INSTALLING THE NCE POWERCAB[™] UPGRADE CHIP



PowerCab™

1. Unplug the PowerCab[™].

2. Remove the 9 screws that hold the back to the front of the case.

3. Lift off the back of the case and set aside.

4. Locate the EPROM chip next to the thumbwheel. It is the largest chip inside the



Prv here



5. Use a small Flat screw driver or hobby knife to separate the EPROM chip from the socket. Make sure you pry BETWEEN the socket and the chip. Work end to end lifting a little on one end, then a little on the other end. Pry the Eprom chip straight

up from the socket it is pressed in to. You will no longer need this chip but hang on to it for the time being.



7. There is a small "U" shaped indent and/or a dimple in one end of the chip. This is the TOP of the chip. Place the chip on the socket with this "U" shape toward the top of the cab (toward the LCD pc board).



8. Align the legs to the socket. When satisfied that ALL of the legs are in line with a socket position, press the new chip down into the socket. Work from end to end, press a little on one end, then a little on the other end. Keep doing this until the EPROM chip is FULLY seated in the socket. 0

"U" shaped

indent



Make sure none of the legs are bent under or outside the socket.

- 9. Examine the installation to ensure ALL 28 of the legs have engaged the socket correctly.
- Replace the back of the case and the 9 screws that hold the back to the front. DO NOT OVERTIGHTEN THE SCREWS. You could inadvertently break the screw boss inside the cab front.
- 11. Plug the PowerCab[™] back into your PCP panel and enjoy the greatest train control in model railroading!



PowerCab[™] Software Update Notes

Version: 1.65

Summary of new features

- $\sqrt{}$ All throttles now have up to 6 recalls
- $\sqrt{}$ Support for 3 external throttles
- $\sqrt{}$ Support for 3 AIU, USB or Mini-Panels *in addition* to the extra throttles
- \sqrt{N} New thumbwheel control of CV programming values
- $\sqrt{\mathrm{Easy}}$ "memory" operation of the last thrown turnout
- $\sqrt{\rm Support}$ for Analog Fast Clocks
- $\sqrt{\text{New, improved USB/computer commands}}$
- √ Programmable 'ProCab[™] mode' timeout so multiple PowerCabs[™] can be used together

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If you are updating from any previous Version:

All consists, macros and system setup parameters will be cleared and reset back to factorydefault conditions. This is because these items are stored in the chip that is being replaced. See the Installation Instructions on Page 4.

New features in this Version

The PowerCabTM now supports cab addresses 3-5 for a total of 3 external throttles in addition addresses 8, 9 and 10 may be used for non-throttle type devices such as AIUs, Mini-Panels or USB interfaces. Regular throttles will not work on address 8, 9 or 10.

There are now 6 recall slots for throttles. The number of recalls can be adjusted from 1-6 using the appropriate selection in the "SET CAB PARAMS" menu. Factory default is 2 recalls.

The "SET CMD STATION" menu now has an option to change the power-on timeout that determines how long the 'ProCabTM, part of the PowerCabTM will wait for cab bus activity beforegoing into PowerCab mode. This value is in seconds (approximately) and can be in the range of 1-30. This will ensure the primary PowerCabTM has a chance to startup before the additional throttles. Factory default is 4 seconds.

In the program CV feature of the PROGRAM ON MAIN menu you can now use the speed buttons or thumbwheel to change the CV values dynamically. Each button press or thumbwheel movement sends the next higher or lower value to the decoder. You can still enter CV data the old way by pressing number buttons as before. Pressing ENTER or PROG/ESC will exit this mode. This is useful for setting start voltage, sound volumes, etc.

If you press SELECT ACCY twice in a row the last used accessory will toggle to the opposite position.

A new setup parameter in SET CMD STA has been added to disable issuing of speed and function packets when a new loco has been selected.

Things that have changed from Version 1.28:

Key code 101 (0x65) now sends the user to the "Set Recalls" menu instead of the obsolete cab setup mode. This enables the CAB06 to set recalls in the PowerCabTM.

There are now 6 recall slots available for each cab (addresses 2-5). The number of recalls can be adjusted from 1-6 using the appropriate selection in the "SET CAB PARAMS" menu. Factory default is 2 recalls.

The menu selection "PROG ACCY ON MAIN" has been changed to read "OPS PROG ACCY CV"

The menu selection "PROG SIG ON MAIN" has been changed to read "OPS PROG SIG $\ensuremath{\mathsf{Cvs}}$ "

USB and Computer Related Stuff

CHANGES:

The version returned by binary command 0xaa is now 7.x.x depending on the configuration of the USB jumpers.

New USB commands

NOTE: Use of the new commands requires USB version 7.x.x (free if you return your USB interface to NCE with a note stating you need the upgrade)

0х9В уу	Return status of AIU yy	(returns 2 bytes)	<current byte="" hi=""></current>
	yy= cab bus address of Al	U	<current byte="" lo=""></current>
	Command Format: 0x9b <	data>	
0xB3 yy xx	Set the cab context page r pointer to cab address yy with yy in the range of 0-25 0-63 (useful only in the rar	memory location xx 55 and cab bus addre	ess ranging from
	Command Format: 0xB3 <	:data> <data></data>	
0xB4 xx	Write 1 byte to cab bus me pointer location. The point after the write		
	Command Format: 0xB4 <	<data></data>	
0xB5 xx	(returns 1,2, or 4 bytes) Return 1,2 or 4 bytes (indicated by $XX = 1,2,$ or 4) from cab memory at the memory pointer location. The pointer will increment with each byte read.		
	Command Format: 0xB5 <		

sending.