

# APRS Reception Quick Start Guide

## Microsoft Windows version 1.0

May 2014

Software and documentation can be obtained from the Downloads section of <http://home.comcast.net/~wb2osz/site/>

### Step 1: Install Dire Wolf

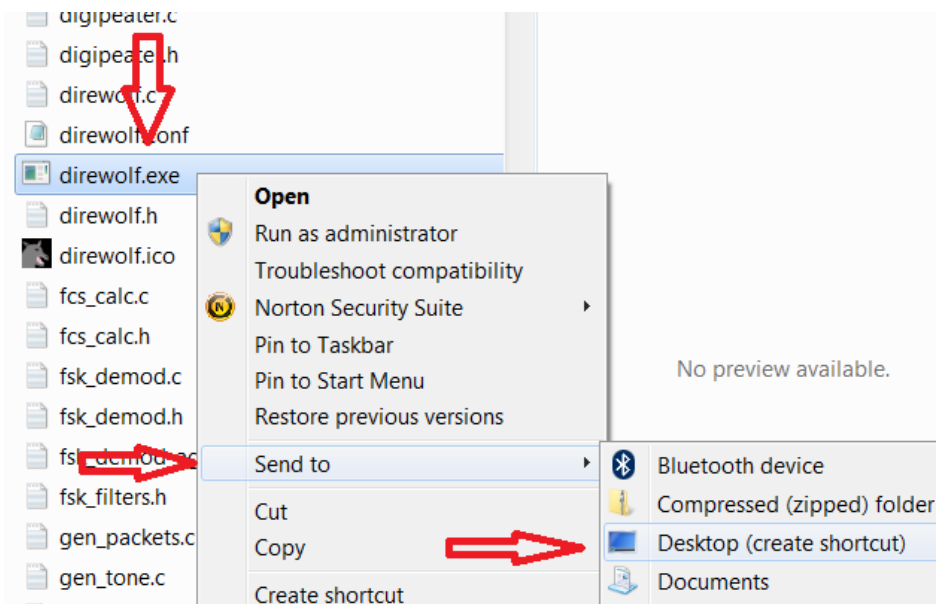
Put the Dire Wolf distribution file, direwolf-0.9-win.zip (or similar name depending on version), in some convenient location such as your user directory. In this example, we will use C:\Users\John

In Windows Explorer, right click on this file and pick "Extract All..." Click on the Extract button.

You should end up with a new folder containing:

- direwolf.exe -- The application.
- decode\_aprs.exe -- APRS raw data decoder.
- Quick-Start-Guide-Windows.pdf -- This document.
- User-Guide.pdf -- More complete information.
- and a few others ...

In Windows Explorer, right click on **direwolf.exe** and pick **Send To > Desktop** (create shortcut).



Look for the new direwolf.exe icon on your desktop.




## Step 2: Connect audio and test

For receiving all you need to do is connect your receiver speaker to the “Line In” or “Mic” jack on your computer.

If you are using a laptop, with a built-in microphone, you could probably just set it near your radio’s speaker in a quiet setting.



Double click on the desktop icon:  and you should get a new window similar to this:

```
direwolf.exe - Shortcut
Dire Wolf version 0.5
Available audio input devices for receive:
 0: Microphone (Realtek High Defini mono: 11 22 44 96 stereo: 11 22 44 96
 1: Microphone (Bluetooth SCO Audio mono: 11 22 44 96 stereo: 11 22 44 96
 2: Microphone (Bluetooth AU Audio) mono: 11 22 44 96 stereo: 11 22 44 96
Available audio output devices for transmit:
 0: Speakers (Realtek High Definiti mono: 11 22 44 96 stereo: 11 22 44 96
 1: Speakers (Bluetooth SCO Audio) mono: 11 22 44 96 stereo: 11 22 44 96
 2: Realtek Digital Output (Realtek mono: 11 22 44 96 stereo: 11 22 44 96
 3: Realtek Digital Output(Optical) mono: 11 22 44 96 stereo: 11 22 44 96
 4: Speakers (Bluetooth AU Audio) mono: 11 22 44 96 stereo: 11 22 44 96
Virtual KISS TNC is connected to COM3 side of null modem.
Ready to accept AGW client application on port 8000 ...

Digipeater W2DAN-14 audio level = 69
[0] N2GYI-4>APOTC1,W2DAN-14*,WIDE2-1:!4102.09N/07157.54W_229/000g000t045P000h96b
Weather Report, WEATHER Station (blue), Open Track
N 4102.0900, W 07157.5400
wind 0.0 mph, direction 229, gust 0, temperature 45, rain 0.00 since midnight, h
[0H] N2GYI-4>APOTC1,W2DAN-14,WB20SZ-5*:!4102.09N/07157.54W_229/000g000t045P000h9

Digipeater WIDE2 audio level = 33
[0] N2GYI-4>APOTC1,K1MIZ,WIDE2*:!4102.09N/07157.54W_229/000g000t045P000h96b10290
Weather Report, WEATHER Station (blue), Open Track
N 4102.0900, W 07157.5400
```

Different types of information are color coded for easy recognition.

It starts with some informational messages in black.

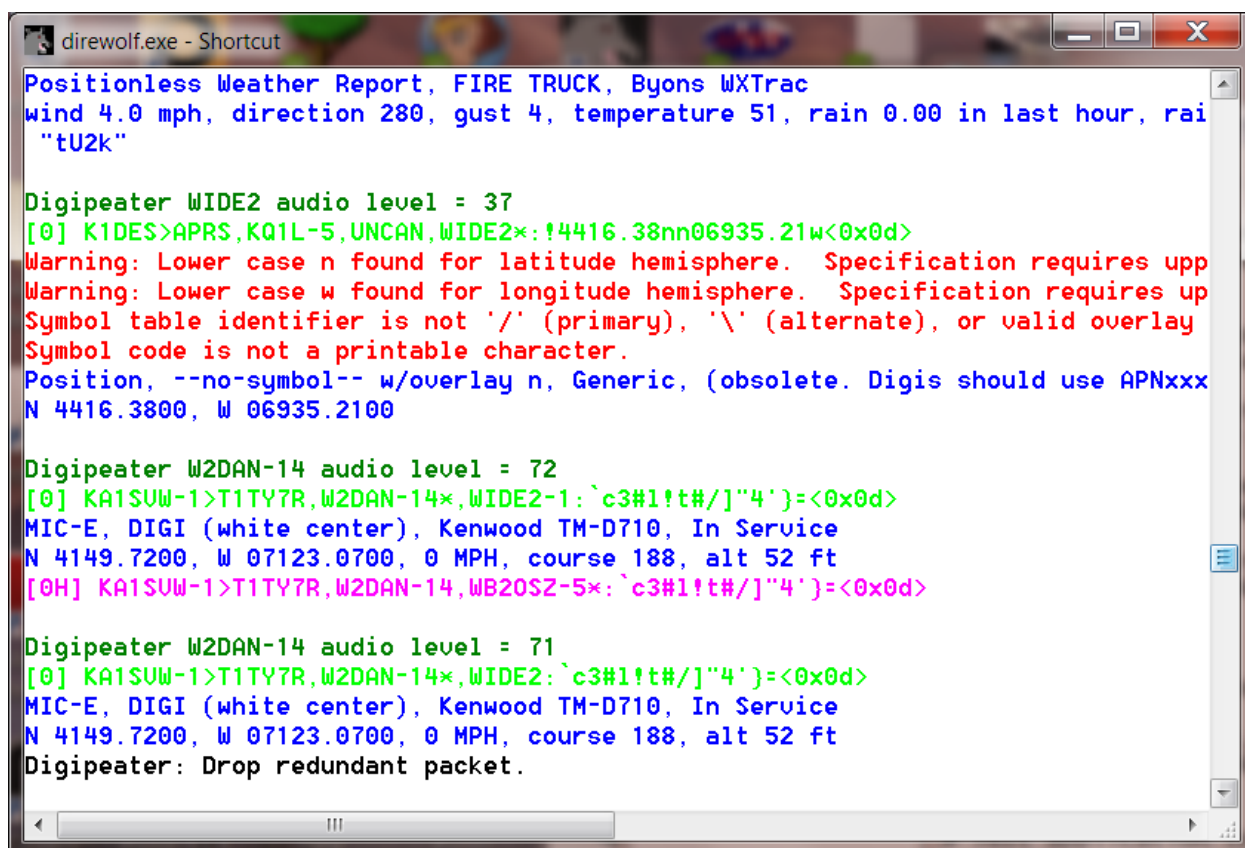
A group of several lines is displayed for each packet received.

The first line of each group, in dark green, contains the audio level of the station heard. It might be the original station or it might be a digipeater that was heard.

The raw data is displayed in green and deciphered information is in blue.

Transmitted packets are in magenta. In the example above, we see that Dire Wolf is being used as a digipeater.

Sometimes you will see error messages in red when invalid data is received.



```
Positionless Weather Report, FIRE TRUCK, Byons WXTrac
wind 4.0 mph, direction 280, gust 4, temperature 51, rain 0.00 in last hour, rai
"tU2k"

Digipeater WIDE2 audio level = 37
[0] K1DES>APRS,KQ1L-5,UNCAN,WIDE2*;!4416.38nn06935.21w<0x0d>
Warning: Lower case n found for latitude hemisphere. Specification requires upp
Warning: Lower case w found for longitude hemisphere. Specification requires up
Symbol table identifier is not '/' (primary), '\' (alternate), or valid overlay
Symbol code is not a printable character.
Position, --no-symbol-- w/overlay n, Generic, (obsolete. Digis should use APNxxx
N 4416.3800, W 06935.2100

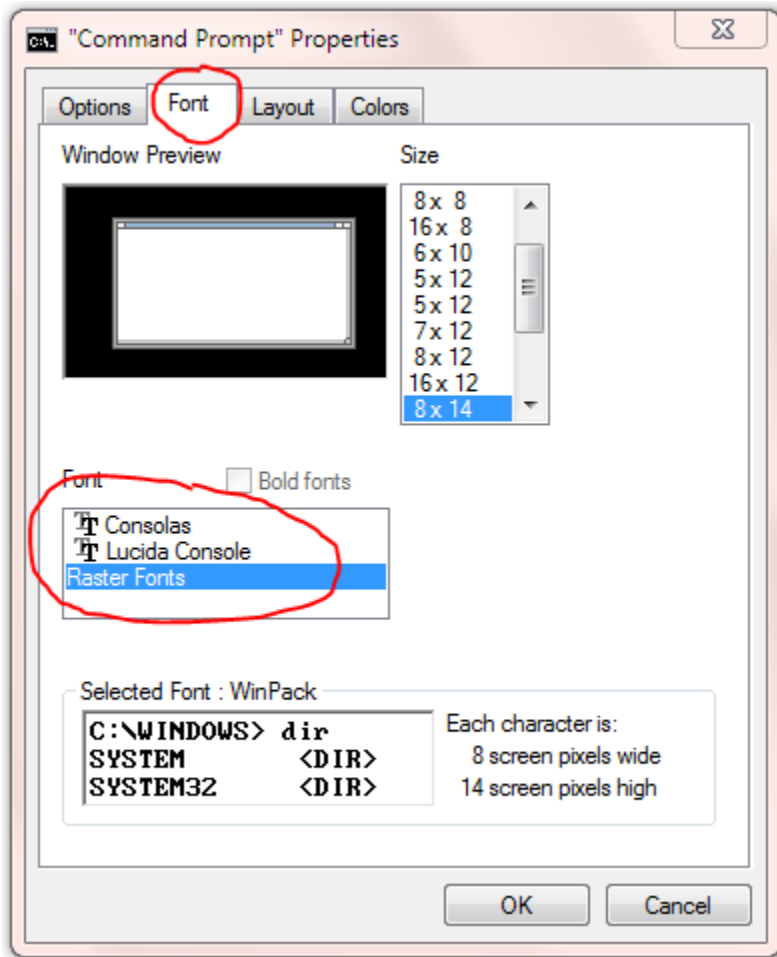
Digipeater W2DAN-14 audio level = 72
[0] KA1SUW-1>T1TY7R,W2DAN-14*,WIDE2-1:`c3#1!t#/"4')=<0x0d>
MIC-E, DIGI (white center), Kenwood TM-D710, In Service
N 4149.7200, W 07123.0700, 0 MPH, course 188, alt 52 ft
[0H] KA1SUW-1>T1TY7R,W2DAN-14,WB20SZ-5*:`c3#1!t#/"4')=<0x0d>

Digipeater W2DAN-14 audio level = 71
[0] KA1SUW-1>T1TY7R,W2DAN-14*,WIDE2:`c3#1!t#/"4')=<0x0d>
MIC-E, DIGI (white center), Kenwood TM-D710, In Service
N 4149.7200, W 07123.0700, 0 MPH, course 188, alt 52 ft
Digipeater: Drop redundant packet.
```

You might need to change the font for best results.

Right-click on the title bar and pick Properties from the pop-up menu.

Use one of the fonts other than "Raster Fonts."



## Alternate Audio Device Selection

If you have multiple audio interfaces, you might want to pick one other than the default. In this example, I plugged in a SignalLink USB, it now appears at the top of the list, and it became the default.

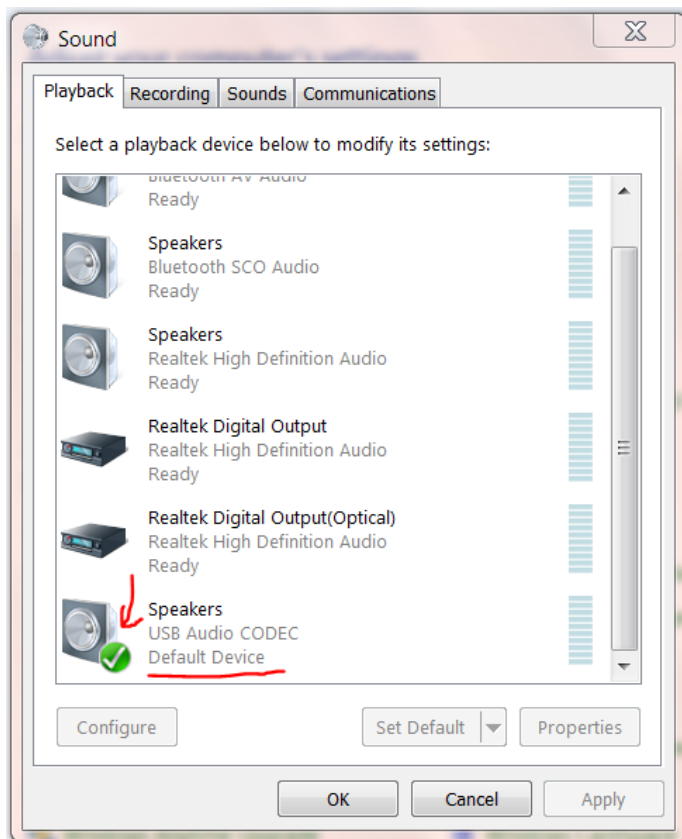
Available audio input devices for receive (\*=selected):

- 0: Microphone (USB Audio CODEC )
- 1: Microphone (Bluetooth SCO Audio)
- 2: Microphone (Bluetooth AV Audio)
- 3: Microphone (Realtek High Defini

Available audio output devices for transmit (\*=selected):

- 0: Speakers (USB Audio CODEC )
- 1: Speakers (Bluetooth SCO Audio)
- 2: Realtek Digital Output(Optical)
- 3: Speakers (Bluetooth AV Audio)
- 4: Speakers (Realtek High Definiti
- 5: Realtek Digital Output (Realtek

This is probably not a good thing because the operating system sounds will go out over the radio. Go to the Control Panel → Sound and notice how the USB device became the default.



You will probably want to select the Speakers, corresponding to the built-in audio interface, as the default so operating system sounds will come out here.

Edit the `direwolf.conf` file and look for a line that contains `ADEVICE`. Add a line like this:

```
ADEVICE USB
```

Stop Dire Wolf by pressing Control-C and then restart it. This time you should see the USB sound device explicitly selected with "\*" next to it.

Available audio input devices for receive (\*=selected):

- \* 0: Microphone (USB Audio CODEC )
- 1: Microphone (Bluetooth SCO Audio)
- 2: Microphone (Bluetooth AV Audio)
- 3: Microphone (Realtek High Defini

Available audio output devices for transmit (\*=selected):

- \* 0: Speakers (USB Audio CODEC )
- 1: Speakers (Bluetooth SCO Audio)
- 2: Realtek Digital Output(Optical)
- 3: Speakers (Bluetooth AV Audio)
- 4: Speakers (Realtek High Definiti
- 5: Realtek Digital Output (Realtek

You should now be receiving APRS packets! It's more interesting to see symbols on a map instead of text. Here is how to install one popular application...

### Step 3: Install APRSIS32

Download the APRSIS32 zip file from <http://aprsisce.wikidot.com/downloads>

**APRS client for windows 32/64 and CE**

Forum Documentation M

Home  
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Search  
Recent changes  
Forum  
List all pages  
Page Tags  
83 active pages.

Page tags  
cyclemap  
documentatic

**Downloads Page**

[Welcome to APRSISCE/32](#) » Downloads Page

Current Release **2012/08/29 21:31**  
**Please note these files are ZIP compressed and r folder and downloads into that folder**  
Some of these releases may work on other platforms,  
**Information on how to get a passcode on this pa**

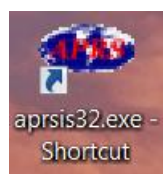
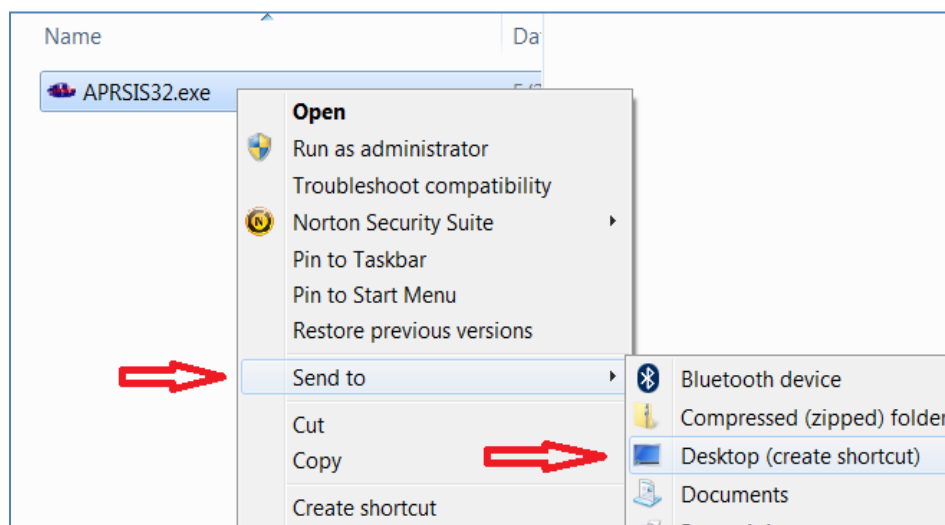
For Windows 32 and x64. XP,2000,Vista,7,8. Should w  
[Windows 32](#)

For Windows Mobile 5. 6. 6.1 and 6.5

Save it in some convenient place such as C:\Users\John, where Dire Wolf was saved.

In Windows Explorer, right click on this file and pick “Extract All...”

Right click on the resulting aprsis32.exe file then pick Send to > Desktop (create shortcut).

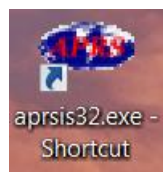


You should end up with a desktop shortcut like this:

#### Step 4: Configure APRSIS32

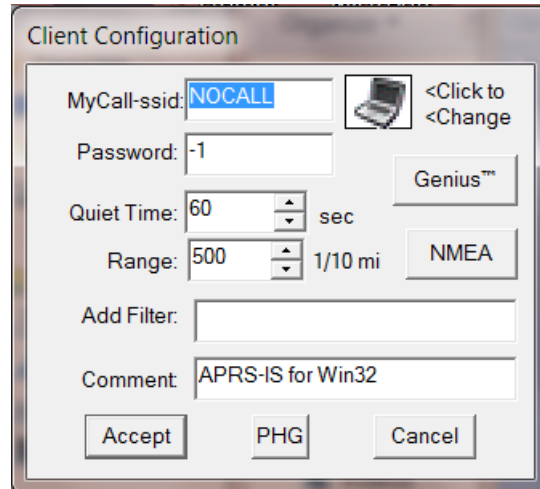


1. If not already running, start up Dire Wolf by double clicking the desktop shortcut created earlier.

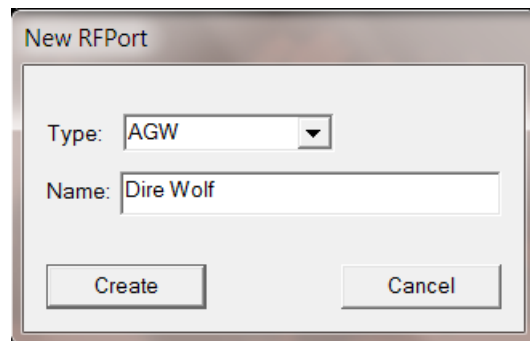


2. Run APRSIS32 by double clicking the desktop shortcut.

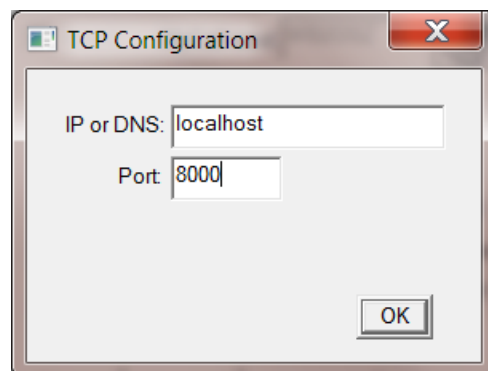
3. Fill in your ham call and click Accept.



4. From the "Configure" menu, pick "ports" then "new port..."
5. Select type "AGW" from the list. Enter "Dire Wolf" as the name. Click "Create" button.



6. When it asks, "Configure as TCP/IP Port?" answer Yes.
7. Enter "localhost" for the address and port 8000. Then OK.



8. Finally click on "Accept."



9. You might want to go to the “Enables” menu and uncheck the “APRS-IS enabled” item so you will only display local information received over the radio.
10. If all goes well, you should see received messages, similar to these in the Dire Wolf window:

```

direwolf.exe - Shortcut
Dire Wolf version 0.5
Available audio input devices for receive:
 0: Microphone (Realtek High Definiti mono: 11 22 44 96 stereo: 11 22 44 96
 1: Microphone (Bluetooth SCO Audio mono: 11 22 44 96 stereo: 11 22 44 96
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 3: Realtek Digital Output (Optical) mono: 11 22 44 96 stereo: 11 22 44 96
 4: Speakers (Bluetooth AU Audio) mono: 11 22 44 96 stereo: 11 22 44 96
Virtual KISS TNC is connected to COM3 side of null modem.
Ready to accept AGW client application on port 8000 ...

Digipeater W2DAN-14 audio level = 68
[0] N1LMA>APU25N,W2DAN-14*,WIDE2-1:;147.240/R*242225z4124.67N/07149.14WrPL100.0/
Object, "147.240/R", Repeater, UIview 32 bit apps
N 4124.6700, W 07149.1400
PL100.0/LINKED REPEATER CRSnet
[0H] N1LMA>APU25N,W2DAN-14,WB20SZ-5*;;147.240/R*242225z4124.67N/07149.14WrPL100.

W1WYC audio level = 53
[0] W1WYC>APRS,WIDE2-2:=4230.93N/07113.34W-=4230.93N/07113.34W
Position, House QTH (UHF), Generic, (obsolete. Digis should use APNxxx instead),
N 4230.9300, W 07113.3400

```

and the same stations should appear along the left side of APRSIS32.

11. Click on a station from the list then pick “Center” from the pop up menu. Zoom in by clicking the “+” on the left side of the map or by moving the mouse scroll wheel away from you. Scroll the map by holding the left mouse button down and dragging.

## Step 5: Learn about the other features

Refer to the more complete **User Guide** for details on other features such as:

- Wiring for transmitting.
- Dual radio operation.
- Selecting other audio devices.
- Beacons.
- Digipeating.
- Internet Gateway.
- AGW network application interface.

- KISS application interface – network or serial port emulation.
- Changing audio tones and data rate.
- decode\_aprs.exe – Raw packet decoder.