



# Getting 'on air' in DMR-mode with your DMR Radio

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## 1. Intention of this document

This document can in no way replace the existing documentation for the radio you bought at Radioddity, but it is intended to get you 'on air' via the fast lane. Therefore, this document only describes the mandatory steps to get you 'on air'. In order to do so, just get along the following steps:

- Apply for and receive your *DMR ID*
- *Gather information about the DMR station(s) you want to operate*
- *Install any USB-driver that might be required*
- *Install CPS according to your DMR-capable radio*
- *Create new codeplug from scratch*
  - Enter your call-sign and your DMR-ID
  - Create your *Digital Contacts* / Talkgroups (TG)
  - Set up your *Digital RX Group Lists*
  - Program your *Channels*, and attach a *Digital Contact* for TX and attach a *Digital RX Group List* for RX to each channel.
  - Program your *Zones* by assigning *Channels* to each zone.
- Save your codeplug and transfer it to your radio
- Get 'on air' with your freshly created codeplug

## 2. Make yourself familiar with DMR

Before you start to program your radio for use with DMR, make yourself familiar with DMR in general. There are lots of videos, tutorials and such things available within the internet. A good abstract on DMR in general is found at:

[https://en.wikipedia.org/wiki/Digital\\_mobile\\_radio](https://en.wikipedia.org/wiki/Digital_mobile_radio)

Furthermore, the pages of the DMR association are also quite interesting.

<https://www.dmrassociation.org/>.

DMR radios sold to amateur radio operators normally support Tier I and Tier II. For operating a DMR repeater the radio needs to be capable of DMR Tier II as it includes the TDMA time slot feature required for use with an amateur radio DMR repeater.

One important aspect you should keep in mind is the fact, that DMR had been initially designed for commercial products and not for ham usage. As a result of that, certain DMR parameters are often not setup in a way, a ham operator would expect them to be setup. "RX groups" probably the best example for such. But we will get to that later on within this document.

### 3. Apply for and receive your DMR ID

To work in a DMR network, you must register for a DMR ID number. For amateur radio this is: <https://www.radioid.net/>

You should have a copy of your license at hand before applying for a DMR ID. Normally, new DMR IDs will be issued within one business day. If you have more than one DMR radio, you may use the very same number on all your DMR-radios. You will only get one DMR ID per call sign. The DMR ID will be used to identify your radio within the DMR network you are using.

### 4. Gather information about a DMR station

As for an analog repeater you would normally just need the following details:

- TX-frequency
- RX-frequency
- any info on CTCSS or DCS-encoding (if required)
- info if a 1750 HZ pilot tone is required

If you setup an analog radio for just the correct RX-frequency you would already be able to hear all traffic transmitted by your local analog repeater. Thus, analog is no big deal to get first successful results.

Unfortunately, DMR is different to the analog world and seems to be extremely complicated at first. But all of us went through that learning curve with lots of trial and error. So be patient with yourself and reread all documentation you got again and again.

For operating a digital DMR-repeater that is close to your location you need at least the following details for that DMR repeater:

- TX-frequency
- RX-frequency
- Color Code (CC, can be 0...15)
- Fixed Talk Groups (TG, some multi digit number)
- Repeater Slot / Time Slot (TS) to be used for each specific TG (1 or 2)

Only if **all** those parameters **plus** a few additional settings ("RX group" being the most important one) are correct, you will be able to successfully hear or even operate the DMR-repeater. That makes up quite a huge number of possibilities (on what may go wrong and - according to Murphy's law - will go wrong, at least in first place). You will find out, that it is nearly impossible to get any info on which parameter is wrong if it is even just one of the parameters not being correct. Do not give up! All of us did go through this hard learning curve. And nearly, if not all of us, failed at the very beginning.

To get the details for those DMR-parameters required by your local repeater, there are different ways:

- Ask some other fellow ham operator (recommended)
- Visit local ham radio club meetings or events
- Search the internet
- Check <https://repeaterbook.com/>
- Check your DMR-network. Brandmeister, which has become the most common DMR network, has all required information available on its webpages
- Check social media platforms (within those you often find working codeplugs for download, but writing a codeplug yourself is strongly recommended.)

Let's say you live in Germany at a location called "Gelsenkirchen". By scrolling through the repeaterbook (<https://repeaterbook.com/>) you found out that there is even a repeater with a callsign of DB0OHL close to your location and supporting DMR. Repeaterbook gave you the following details:

Frequency	Offset	Tone In / Out	Location	Call	Use	Modes	
438.2375	-7.6 MHz	CC1	Gelsenkirchen, Oberschlvener Halde	DB0OHL	OPEN	DMR	+

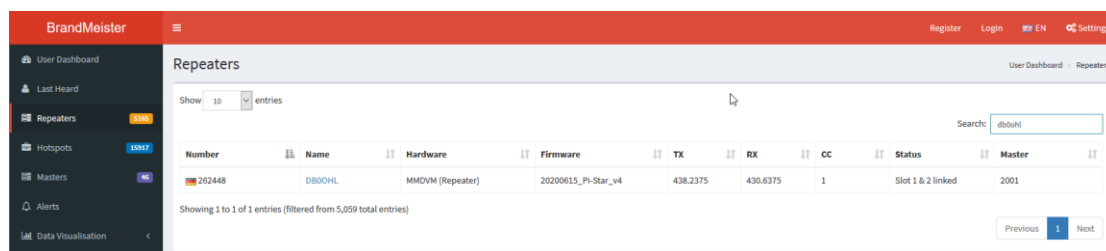
OK, so you just got the first three of the required parameters:

- TX-frequency 438.2375MHz
- RX-frequency 430.6375MHz
- Color Code (CC) required: 1 (CC1)

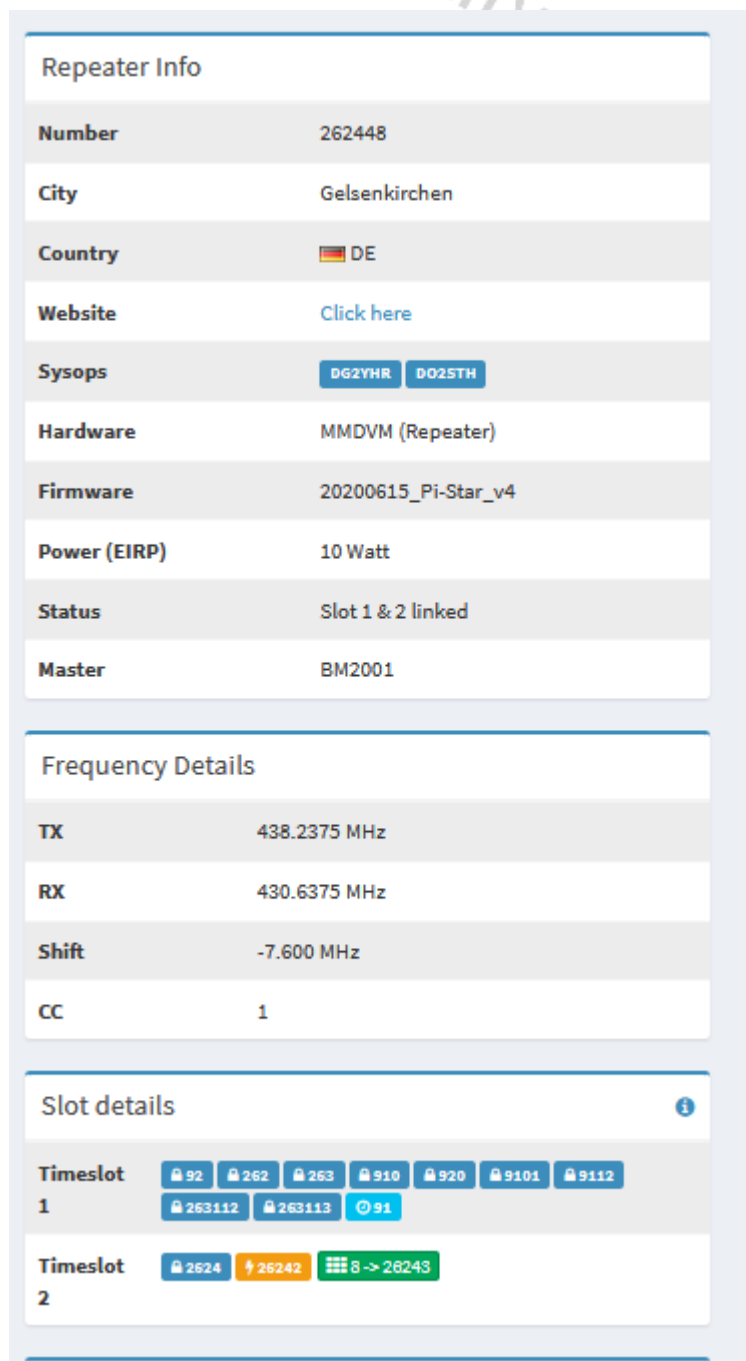
Next, we need to find out which DMR-network the repeater is associated with. Once more, repeaterbook will help on that one as well. Using <https://www.repeaterbook.com/repeaters/niche/index.php?mode=DMR> and then selecting the country (for the above example "Germany") and the Band (for the above example "70cm") you get closer to those details. Next search for the call sign (for the above example "DB0OHL") and you end up with the information that your local repeater is connected to the Brandmeister network.

Frequency	Offset	Tone In / Out	Location	Call	Use	Modes	Network
438.2375	-7.6 MHz	CC1	Gelsenkirchen, Oberschlvener Halde	DB0OHL	OPEN	DMR	Brandmeister
430.2375	-7.6 MHz	CC1	Waldhorn / Trossen	DB0MOT	OPEN	DMR	DM

Next, you would navigate to <https://brandmeister.network/>, click on "Repeater" and then enter the repeaters call sign (for the above example "DB0OHL"). Be patient as it may take a couple of seconds for the search result to be displayed.



Now click on the callsign within the displayed entry. On the left of the next page, you will then see all the remaining details you need in order to communicate with this repeater.



Let's summarize the details for that specific DMR repeater once more:

TX--frequency	438.2375MHz
RX-frequency	430.6375MHz
Color Code (CC) required:	1 (CC1)
Time slot 1 (TS1) serving the following talk groups	92, 262, 263, 910, 920, 9101, 9112, 263112, 263113
Time slot 1 (TS1) during certain operating times also serving the following talk group	91
Time slot 2 (TS2) serving the following talk groups	2624 and cluster TG 8 which is being redirected to TG 26243

## 5. Install any USB-driver that might be required

Most of the analog radios are programmed via a computers serial port. That normally does require a USB2Serial-cable which often has a K1-type connector on one side and a USB-plug on the other side. Within those cables USB2Serial-converters are built in, such as Prolific, FTDI, CH340G or similar.

In order to program a DMR-radio you need a cable, although optically looking about the same as for the analog world, that often is different to the above as it normally does not include a USB2Serial converter. This results in all DMR-radios requiring their own USB-driver to be installed. To give you a few examples:

Brand and model	Driver
Radioddity GD-55	Prolific USB-to-Serial Comm Port
Radioddity GD-77*, GD77S*	HID USB Input Device / MCU Mouse Demo
Radioddity GD-73*	walkie-talkie-C7000 (driver to be installed prior to first connection)
Radioddity GD-AT10G*	GD32 Virtual ComPort in FS Mode
Radioddity DB-25D	Prolific USB-to-Serial Comm Port
Radioddity x Baofeng RD-5R*	HID USB Input Device / MCU Mouse Demo
Baofeng DM-1701*	Digital Radio in USB mode - STM Device in DFU Mode
TYT MD-9600*	Digital Radio in USB mode - STM Device in DFU Mode

*\*) Radio has to be turned on in order for the device been recognized by your PC as there is not USB2SER converter chip included in the programming cable.*



## 6. Install CPS according to your DMR-capable radio

The file created by the Computer Programming Software (CPS) contains the frequencies and other operating parameters and is referred to as a 'codeplug'. Creating a codeplug is a bottom-up process where you first have to create the lowest common elements, and then combine those elements to form a codeplug that will be transferred to the radio. With the CPS we supply for your specific radio, you can create the codeplug yourself to suit your exact requirements, or you can use another person's codeplug if you wish. Don't forget to save your codeplug so you can easily make changes to your radio configuration at some time in the future.

There is a specific CPS-program for each DMR radio. Check our support pages ([www.radioddity.com](http://www.radioddity.com) -> Support -> select brand -> select radio model) for the most up to date version required for your radio. Installation instructions are found within the archive downloaded from our support pages.

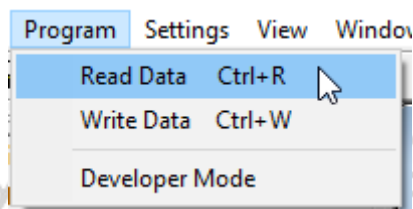
## 7. General process of creating a DMR codeplug from scratch

Within the next paragraphs we just describe the general steps to create a DMR codeplug without getting into more details than necessary on a particular DMR radio. After reading this paragraph, you may continue with the specifics on your DMR radio. The following screenshots refer to our GD-73 handheld radio but you will find out that the specific CPS for your radio will look very similar to the screenshots shown.

### 7.1. First of all: Save existing data

Read data from the radio to your PC to create a first CPS template, and at the same time save the factory data for future use.

When reading or writing data to or from a radio the CPS often has several options, such as "Program -> Read Data".





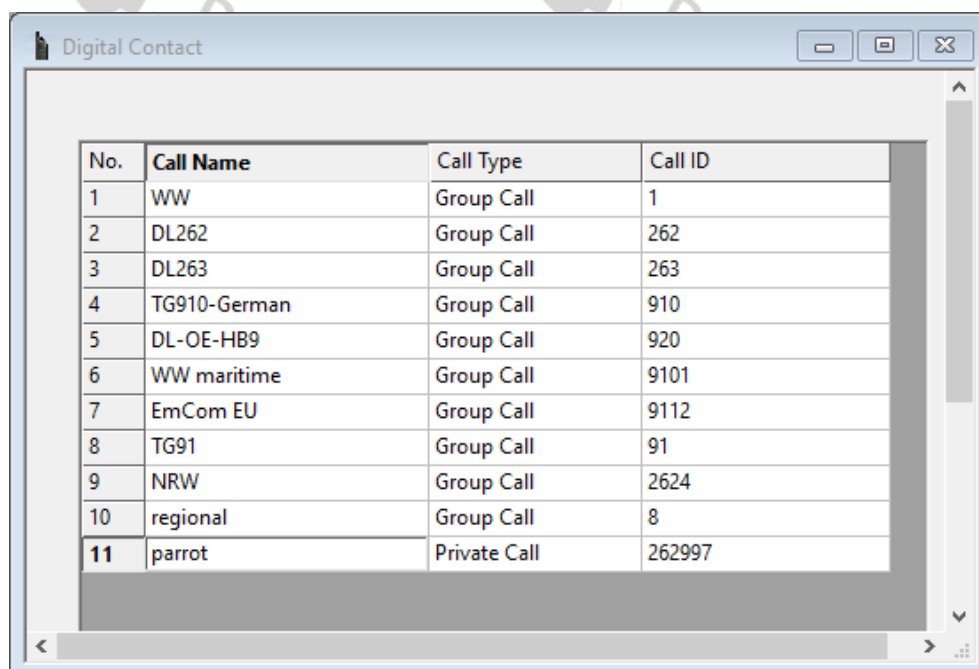
## 7.2. Enter your DMR ID

Next enter your DMR ID. The field for that DMR ID is a general one. Thus check those more general configuration pages for a field that states DMR ID, DMRID or similar.

**Note:** *Never operate the radio with an ID that has not been assigned to you. In amateur radio networks this can lead to the loss of your license.*

## 7.3. Create Digital contacts

Now you need to continue with the section for digital contacts. These digital contacts are used for storing talkgroups (TG with a Call Type of "Group Call") as well as individual stations DMR ID numbers (with a Call Type of "Private Call"). Your Digital contact list might look as follows:



No.	Call Name	Call Type	Call ID
1	WW	Group Call	1
2	DL262	Group Call	262
3	DL263	Group Call	263
4	TG910-German	Group Call	910
5	DL-OE-HB9	Group Call	920
6	WW maritime	Group Call	9101
7	EmCom EU	Group Call	9112
8	TG91	Group Call	91
9	NRW	Group Call	2624
10	regional	Group Call	8
11	parrot	Private Call	262997

No	Entry in the list of digital contacts
Call Name	Display name of the contact
Call Type	You can choose between the following call types: <ul style="list-style-type: none"><li>• Group Call (required for most talk groups, TG)</li><li>• Private Call (required for direct call to other station)</li><li>• All Call (normally not used)</li></ul>
Call ID	DMR ID for an individual / private digital call or a talkgroup (TG). This ID is for identification and communication with a destination radio (DMR ID) or a group of radios listening to the very same talkgroup (TG) depending on the call type.

## 7.4. Setup Digital RX Groups

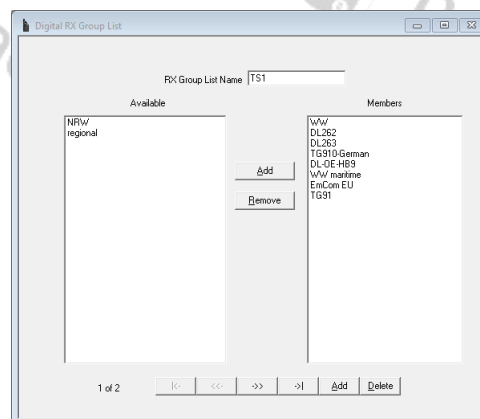
For sure you had been waiting for that one to be explained as we mentioned it already a couple of times. This is the most common parameter that causes headaches on ham operators new to DMR. Its name may be "Digital RX Group", "Digital RX Group Call", "RX Group", "RX Group List", "TG List" and some more similar to the ones already listed.

Normally each digital channel can transmit on just one single talkgroup but can receive more than just one talkgroup. The actual talkgroups that are able to be heard are defined in a so called "Digital RX Group" (or one of the other names mentioned above). For each channel you should later on assign one Digital RX group.

Creating a Digital RX group allows you to group your digital Talkgroups (TG) into logical groups so they can be targeted later on within the channel settings.

- Each group can contain as few or as many contacts as you like.
- Groups should be named with something meaningful to the user
- Only contacts that are stored as group calls can be added to a group.
- Each Digital (DMR) channel must have a Digital RX Group List, with at least the transmit Talkgroup Digital contact for the channel being a member of the group you attach to the channel.
- **If you do not attach a Digital RX Group List to a DMR channel, you won't be able to hear or receive anything on that channel.**

A typical Digital RX group may look like:



### Note

*To start with, it is a good idea to group all those digital contacts (TG) that are active on time slot 1 within the very same group and name it 'ts1'. For those that are active on time slot 2, name the corresponding group 'ts2'.*

## 7.5. Setup of channels

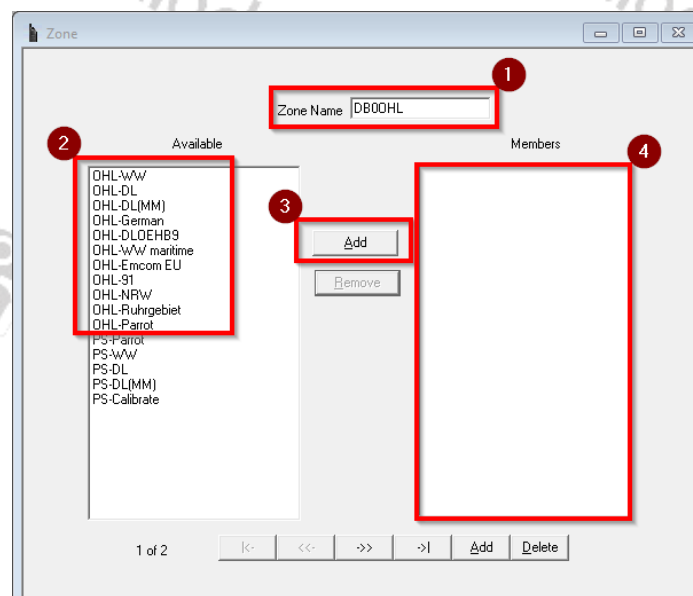
Name the channel in a way, that there is also some information about the talkgroup (TG) within its name. This will be very helpful in later operation. e.g. <trailing 3 digits of repeater>-<talkgroup> such as 'OHL-262'

Here is a brief explanation of the different fields required for a DMR channel. Their naming might be slightly different, depending on the DMR radio used.

<b>Channel name</b>	Name of the channel – this needs to be unique.
<b>Receive Freq</b>	The receive frequency in MHz
<b>Transmit Freq.</b>	The transmit frequency in MHz
<b>TX Contact</b>	The Talkgroup (TG) which is assigned to this channel
<b>Slot</b>	Selects which timeslot, 1 or 2, should be used. Often a particular Talkgroup is assigned to a particular timeslot.
<b>Color Code</b>	Select which colour code (CC) is associated with this channel.
<b>RX Group List</b>	This determines the Digital RX Group used for the channel

## 7.6. Bundling of channels into zones

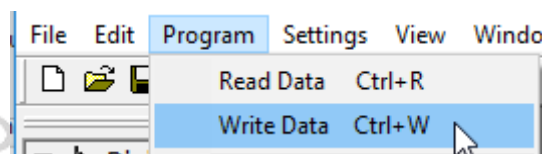
A zone is a collection or group of channels. They may be grouped any way you wish, for example a zone for each geographic area, or a zone with different talkgroups for one repeater, or any other way you find useful or convenient. Once you have defined your channels, you are ready to bundle them into zones for later use. The number of different channels and zones depends on your radio model.



- First give the zone a meaningful name (1), such as the identification of the repeater whose channels you want to store in the zone.
- Then select from the list of available radio channels (2) all those you want to bundle in that zone.
- Click the 'Add' button (3) to accept each channel.
- The added channels will then be listed as 'Members' of that zone (4).

## 7.7. Transfer the codeplug to the radio

After completing all the above steps, it is advisable to save the data locally to the PC first ('File' → 'save'/'save as') before you transfer the data from your PC to the GD-73. To do so, click on 'Program'→'Write Data'



## 7.8. Summary

Let's list the main keypoints required for setting up a DMR codeplug:

- A zone consists of various channels
- A digital channel is required for each DMR contact/talkgroup you want to address
- For each channel a Digital RX group is required. As a minimum that Digital RX group should contain at least the same talkgroup as the channel is defined for. However, one Digital RX group may contain several talkgroups and may be used for several channels.
- Each talkgroup has been assigned by the repeater operator to a certain time slot. That time slot (TS) is also part of the channel definition.
- Each Repeater has a common ColorCode. The ColorCode (CC) is also part of the channel definition.
- Each talkgroup or station must be defined as a Digital contact
- A Digital Contact for a Talk Group (TG) should be of Call type "Group Call", whereas a station (and often parrot as well, depending on your local repeater settings) requires a Call type of "Private Call".

**Now you are prepared to get 'on air'.**

## 8. Sample codeplugs

The following screenshots are all very similar to each other, as all of them are created for operating the very same DMR repeater (DB0OHL) using the talkgroups available on that repeater.

The following data is used for all of those sample codeplugs:

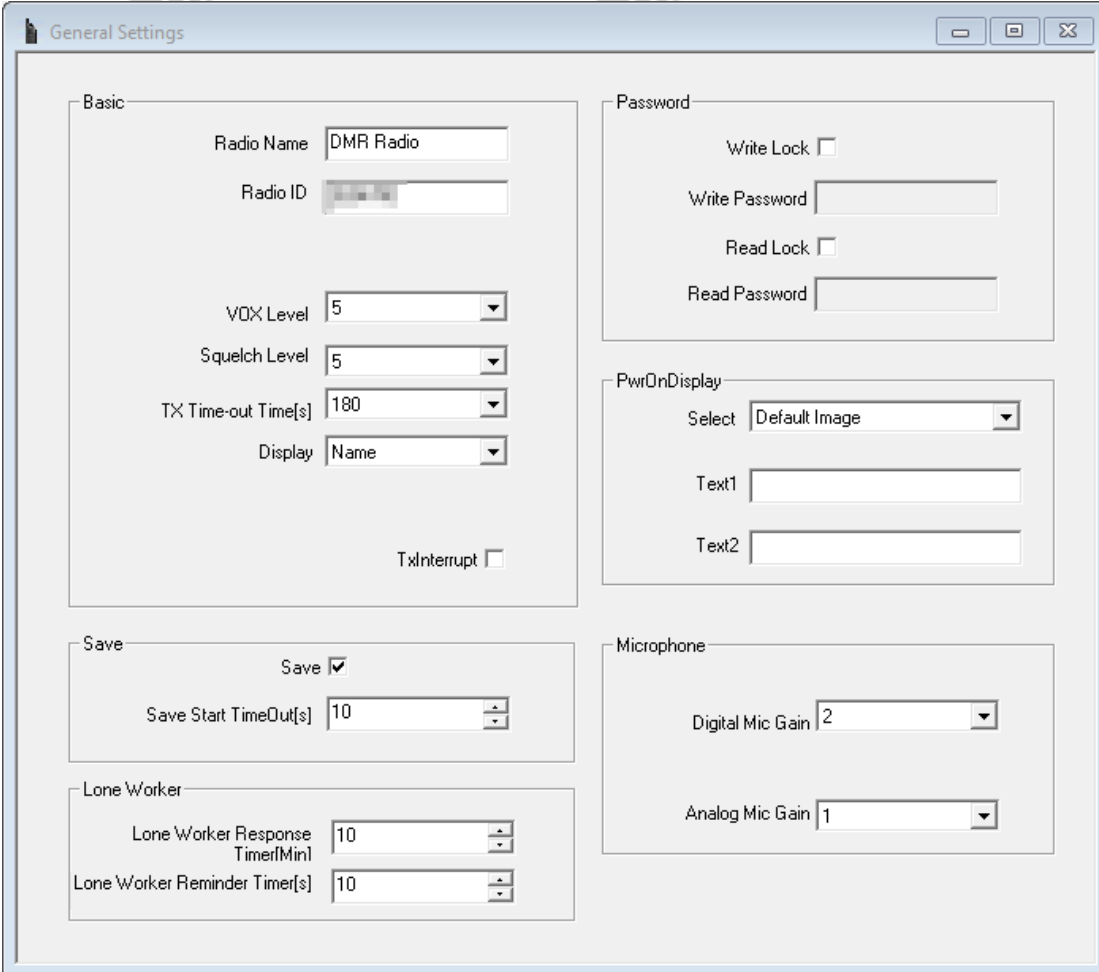
TX-frequency of repeater (becomes RX-frequency of own radio)	<b>438.2375 MHz</b>
RX-frequency of repeater (becomes TRX-frequency of own radio)	<b>430.6375 MHz</b>
Color Code (CC) required	<b>1 (CC1)</b>
Time slot 1 (TS1) for talk groups	<b>91, 262</b>
Time slot 2 (TS2) for talk groups	<b>2624</b> and cluster TG <b>8</b> being redirected to TG <b>26243</b>
Parrot on that DMR repeater available at	<b>262997</b> with Call Type "Private Call"

Unless otherwise specified, these sample codeplugs are based on a blank new codeplug and its default settings.

## 8.1. Sample codeplug for Radioddity GD-73

The following screenshots have all been taken using GD-73 CPS V1.05.

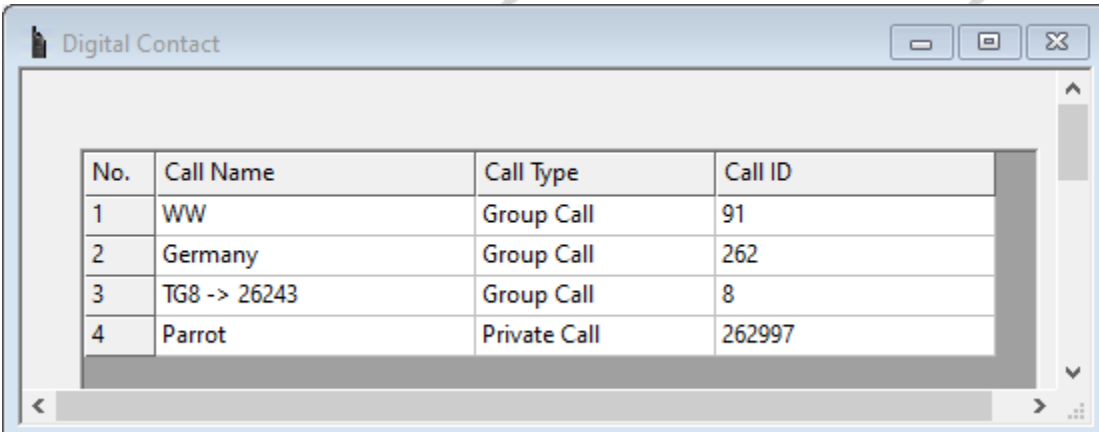
### General Settings:



The General Settings window is divided into several sections:

- Basic:** Radio Name (DMR Radio), Radio ID (blurred), VOX Level (5), Squelch Level (5), TX Time-out Time[s] (180), Display (Name), TxInterrupt (unchecked).
- Password:** Write Lock (unchecked), Write Password (blurred), Read Lock (unchecked), Read Password (blurred).
- PwrOnDisplay:** Select (Default Image), Text1 (blurred), Text2 (blurred).
- Save:** Save (checked), Save Start TimeOut[s] (10).
- Lone Worker:** Lone Worker Response Timer[Min] (10), Lone Worker Reminder Timer[s] (10).
- Microphone:** Digital Mic Gain (2), Analog Mic Gain (1).

### Digital Contacts:



The Digital Contact window displays a table of contacts:

No.	Call Name	Call Type	Call ID
1	WW	Group Call	91
2	Germany	Group Call	262
3	TG8 -> 26243	Group Call	8
4	Parrot	Private Call	262997



## Digital RX Group List:

Digital RX Group List

RX Group List Name: TS1

Available

TG8 -> 26243

Members

WW  
Germany

Add

Remove

1 of 2

<- << >> >| Add Delete

Digital RX Group List

RX Group List Name: TS2

Available

WW  
Germany

Members

TG8 -> 26243

Add

Remove

2 of 2

<- << >> >| Add Delete

## Channels:

Channel Information

Digital/Analog

Mode: Digital Channel Name: OHL-WW

Channel Space: 12.5K Rx Frequency(MHz): 438.237500

Power Level: High Tx Frequency(MHz): 430.637500

Scan List: None

Access Policy: Always

PTT Template: None

Talk Around: ☐

Rx Only: ☐

Auto Start Scan: ☐

Digital

Tx Contact: WW

Slot: Slot1

Color Code: 1

Rx Group List: TS1

Emergency: None

Encrypt: None

Analog

Tx CTCSS/CDCSS: None Rx CTCSS/CDCSS: None

CTCSS Enc: 62.5 CTCSS Dec: 62.5

CDCSS Enc: 023 CDCSS Dec: 023

1 of 4

<- <<- >> >| Add Delete Export Import

Channel Information

Digital/Analog

Mode: Digital Channel Name: OHL-Germany

Channel Space: 12.5K Rx Frequency(MHz): 438.237500

Power Level: High Tx Frequency(MHz): 430.637500

Scan List: None

Access Policy: Always

PTT Template: None

Talk Around: ☐

Rx Only: ☐

Auto Start Scan: ☐

Digital

Tx Contact: Germany

Slot: Slot1

Color Code: 1

Rx Group List: TS1

Emergency: None

Encrypt: None

Analog

Tx CTCSS/CDCSS: None Rx CTCSS/CDCSS: None

CTCSS Enc: 62.5 CTCSS Dec: 62.5

CDCSS Enc: 023 CDCSS Dec: 023

2 of 4

<- <<- >> >| Add Delete Export Import

Channel Information

Digital/Analog

Mode: Digital Channel Name: OHL-TG8

Channel Space: 12.5K Rx Frequency[MHz]: 438.237500

Power Level: High Tx Frequency[MHz]: 430.637500

Scan List: None Talk Around: ☐

Access Policy: Always Rx Only: ☐

PTT Template: None Auto Start Scan: ☐

Digital

Tx Contact: TG8 -> 26243

Slot: Slot2

Color Code: 1

Rx Group List: TS2

Emergency: None

Encrypt: None

Analog

Tx CTCSS/CDCSS: None Rx CTCSS/CDCSS: None

CTCSS Enc: 62.5 CTCSS Dec: 62.5

CDCSS Enc: 023 CDCSS Dec: 023

3 of 4

K- << >> >I Add Delete Export Import

Channel Information

Digital/Analog

Mode: Digital Channel Name: OHL-Parrot

Channel Space: 12.5K Rx Frequency[MHz]: 438.237500

Power Level: High Tx Frequency[MHz]: 430.637500

Scan List: None Talk Around: ☐

Access Policy: Always Rx Only: ☐

PTT Template: None Auto Start Scan: ☐

Digital

Tx Contact: Parrot

Slot: Slot1

Color Code: 1

Rx Group List: TS2

Emergency: None

Encrypt: None

Analog

Tx CTCSS/CDCSS: None Rx CTCSS/CDCSS: None

CTCSS Enc: 62.5 CTCSS Dec: 62.5

CDCSS Enc: 023 CDCSS Dec: 023

4 of 4

K- << >> >I Add Delete Export Import

**Zone:**

Zone

Zone Name

Available

Members

OHL-WW  
OHL-Germany  
OHL-TG8  
OHL-Parrot

Add  
Remove

1 of 1

<- <<- ->> ->| Add Delete

## 8.2. Sample codeplug for Radioddity GD-77

The following screenshots have all been taken using GD-77 CPS v3.1.9.

### General Settings:

General Setting

Radio Name: GD-77

Radio ID: [Hex]

Tx Preamble Duration [ms]: 360

Rx Low Battery Interval [s]: 40

Monitor Type: Open Squelch

☒ Private Call

☐ Tx Inhibit Quick Key Override

☐ Disable All LED

Program Password: [Empty]

Vox Sensitivity: 3

Up Channel Mode: Channel

Down Channel Mode: Channel

Alert Tone

☐ Disable All Tone

☐ Channel Freq Indication Tone

☒ Self Test Pass Tone

Talk Permit Tone: None

Call Alert Tone Duration [s]: 120

ARTS Tone: Once

☐ Unfamiliar Number Tone

☐ Reset Tone

☐ Tx Exit Tone

Battery Saver

☒ Preamble

☒ Receive

Lone Worker

Response Timer [min]: 1

Reminder Timer [s]: 10

Talkaround

Group Call Hang Time [ms]: 3000

Private Call Hang Time [ms]: 3000

Scan

Scan Mode: Time

### Digital Contacts:

	Number	Name	Call ID	Type	Ring Style	Call Receive Tone
▶ 1	1	VW	00000091	Group Call	None	On
2	2	Germany	00000262	Group Call	None	On
3	3	TG8 -> 26243	00000008	Group Call	None	On
4	4	Parrot	00262997	Private Call	None	On

## RX Group List:

The screenshot shows the 'Rx Group List' window for a group named 'TS1'. The window has a title bar with standard Windows controls. Below the title bar, there is a 'Name' field containing 'TS1'. The main area is divided into two columns: 'Available' and 'Member'. The 'Available' column contains a list with one item, 'TG8 -> 26243', which is highlighted in blue. Below this list are 'Add' and 'Delete' buttons. The 'Member' column contains a list with two items, '001:WW' and '002:Germany', with '001:WW' highlighted in blue. To the right of the 'Member' list are 'Up' and 'Down' buttons.

Name:

Available

- TG8 -> 26243

Member

- 001:WW
- 002:Germany

Buttons: Add, Delete, Up, Down

The screenshot shows the 'Rx Group List' window for a group named 'TS2'. The window has a title bar with standard Windows controls. Below the title bar, there is a 'Name' field containing 'TS2'. The main area is divided into two columns: 'Available' and 'Member'. The 'Available' column contains a list with two items, 'WW' and 'Germany', with 'WW' highlighted in blue. Below this list are 'Add' and 'Delete' buttons. The 'Member' column contains a list with one item, '001:TG8 -> 26243', which is highlighted in blue. To the right of the 'Member' list are 'Up' and 'Down' buttons.

Name:

Available

- WW
- Germany

Member

- 001:TG8 -> 26243

Buttons: Add, Delete, Up, Down



## Channels:

Channels

Analog Add Delete Clear Export Import

	Number	Name	Rx Freq	Tx Freq	Ch Mode	Power	Rx Tone	Tx Tone	Color Code	Rx Group List	Contact	Repeater Slot
▶ 1	1	OHL-WW	438.23750	430.63750	Digital	High	None	None	1	TS1	WW	1
2	2	OHL-Germany	438.23750	430.63750	Digital	High	None	None	1	TS1	Germany	1
3	3	OHL-TG8	438.23750	430.63750	Digital	High	None	None	1	TS2	TG8 -> 26243	2
4	17	OHL-Parrot	438.23750	430.63750	Digital	High	None	None	1	TS2	Parrot	2

## Zone:

Zone

1 / 1 | ⏮ ⏪ ⏩ ⏭ + ×

Name DB0OHL

Available

Member

001:OHL-WW  
002:OHL-Germany  
003:OHL-TG8  
004:OHL-Parrot

AddDelete

UpDown

### 8.3. Sample codeplug for Radioddity x Baofeng RD-5R

The following screenshots have all been taken using RD-5R CPS v1.0.0.4.

#### General Settings:

General Setting

Radio Name: RD-5R

Radio ID: [ ]

Tx Preamble Duration [ms]: 360

Rx Low Battery Interval [s]: 30

Monitor Type: Open Squelch

☒ Private Call

☐ Tx Inhibit Quick Key Override

☐ Disable All LED

Program Password: [ ]

Vox Sensitivity: 3

Scan Mode: Time

Up Channel Mode: Channel

Down Channel Mode: Channel

Ani: Off

Double Wait Tx Select: Main

Repeater Ste: Off

Repeater End Delay: Off

Alert Tone

☐ Disable All Tone

☐ Channel Freq Indication Tone

☒ Self Test Pass Tone

Talk Permit Tone: None

Call Alert Tone Duration [s]: 120

ARTS Tone: Once

☐ Unfamiliar Number Tone

☐ Reset Tone

☐ Tx Exit Tone

Battery Saver

☒ Preamble

☒ Receive

Lone Worker

Response Timer [min]: 1

Reminder Timer [s]: 10

Talkaround

Group Call Hang Time [ms]: 3000

Private Call Hang Time [ms]: 3000

#### Menu:

Menu

Basic

Menu Hang Time [s]: 10

☒ Information

Scan

☒ Scan

☒ Edit List

Contact

☒ Call Alert

☒ Edit

☒ Manual Dial

☒ Radio Check

☒ Remote Monitor

☒ Radio Enable

☒ Radio Disable

☒ One Key Dial

Basic

☒ Talkaround

☒ Tones/Alerts

☒ Power

☒ Backlight

☒ Intro Screen

☒ Keypad Lock

☒ LED Indicator

☒ Squelch

☒ Privacy

☒ Vox

☒ Password And Lock

☒ Channel Display

☐ Double Standby

Key Tone: On

Backlight [s]: 5

Keypad Lock: Manual

Channel Display: Name

Double Standby: Double Single

Call Log

☒ Missed

☒ Answered

☒ Outgoing Radio

☐ ANI Menu

☐ DTMF SideTone

☐ Scan Resume Mode

☐ PTTID

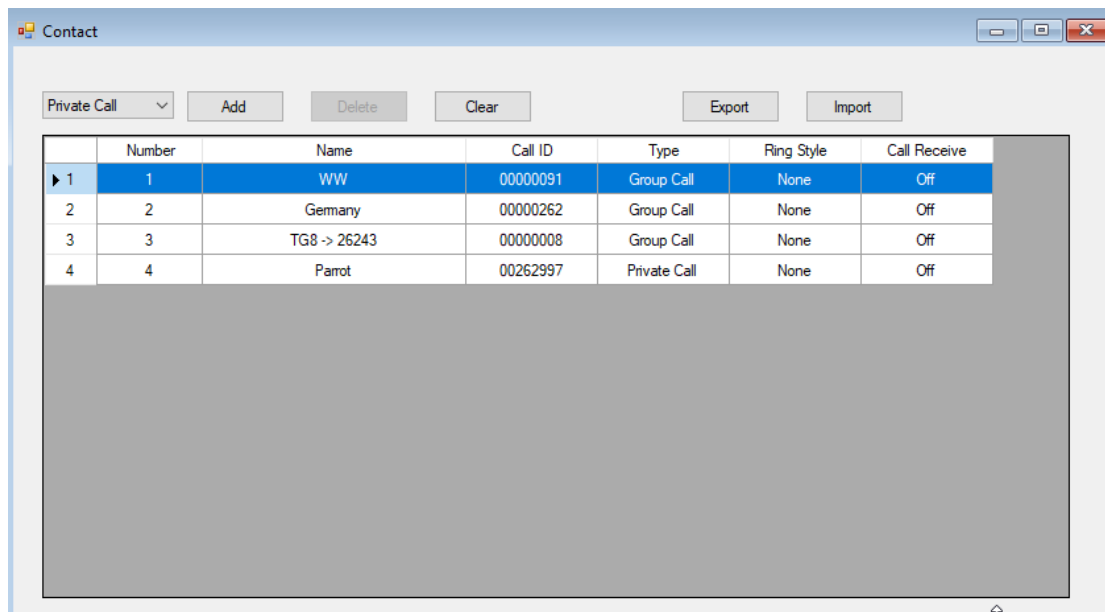
☐ Tx End Delay

☐ Double Wait Tx Select

☐ STE

☐ Non Ste

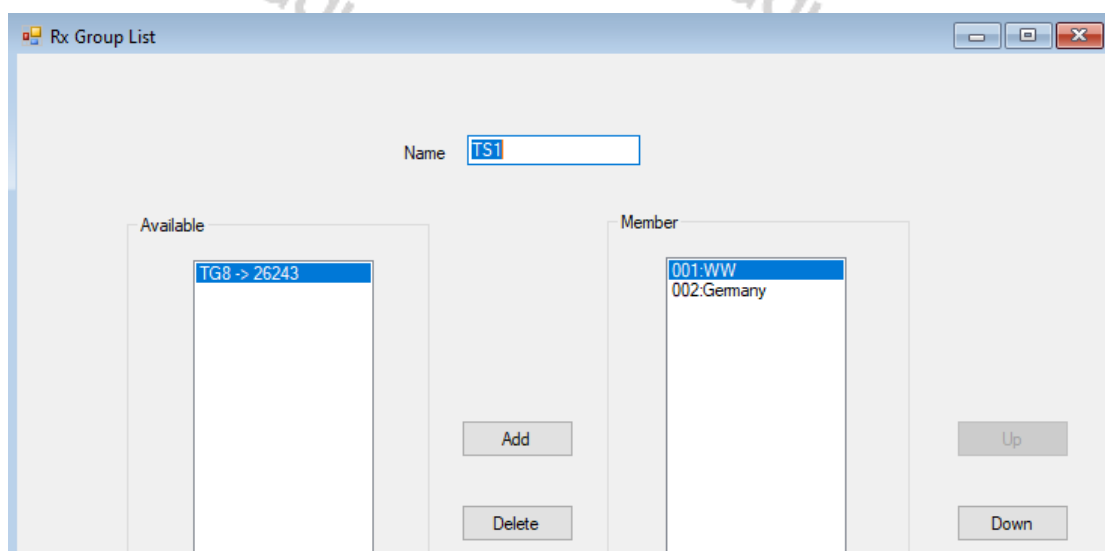
## Digital Contacts:



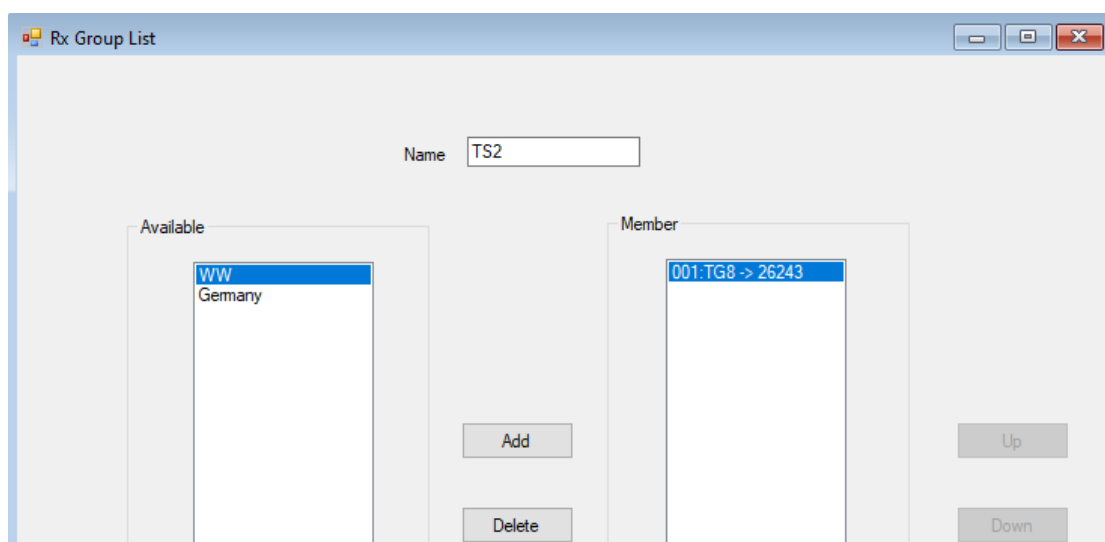
The 'Contact' window displays a table of digital contacts. The table has columns for Number, Name, Call ID, Type, Ring Style, and Call Receive. The contacts are listed as follows:

	Number	Name	Call ID	Type	Ring Style	Call Receive
▶ 1	1	WW	00000091	Group Call	None	Off
2	2	Germany	00000262	Group Call	None	Off
3	3	TG8 -> 26243	00000008	Group Call	None	Off
4	4	Parrot	00262997	Private Call	None	Off

## RX Group List:

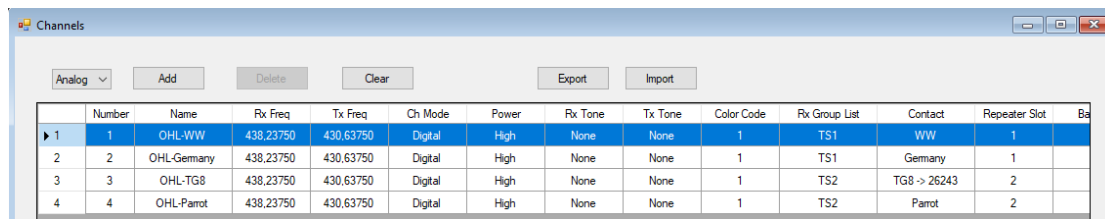


The 'Rx Group List' window for TS1 shows two columns: Available and Member. The Available column contains 'TG8 -> 26243'. The Member column contains '001:WW' and '002:Germany'. Buttons for Add, Delete, Up, and Down are visible.



The 'Rx Group List' window for TS2 shows two columns: Available and Member. The Available column contains 'WW' and 'Germany'. The Member column contains '001:TG8 -> 26243'. Buttons for Add, Delete, Up, and Down are visible.

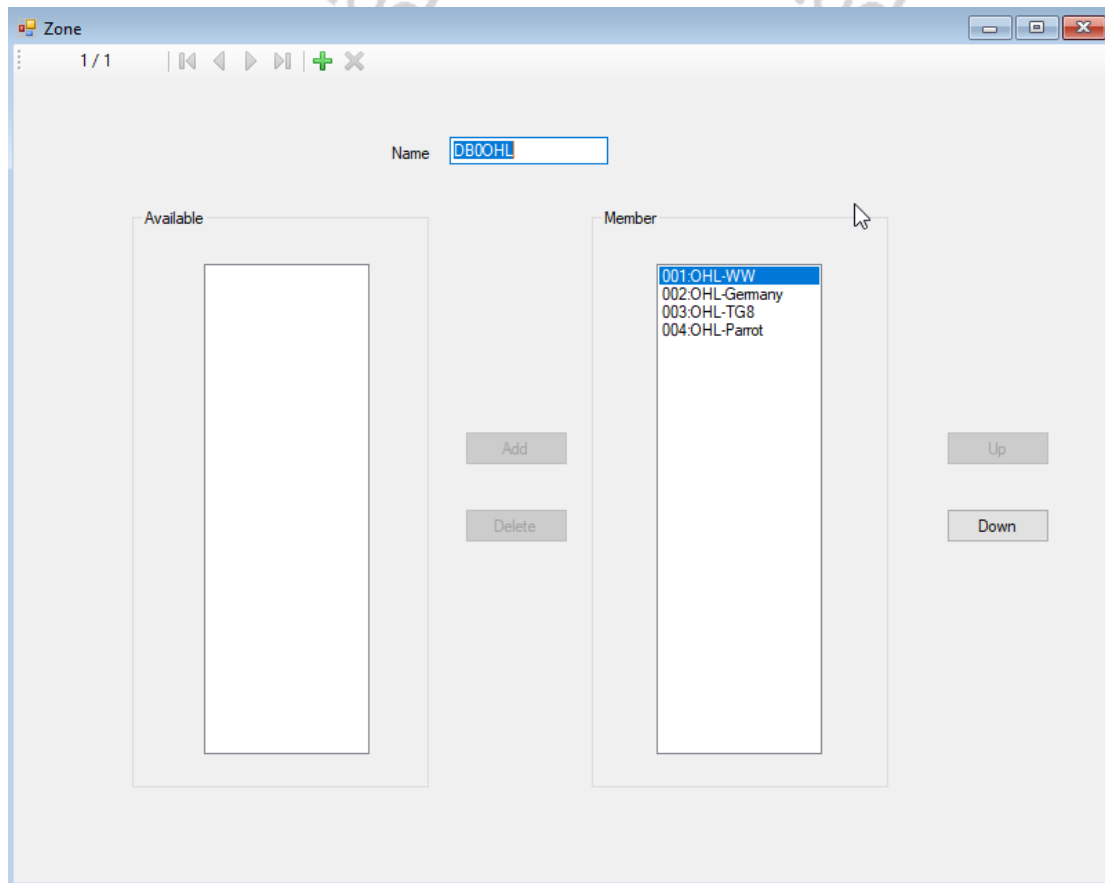
## Channels:



The screenshot shows the 'Channels' window with a toolbar at the top containing buttons for 'Analog', 'Add', 'Delete', 'Clear', 'Export', and 'Import'. Below the toolbar is a table with 14 columns: Number, Name, Rx Freq, Tx Freq, Ch Mode, Power, Rx Tone, Tx Tone, Color Code, Rx Group List, Contact, Repeater Slot, and Base. The table contains four rows of data.

	Number	Name	Rx Freq	Tx Freq	Ch Mode	Power	Rx Tone	Tx Tone	Color Code	Rx Group List	Contact	Repeater Slot	Base
▶ 1	1	OHL-WW	438.23750	430.63750	Digital	High	None	None	1	TS1	WW	1	
2	2	OHL-Germany	438.23750	430.63750	Digital	High	None	None	1	TS1	Germany	1	
3	3	OHL-TG8	438.23750	430.63750	Digital	High	None	None	1	TS2	TG8 -> 26243	2	
4	4	OHL-Parrot	438.23750	430.63750	Digital	High	None	None	1	TS2	Parrot	2	

## Zone:



The screenshot shows the 'Zone' window. At the top, there is a 'Name' field containing 'DB0OHL'. Below this, there are two main sections: 'Available' and 'Member'. The 'Available' section is currently empty. The 'Member' section contains a list of four items: '001.OHL-WW', '002.OHL-Germany', '003.OHL-TG8', and '004.OHL-Parrot'. Between the two sections are 'Add' and 'Delete' buttons. To the right of the 'Member' list are 'Up' and 'Down' buttons. At the top left of the window, there is a '1 / 1' indicator and navigation icons.

## 8.4. Sample codeplug for Radioddity GD-AT10G

The following screenshots have all been taken using GD-AT10G CPS V1.05.

### Digital → Radio ID List

No.	Radio ID	Name
1	12345678	My Radio

### Digital → Contact/Talk Group:

No.	TG/DMR ID	Call Alert	Name	Call Type
1	91	None	WW	Group Call
2	262	None	Germany	Group Call
3	8	None	TX8 -> 26243	Group Call
4	262997	None	Parrot	Private Call

### Digital → Receive Group Call List:

No.	Group Name	Group Contacts	Contact
1	TS1	2	Germany/WW
2	TS2	1	TX8 -> 26243

Detailed views:

Receive Group Call List Edit---1

Receive Group Name: TS1

Available Receive Group Call Contact

TX8 -> 26243	8
--------------	---

Receive Group Call List Member

Germany	262
WW	91

Buttons: OK, Cancel, Previous, Next

The screenshot shows a window titled "Receive Group Call List Edit---2". At the top, there's a label "Receive Group Name:" followed by a text input field containing "TS2". Below this are two main panels. The left panel, labeled "Available Receive Group Call Contact", contains a table with two columns: one for contact names ("Germany", "WW") and another for counts ("262", "91"). The right panel, labeled "Receive Group Call List Member", also has a similar table showing "TX8 -> 26243" and "8". Between these tables are two arrow buttons: ">>" pointing from left to right, and "<<" pointing from right to left. At the bottom of the window are four buttons: "OK", "Cancel", "Previous", and "Next".

**Receive Group Call List Edit**

Receive Group Name: TS2

Contact	Count
Germany	262
WW	91

>>

<<


Member	Count
TX8 -> 26243	8

Buttons at the bottom: OK Cancel Previous Next

Common Setting → Channels:

No.	Receive Frequency	Transmit Frequency	Channel Type	Power	Band Width	CTCSS/DCS Decode	CTCSS/DCS Encode	Channel Name	Contact	Radio ID	Optional Signal
1	438 23750	430 63750	D-Digital	High	25K	Off	Off	DB0OHL-WW	WW	My Radio	Off
2	438 23750	430 63750	D-Digital	High	25K	Off	Off	DB0OHL-Germany	Germany	My Radio	Off
3	438 23750	430 63750	D-Digital	High	25K	Off	Off	DB0OHL-TG8	TG8 -> 26243	My Radio	Off
4	438 23750	430 63750	D-Digital	High	25K	Off	Off	DB0OHL-Parrot	Parrot	My Radio	Off

Detailed views (only the relevant digital settings are shown):

 Channel Information Edit---1

Channel Name

DB0OHL-WW

Receive Frequency

438.23750

Transmit Frequency

430.63750

Correct Frequency[Hz]

0

Channel Type

D-Digital

Transmit Power

High

Band Width

12.5K

TX Permit

Always

Scan List

None

APRS Report Type

Off

Analog APRS PTT Mode

Off

Digital APRS PTT Mode

Off

Digital APRS Report Channel

1

Exclude channel from roaming

on

DMR MODE

Double Slot

☐ PTT Prohibit
 ☐ Talk Around(Simplex)
 ☐ APRS RX

☐ Work Alone
 ☒ DataACK Disable
 ☐ Auto Scan
 ☐ Ana Aprs Mute

Digital

Contact

WW

Radio ID

My Radio

Color Code

1

Slot

Slot1

Receive Group List

TS1

Digital Encryption

Off

AES Digital Encryption

Off

Multiple Key

Off

Random Key

Off

SMS Forbid

Off

☐ Call Confirmation
 ☐ Ranging

☐ Slot Suit
 ☐ SMS Confirmation



Channel Information Edit---2

Channel Name: DB0OHL-Germany

Receive Frequency: 438.23750  
Transmit Frequency: 430.63750  
Correct Frequency[Hz]: 0

Channel Type: D-Digital  
Transmit Power: High  
Band Width: 12.5K  
TX Permit: Always  
Scan List: None  
APRS Report Type: Off  
Analog APRS PTT Mode: Off  
Digital APRS PTT Mode: Off  
Digital APRS Report Channel: 1  
Exclude channel from roaming: on  
DMR MODE: Double Slot

☐ PTT Prohibit ☐ Talk Around(Simplex) ☐ APRS RX  
☐ Work Alone ☒ DataACK Disable ☐ Auto Scan ☐ Ana Aprs Mute

Digital

Contact: Germany  
Radio ID: My Radio  
Color Code: 1  
Slot: Slot1  
Receive Group List: TS1  
Digital Encryption: Off

AES Digital Encryption: Off  
Multiple Key: Off  
Random Key: Off  
SMS Forbid: Off

☐ Call Confirmation ☐ Ranging  
☐ Slot Suit ☐ SMS Confirmation

Channel Information Edit---3

Channel Name: DB0OHL-TG8

Receive Frequency: 438.23750  
Transmit Frequency: 430.63750  
Correct Frequency[Hz]: 0

Channel Type: D-Digital  
Transmit Power: High  
Band Width: 12.5K  
TX Permit: Always  
Scan List: None  
APRS Report Type: Off  
Analog APRS PTT Mode: Off  
Digital APRS PTT Mode: Off  
Digital APRS Report Channel: 1  
Exclude channel from roaming: on  
DMR MODE: Double Slot

☐ PTT Prohibit ☐ Talk Around(Simplex) ☐ APRS RX  
☐ Work Alone ☒ DataACK Disable ☐ Auto Scan ☐ Ana Aprs Mute

Digital

Contact: TG8 -> 26243  
Radio ID: My Radio  
Color Code: 1  
Slot: Slot2  
Receive Group List: TS2  
Digital Encryption: Off

AES Digital Encryption: Off  
Multiple Key: Off  
Random Key: Off  
SMS Forbid: Off

☐ Call Confirmation ☐ Ranging  
☐ Slot Suit ☐ SMS Confirmation

Channel Information Edit---3

Channel Name: DB0OHL-TG8

Receive Frequency: 438.23750  
 Transmit Frequency: 430.63750  
 Correct Frequency[Hz]: 0

Channel Type: D-Digital  
 Transmit Power: High  
 Band Width: 12.5K  
 TX Permit: Always  
 Scan List: None  
 APRS Report Type: Off  
 Analog APRS PTT Mode: Off  
 Digital APRS PTT Mode: Off  
 Digital APRS Report Channel: 1  
 Exclude channel from roaming: on  
 DMR MODE: Double Slot

☐ PTT Prohibit ☐ Talk Around(Simplex) ☐ APRS RX  
☐ Work Alone ☒ DataACK Disable ☐ Auto Scan ☐ Ana Aprs Mute

Digital

Contact: TG8 -> 26243  
 Radio ID: My Radio  
 Color Code: 1  
 Slot: Slot2  
 Receive Group List: TS2  
 Digital Encryption: Off

AES Digital Encryption: Off  
 Multiple Key: Off  
 Random Key: Off  
 SMS Forbid: Off

☐ Call Confirmation ☐ Ranging  
☐ Slot Suit ☐ SMS Confirmation

Common Setting → Zone:

No.	Name	Zone Channels	A Channel	B Channel
1	DB0OHL Gelsenk.	3	DB0OHL-WW	DB0OHL-WW

## Common Setting → Optional Setting → Display

Optional Setting

Work Mode | Vox/BT | STE | FM | Power Save | Key Function | Other | Digital Func

Power-on | Alert Tone | **Display** | GPS/Ranging | VFO Scan | Auto repeater | Record | Volume/Audio

Display

Brightness	5	A Channel Name Color	White
Auto Backlight Duration	5s	Receive Backlight Delay[s]	Always
Backlight Delay Of TX[s]	Off	B Channel Name Color	White
Menu Exit Time[s]	15	Zone Name Colour A	White
Time Display	On	Zone Name Colour B	White
Last Caller	Show Both	Display Channel Type	On
Call Display Mode	Call Sign Based	Display Time Slot	On
Call Sign Display Color	White	Display Color Code	On
Call End Prompt Box	Off	Date Display Format	yyyy/m/d
Display Channel Number	Actual Channel Number		
Display Current Contact	On		
Standby Char Color	White		
Standby BK Picture	Default		
Show Last Call On Launch	On		
Separate display	On		
CH Switching Keeps Last Caller	Off		

OK Cancel

## Common Setting → Optional Setting → Work Mode

Optional Setting

Power-on | Alert Tone | Display | GPS/Ranging | VFO Scan | Auto repeater | Record | Volume/Audio

**Work Mode** | Vox/BT | STE | FM | Power Save | Key Function | Other | Digital Func

Work Mode

Display mode	Channel
VF/MR(A)	MEM
MEM Zone(A)	DB0OHL
VF/MR(B)	MEM
MEM Zone(B)	DB0OHL
Main Channel Set	A
Sub-Channel Mode	On
choose working mode	professional mode

OK Cancel

## Common Setting → Optional Setting → Digital Func

Optional Setting

Power-on Alert Tone Display GPS/Ranging VFO Scan Auto repeater Record Volume/Audio  
Work Mode Vox/BT STE FM Power Save Key Function Other Digital Func

Digital Func

Group Call Hold Time	5s	
Private Call Hold Time	5s	
Manual Dial - Group TG Hold Time	5s	
Manual Dial - Private TG Hold Time	5s	
Prewave Time	100ms	Recommend setting is 100ms.
Wake Head Period	100ms	Recommend setting is 100ms.
Filter Own ID In MissCall	On	
Digital Remote Stun&&Kill	Off	
Digital Monitor	Off	
Digital Monitor CC	Any	
Digital Monitor ID	Any	
Monitor Slot Hold	Off	
Remote Monitor	Off	
SMS Format	M-SMS	

OK Cancel

## 8.5. Sample codeplug for Radioddity DB-25D

The following screenshots have all been taken using DB-25D CPS V3.3.

### Basic Parameters:

Basic Parameter

Radio Name	My Radio	Radio ID.	1234567	<input type="checkbox"/> Rolling code
Language	English	Backlight ON/OFF	On	
TOT	120S	Keylock	Off	
Busy Channel Lockout	Off	Roaming	Off	
VOX	Off	Roaming Mode	Manual	
VOX Sensitivity	1	Rssi Set	-90dBm	
Power-saving	On	Connect Check Timer	10S	
Power Saving Ratio	1:1	Repeater Check Timer	10S	
Save power startup time	10S	Connect Timer	1	
Scan Mode	SE	Record Set	Off	
End-tone types	55Hz			
Squelch(A) Level	5			
Squelch(B) Level	5			

### DMR Service:

DMR service

Remote monitor duration	10S	GPS	On
Remote Monitor Decode	Off	GPS Interval	1Min
Remote Kill Decode	Off	GPS Channel	Current Channel S
Radio Detection Decode	Off	Mandown	On
Radio Revive Decode	Off	Mandown Interval	255min
Call Alert	Off	Mandown Angle	90°
Group call hang time	7000ms	Mandown Alarm Duration	255s
Private call hang time	7000ms	Inactive time	1min
Import Delay	200ms	Pre-alarm Time	1s
DTMF Duration (On-time)	60ms	Response transmission interrupt	On
DTMF Interval (Off time)	60ms	Scrambling frequency	3600Hz
DTMF Volume (Local)	7	Keylock Password ON/OFF	On
DTMF ON/OFF	<input type="checkbox"/> 1234	Keypad Password	0000

### Contacts→ Contact List:

Serial No	Contact name	Contact ID	Call Type
1	WW	91	Group Call
2	Germany	262	Group Call
3	TG8->26243	8	Group Call
4	Parrot	262997	Private call

## RX Group → RX Group list:

**1\_TS1**

RX Group List: TS1 + Add - Del

Optional Digital Contacts: 3 \_ TG8->26243

Selected Digital Contacts: 1 \_ WW, 2 \_ Germany

---

**2\_TS2**

RX Group List: TS2 + Add - Del

Optional Digital Contacts: 1 \_ WW, 2 \_ Germany

Selected Digital Contacts: 3 \_ TG8->26243

## Zone [Channel]:

Zone	Zone Name
1	DB0OHL

## Zone [Channel] → DB0OHL:

Z-1	CH mode	CH Name	RX Freq	TX Freq	Power	RX Only	Alarm ACK	Priority	PCT	RX TS	TX TS	RX CC	TX CC	Msg Type	TX Policy	RX Group	Encryption List	Scan List	Contacts	PLAS	Bandwidth	RX QT/DQT	TX QT/DQT	APRS
1	Digital	OHL-WW	438.23750	430.63750	High	Off	Off	Off	Patcs	Slot 1	Slot 1	1	1	Unconfirmed Data	Impolite	TS1	Off	Off	WW	Off	12.5	Off	Off	Off
2	Digital	OHL-DE	438.23750	430.63750	High	Off	Off	Off	Patcs	Slot 1	Slot 1	1	1	Unconfirmed Data	Impolite	TS1	Off	Off	Germany	Off	12.5	Off	Off	Off
3	Digital	OHL-TG8	438.23750	430.63750	High	Off	Off	Off	Patcs	Slot 2	Slot 2	1	1	Unconfirmed Data	Impolite	TS2	Off	Off	TG8->26243	Off	12.5	Off	Off	Off
4	Digital	OHL-Parrot	438.23750	430.63750	High	Off	Off	Off	Patcs	Slot 2	Slot 2	1	1	Unconfirmed Data	Impolite	TS2	Off	Off	Parrot	Off	12.5	Off	Off	Off

Extract with the most important ones (for better readability):

Z-1	CH mode	CH Name	RX Freq	TX Freq	Power	RX Only	PCT	RX TS	TX TS	RX CC	TX CC	Msg Type	TX Policy	RX Group	Contacts	APRS
1	Digital	OHL-WW	438.23750	430.63750	High	Off	Patcs	Slot 1	Slot 1	1	1	Unconfirmed Data	Impolite	TS1	WW	Off
2	Digital	OHL-DE	438.23750	430.63750	High	Off	Patcs	Slot 1	Slot 1	1	1	Unconfirmed Data	Impolite	TS1	Germany	Off
3	Digital	OHL-TG8	438.23750	430.63750	High	Off	Patcs	Slot 2	Slot 2	1	1	Unconfirmed Data	Impolite	TS2	TG8->26243	Off
4	Digital	OHL-Parrot	438.23750	430.63750	High	Off	Patcs	Slot 2	Slot 2	1	1	Unconfirmed Data	Impolite	TS2	Parrot	Off



## 8.6. Sample codeplug for Baofeng DM-1701

The following screenshots have all been taken using DM-1701 CPS V1.05.

### General Settings:

**General Setting**

**Save**

Save Preamble ☒

Save Mode Receive ☒

**Alert Tone**

Disable All Tone ☐

CH Free Indication Tone ☐

Talk Permit Tone: None

Call Alert Tone Duration[s]: Continue

**Scan**

Scan Digital Hang Time[ms]: 1000

Scan Analog Hang Time[ms]: 1000

**Lone Worker**

Lone Worker Response Time[min]: 1

Lone Worker Reminder Time[s]: 10

**Power On Password**

Password and Lock Enable ☐

Power On Password: 00000000

**Voice Announcement**

CH Voice Announcement ☒

Voice Announcement: English

**Radio Name**

Radio ID

Monitor Type: Open Squelch

VOX Sensitivity: 3

TX Preamble Duration[ms]: 600

RX Low Battery Interval[s]: 120

Channels Hang Time[ms]: 3000

PC Programming Password

Radio Program Password

Back Light Time[s]: Always

Set Keypad Lock Time[s]: Manual

Freq/Channel Mode: Channel

Model Select A: MR

Model Select B: MR

Time Zone: UTC +8:00

Diable All LEDs ☐

Group Call Match ☒

Private Call Match ☒

**Talkaround**

Group Call Hang Time[ms]: 3000

Private Call Hang Time[ms]: 4000

**Intro Screen**

Intro Screen: Picture

Intro Screen Line 1

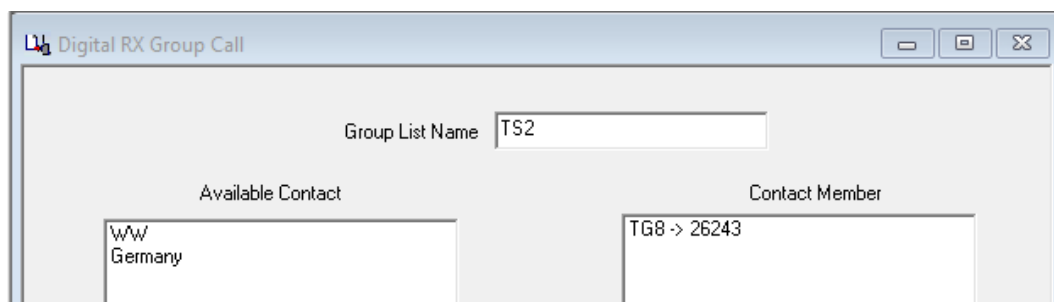
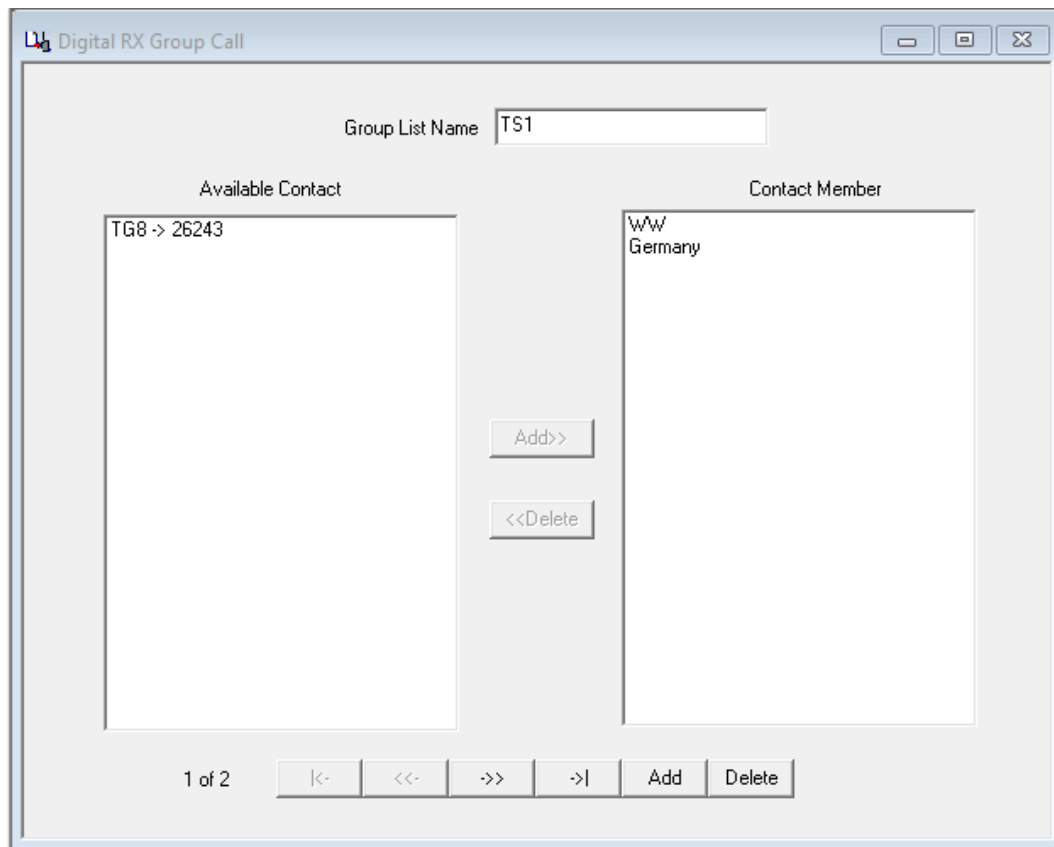
Intro Screen Line 2

### Digital Contacts:

**Digital Contact**

No.	Contact Name	Call Type	Call ID	Call Receive Tone
1	WW	Group Call	92	No
2	Germany	Group Call	262	No
3	TG8 -> 26243	Group Call	8	No
4	Parrot	Private Call	262997	No

## Digital RX Groups:



## Channels:

Channel Information

Digital/Analog Data

Channel Mode: Digital Channel Name: OHL-WW

Band Width: 12.5kHz RX Frequency(MHz): 438.23750

Scan List: None TX Frequency(MHz): 430.63750

Squelch: Normal Admit Criteria: Always

RX Ref Frequency: Low Auto Scan: ☐

TX Ref Frequency: Low Rx Only: ☐

TOT[s]: 60 Lone Worker: ☐

TOT Rekey Delay[s]: 0 VDX: ☐

Power: High Allow Talkaround: ☐

Digital Data

Private Call Confirmed: ☐

Emergency Alarm Ack: ☐

Data Call Confirmed: ☐

Allow Interrupt: ☐

DCDM Switch: ☐

Leader/MS: MS

Emergency System: None

Contact Name: WW

Group List: TS1

Color Code: 1

Repeater Slot: 1

In Call Criteria: Always

Privacy: None

Privacy No.: 1

Analog Data

CTCSS/DCS Dec: None CTCSS/DCS Enc: None

Rx Signaling System: Off Tx Signaling System: Off

QT Reverse: 180 Non-QT/DQT Turn-off Freq: None

☐ Display PTT ID ☒ Reverse Burst/Turn-off Code

1 of 4

<- << >> >| Add Delete Export Import

Channel Information

Digital/Analog Data

Channel Mode: Digital Channel Name: OHL-Germany

Band Width: 12.5kHz RX Frequency(MHz): 438.23750

Scan List: None TX Frequency(MHz): 430.63750

Squelch: Normal Admit Criteria: Always

RX Ref Frequency: Low Auto Scan: ☐

TX Ref Frequency: Low Rx Only: ☐

TOT[s]: 60 Lone Worker: ☐

TOT Rekey Delay[s]: 0 VDX: ☐

Power: High Allow Talkaround: ☐

Digital Data

Private Call Confirmed: ☐

Emergency Alarm Ack: ☐

Data Call Confirmed: ☐

Allow Interrupt: ☐

DCDM Switch: ☐

Leader/MS: MS

Emergency System: None

Contact Name: Germany

Group List: TS1

Color Code: 1

Repeater Slot: 1

In Call Criteria: Always

Privacy: None

Privacy No.: 1

Analog Data

CTCSS/DCS Dec: None CTCSS/DCS Enc: None

Rx Signaling System: Off Tx Signaling System: Off

QT Reverse: 180 Non-QT/DQT Turn-off Freq: None

☐ Display PTT ID ☒ Reverse Burst/Turn-off Code

2 of 4

<- << >> >| Add Delete Export Import

Channel Information

Digital/Analog Data

Channel Mode: Digital Channel Name: OHL-TG8

Band/Width: 12.5kHz RX Frequency(MHz): 438.23750

Scan List: None TX Frequency(MHz): 430.63750

Squelch: Normal Admit Criteria: Always

RX Ref Frequency: Low Auto Scan: ☐

TX Ref Frequency: Low Rx Only: ☐

TOT[s]: 60 VDX: ☐

TOT Rekey Delay[s]: 0 Allow Talkaround: ☐

Power: High

Digital Data

Private Call Confirmed: ☐

Emergency Alarm Ack: ☐

Data Call Confirmed: ☐

Allow Interrupt: ☐

DCDM Switch: ☐

Leader/MS: MS

Emergency System: None

Contact Name: TG8 -> 26243

Group List: TS2

Color Code: 1

Repeater Slot: 2

In Call Criteria: Always

Privacy: None

Privacy No.: 1

Analog Data

CTCSS/DCS Dec: None CTCSS/DCS Enc: None

Rx Signaling System: Off Tx Signaling System: Off

QT Reverse: 180 Non-QT/DQT Turn-off Freq: None

☐ Display PTT ID ☒ Reverse Burst/Turn-off Code

3 of 4

K< << >> >| Add Delete Export Import

Channel Information

Digital/Analog Data

Channel Mode: Digital Channel Name: OHL-Parrot

Band/Width: 12.5kHz RX Frequency(MHz): 438.23750

Scan List: None TX Frequency(MHz): 430.63750

Squelch: Normal Admit Criteria: Always

RX Ref Frequency: Low Auto Scan: ☐

TX Ref Frequency: Low Rx Only: ☐

TOT[s]: 60 VDX: ☐

TOT Rekey Delay[s]: 0 Allow Talkaround: ☐

Power: High

Digital Data

Private Call Confirmed: ☐

Emergency Alarm Ack: ☐

Data Call Confirmed: ☐

Allow Interrupt: ☐

DCDM Switch: ☐

Leader/MS: MS

Emergency System: None

Contact Name: Parrot

Group List: TS2

Color Code: 1

Repeater Slot: 2

In Call Criteria: Always

Privacy: None

Privacy No.: 1

Analog Data

CTCSS/DCS Dec: None CTCSS/DCS Enc: None

Rx Signaling System: Off Tx Signaling System: Off

QT Reverse: 180 Non-QT/DQT Turn-off Freq: None

☐ Display PTT ID ☒ Reverse Burst/Turn-off Code

4 of 4

K< << >> >| Add Delete Export Import

**Zone:**

Zone Information

Zone Name: DB00HL

Available Channel	Channel Member A	Available Channel	Channel Member B
	OHL-WW OHL-Germany OHL-TG8 OHL-Parrot	OHL-WW OHL-Germany OHL-TG8 OHL-Parrot	

1 of 1

<- <<->> >> >| Add Delete

## 8.7. Sample codeplug for TYT MD-9600

The following screenshots have all been taken using MD-9600 CPS V.27.

### General Settings:

General Setting

Alert Tone

Disable All Tone ☒

CH Free Indication Tone ☐

Talk Permit Tone

Call Alert Tone Duration[s]

Scan

Scan Digital Hang Time[ms]

Scan Analog Hang Time[ms]

Lone Worker

Lone Worker Response Time[ms]

Lone Worker Reminder Time[s]

Power On Password

Password and Lock Enable ☐

Power On Password

Radio Name

Radio ID

Monitor Type

VDX Sensitivity

TX Preamble Duration[ms]

RX Low Battery Interval[s]

Channels Hang Time[ms]

PC Programming Password

Radio Program

Back Light Time[s]

Set Keypad Lock Time[s]

Freq/Channel Mode

Model Select A

Model Select B

Time Zone

Radio ID 1

Radio ID 2

Radio ID 3

MIC Level

Tx Mode

Auto Shutdown Time[ms]

Backlight Level

Edit Radio ID ☐

Public Zone ☒

Group Call Match ☒

Private Call Match ☒

Talkaround

Group Call Hang Time[ms]

Private Call Hang Time[ms]

Intro Screen

Intro Screen

Intro Screen Line 1

Intro Screen Line 2

### Digital Contacts:

Digital Contact

No.	Contact Name	Call Type	Call ID	Call Receive Tone
1	WW	Group Call	91	No
2	Germany	Group Call	262	No
3	TG8 -> 26243	Group Call	8	No
4	Parrot	Private Call	262997	No

Add Delete Export Import

## Digital RX Groups:

Digital RX Group Call

Group List Name: TS1

Available Contact	Contact Member
TG8 -> 26243	WW Germany

Add>>

<<Delete

1 of 2

<- <<- ->> ->| Add Delete

Digital RX Group Call

Group List Name: TS2

Available Contact	Contact Member
WW Germany	TG8 -> 26243

Add>>

<<Delete

2 of 2

<- <<- ->> ->| Add Delete

## Channels:

Channel Information

Digital/Analog Data

Channel Mode: Digital Channel Name: OHL-WW

Band Width: 12.5kHz RX Frequency(MHz): 438.23750

Scan List: None TX Frequency(MHz): 430.63750

Squelch: Admit Criteria: Always

RX Ref Frequency: Low Auto Scan: ☐

TX Ref Frequency: Low Rx Only: ☐

TOT[s]: 555 Lone Worker: ☐

TOT Rekey Delay[s]: 0 VOX: ☐

Power: High Allow Talkaround: ☐

Send GPS Info: ☐

Receive GPS Info: ☐

Digital Data

Private Call Confirmed: ☐

Emergency Alarm Ack: ☐

Data Call Confirmed: ☐

Allow Interrupt: ☐

DCDM Switch: ☐

Leader/MS: MS

Emergency System: None

Contact Name: WW

Group List: TS1

Color Code: 1

Repeater Slot: 1

In Call Criteria: Always

Privacy: None

Privacy No.: 1

GPS System: None

Analog Data

CTCSS/DCS Dec: None CTCSS/DCS Enc: None

Rx Signaling System: Off Tx Signaling System: Off

QT Reverse: Silent Non-QT/DQT Turn-off Freq: None

☐ Display PTT ID ☒ Reverse Burst/Turn-off Code

Decode 1: ☐ Decode 2: ☐ Decode 3: ☐ Decode 4: ☐ Decode 5: ☐ Decode 6: ☐ Decode 7: ☐ Decode 8: ☐

1 of 4 |< << >> >| Add Delete Export Import

Channel Information

Digital/Analog Data

Channel Mode: Digital Channel Name: OHL-Germany

Band Width: 12.5kHz RX Frequency(MHz): 438.23750

Scan List: None TX Frequency(MHz): 430.63750

Squelch: Admit Criteria: Always

RX Ref Frequency: Low Auto Scan: ☐

TX Ref Frequency: Low Rx Only: ☐

TOT[s]: 555 Lone Worker: ☐

TOT Rekey Delay[s]: 0 VOX: ☐

Power: High Allow Talkaround: ☐

Send GPS Info: ☐

Receive GPS Info: ☐

Digital Data

Private Call Confirmed: ☐

Emergency Alarm Ack: ☐

Data Call Confirmed: ☐

Allow Interrupt: ☐

DCDM Switch: ☐

Leader/MS: MS

Emergency System: None

Contact Name: Germany

Group List: TS1

Color Code: 1

Repeater Slot: 1

In Call Criteria: Always

Privacy: None

Privacy No.: 1

GPS System: None

Analog Data

CTCSS/DCS Dec: None CTCSS/DCS Enc: None

Rx Signaling System: Off Tx Signaling System: Off

QT Reverse: Silent Non-QT/DQT Turn-off Freq: None

☐ Display PTT ID ☒ Reverse Burst/Turn-off Code

Decode 1: ☐ Decode 2: ☐ Decode 3: ☐ Decode 4: ☐ Decode 5: ☐ Decode 6: ☐ Decode 7: ☐ Decode 8: ☐

2 of 4 |< << >> >| Add Delete Export Import



Channel Information

Digital/Analog Data

Channel Mode: Digital Channel Name: OHL-TG8

Band Width: 12.5kHz RX Frequency(MHz): 438.23750

Scan List: None TX Frequency(MHz): 430.63750

Squelch: Admit Criteria: Always

RX Ref Frequency: Low Auto Scan: ☐

TX Ref Frequency: Low Rx Only: ☐

TOT[s]: 555 Lone Worker: ☐

TOT Rekey Delay[s]: 0 VOX: ☐

Power: High Allow Talkaround: ☐

Send GPS Info: ☐

Receive GPS Info: ☐

Digital Data

Private Call Confirmed: ☐

Emergency Alarm Ack: ☐

Data Call Confirmed: ☐

Allow Interrupt: ☐

DCDM Switch: ☐

Leader/MS: MS

Emergency System: None

Contact Name: TG8 -> 26243

Group List: TS2

Color Code: 1

Repeater Slot: 2

In Call Criteria: Always

Privacy: None

Privacy No.: 1

GPS System: None

Analog Data

CTCSS/DCS Dec: None CTCSS/DCS Enc: None

Rx Signaling System: Off Tx Signaling System: Off

QT Reverse: Silent Non-QT/DQT Turn-off Freq: None

☐ Display PTT ID ☒ Reverse Burst/Turn-off Code

Decode 1 ☐ Decode 5 ☐

Decode 2 ☐ Decode 6 ☐

Decode 3 ☐ Decode 7 ☐

Decode 4 ☐ Decode 8 ☐

3 of 4

K- << >> >| Add Delete Export Import

Channel Information

Digital/Analog Data

Channel Mode: Digital Channel Name: OHL-Parrot

Band Width: 12.5kHz RX Frequency(MHz): 438.23750

Scan List: None TX Frequency(MHz): 430.63750

Squelch: Admit Criteria: Always

RX Ref Frequency: Low Auto Scan: ☐

TX Ref Frequency: Low Rx Only: ☐

TOT[s]: 555 Lone Worker: ☐

TOT Rekey Delay[s]: 0 VOX: ☐

Power: High Allow Talkaround: ☐

Send GPS Info: ☐

Receive GPS Info: ☐

Digital Data

Private Call Confirmed: ☐

Emergency Alarm Ack: ☐

Data Call Confirmed: ☐

Allow Interrupt: ☐

DCDM Switch: ☐

Leader/MS: MS

Emergency System: None

Contact Name: Parrot

Group List: TS2

Color Code: 1

Repeater Slot: 2

In Call Criteria: Always

Privacy: None

Privacy No.: 1

GPS System: None

Analog Data

CTCSS/DCS Dec: None CTCSS/DCS Enc: None

Rx Signaling System: Off Tx Signaling System: Off

QT Reverse: Silent Non-QT/DQT Turn-off Freq: None

☐ Display PTT ID ☒ Reverse Burst/Turn-off Code

Decode 1 ☐ Decode 5 ☐

Decode 2 ☐ Decode 6 ☐

Decode 3 ☐ Decode 7 ☐

Decode 4 ☐ Decode 8 ☐

4 of 4

K- << >> >| Add Delete Export Import

**Zone:**

Zone Information

Zone Name: DB00HL

Available Channel	Channel Member A	Available Channel	Channel Member B
	OHL-WW OHL-Germany OHL-TG8 OHL-Parrot	OHL-WW OHL-Germany OHL-TG8 OHL-Parrot	

1 of 1

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## 9. Revision history of this document

We are constantly trying to update our manuals according to changes resulting of new firmware versions. If you miss any aspect in this document or believe that something has been described incorrectly or in a misleading way, please feel free to give us feedback at [support@radioddity.com](mailto:support@radioddity.com). We will try our best to make the next version of this document of even more added value for you.

revision	Changes	released
V1.0	Initial version	2021-04-26
V2.0	Addition of details for Radioddity GD-AT10G and Radioddity DB-25D plus some minor corrections	2022-01-01

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