

jarecmini

**(j)ava (A)udio and (Re)mote (C)ontrol
(command line version of jAReC)**

**A Java multiplatform application to securely make your
transceiver available for CAT and audio over the LAN or
WAN**

Console version Version 3.0

Dan Toma - YO3GGX - yo3ggx@gmail.com

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Introduction

This is a light version (requires only the command line environment, no GUI) of the JAReC application, which can be used to redirect one of your personal computer serial ports and one audio channel to an Ethernet connection. In this way you will be able to connect to any serial port (Computer embedded, USB/Serial module or Bluetooth serial module) remotely over the network and also transfer audio with a special client. Some of my Android applications, are able to connect to serial ports via Ethernet using this program. The PocketRxTx Android application can use the secure authentication feature to securely connect and then control (CAT) a radio transceiver connected to the host PC over the Internet, including audio support.

Features

The mini version of jAReC has the same basic features as the GUI based one, but with some limitations, described later. For the full list of features please consult jAReC v3.0 user guide available online here (multilingual):

<https://www.yo3ggx.ro/jAReC/doc30/i.html>

or as a PDF file here (English only):

https://www.yo3ggx.ro/jAReC/doc30/jAReC_v3.0.pdf

Limitations

The current version of this application has the following limitations:

- The following jAReC features are not available in jarecmini:
 - Configuration files import/export (from/to PocketRxTx).
 - Data monitoring function.
- The configuration file must be manually created/edited or you may use one from the JAReC application.

Open actions

This program has not been tested yet on the Mac platform however it should most likely work.

WARNING!!!

Use this application on your own risk. I cannot be held responsible for any damage caused to your system or radio.

The configuration file

This file is the same format as the one created by the full jAReC (GUI) version. You can edit the file using the GUI and then use it with this console (mini) version.

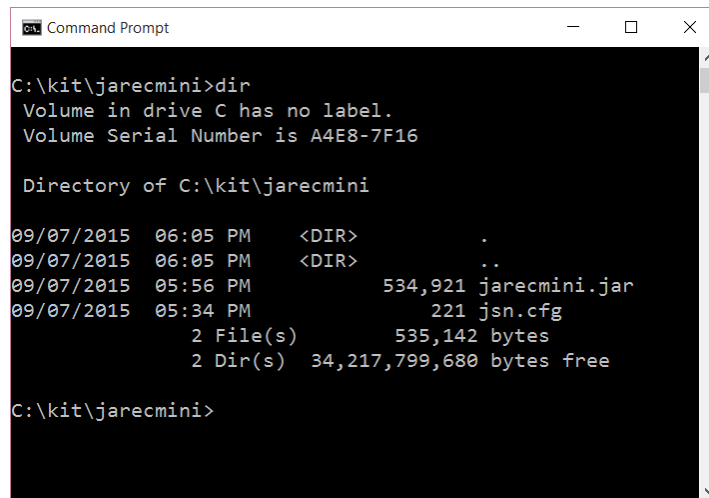
Starting the application

To use the application, you must download the latest java 8 runtime from Oracle (currently version 1.8.0_192).

When you first start the application with the default configuration file, ensure that the parameter `bAutostart` is set to false. The list of current settings and what ports are available on your system will be displayed.

Windows

To start the application in Windows, open a command prompt and go to the folder where `jarecmini.jar` and `jsn.cfg` file was placed.



```
Command Prompt
C:\kit\jarecmini>dir
Volume in drive C has no label.
Volume Serial Number is A4E8-7F16

Directory of C:\kit\jarecmini

09/07/2015  06:05 PM    <DIR>          .
09/07/2015  06:05 PM    <DIR>          ..
09/07/2015  05:56 PM                534,921 jarecmini.jar
09/07/2015  05:34 PM                 221 jsn.cfg
                2 File(s)      535,142 bytes
                2 Dir(s)  34,217,799,680 bytes free

C:\kit\jarecmini>
```

Run the command `java -jar jarecmini.jar`:

```
P:\HAM\jarecmini\Objects>java -jar jarecmini.jar
jarecmini version 3.0 (2019/01/14--11:11:57)

Invalid audio IN device
Current settings:
TCP port: 4321
Baudrate: 19200
CAT Port: COM1
PTT Port:
Use Audio: false
Power over RTS: false
Power over DTR: false
PTT Mode: CAT
Audio Out Interface: (5) - Port Remote Audio
Use authentication: true
Secret Hash: 2743C71E3828333B277A8FE65050595BF13DD669
*****

Available com ports:
COM1
COM3

Available Audio IN devices:
(02) Primary Sound Capture Driver
(03) Remote Audio

Available Audio OUT devices:
(00) Primary Sound Driver
(01) Remote Audio

Unsupported devices:
(04) Port Remote Audio
(05) Port Remote Audio

If ok, set bAutostart=true in the jsn.cfg file and run again
```

You will be displayed a list of available COM ports, audio in and audio out devices. Please note the number before the name of the audio device you want to use (for both in and out).

Edit the configuration file (`jsn.cfg`) according to your needs. Keep `bAutoStart=false` and run again to check that you selected the right parameters. When ready, change `bAutoStart=true` and run again. The application will go to listening mode:

```
P:\HAM\jarecmini\Objects>java -jar jarecmini.jar
jarecmini version 3.0 (2019/01/14--11:10:51)

Listening for connections on the following IPs : 192.168.33.2; 192.168.204.1; 192.168.121.1
On TCP/UDP port:4321
```

When you start a connection from PocketRxTx the remote IP address will be displayed, the audio channel will be started (if activated) and login authentication performed (if selected).

```
P:\HAM\jarecmini\Objects>java -jar jarecmini.jar
jarecmini version 3.0 (2019/01/14--11:17:23)

Listening for connections on the following IPs: ; 192.168.33.2; 192.168.204.1; 192.168.121.1
On TCP/UDP port:4321
Remote IP Address: 81.12.206.2
Authenticating ...
Authenticated
```

You can now use the connection. If you stop PocketRxTx, then jarecmini will go back to listening mode.

```
Listening for connections on the following IPs: ; 192.168.33.2; 192.168.204.1; 192.168.121.1
On TCP/UDP port:4321
Remote IP Address: 81.12.206.2
Authenticating ...
Authenticated
Paket RxTx disconnected!

Listening for connections on the following IPs: ; 192.168.33.2; 192.168.204.1; 192.168.121.1
On TCP/UDP port:4321
```

Linux

Using a terminal window enter the following command when you are in the folder containing the program and configuration file:

```
java -jar jAReC.jar
```

Operation is the same as described under the Windows environment.

You can simultaneously start several instances of the application, one for each serial port which you wish to access across the network. If you have multiple transceivers, you can start one instance of the application for each of them. The only requirement is to use a different TCP port for each connection, in order to have unique network sockets. The serial Port can not only be a local physical serial port (like the COM port on the motherboard or an USB/Serial interface) but also virtual COM ports are supported. One example is the virtual com port created by a Bluetooth interface. This means can connect to your Bluetooth devices over the network using jarecmini.

Application history

Version 0.8.1 (Sep 7, 2014). *First public release of the application*

NOTE:

Starting with the version 0.9.0-16, jarecmini has the same features as the GUI version, so please check the history in the GUI version user guide bearing in mind the limitations described [here](#).

Version 3.0 (Jan 14, 2019). *The new version to be used with Pocket RxTx v3*