

Enable options Motorola Tetra portable & mobile radios.

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Introduction

Some options of the Motorola Tetra radio's, such as a built-in GPS, need to be enabled via a license or via Lab CPS. This guide explains how to accomplish this.

This short guide is an *addition to* the STTA Getting Started DMO. **It should only be used after *first*** having thoroughly read and fully understood **the STTA Getting Started DMO (GS)**.

Warnings

Enabling options requires the use of the so-called Lab/Depot CPS software. This CPS software, intended for service organizations, allows the user to adjust *every* parameter in the radio. It is also possible to change parameters that don't need to be changed and might **permanently** disable the radio. **Be warned!**

Disclaimer

Of course, there is no guarantee of any guarantee on the procedure described.

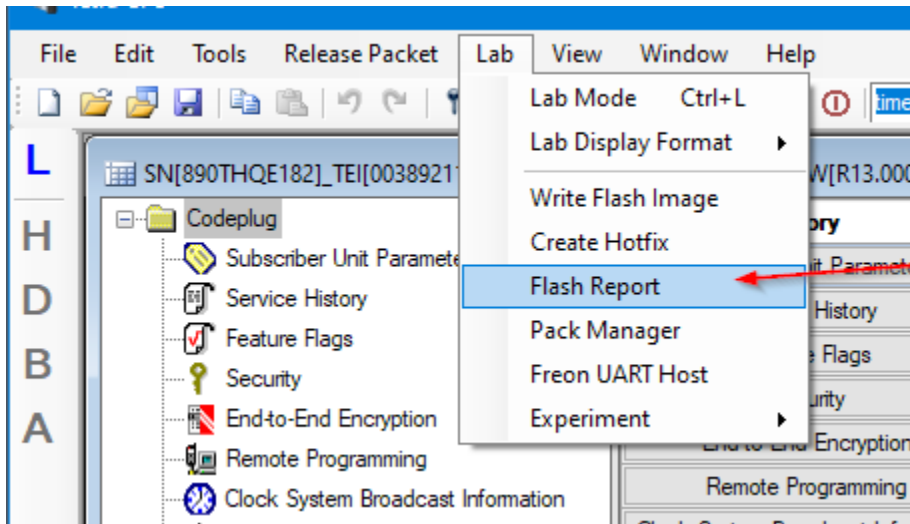
General

Install the **Lab version** of CPS, as described in the GS. The regular CPS is not suitable for the described change.

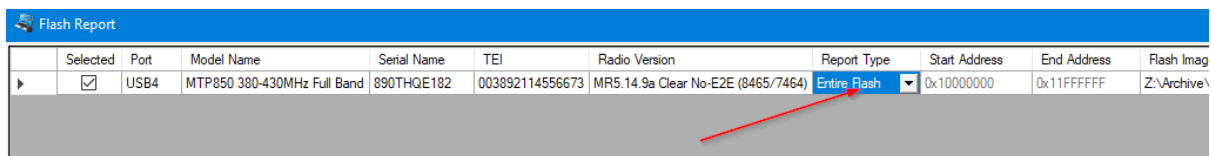
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Steps

A. Make a full backup (Motorola calls that a Flash Report) of the radio. In case of problems this backup can be restored. See the screenshot below. Creating such a flash report backup can take a while, just be patient.



Ensure you select `Entire flash` for the backup:



B. Enable desired options

1. Switch the Lab CPS to **Lab** mode. This goes through the **L** on the left side of the screen. See the red arrow at the L in the screenshot below.

2. Turn the Lab CPS into **Decimal** display mode. This goes through the **D** on the left side of the screen. See the red arrow at the D.

3. Navigate to `cp_sale_feature_t -> sale_feature_data`

4. For the options that need to be enabled, change the value from 0 to 1. See the arrows on the right side of the screenshot.

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Please note:

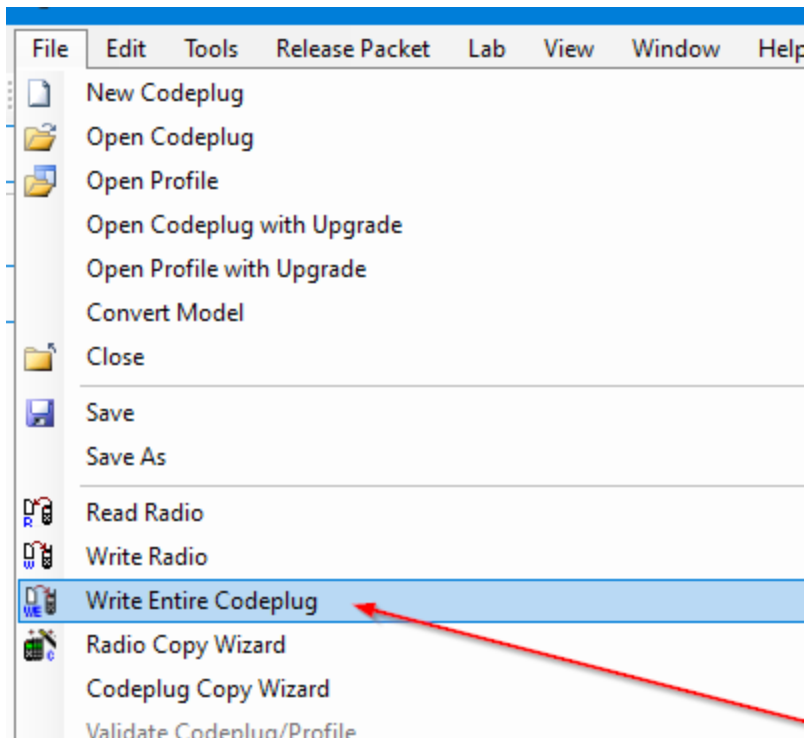
- The options available depend on the radio model. The example used here is a Motorola Tetra MTP850 radio. For example, the MTP850* itself can operate as a DMO repeater, which is enabled by the option *dmo_repeater_mode* (line 22 in the screenshot).
- For mobile radios, the GPS hardware is not always present, it is a separate, optional, module. Enabling the option obviously does not make sense if the GPS receiver hardware is not installed.
- Do not enable *permanently disable* options (lines 8 and 9).
- Please do not enable *Ignore_lst_sites* (rule 24). [To keep a long story short: this has to do with using the radio in TMO mode in cases when the relevant TMO node ('repeater') is not connected to a underlying TMO network. The (rare) TMO nodes in amateur use will run in LST. Enabling an option that makes the radio ignore them is therefore decidedly impractical :-)].

	Field Name	Field Value
1	GPS	1
2	WAP	0
3	Multi_Slot_Packet_Data	0
4	Enhanced_Security	0
5	Man_Down_Radio	0
6	Callout	0
7	RUA_RUI	0
8	Permanent_Disable	0
9	Permanent_Disable_v2	0
10	SCCH	0
11	AIM	0
12	Color_Display	1
13	Toggle_RF_Power_Class	1
14	Allow_Toggle_RF_Power_Class	1
15	SC_by_Group	0
16	GPS_over_PD	1
17	SDS_Remote_Control	0
18	RMS	0
19	WAP_Push	0
20	ete_sds	0
21	immediate_msg	0
22	dmo_repeater_mode	1
23	stick_to_home_cells	0
24	Ignore_lst_sites	0
25	Emergency_number_dialing	0
26	atex_accy_voice_data	0
27	spare_padded_64	Expand

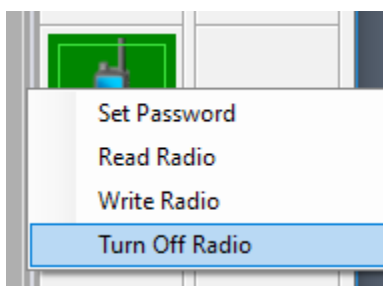
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Remark*: the Motorola Tetra MTP850 is also available in an S-version (MTP850S).

C. Write the **full settings** back to the radio. That goes with the function *Write **entire code plug***. The *Write radio* used for a normal code plug change is *not* sufficient! See below screenshot.



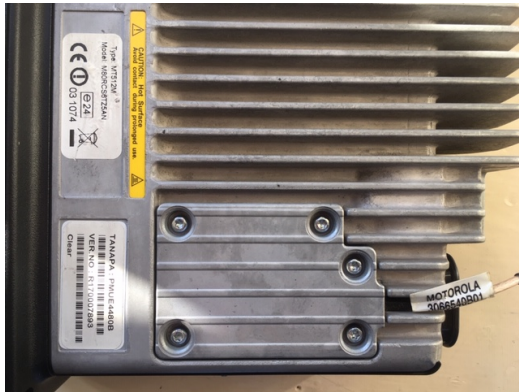
D. Turn off the radio according to the screenshot below



After switching on, the radio can be programmed using the enabled options via a *regular* code plug change, using the normal (non-lab) CPS.

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How to recognize if your mobile radio, like the MTM mobile versions, has the GPS module, please refer to the pictures below.



This MT512M version has the GPS module.



This MT512M version doesn't have the GPS module).

Learn more

- If it really doesn't want to work, please contact Wilko via: PA1WBU@Veron.nl