WA7RF's
Airmail/BPQ32/WINMOR
Setup Instructions
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Updated by G8BPQ

Please note that if you are running a 64 bit version of Windows, you will need a slightly different setup. See below for details.

These instructions will help the user to setup Airmail to use the WINMOR Soundcard TNC. Currently Airmail does not support WINMOR. However by installing the BPQ32 software on the same computer as Airmail, full use of the WINMOR Soundcard TNC is possible. This allows Airmail to connect to Clients and Servers running the WINMOR TNC. These instructions will also allow inbound connects to your Airmail Mailbox.

Airmail/BPQ32/Winmor has been tested and has successfully passed messages with RMS WINMOR Stations, RMS Express, BPQMail BBS, SNOS and other Airmail Users with the same setup discussed here. Airmail also has a terminal mode so users are able to interact with any node or application that has a WINMOR Port. **Note that RMS Express will only accept connections if running in peer-to-peer mode.**

It is recommended that persons attempting to setup BPQ32 for Airmail, have prior knowledge and experience with Airmail and RMS Express and the WINMOR Sound Card TNC. This experience is not required but will help you get on the air with Airmail/BPQ32/WINMOR cleanly and quickly. Instructions for setting up the WINMOR Soundcard TNC, rig interface, audio levels, etc., will not be covered here. Setup of Airmail will not be discussed either except for the specific points in making this setup work. Please refer to the Help files included with Airmail and the WINMOR Virtual TNC for additional setup information of the specific applications. Additional help can be found at the Yahoo groups that have been setup to support these applications.

OVERVIEW

The use of Airmail with WINMOR is possible because of the WINMOR support in BPQ32. For those users who have used packet/pactor gateways in the past, understanding the Airmail to BPQ32 to WINMOR interaction will be easier.

Airmail currently supports AX.25 Packet, Pactor and telent sessions directly. BPQ32 is AX.25 NET/ROM compatible node software for Windows. The WINMOR Soundcard TNC is a stand alone Virtual TNC that interacts with you soundcard interface and is controlled by a TCP interface. By installing these 3 applications on a Windows computer it is possible for Airmail to use WINMOR.

Once these applications are installed correctly, Airmail uses the Packet Client module to connect with the installed BPQ32 node (by a virtual connection on the same computer) which then allows outbound connects via the WINMOR port to the desired RMS Winmor, BPQMail BBS, etc.

INSTALLATION STEPS

It is highly recommended that you join the Yahoo Groups that support this software. The latest software and information about these applications can be obtained there. There is a BPQ32 group that covers the node software and a WINMOR group that supports the WINMOR Soundcard TNC. These installation steps setup the WINMOR TNC to use VOX control of your transceiver. If you want to setup PTT control continue with the PTT Installation steps further in this document.

1. Obtain the needed software. Download the BPQ32 software from the BPQ32 Yahoo Group in the files section. Choose the latest version. You need at least BPQ32_4.10p_20101007, so if you already have BPQ32 installed, you may need to upgrade.

2. Click on the executable file you downloaded.

3. Go through the Setup Wizard accepting the default locations.

4. On the last window of the install wizard select the Display documents and click on Finish. If you have any questions during the install you can refer to this documentation. It will assist you in troubleshooting also. The documents show in you browser so just minimize your browser so that you can refer to them as we need to.

5. Navigate to the install directory using Windows Explorer. Start Menu > Computer > C: > Program Files > BPQ32. If you did not install in the default location then navigate to your BPQ32 folder you used in the setup wizard. If you are using Vista or later, you will need to give full control privileges to your USERS on this folder. Right Click on the BPQ32 Folder. Click the on Security Tab. Click on Edit. Give permission to continue. Click on Users and then click on the Full control box under Allow. Apply and click ok.

6. In the BPQ32 folder find the bpq32.cfg file. Rename it to bpq32orig.cfg.

7. Open up Notepad or other text editor with a blank document, and copy/paste the following into it:

```
;        AIRMAIL/WINMOR  configuration.

SIMPLE

NODECALL=MYCALL-1

INFOMSG:
Airmail to WINMOR Gateway
***

PORT
 ID=WINMOR Port 1
 TYPE=EXTERNAL
 DLLNAME=WINMOR.dll
 PROTOCOL=WINMOR
 CONFIG                  ; Driver-Specific Configuration
 ADDR 127.0.0.1 8500 PATH C:\Program Files\bpq32\Winmor TNC\Winmor TNC.exe
 CWID True
 BW 1600
 DRIVELEVEL 100
ENDPORT

APPLICATION 1,AIRMAIL,,MYCALL-2

;       End of Config
```

8. In Notepad Change MYCALL-1 to your actual callsign and SSID. Change MYCALL-2 to your callsign without the SSID or a unique SSID. This must be different than the NODECALL. This is the call that other users will use to connect to your Airmail.

9 Save this file to you BPQ32 Directory (default is C:\Program Files\BPQ32) and name it bpq32.cfg

10. Download the WINMOR Soundcard TNC from the Yahoo Group Files section. You will need to join if you haven't already. Download the WINMOR TNC 1.1.8.0.zip (or current version)

11. Open up this zip file and extract. Make a folder in you BPQ32 folder called WINMOR TNC. Extract the full contents into this folder. So the contents of the zip file should now be in C:\Program Files\BPQ32\WINMOR TNC

12. Start the WINMOR TNC by clicking on WINMOR TNC Application. You will be asked for your registration key. If you have one enter it. If you don't you can be reminded later or click on the link to register.

13. From the WINMOR Sound Card TNC, select under Help Basic Setup. Enter your callsign, and Grid Square. From the Sound Card Capture and Playback Device select the device that your soundcard interface is configured for. Click on Update ini. If you don't have a registration key it will warn you how it doesn't match your callsign. You can ignore.

14. Now we must setup a virtual comm. Port for Airmail to use. Go to you BPQ32 Folder and run VCOMConfig. For Vista or later users, Run as an administrator by right clicking and selecting Run as Administrator .

15. It may warn you that the driver is not loaded. Click OK. Click on Load Driver. If you did not run as an adminstrator (Vista) it will say access denied. Should see Service Started. From the pulldown menu select a comm. Port (shows COM1). Select one that is not in use by your system. I used COMM 20 then click on ADD. Should now say COMM added. Close this program but remember the com port number.

16. From the BPQ32 folder start BPQHostModes

17. Select Add Entry. Under COM, put the COM port number we setup in VCOM. In our example it would be 20. In streams put 1, and for Applmask enter 1. Select Kant under Mode and click on Save Settings. Click Ok on the notice of restart and close the program.

18. Install Airmail, if not installed already, using documentation included with Airmail.

19. In Airmail select Tools > Options. Make sure under Settings tab you have set your base callsign and under BBS Forwarding Protocol have selected Offer FBB Binary Level 2.

20. On the Modules Tab, click on check boxes next to VHF Packet Client and Auto Start. Next click on Setup of the VHF Packet Client. In this window, select KAM+ on TNC type, select your virtual com port that was setup in VCOM (Com20 in our example), 9600 for baud rate. Click on the OK and then OK on the next window to exit the Setup of Airmail.

TESTING AND OPERATION

Congratulations. You have finished the steps in installing BPQ32 with a WINMOR port with VOX Control. There is a good chance that the install should work, however the various combinations of hardware and software configurations present in the shack, make errors likely. Finding errors is just a matter of reading the status and warnings and referring to the configuration files and documentation and tweaking until you have a working installation. Let's see if it works.

1. Close all instances of the BPQ Software and WINMOR TNC. **Note for future reference**: The BPQ Sofware will continue to restart if any program that relies on BPQ is still open. For example if BPQTerminal or BPQHostModes is open and you try to close the BPQ Node, the BPQ Node will restart. The WINMOR TNC shoudl close when BPQ32 closes, but if not use the TNC Help/Close option. If WINMOR TNC does not close you can use Ctrl-Alt-Del to bring up Task Manger to close WINMOR TNC in a timely matter.

3. Start BPQHostModes in the BPQ32 Folder. If your install is good, several BPQ windows will open, and the WINMOR TNC will start. BPQHostModes will open. WINMOR Status window will open and should show that the Comms State is Connected to WINMOR TNC. The WINMOR TNC waterfall should start moving and the Status is DISCONNECTED. The BPQ32.dll Console window will open and if the node came up properly you should see no errors and the statement Port Initialisation Complete. Note that Port 1 is WINMOR Host 127.0.0.1 8500 (This is the WINMOR TNC on you local machine and using TCP port 8500) You can minimize but do not close any of these windows. I usually minimize the BPQ32.dll console and BPQHostModes…Do Not CLOSE. I then can monitor the WINMOR Status and TNC.

4. Start Airmail. Under Modules select Packet Client. If the Packet Client Window reports back Date/Time and Packet initialized OK, you have completed the linking of Airmail to BPQ32 to WINMOR at this point. If not, you will need to check your configuration will special attention to typos.

5. Now it is time to make a connection. In the packet client window click on the **Handshake icon**. In the Connect to box enter the callsign of the station you want to connect to, followed by "1 WINMOR", eg **GM8BPQ-10 1 WINMOR**. This tells the node to connect using port 1 and the WINMOR protocol.

6. Push the Green GO icon. The WINMOR TNC should start transmission and you will see CONNECT IN PROCESSS.

7, When the session is over the connection will disconnect and Airmail should disconnect from your node. If not then click on the Stop Icon.

8. **To accept inbound connects**, the Packet Client Module must remain open or minimized and in the Handshake mode. Outside stations would connect to the APP1CALL Callsign. Connects to this callsign will be directed to your Airmail Mailbox.

PTT Operation

BPQ32 uses the Rig Control functions for PTT control. Please read the BPQ RigControl documentation for how to apply Rig Control for you specific radio. Here are some steps to assist in setting up PTT Operation.

1. In Notepad open up bpq32.cfg.

```
Replace:

ADDR 127.0.0.1 8500 PATH C:\Program Files\bpq32\Winmor TNC\Winmor TNC.exe

With:

ADDR 127.0.0.1 8500 PTT RTS PATH C:\Program Files\bpq32\Winmor TNC\Winmor TNC.exe
RIGCONTROL COM4 19200 PTTONLY
```

This is for my setup of Com port 4 at 19200 baud and is for PTT only. Radio is a Kenwood TS2000. This is a name only. If your install uses DTR for PTT replace RTS with DTR. The name is used only for reference only. You can get your com port and speed information from your RMS Express setup if you have installed that application. After editing to reflect your setup save the changes.

Save this file

4. Close Airmail and BPQHostModes (and all BPQ Software)

5. Start BPQHostModes. You should now have an additional line on the WINMOR Status window showing your Radio Name

6. Start Airmail and following the steps in Testing and Operation.

PACLINK SETUP

It is possible to setup Paclink in much the same way as Airmail. The only difference is that Paclink would not be accepting inbound connects. To setup Paclink. Define another virtual com port in VCOMConfig (different than what is setup for Airmail). In BPQHostModes, add another entry using the newly defined Com Port, 1 Stream and no ApplMask. Select Kant mode. In Paclink you would define a new TNC Channel using the Com port defined in VCOM and HostModes, baud rate 9600 for serial port and a KAM/+ TNC.

Follow the instructions and Help files for setting up a Connect Script. The connect script would have something like <C 1 GM8BPQ V WINMOR>

Installation on 64 bit Windows System.

The VCOM driver used to create the Virtual Serial Port used to link Airmail to BPQ32 doesn't work on 64 bit Windows. BPQHostModes can be confgured to use pairs of serial ports, instead of the BPQ VCOM port. These can be real serial ports connected via a crossover cable, or a 3rd party Virtual Serial Port product the works on 4 bit windows. I have tested this with VSP Manager

To install on 64 bit Windows, instead of steps 14 and 15, install your real or virtual serial ports.
In step 17, enter the COM port number of one of your serial device pairs. Check "Use Real COM Ports".
In step 20, select the other one of the COM port pair.

FINAL COMMENTS

The future of Digital Ham Radio is very bright due to the tireless dedication of all of the developers and users of these technologies. There has been some giant leaps in the software used in this install. Copyright, Credits, License and many thanks to the following:

Airmail – Jim Corenman KE6RK and Sirius Cybernetics LLC
BPQ32 – John Wiseman G8BPQ
WINMOR TNC –Victor Poor W5SMM and Rick Muething, KN6KB
Amateur Radio Safety Foundation – http://www.arsfi.org/, http://www.winlink.org/

Please support these people and organizations for their contributions to the field of Digital Radio Messaging and Amateur Radio.

73

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