



# M17 Protocol Codeplug

*DRAFT*

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## Part II - Codeplug:

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## Recommendation for the codeplug structure

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### 1.1 Introduction

Codeplugs are ordinary text files with *.m17* extension. They provide an information on:

- channel banks
- channel frequencies
- destination IDs
- transmission mode
- payload type
- encryption mode

Codeplugs should be human-readable and easily editable with common text editors.

### 1.2 Codeplug file structure

We recommend using YAML for the codeplug files.

#### 1.2.1 Keywords

**codeplug:**

**author:** String - Codeplug author, max 16 characters

**version:** Date and time in YYYY-MM-DDTHH:MM:SS format

**bank:**

**name:** String - Channel bank name, 16 characters maximum

**channel:**

**name:** String - Channel name, 16 characters maximum

**descr:** String - Channel Description, 16 characters maximum

**freq\_rx:** Integer - Channel RX Frequency in Hz

**freq\_tx:** Integer - Channel TX Frequency in Hz

**mode:** Integer - Channel mode. Valid modes are: 0 - Analog, 1 - Digital Voice, 2 - Digital Data, 3 - Digital Voice and Data

**encr:** Integer - Is encryption enabled? 0 for no encryption, 1 - AES256, 2 - scrambler etc. (refer to M17\_spec for details)

**nonce:** String - 14-byte hex value without leading 0x. nonce for ciphers or initial LFSR value for scrambler

**gps:** Boolean - If true, and mode value enables digital data, gps data will be transferred along with payload

### 1.3 Example Codeplug

```
codeplug:
  author: SP5WWP
  version: 2020-28-09T13:20:49
  - bank:
    name: M17
    - channel:
      name: M17_DMO
      descr:
      freq_rx: 439575000
      freq_tx: 439575000
      mode: 2
      encr: 0
      nonce: 0
      gps: false
    - channel:
      name: M17_DMO_2
      descr:
      freq_rx: 439975000
      freq_tx: 439975000
      mode: 2
      encr: 0
      nonce: 0
      gps: false
  - bank:
    name: Repeaters
    - channel:
      name: SR5MS
      descr:
      freq_rx: 439425000
      freq_tx: 431825000
      mode: 2
      encr: 0
      nonce: 0
      gps: false
#codeplug end
```