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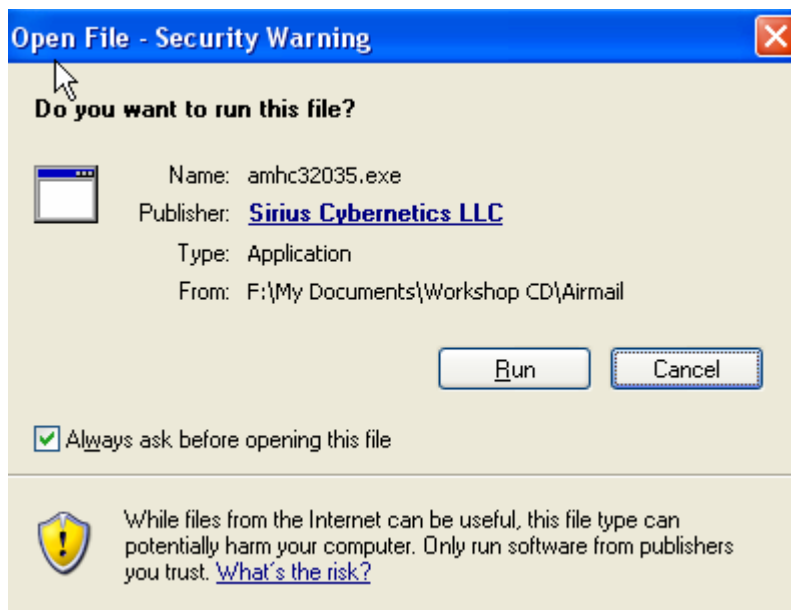
Installing the Airmail program

Download:

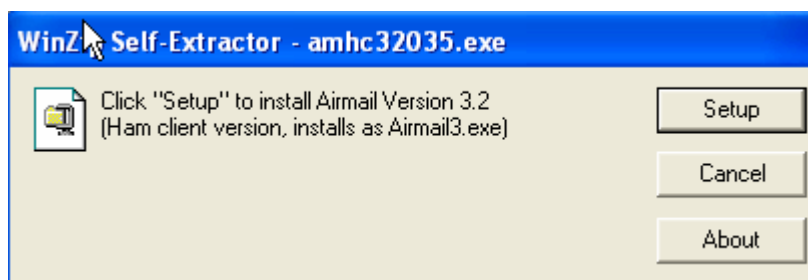
1. Download the Airmail program from <http://www.siriuscyber.net/ham/> which is about 4.1 Mb
 - a. You should already have this program on your workshop CD
 - b. You will not need to download any other program for packet Airmail (for HF, you should download ICEPAC, the propagation program)
2. Make a note of the folder name where you place it.

Install

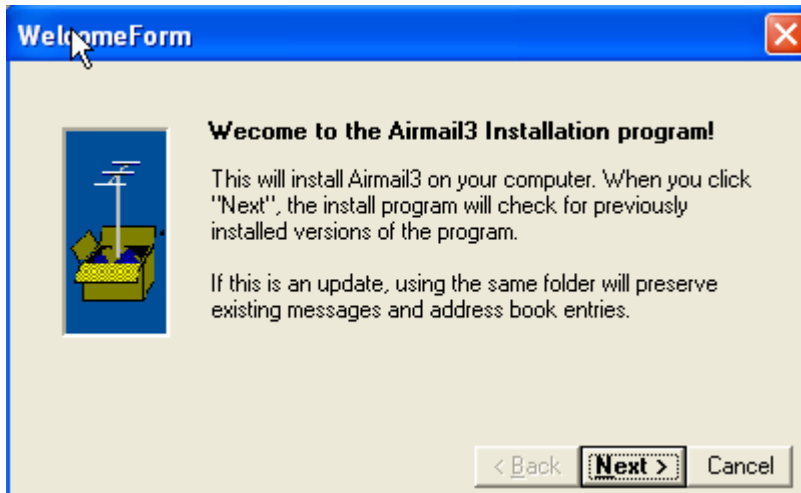
1. Close all programs
2. Go to 'Start', then 'Run'
3. Browse to find your file which is called something like 'amc32035.exe'
4. Click on 'OK'
5. Then you will see this (if you are on XP)...click on 'Run'



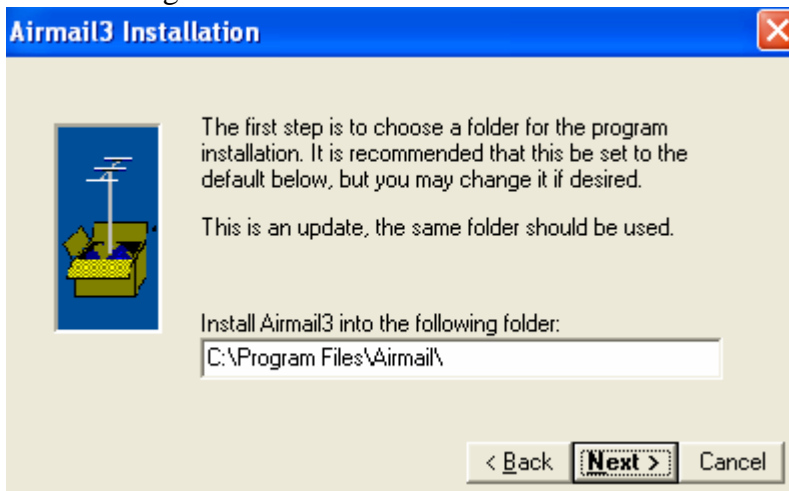
6. Then this page.....click 'Setup'



- 7. Then this page.....click 'Next'



- 8. Do not change the folder click 'next'



- 9. Click the rest of the screens which are straightforward

Configuring Airmail – initial setup

Configuring Airmail for packet only operation is very simple (In HF, there are many more steps)

Pre-commissioning:

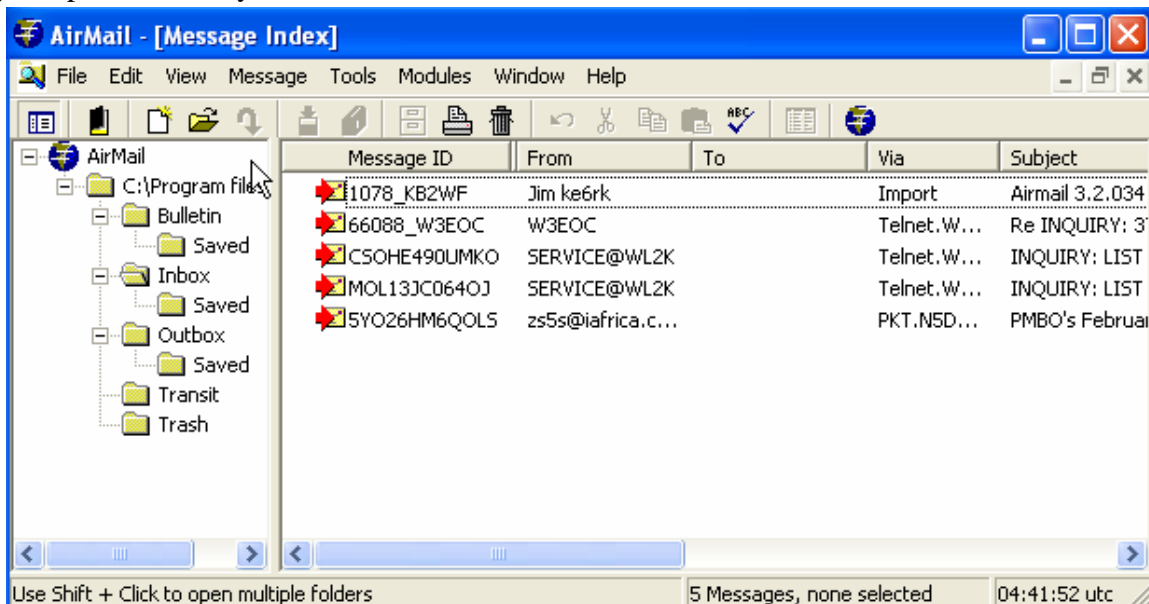
But before configuring the Airmail program and expecting it to work, there are some pre-commissioning steps to carry out:

- Check your transceiver frequency. It should be within 200 Hz of the correct frequency
- You will probably need to set your deviation. Some of the older TNCs have a manual adjustment for deviation and *must* be set before you use Airmail
 - Do not try and guess the deviation by listening to it
 - If at all possible, use a deviation meter
- Check the operation of your TNC with Hyperterm or a similar terminal program.
 - Set the PC-TNC baud rate to at least 9600 and preferably 19,200baud
 - Make a note of your COM port number (COM 1 or 2?)
 - Set your carrier detect to software (for Kantronics)

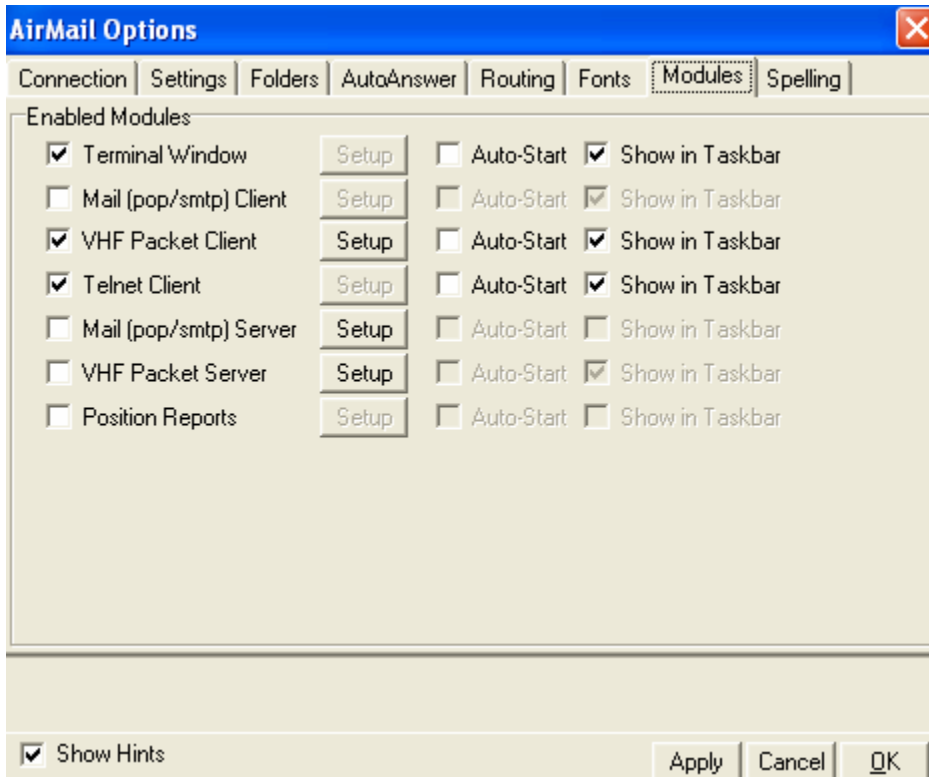
Remember: if your TNC does not work with Hyperterm, it **won't** work with anything more complicated

Configuring:

When you open Airmail, you will see this screen:

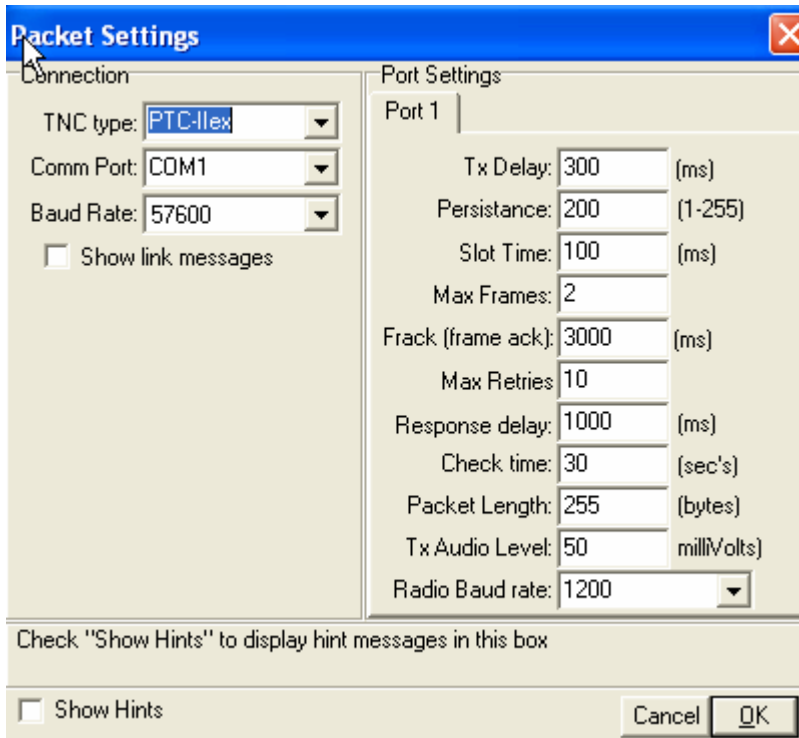


1. Open 'Tools', then 'Options', then 'Modules'. You will see this:



VHF Packet Client

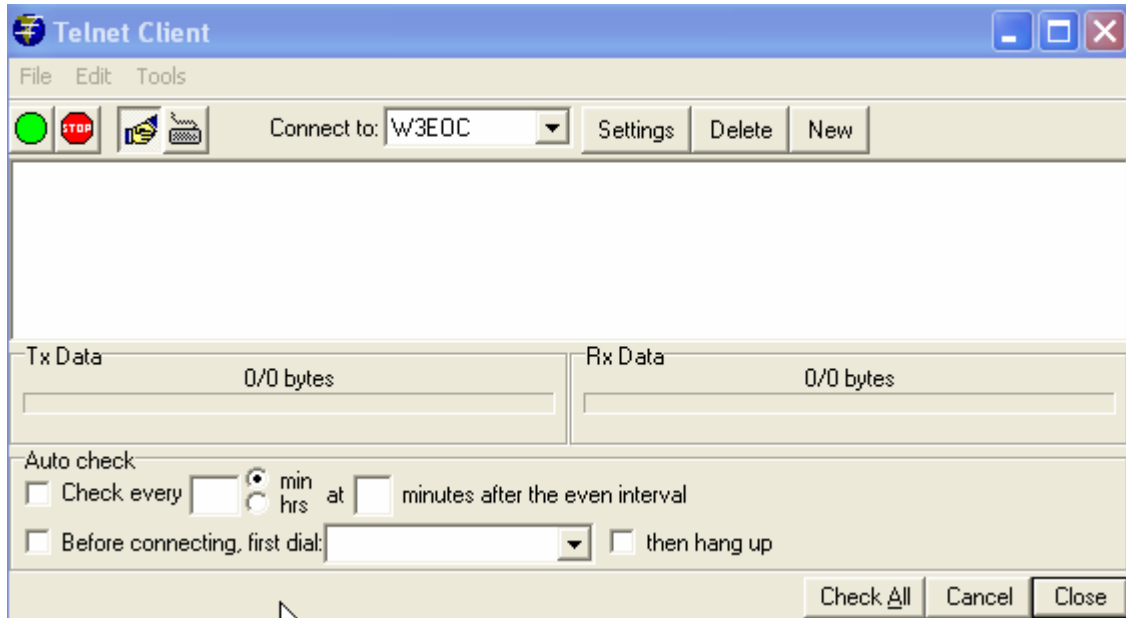
2. Click on the box next to 'VHF Packet Client'. Then click 'Setup'. You will see this screen



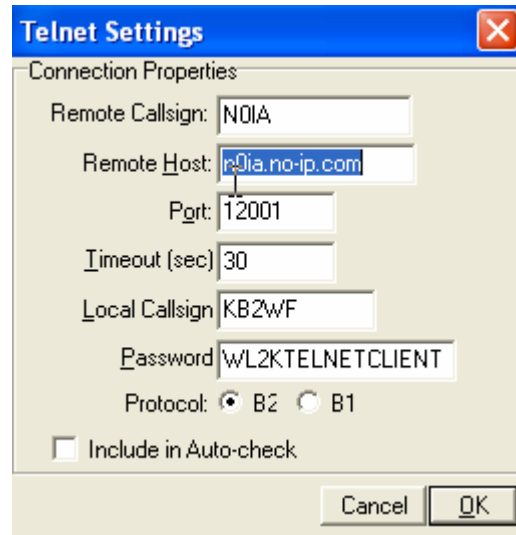
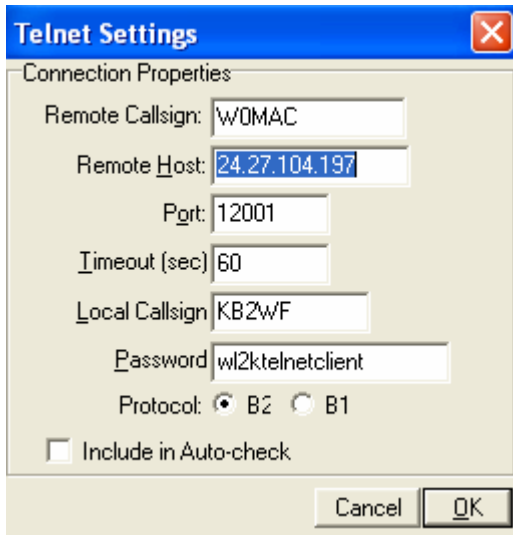
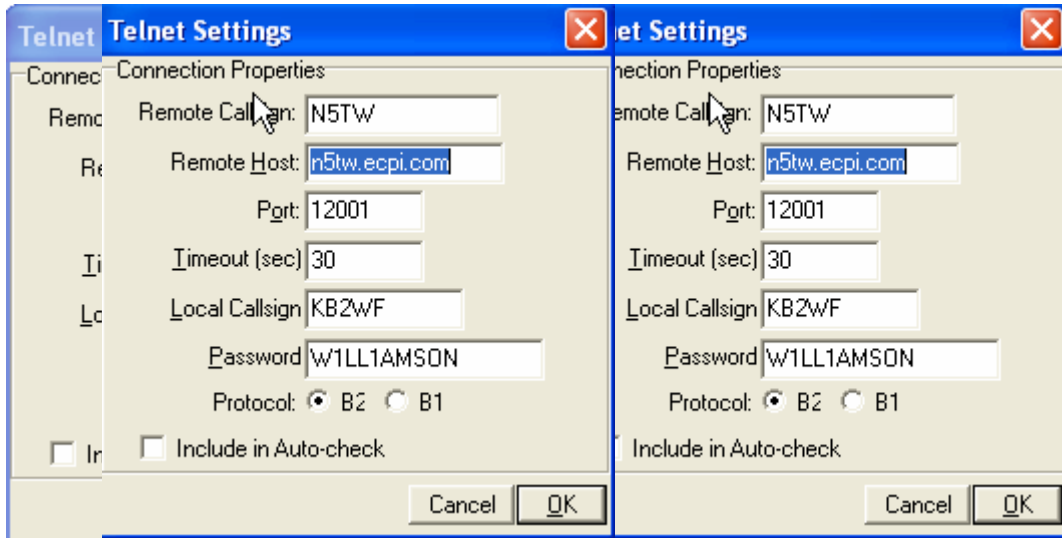
3. Enter the details for your particular TNC:
 - a. The model number for your TNC. Your exact model number may not be there.....
 - i. for example, a KPC3+ is not there, so use the KPC3 setting
 - ii. for a KPC9612, use the KAM XL setting
 - b. Your COM port number that you noted
 - c. The baud rate for the PC-TNC that you set in your TNC check
 - d. Do not change any of the default port settings. These are perfectly OK for getting you started. Changing them is an advanced topic and should not be attempted by a beginner
 - e. Click OK

Telnet Client

4. You should be back at the ‘Airmail Options’ screen. Click on the box next to ‘Telnet Client’. Then click OK which will exit you back to the main screen
 - a. On the top menu, click ‘Modules’
 - b. Click on ‘Telnet Client’
 You will see this:



- c. Click on ‘Settings’
 - Fill in the data for W3EOC as shown below (but replace KB2WF with your own callsign)
 - Click ‘OK’ when complete
- d. Then repeat the process several times, as follows:
 - Fill in the data for N5TW as shown below
 - Click ‘OK’ when complete
 - Fill in the data for W0MAC and N0IA as shown below
 - Click ‘OK’ when complete



e. Click OK which will take you back to the main menu

Your configuring is complete!! You are ready to try out the Airmail packet program

(There will be some advanced configuring that you can do later, but it is not necessary right now. What you have configured will get you started)

Operating Airmail – basic skills

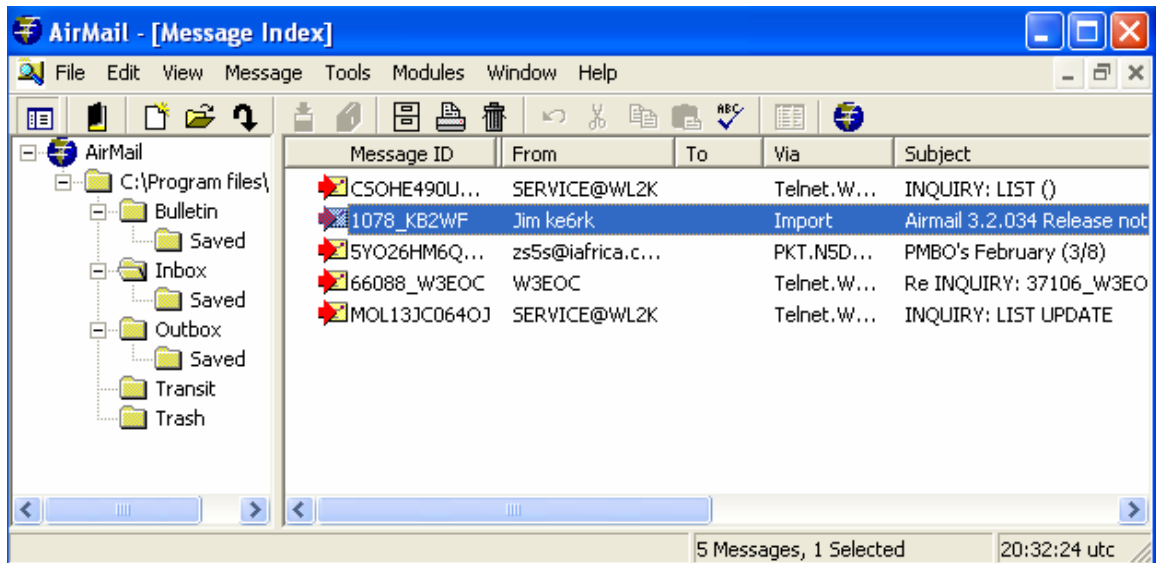
In basic operating, you will need to be able to:

- Create and post a new message
- Connect to a Telpac station
- Connect to the internet using Telnet
- Reply to and forward messages

This will get you started. If you wish, you can then move to the next level which will give you more flexibility.

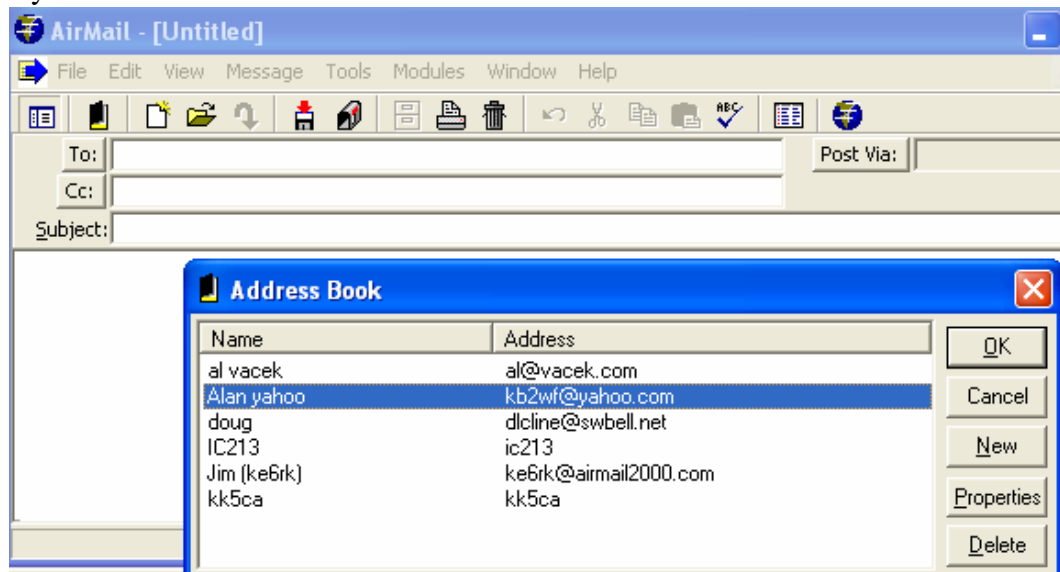
Create and post a new message

When you open Airmail, you will see this screen:



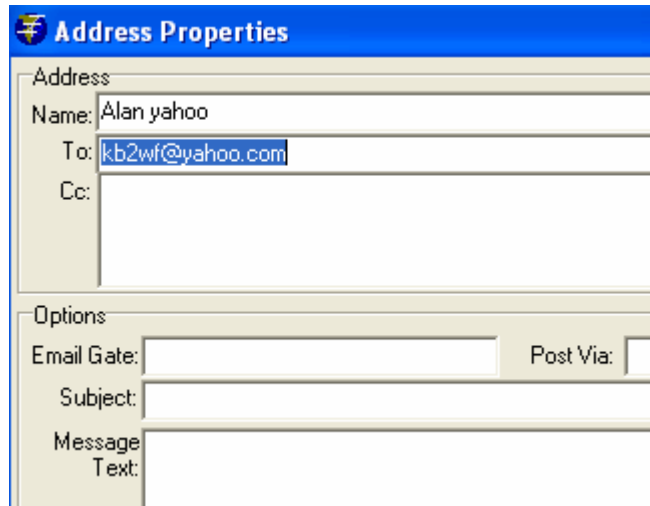
Then:

1. Click on the third icon from the left, which will say 'Format a new Message' as your mouse hovers over it
2. You will see these screens



3. Address book:

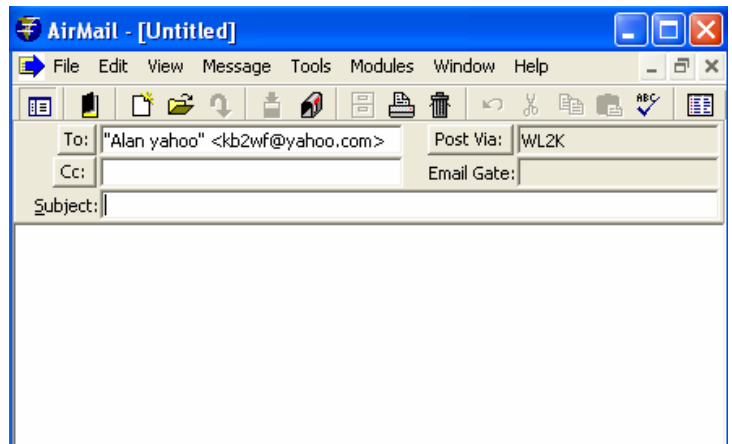
- To add a name, click 'New'
- Add the name you wish to identify the person
- Add the email address.
If the person has a Winlink email account (e.g. kb2wf@winlink.org), this entry can be abbreviated to the callsign only (e.g. kb2wf)
- Add cc if you wish
- Options are not required to be filled
- Click OK twice



If the name is already in the address book, then select the name and click OK
If you don't want to use the address book at all, click 'Cancel' or use the Escape key

4. Complete the message box

- Add the cc, subject and text of the message just like a normal email
- The 'Post via:' box:
 1. it will default to 'WL2K' which is what you want for sending a message to the internet via a Telpac or Telnet
 2. if you wish to connect directly with another station, you would add the callsign of that station



5. Attachments can be added as follows:


- Go to 'File' then 'Attach File'
- Browse to locate your attachment and click 'Open'

Be careful with attachments when you use Winlink! Make them small!
Winlink is not designed to transfer large graphics files as it takes too long. On Airmail packet, you can expect a transfer rate of about 3.5Kb/minute.

Aim to minimize the file size. If you send photos:

- Send them as jpgs
- crop them in Microsoft Photo Editor or similar
- reduce the resolution and image size

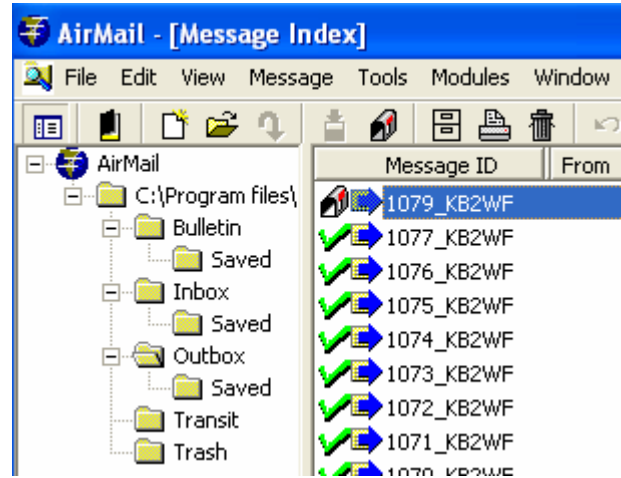
A file size of 10-15Kb can give an effective picture with much information

6. **Post** the message once you have checked the content of the email. This is done by clicking on the icon at the top with a mailbox. 
The message is now sitting and waiting for the 'mailman' to come and pick it up.

If you click on the Outbox in the folder window, you will see the message waiting in the message list with the same mailbox icon next to it. The other messages have a check mark next to them showing that they have been sent.

The new message will be sent when you connect:

- to the internet via a Telpac station or via Telnet if you chose to post via WL2K
- to the other station if you added that station callsign to the 'Post via' box



7. Note:

By sending an email to an address via telnet or packet client (or HF), that address is now registered and qualified to send you email at your callsign@winlink.org

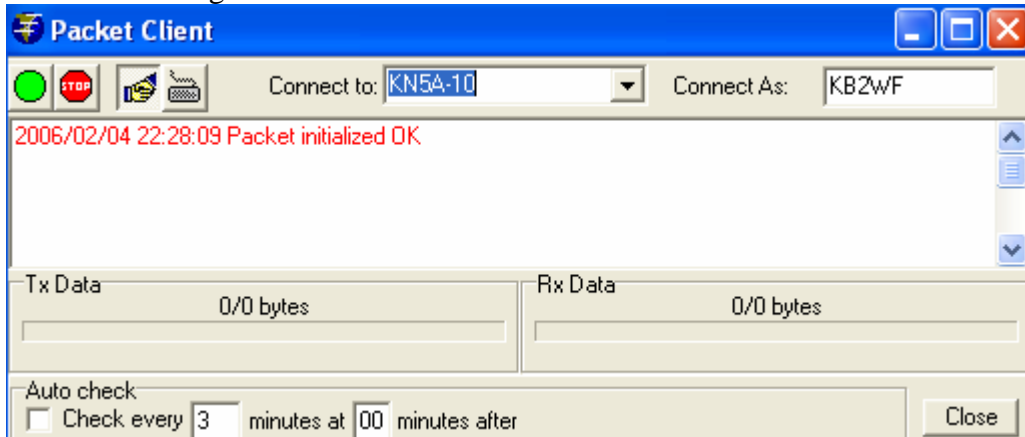
Without this, the Winlink system will block emails coming to you. So there is no point in giving your Winlink.org address to many people.



Connect to a Telpac station

You will need to know the callsign of a Telpac station that is close enough to you and also its operating frequency. This can be obtained from a map on the Winlink site which shows the relevant details. (<http://www.winlink.org/positions/telpacpos.aspx>)

At the main screen of Airmail:

1. Click on 'Modules', then 'Packet Client'. If your TNC is ready, it will initialize and you will see the following screen




2. In the 'Connect to' box, insert the call sign of the Telpac station you are contacting. Most Telpac stations have a suffix of "-10", but sometimes you will find a suffix of "-11" or "-12"
3. In the 'Connect As' box, check that your callsign is correct. Note that there is no security in Airmail as you can connect using someone else's callsign and conversely, they can connect with your callsign
4. Click on the *automatic handshake* icon. This is the easiest way to connect. This enables Airmail to do all the connections and instruction to start, send posted messages, pick up waiting messages and disconnect when finished. This is much quicker than the keyboard mode which is only used for special purposes. 
5. You should see the red transmit light on your TNC blink. Then you should see your receive light blink if a reply is sent. Both lights will alternate on and off.
6. If the other station cannot be contacted, the TNC will time out after a fixed number of tries
7. You will see codes being sent and also the file transfer rate, either transmit or receive, if an attachment is being sent
8. Finally, you will see an 'FQ' and then a disconnect. Your posted messages should now have a check mark. Any new messages received will be in your inbox with a  icon

Well done! That's it! Your first connect to a Telpac station!

Connect to the internet using Telnet

Use telnet when you can as it is quicker and can handle large attachments. Don't overlook that you can access Internet from wireless connections around the city!

When you are at the main Airmail screen:



1. Click on 'Modules' and then 'Telnet Client'
2. Select one of the stations that you entered in the Telnet configuration
3. Click on the automatic handshake icon 
4. Watch it complete. It will finish with an FQ and then disconnect

Reply to and forward messages


When you reply to a message, the original message will not be included. This minimizes the size of the email, which is always important in Winlink

If you want to retain the original message, use the 'Forward message' function

Reply

1. At the main screen, click on the Inbox and select the message to reply to.
2. Then click on the reply icon 
3. Add your comments and ccs
4. Check carefully that the path in the 'Post Via' box is correct. The default value is determined by the route that was used when the message came to you. This may not be appropriate for your station.
5. Click on the 'Post' icon 
6. Connect to the internet or station as described previously

Forward

1. Go to the top menu bar and select 'Message' and then 'Forward'
2. Select the email address from your address book, or add it manually
3. Complete the 'Post Via' box
4. Add your comments and ccs
5. Click on the 'Post' icon 
6. Connect to the internet or station as described previously

Operating Airmail – intermediate level skills

Here are some extra skills that are useful to learn

1. Using a digipeater to send messages
2. Using a KA node to send messages
3. Using a node to check stations heard at that node
4. Using the Winlink website for email
5. Controlling which messages are downloaded

Using a digipeater to send messages

A digipeater (digital repeater) can be used to extend your range, but be careful as it has disadvantages too!

When to use a digipeater

If you can contact a station direct, you should do so.

A digipeater can extend the range by repeating everything but will slow down the process.

If you have strong signal strengths in your connections and short messages, a digi will work OK

Potential problems with using a digipeater/s

How it works: When you send a data burst to a digi to forward on, it will send it on to the target station which will then check that it was received correctly. It will do end-to-end checks and if there is an error, it loops the whole way around until it gets the data correct.

Problems: Speed is certainly a problem with a digipeater. It is possible to forward messages through more than one digipeater but the problems will grow, particularly if errors occur (for example, under weak signal conditions)

The best practice is to go direct and not use a digi unless you really have to. Often, it is not worthwhile using a second digi particularly if data bursts need to be repeated

How to send to through a digipeater in Airmail

Airmail will allow you to use one digi only. To use a digi:

1. prepare your message and post it as normal
2. When you open your packet client, you will enter:
 - a. The call sign of your target station
 - b. Followed by a space and the callsign of the digi

Note that it will not work if you use a 'via' or 'v' in between the two callsigns

Using a KA node to send messages

A KA node will relay a message similar to a digi but using a different method

When to use a KA node

- If you can contact a station direct, you should do so.
- A KA node can extend the range by repeating everything but will slow down the process.
- If you have strong signal strengths in your connections and short messages, a KA node will work OK
- If you have a lot of traffic to send, a KA node is better than a digi. But a digi is simpler to use

Potential problems with using a KA node




How it works: When you send a data burst to a KA node to forward on, it will check it and retransmit it. Each leg checks that it was received correctly. This is a little quicker than the digi if one leg introduces errors.

Problems: Speed is certainly a problem with a KA node. It is possible to forward messages through more than one KA node but the problems will grow.

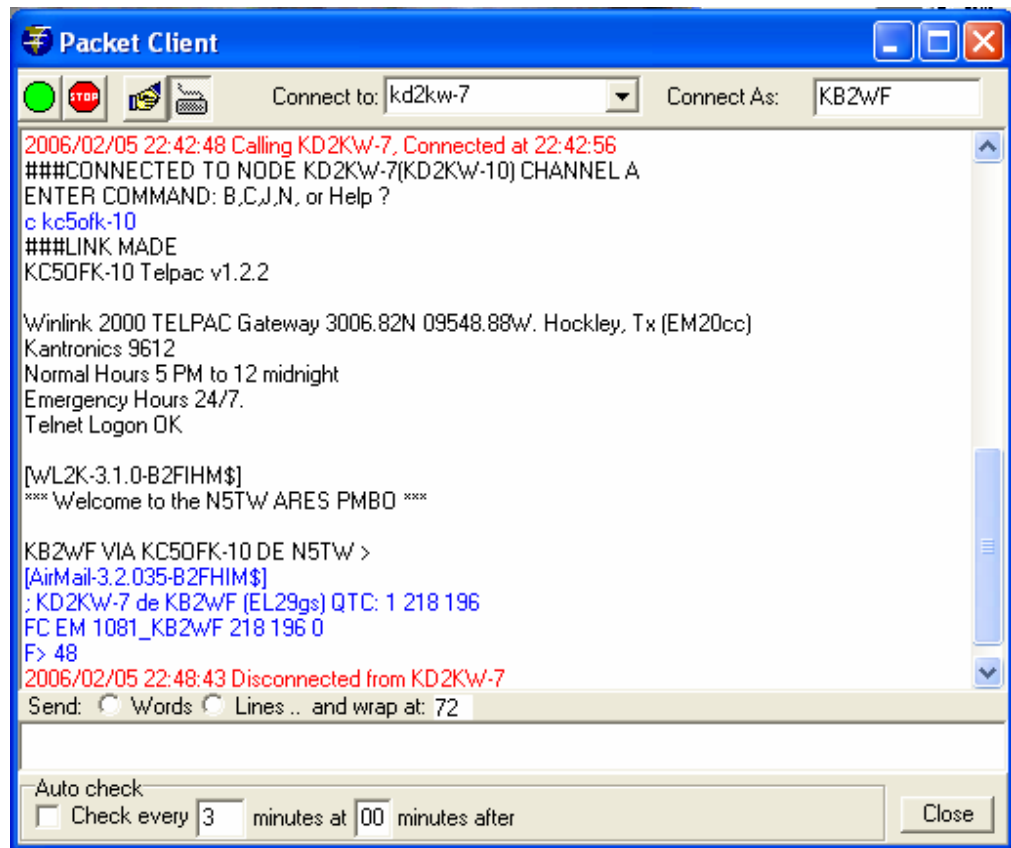
The best practice is to go direct and not use a KA node unless you really have to. Often, it is not worthwhile using a second KA node, particularly if data bursts need to be repeated

How to send to through a KA node in Airmail

Airmail will allow you to use more than one KA node. To use a KA node:


1. prepare your message and post it as normal
2. When you open your packet client, you need to:
 - a. Click on the keyboard icon  . An extra window opens at the bottom
 - b. Enter the call sign of KA node station in the 'Connect to' box at the top
 - c. In the extra window at the bottom, enter 'c (callsign of target station)
 - d. Click on the green icon 
 - e. A connection should now be made with the KA node
 - f. When the connection is shown, click on the auto handshake icon 
 - g. The process is now on auto pilot and will complete by itself

As an example, if KB2WF connects to KC50FK-10 via KD2KW-10, you will see this box:



Using a node to check stations heard at that node

You can connect to a node and look at the stations that have connected or have been heard!!
This can be very useful for finding new stations.

1. Open your packet client, then:
2. Click on the keyboard icon . An extra window opens at the bottom
3. Enter the call sign of KA node station in the 'Connect to' box at the top

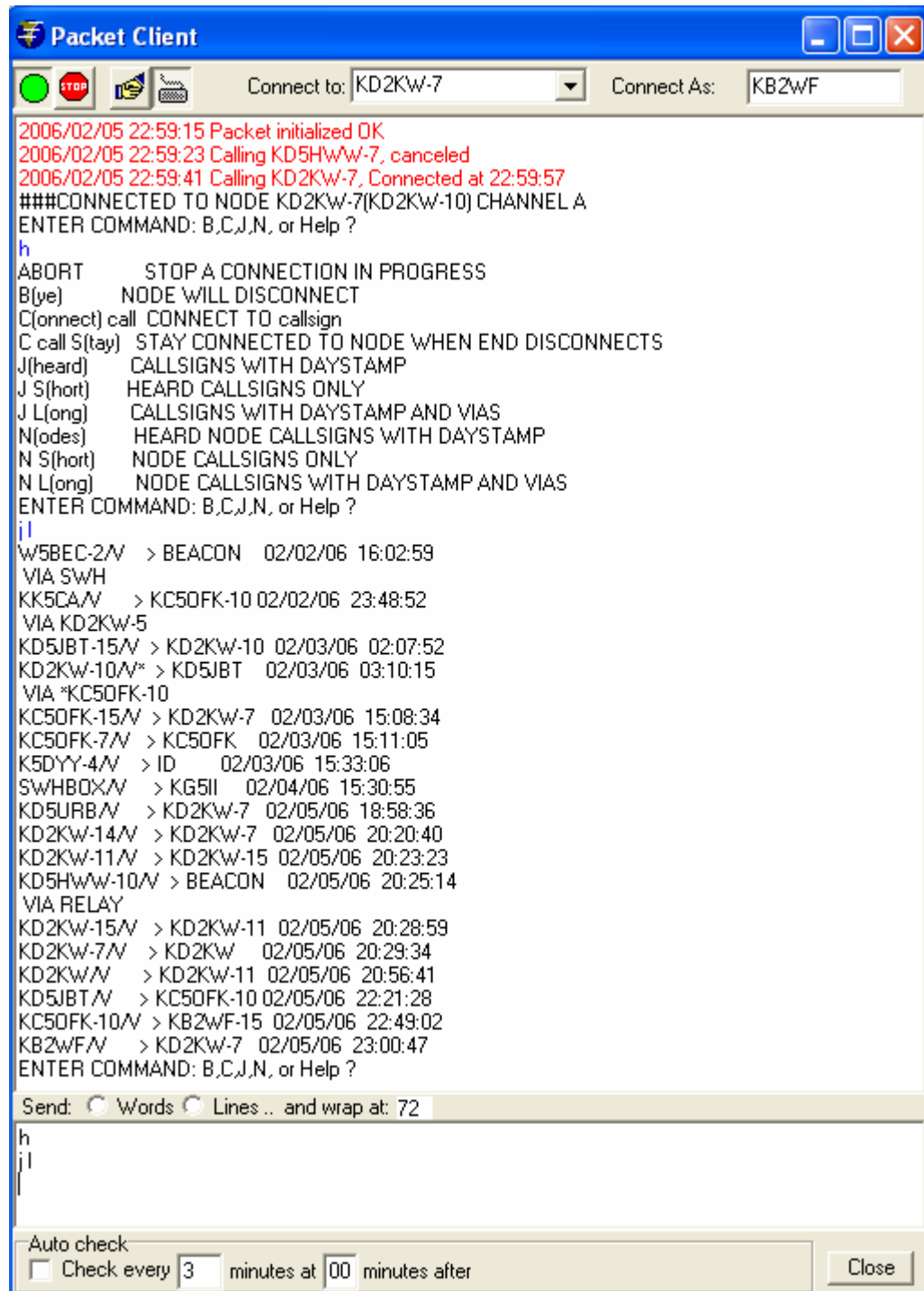
Here, I entered 'h'
for help.

All the possible
commands were
given

I entered 'j l' to get
all details

All the callsigns
appear

Now, I will sign off
with a 'b'



Using the Winlink website for email

If you have access to the Winlink website, you can send and receive email from there if you use MS Internet Explorer

Go to Message Access at <http://www.winlink.org/MailAccess.htm>


NOTES:

- You must have already logged into Winlink using radio.
- You will need to register
- You are not able to use attachments with this method

Controlling which messages are downloaded

Sometimes, you want to see what messages are waiting for you before they are automatically downloaded. Otherwise, if you have a slow connection and you have 100Kb of files to download, you could be in trouble!!

To monitor and control messages:

1. Connect to a Telpac using keyboard mode 
2. When connected, enter 'LM' meaning 'List all my Messages'
3. If you wish to read one particular message, enter 'R (number of message)'
4. To read all messages, enter 'RM'
5. If you wish to remove that message, or kill it, enter 'K (number of message)'
6. If you wish to kill all messages, enter 'KM'
7. Enter 'B' to say Bye
8. Note that you can read messages, but they won't be put in the Inbox until you connect on automatic handshake.

In this example, KB2WF was listing and reading messages from TelPac KB2WF-11

