```
# 256 : See-all-messages.
# 512 : Unproto-list asking is allowed.
# 1024: List of new messages given at logon.
# Add up the values for your choises.
1568
#
```

Then we have 'Security-codes'. Here we give 3 values. The first says what ALL users are allowed to do. The next says what sysops are allowed to do when they connect the BBS, and the third says what a sysop is allowed to do after he has successfully performed the SYS-command. The same applies here as above; choose the values you want and add them up.

```
# Security-codes.
# All users can:
    : Read all messages, including all personal messages.
    : Kill all messages.
# 4 : Send SYS-command.
# 8 : Use remote-sysop commands (edit, forward etc).
# 16 : Edit labels in YAPP, FBBDOS, DOC.
# 32 : Can delete files in YAPP and FBBDOS.
# 64 : Have access to all gateways.
# 128: Run dos-programs (command DOS in FBBDOS).
# 256: Have access to the entire hard-disk.
# 512: Have access to command /A (stop BBS) and /R (reboot PC).
# All: Sysop: Sysop after successful SYS-command:
      127
 0
             1023
```

Next we have the time for cleanup of messages. This should be done in a low-traffic hour, as the BBS is completely shut down during cleanup. Type also the timeout-values you want, the default values here should be OK. Put also in the number of hours (+ or -) between the PCs local-time and UTC.

```
# Time (hour) for cleanup of messages
02
#
#
# Time-out for normal use (minutes)
10
#
# Time-out during forward (minutes)
15
#
# Hours +/- in relation to UTC
0
#
```

Type how many callsigns you want (maximum) in each mail-beacon (variable \$Q). If you precede the number by a B, also bulletins to local users (type BN or BY) will be brodcast in the mail-beacon. Like this:

```
# Number of callsigns in mail-beacon
B20
#
```

Number of lines in scroll-buffer may be changed. Just remember that they use a lot of memory (each line takes 160 bytes of memory, but can be in high memory), so I advice you to use these values:

```
# Number of lines in scroll-buffer
# User Console Monitoring
200    100    100
#

Leave this one alone:

# Text for forward-header (variables OK), appears LAST in the R:line.
# Please do not change the contents and the order of the fields except
# the FBB$E field which is only an information and can be removed.
# $c is the QTH as declared before in this file.
[$c] #:%M Z:$z FBB$E
#
```

Next you must decide how many BIDs to keep. 3000 is a good value. If you are using EMS or XMS-memory (with a special driver loaded for this..) you should answer OK for BID in EMS/XMS, if not, you must answer NO.

```
\# Number of BIDs that are saved (32000 max) \# No more than 3000 when EMS/XMS is not used ! 3000 \#
```

Leave this one alone. This one means that bulletins that are older than (in this case) 30 days, will not be forwarded again from my BBS, and will go directly to X-status. Be aware: a too low value here will make problems for other BBSs that you forward to..

```
\mbox{\#} Lifetime for bulletins. Number of days from message is written 30 \mbox{\#}
```

Here you must say if you use any EMS or XMS memory, or if you have no such memory available. If you DO have such memory available, you should answer 1 or 2 here followed by the list of topics you want to load in high memory. The BBS will do these operations very much faster.

```
#
# Use EMS or XMS memory ? 0=No, 1=EMS, 2=XMS.
# and optional list of topics to put in high memory
#
# Topics : BID = Bulletins or messages identifiers
# MSG = Message lists
# HIE = Hierarchical information
OVR = Software overlays
# SCR = Screen buffers
# WPG = White Pages database
# REJ = Reject/hold informations
# FWD = Forwarding informations
# 2
BID MSG WPG
```

List of routes to send WP update messages. First, keep this line blank until you have a WP network available, then give the route(s) to send your updates.

```
# List of routes to send WP messages
 Zip code of the BBS. Give the post code area where is the BBS.
 # ZipCode of the BBS
 31120
Here you will give the paramaters allowing the list of messages in unproto
mode. This list can be interpreted by some terminal softwares (as TPK) and
greatly reduce the traffic on the local frequency.
The first parameter is the maximum backward number. If a unproto user asks a
list which is lower than this number backward, he will be limited to this
parameter (IE: if the current message number is 20000 and a user asks the
list of the message 15000, he will be then limited to the 19500 if the
backward number is 500).
The second parameter is the speed of the unproto updates given in seconds.
The frames will be sent with this period.
 # Back number and unproto lists period
500 10
Leave this lines alone, unless you are absolutely sure you want to change
it:
 # Intern interrupt (hexadecimal, default 7C)
7C
 #
Then you have two optional programs of batches which are called at the end
of the initialization, and just before shutdown. If you don't need them, keep
these lines empty.
 # BBS-UP program (default empty)
 # BBS-DW program (default empty)
 You can change these colours if you like:
 # Colour on texts :
             : 0
 # Black
                       Dark grey
                                    : 8
                       Light blue
                                     : 9
 # Blue
             : 1
              : 2
 # Green
                       Light green
                                     : 10
```

: 11

Light cyan

: 3

Cyan

```
Light red
# Red : 4
# Magenta : 5
# Brown : 6
                                  : 12
                       Light magenta: 13
                      Yellow : 14
White : 15
# Light grey : 7
                      White
# COULEUR FONDS
# Status (top)
# Bandeau (middle)
# Tekst (bottom)
# Menues
# Colour of characters
# Status (top)
# Bandeau (middle)
# Menues
14
# Text sent
10
# Text received
12
# UI (Headers)
15
# UI (traffic)
# Console
14
# Beacon
# Channel-marking
11
#
```

You may change these lines if you like. These are the servers that are normally available in most FBB-BBSs, and they are automatically installed for you from the diskettes. So you can leave them alone. Or you can disable them with a # in front of each of these lines.

Two built-in servers already exist, but you MUST declare them in this file to make them available. As they are built-in, the program-name MUST be replaced with stars.

```
# List of "servers":
#
# To Program-name Description
#
REQCFG ****** Request configuration
WP ****** WP server
REQDIR REQDIR Request directory-listings from other BBSs.
REQFIL REQFIL Request files from other BBSs.
NEWDOC Upgrade files under DOCS.
```

```
#
# End of file
#
```

 $\mbox{Ok.}$ That was the INIT.SRV file. This file is VERY important, so check and double-check to make sure that you have it all $\mbox{OK.}$

5.4 EPURMESS.INI.

This file is also in the main FBB-directory. This is the file that controls the lifetime of messages. Each night EPURMESS will be activated at the time specified in INIT.SRV. Normally you will not need to change this, but if you did any changes in SUITE1.BAT during installation, you must also change the same pathnames here. That goes for these lines:

```
# File for deciding messages' lifetime..
 # Directory for messages
\FBB\MAIL\
 # Directory for binary-messages
 \FBB\BINMAIL\
 # Directory for "killed" messages
 \FBB\OLDMAIL\
 # The file DIRMES.SYS (database-file)
\FBB\SYSTEM\DIRMES.SYS
 # Old database-file (backup)
\FBB\SYSTEM\DIRMES.OLD
 # New database-file (after EPURMESS (cleanup))
 \FBB\SYSTEM\DIRMES.NEW
 # Result of cleanup is pu into this file:
\FBB\EPURMESS.RES
Next, you decide if you want to save "killed" messages in the OLDMAIL-
directory. If you do, write an 1 first, if you want to save old personal
messages, and another 1 if you want to save old bulletins.
 # Personal Bulletins (0=kill 1=archive in oldmail)
0 0
Next we have the actual parametres (in days) for the lifetimes of bulletins
and personal messages. Let me just explain the letters in use here:
P=Personal message
B=Bulletin
N=Not read
Y=Had been read
F=Forwarded (forwarded to all BBSs that should receive this msg)
X=Expired (still readable, but will not be forwarded to other BBSs)
K=Killed (readable only by sysop)
A=Archived (same as killed, but will be deleted at once, or moved to
OLDMAIL)
I think this is self-explainatory:
 # Parametres in days:
# PARAMETRES FOR PERSONAL MESSAGES:
 # PN -> PX (days after message is written)
```

At the end of the file, you can have special lifetimes for special messages. In the example below, messages that are TO LA6CU will be 365 days old, messages FROM system will be 0 days, messages @LA will be 365 days. I have an # in front of them, this means they are disabled right now.

```
# List of lifetime-tests
#
# Type To Days
@ VEST 365
@ LA 365
> LA6CU 365
< SYSTEM 0
#
# End of this file.
#</pre>
```

5.5 PORT.SYS.

This file is found in the directory called SYSTEM (if you used my default directory-names). In this file we decide what kind of TNCs to use, how many available channels etc. You must do several changes here, and be very careful that you do all changes correctly. If you don't, the BBS cannot operate properly. Remember that a line starting with # is a comment-line, and the BBS ignores these lines.

The BBS has built-in drivers for a maximum of 8 serial-ports, named COM1-COM8. It can also use a special port-multiplexer so that you can have up to 4 TNCs per COM-port. First you must type how many ports and TNCs you use, like this:

Next you must type one complete line of parametres for each COM-port you use. You must be careful to use the correct values here. If you use external drivers like COMBIOS, BPQ or DRSI-card, you must be careful to give the correct values here. If you use COMBIOS, FBBIOS, BPQ etc, they must always be loaded before you start the BBS-program.

```
: COM-number (1, 2, ... 8)
# Interface: 1 = External ESS driver
             2 = BPQ-node V 4.05 or up.
             3 = Telephone-modem with FBBIOS
             4 = DRSI card with driver
             5 = TFPCR/TFPCX interface
           : Adress of port in hexadecimal (Needed for multiplexor).
# Adress
# Baud
           : Ports baud rate. Ignored by BPQ.
# Use same number of lines as number of ports.
#Com Interface Adress (Hex) Baud
               3F8
3
     0
               338
                            4800
```

Once more, the number of lines below must be the same as number of TNCs in use. One line for each TNC. I think most of it is self-explainatory. MultCh will normally be 1. If you use DRSI-card, you can use a value from 0 to 7. If you have a KAM in host-mode, you must use 1 for VHF and 2 for HF. MxBloc decides how many kb will be forwarded one way to another BBS before the forward is reversed. Leave this value at 10 for VHF/UHF and a little smaller for HF. Type host-mode depends on your TNC, and if you use BPQ:

```
# TNC : Number on TNC in use.
# NbCh : Number of channels I want to use in the TNC.
# Maximum available channels depend on firmware.
```

```
: Number of the COM-port. Com1, Com2 etc.
# MultCh : Number of channel if port-multiplexer is used, otherwise 1.
            In DRSI use values from 0 to 7, by KAM use 1/VHF and 2/HF.
# Paclen : PACLEN on this TNC.
# Maxframe: The maximum nb of frames the TNC will send at a time.
# NbFwd : Number of channels for OUTGOING forward at same time.
# MxBloc : Size of forward-block in kb.
          : Size of forward-block in kb.
# M/P-Fwd : Minute of the hour for start of forward, and period
            (how many minutes between each forward-start).
# Port mode, one of these:
            B : BBS-mode.
            G : "Guest"-mode.
            U : Normal-mode.
# Type host-mode, one of these:
            D : WA8DED
            K : KAM hostmode.
            P : PK-232
            Q : BPQ v 4.x
# Addition: One or more of these letters can be used too:
            L : Send unproto beacon after each arriving mail.
            M : Telephone-modem.
            Y : Yapp allowed on this QRG.
            \ensuremath{\mathtt{W}} : Gateway allowed TO this QRG.
            R : Modem port allowed in Read-only mode.
# Freq. : Text to describe this port (max 9 characters, no space)
# Same number of lines as number of TNCs.
#TNC NbCh Com MultCh Pacln Maxfr NbFwd MxBloc M/P-Fwd Mode Freq
                                                30/60 UDYW 433.650
17/30 GDW 15/20m
        1 1
3 1
     7
                      230 4 1 10
                      80
                            2
                                  1
                                         5
     1
          3
              1
```

At the end of the file, you can specify one (or more) callsigns and SSIDs for some channels. You might use this for special callsigns on forward-channels. If you don't need this (you probably don't, at least not the first times..), place an # in front of the line. This only works with WA8DED interface.

5.6 SWAPP.SYS.

This file will also stay in SYSTEM-directory. This file is used for automatically re-route messages. This file normally changes the @BBS-adress, but can also change the TO-field. You might not need so many callsigns etc. here, but you should make one line with only your callsign after the @. In that case the @BBS will be removed from messages to users in your own BBS. For the first tries, it is enough to have one line starting with @, and then your BBS-callsign. You can fill in the rest later.

```
#
# File SWAPP.SYS is used to change @BBS-adresses.
# For example replace @EUR to @EU
#
# Change TO-adress... Use > instead of @
# Change @BBS for a specific callsign, ex; > LA8AK @ OZ2PAC
#
@ LA8AK @ LA9K
@ LA5IV @ LA9K
@ LA5F @ LA9H
@ EUR @ EU
@ HF @ EU
@ WWW @ WW
> LA1B @ LA6CU
@ LA6TAA @ LA1Z
@ LA9WO @ LA9H
> F6FBB @ F6FBB.FMLR.FRA.EU
```

5.7 INITTNCx.SYS

This file is also in the SYSTEM-directory. When the BBS starts, it sends some standard parametres to the TNC, like PACLEN, MAXFRAME etc. These parametres are in PORT.SYS. But in addition to this we may send som more parametres to each TNC. We send parametres to TNC 1 with the INITTNC1.SYS, to TNC 2 with INITTNC2.SYS etc. Here is just one example from LA1B BBS: (you do not need to use the same parametres)

C MAIL v LA7QR

U O

N 10

M IU

P 64

T 40

C MAIL V LA7QR means that unproto mail-beacon will be sent to MAIL via the digipeater with callsign LA7QR. You may use just C MAIL if you do not want to send via digipeaters. U 0 means that the TNC will not send any TNC-message to user when he connects to the BBS. You should use this parametre.

N 10 means that RETRY will be set to 10.

M IU means that that all I and UI frames will be shown in monitor-windows. P 64 means a p-persistance value of 64. This is normal.

T 40 sets a TXDELAY of 40. This value depends on Transceiver in use. So, you can use any suitable parametres in this file. You need one file for each TNC.

The commands sent to the TNC, are the commands described in the documentation for the firmware you use, or in the documentation for PK-232, DRSI, BPQ etc.

If you are using BPQ, DRSI, PK-232 or KAM, look in section 14 for special commands for this files.

5.8 MAINTx.SYS

This file is in the SYSTEM directory. This works exacly like ${\tt INITTNCx.SYS}$, but the parametres are sent to the TNC when the BBS is shut down. The file can look like this:

Y 1

- U 1 BBS (\$c) was shut down for service \$d \$T.
- Y 1 means that only 1 station can connect my TNC now.
- U 1 means that the TNC will send this message to any user that connects after the BBS has shut down.

If you use a PK-232, the same file would look like this:

UR1

CTBBS (\$c) was shut down for service \$d \$T.

The commands sent to the TNC, are the commands describ documentation for the firmware you use, or in the documentation for PK-232, DRSI, BPQ etc.

5.9 BALISEx.SYS

This file is in the SYSTEM directory. This file makes the text that will be broadcast as mail-beacon from the BBS. (Balise in french means beacon). The first line is a parametre that says how often to send the beacon. %15 means "send one beacon every 15 minutes". The next line says to what unproto-address the beacon will be sent. ! MAIL v LA7QR means send beacon to MAIL via LA7QR digipeater.

The next lines are the actual beacon-text. Here we can use variables like \$d \$T etc. We cannot use variables that are specific to one channel alone. You do not need to change anything else then the !-line in this file. But you will need one file named BALISE1.SYS for TNC1, one calles BALISE2.SYS for TNC2 etc.

%15
! MAIL v LA7QR
\$d \$T <<< Mailbox \$0 \$c >>> \$N active messages.
Messages for\$W\$Q

5.10 BBS.SYS

This file is in SYSTEM directory. In this file you MUST put the callsign of every BBS you will forward directly to. There must be 80 (from 1 to 80) lines, even if you do not use them all. The format is very critical, so do NOT change line-arrangement!

All the BBSs you forward to (the callsigns after A in FORWARD.SYS) must also be in BBS.SYS. Before you start your BBS for the first time, you should remove all not-used callsigns in BBS.SYS, and put in the file only the BBSs that you forward to in your FORWARD.SYS. Later it is recommended that you do NOT replace one callsign with another, as messages then will go to the wrong BBS.

This file should speak for itself.

5.11 FORWARD.SYS

This file is in SYSTEM directory. In this file all necessary data for forwarding of messages is held. First I will give an example of a file that contains the minimum of data that MUST be in FORWARD.SYS if you have forward to only 1 other BBS, called LA2D in this example.

The file is organised in blocks, one block for each BBS we forward directly to. A block starts with A (callsign) and ends with ----- We can have as many blocks as we want in FORWARD.SYS.

```
A LA2D
#
P C
#
C C LA2D
#
B LA2D
F LA2D
#
```

All lines starting with a '#' are comments-lines, and are ignored by the BBS. The first line must always start with the letter A, and next the callsign of the BBS we want to forward to. Here: A LA2D

Then there must be line telling on which port to start the forward. This line must be there even if we only have 1 port.

In this example I use port C, which is the same as TNC 3 in my PORT.SYS. Command: P \mbox{C}

So I will send the connect-command to the TNC. That line must start with a C before the actual connect-command. So if I call LA2D directly, I need to write C C LA2D. (Only 1 C will not work). And lastly I must write which messages I shall forward to that BBS. In this case I type only B LA2D, which means all messages with @ LA2D, and F LA2D, which means all messages TO LA2D. The forward-file must end with a string of -----. If you have more than one BBS to forward to, you write all data for that BBS in a similar block in this same FORWARD-SYS-file (starting with A, and ending with ----) right after this block for LA2D.

You can also use one include-file for every BBS, but we will look at that in section 14 of this sysop-documentation.

Well. I expect you do not want to forward only those messages that are TO LA2D or @ LA2D (in this example), I expect you want to forward bulletins also. Just include some lines starting with G, like G EU, G ALL, G WW etc in the file. G EU means all bulletins addressed to @ EU. So may want to add this in each file, like this:

```
A LA2D

#
P C
#
C C LA2D
#
B LA2D
F LA2D
#
G EU
G ALL
```

G WW

OK. Next you may want to forward messages through LA2D, that is not really for LA2D, but that LA2D can forward on to this other BBS. These other BBSs can be included in lines starting with a B, like B LA1G, B LA4O, B LA5G etc. like this:

A LA2D
#
P C
#
C C LA2D
#
B LA2D
F LA2D
#
B LA40
B LA40
B LA5G
#
G EU
G ALL
G WW

Also, if you want to forward ALL messages for other SM-BBSs this way, you can use wildcards (as in DOS) like B SM^* , B SK^* , B OH^* etc. like this:

A LA2D
#
P C
#
C C LA2D
#
B LA2D
F LA2D
#
B LA40
B LA40
B LA5G
#
B SM*
B SK*
B OH*
#
G EU
G ALL
G WW

Well. Now the file is almost complete for most needs. We may want to add the possibillity to forward (on VHF or UHF) via several nodes. This is very easy, as we just add another C C (callsign) line for each node we have to call. If i must call first my local node LA7QR, next the local node of LA2D (LA1EAX-7), and lastly LA2D, the complete file for LA2D will now look like this:

A LA2D
#
P C
#
C C LA7QR
C C LA1EAX-7

```
C C LA2D
#
B LA2D
F LA2D
#
B LA1G
B LA40
B LA5G
#
B SM*
B OH*
#
G EU
G ALL
G WW
#
R
```

If you want to forward via KA-nodes etc., look in section 14.7.

I put in an R at the end. This forces my BBS to call LA2D BBS and ask him for forward from him to me (revers forward), even if I have nothing to forward to him.

Well, this was a simple forward-file. There is a lot more we can do with this file, so you should read section 14 of the sysop-manual very carefully, I think you will find all you need there.

5.12 Start the BBS for the first time.

Now you should be ready to start the BBS for the first time. Before you do, make sure that the internal clock of the BBS is correct. If not, you must correct it now with the DOS-command DATE and TIME. In most newer PCs today, the clock is automatically set at each power-up. But in some older PCs you may need to use a special clock/calendar card in your PC, and use a special program to set the date/time at each startup. For this you must look in the manual for that clock/calendar card and include the appropriate command in your AUTOEXEC.BAT file.

When this is settled, go to the FBB directory and type APPEL and press ENTER. The first time you start the BBS like this, it will ask you if you want to create some files. Just answer Y (for Yes) every time. Then those files are automatically created for you.

The BBS should now be ready for use. You will find a short help-list for all the function-keys by pressing F1.

Try a connect to the BBS. Do this by pressing F2. The BBS will ask you for your name and QRA-locator. Next you must define all the BBSs you want to forward to. You do this with the command EU. If you want to have forward to for example LA2D, you type EU LA2D.

The BBS will say that this callsign is not known, and ask if you want to create it. You answer Y. Next you will see a line of different options for that user. You only have to type B. Now that callsign (LA2D) will be defined as a BBS. You must press ENTER once more to stop editing the user. Repeat this procedure with the callsign of all the BBSs that you will forward to. You terminate the keyboard-session with the command B (Bye).

Well, if all is ok, and you have not encountered any big problems so far, you can stop the BBS (you do this with Alt-F10) now. You can connect the TNCs, and in INIT.SRV you must change from No to Ok in the line that asks 'Mode test?', or use INSTAFBB to change the field "TEST MODE" to "N".

5.13 TNC.

This software will work with different kinds of TNCs or TNC-interfaces:

- TNC-2 or close clones. The EPROM of type 27256 must be replaced by a special EPROM with the WA8DED host-mode software, or by the german TF4, TF8 or TF18.
- PK-232 in host-mode.
- Kantronics KAM in host-mode. You need a special driver called ESSKAM.
- DRSI-card.
- G8BPQ-node (uses TNCs in KISS-mode).

The software for the TNC-2 host-mode EPROMs TF4 and TF8, are on the distribution-disks. If you cannot burn new EPROMs yourself, there are a lot of hams around who can. You can also send a new EPROM to F6FBB or FC1GHV (with return-postage and packing material, of course) and they will do the work for you.

The TNC should work on $4.9~\mathrm{MHz}$. The standard is $2.5~\mathrm{MHz}$, but a modification for this is normally quite simple. In some cases it might be necessary to replace the Z80 and the Z80 SIO by A-versions.

If you use standard TNC-2 with one of the mentioned host-EPROMs, you can start again now, and all should work fine. Make sure that the TNCs have the same baud-rate as you wrote in PORT.SYS, and that they really are connected to the COM-ports that you said in PORT.SYS.

If you do NOT use a standard TNC-2 with DED-type host, but PK-232, Kantronics KAM, DRSI-card or BPQ-node, you must read about your special TNC-setup in one (or more) of the chapters 5.14 to 5.17 before you can start the BBS again.

If the TNCs don't work ok with the software, you will see this when you start the BBS. You will have a lot of error-messages on the screen, and the TNCs may start to resync. Stop the program and go throug all the setup once more.

5.14 PK-232 in host-mode.

If you plan to use a PK-232 with this sofware, you must make some changes. First, check again PORT.SYS. You must have a P in "Type host mode". For example:

```
#
#TNC NbCh Com MultCh Pacln Maxfr NbFwd MxBloc M/P-Fwd Mode Freq
1 7 1 1 230 4 1 10 30/60 UPYW 433.650
2 1 3 1 80 2 1 5 17/30 GPW 15/20m
#
```

Example of INITTNCx.SYS for PK-232:

UNMAIL v LA7QR means Unproto MAIL v LA7QR

RY10 " Retry 10 MN6 " Monitor 6 MC6 " Mcon 6

Example of MAINTx.SYS for PK-232:

UR 1

CTBBS (\$c) was shut down for service \$d \$T.

PK-232 host-mode commands (from F6AIW) :

```
8B 8BITCONV AU AAB
                      AB ABAUD
                                 AG ACHG
                                            AA ACRDISP
AK ACRPACK AT ACRRTTY AE ADDRESS AD ADELAY
                                            AI ALFDISP
AP ALFPACK AR ALFRTTY AL ALIST
                                 AM AMTOR
                                            AC ARO
AO AROTMO AS ASCII
                      AY ASPECT
                                 AW AWLEN
                                            AV AX25L2V2
AX AXDELAY AH AXHANG
                      BA BAUDOT
                                 BE BEACON
                                            BI BITINV
                     CL CANLINE CP CANPAC
BK BKONDEL BT BTEXT
                                            CX CASEDISP
CU CBELL
                      CF CFROM
           CC CCITT
                                 CB CHCALL
                                            CD CHDOUBLE
CH CHSWITCH CK CHECK
                     CQ CMDTIME CM CMSG
                                            CI CODE
CN COMMAND CE CONMODE CO CONNECT CY CONPERM CG CONSTAMP
CI CPACTIME CR CRADD
                      CT CTEXT
                                 CW CWID
                                            DS DAYSTAMP
DA DAYTIME DC DCDCONN DL DELETE DF DFROM
                                            DI DISCONNE
DW DWAIT
           EA EAS
                      EC ECHO
                                 ES ESCAPE
                                            FA FAX
                                            FS FSPEED
FN FAXNEG
          FE FEC
                                 FR FRACK
                      FL FLOW
FU FULLDUP GR GRAPHICS HB HBAUD HD HEADERLN HI HID
HO HOST
           HP HPOLL ID ID
                                IL ILFPACK IO IO
JU JUSTIFY KI KISS
                      LR LEFTRITE LO LOCK
                                            MX MAXFRAME
                                            MI MFILTER
MB MBX
           MC MCON
                      MD MDIGI
                               MM MEMORY
           MH MHEARD MN MONITOR MO MORSE
MF MFROM
                                            MP MSPEED
          MS MSTAMP MT MTO MA MYALIAS ML MYCALL
MR MRPT
MG MYSELCAL MK MYALTCAL NE NEWMODE NO NOMODE
                                            NR NUCR
         NU NULLS OK OK
                                 OP OPMODE
                                            PA PACKET
NF NULF
PL PACLEN
           PT PACTIME PR PARITY
                                 PS PASS
                                            PX PASSALL
PE PERSIST PP PPERSIST PC PRCON
                                 PF PRFAX
                                            PO PROUT
          RW RAWHDLC RB RBAUD
                                 RC RCVE
PY PRTYPE
                                            RE RECEIVE
                                 RS RESET
RX RXREV
          RD REDISPLA RL RELINK
                                            RP RESPTIME
RT RESTART RY RETRY
                      RF RFEC
                                 SE SELFEC
                                            SP SENDPAC
SI SIGNAL SL SLOTTIME SQ SQUELCH SR SRXALL
                                            ST START
SO STOP
           TB TBAUD TC TCLEAR
                                 TM TIME
                                            TR TRACE
           TI TRIES
                                 TF TXFLOW
                      TD TXDELAY
TW TRFLOW
                                            TX TXREV
UN UNPROTO UR USERS
                     US USOS
                                 VH VHF
                                            WI WIDESHFT
WO WORDOUT WR WRU
                      XW XFLOW
                                 XM XMIT
                                            XO XMITOK
          XN XON
XF XOFF
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