0 or 1.
<B cv bit value callbacknum callbacksub> legacy version. Callback values are arbitrary
```

All other predefined User built and Automated Throttle Control scripts are added to the DecoderPro panel the same way.