

Creating Full Flash backups and the restoring of Motorola TETRA radios

Verified using MTP830/MTP85/MTP3350/MTP6650 and MTM800e/mtm5400

Required software:

- TETRA CPS (tested using version 7.8)
- Relevant firmware RPK (must match what is in your radio)

Required hardware:

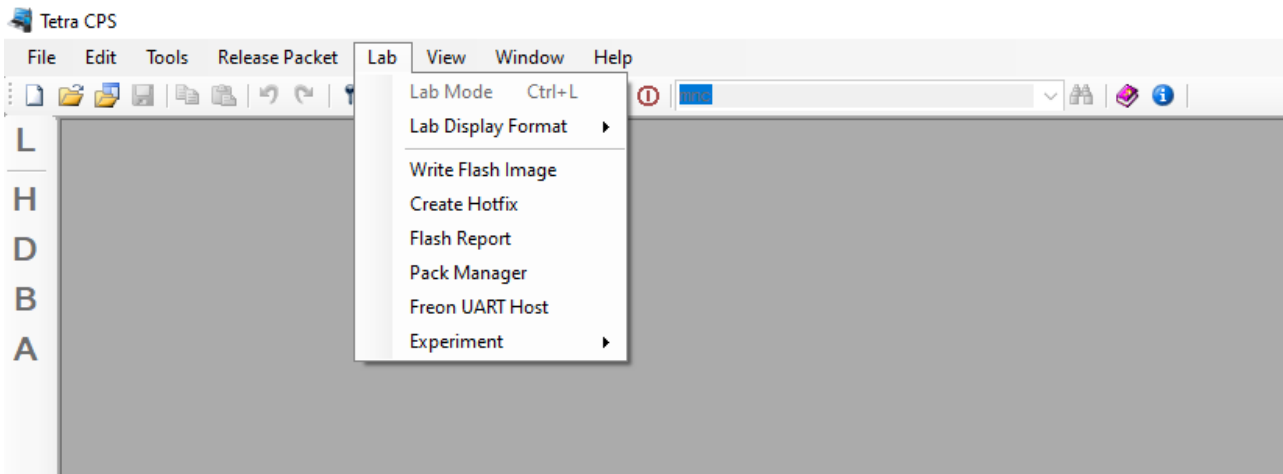
- Windows PC (not a virtual machine!!!)
- USB or serial RS232 programming cable
- In case of a serial cable: real COM port → not a FTDI

It is important to keep a Full Flash backup of every Motorola TETRA radio.

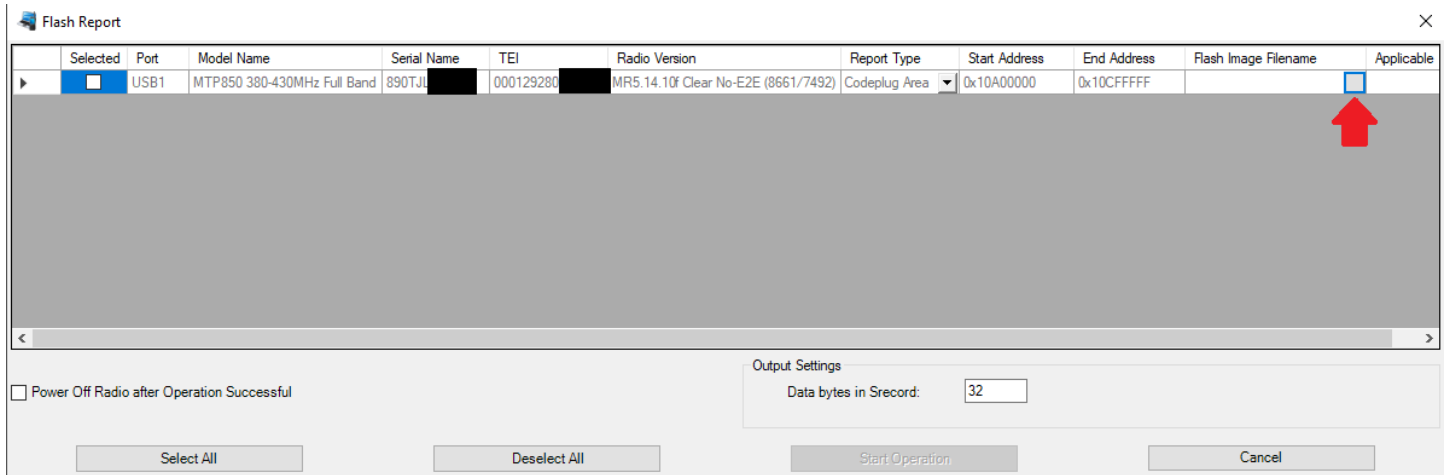
1. Entire flash backup

Using TETRA CPS save the flash memory contents of the radio. Connect the radio to the PC, start CPS and power up the radio using the key combination „1“, „9“ and „Power On“

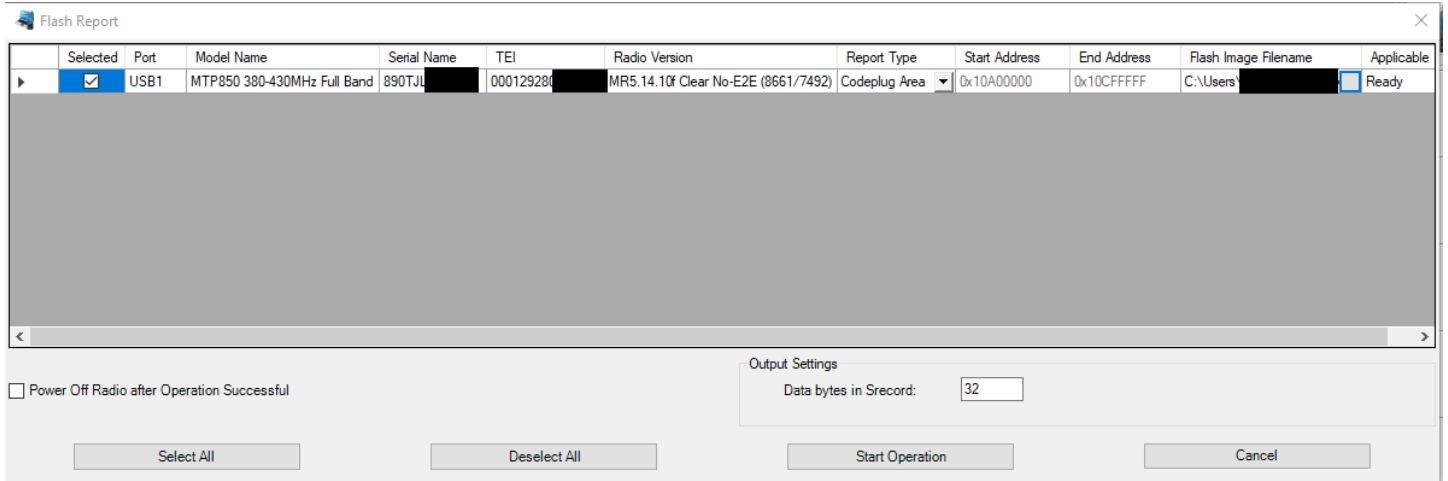
In the Lab Menue select „Flash Report“



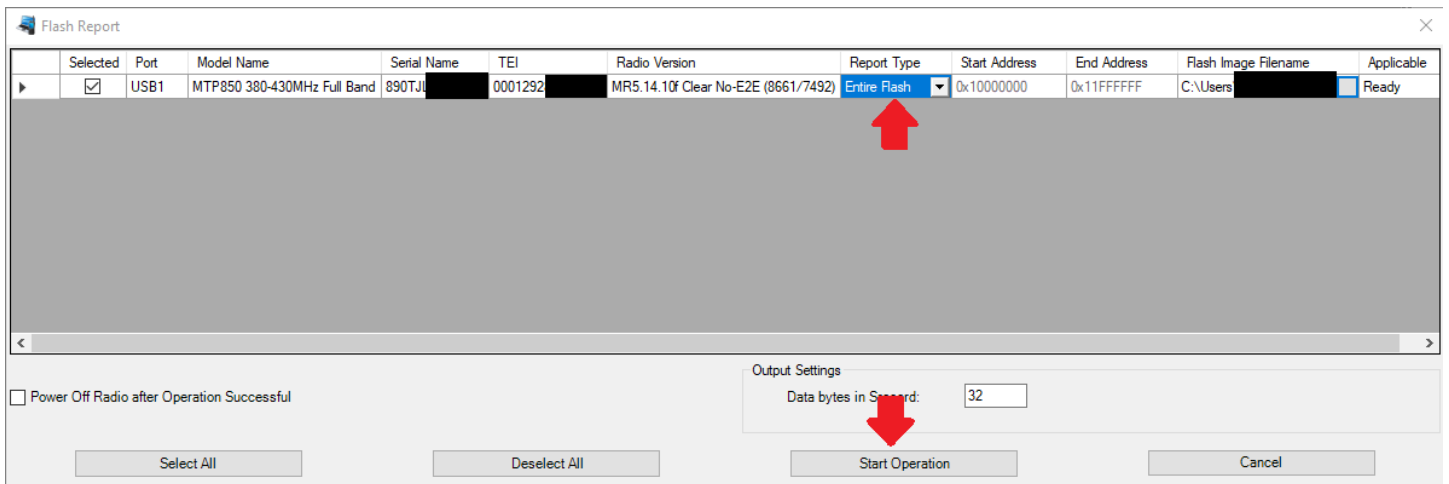
For „Flash Image Filename“ enter a file name for the Entire Flash backup as follows:



Subsequently by „Selected“ select the box :



Under Report Type select „Entire Flash“. Now click „Start Operation“



After some time (be patient, especially when using a serial programming cable) the Entire Flash contents are saved on the PC. This allows a restore should the radio ever „lose its mind“ HI.

Please continue on the next page..

2. Reset radio to Factory Defaults without erasing the radio's tuning data

First step is to read the code plug (CP) from the radio and store it on your PC, then note down the important data or keep them as screenshots.

Required is:

- from the window title the version.
- the model type.
- the model number.
- the serial number.
- radio TEI
- firmware release

In this example

CP 7492

MTP850 Unicode Platform Portable

Handset 380-430 MHz Full Band

H60PCN6TZ5AN

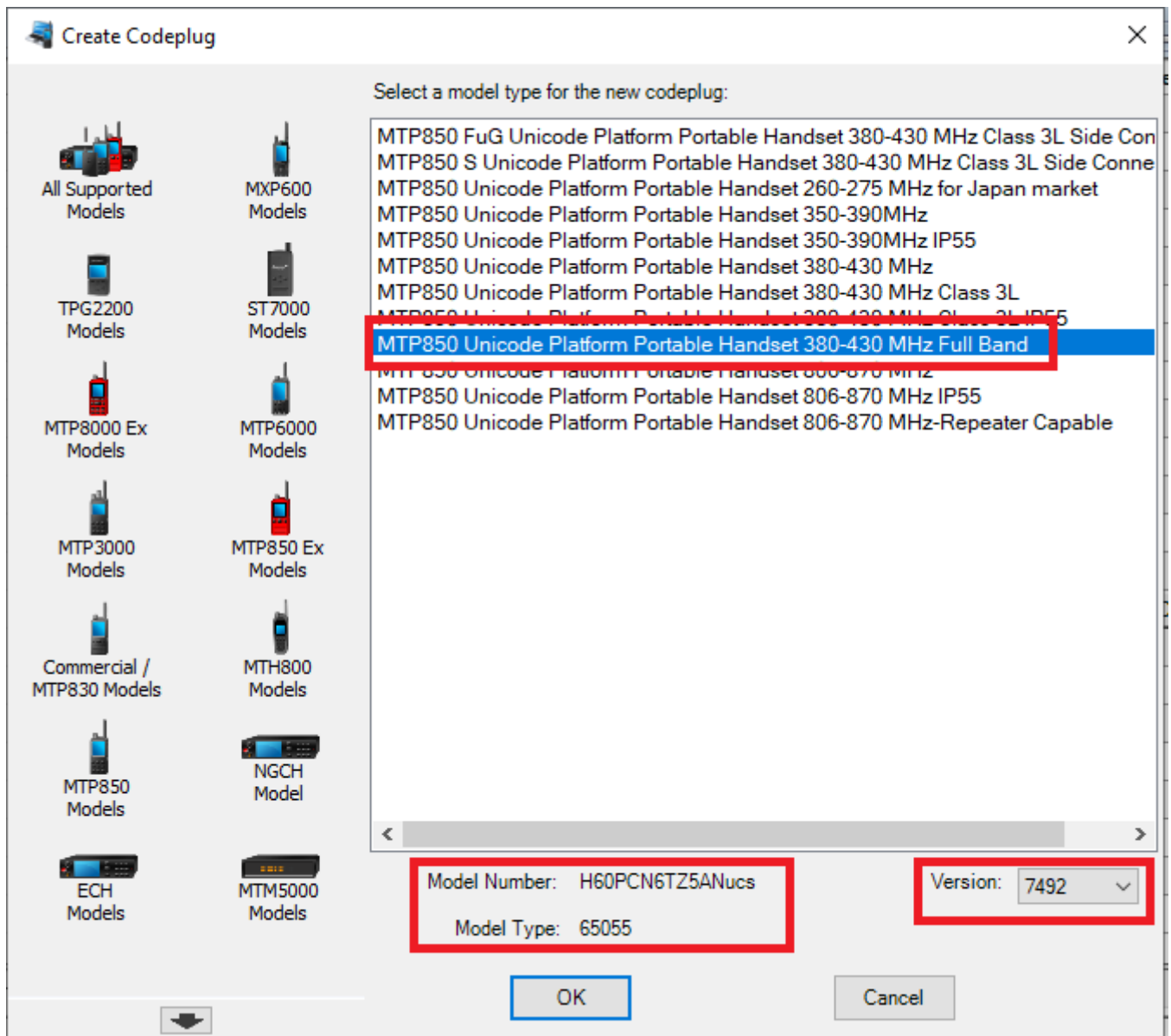
890TJLxxxx

00012928xxxxxxx

MR5.14.10f (yeah.. it could use a firmware update...)

Field Name	Field Value	Set Default
1 Codeplug Structure Version	0x0074	
2 Codeplug Defaults Version	0x0092	
3 Application Image	R13.000.8661	
4 Model Type	MTP850 Unicode Platform Portable Handset 380-430 MHz Full Band	
5 Model Number	H60PCN6TZ5AN	
6 Radio Hardware Id	07.0.0	
7 Copyright Notice	Copyright 2014 Motorola Solutions, Inc	
8 Equipment Temporary Disabled	<input type="checkbox"/>	
9 Subscription Temporary Disabled	<input type="checkbox"/>	
10 Equipment Permanently Disabled	<input type="checkbox"/>	
11 Subscription Permanently Disabled	<input type="checkbox"/>	
12 Serial Number	890TJ [redacted]	
13 Radio TEI	00012 [redacted]	
14 Radio JSSI	100	Set Default
15 Organization		
16 Person		
17 This Radio Phone Number	100	
18 This Radio Private Number	100	
19 Last Modification Date	06/25/2022 12:31:00	
20 Programming Source	CPS	
21 Comment		
22 Release Name	MR5.14.10f	

Now you create a fresh codeplug in CPS. In order to do so, you select „File“ and „New Codeplug“. It is important to select the right radio type. So, you also have to select the right model number, the right model type and the right version. All of this has to match the old data recorded in the previous step.



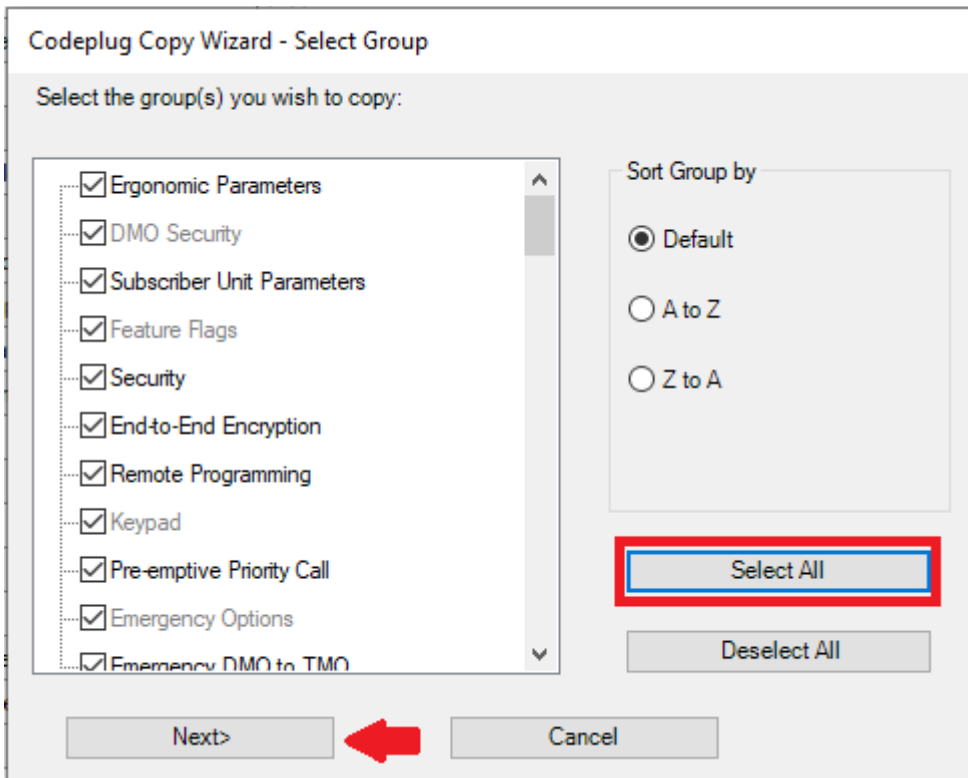
Now enter the correct serial number and TEI. Also check if the software version matches the old ode plug.

	Field Name	Field Value	Set Default
1	Codeplug Structure Version	0x0074	
2	Codeplug Defaults Version	0x0092	
3	Application Image		
4	Model Type	MTP850 Unicode Platform Portable Handset 380-430 MHz Full Band	
5	Model Number	H60PCN6TZ5AN	
6	Radio Hardware Id	0.0.0.0	
7	Copyright Notice	Copyright 2014 Motorola Solutions, Inc	
8	Equipment Temporary Disabled	<input type="checkbox"/>	
9	Subscription Temporary Disabled	<input type="checkbox"/>	
10	Equipment Permanently Disabled	<input type="checkbox"/>	
11	Subscription Permanently Disabled	<input type="checkbox"/>	
12	Serial Number	999ABC9999	
13	Radio TEI	F8F9FABFCDFEF	
14	Radio ISSI	100	Set Default
15	Organization		
16	Person		
17	This Radio Phone Number		
18	This Radio Private Number		
19	Last Modification Date	08/17/2011 14:18:00	
20	Programming Source	Factory(PATS)	
21	comment	Golden Codeplug V1.4	
22	Release Name	MR5.14.10	

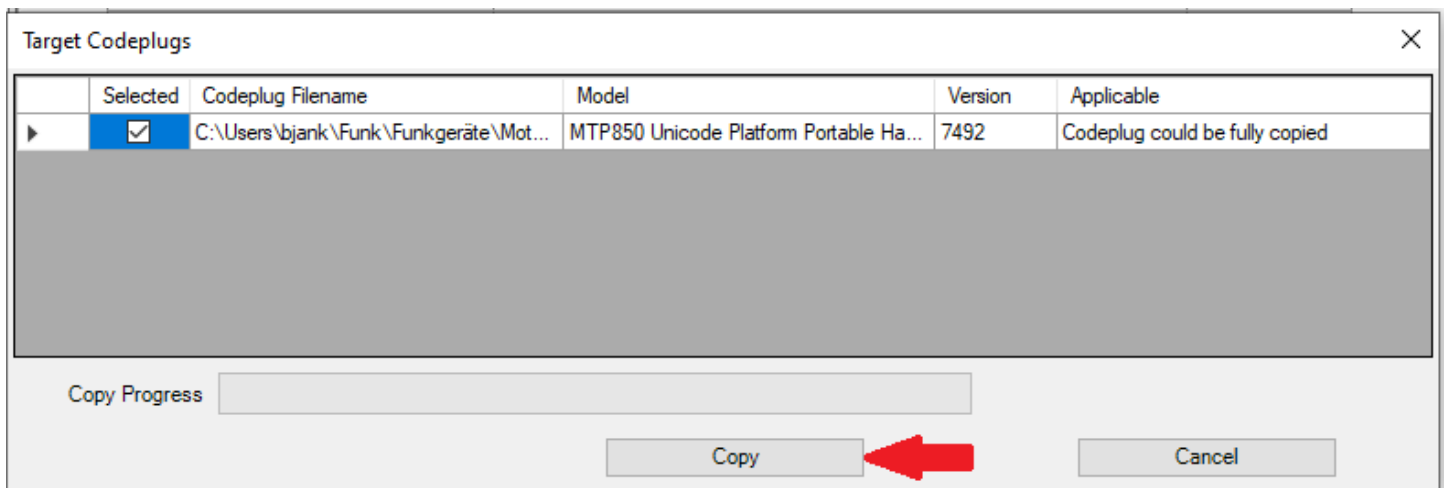
This new code plug now has to be saved on the PC. Please ensure that you do not mix up the names of the old and the new code plug!

In the next step you have the new code plug open in CPS and you start the code plug copy wizard using „File“ → den „Codeplug Copy Wizard“.

In the Wizard you „Select All“ to copy everything into the new codeplug and click „Next“.



In the final step you select your old code plug, as this contains the sensitive data, and copy the new code plug into the old one. Mark the „Selected“ and start the process by clicking „Copy“.



Once all of this has been done, you can write the code plug into the radio. The radio is now 'empty', just as it was when it came from the factory.

Good luck! I hope I have been able to help you.
More information on this subject (in German) can be found at berlinographics.com

Translated by Wilko PA1WBU