

Enable options Motorola Tetra portable & mobile radios.

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version: 0.2 2020.07.07 EN

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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 do 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.

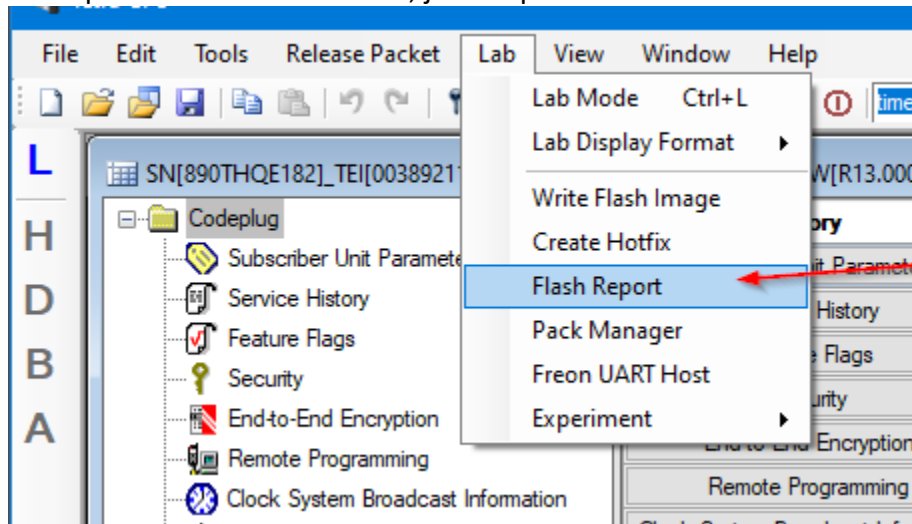
General

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

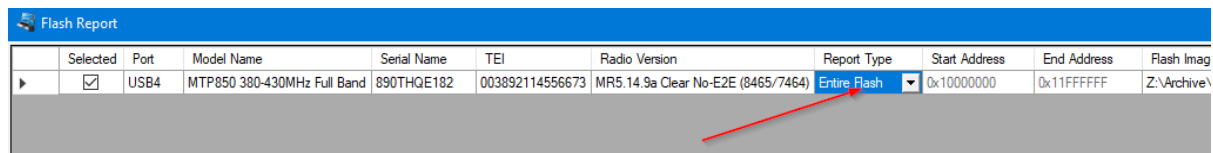
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Steps

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



Ensure you select Entire flash for the backup:



B. Turn on 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 option which might be available depends on the radio model. The example we use here is a Motorola Tetra MTP850 radio. For example, the MTP850* itself can act as a DMO repeater, which is enabled by the option *dmo_repeater_mode* (rule 22).
- For mobile radios, the GPS hardware is not always present, it is a separate, optional, module. The option of turning on this option does not make sense if the GPS receiver is missing in the radio.
- Do not switch on *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 case the relevant TMO node ('repeater') is not connected to a underlying TMO network. These rare TMO nodes in amateur use will be LST. Turning on an option that makes it possible to ignore them is therefore decidedly impractical].

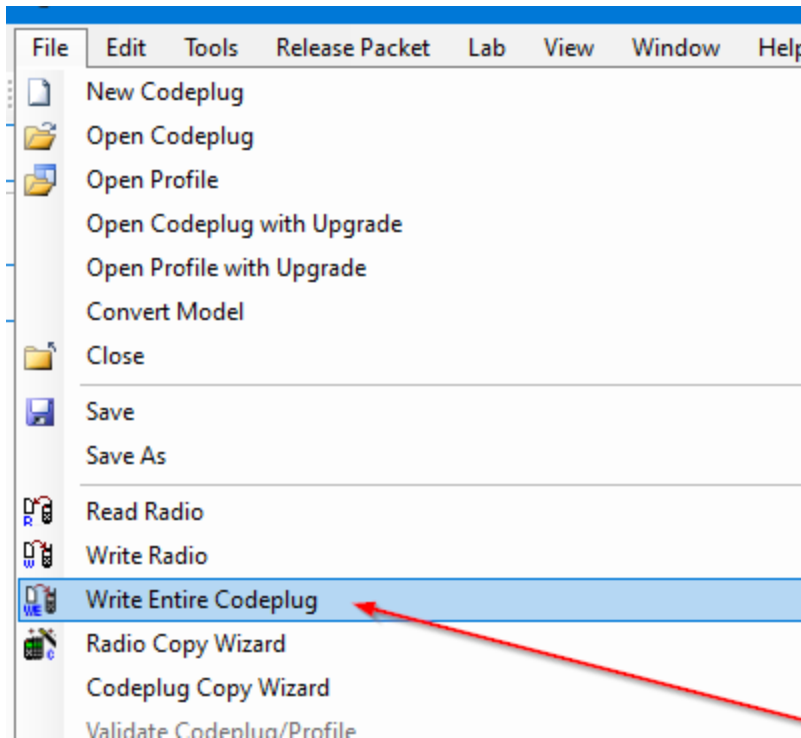
PA1WBU-20200510-MTP850-SN[890THQE182]_TEI[003892114556673]_ISSI[62041]_CP[454]_SW[R13.00]

	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

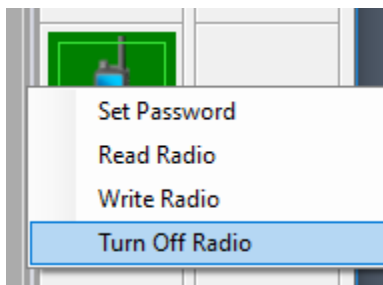
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Remark*: the Motorola Tetra MTP850 is also available in an s-version (MTP850s).

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* enough! See below screenshot.



D. Turn off the radio according to the screenshot below



After switching on, the radio will be programmed using the enabled options via a *regular* code plug change, and without the lab CPS function being required.

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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 (is now with Wilko 😊).

Learn more

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