HOW-TO!

2008 EDITION

WINLINK2000 RADIO E-MAIL FOR NEWBIES

E-MAIL WITHOUT THE INTERNET!

AROUND THE WORLD, OR ACROSS YOUR TOWN, JUST FOR HAMS!

www.SignGenerator.org

"WINLINK FOR DUMMIES"

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This is an on-line "course of instruction" for those serious about learning how to use the EmComm "last mile" portion of Winlink 2000, but who also may feel 'digitally challenged.' In this course, it is possible to experience WL2K e-mail Over Amateur Radio without a data terminal (TNC) or a radio.

The Yahoo Group
http://groups.yahoo.com/group/LOADING_WL2K_USER_PROGRAMS/ moderated by PMBO N0IA, 'bud' Thompson in Deltona, FL, will lead you through loading all the programs necessary to experience Winlink 2000 e-mail over Ham Radio without having to first purchase a Modem (TNC) or compatible radio. All that is required is a Microsoft Windows 2000 Pro or above computer, Internet access, and a valid Amateur Radio License. You will work through several assignments **at your own pace,** and then determine if you wish to get further involved with a TNC and compatible radio over the air!

Here are the assignment headers:

Assignment #1
Collecting Information and Cataloging Equipment
Estimated time – less than 10 minutes.

Assignment #2
Programs Required for WL2K E-Mail
Estimated time **-** 30 minutes or less

Assignment #3
Installing and configuring the Winpack Program
Estimated time – 15 to 20 minutes

Assignment #4 Airmail
Installing and configuring the Airmail Program, creating an Internet Access (Telnet)
Link, making and registering for WL2K Account, and your first email with Airmail.
Estimated time – 30 to 40 minutes

Assignment #4 PMP

Installing the Paklink MP program, registering for a WL2K account, configuring a
connect channel for Telnet Client, configuring your WL2K E-mail account in Outlook
Express, and sending your first E-mail

Assignment #5
Confirming TNC works

 Estimated time- 30-45 minuets

Assignment #6 PMP
Installing and configuring AGW Packet Engine free and establishing a Paclink MP AGW
channel to use a TNC with AGW Packet Engine.
Estimated time – 20-30 minutes

Assignment #6 Airmail –
Configuring a TNC in Airmail.

Assignment #7
Configuring a Paclink MP TNC channel.

73,

bud N0IA

WINLINK FOR DUMMIES

ASSIGNMENT #1 -
Collecting Information and Cataloging Equipment

POSTED – March 16, 2008
Last Modified – March 17, 2008

ESTIMATED TIME REQUIRED - 10 Minutes or less

INFORMATION: In this assignment you will learn if the computer-associated equipment you have available is sufficient for downloading, installing, and configuring the several programs that will be used for packet and the WL2KE-mail over ham radio system. It is not necessary for you to have any radio equipment or data controller/TNC to compete this assignment (or this course!)

You will also introduce yourself to the group.

SYSTEM REQUIREMENTS:
Internet-capable computer running MS Win2000, XP, or Vista operating system. Win98 will work for only part of the systems.

Virus scanning for outgoing e-mails.

Adobe .pdf reader or some program to read .pdf files.

OPERATOR REQUIREMENTS:
Ham Radio license of any class.
Reasonable facility with browsing the internet; downloading files from the internet and saving to the computer; "installing" programs from the downloaded file(s.) If you have never done this - don't worry - you can learn how in this course.

Assignment: Send an e-mail to the YAHOO Group

LOADING_WL2K_USER_PROGRAMS@yahoogroups.com

with the following information: Keep it simple and short - details not needed at this time.

Subject of Message: NEW Assignment#1 (your ham call)

Name -
Call -
City, State -
Computer Operating System -
Desk or Laptop -
Main E-mail client (i.e. Outlook Express, Outlook, Eudora, etc.)
Internet - broad band or dial up

Following only need Yes or No responses
HF digital experience?
HF or vhf/uhf Packet experience?
Own TNC?
Have digital station running now?
Interested in EMCOMMs?
Is there a functioning packet network within 25 miles?
What is the last modified date of the assignment you followed?
Comments-

    * * *

Go right on to Assignment #2

ASSIGNMENT #2
PROGRAMS REQUIRED FOR WL2K E-MAIL

Posted March 16, 2008

ESTIMATED TIME REQUIRED - 30 minutes or less

To run E-mail over Ham radio several (free) programs are required on the computer. The following programs need to be downloaded from the indicated internet sites and saved to your hard drive (i.e. Desktop or where ever.)

What you download is the installer for the programs. Later, in the next assignment we'll start installing them one or two at a time. If you go ahead and install on your own - you are on your own until we catch up!

NOTE: Win98 computers do not need and cannot use all these programs. Be sure to only install those required for your operating system.

Packet programs and support programs –

Get all these though you may not yet have a TNC/Radio for packet.

For general packet use, I recommend Winpack. It is free and will allow a range of capabilities - keyboarding, file sending, capturing, etc. We install Winpack on all the computers we help put on packet. You can download it here:

> http://www.winpack.org.uk/

Scroll down the page for the software section and download and save

> Winpack Full Install Version 6.80 2.12mb

You can download the direct install version or an install version on two floppies.

Then get AGW Packet Engine (AGW PE) Free - not the pay for version AGW PE Pro (unless you already have it - then use it.)

Get the free version here:

> http://www.sv2agw.com/downloads/default.htm

Scroll down the page and get AGW Packet Engine download and save

> AGWPE.zip (AGW Packet Engine ver 2004.1108 Win95/98/NT/2k/ME/XP)

Then get Airmail here

       http://www.siriuscyber.net/ham/

download and save

       Airmail 3.3 Ham Client (or current version) complete install

There is also a download for floppies if needed.

In the files section of the LOADING_WL2K_USER_PROGRAMS Yahoo group
Scroll down and download and save

       RMS Link Test.zip .

Win98 stops here - go to REPORT below.

These last three are for Win2000, XP, and Vista operating systems only.

If your computer runs Win2000 or newer you will need the following:

Microsoft .NET Framework Version 1.1 Redistributable Package

To determine if it is already on the Win2000 or XP computer go to
Start/Control Panel/Add or Remove Programs. When the list is populated,
look for

Micro Soft .NETFRAEMWORK 1.1.

If not there, then do a Google search for

MS .NET FRAMEWORK 1.1

Look for Microsoft .NET Framework Version 1.1 Redistributable Package

Then download and save the file to your desktop (or your favorite place.)

(the file name is dotnetfx.exe)

You can go ahead and run the Install for this - it is fully automatic and
becomes part of the operating system.

Get MS .NET FRAME WORK 2.0 in a similar manner and install it on the computer.
Google search for .NET Framework Version 2.0 Redistributable. Note the downloaded
file name is similar to that for 1.1 so be cautious where you store these for installation!

NOTE: Do not remove 1.1 from your computer. Both 1.1 and 2.0 may be installed and
coexist on your computer; some programs require 1.1 some require 2.0.

The WL2K-client program Paclink MP may be found here:

In the files section of the LOADING_WL2K_USER_PROGRAMS Yahoo group
Scroll down and download and save file

      Paclink MP Full Install.zip

REPORT: Send an e-mail to

LOADING_WL2K_USER_PROGRAMS@yahoogroups.com

Subject: NewE-mail Assignment #2 (yourcall)

Operating system –
List all programs you downloaded.

* * *

Go right on to NewE-mail Assignment #3

ASSIGNMENT #3 –
Installing and configuring the Winpack Program
(Windows 95, 98, 2000, XP, Vista) No TNC required.
Testing to be sure needed ports are open in firewall/router out to the internet.

POSTED – March 16, 2008

ESTIMATED TIME REQUIRED - 15-20 minutes.

INFORMATION: Winpack is a general purpose packet program that you will use
to do basic testing of TNCs and local packet networks It has a lot of power
for those who want to do more with packet radio in general, such as keyboard
chat (hams invented that in the early 80s!,) BBS browsing, file transfers,
etc. However, this type of packet activity has all but disappeared in the
US since internet e-mail became common in the mid 90s. For this course, we
will configure Winpack for use with a TNC in cmd: (native) mode and for use
with Paclink MP for those computers running Win2000 or XP. Assignments in
this course will not cover configurations for or other applications of
Winpack - of which there are many. If you have a favorite terminal program
you may use it for our purposes, but you will need a terminal program that
is AGW PE compliant such as Winpack if you are running Win2000 or XP.

SYSTEM REQUIREMENTS:
Computer running Win95, 98, 2000, XP, or Vista operating system. Working comport
(1 through 8) if - when - a TNC is available.
Winpack wpsfx680.exe (or two floppy disks for install.)
RMS Link Test.zip

OPERATOR REQUIREMENTS:
Completion of Assignment #2 - All programs downloaded from the
internet and saved to local computer.

INSTALLING WINPACK

1. Run wpsfx680.exe (or SETUP.exe from #1 floppy.)
START/RUN - browse to wpsfx680.exe or just double click on wpsfx680.exe
2. Take all defaults - otherwise you are on your own for later problems.
This should install in c:/winpack and require minimal intervention on your
part. It is not part of the c:/program files system on Windows 2000/XP.
3. When the program group comes up make a shortcut and place Winpack V6.8 on
the desktop. If this is not obvious, go to c:/winpack and make a shortcut
for packet.exe to the desktop. (NOTE: Several hams have reported this
program not running from a desktop shortcut - but this has not been a common
occurrence.)

CONFIGURING WINPACK

NOTE: Winpack has a "nag meter" that appears unless you have paid for a registered copy. Just say OK in the window if needed and move on. Otherwise, the program is full-featured. The author is now a SK, but his friends continue with the website and will accept a registration payment that I believe goes to a cancer research cause. Refer to the website for details http://www.winpack.org.uk/

1. Start Winpack from the desktop shortcut/icon or from
 c:/winpack/packet.exe
2. Across the top row click on OPTIONS/Personal BBS Info
3. The only field that is a MUST is the callsign field. Be certain the callsign you want to use on packet as a keyboarder is in that field.
Click OKAY
4. OPTIONS /Comms Setup - This is where you configure for the TNC if you have one:
 4a. Baud Rate - This is the serial port speed between the computer and the TNC.
 4b. Data Bits 8; Stop Bits - 1; Parity NONE
 4c. Com Port - This is the serial or comport number being used by the TNC.

NOTE: If you need a comport number greater than 4, successive right clicks on the field "Com 4" will reveal comports 5 through 8 and return to 4.

 4d. HOST MODE - (bottom right corner) Use the pull-down menu to observe the choices. For now leave this on NONE for cmd:
 (Native) mode.
 Click OKAY

5. Across the top click on ACTIONS - Click on Auto BBS Disable and leave it with a check mark in front.

Winpack is now installed for keyboard use once a TNC/Radio are installed and the OPTIONS/Com Setup menu is configured for the comport.

Take Winpack down.

TESTING FOR REQUIRED INTERNET ACCESS

Your computer/router must support using several **outbound** IP ports.
Outbound Ports: CMS Access: TCP link to appropriate CMS sites, port **8775**
AutoUpdate: Outbound ftp (passive) connection to ftp.winlink.org port **8777**
Telnet connections: Port **8772** for CMS Telnet sites.
Version/Status Reporting: UDP outbound to winlink.org port 8778

Inbound Ports: The only inbound ports used are the local POP3 (default 110) and

SMTP (default 25) TCP ports. If your current e-mail client (i.e. Outlook Express, Outlook, etc works you should be in good shape.
To confirm your computer will accommodate this take the following action.

A. Put the RMS Link Text.zip file in a new directory:
c:\RMS
B. Unzip the RMS Link Test.exe into the C:\RMS directory.
C. Make a desktop shortcut to the file RMS Link Test.exe
D. Run RMS Link Test.exe – click on Start Test and see if it works!

You should see something like the example below.

Do not continue this installation until the RMS Link Test indicates you can reach the WEB/FTP site and one or more CMS sites.

Possible blocking problems include firewalls in the router, computer OS, antivirus programs, etc.

```
RMS Link Test                                                    _ □ ×
Close   Start Test   About...

Test started 2008/03/04 16:46 UTC (0.1.0.7)

Computer LAN connection found...

Testing Winlink WEB/FTP site winlink.org...
Ping test - response time: 1341 Milliseconds
Database access test - TCP/IP outbound port 3306 - response time: 916 Milliseconds
HTTP access test - TCP/IP outbound port 80 - response time: 91 Milliseconds
FTP access test - TCP/IP outbound port 8777 - response time: 103 Milliseconds
Status report test - UDP/IP outbound port 8778 - response time: 334 Milliseconds

Testing CMS site halifax.winlink.org...
Ping test - response time: 148 Milliseconds
Database access - TCP/IP outbound port 3306 - response time: 69 Milliseconds
Telnet access - TCP/IP outbound port 8772 - response time: 76 Milliseconds

Testing CMS site sandiego.winlink.org...
Ping test - response time: 114 Milliseconds
Database access - TCP/IP outbound port 3306 - response time: 86 Milliseconds
Telnet access - TCP/IP outbound port 8772 - response time: 94 Milliseconds

Testing CMS site washington.winlink.org...
Ping test - response time: 119 Milliseconds
Database access - TCP/IP outbound port 3306 - response time: 60 Milliseconds
Telnet access - TCP/IP outbound port 8772 - response time: 64 Milliseconds

Testing CMS site perth.winlink.org...
Ping test - response time: 429 Milliseconds
Database access - TCP/IP outbound port 3306 - response time: 331 Milliseconds
Telnet access - TCP/IP outbound port 8772 - response time: 338 Milliseconds

Test complete - ready to retest...
```

NOTE; Airmail only needs to be able to reach a CMS site. (Port 8772)

RMS Link Test.exe does not have to be running once you have proven you can reach the sites.

Check the files section of the Yahoo Group for troubleshooting problems with IP ports not open.

This assignment is complete – please file a report as indicated below.

REPORT: In an e-mail to

LOADING_WL2K_USER_PROGRAMS@yahoogroups.com

Subject: NewE-mail Assignment #3

Provide
    Call
    OS
    Will your computer now run RMS Link Test successfully?
    Did you try to configure for a TNC?
    If so- what type?
    If so - were you successful?
    Do you have an e-mail address @winlink.org?
    If so what is it?
    Comments on this set of instructions if any.

* * *

If you do not have an e-mail address @winlink.org you will develop one in a subsequent assignment.

Go right on to Assignment #4MP for Paclink MP

or

NewE-mail Assignment #4Airmail for Airmail.

Ultimately you can do both if you like.

ASSIGNMENT #4 Airmail –
Installing and configuring the Airmail Program, creating an Internet Access (Telnet) link, making your first WL2K connection, getting registered for a WL2K e-mail account, and your first E-mail with Airmail. (Windows 95, 98, 2000, XP, Vista) No TNC required.

POSTED – March 16, 2008

INFORMATION: Airmail is a complete stand-alone package for e-mail over Ham Radio for either Pactor on HF or Packet (ostensibly on VHF or UHF.) It contains a complete message management system, address book, etc., and an "Outlook Express Look-alike" E-mail Client. The Airmail program was originally written for HF Pactor and has been the mainstay program for all remote user access on HF, as well as for many users of commercial e-mail services such as Sail Mail. An accompanying HF propagation program may be integrated to provide those inexperienced with HF help with links from distant points to WL2K e-mail servers called Remote Mail Servers (RMS Pactor.)

NOTE: Airmail's Packet Client is not yet AGW PE compliant, thus the list of supported TNCs is somewhat short. (The AGW TNC selection is in there now, but is not active.) Airmail does not support –SSIDs or nested packet connect scripts thus limiting its use in extended packet networks. The present scheme for making packet connections is somewhat awkward for the experienced packetter, but should not adversely affect making connections once understood. 1

SYSTEM REQUIREMENTS:
Computer on the internet running Win95, 98, 2000, XP, or Vista operating system. Working comport (1 through 6) when a Data Controller/TNC is available. File amhc32035.exe (or two floppy disks for install.)

OPERATOR REQUIREMENTS:
Current Amateur License; completion of Assignment #3.

INFORMATION: It is necessary to establish an e-mail account (yourcall @winlink.org) using an RF or telnet link to a CMS before being able to use the WL2k e-mail system. The very first time you link to a CMS your e-mail account will be registered. However, you will not be able to received email in to this account until you first SEND an e-mail from the account to any legitimate e-mail address (later in this assignment!)
What call sign should you use for YOUR WL2K account? In packet networking each amateur radio call sign may support up to 16 individual calls (i.e. packet stations) on a single frequency within the radio horizon. This is effected by the use of a Secondary Station IDentifier (SSID) made by the call sign followed by a dash and a numeral from 0 -15. The base call -0 is understood when there is no -n used. Examples of calls are

N4ABC
N4ABC-1
N4ABC-6

At the present time, Airmail does not support SSIDs, so you must use your standard call w/o an SSID for this exercise. Your resulting e-mail address will be yourcall @winlink.org. There will be more information later regarding SSIDs with WL2K.

Paclink MP is clearly the best choice of user programs for WL2K packet.

INSTALLING AIRMAIL –

1. Run amhc32035.exe (or amdisk1.exe from #1 floppy.)
START/RUN - browse to amhc32035.exe or just double click on amhc32035.exe.

2. Take all defaults - otherwise you are on your own for later problems.
This should install in c:/airmail and be quite straightforward.

3. A shortcut to Airmail3 will be on your desktop. If this is not obvious,
go to c:/airmail and make a shortcut for airmail.exe to the desktop.

CONFIGURING AIRMAIL

NOTE: When Airmail starts it is ready to be configured for HF PacTOR, vhf Packet, or Internet Access (Telnet Client.) It is not necessary for an HF data terminal or a packet TNC to be connected to the computer while configuring.

1. Start Airmail from the desktop shortcut/icon.
2. Across the top row click on TOOLS/OPTIONS/

AIRMAIL OPTIONS SCREEN

CONFIGURATION TAB -This for HF PacTOR only and will not be configured at this time.
If you need this, join ttp://groups.yahoo.com/group/airmail2000 and ask for help.

3. Click on MODULES tab then fill in as in the graphic below:
3a. Enable Terminal Window, VHF Packet Client, and Internet Access (Telnet)
3b. Have check mark on Show in Task Bar in all three.
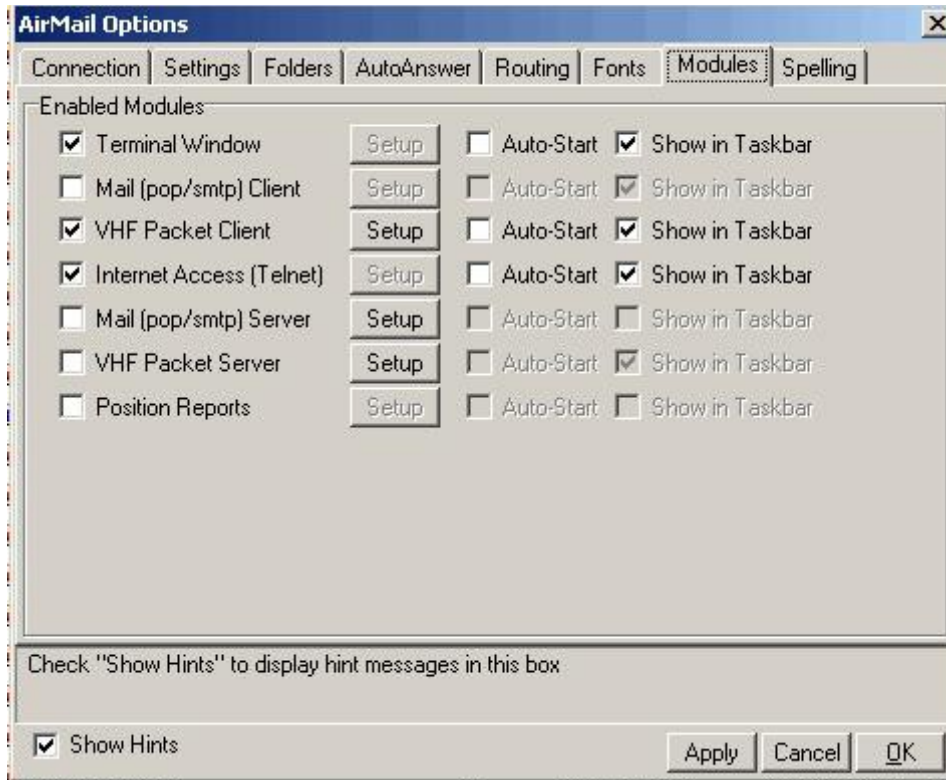
4. Click on SETUP to the right of VHF Packet Client.
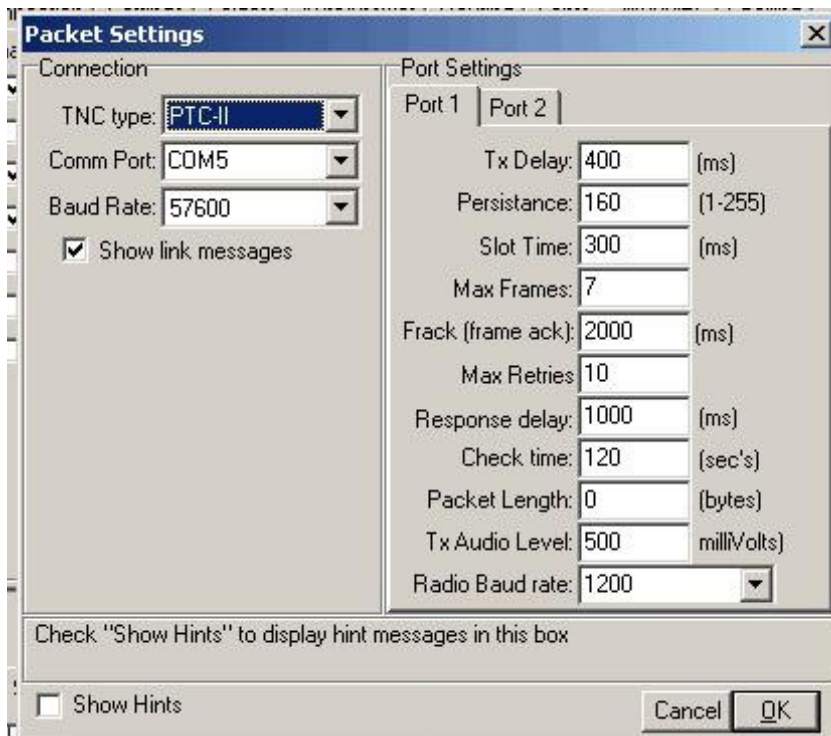
PACKET SETTINGS SCREEN
(For information so you'll know where to find it later!)

16

Connection (left side) This screen is where you select the TNC type, comport and comport baud rate if/when you have a TNC attached to the computer. Port Settings - This is where you will set the tnc packet parameters.

We will not configure this section in this assignment. If you need this, join http://groups.yahoo.com/group/airmail2000 and ask for help For now - click on

> CANCEL

then

> APPLY

which will take you back to the main Airmail [Message Index] Screen.

NOTE: Airmail is now installed and ready to be configured for a data terminal on HF or a TNC on VHF packet.

Across the top click on MODULES then Internet Access

This brings up the Internet Access (Telnet Client) screen.

Across the top click on NEW which brings up the Telnet Settings Window.

In this window you will configure this Telnet Client for targeting the WL2K Central Message Server (CMS)

5. Put your call sign in as the Local callsign, and fill in the rest of the screen as shown in the graphic.

Click on OKAY to be returned to the Internet Access Screen
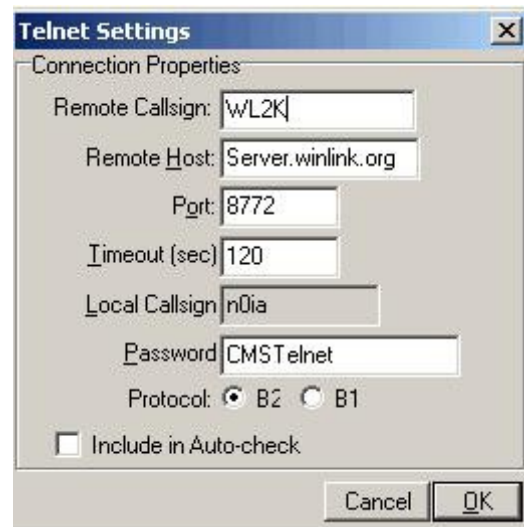
**MAKING YOUR FIRST WL2K CONNECTION AND REGISTERING WITH WL2K
(Your computer must be on the internet to complete this exercise.)**

Note that **WL2K** is now in the Connect to: Window.

To the left of the Connect to: window are four Icons:

      Green "Go" light
      Red "Stop" light
      Handshake icon
      Keyboard icon

6. Be sure the handshake icon is highlighted.

7. Click on the Green GO light and watch the screen.
If all is okay, you have just been registered with yourcall@winlink.org.
NOTE: You will not be able to receive e-mails until you have sent an e-mail
using the account yourcall@winlink.org

Take Airmail down.

NOTE: If you have (1) previously sent AND received e-mails using this account,
AND (2) know how to access your account at Winlink Webmail, you have completed
all you need to do with this assignment. Go to **REPORT** below.

INFORMATION: Do you have spam block set up on your main commercial e-mail
account? If so, it is recommended you put the domain @winlink.org on the
safe or white list on your commercial account in order to not have messages from
your WL2K account be blocked. Unless you do this you will not be able to
receive e-mail into your regular e-mail account from winlink accounts - and it
may be yourcall @winlink trying to get through!

SENDING AN E-MAIL MESSAGE FROM AIRMAIL

Start Airmail from the desktop shortcut/icon.

This brings up the Airmail [Message Index] screen. This is where you will
start any new e-mail message.

1. Click on FILE/NEW - that brings up the Airmail E-mail Client and the
Address Book window.

2. In the Address Book click on NEW - This brings up the Address Properties
window.

3. In the NAME field at the top enter "yourcall at home" w/o the quotes
(where yourcall is your call!)

4. In the TO field enter your commercial e-mail address to get e-mail at home.

5. In the OPTIONS - Post VIA field enter "WL2K"

6. In the upper right corner click OK

That takes you back to the Address Book window.

7. Highlight "yourcall at home" and click on OK.

This takes you to the Airmail E-mail Client ready for entry of an e-mail.
The TO field should look like this:

TO: "yourcall at home" <your email address at home>

8. In the cc: enter N0IA-11@winlink.org; N4ZZO-2@winlink.org

NOTE: Be sure and get the numeric zero and alpha O correct!

9. In the Subject field enter **Assignment #4Airmail** (your call)

NOTE: Please use the precise phrase in the Subject "Assignment #4Airmail"
(There is a space before the # and #4Airmail has no spaces.)

10. In the large lower window enter any comments you may have as text for
this e-mail.

11. Confirm that in the far right end of the TO line the POST VIA field has
WL2K in it.

12. Along the top row of icons, right under Tools is a mailbox icon.
Click on the Mailbox Icon. That will POST the message to the Airmail Outbox
- ready to send the next time Airmail links to a CMS

If you have not been returned to the OUTBOX- click on it on the left side of
the screen.

You will see the message header with the mailbox icon in front of it. That
signifies that it is ready the next time you link to a CMS.

You should be at the Airmail [Message Index] window.

NOTE: Your computer must be on the internet to complete this exercise.

13. Across the top click on MODULES/Internet Access

14. Click on the Green Go button when you are ready to send the message.
Watch the screen! Your message should be sent.

15. After ten minutes or so (be patient) go to your conventional e-mail account and poll - you should receive the message from yourcall @winlink.org.

16. Wait 30 minutes or so after step 15 (be patient) then return and repeat steps 13 and 14. Read the following now then continue con at 16.a.

Within 30 minutes or so you should receive a message from N0IA-11@winlink.org and one from N4ZZO-2 @winlink.org. Wait until you receive any one of these or the one to your commercial account before continuing with this exercise.

NOTE: Because these two messages come from Winlink accounts with -SSIDS they will not end up in your Airmail INBOX but in the TRANSIT folder. (I assume that once Airmail can handle SSIDs that will not be the case.)

      16.a While waiting that hour continue on . . .

SETTING UP YOUR WL2K E-MAIL WEBMAIL ACCOUNT –

Point your browser to www.winlink.org

Click on Webmail.

This brings up the Login Screen.

Read the HELP provided to understand how this works.

Return to the Login Screen.

Put your callsign in the upper field as required.

Drop down and Click on "Send me my Password" in field below.

Wait 15 - 20 minutes then return to Airmail and repeat steps 13 and 14 above - you are not sending another message, you are just polling to receive a message back from this request for a password. Watch in the telnet screen as the message comes in. You will see

"Winlink Password"...Decoded OK

Return to the Airmail [Message Index] screen and look in the INBOX for your message. Open the message and you will find your password. If this is the first time you have retrieved your password remember to return to the webmail site and change it. . . . and remember the new one.

This is your main WL2K Password for using WL2K Webmail and will be referred to later as your **BASE ACCOUNT PASSWORD**.

If it has been long enough since you sent that first e-mail you may also have

received some replies from it! If not, wait a while longer before polling again.

HOW IT WORKS - As with most high technology, WL2K is quite complex. However from a remote user perspective who has the programs configured, there is only one goal: to transfer and receive internet e-mail through WL2K: To do this the user must make a connection to a WL2K CMS. You have just done that using Internet Access over the internet.

NOTE: If you have an HF data terminal or TNC and want to configure them consult airmail2000 yahoo group if you need help right away.
http://groups.yahoo.com/group/airmail2000

REPORT: In an e-mail from your normal e-mail account to the

LOADING_WL2K_USER_PROGRAMS@yahoogroups.com

Subject: Airmail Installed!

Report the following:

CALL
OS
How long did this assignment take?
List any suggested edits/changes to the instructions.

Following Yes or No

HF data terminal?
If Yes - is it configured in Airmail?
Packet TNC?
If Yes - is it configured in Airmail?
Do you have an e-mail address @winlink.org?
If so what is it?

* * *
Go right on to Assignment #4PMP

ASSIGNMENT #4 PMP –
Installing the Paclink MP program, registering for a WL2K account, configuring a connect channel for Telnet Client, configuring your WL2K E-mail account in Outlook Express (OE,) and sending your first E-mail using WL2K.

POSTED March 16, 2008

Estimated Time: 30-45 minutes after reading the introductory information.

NOTE: If you presently have Paclink Post Office and Paclink AGW configured with an e-mail client on your computer do not use this assignment to "upgrade" to Paclink MP. See the files section of the Yahoo Group – look for folder

Paclink MP in place of Paclink AGW and get the assignment
        Update Paclink AGW to Pacllink MP.pdf

INFORMATION - Paclink MP supports linking to WL2K Central Message Server (CMS) in two ways: (1) Telnet client over the internet and (2) Ham Radio bands using a data terminal (i.e. TNC) to a radio. To use the Ham Radio bands Paclink MP supports using TNCs in two ways:

Direct in Host mode for those TNCs that support HOST mode:

Via AGW Packet Engine to one or more supported TNCs in KISS mode.

Unless you have the need to address a single TNC/Radio with more than one program, you will concentrate your over-the-air packet activity using Paclink MP Packet TNC channels on vhf/uhf or Paclink MP Pactor channels on HF.

NOTE: Not all multimode TNCS support Pactor

NOTE: Not all TNCs support HOST Mode but most support KISS mode.

If your TNC will not support HOST mode – or you need to use the same TNC/Radio for WL2K access (Paclink MP) and other services such as APRS, RMS Packet (which replaces Telpac Gateway,) keyboarding with other terminal programs such as Winpack, etc., you will need to install AGW PE (free) - or AGW PE Pro if you like, and use Paclink MP Packet AGW channels. (Covered in later assignment(s.)

Your single install and configuration of Paclink MP will support both methods, direct via Host mode and via AGW PE in KISS mode.

Paclink MP links your E-mail Client (i.e. Outlook Express, etc.) to the outside world through one or more radios and/or the internet. In either case, the ultimate target for the connection is a WL2K Central Mail Server (CMS.)

Connections are made by creating Paclink MP "Channels" which are configured for connect scripts to reach the targets. Each channel only links to a single target. Many channels may be established, saved, and recalled for use when needed. Channels are assigned a priority 1-5 so that in automatic mode connections are tried to targets in priority order. If one fails the next is tried, etc.

NOTE: Those with Win95/98/ME will not be able to do this assignment, but need to be familiar with the information.

SYSTEM REQUIREMENTS:
Win2000, XP, or Vista computer on the internet; Outlook Express or other e-mail client; successful test of RMS Link Test.exe.

OPERATOR REQUIREMENTS:
Current Amateur Radio license; Completion of Assignment #3.
NOTE: Paclink MP has Windows Help files – so if you run into problems, first try that source to get you on the right track.

INSTALLING PACLINK MP

With Outlook Express NOT RUNNING and with the computer on the internet-

> **1.** RUN or Double click on the downloaded file *Paclink MP Full Install.zip*. Unzip/extract all the files. Pay attention to the folder where the files are extracted.

> **2.** START/RUN/Browse to that folder and select Paclink MP setup.msi, then click *OK*.

> **3.** At the first screen click *NEXT*

> **4.** At the next screen check *Everyone* and accept the default install folder c:\Paclink MP and click on *NEXT*

> **5.** Click on NEXT; wait for the install to complete then click CLOSE.

> **6.** Using Explorer, find c:\Paclink MP\Bin and right click on *Paclink MP – the application* (largest of the two Paclink MP files) – Send TO Desktop. That will put a shortcut to Paclink MP.exe on the desktop.

<p align="center">Configuring Paclink MP</p>

At the Desktop double click on the *Paclink MP Icon* – a thin update window may appear then disappear, unless there is an update that requires your approval.
Do not approve the update until further notice.

You will see the Paclink MP (. . . Initializing Window) which will end with Please standby . . .Then a larger Base Callsign/Sysop Registration window will

appear in front of the Initializing window. (If not – click on
FILES/Registration.)

Registering Paclink MP – (See next graphic – Base Callsign/Sysop Registration.)

NOTE: This information is case insensitive – lower or upper case reverts to
upper case**.**

As a minimum –

1. Enter your ham call WITHOUT SSID as the BASECALLSIGN
2. Enter your Winlink Base Account Password 1 – do not use your callsign.
3. Enter your grid square
4. Enter your name
5. Enter your commercial e-mail address 2
6. Enter street address, city, state, country, and zip code
7. Click on *UPDATE*

(This should take you to second graphic following.)

_____

[1] Letters and numbers between 4 and 12 characters long (case insensitive)
[2] Before this exercise is over – be sure your commercial e-mail account will
accept messages from @winlink.org domain.
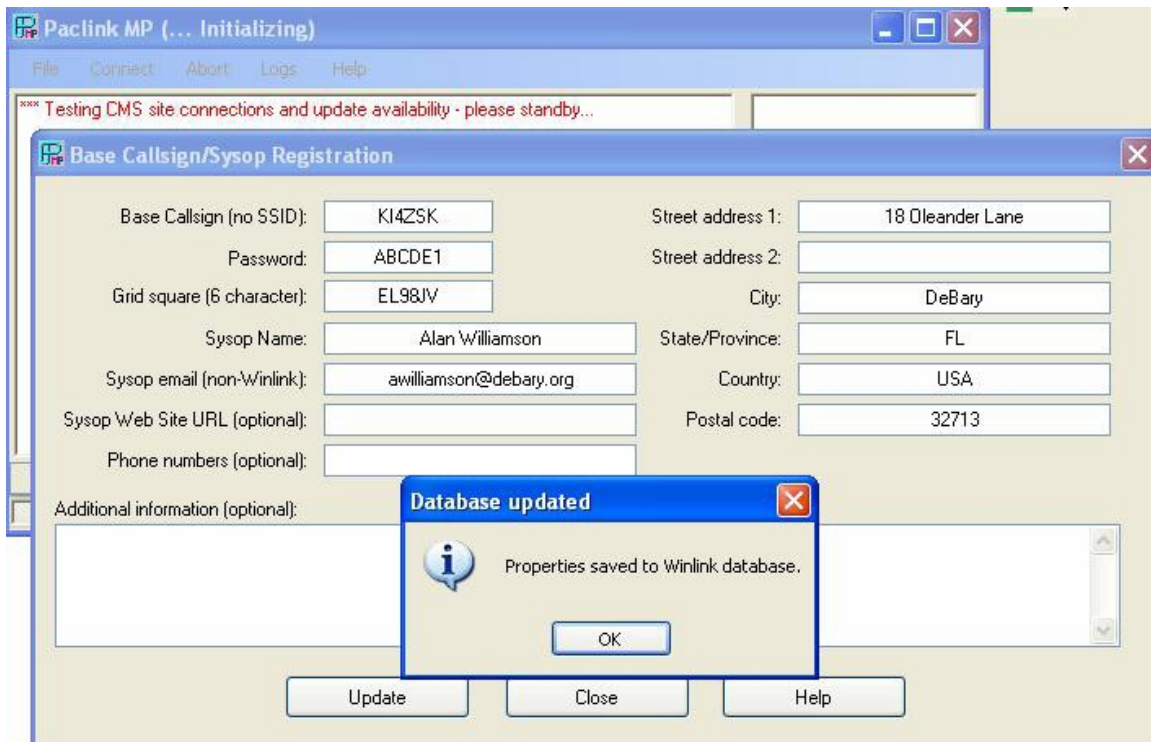
If all is well, you will see a small window indicating properties saved to Winlink
database. Click *OK* - If an error message is presented just get past it.

The Paclink Site Properties window will appear. The Callsign field will likely have yourcall-8 (i.e. with an ssid of -8.)
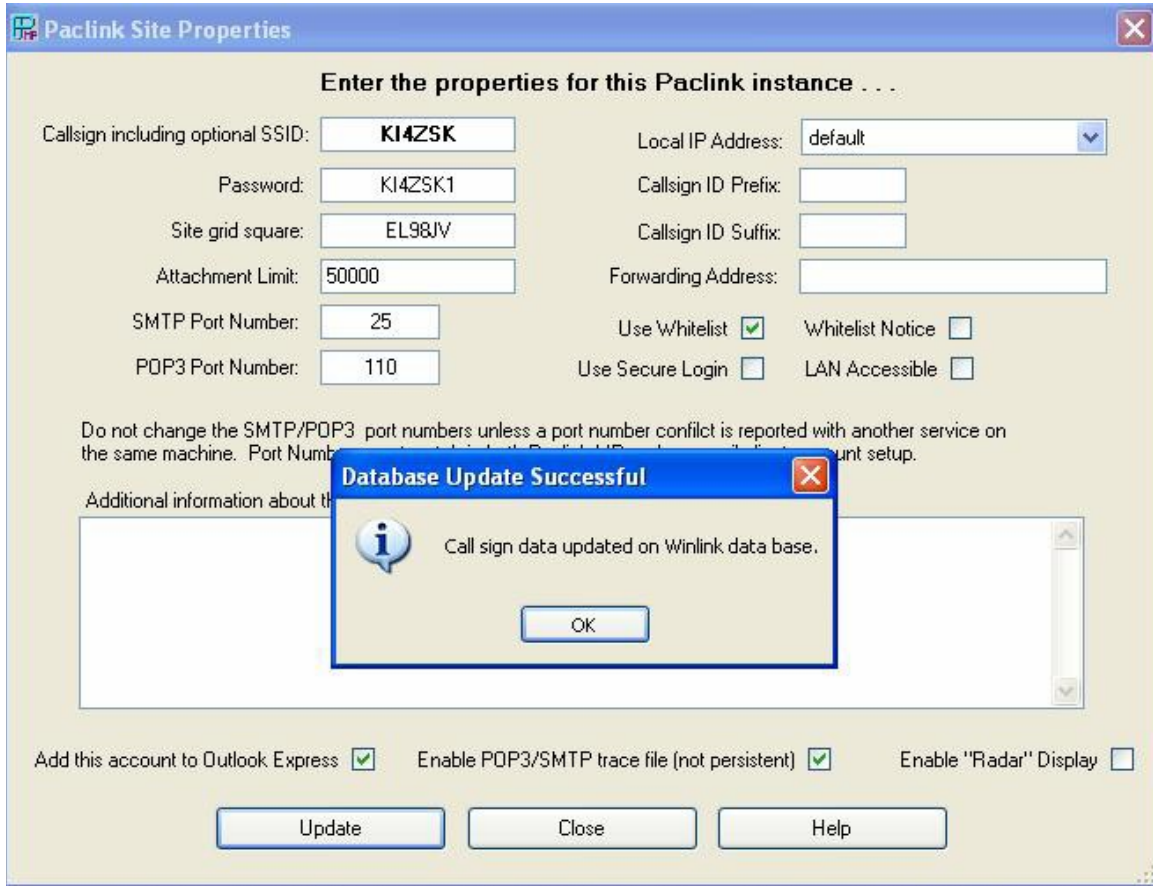
Configuring Paclink Site Properties (previous graphic)

1. Fill in the call sign of the e-mail account you are preparing – If this is your first install of Paclink MP do not use an SSID.
2. Fill in the *e-mail password* you will use for this Outlook Express account.3
3. Fill in the grid square if it is not correct.
4. Defaults for attachment limit, port numbers, and local IP address should work for now along with Use White List checked.
5. CLICK ON **ADD THIS ACCOUNT TO OUTLOOK EXPRESS**
6. Click on enable POP3/SMTP trace file.
7. Click on UPDATE

A window indicating the call sign data has been updated on the Winlink database should appear.

CLICK *OK*

You will be notified that the account has been added to Outlook Express.

CLICK *OK*

DO NOT START OUTLOOK EXPRESS AT THIS TIME

This should revert back to the original Paclink MP window which will now have a title Paclink MP <accountname> and indicate

Paclink MP Ready

NOTE: If the RED UPDATE field appears in the upper right corner, click on it to update the Paclink MP program. It should be totally automatic, and will take a minute or so.

CONFIGURING CMS TELNET CHANNEL

Across the top of the Paclink MP screen click on FILE and curser down to **Telnet Channels** – Left Click

The Telnet Channels window appears – Fill in as shown here:

Click on *Add New Channel*

Back to Paclink MP screen.

_____

[3] Not a security issue. I suggest using your call followed by a 1 w/o SSID (i.e. WB4ABC1)

TEST THE CMS TELNET LINK – At the top of the Paclink MP Window click on Connect/*Autoconnect*. It should work like this.
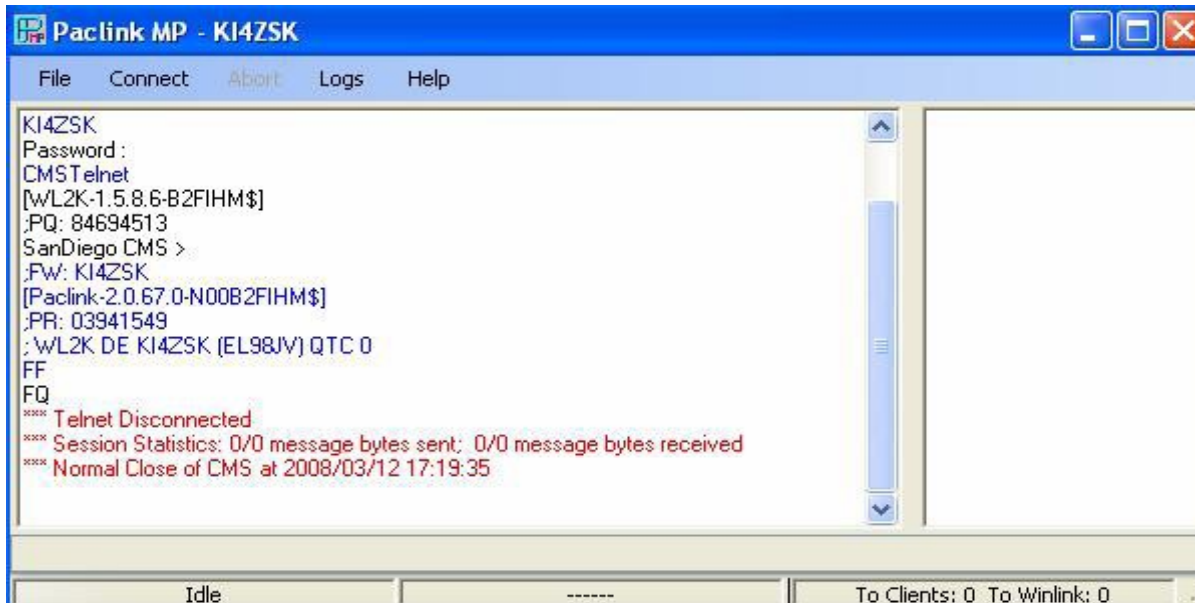
TESTING WL2K PACLINK MP WITH OUTLOOK EXPRESS

With Paclink MP running -

1. Start Outlook Express – A window requiring the password for the new e-mail
account will appear as on the right.
2. ccount (from step 2 above) – click *OK*
3. Back to the Outlook Express main screen.
Across top click on **Tools,** and curser down
to click on ***Accounts***.

Your new account should be on the list as shown below.
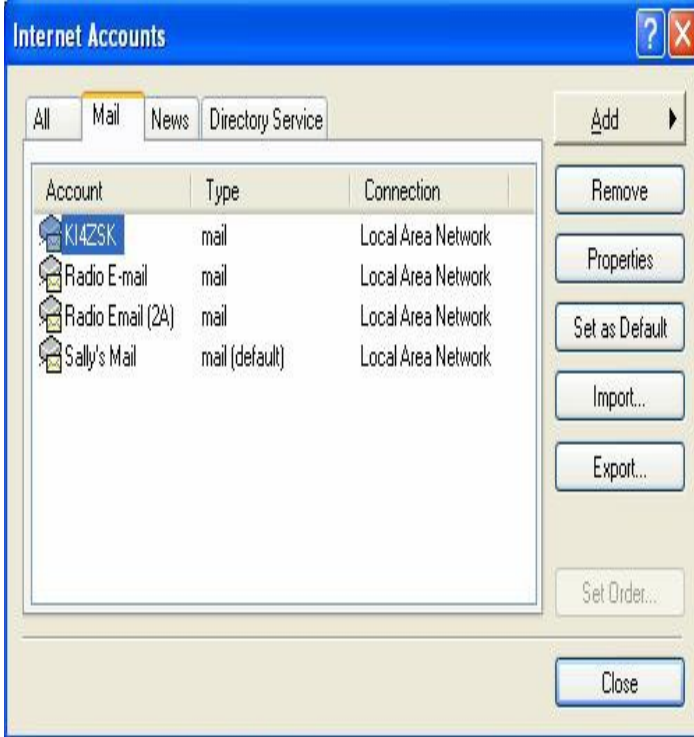
4. Click *Close* and return to the main Outlook Express screen.

5. Across the top you should find a *SEND/Recv* button with a pulldown arrow. Pull the arrow down to see the list of active e-mail accounts on this computer.
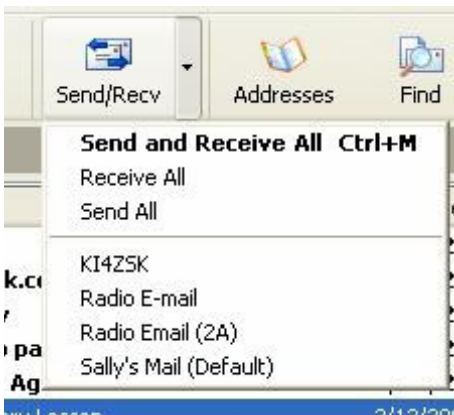
6. Click on your new account – you will see the screen momentarily flash while Outlook Express polls Paclink MP for any new mail.
If you do not see an error message from Outlook Express you now have an active Ham Radio account.

NOTE: Remember that you must have Paclink MP running on the computer in order to poll or send with the Ham Radio account.

FYI – In Tools/Accounts – highlight your Ham Radio account then click on *Properties*. At the General Tab note the bottom line:

"Include this account when receiving mail or synchronizing."

Any e-mail account with that line checked will be polled every time you look for e-mail. If an e-mail server, such as your ISP or Paclink MP can't be found you will receive an error message.

SENDING YOUR FIRST E-MAIL FROM THE HAM RADIO E-MAIL ACCOUNT

Create a New Mail message. (File/New/Mail message) using the Ham Radio account.

28
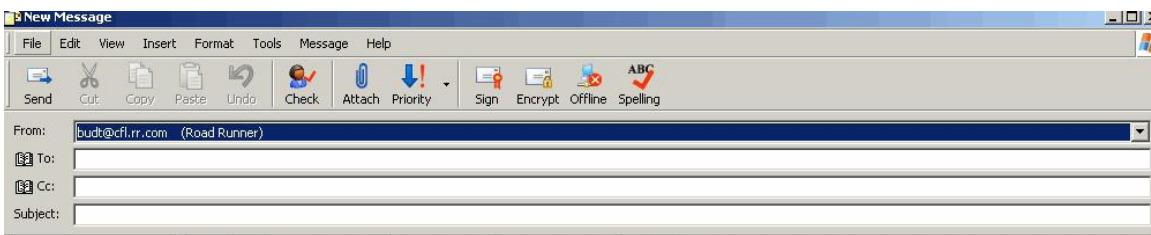
NOTE: If there is only the default e-mail account in the From window use the pull-down arrow at the far right to find the Ham Radio E-mail account.

1. Set up this message To: N0IA-11@winlink.org.

Setup cc: N4ZZO-2@winlink.org and also cc: your commercial e-mail account.

(You have cleared incoming mail from @winlink.org haven't you?)

2. Subject: NewE-mail Assignment #4PMP <yourcall>

NOTE: Make the words "Assignment #4PMP" exact so N0IA-11 can send an automatic reply!

3. TEXT - report the following in the text:

Your call
OS
How long did this assignment require?
What is the last date modified of the instructions you used?
What version of Paclink MP do you now have? (Look in Help/About)
Include any suggestions for corrections, additions to the detailed instructions.

4. After checking the entries, SEND the message.
5. Go to the Paclink MP screen and click on Connect/Autoconnect. Watch the Paclink MP screen for the Telnet exchange.

When the e-mail is received at N0IA-11 you will get an automatic replay message. Check in about an hour and poll for new e-mail by repeating step 5 above. If you see the e-mail coming in Paclink MP, then poll for e-mail using Outlook Express
  – SEND/RCV .

  ***
Go right on to Assignment #5

ASSIGNMENT #5 –
CONFIRMING THE TNC WORKS

REQUIRED: TNC with RS-232 to computer comport. (Sound Card applications not covered here.)
No radio required

POSTED – March 26, 2008

Time required – Minutes if the TNC is working – wasted hours if not!

SYSTEM REQUIREMENTS:
Computer on the internet running any MS Windows OS. Working comport (1 through 8) Winpack program installed.

OPERATOR REQUIREMENTS:
Completion of Assignment #3.

INFORMATION: It is imperative that the TNC functions normally in native (AX.25) mode and that you can communicate with it from the keyboard. Assuming the TNC is stock and really does work, this will require knowledge of:

> Serial **baud rate** for communicating with the computer over the RS232 connection.
> Which **comport number** is being used.

1. With the TNC connected to the computer comport and turned OFF, start Winpack.

2. At the Winpack screen click on OPTIONS/Comms Setup

COMMS Setup window

NOTE The Baud Rate and Comport number for your set up may not be the same as shown in the graphic.

3. Confirm Baud Rate, Data Bits 8, Parity NONE, Stop Bits 1, and comport number.
(Note if your computer comport number is greater than 4, click on the words "com 4" to advance through com 8.)

4. In the bottom right corner select HOST MODE = NONE

Comms Setup [Press F1 For Help]

Baud Rate
○ 1200   ○ 2400   ○ 4800
○ 9600   ◉ 19200   ○ 38400

Connect String
*** CONNECTED to

Data Bits
○ 7   ◉ 8

Stop Bits
◉ 1   ○ 2

Disconnect String
*** DISCONNECTED

Parity
◉ None
○ Odd
○ Even

Com Port
◉ Com1
○ Com2
○ Com3
○ Com4

Editor Line Length
74   characters

Handshaking XON/XOFF ▾

DCD shows con YES ▾
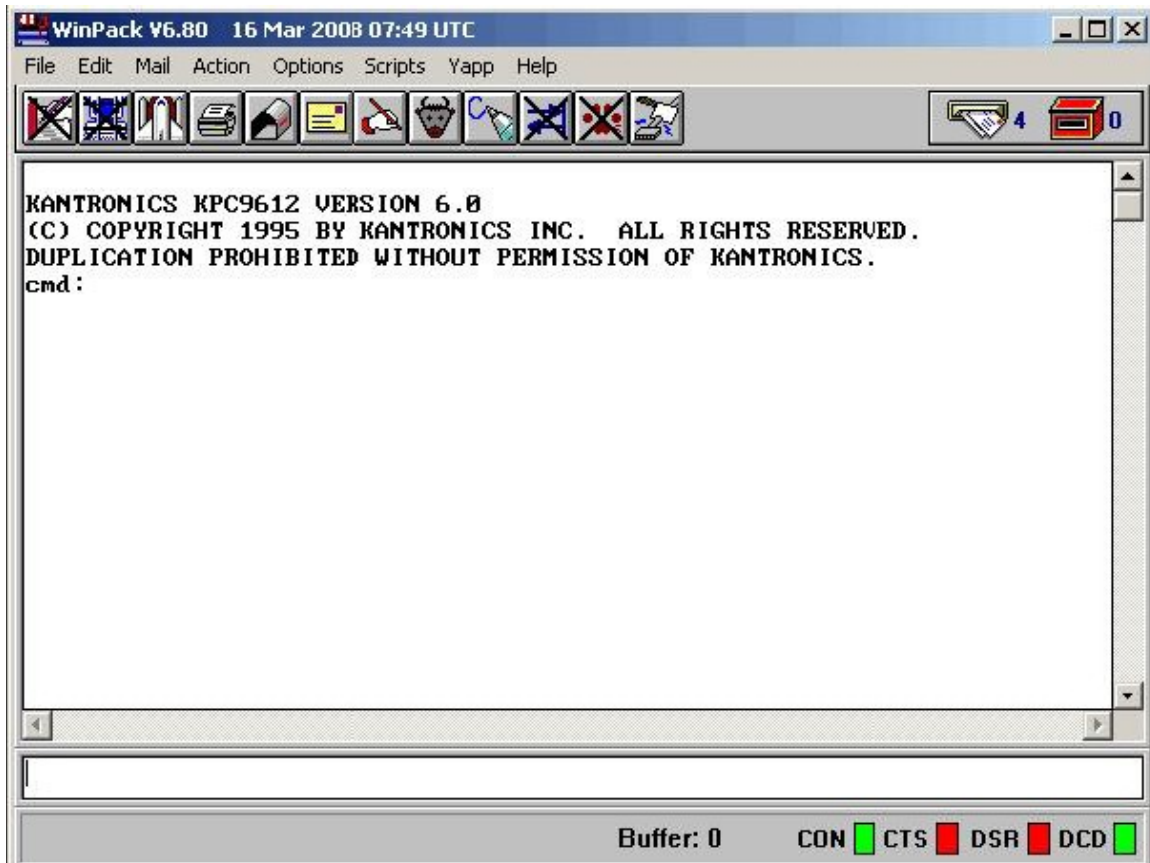
Ok   Cancel   Host mode NONE ▾

NOTE: This is "command" or "native" mode.

Click *OK* – returns to main Winpack window.

5. Turn TNC on.

You should see the sign-on message from the TNC in the upper screen and be able to communicate with it by typing in the lower narrow window. Hit the ENTER key to be certain cmd: appears in the last line on the top, then type mycall <return> to be sure you have the correct mycall in the TNC.

If your call is not the mycall issue the command

      MYCALL <yourcall>
      w/o the carrots.
      <enter>

NOTE: If you did not observe any activity between the TNC and your computer take Winpack down and go now to the Troubleshooting section at the end of this assignment..

NOTE: If you are using a Kantronics TNC that supports the CD command set

CD SOFT
<enter>

Click on OPTIONS/COMMs Set up

COMMS Setup window

If you will be using Airmail skip step 6 and move to step 7.

6. In the bottom right corner select **HOST MODE = AGW**

NOTE: This is the AGW mode. The next time Winpack is started it will be looking for the AGW Packet Engine.

Click OK – brings up a small window reminding that AGW PE is not running.

Click OK returns to main Winpack window.

7. Take Winpack down.

REPORT: In an e-mail from your normal e-mail account to the

LOADING_WL2K_USER_PROGRAMS@yahoogroups.com

Subject: TNC working in native mode!
Report the following:

CALL
OS
How long did this assignment take?
What TNC/data terminal are you using?
What modification date is on the assignment you used?
List any suggested edits/changes to the instructions

* * *

Go on to NEWE-Mail Assignment #6PMP for Paclink MP
or
Go on to NEWE-Mail Assignment #6Airmail for Airmail

Troubleshooting section follows.

TROUBLESHOOTING - (When success is reached shutdown all terminal programs and start again at the beginning of this assignment.) **Start the Winpack Program –**

TS1. When turning the TNC OFF/ON watch to see if there is any blinking of any of the four LEDS (CON CTS DSR DCD) in the lower right corner of the Winpack Screen.

```
WinPack-AGW V6.80   16 Mar 2008 06:47 UTC              _ □ ×
File  Edit  Mail  Action  Options  Scripts  Yapp  Help

Report any problems to N0IA      budt@cfl.rr.com

 1:Fm AI4RI To N0IA-10 Via 386677,N3PPC-8* <RR P/F R1 >[06:47:21
 1:Fm N0IA-10 To AI4RI Via N3PPC-8,386677 <I P R0 S1 pid=F0 Len=
[WL2K-1.5.8.6-B2FIHM$]

 1:Fm AI4RI To N0IA-10 Via 386677,N3PPC-8* <RR P/F R2 >[06:47:24
 1:Fm N0IA-10 To AI4RI Via N3PPC-8,386677 <I P R0 S2 pid=F0 Len=
;PQ: 50115308

 1:Fm AI4RI To N0IA-10 Via 386677,N3PPC-8* <RR P/F R3 >[06:47:25
 1:Fm N0IA-10 To AI4RI Via N3PPC-8,386677 <I P R0 S3 pid=F0 Len=
Perth CMS via N0IA-10 >

 1:Fm AI4RI To N0IA-10 Via 386677,N3PPC-8* <RR P/F R4 >[06:47:27

                        Buffer: 0     CON ▉ CTS ▉ DSR ▉ DCD ▉
```

If there is no blinking at all you likely don't have the correct comport number in the COMS/Setup screen. Change the comport number and do OFF/ON again.

If there is some blinking of the LEDs, the comport number is now correct.

TS2. If there is still no signon message *or readable information* being sent from the TNC the Baud Rate may not be correct. Try another Baud Rate value in COMS/Setup screen.

If there are just a short few unrecognizable characters, the TNC may be in HOST or KISS mode. (See next graphic) The com port and Baud Rate are probably correct. While this may require a Hard Reset, it is best to try to get the TNC back into native mode w/o such drastic measures.
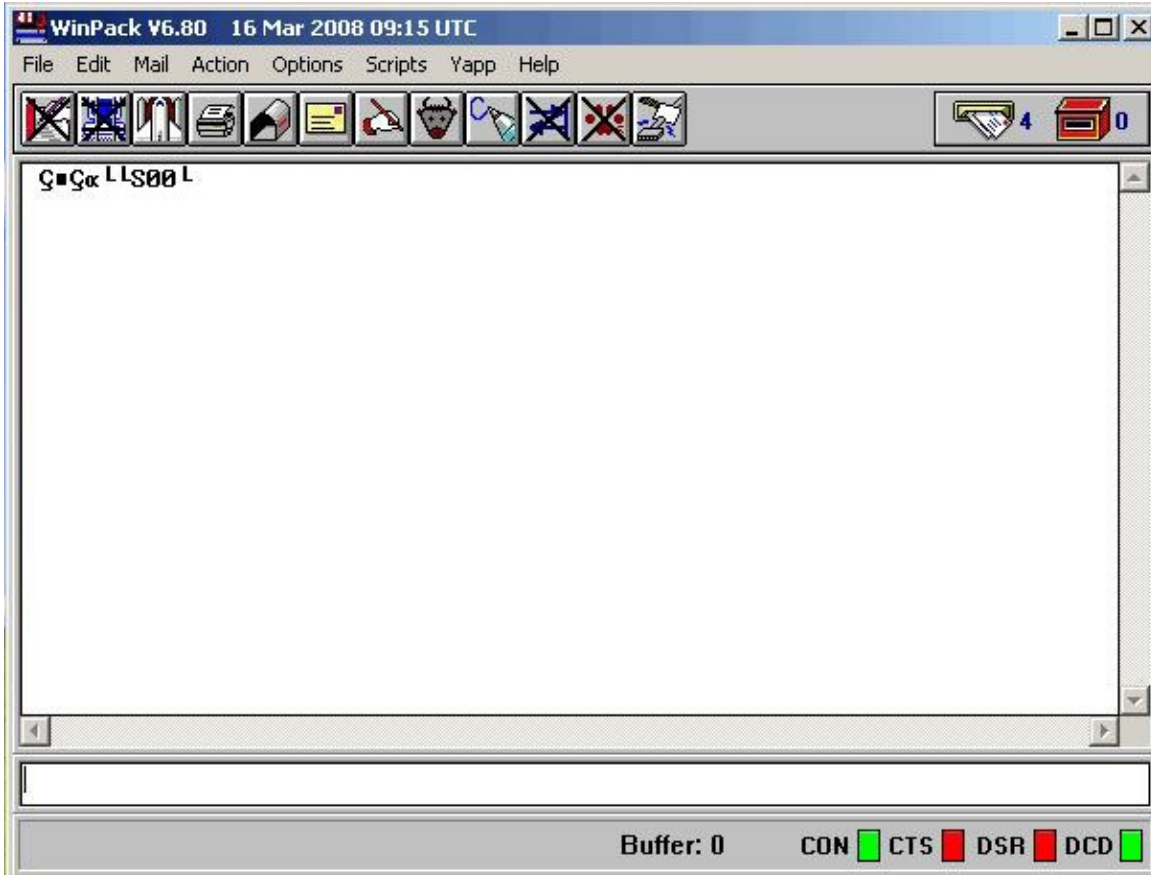
If your tnc is supported by Airmail :

TS3 Bring up Airmail. At the opening Message Index screen click on Tools/Options then select *MODULES TAB*.
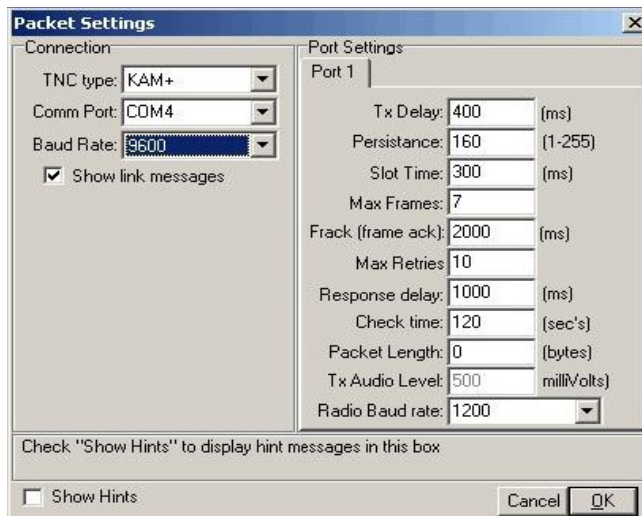
TS3a Set up the three check marks along the left side then click on SETUP opposite VHF Packet Client.
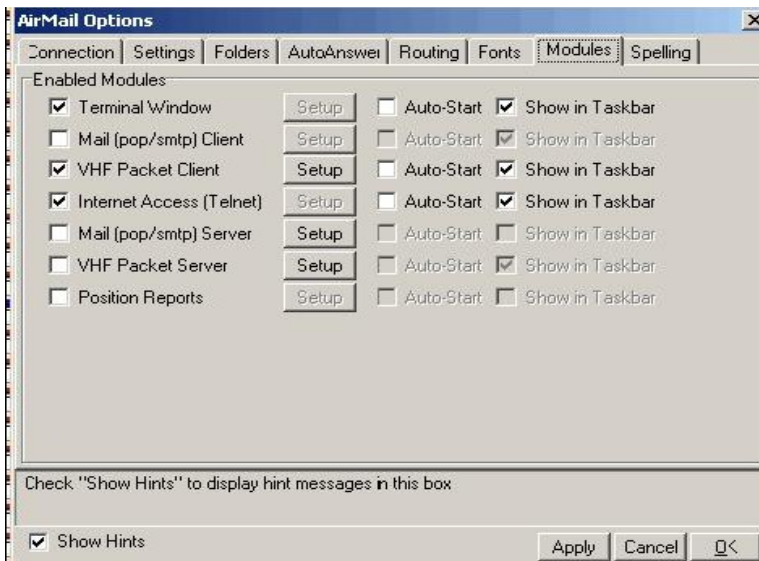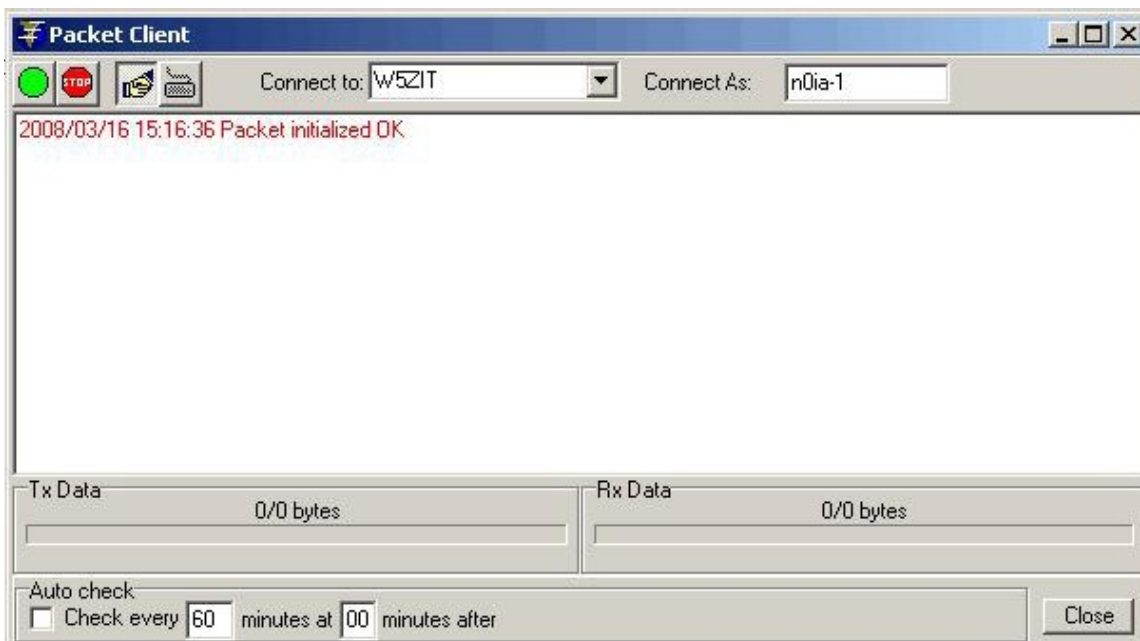
TS3b Using the pull-down arrows select your TNC TYPE, Com Port and Baud Rate. Do not worry about the Port Settings on the right side at this time.

Click on OK
Click on OK –

. . . back to Main Airmail Screen

TS3c – Across the top click on MODULES then Packet Client

TS3d – Click on CLOSE

TS3e – Take Airmail down.

Return to step 5 at the beginning of this Assignment.

No more

ASSIGNMENT #6 PMP –
Installing and configuring AGW Packet Engine free and establishing a Paclink MP AGW channel to use a TNC with AGW Packet Engine.

NOTE: If you have AGW PE free or AGW PE Pro properly installed on your computer you do not need (nor want) to install AGW PE using this Assignment. If that is the case read all this material but start at **Preparing Winpack for AGW PE.**

TNC required
No radio required

POSTED – March 22, 2008

Estimated Time: 20-30 minutes after reading the introductory information.

INFORMATION – Here you will set up for Paclink MP (local server) to link to the outside world through AGW Packet Engine (AGW PE) for RF links via packet radio. Connections are made by creating Paclink MP AGW "Channels" which are configured for connect scripts to reach the target. Each channel only links to a single target. Many channels may be established, saved, and recalled for use when needed. Channels are assigned a priority 1-5 so that in automatic mode connections are tried to targets in priority order. If one fails the next is tried, etc. Any Paclink MP Telnet Channel you have configured and enabled is also in the priority mix.

NOTE: Those with Win 98 will not be able to do this assignment, but need to be familiar with the information.

SYSTEM REQUIREMENTS:
Win2000, XP, or Vista computer on the internet with Paclink MP installed, Outlook Express or compliant e-mail client configured for the Base Account, and the AGW PE free installer executable downloaded during Assignment #2. AGW PE-compliable TNC that has been checked and working on a comport on this computer. (Assignment #5.)

OPERATOR REQUIREMENTS:
Current Amateur Radio license; Completion of Assignments #5

INFORMATION ABOUT AGW PE - There are two versions of AGW Packet Engine. One is free and the other, AGW Packet Engine Pro, costs about $50USD. I have no doubt that the Pro version is a better, perhaps more stable program, and offers a lot more capability, especially in support of sound cards for packet. This assignment will cover installing of only the AGW PE FREE version and only with conventional firmware-based TNCs. (I've had the free version working here for over five years.)

AGW PE can control as many TNCs as you can hang on your computer. Each TNC must be connected to and working with a comport on the computer. AGW PE can manage a dual-port TNC resulting in two radio ports for a single comport. A TNC must support KISS mode and be on the AGW PE list of TNC types for which it has drivers.

A terminal program must be AGW compliant to use a TNC through AGW PE. Winpack and Paclink MP are both AGW compliant. Airmail is no AGW compliant.

NOTE: It is not necessary to have a radio connected to the TNC. If there is a radio connected, turn it off until later.

NOTE: It is necessary to know the serial baud rate of the TNC and which computer comport number it is using.

Preparing Winpack for AGW PE:
(Skip this section if you left Winpack in HOST=AGW)

With TNC Off – Start Winpack

1. Turn TNC on.

You should see the sign-on message from the TNC and be able to communicate with it by typing in the lower narrow window. Type mycall <return> to be sure you have the correct mycall in the TNC.
NOTE: If you are using a Kantronics TNC that supports the CD command set

    CD SOFT
    <enter>

2. Click on OPTIONS/COMMs Set up

COMMS Setup window

In the bottom right corner select **HOST MODE = AGW**

NOTE: This is the AGW mode. The next time Winpack is started it will be looking for the AGW Packet Engine.

Click *OK* – brings up a small window reminding that AGW PE is not running.

Click *OK* returns to main Winpack window.

Take Winpack down.

INSTALLING AGW PACKET ENGINE FREE (AGW PE)

1. Put the AGWPE.zip file in C:\AGWPE folder

2. Run (or double click) *AGWPE.zip*

Unzip all files to C:\AGWPE

3. Using Windows Explorer (file tree) look for AGW Packet Engine.exe. Note the icon – "twin towers". Right click on the file name and SEND SHORTCUT TO DESKTOP. Get out of Explorer and return to Desktop.

Double click on the Desktop AGW PE twin towers icon – agree to the license agreement and the icon will be minimized to the right bottom corner of the screen. The program is running.

Right click on the small AGW PE icon in the lower right corner and a menu will be available.
Click on exit. The small icon disappears. The program is no longer running.

Double click on the Desktop twin towers icon – the AGW PE program will start running and two pop-up windows appear. Eventually they will go away, but once you have read the information in the lower window you can click on each window to get them out of the way sooner.

NOTE: When AGW PE is running the small icon will be in the bottom right corner of the screen. All AGW PE program configurations start with a right or left click on this icon.

CONFIGURING AGW PE FOR A TNC

1. With AGW PE running, click on the small twin tower icon then PROPERTIES.
The RADIO PORT SELECTION window will not have any radio ports.

Click on NEW PORT

AGWTNC note appears - click on OK

PROPERTIES FOR PORT 1 window.
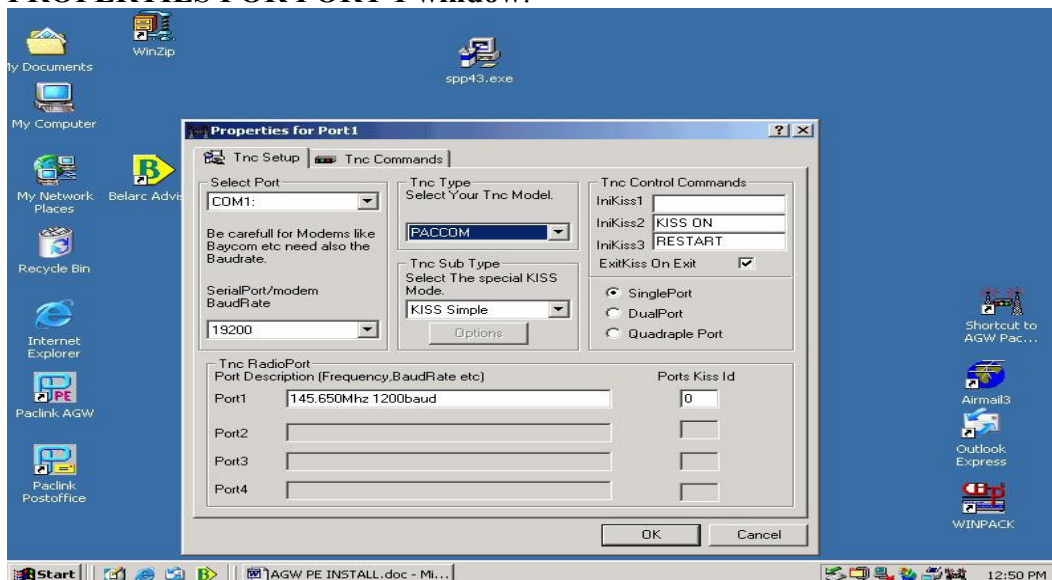
2. Using pull-down arrows set in Serial Port #, and Serial Port Baud Rate (Same as in Winpack.) Select TNC type from pull down list. Generally (i.e. if you are lucky) the Tnc Sub Type, TNC Control Commands, and number of ports will be defaulted properly.

NOTE: Be certain that *ExitKiss on Exit* is checked.

2.a Tnc RadioPort / Port Description – This is alpha information that will allow you to identify this port in AGW PE compliant programs. I normally put the frequency, baud rate, and if there is more than one radio the radio name, etc.

3. Click on TNC Commands tab

TNC Commands – Port1
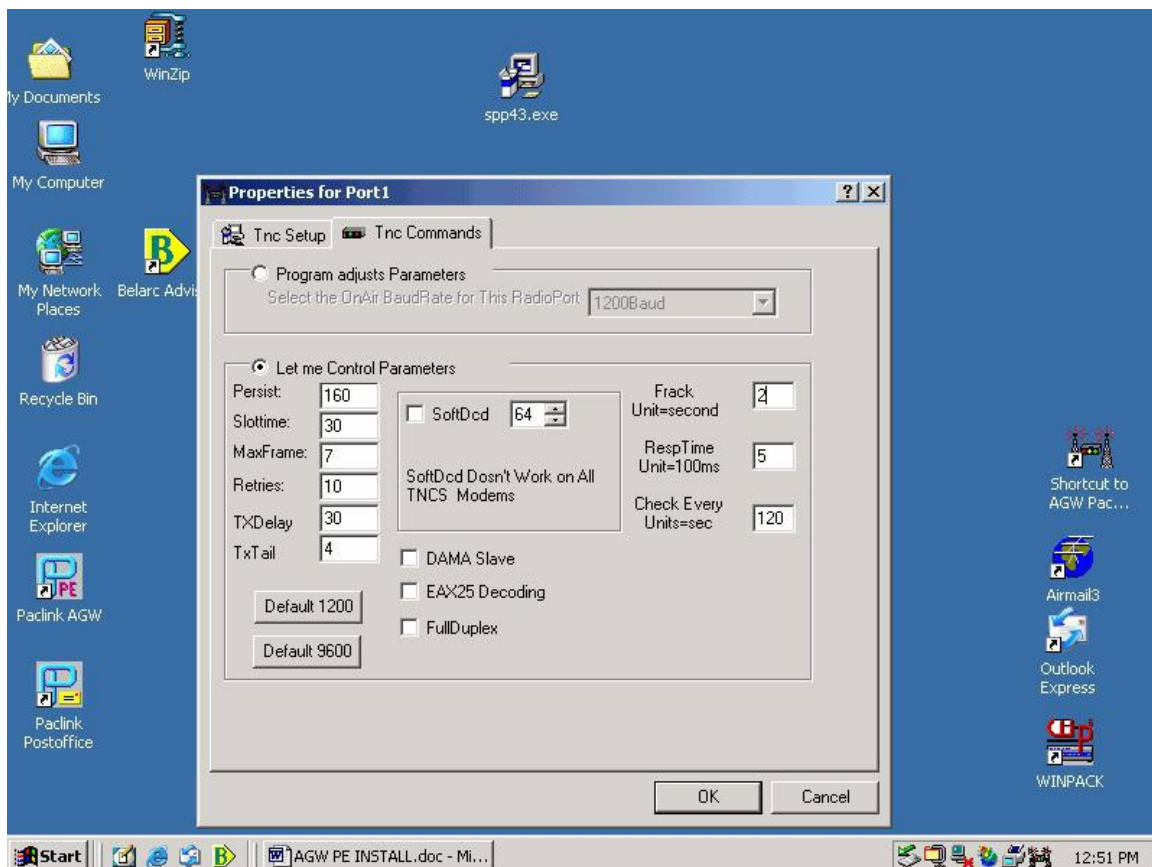
Click on *Let me Control Parameters* and fill in all fields as shown..

If this TNC has DCD state machine, CD soft, etc. click on SoftDcd, leave 64 as default.

NOTE: These 1200 baud parameters will prove to be moderately aggressive and may need to be altered once there is a large number of users on the packet channel.

Click *OK* and then you will have to take the AGW PE program down and then RESTART.

Once AGW PE is running,

Start Winpack.

In the thin bottom window type

> Ports
> <return>
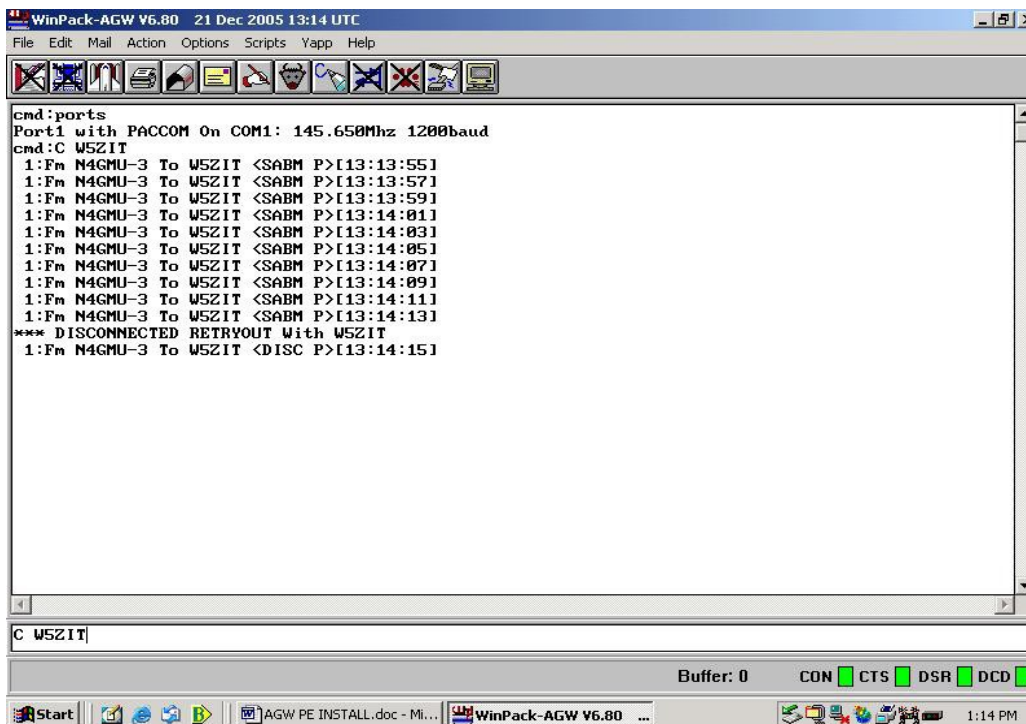
The name of the AGW PE radio port you just configured should be displayed as Winpack Port 1.

Testing AGW PE with Winpack. No radio needed.

In the thin window type a connect request to any station Example:

> C W5ZIT
> <return>

And watch the PTT LED on the TNC. It should blink signifying turning on the radio if there were one. If you have no radio or the target station did not answer, you will see ten (RETRIES) and a disconnect.

The AGW Packet Engine is now installed and working.

You may leave Winpack running as a channel monitor or for keyboarding functions.

CONFIGURING PACLINK MP AGW CHANNELS

Start Paclink MP

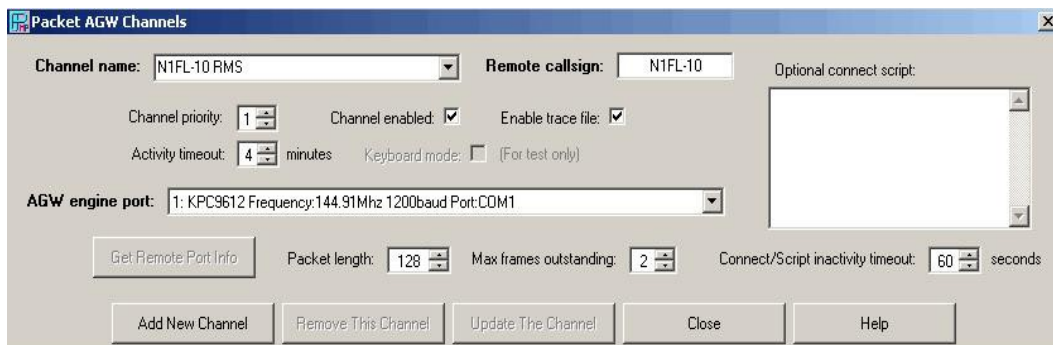In Paclink MP - File – scroll down to AGW Engine and *click*
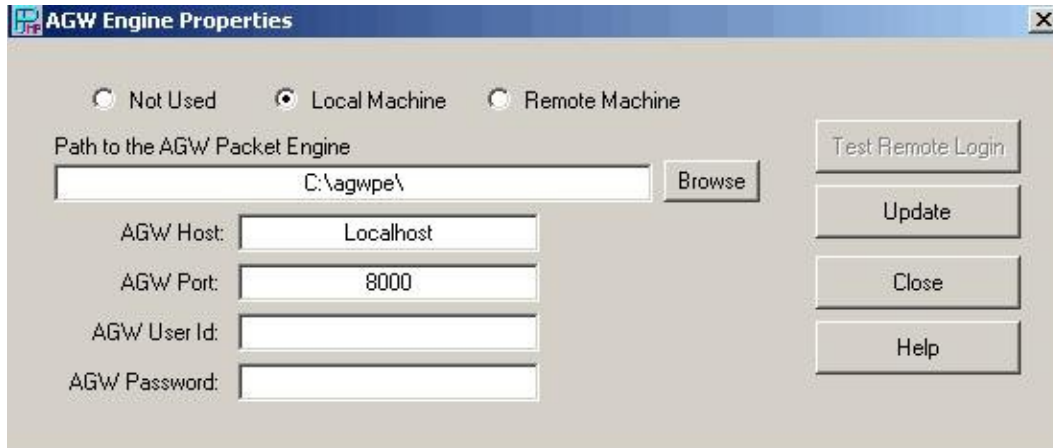
Set up as Local Machine and be sure to use the proper path to the AGW Packet Engine.

Caution – the default may not be where you put AGW PE FREE.

Click on *Update* – back to Paclink MP window

Configuring a Paclink MP AGW Channel to work out to a TNC

   1. In Paclink MP FILE select Packet AGW Channels

2. Packet AGW Channels window.
      Channel Name – This is alpha information that will be on a pull-down menu for
      ID
      Suggest using RMS Packet call as the channel name.
      Remote callsign - Must be the mycall of the target station (probably an RMS
      Packet)
      Channel Priority – Set this to 1 since it is the only AGW channel.
      Channel Enabled. – Enable this channel to have it appear on the Connect pull-
      down menu.

Enable trace file – Check this to assist in debugging problems.
Activity timeout – 4 minutes. Keyboard mode box is grayed out.
AGW engine port - Use pull-down arrow and select desired AGW PE Port
Packet length – 128 for now
Max frames – 2 for now
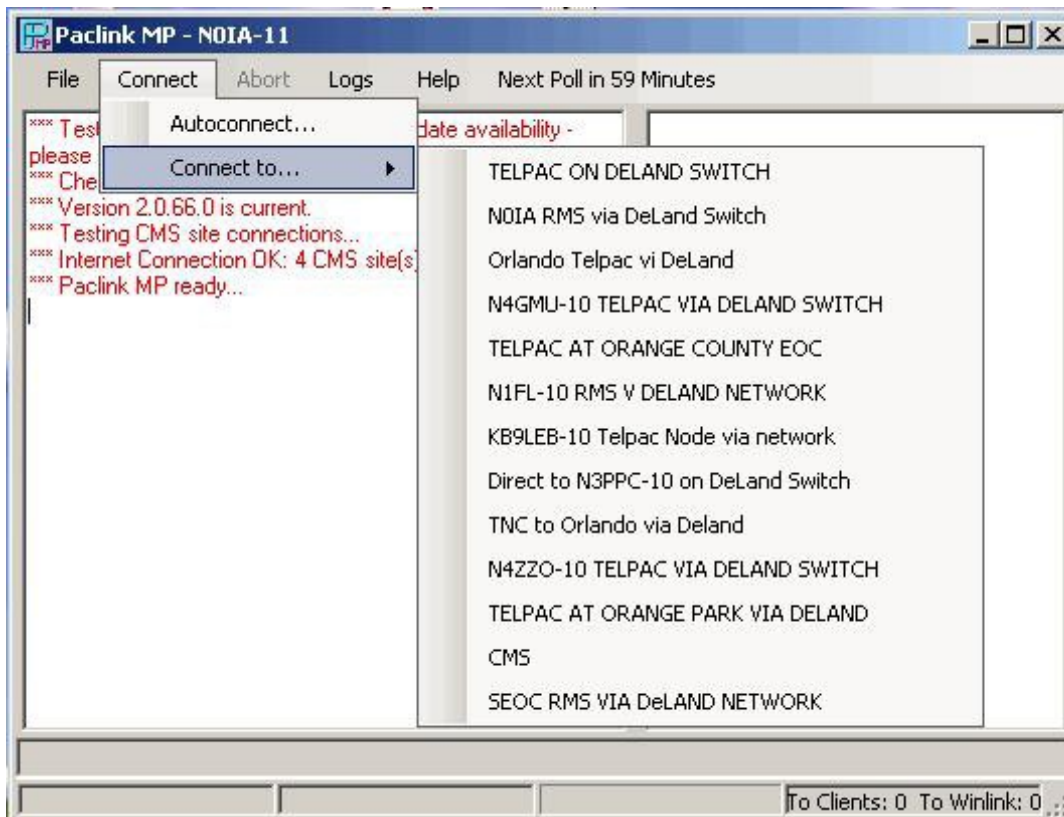Connect/Script inactivity timeout 60 seconds for now.

Review your entries then

Click *Add New Channel*

Packet MP Window –

5. Click on Connect, and then hold mouse over Connect for the pull down menu.

You will see a list of ENABLED channels.

6. Click on the Paclink MP AGW channel just created.

The TNC PTT LED will blink signifying trying the connection. Unless you have a real target available via the packet radio channel, the link will time out as did the test with Winpack.

The windows will provide information during the process of linking as well as during the exchange if a link to as RMS Packet is made.

7. If you have an RMS Packet Node or Telpac Gateway within range and can use packet:
Set the Packet AGW Channel to the Telpac Node as Priority 1
Set the Paclink MP CMS Telnet Channel as Priority 2

If you do not have a Telpac Node within range or cannot use packet:
Set the Paclink MP CMS Telnet Channel as Priority 1
Set the Paclink MP AGW Packet Channel not enabled

8. Paclink MP Window – Files / Polling Interval

Set for automatic polling (60 minutes) as well as automatically sending any new messages.

You have completed this assignment.

Report - Using your WL2K E-mail account send an E-mail

TO: N0IA-11@winlink.org
CC: N4ZZO-2@winlink.org
Subject: Completed NewE-mail Assignment #6MP yourcall
(note #6MP w/o spaces!)

In Text
Your call
OS
Did you use Paclink MP AGW Channel or Paclink MP CMS Channel for this e-mail?
If you could not use the Packet AGW Packet Channel –Why?
No local RMS Packet or Telpac Gateway node
No radio yet
If you have a radio do you need help setting it up?
How long did you take on this assignment?
Comments on NewE-mail Assignment #6MP instructions if any

* * *

If your Data Terminal/TNC supports Pactor (HF) – continue to

NEWE-MAIL ASSIGNMENT #7PMP

ASSIGNMENT #6 Airmail –
Configuring a TNC in Airmail.

REQUIRED: TNC that is supported by Airmail and works with a comport on this computer.

LAST UPDATED – March 20, 2008

NOTE: Airmail's Packet Client is not yet AGW PE compliant, thus the list of supported TNCs is somewhat short. (The AGW TNC selection is in there now, but is not active.) Airmail does not support –SSIDs or nested packet connect scripts thus limiting its use in extended packet networks. The present scheme for making packet connections is somewhat awkward for the experienced packetter, but should not adversely affect making connections once understood.[1]

SYSTEM REQUIREMENTS: Computer on the internet running Win95, 98, 2000, XP, or Vista operating system. Working comport (1 through 6)

OPERATOR REQUIREMENTS: Current Amateur License; completion of NewE-Mail Assignment #4Airmail and NewE-Mail Assignment #5.

CONFIGURING AIRMAIL (Don't be afraid to consult Airmail Help files)

NOTE: When Airmail starts it is ready to be configured for HF PacTOR, vhf Packet, or Internet Access (Telnet Client.) It is not necessary for an HF data terminal to be connected to the computer while configuring.
1. Start Airmail from the desktop shortcut/icon.
2. Across the top row click on *TOOLS/OPTIONS*

AIRMAIL OPTIONS TABS

Connection Tab -This is for HF PacTOR only and will not be configured at this time. If you need this, join http://groups.yahoo.com/group/airmail2000 and ask for help.
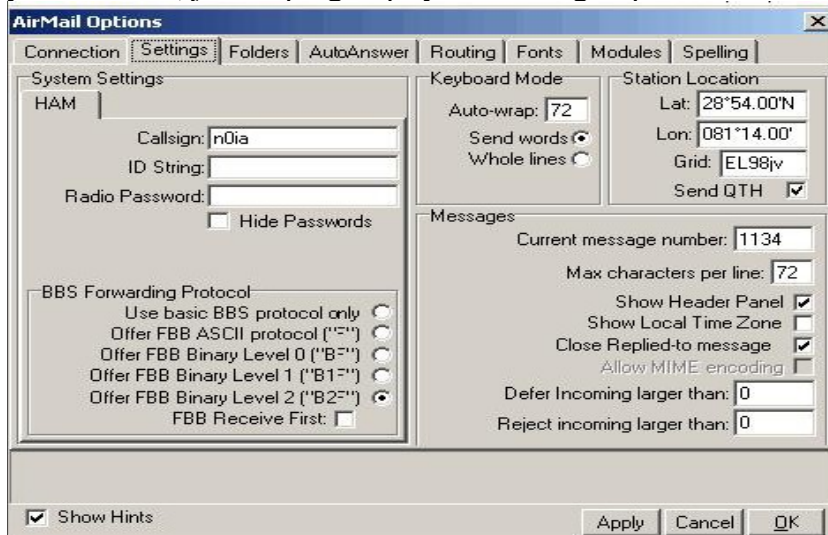

[1] Paclink MP is clearly the best choice of user programs for WL2K packet on extended networks.

Settings Tab - (Above) This is where you put your mycall in for the Airmail program.

1. Put your WL2K BASE CALL in the HAM Callsign window. (No SSID)
2. In the BBS Forwarding Protocol section click on **B2F**
3. Fill in your station Location information **LAT/LON/GRID**
4. Check in **Send QTH**

Click *APPLY* then click on **Modules** tab at the top
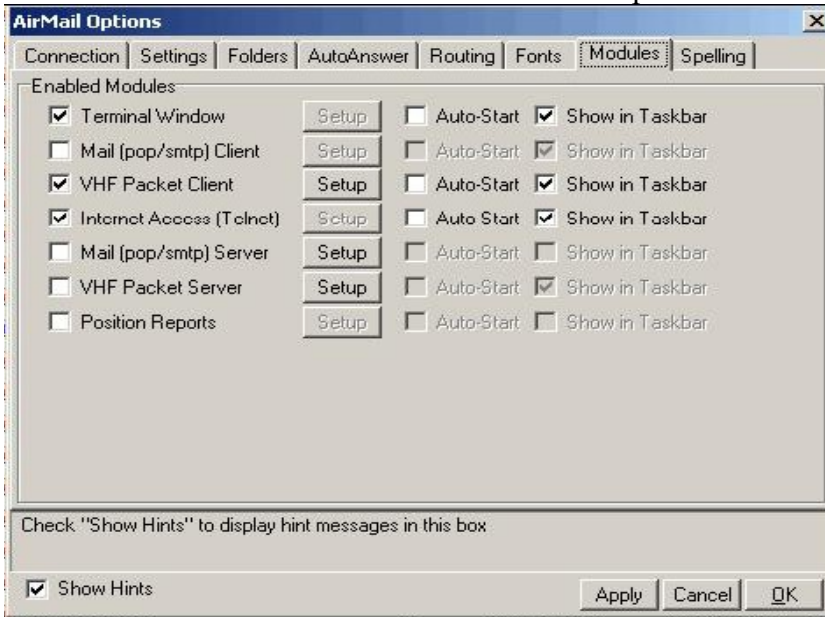
Modules Tab fill in as in graphic above.

1. Enable Terminal Window, VHF Packet Client, and Internet Access (Telnet)
2. Have check mark on *Show in Task Bar* in all three.
3. Click on SETUP to the right of VHF Packet Client.

<div align="center">

PACKET SETTINGS SCREEN
(Graphic below)
</div>

Connection (left side) Use the pull down arrows and select the TNC type, Comm Port number, and Comm port Baud Rate.

Port Settings. Some of these will be defaulted for the general case and others are more site-specific.

Use the settings as in the graphic for now and you can optimize them later once the radio is connected and you test out to the local packet network.

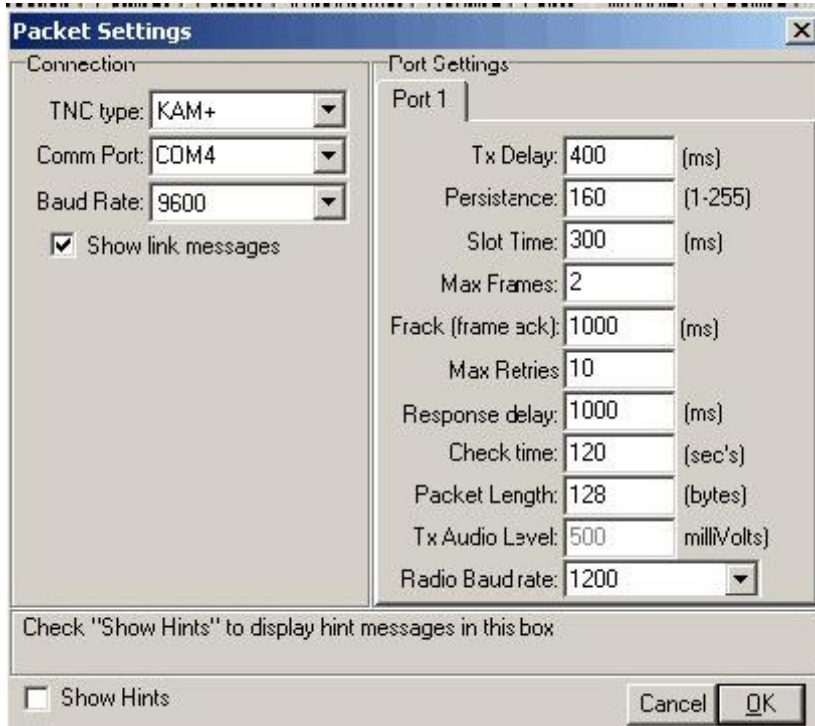The settings are for 1200b packet. Click
    OK
Then
    OK
then
    APPLY
which will take you back to the main Airmail [Message Index] Screen.
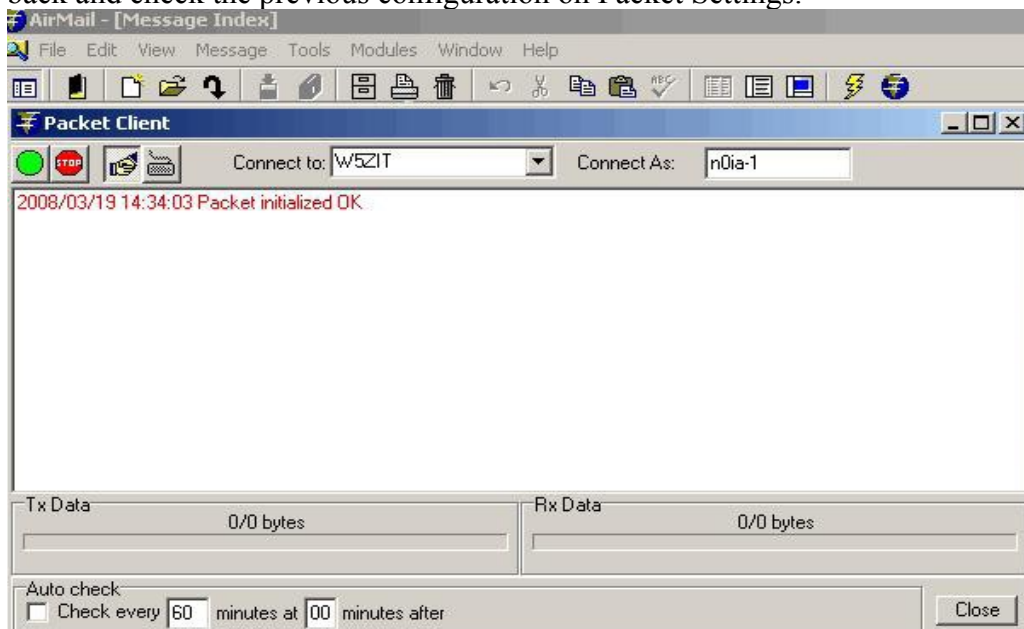
TESTING THE AIRMAIL TO TNC LINK

Power on the TNC - turn of the radio.

At the main Airmail Window (Message Index) click on *Modules* then *Packet Client*

If Airmail and the TNC are talking you will see the line "Packet initialized OK" if not, go back and check the previous configuration on Packet Settings.
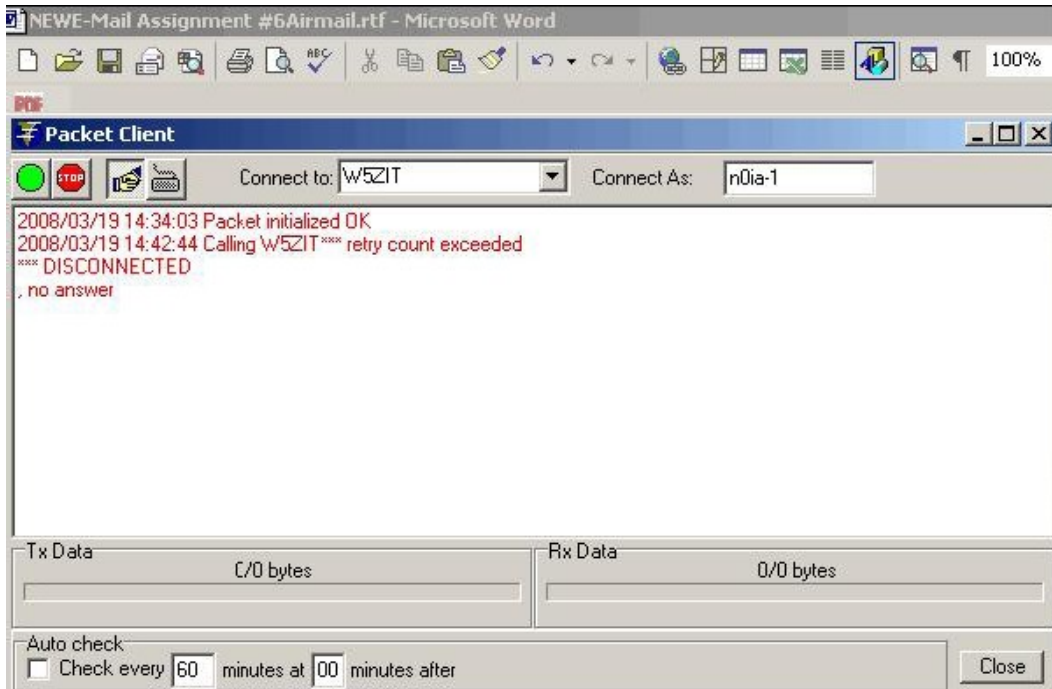
In the *Connect* window put W5ZIT

Be sure your BASE CALL is in the *Connect As*: window (no ssid)

Be sure the H*andshake* icon is highlighted.

Click on the *Green GO* light and watch the screen.

If all is okay, the TX or XMIT LED on the TNC will light several times and the attempt at connecting to W5ZIT will be reflected as shown below:

This will take ten or so blinks of the TNC Xmit LED – the packet TNC parameters are not very aggressive so it will take a while.

INFORMATION: If you have previously tested the TNC/Radio combination and have a WL2K RMS Packet or Telpac Gateway within direct connect range give it a try – but do not post an e-mail here for help with that part of the exercise – that will come later!

Close the Packet Client window

SENDING A REPORT ON THIS ASSIGNMENT FROM AIRMAIL
(Read this part to the end before doing anything!)

At the Airmail [Message Index] screen. This is where you will start any new e-mail message.

1. Click on FILE/NEW - that brings up the Airmail E-mail Client and the Address Book window.

2. In the Address Book make an entry for N0IA-11@winlink.org if there is not one there.

3. Set up an E-mail TO: N0IA-11@winlink.org
Subject: NEWE-mail Assignment #6Airmail (yourcall)

(be sure there are no spaces in #6Airmail.)

In Text
       Your call
       OS
       What TNC?
       Did you use Airmail TNC/RF or Airmail Telnet CMS Channel for this e-mail?
       If you could not use the Airmail TNC/RF -Why not?
              No local RMS Packet or Telpac Gateway node
              No radio yet
              If you have a radio do you need help setting it up?
       How long did you take on this assignment?\
       What is the last modified date on the instructions you used?
       Comments on NewE-mail Assignment #6Airmail instructions if any

4. Be sure in the upper right corner - Post VIA field is "WL2K"

5. Across the top row of ICONS click on the *MailBox* icon to POST for sending

That takes you back to the Main Airmail screen. Go to the *OUTBOX* and you will find this message at the top of the list with a MailBox icon in front indicating it is ready to be sent the next time Airmail links to a CMS.

SENDING THE MESSAGE

If you have a proven packet link to a WL2K RMS Packet or Telpac Gateway – Go for it!

       Across the top row of icons click on Modules/Packet Client
       Put the call of the local WL2K link in the Connect to: window
       Put your WL2K BASE CALL in the Connect as: window
       Be sure the *Handshake* icon is highlighted
       Click on the *Green GO* icon
Otherwise – use the Modules/*Internet Access* Icon (Telnet Window)

       With WL2K in the Connect to: window Click on the *Green Go* icon.

Wait an hour and come back and poll for any return message

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ASSIGNMENT #7 PMP –
Configuring a Paclink MP TNC channel.

REQUIRED: TNC that is supported by Paclink MP and works on a comport on this computer. VHF packet or HF Pactor radio not required.

LAST MODIFIED – March 22, 2008

NOTE: In NewE-Mail Assignment #6PMP you were able to blink the LEDs on a TNC in KISS mode using a Paclink MP AGW Channel. In this exercise Paclink MP will use the TNC directly in Host Mode to do the same. Unless you have a need for AGW Packet Engine it does not need to be installed or running for this assignment. However, there is no problem with AGW PE running so long as the TNC you want to use for this assignment is not also being used by AGW PE.

SYSTEM REQUIREMENTS: Computer on the internet running Win 2000, XP, or Vista operating system. Working comport (1 through 6)

OPERATOR REQUIREMENTS: Current Amateur License; completion of NewE-Mail Assignment #4PMP, NewE-Mail Assignment #5, and NewE-Mail Assignment #6PMP.

TNC APS FILES

NOTE: This may be the most difficult part for those without prior experience with packet or multi-mode firmware-based TNCs to get arms around. Best open up your arms and embrace this short note and remember it; much of your time troubleshooting later will be saved.

In AX.25 (native) mode the **cmd**: prompt is there to allow manual commands to be sent to the TNC. Example commands are:

        cmd: Mycall
        cmd: Paclen
        cmd: TXDelay
        cmd: Persist
        cmd: Maxframe

Using TNC-specific APS files, Paclink MP sends and confirms *all the needed commands* to the TNC when it initializes the TNC – at the time you tell Paclink MP to try a connection (or it is automated) using the Paclink MP TNC channel.

This presupposes all the commands are set for what you want/need, but you didn't have any opportunity to make your choices! However, it turns out that Paclink MP is far more experienced at these things than 90% of the folks who sign up for a WL2K for Dummies course, so you can relax – at least for this exercise.

Here is how it works. Paclink MP has been under beta testing since May, 2007 with more than 500 volunteer hard core folks participating with all types of (supported) TNCs. Every time a problem with any TNC is reported the 'fix" is made to the information data base by the authors. The result is that all <TNCtype>.aps files are updated with the latest best parameters every time that Paclink MP is updated. Provided your site-specific situation works with these you have no problem.

Ultimately you will be able to overcome any *updated changes* in the (new) aps file that adversely affect your site, but this will not be covered in this exercise. Consult the Paclink MP Help Files for further information.

CONFIGURING A PACLINK MP PACKET TNC CHANNEL
(Don't be shy about consulting the Paclink MP help files)

Start Paclink MP. Click on Files / *Paclink TNC channels*

NOTE: If your TNC type is not on the list you cannot do this Assignment.
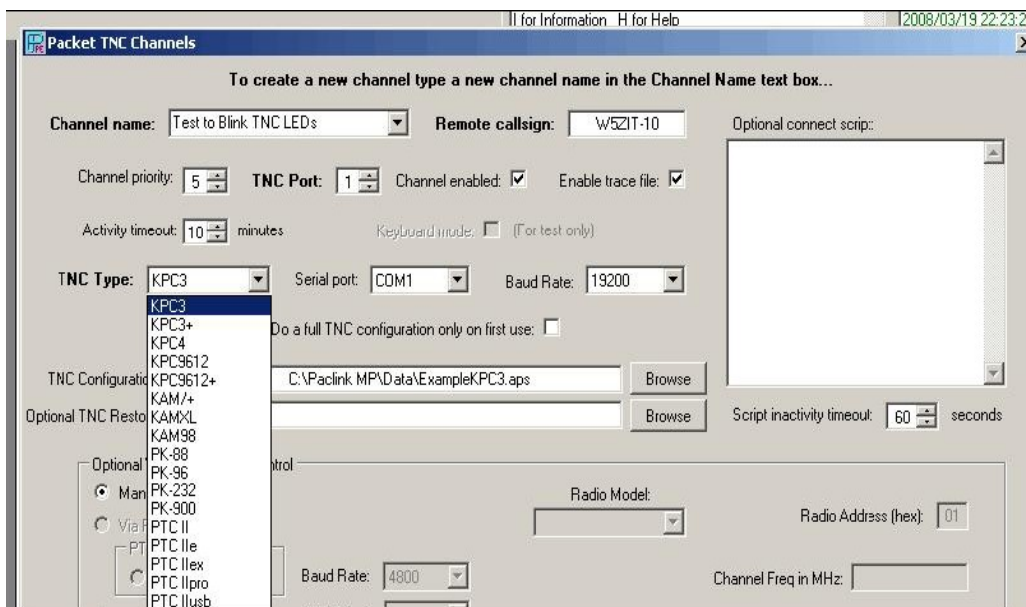
1. Overtype anything in Channel Name and put in "*Test to Blink TNC LEDs*"
2. Remote callsign: *W5ZIT-10*
3. *Channel priority 5;, Channel enabled and Enable trace file checked*..
4. Select *TNC type, Serial port, and Baud Rate* for your set up.

NOTE: TNC Port number and TNC configuration aps file are automatically set by the program.

All else may remain as defaulted.

Check your entries and click on *Add new channel*

Testing this practice Paclink MP Packet Channel to the TNC

If the TNC you want to use is presently being used with AGW PE – take AGW PE down. (Do NOT turn the TNC OFF before Taking AGW PE down – that is a NO/NO!)

If off, turn on the TNC – in command mode – turn the packet radio off.

At the Paclink MP screen click on Connect/*Connect to* and select the new channel.
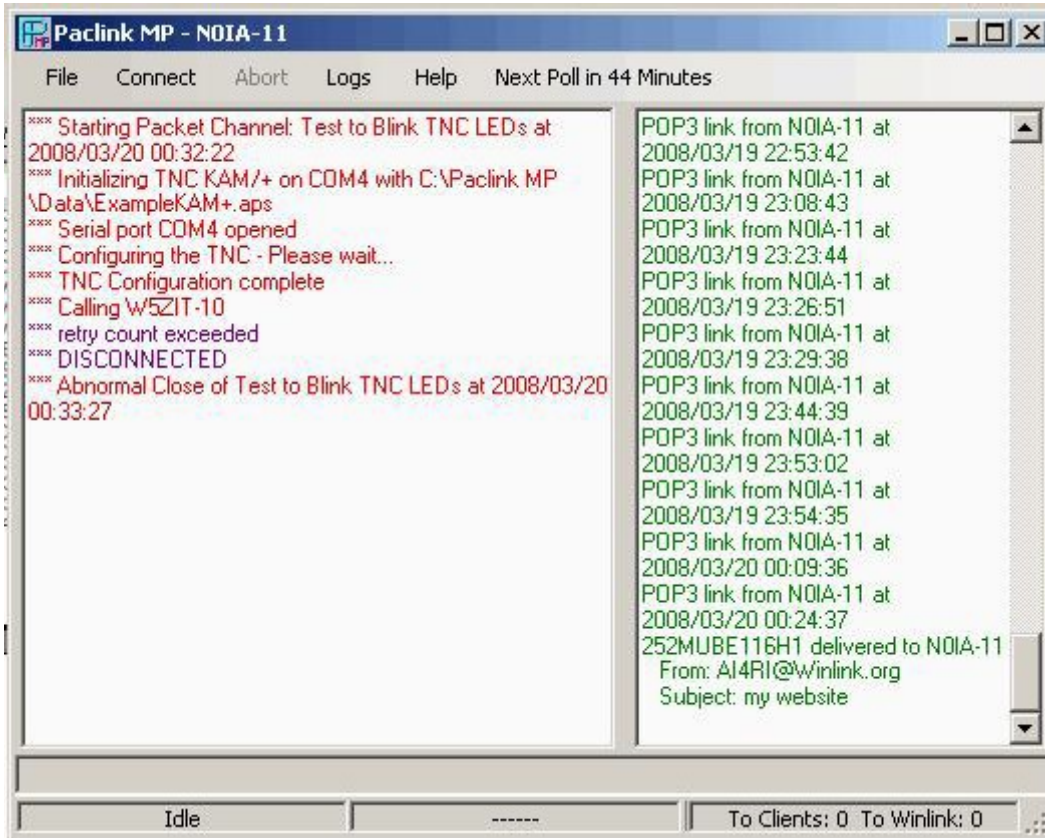
You will see the left screen on the Paclink MP window start initializing the TNC then the TNC TX or XMIT LED will blink signifying trying the link. The blinking will continue until the link fails as indicated in the graphic above.

INFORMATION: If you have previously tested the TNC/Radio combination and have a WL2K RMS Packet or Telpac Gateway within direct connect range give it a try. Make a new Paclink MP Packet TNC channel and use it - but do not post an e-mail here for help with that part of the exercise!

SENDING A REPORT ON THIS ASSIGNMENT FROM PACLINK MP
(Read this part to the end before doing anything!)

Be certain that in Paclink MP Files/*Polling interval* that automatically *send* is not checked.

In Outlook Express set up a new e-mail from your Ham Radio E-mail account.

>TO: N0IA-11@winlink.org
>cc: N4ZZO-2@winlink.org ; <your commercial e-mail account>
>
>Subject: NEWE-mail Assignment #7PMP (yourcall)
>
>(be sure there are no spaces in #7PMP.)

In Text
>Your call
>OS
>What TNC?
>Did you use Packet MP TNC/RF channel or CMS Telnet channel?
>If you could not use the Paclink MP TNC/RF -Why not?
>>No local WL2K RMS Packet or Telpac Gateway node
>>No radio yet
>>If you have a radio do you need help setting it up?
>How long did you take on this assignment?
>What is the last modified date on the instructions you used?
>Comments on NewE-mail Assignment #7PMP instructions if any

Click *Send* to put this e-mail in the Paclink MP e-mail server.

SENDING THE MESSAGE

If you have a proven packet link to a WL2K RMS Packet or Telpac Gateway – Go for it!

Connect/Connect to – select the Packet TNC channel .

Otherwise – use the File/Connect to *CMS Telnet channel*

Wait an hour and come back and poll for any return message

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