

HRDip – IP Server tester for Ham Radio Deluxe



Version 0.2

Dan Toma - YO3GGX - yo3ggx@gmail.com

Contents

Introduction	2
Features	2
Limitations.....	2
Operation	2
Starting the application.....	3
Resizing application fonts	3
Configure communication parameters.....	3
Transceiver config file format	4
Loading transceiver specific configuration	4
Sending commands to the transceiver	5
Practical demonstration.....	6
Bibliography	6
Application history	6

Introduction

This is an Android only application used to test the functionality of the Ham Radio Deluxe IP Server.

(<http://www.hrdsoftwarellc.com/>)

You can read and write all the parameters of the connected HAM transceiver which are available in the Windows application from your pocket device, using a simple to use graphical interface which provides dropdown lists to simplify building commands.

For more details about how to configure Ham Radio Deluxe IP Server, look into the application user guide available at the following address:

<http://www.hrdsoftwarellc.com/HRD521preliminary-11may.pdf>

This application was designed for the single purpose of helping me to support as many transceivers as possible in my Pocket RXTX application (more details will be available on my web site).

Features

Current version of the application has the following features:

- Works on any Android device with an OS version 2.x or higher, with any resolution greater than 320x240;
- Load all the buttons, dropdowns and sliders available for the currently connected transceiver;
- Save all this info in a file;
- Build specific IP Server commands using dropdown lists, instead of writing them manually;
- Configurable font size.

Limitations

Current version of the application has the following limitations:

- It was practically tested only on Samsung Galaxy Tab 7.7 (P6800), Sony Xperia Mini (ST15i) and different emulator configurations;
- In order to get feedback if you change parameters from the HRD application or directly from transceiver you need to manually run the command to (re)read that parameter;
- The application can be used only in Landscape mode;
- Does not offer any kind of authentication for the IP connection, as this is not supported in HRD version 5.x;

Operation

WARNING!!!

Use this application on your own risk. I cannot be held responsible for any damage caused to your Android device...☺

Starting the application

You can install the application directly from Google Play Store (search for “HRDip”) or using the link from the top of this document. After you install the application, you will have a new icon like the following:



Press on the icon to launch the application. You will get the following startup page:



Resizing application fonts

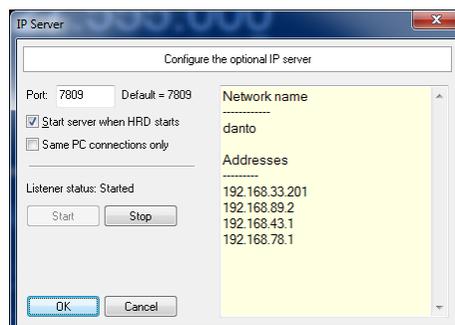
For some Android devices it is possible that application fonts to be too big or too small (based on the system settings), or you just want to adapt it to your own preferences. You can change the size of the font by simply sliding the finger over the lower right area of the frequency display, next to the result frame and under the LOAD/CLEAR buttons. Sliding up the font size will increase with one unit. Sliding down will decrease with one unit. When you are satisfied with the result, just exit the application in order for this information to be saved in the configuration file. When you further run the application, the new font size will be used.

Configure communication parameters

1. PC side

On the PC where HRD is installed, you need to configure the IP Server.

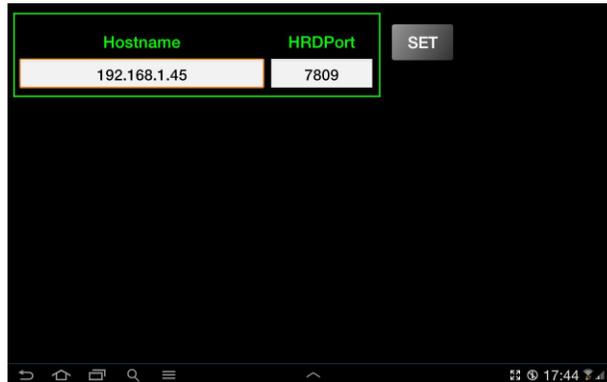
For this purpose, in the HRD main window select from the menu bar: Tools > IP Server.



Enter the desired TCP port and then check “Start server when HRD starts” (optional) and uncheck “Same PC connection only” (mandatory) and then click “Start”. You can now click “OK” if the service was started (“Start” button grayed out and “Stop” button active).

2. Android side

From the application menu select “SETUP”. You will be prompted to add Hostname and TCP port of HRD IP Server.



Transceiver config file format

This is how it looks the auto generated file for Yaesu FT-45AT transceiver (FT-450 . cfg):

```
Currently connected radio: FT-450
Ham Radio Deluxe v5.24.0.38 b3474
```

Buttons:

```
ATT, ATU, Band +, Band -, Bk-in, CW Spot, Chan +, Chan -
, Contour, Dimmer, Fast, Keyer, Lock, NB, NR, Notch, QMR, QMS, Q-Split, Scan Dn, Scan
Up, Tune, Moni, Nar, Pre, VOX, TX, TXW, VM, VV, A <> B, VFO A, VFO B,
```

Dropdowns: <dropdown> <item1, item2, ...>

```
Mode LSB, USB, CW, FM, AM, RTTY-LSB, CW-R, USER-L, RTTY-USB, FM-N, USER-U
```

```
AGC Off, Fast, Medium, Slow, Auto
```

```
CW Keying Text 1, Text 2, Text 3
```

```
CW Pitch 400 Hz, 500 Hz, 600 Hz, 700 Hz, 800 Hz
```

```
Mode Key Up, Down, Reverse
```

Sliders:

```
AF gain, Break-in delay, Contour, Dimmer, Filter width, IF shift, Key speed, Manual
notch, Meter, Mic gain, Noise reduction, RF gain, RF power, Squelch, VOX delay, VOX gain,
```

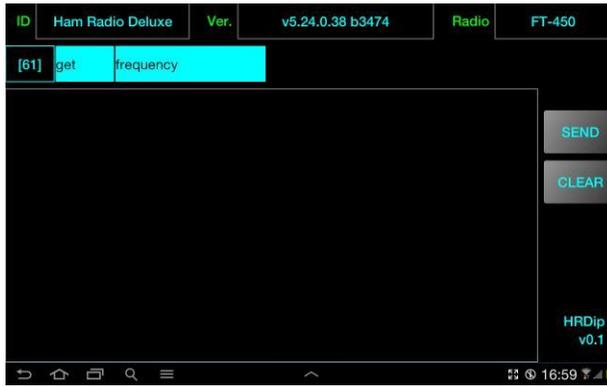
You can find the file on the SD card in the folder named “HRDip”.

Loading transceiver specific configuration

Each transceiver expose through HRD a specific set of buttons, dropdowns and sliders, based on common or specific functionalities available in that transceiver.

In order to read or set different parameters, you need first to find what is available.

For this purpose you need to press “LOAD” button.



The result of this is:

- Filling up the fields containing: HRD application ID, HRD application version and model of connected transceiver;
- Command and first parameter dropdown lists are filled accordingly;
- “LOAD” button changes in “SEND”;
- A new button is displayed, which will be used to clear the result window;
- A file is created on SD card (if not available then on internal device memory) containing all the specific parameters for the connected transceiver. File name is <radio>.cfg where <radio> is the name of the transceiver as it was reported by HRD.

NOTE: To further help me support as many transceivers as possible in my Pocket RXTX application, please send me this file by mail.

Sending commands to the transceiver

You can now start sending different commands which are available through the IP server. You just have to select first if you want to read a parameter ('get' command) or to write one ('set' command'). A list of available parameters is filled up automatically, so you just have to select them. If a full command was built in that way press “SEND” to send the command to the transceiver.

IP Server will answer with the result of that command which will be displayed all the time in the upper part of the big box. If you want to clear the result box press “CLEAR”. You can see some examples in the pictures below.





Practical demonstration

A short video demo of the preview 0.2 version will be available on YouTube.

Please subscribe to my channel (Dan Toma) to be automatically informed when available.

Bibliography

Ham Radio Deluxe v5.24 - <http://www.hrdsoftwarellc.com/setuphrd52438.exe>

Ham Radio Deluxe User Manual - <http://www.hrdsoftwarellc.com/HRD521preliminary-11may.pdf>

HRD IP-Server Command List - <http://forums.hrdsoftwarellc.com/showthread.php?9248-HRD-IP-Server-Command-List>

Application history

Version 0.1 (Jan 30th, 2013). *First release of the application*

Version 0.2 (Feb 1st, 2013).

What's new/changed:

- add sliders accepted values to the saved transceiver file;
- for 'get slider-pos', 'get slider-pos' and 'get smeter-main' commands a text is added to the result to better understand the values;
- - application font resize function added in the user guide;

Bugs solved:

- selection of new command first parameter does not correctly select the rest of the parameters;

Please send me your feedback.

hrdip_v0.2.pdf Bucharest, Feb 1st 2013 – © Dan Toma – YO3GGX – yo3ggx@gmail.com