

Extended Feature Sets

Introduction

Starting with CPS R09.01.00 non-FLASHcode “Extended Feature Sets” have been added to the codeplug in order to handle certain radio features. The presence or absence of the Extended Feature Sets in the codeplug will control cloning and the visibility of the fields related to these features. The Extended Feature Sets can be seen by clicking the “Show Feature Set” button in the Codeplug ribbon.

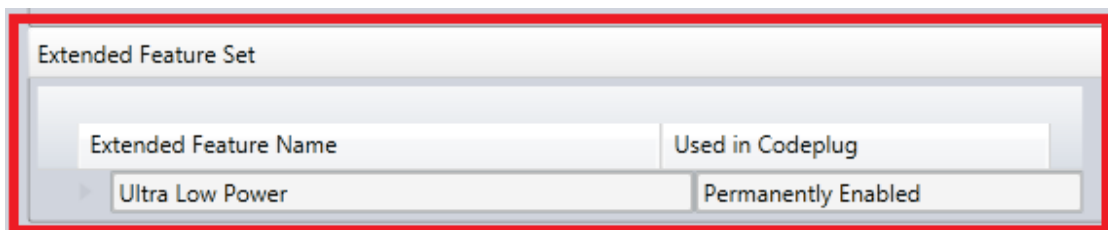


Extended Feature Sets generally fall into two categories:

1. Features that are not backwards compatible with older radios and require the latest version of firmware to be functional.



2. Features that are associated with a particular radio type.



Firmware Version Extended Feature Sets

Firmware Version Extended Feature Sets are only dependent on the version of firmware being used. Codeplugs that were created for a given firmware version will allow the CPS user to access the features supported by that version of firmware. Older codeplugs will be updated with the new Extended Feature Sets when FLASHport Refresh or Upgrade is performed on the radio.

Cloning will be blocked when a new codeplug has an Extended Feature Set in use, and the target radio has firmware that does not support that feature. The CPS detects when Extended Feature Sets are in use in the codeplug and sets the "Used in Codeplug" column of the Extended Feature Set dialog to Yes. When cloning to radios with older firmware is required, the CPS user needs only to disable the new feature in the codeplug, and cloning will be permitted.

Radio Type Extended Feature Sets

Certain radios may have special hardware or software that is incompatible with other similar radios. In this case, a Radio Type Extended Feature Set may be Permanently Enabled. If this type of Extended Feature Set is enabled, the radio cannot be cloned to other radios that do not have this capability.

The Radio Type Extended Feature Sets will only be enabled in the radios of a particular type in the factory. Some of them can also be added via the Depot tool. (See below.)

Depot Handling of Extended Feature Sets

The Depot handles the two types of Extended Feature Sets in different ways.

Firmware Version Extended Feature Sets

During Force Write or Upgrade Radio, the Depot will detect the firmware version of the radio (or upgrade f/w version). If the firmware version (or upgrade firmware version) supports a given Extended Feature Set, that Extended Feature Set will be added to the codeplug. If the firmware version of the radio does not support the Extended Feature Set, the feature will not be added to the codeplug.

In the new Create Codeplug and Upgrade Codeplug functions, all of the latest Firmware Version Extended Feature sets will be enabled. During Force Write of the codeplug, the feature sets will be removed, if the target radio does not support the feature.

For the R09.01.01 Depot the following Extended Feature Sets will be enabled:

- Multiple Emergency Revert
- Audible Emergency Beacon Routing

For the R10.00.00 Depot the following Extended Feature Sets, including the ones from previous Firmware versions will be enabled:

- Expanded MDC1200 Software Capable

For the R10.01.01 Depot the following Extended Feature Sets, including the ones from previous Firmware versions will be enabled:

Disable Emergency Call Indications Capable

- MFK Emergency Access

For the R11.00.00 Depot the following Extended Feature Sets, including the ones from previous Firmware versions will be enabled:

- Man-Down Emergency Profile Configurability
- Emergency Tone Configurability

For the R11.01.01 Depot the following Extended Feature Sets, including the ones from previous Firmware versions will be enabled:

- Emergency Hot Aux Mic
- Audible Emergency Beacon

For the R13.00.00 Depot the following Extended Feature Sets, including the ones from previous Firmware versions will be enabled:

- PASS Alarm Filter Capable

For the R13.01.00 Depot the following Extended Feature Sets, including the ones from previous Firmware versions will be enabled:

- Audio Enhancement

For the R14.00.00 Depot the following Extended Feature Sets, including the ones from previous Firmware versions will be enabled:

- MOSCAD ACE3600 Capable

Radio Type Extended Feature Sets

Certain Radio Type Extended Feature Sets can be enabled via a checkbox in the Create Codeplug screen. Codeplugs created with this type of Extended Feature Set enabled can only be written to radios of the corresponding type.

The R08.02.00 Depot supports setting the following Extended Feature via the “Create Codeplug” dialog:

- Extended UHF R1

The 'Create Codeplug' dialog box contains the following fields:

- Radio: APX7000
- Model Number: H97TGD8PW1AN
- Serial Number: 123ABC1234
- FLASHCode: 004000 - 000000 - 2
- Regional Governance: ACMA (highlighted with a red box)

Buttons: OK, Cancel

If the radio is APX5000, APX6000, APX7000, APX5500, APX6500 or APX7500 without Consollete, and "ACMA" is selected in field <Regional governance>, then the Extended UHF R1 feature allows the user to enter a frequency between 470MHz to 472MHz in a supported UHF R1 band codeplug.

The R09.01.01 Depot supports setting the following Extended Feature via the "Create Codeplug" dialog:

- Ultra Low Power

The 'Create Codeplug' dialog box contains the following fields:

- Radio: SRX2200
- Model Number: H99QDH9PW7AN (highlighted with a red box)
- Serial Number: 123ABC1234
- FLASHCode: 000000 - 000000 - 0
- Regional Governance: FCC Compliant
- ☒ Ultra Low Power (highlighted with a red box)

Buttons: OK, Cancel

Note that the checkbox will only be visible if the model number is "H99QDH9PW7AN"

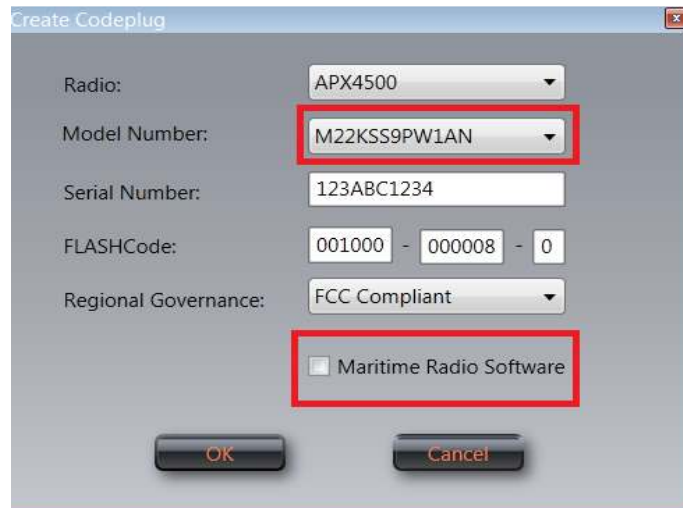
The R10.00.00 Depot supports setting the following Extended Feature via the "Create Codeplug" dialog:

- APX6000P25 Radio

If the radio is APX6000 and the H-Option Field <P25 Common Air Interface> in FLASHCode is enabled, the PCI field <APX6000P25 Radio> would be enabled in the codeplug created out.

The R10.01.01 Depot supports setting the following Extended Feature via the “Create Codeplug” dialog:

- Maritime Radio Software



The screenshot shows the 'Create Codeplug' dialog box with the following fields and values:

Field	Value
Radio:	APX4500
Model Number:	M22KSS9PW1AN
Serial Number:	123ABC1234
FLASHCode:	001000 - 000008 - 0
Regional Governance:	FCC Compliant
Maritime Radio Software	<input checked="" type="checkbox"/>

The 'Maritime Radio Software' checkbox is highlighted with a red rectangle. The 'OK' and 'Cancel' buttons are at the bottom.

If the radio is APX4500 with model number “M22KSS9PW1AN”, the PCI field < Maritime Radio Software> would be visible in the dialog “Create Codeplug”.

The R13.00.00 Depot supports setting the following Extended Feature via the “Create Codeplug” dialog:

- APX 2-Knob Control



The screenshot shows the 'Create Codeplug' dialog box with the following fields and values:

Field	Value
Radio:	APX4000
Model Number:	H51KDH9PW7AN
Serial Number:	123ABC1234
FLASHCode:	000000 - 000000 - 0
Regional Governance:	FCC Compliant
APX 2-Knob Control	<input checked="" type="checkbox"/>

The 'APX 2-Knob Control' checkbox is highlighted with a red rectangle. The 'OK' and 'Cancel' buttons are at the bottom.

If the radio is APX2000 or APX4000 with model 2 / 3 in bands (7/800, U1, U2, VHF), the PCI field < APX 2-Knob Control> would be visible in the dialog “Create Codeplug”.

Purpose of Extended Feature Sets

The purpose of the Extended Feature Sets is to provide protection against enabling features in the codeplug that will not work in the radio. Ultimately, they are meant to protect Motorola Solutions Radio Users from believing that their radio is capable of performing a critical task, when the software or hardware inside it does not actually support it. The Extended Feature Sets will only be used for the radio’s most mission-critical new features.