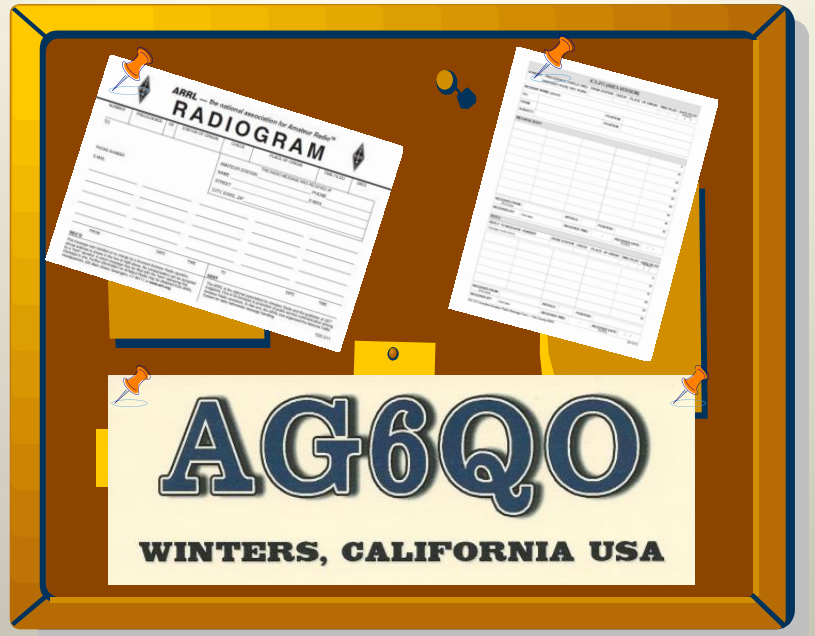


AG6QO Packet BBS

Effective Use

Outline

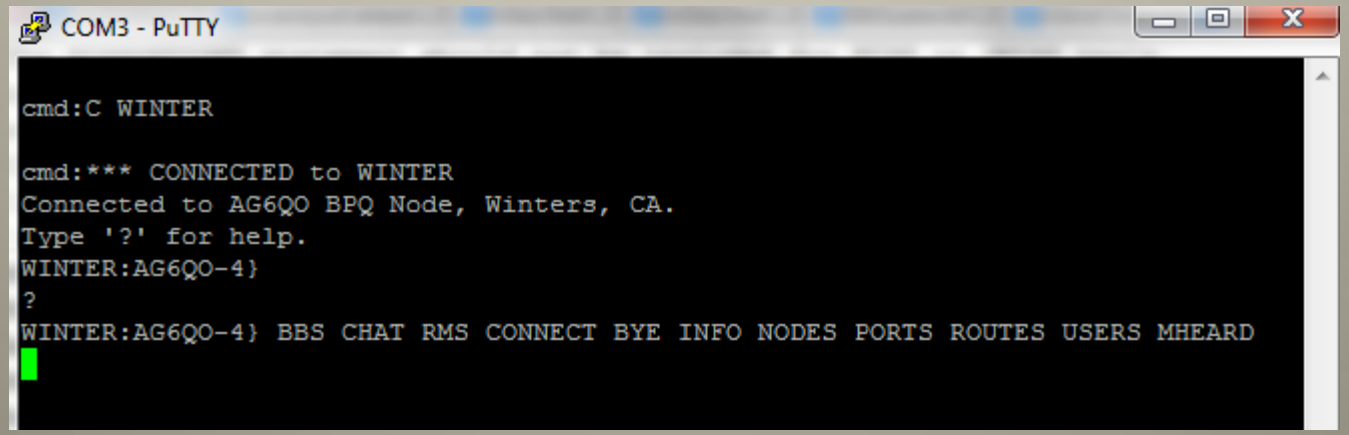
- Node Services
- BBS Services
- Message Types
- NTS Messages
- Emergency Services
- The Bigger Picture
- References
- System Details

AG6QO BPQ Node

- Call WINTER or AG6QO-4 on any VHF port or AG6QO on PACTOR
- Supports multiple node protocols
  - Net/ROM – automatically add/remove nodes
  - http://www.tapr.org/pr_intro.html#NetSchemes lists various networks
- Supports multiple ports
  - 144.37, 145.05, 223.6, PACTOR, internet.
  - Connecting to the BPQ node allows "gateway" to any node system on any supported port.
  - For example, while on 144.37, and connected to the BPQ node *C 5 BERRY* to be connected to BERRY on 145.05
  - WinLink Gateway
- Access the BBS, Chat, RMS, DX Cluster, Telnet, Applications, White Pages, many more… configurable.

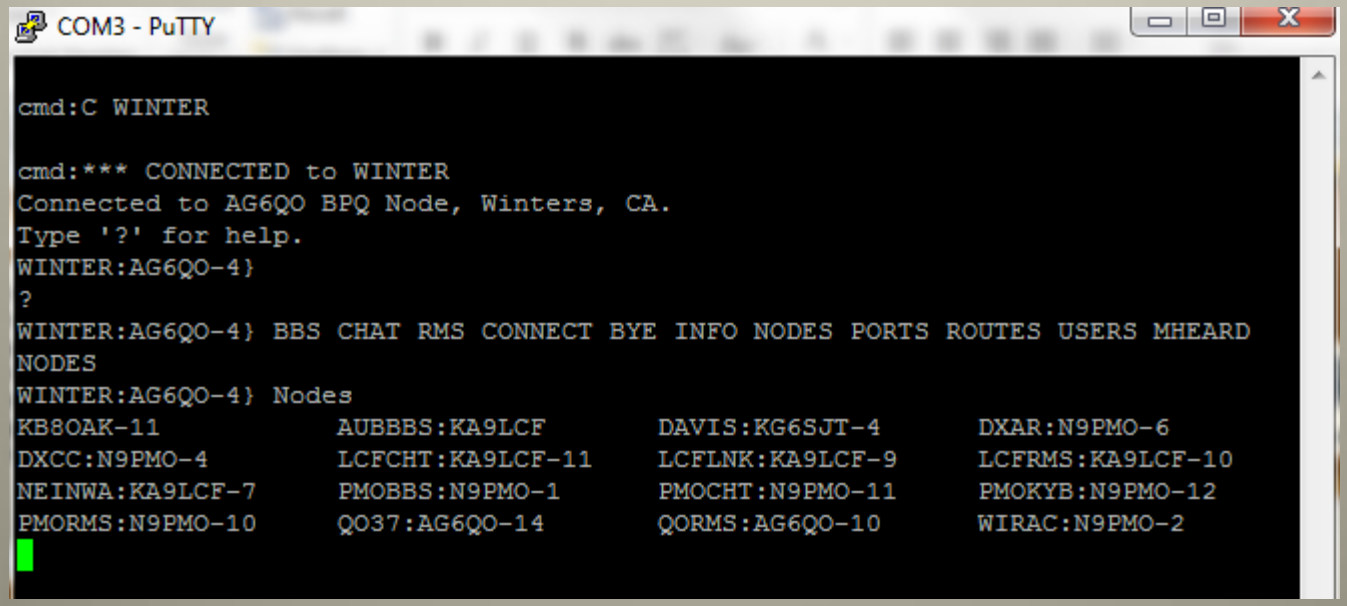
AG6QO BPQ Node

- To connect to the BPQ node:
- On 144.37 or 145.05 :
  - *C AG6QO-4* or *C WINTER* (alias).
  - From outside the immediate area, use the node network:
  - *On 144.37, C BERR37*, or on 145.05, C KBERR and after connected,
  - *C WINTER*



AG6QO BPQ Node

- From the Node Menu
  - There are many nodes accessible locally and via internet.
  - You can list these using the NODES command:



AG6QO BPQ Node

- From the Node Menu
  - You can connect to any heard node
  - Many of these have gateways to remote RF ports on various bands
  - For example, here I've connected to a BBS in Wisconsin N9PMO

```
cmd:C WINTER

cmd:*** CONNECTED to WINTER
Connected to AG6QO BPQ Node, Winters, CA.
Type '?' for help.
WINTER:AG6QO-4}
NODES
WINTER:AG6QO-4} Nodes
KB8OAK-11           AUBBBS:KA9LCF       DAVIS:KG6SJT-4      DXAR:N9PMO-6
DXCC:N9PMO-4        LCFCHT:KA9LCF-11    LCFLNK:KA9LCF-9     LCFRMS:KA9LCF-10
NEINWA:KA9LCF-7     PMOBBS:N9PMO-1      PMOCHT:N9PMO-11     PMOKYB:N9PMO-12
PMORMS:N9PMO-10     QO37:AG6QO-14       QORMS:AG6QO-10      WIRAC:N9PMO-2
CONNECT PMOBBS
WINTER:AG6QO-4} Connected to PMOBBS:N9PMO-1
[BPQ-1.4.61.13-IHJM$]
Welcome Joe
You Have: 0 Pending Messages
Use LC To List Message Fields
www.n9pmo.com>
```

AG6QO BBS Services

- **Message Store and Forward**
  - Forwards messages (Packet mail) anywhere in the world
  - Hierarchical message addressing : *VE3WBZ@VA3BAL.#SCON.ON.CAN.NOAM*
    - *The above address will route your message to Peter, VE3WBZ who uses the VA3BAL BBS system in south-central Ontario, Canada. The routing happens automatically!*
  - "Home" BBS – the BBS where you will pick up all your BBS messages.
    - KG6SJT@*AG6QO*.#NCA.CA.USA.NOAM
  - BPQ Supports B2 Protocol forwarding, containing attachments and multiple addressees
  - Can send WinLink and NTS messages
- **Server Mode – store/retrieve files (packet "dropbox")**
- **Gateway Services – connect to other ports / frequencies**
- **Real-time Chat with other users**
- **See Online User Guide**
  - **http://www.cantab.net/users/john.wiseman/Documents/BBSUserCommands.html**

What is a Full-Service BBS?

- Online 24/7
- Provides automated message store/forward on behalf of third parties.
- Uses one or more standard protocols for forwarding.
- Provides one or more ports dedicated to forwarding only.
- Maintains “White Pages” for routing information.
- Usually provides other services as well, such as file storage, applications, gateways to other ports, nodes, and BBSs
- Is NOT limited to forwarding messages for a single user or single target.

Full-Serve vs. PBBS

- PBBS – means Personal BBS
  - Personal BBS's are small, limited-resource systems (memory, bandwidth, availability, forwarding paths, etc).
  - Do not handle messages on behalf of "third-parties", only those for (or from) the PBBS owner.
- Full-service BBS
  - Has adequate resources to handle large volumes of traffic
  - Sole purpose is to handle traffic on behalf of third parties.
  - Operate 24/7
  - Maintain complete and robust forwarding paths in order to ensure reliable message delivery to remote nodes.

Hierarchical Addressing

- Perhaps the most valuable feature of a full-service BBS is message store and forward.
- This service uses a message addressing scheme called “Hierarchical Addressing” which helps BBS systems worldwide to route messages to their destinations.
- In order for this system to work well, each BBS system user must declare and maintain a consistent “Home BBS”.
- A “Home BBS” is a full-service BBS where you will have all your BBS mail delivered.
- You can pick it up or have it delivered to your personal MBX, or use a “client” program like Outpost, or AirMail, or email client, to retrieve your mail from the Home BBS for you.
- Full services BBSs keep lists of known BBS users’ Home BBS’s in something called White Pages. It is, effectively, a routing table.

Setting Your Home BBS

- AG6QO BBS runs BBS software known as BPQmail (pilinbpq).
- You can find a user-guide for BPQ at:
  - http://www.cantab.net/users/john.wiseman/Documents/BBSUserCommands.html
- There is an AG6QO BBS tutorial online here:
  - http://ag6qo.com/EffectiveUseAG6QObbs.pdf
- On all BPQ BBS's, you can set your hierarchical Home BBS address when you register.
- If you incorrectly set it, or want to change it later, you can use the following commands to set your user information, including Home BBS
- To use AG6QO as your Home BBS, type :
  - *HOMEBBS AG6QO.#NCA.CA.USA.NOAM*

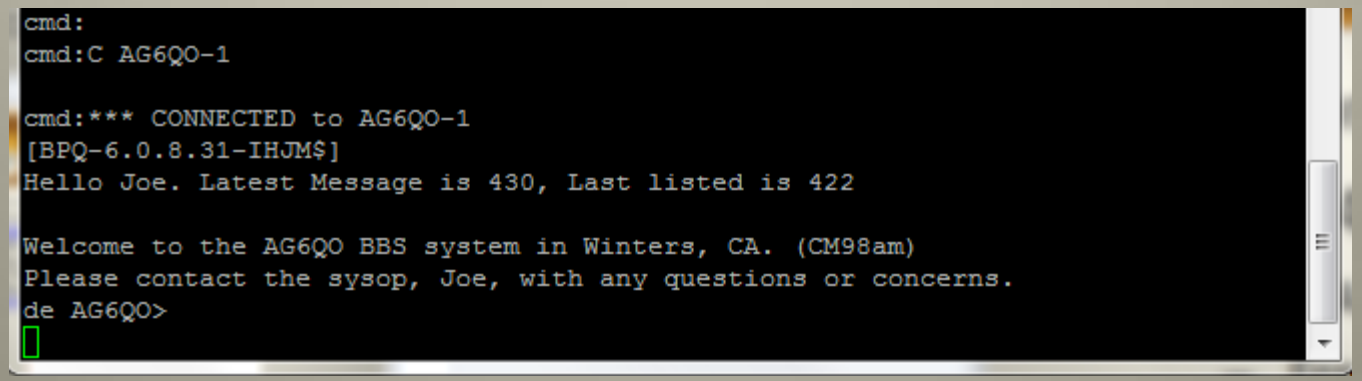
```
HOMEBBS
HomeBBS is AG6QO.#NCA.CA.USA.NOAM
```

- To display your White Page parameter settings, type:
  - *I yourcallsign*

```
de AG6QO>
I AG6QO
AG6QO  AG6QO.#NCA.CA.USA.NOAM Joe 95694 Winters CA
de AG6QO>
```

AG6QO BBS

- To connect,
- On 144.37 , the primary user channel, or 145.05:
  - C AG6QO-1 … or,
  - From outside the immediate area, use the node network:
    - C BERR37 on 144.37, or C KBERR on 145.05 , and after connected,
    - C AG6QO-1



Message Types

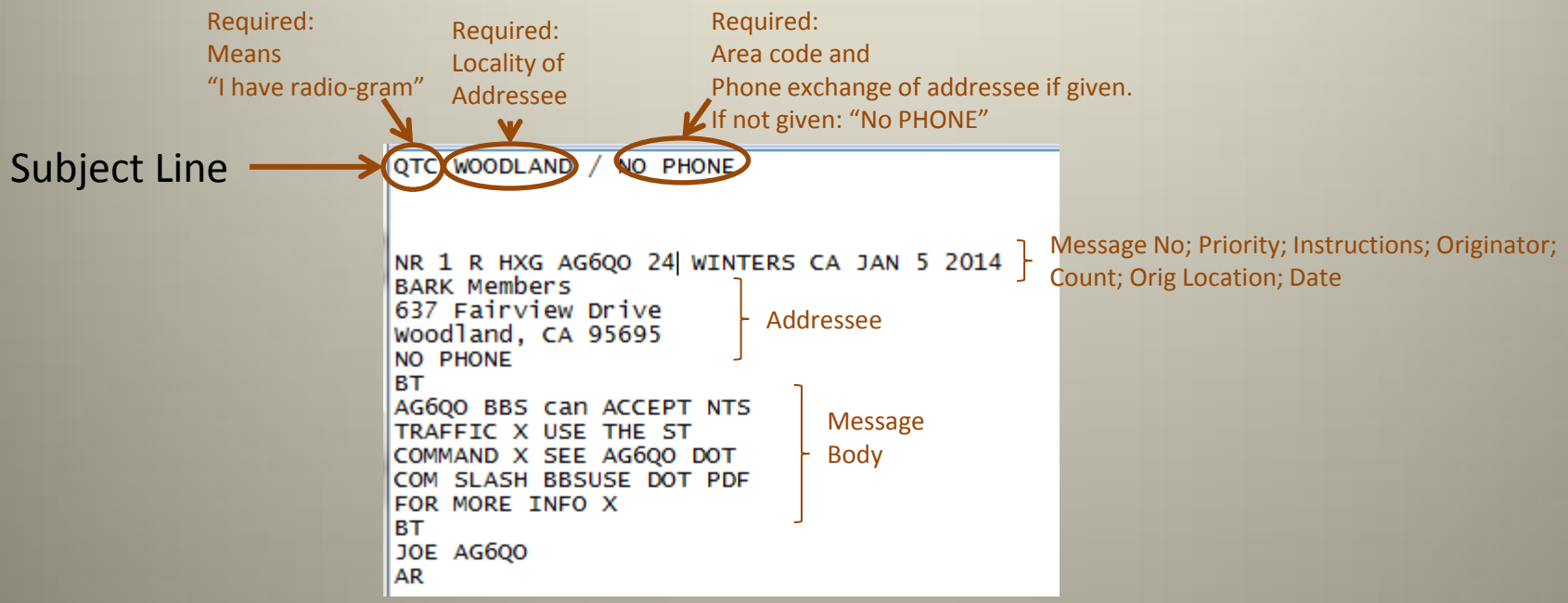
- General Messages
  - Hierarchical Addressing
  - Everyone sees
- Personal Messages (“P” type)
  - Hierarchical Addressing
  - Not listed for everyone (but not private)
- Bulletins (“B” type)
  - Intended for a group
    - Example: YARES, BARK, etc.
- WinLink
  - ur1call@winlink.org, or
  - “rms:email@domain.com”
  - BBS can poll and download your WinLink mail for you
- Formal NTS(D) Traffic (“T” type)
  - Special Addressing: 95694@NTSCA
  - Special Handling – must be delivered or forwarded
  - http://www.arrl.org/files/file/Public%20Service/MPG604A.pdf

```
WINTER:AG6QO-4} Connected to BBS
[BPQ-6.0.8.31-IHJM$]
Hello Joe. Latest Message is 430, Last listed is 422

Welcome to the AG6QO BBS system in Winters, CA. (CM98am)
Please contact the sysop, Joe, with any questions or concerns.
de AG6QO>
?
A - Abort Output
B - Logoff
D - Flag NTS Message(s) as Delivered - D num
HOMEBBS - Display or get HomeBBS
INFO - Display information about this BBS
I CALL - Lookup CALL in WP Allows *CALL CALL* *CALL* wildcards
I@ PARAM - Lookup @BBS in WP
IZ PARAM - Lookup Zip Codes in WP
IH PARAM - Lookup HA elements in WP - eg USA EU etc
K - Kill Message(s) - K num, KM (Kill my read messages)
L - List Message(s) - L = List New, LR = List New (Oldest first)
                      LM = List Mine L> Call, L< Call = List to or fror
                      LL num = List Last, L num-num = List Range
                      LN LY LH LK LF L$ LD - List Message with correspo
                      LB LP LT - List Mesaage with corresponding Type
                      LC List TO fields of all active bulletins
LISTFILES or FILES - List files available for download
N Name - Set Name
NODE - Return to Node
OP n - Set Page Length (Output will pause every n lines)
POLLRMS - Manage Polling for messages from RMS
Q QTH - Set QTH
R - Read Message(s) - R num, RM (Read new messages to me)
READ Name - Read File
S - Send Message - S or SP Send Personal, SB Send Bull, ST Send NTS,
                   SR Num - Send Reply, SC Num - Send Copy
X - Toggle Expert Mode
EU - Edit User Flags - Type EU for Help
EXPORT - Export messages to file - Type EXPORT for Help
FWD - Control Forwarding - Type FWD for Help
IMPORT - Import messages from file - Type IMPORT for Help
SHOWRMSPOLL - Displays your RMS polling list
UH - Unhold Message(s) - UH ALL or UH num num num...
de AG6QO>
```

To Send NTS Traffic

- First compose and format your message:



See http://www.arrl.org/files/file/Public%20Service/MPG604A.pdf for details and standards.

To Send NTS Traffic

- Next enter it into the BBS using the ST command of the form ST zipcode@NTSCA:

```
(0) AG6QO BBS>
st 95694@NTSCA
We have no forwarding route for 95694. SYSOP will be advised.
Enter the title for this message to 95694 :
QTC WOODLAND / NO PHONE
Enter the text for this message, end with Ctrl-Z or /EX on a blank line) :
NR 1 R HXG AG6QO 34 WINTERS CA JAN 5 2014
BARK Members
Woodland, CA 95695
NO PHONE
BT
AG6QO BBS can ACCEPT NTS
TRAFFIC X USE THE ST
COMMAND  TO SEND X  USE
THE LT COMMAND TO LIST
TRAFFIC X SEE AG6QO DOT
COM SLASH BBSUSE DOT PDF
FOR MORE INFO X
BT
JOE AG6QO
```

End your message with a line that starts with:
/EX
That's IT! Your message will be sent via packet to the area specified in the address zip !

See http://www.arrl.org/files/file/Public%20Service/MPG604A.pdf for details and standards.

To Receive NTS Traffic

- Use the LT command to “List Traffic”

- Must follow strict protocol to avoid loss or dead-ending of messages
  - Do not “kill” a message unless you are committed to delivering it to the addressee !
  - “Killing a message tells everyone YOU are going to deliver it.
  - If you read but DON’T kill a message, do NOT deliver it ! Some folks get annoyed at multiple calls for the same message. It’s unprofessional !

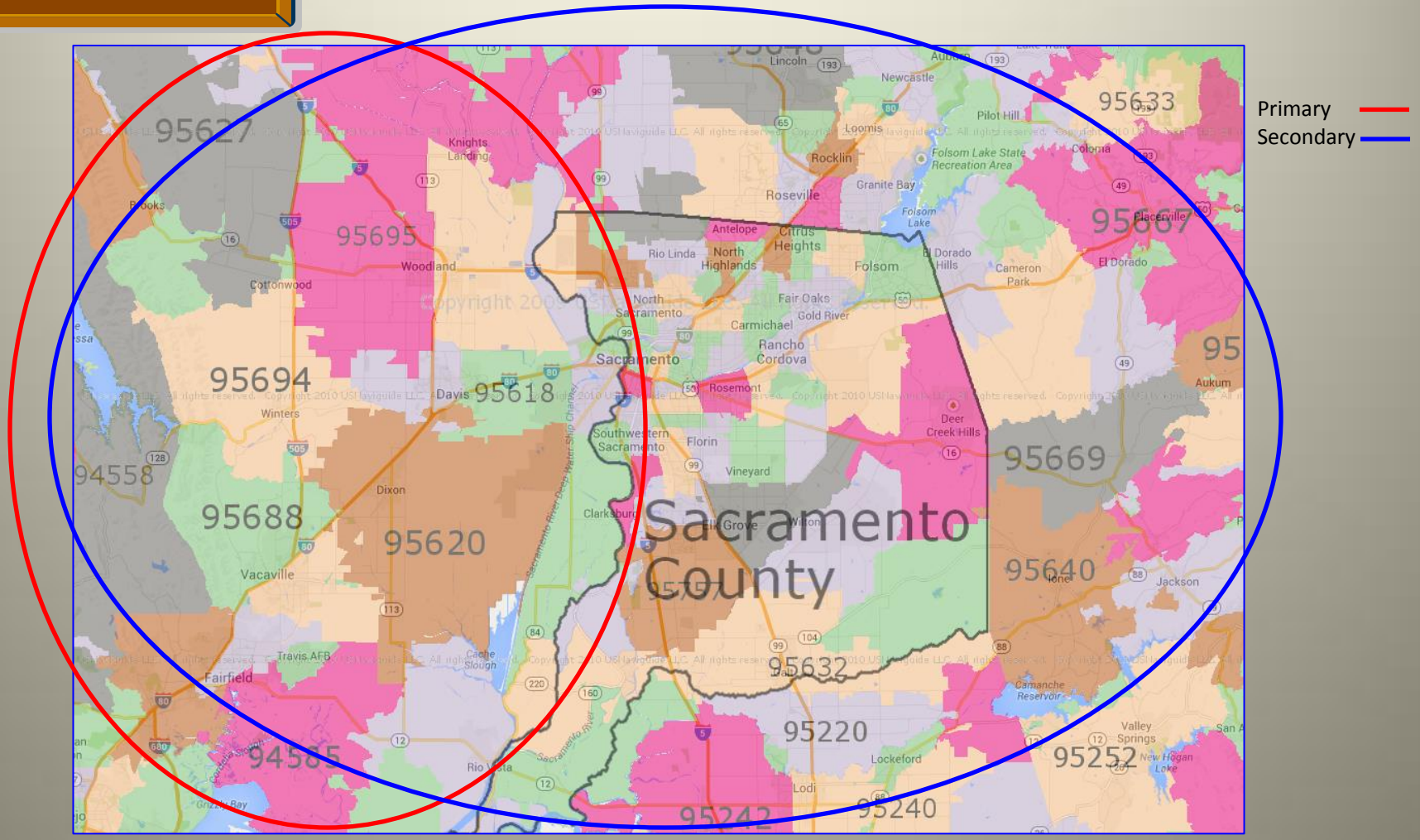
```
(0) AG6QO BBS>
l

Msg#   TSLD  Size To     @Route  From    Date/Time Subject  [LC-choice: *]
7263   B$   30065 DX     @WW     KB8NW   0209/1137 Ohio/Penn DX Bulletin No. 1149
(0) AG6QO BBS>
lt

Msg#   TSLD  Size To     @Route  From    Date/Time Subject  [LC-choice: *]
7262   TKL    232 18201 @NTSPA  AG6QO   0209/1129 QTC HAZLETON / 570454
7261   TKL    232 18201 @NTSPA  AG6QO   0209/1050 QTC HAZLETON / 570454
7260   TKL    235 18201 @NTSPA  AG6QO   0209/1022 QTC HAZLETON / 570454
(0) AG6QO BBS>
```

AG6QO logs into the California NTS hub and picks up messages for the 956*@NTSCA zip codes daily

NTS Traffic Areas



Bulletins

- To read Bulletins:
  - "L" – lists all messages received since your last "L"
  - "LB" – lists ALL Bulletins on the BBS (can be a long list!)
- To send Bulletins:
  - "SB ADDRESSEE" – "send bulletin"
    - For example:
    - SB BARK
    - SB YARES
  - Can use "hierarchical" addressing, with "keyword" addressing.
    - For example:
    - SB SATDIG@WW – intended for all satellite digital stations, worldwide
    - SB LETTER@ARRL- LETTER intended for all ARRL members

```
(0) AG6QO BBS>
SB YARES
Enter the title for this message to YARES :
AG6QO LOOKING FOR RF PARTNERS
Enter the text for this message, end with Ctrl-Z or /EX on a blank line) :
If you are a packet-user, or user of other digital modes, you may want to consid
er becoming a packet BBS SYSOP.

I am looking for hams in Northern California who may be interested in establishi
ng a new packet BBS station and using VHF or UHF forwarding. I am willing and ab
le to provide technical assistance, and may be able to assist with hardware for
serious operators.

Contact me if you are interested:
Joe AG6QO@AG6QO.#NCA.CA.USA.NOAM
AG6QO@WINLINK.ORG
```

Standard BBS Interface

```
WINTER:AG6QO-4} Connected to BBS
[BPQ-6.0.8.31-IHJM$]
Hello Joe. Latest Message is 430, Last listed is 430

Welcome to the AG6QO BBS system in Winters, CA. (CM98am)
Please contact the sysop, Joe, with any questions or concerns.
de AG6QO>
LL 10
430    28-Nov PN     252 KD6NIG          AG6QO  Re: BBS Changes
429    28-Nov PF   15172 RMS:     AG6QO  Section News
428    28-Nov PF     648 RMS:     AG6QO  Pacific Division Leadership Meeting
427    28-Nov PK     480 KG6SJT          AG6QO  Re: I emailed the iARRL meeting info
426    28-Nov PN     151 AG6QO  @AG6QO    KG6SJT I emailed the iARRL meeting info
425    28-Nov PK     630 KG6SJT          AG6QO  Re: ARRL Meeting Info
424    28-Nov PN     487 AG6QO  @AG6QO    KG6SJT RE: ARRL Meeting Info
423    28-Nov PK     179 KG6SJT          AG6QO  ARRL Meeting Info
422    28-Nov BF   32180 DX      @WW      KB8NW  Ohio/Penn DX Bulletin No. 1191
421    28-Nov BF   32687 DX      @WW      kb8nw  Ohio/Penn DX Bulletin No. 1191
de AG6QO>
k 424
Message #424 Killed
de AG6QO>
```

Requires “connect” command and login.

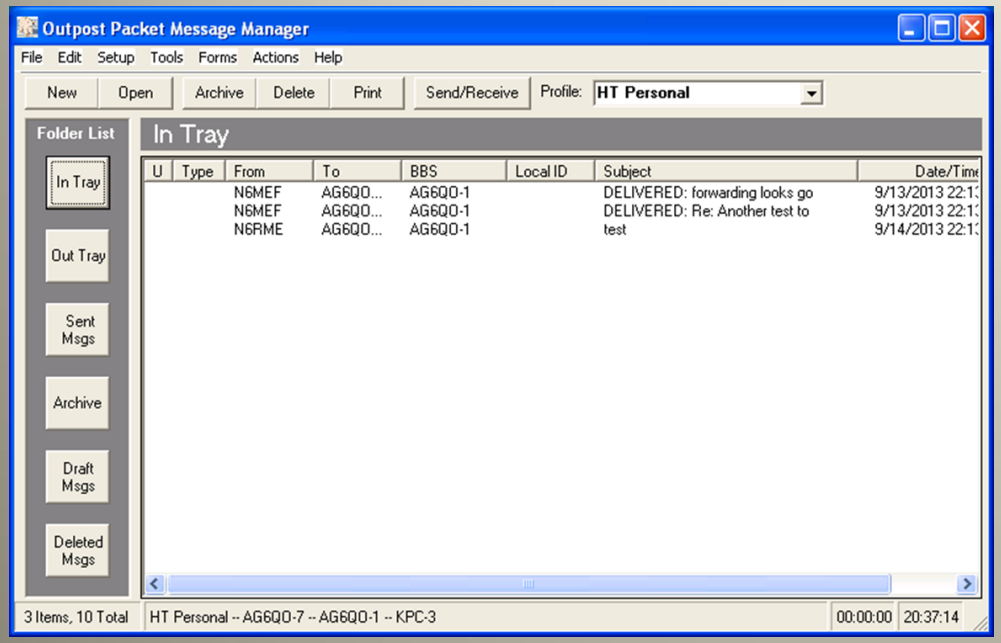
Requires individual commands to list,
Read,
and delete (kill) messages.

See the online user-manual for a list of commands and their use:

http://www.cantab.net/users/john.wiseman/Documents/BBSUserCommands.html

Outpost BBS Interface

Ideal for EMCOMM. ***"Focus on the message, not the medium."***



- Does all the connections and login for you.
- Automatically gets a message listing.
- Automatically downloads, and stores messages locally.
- Automatically "deletes" the messages from the BBS.
- Automatically logs out.
- Contains standard message forms.

http://www.outpostpm.org/

See "How To" to configure Outpost

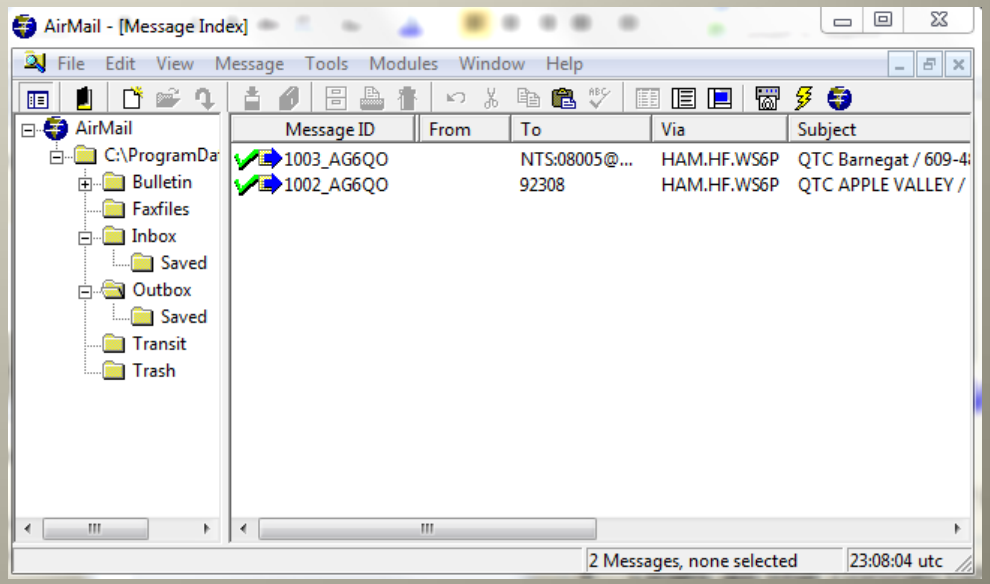
Also, see this video on using Outpost for NTS messages.

AirMail BBS Interface

Ideal for EMCOMM.

AirMail – message client also provides NTS and WinLink connections.

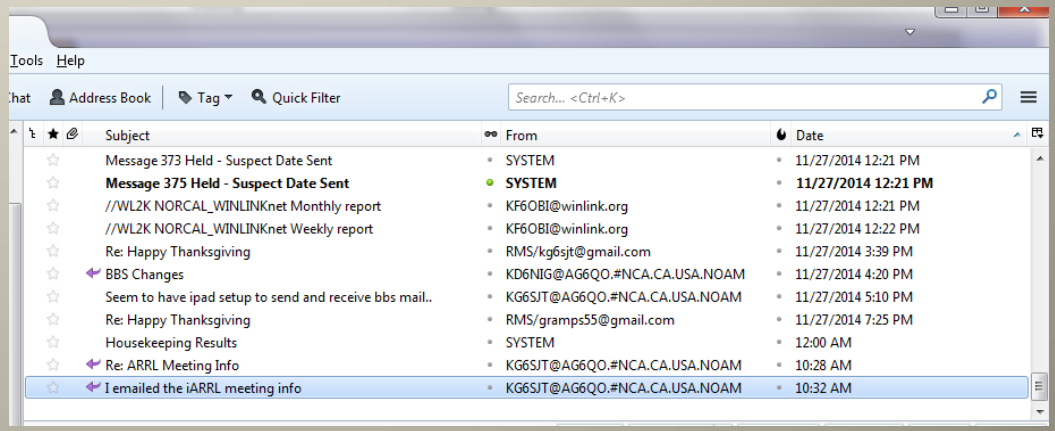
- Does all the connections and login for you.
- Automatically gets a message listing.
- Automatically downloads, and stores messages locally.
- Automatically "deletes" the messages from the BBS.
- Automatically logs out.
- Requires special BBS permission for Forwarding



Email Client Interface

Any POP mail Client such as Thunderbird, Outlook, or iPhone mail.

- Does all the connections and login for you.
- Automatically gets a message listing.
- Automatically downloads, and stores messages locally.
- Automatically "deletes" the messages from the BBS (optionally).
- Automatically logs out.
- Requires special BBS permission.



Why Packet / BBS for EC ?

- Fast:
  - Packet is much faster than voice
- Accurate:
  - Packet is far more accurate than voice, especially for data and difficult items like drug names.
- Deployable:
  - Packet is way more deployable than wifi or cellular data
- Meets served agency needs:
  - Agencies need data/forms.
  - Automatic logging, statistics, message tracking.

2m BERR37 Node

BBS in Winters

BERR37
Node
144.370 MHz
Mt. Berryessa

WINTBB
AG6QO-1
(WINTBB)
Winters

Relay Node
Mt. Berryessa

Yolo User

```
 xfbbC V3.3 (May  5 2013) -  Callsign : ag6qo  -  Remote host : localhost
(0) AG6QO BBS>
LM

Msg#    TSLD  Size To    @Route  From    Date/Time Subject  [LC-choice: *]
4400    PY     285 AG6QO @AG6QO  N6RME   0902/1113 CP N6RME: *** UNKNOWN NTS ***
4393    PYL    693 AG6QO        KG6SJT  0902/0754 FW: Monday morning test
4386    PY    1008 AG6QO @AG6QO  K4GBB   0902/0430 Re: Y
4383    PY     940 AG6QO @AG6QO  N6RME   0902/0030 Re: CP N6RME: reply to 14
4375    PYL    419 AG6QO        KG6SJT  0901/2128 Hi Joe
4365    PY     736 AG6QO @AG6QO  N6RME   0901/1631 CP N6RME: reply to 14
4352    PY     934 AG6QO @AG6QO  N6RME   0901/1013 Re: NTS Traffice for 95694
4337    PY     391 AG6QO @AG6QO  KB6LTY  0831/1736 Dupl reply to 14
4241    PY    1373 AG6QO @AG6QO  WA6EWV  0827/1536 Re: Introduction
```

1.25m #BERRY Node

BBS in Winters

Forwarding Partners

#BERRY or BERR
223.6 MHz
Mt. Berryessa

AG6QO-1
(WINTBB)
Winters

Backbone Relay Node Mt.Berryessa

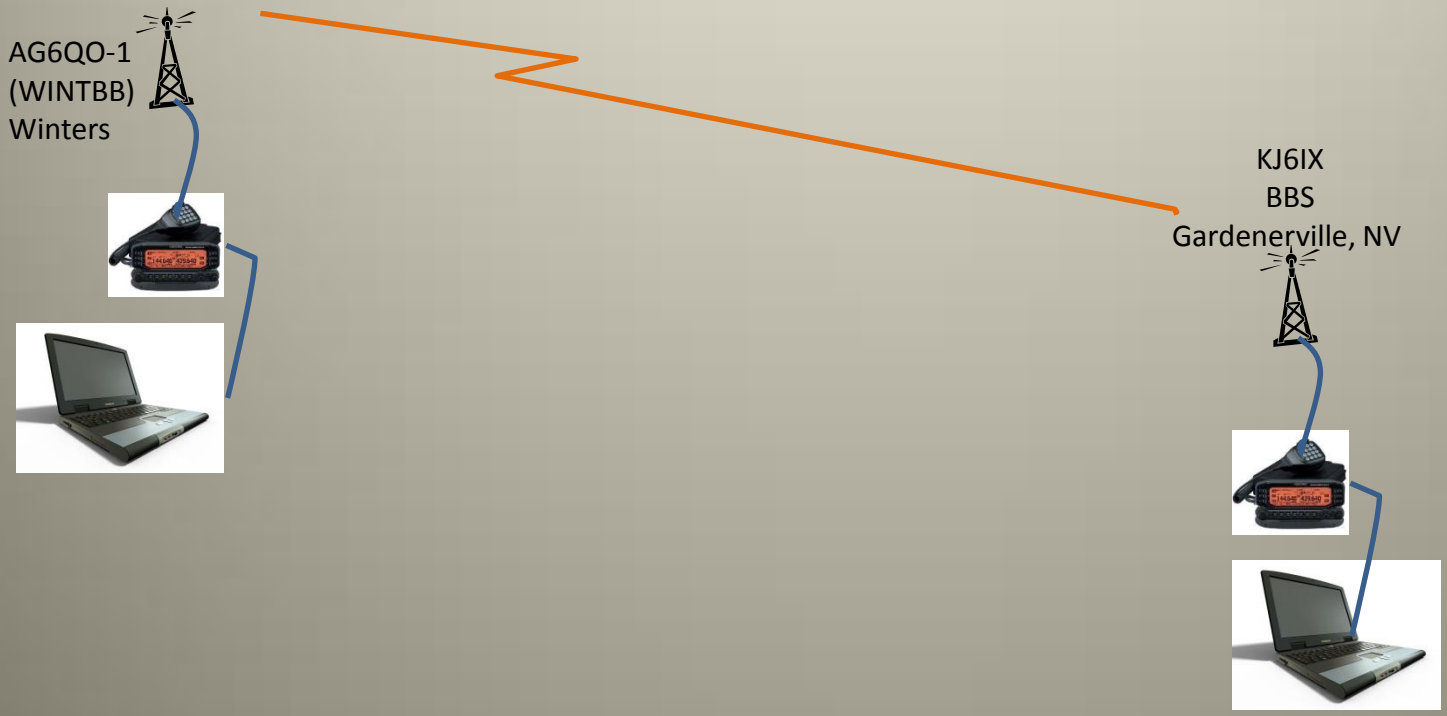
K6ETA
BBS
Petaluma

N6RME
BBS
Diamond Springs

BBS HF PACTOR Links

BBS in Winters

Forwarding Partners



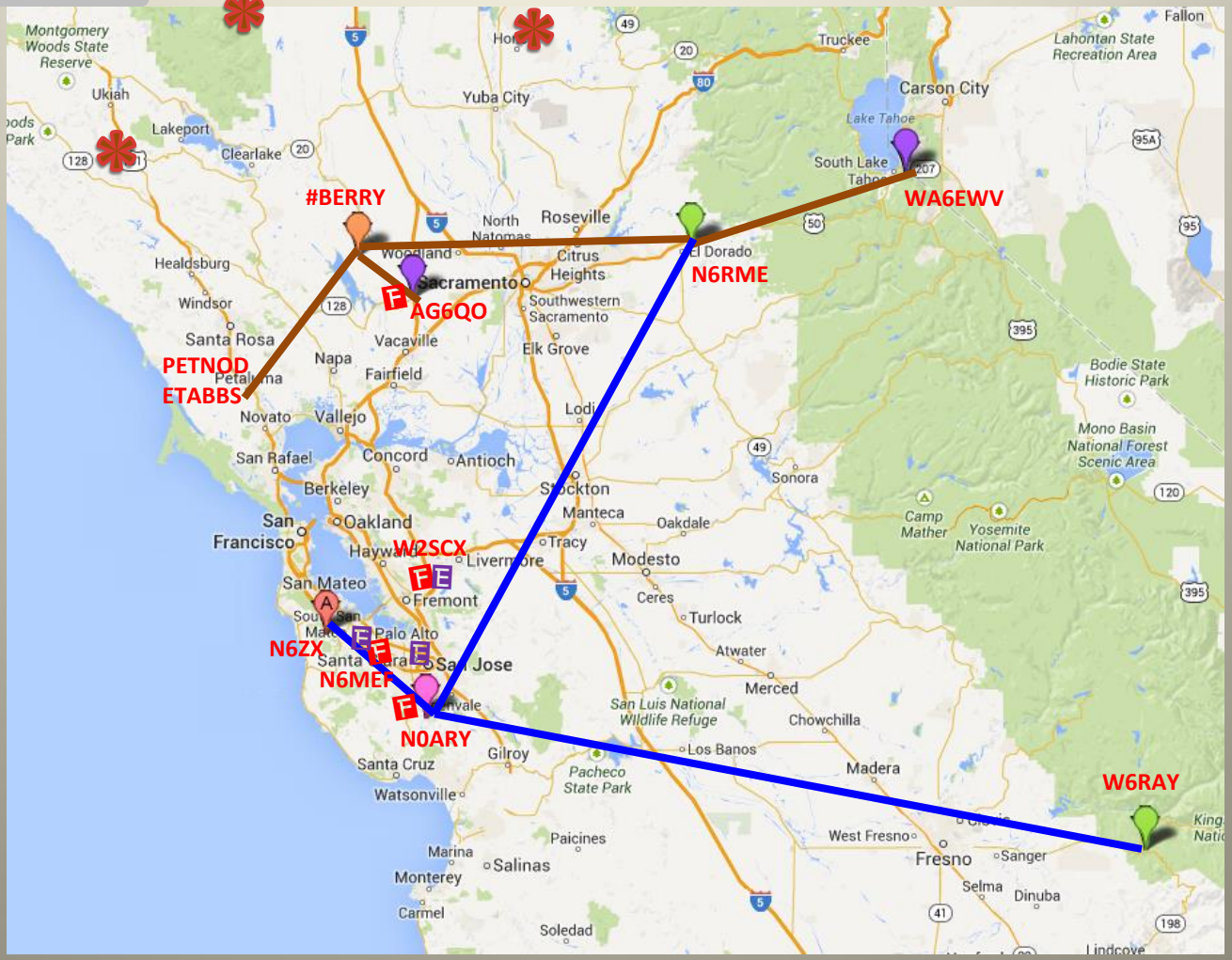
144.37 MHz – User Access
BERR37 / QO37 Node(s)

- Alinco DR-135T
  - 144.37 MHz
  - 25 Watts
- Telewave Antenna
- KPC3+ TNC

223.6 MHz Forwarding
#BERRY/BERR Node(s)

- Alinco DR-235T
  - 223.6 MHz
  - 25 Watts
- Telewave Antenna
- KPC3+ TNC

223.6 MHz Backbone



Transitioning To 6m

Existing 223.6

F Currently Internet Forwarding

E W2XSC system Santa Clara ARES/RACES/ CERT

Looking for RF forwarding partners (contact AG6QO if interested)

#BERRY to N6RME

223.6 MHz Link

Great-circle distance between two points

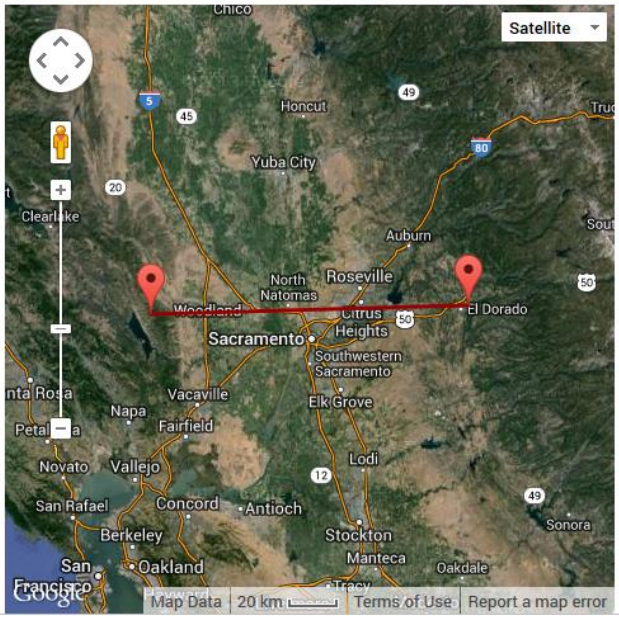
Enter the co-ordinates into the text boxes to try out the calculations. A variety of formats are accepted, principally:

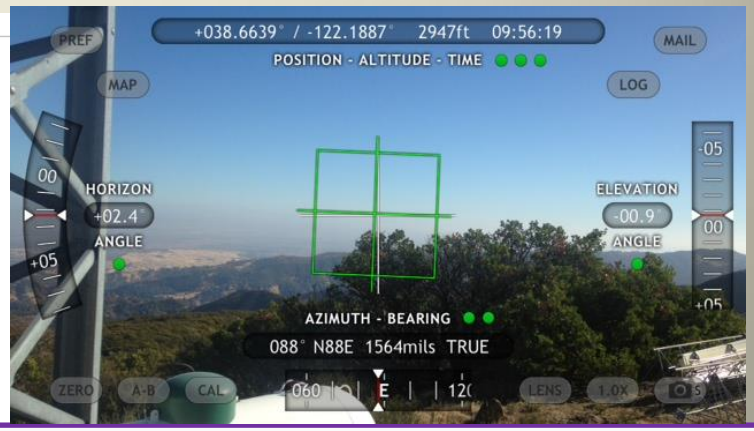
- deg-min-sec suffixed with N/S/E/W (e.g. 40°44′55″N, 73 59 11W), or
- signed decimal degrees without compass direction, where negative indicates west/south (e.g. 40.7486, -73.9864):

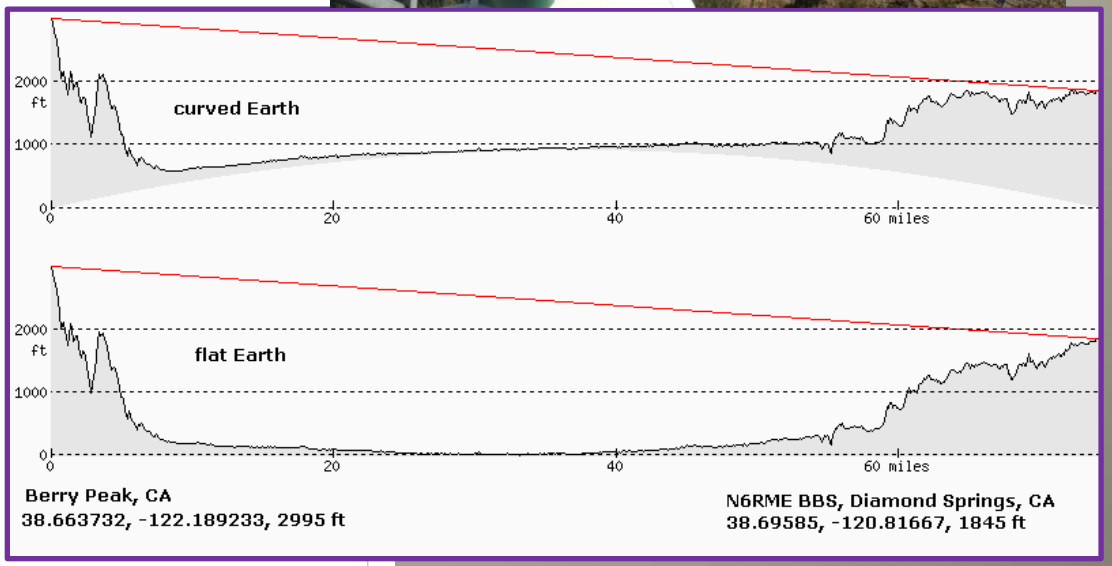
Point 1:	38.66394 ,	-122.18870	
Point 2:	38.69585 ,	-120.81667	

Distance: **119.1** km (to 4 SF*)
Initial bearing: **087°51′53″**
Final bearing: **088°43′20″**
Midpoint: **38°40′55″N, 121°30′10″W**

... hide map







NTS, NTSD, ARES, Interoperability

- A strong network of digital stations spanning Amateur Bands and large geographic areas, provides an invaluable resource for EC and general amateur use.
- Using BBS networks, Packet Node Networks, HF PACTOR networks, and WinLink 2000
- http://wx4j.com/MPG6_NTSD_RADIOEMAIL.htm

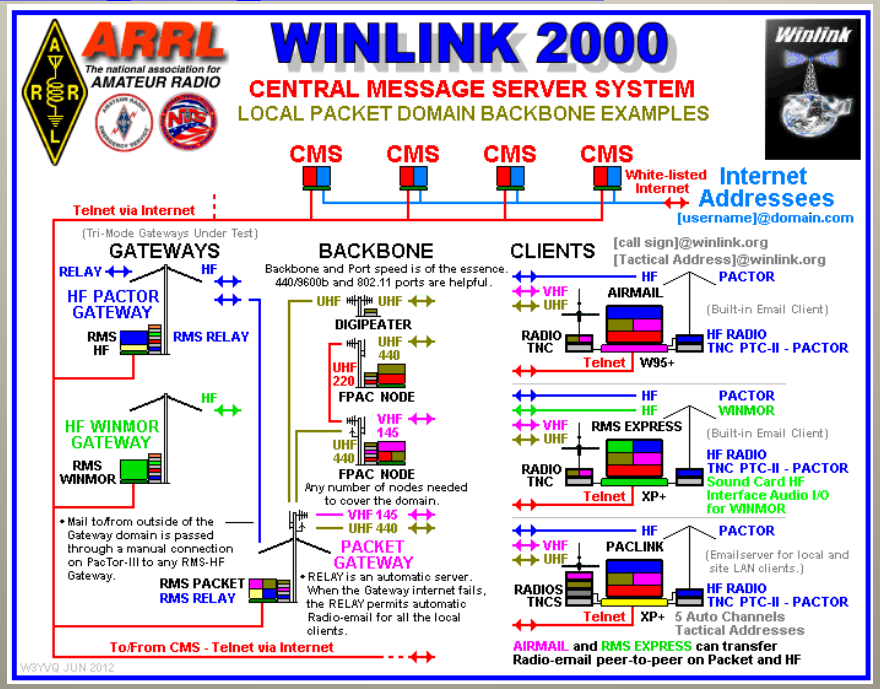


Diagram courtesy W3YVQ

Antennas

144.37MHz
BBS user

BBS 223.6 MHz
Forwarding

BBS Node Location

Reference Material

- Online BPQ BBS User Guide
  - http://www.cantab.net/users/john.wiseman/Documents/BBSUserCommands.html
- AG6QO BPQ BBS web log
  - http://ag6qo.com/RpiBPQnode.html
- AG6QO BPQ BBS Tutorial
  - http://ag6qo.com/EffectiveUseAG6QObbs.pdf
- AG6QO's old FBB BBS web log
  - http://www.ag6qo.com/PiPBBS.html
- NTS, NTSD, ARES – NTSD, WinLink interoperability reference guide
  - http://wx4j.com/MPG6_NTSD_RADIOEMAIL.htm
- ARRL National Traffic System
  - http://www.arrl.org/chapter-one-national-traffic-system
- ARRL NTS-Digital (NTSD) Manual
  - http://www.arrl.org/files/file/Public%2520Service/MPG604A.pdf
- Berks Co ARES - "Getting Started with Airmail Packet"
  - http://berkscountyaresraces.homestead.com/Getting_Started_on_Packet_Airmail2009.pdf
- NCPA – N CA packet BBS frequency coordination
  - http://ncpa.n0ary.org/bbsindex.html

Joe Contact Info

- Cell Phone: Ask via message or email
- BBS: AG6QO@AG6QO.#NCA.CA.USA.NOAM
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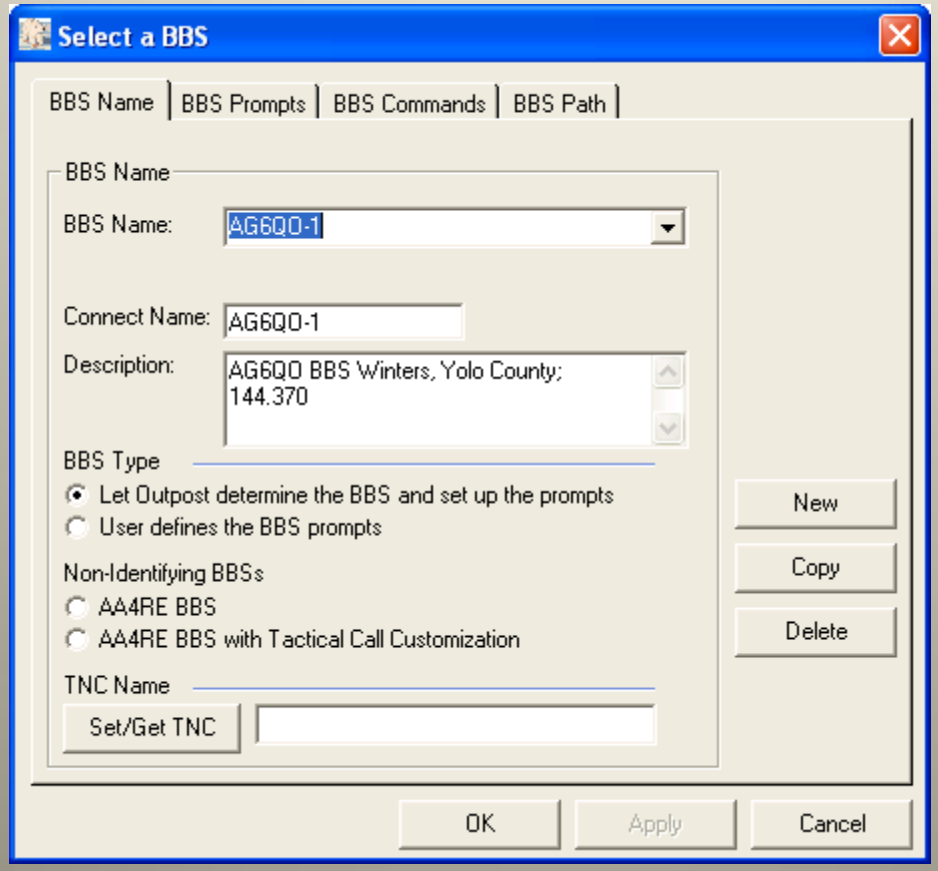
- Email: jod@online-tek.com
- Ham info: http://ag6qo.com/
- Professional Info: http://www.linkedin.com/in/joedeangelo/

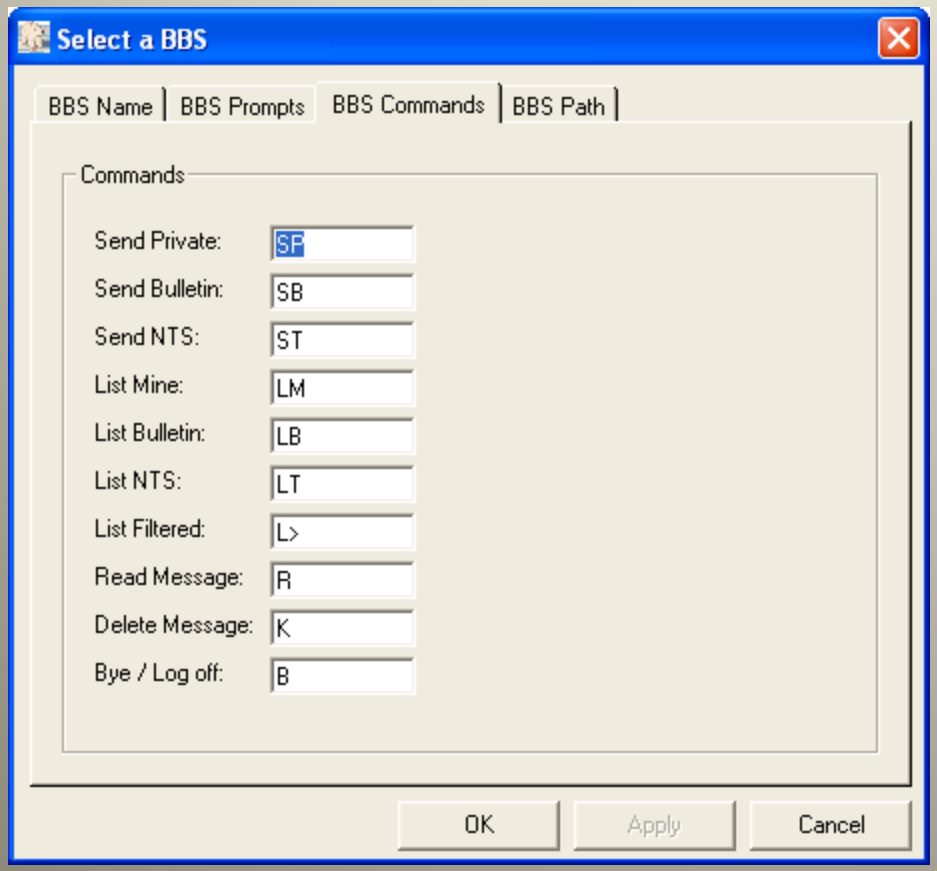
How To Configure Outpost 1

To set up Outpost for use of AG6QO BBS from Setup>BBS " BBS Name tab:



How To Configure Outpost 2

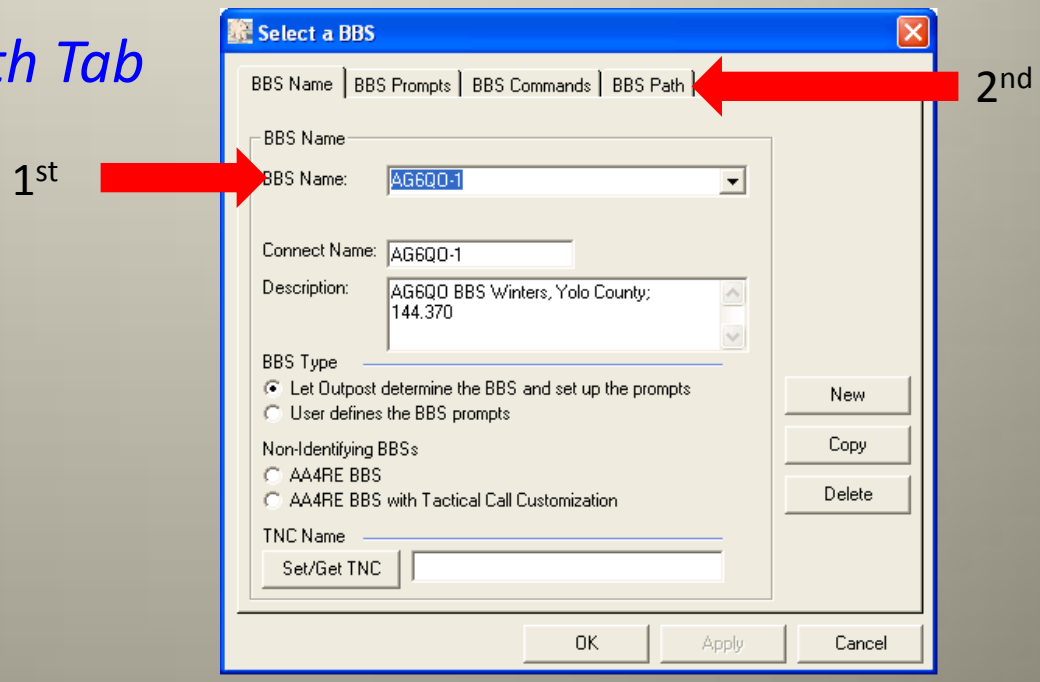
- Go to the “BBS Commands” tab:



If not already the same, setup the commands as shown

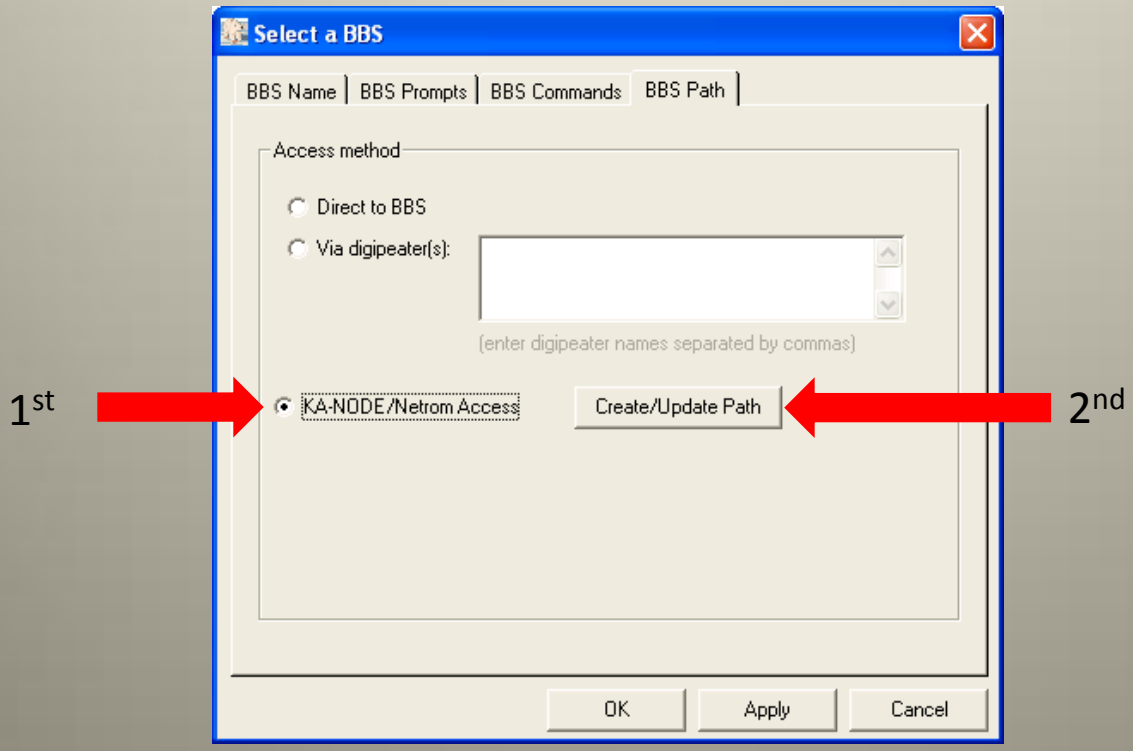
How To Configure Outpost 3

- Now that you have a BBS setup for AG6QO-1…
- From the Outpost “Setup” menu selection, choose *Setup> BBS*
- First select AG6QO-1
- Then Select *BBS Path Tab*



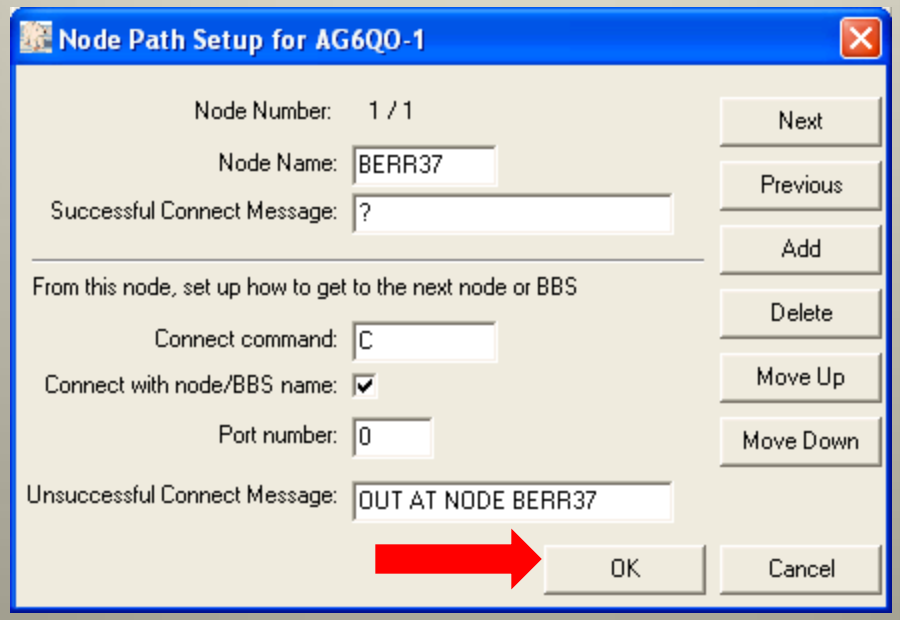
How To Configure Outpost 4

- You'll get the following window,
- Then, select "KA-NODE/Netrom Access".
- Then, select "Create/Update Path"



How To Configure Outpost 5

- When you get the “Node Path Setup for AG6QO-1” Screen,
- fill it in as follows, then click OK:



You are now ready to use AG6QO-1 BBS from Outpost !

REMEMBER, the above Node setup will only work on 144.37 ! BERR37 does not exist on 145.050