

Instructions for building DMR codeplugs

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This documents how to build configs for Anytone 878 (and similar) and CS-800D using a combination of community supplied files from PNW-Digital and data from our local group. This process will produce identical configurations of Contacts, Channels, Zones and Scanlists on the two types of radios. We leverage Andrew Dickinson's Anytone Config Builder to make this easy.

In this example I am using the PNW core digital files, the Repeaterbook data that NO7RF has supplied, and data particular to Seattle ACS, but you can substitute your own personal sources.

We do a couple of weird steps (24, 25) to work around some deficiencies in Contact Manager and the CS-800D CPS to get some channel fields updated in bulk (power and transmit time-out-timer).

General Notes:

It's a good idea for all files to have a date extension (e.g. -20200215)

The "Empty" codeplug really needs to be empty. Mine has one sample analog channel, one DMR channel TG9, one contact (Group TG9 - 9), one Rx Group with TG9 in it, and one Sample zone with those 2 channels. Contact Manager has some issues working with residual data in the codeplug when doing structural imports.

Step by step instructions:

1. Download latest PNW Community files (Talkgroups, Digital-Repeaters, Digital-Others, Analog-Custom-NO7RF-Repeaterbook (or similar)) from PNW-Digital Groups.io codeplugs site:
<https://dmr.groups.io/g/PNW-CPS-Programming-Codeplugs/files/Codeplugs/Anytone/ACB>
2. Update Analog-ACS-addon (if needed)
3. Update any personal addon files (if needed)
4. Create Analog-Merged (Analog-ACS-addon + Analog-Custom-NO7RF-Repeaterbook + and personal additions)
5. Create Talkgroups-Merged (Talkgroups + Talkgroups-Seattle-addon)
6. Create Digital-Repeaters-Merged by editing a copy of the PNW Digital-Repeaters file
 - a. Add 3 rows for the three seattle repeaters copying and modifying the MM/Rex entry (update name, frequency, CC). Zone name format uses a semicolon.
 - b. Add 3 columns for King County (slot 2), Seattle 1 (slot 1) and Seattle 2 (slot 2)
7. Visit <https://www.k7abd.net/anytone-config-builder/config-builder.php>
8. Set options 'Use my sorting, Analog channels as first zone' and Digital Repeater Nicknames to 'Prefix'.

9. Upload the Merged files and Digital-Other which is currently unmodified.
10. Unpack anyone.zip from Downloads into the ConfigBuilder directory (it creates an anyone sub-directory)
11. Edit zones.csv to reorder as you like, ensuring No. is in the order you desire.
12. Start the Anytone CPS and open KD7DK-Empty.rdt
13. Tool -> Import, Select the files from anyone.zip, and Import.
[We are now done with Anytone except for updating contacts]
14. Write out a DCF file (Tools -> Write Data Conversion File) in the Anytone directory
15. Start ContactManager and Open Codeplug File with the DCF file
16. Select "Import Contacts from DMR Online Database"
17. 'Add All Records' from Online DMR database (Search, Add All Records w/Refresh Contacts, Done Searching).
18. Save Codeplug File
19. Back to the Anytone CPS, where you open the updated DCF file and import this (overwriting the previous config, or in a new instance of the CPS)
20. Check settings on Optional Settings -> Power-on
21. Check Digital -> Radio ID List for your DMR ID number
22. Check Optional Settings, Work Mode.
23. Save codeplug (save as .rdt file).

[We are now done with the Anytone codeplug and they can now be programmed]

24. Open a new copy of Contact Manager and import the DCF file from the Anytone directory
25. Select the Channels pane, and then 'Export to CSV' to the CS800D directory (e.g. to Channels-YYYYMMDD.csv)
26. Edit this file and set a consistent power level (MID, Column M) and time out time (180s, Column K). Select the column and use Edit -> Find & Replace.
27. Open a new copy of Contact Manager and open codeplug file KD7DK-Empty.rdb
28. Save as KD7DK-YYYYMMDD
29. Import contacts from codeplug (use the DCF directory in the Anytone directory)
30. Select Channels tab
31. Import from CSV (saved above in step 25).
32. Select Structural Import tab
33. All boxes should be checked except 'Import Private Contacts...', then select 'Import Selected Structures' using the DCF file in the Anytone directory as the source
34. Select the Zones tab, and delete the zone 'Sample'
35. Select the Scan Lists tab, and delete the scan list 'Sample'
36. Save Codeplug File
37. In CS800D CPS, File -> Open the new codeplug file
38. Check General Settings -> Setting. Set date string on Power On Message Line 2. Check Call and Radio ID.
39. Save the codeplug (a .rdb file)

[We are now done with the CS-800D configuration and they can now be programmed]

How to make a codeplug generic (remove your personal information, the next person can reverse this to make it personal)

Anyone:

1. Open codeplug file
2. Public->Channel: Delete any private channels you don't want to share.
3. Public->Optional Setting->Power-on: Power-on Display: make generic
4. Public->APRS (optional): make Your Call Sign generic (NOCALL),.
5. Digital->Radio ID List: put in dummy Radio ID for DMR ID (1234567)
6. Save codeplug file

CS-800D:

1. Open codeplug file
2. General Settings->Setting: make Radio Alias and Radio ID generic (NOCALL, 1234567)
3. Conventional->Zone: Delete any zones you don't want to share
4. Conventional->Channel: Delete any channels you don't want to share (both analog and digital)
5. Conventional->Scan List: Delete any scan lists you don't want to share
6. Save codeplug file