FlexNet-Digi node / F6FBB bbs Packet System Commands

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FlexNet User Command Summary

A	shows information about Destination calls
B	shows beacon text
C <call> [options]	connect to station <call>; possible options:
	<node> : use path via <node>
	<node-SSID>: use path via <node> with <SSID>
	<port> : use path via <port>
	a maximum of 6 of these options can be given)
C -<SSID>	change to (user)port <SSID>
C	shows all participants of convers (with
	channelnumber) and users of the infobox
	(with '---'); after the prompt 'channel?' you
	can type the channel number to enter a spe-
	cific channel or type RETURN to go back to
	the infobox
	commands in the convers mode:
/w	shows all users of convers and infobox
/w <n>	shows all users of convers channel <n>
/c	shows the current channel number of the convers
/s <call> <text>	sends <text> to the user <call>
/t <call>	starts talk mode to user <call>
/t	exits talk mode
/q	Quit, exits convers or talk mode
D	shows destination table (list of reachable
	nodes) with SSID range and RTT in tenth of
	a second
D <partial call>	like D, shows only destinations with the
	string <partial call> e.g. prefix or suffix
D *	like D, shows also destinations that would
	be available via a loop
D * <partial call>	combination of 'D *' and 'D <partial call>'
D <call>	shows RTT and choosen path to <call>
D <call> *	shows RTT via different available paths
D <call> >	shows RTT of all nodes of the path in between
F <call>	search for <call>
H	shows this help text
I	shows information about the node
	(if available)
L	shows link information of the node
L *	like L, additionally shows the last 16
	measured RTT's
LO	shows local info text
M	connects to the (local) mailbox (if defined)
M ?	shows call of the (local) mailbox (if defined)

MH <options>	shows MHeard list: list of stations with time since the last activity; possible options:
	<call> : callsign
	<partial call> : shows only stations with
	: the string <partial call>
	e.g. prefix or suffix
	<number> : shows last 16..300 entries;
	default: 30 entries
MY	shows callsign of the node with SSID range
P	shows parameters (layer 1/2 parameters)
P *	like P, with additional information (see below)
P [*] <port>	like P or 'P *' only for port <port>
Q	disconnect from the node
S	shows searchpaths for the FIND command (setsearch text)
ST	shows internal port statistics
T <call> <text>	talk mode, sends <text> to user <call>
T * <text>	sends <text> to all users connected to the infobox
T <call>	starts talk mode to user <call>, the talk mode uses the same command set like the convers mode
U <options>	shows user list; possible options:
	'*' :also shows Maxframe and Frack
	'=' :shows only the QSO's directly with the node (infobox)
	<port> : shows only QSO's on port <port>
	<call> : shows only user <call>

Additional information when using the commands 'L *' and 'P *' :

```
(d:142 v:1 t:193d,14h)
  |    |   +----------------time since last start/reset (uptime)
  |    +-------------------software revision (minor updates)
  +-------------------------number of destinations stored in the
                             routing list; these destination are
                             reachable via FlexNet routing
```

Flexnet User Commands

4.1. User Commands

User commands are all the commands normal users can access. The sysop has a set of additional commands or may specify additional parameters to normal user commands. In this documentation, <CR> means entering of a Carriage Return, $0D. The "=>" is the system prompt of FlexNet; input is expected now. All input can be made either upper or lower case. Is another command entered than those listed below, the node answers with: "invalid command".

4.1.1. L<A>test News

Syntax: A <CR>

The A-Command shows the text for latest news as set by the sysop. After a cold reboot this text is empty.

4.1.2. <B>eacon

Syntax: B <CR>

The B-Command shows the current beacon file. In this file you can see which beacon is sent on which port in which interval. After a cold reboot the default beacon is sent on port 0 or 1.

4.1.3. <C>onvers mode

Syntax: C <CR>

If no callsign is given, the CONNECT command puts you in convers mode. By this mode, a great number of stations can have a round table conversation there are 255 different convers channels available. After entering the C-Command, you get a list of all stations connected to the node and, if they are in convers mode, too, the channel on which they are. Now the node prompts for a number, which selects the channel you want to join.

Example:

=>C <CR>
users:
0: DL1AA 0:DL1ZZ ---: DL2XY   73: DG3FBL   73: DK7WJ

channel ? 73 <CR>
*** starting convers, exit: /q

In this example, DL1AA and DL1ZZ are on channel no. 0 and DG3FBL and DK7WJ on channel 73. DL2XY is connected to the node without being in convers mode. Having given the desired number 73, the conversation starts. All stations logged in onto the chosen channel get the message:

" <DL9ABC>: *** Logon"

While being in convers mode you have the following commands at your disposal:

"/w"   shows all stations connected to the node (with convers
                        channel number if available)
"/c"   shows the actual channel number
"/c n"   switches to channel n
"/s <call> <msg>"   sends private msg to <call> only
"/m <call> <msg>"   sends private msg to <call> only
"/q"   quits convers mode

If a station disconnects while being in convers mode or quits convers mode, all other users of the channel get the message:

"<DL9ABC>: *** Logoff".

If a user changes to another channel, the users of the left channel get the message:

"<DL9ABC>: *** switched to channel n"

If there is no channel number entered on convers start-up, convers mode is ended immediately. You are then prompted for a new command.

4.1.4. <C>onnect

Syntax: C Call [via] [digi1 digi2 ... digi8] <CR>

The CONNECT command is used to connect further onwards. The node will try to connect you to the station via the path you specified. To confirm your command, you get the message "link setup...".As soon as the connection is made, you will get "*** connected to <call>" from the node. When the called station did not respond, you get "*** failure with <call>". If the called station sends a Busy (DM), the message "*** busy from <call>" is sent to you.
The link setup can be interrupted by sending a single <CR> to the node. If you see the message "*** can't connect twice", you have tried to establish a QSO which already exists with the same callsign fields.

With the C-Command it is also possible to change the user port, if the node has more than one. By typing "C -7" you change to the port with the SSID 7. This is acknowledged by the message "*** <call>: SSID OK".

If you connect to another station from the node onwards, and that station disconnects you, you will get reconnected to the node. To show you what happened, you get a "*** reconnected to <call>" then.

A connect request will be denied, if it causes a loop in the network. If, for example, you are connected to DB0KT via DB0ODW, you cannot connect back to DB0ODW nor to other nodes behind DB0ODW. You should quit the QSO with DB0KT then and retry after the reconnect.

Example: (user is connected to DB0HP)

=> C DB0ODW <CR>
link setup...
*** connected to DB0ODW
RMNC/FlexNet V3.3d - DB0ODW - JN49 IQ - Help mit H

=> C DB0HP <CR>
*** DB0ODW: loop detected
=> Q <CR>
73!
*** reconnected to DB0HP
=>

4.1.5. <D>estinations

Syntax: D [call] <CR>

The DESTINATIONS command prints out the destination table maintained by the node. In this table all nodes, where the autorouter knows a way to, are shown. For every callsign there are the SSID range of the callsign and the average round trip time in 100 ms steps are shown. As an optional parameter a destination callsign may be given. The node will now try to work out the way to this node and will show it (after some seconds, depending on the (round-trip time). Uppercase callsigns mean that the node knows the FlexNet protocol, lower case callsigns are inserted by the autorouter to reach the next FlexNet node. The characters "???" mean, that the previous digi does not know the way to the destination. This may happen, when the route to the destination is reorganized at the moment or when the destination is not reachable anymore. The "D-Table" is usually the same on all nodes. Only when round trip times get too high, a node is not shown anymore. Only nodes that you can reach without link loops are shown by default. This reduces link load and has the advantage that you
will see only the nodes that are not in your direction. By using the option "*", you will get the complete list. Another possibility is the selective display of a part of the list. By entering "D HB9" for example, you get all destinations starting with "HB9", i.e. the whole Swiss network. Both parameters may be used together. If you type "D * HB9" you will get all Swiss destinations, including these you cannot reach without loops.

4.1.6. <F>ind

Syntax: F call <CR>

With the FIND command it is possible to look for a station which is standby on this or another node. When the F-Command and the callsign are entered, the digi sends UI-frames with the POLL-bit set to this station via some neighbor nodes. Source callsign is the callsign of the OM who issued the FIND command. If the called station hears the frame, it will answer with a DM-Frame. The node analyses all frames coming back and is able to determine if this was an answer of the FIND command. If this is the case, you will get a message via which node the station was found. If the called station is already connected to the node, no special frame is sent and the user will get the message that the user is QRV on the digi.

Example:

=>F DK7WJ <CR>
*** DK7WJ found via DB0ODW
=>

Only the node via which the called station was found is put out. It will be known to the autorouter. If the station was not found, a system prompt "=>" appears again. Since the used UI and DM frames may get lost, it is advisable to use the FIND command more than only once to be sure the user is not QRV. Due to the protocol, the SSID of the called station must be known.

4.1.7. <H>elp

Syntax: H <CR>

The H-Command prints out the text-file HELP. The text can be entered by the sysop only and should give short help text about using the node. After a cold reboot the text is empty.

4.1.8. <I>nfo

Syntax: I <CR>

The I-Command prints out the text-file INFO. This text can be entered by the sysop only and should provide information about the node (QTH, equipment, antennas and so on). After a cold reboot the text is empty.

4.1.9. <IO> (In/Out)

Syntax: IO <CR>

The IO-Command shows the state of the I/O-ports of the RMNC reset card. There are 16 lines in and 16 lines out. The latter may be set only by the sysop. Using this ability it is possible to remote control the node by hardware. There are no limits to the fantasy of the sysop. The data is shown binary.

Example:
=>IO<CR>
I: 0000 0000 0000 0000   O: 0000 0000 0000 0000
=>

The input lines are shown first and then those of the output. 0 means "low", 1 means "high". The meaning of the single bits needs to be documented by the sysop.

4.1.10. <L>inks

Syntax: L <CR>

The LINKS-Command displays the link table set up by the sysop.
Example:

```
=>L <CR>
DB0KT        0-7     60/68          P1
DB0AAC       0-15    (---)          P2
DB0IE        0-1      583           P3 @
DB0EQ        0-8     (355/399)      via DB0IE
DK7WJ        8-11     44/67         P0
DB0ABA                              P4
DB0BBS       0-15     ---           P5
```

In the first column the callsigns of the neighbor nodes are shown. Second column shows the SSID ranges of these stations (default: 0-15). In the third column you read the round trip time to the neighbor in 100 ms - steps. No number here means that the round trip time is not calculated. Three hyphens mean that the link is not available at the moment. Three hyphens within brackets mean that the link is not available but the autorouter is aware of another way to the station. If there is only one number in the column, the link partner does not know about the FlexNet protocol, or the internode QSO could not be established. When the sysop knows that the neighbor does not know the FlexNet protocol, he may set the attribute "@" to the link. Then only the link is tested, not if the partner knows the protocol. If the round trip time is surrounded by brackets, the link is so bad that it is not made known to the network. If there are two numbers, separated by a diagonal stroke, the neighbor is a FlexNet node. In this case the round trip times of both directions are shown. If these values are within brackets, the autorouter knows a better way to the destination, i.e. the direct link is not used. The 4th column shows either the port number of the link to the neighbor (on direct links) or the stations via which the neighbor is reachable. A hyphen behind the port number means that the link is not made known to the network. This may be used for temporary links or software tests for example.

4.1.11. <LO>cal

Syntax: LO <CR>

The LO-Command shows the text-file LOCAL. This text is appended to the CTEXT for local users, but it can be displayed by the LO command separately. The text may only be entered by the sysop. After a cold reboot this text is empty.

4.1.12. <M>ail

Syntax: M <CR>

The MAIL-Command connects you to the nearest BBS as defined by the sysop. This command therefore works like a "Connect" command with predefined destination. The BBS callsign can be shown with "M ?" (Notice the space!)

4.1.13. <MH>eard

Syntax: MH [options] <CR>

The MHeard-Command by default displays the last 30 direct heard callsigns. Optionally, a port number, a callsign (with or without SSID) or a number (16 ... 200) of entries to be listed, may be given.

4.1.14. <MY>call

Syntax: MY <CR>

The mycall command gives the callsign and the SSID range of the node.
Example:

=> MY <CR>
mycall: DB0ODW, SSID's: 0-7
=>

4.1.15. <P>arameters

Syntax: P <CR>

The PARAMETERS command puts out a list of the current parameters and some channel statistics. Additionally, the links as shown with the <L> command are displayed.

Example:
=> P <CR>

po	id	td	qso	usr	tifr	rifr	tkby	rkby	qty	mode	links
1	--	10	30	1	365	287	50	33	100	9600d*+	DB0KT 0-10 6/6
2	--	1	36	1	271	908	30	163	99	19200d*+	DB0GV 0-0 4
3	--	1	1	1	0	0	0	0	100	9600d*+	DB0GV 6-6 10
4	--	40	3	1	27	3	2	0	82	1200*+	DB0TCP 0-15 580/647
5	--	1	50	1	835	377	102	55	100	19200dtr*+	DB0SHI 0-15 11/39
6	--	1	39	1	582	546	78	42	100	38400d*+	DB0GV 10-12 1/1
7	--	40	4	1	31	3	2	0	70	1200*+	DB0ASF 0-15 229/243
8	7	40	8	8	184	36	34	1	92	1200*+	

The single columns mean:

po: Port number
id: Port SSID, on interlink-only ports "--"
td: TxDelay in 10 ms units
qso: number of QSOs on this port, internode QSOs are also counted
usr: number of stations heard on this port (since 3 mins)
tifr: transmitted I-frames within the last 10 mins
rifr: received I-frames within the last 10 mins
tkby: transmitted kilobytes within the last 10 mins
rkby: received kilobytes within the last 10 mins
qty: quality of the channel; this is updated every 10 mins, but not if
       there was nothing to send.
mode   Baudrate on this port, additionally:

  "c" KISS: CRC-Mode, HDLC: Software-DCD (depends on hardware)
  "d" fullduplex
  "t" external TX-Clock
  "r" external RX-Clock
  "z" NRZ mode
  "m" DAMA master
  "s" port is synchronized
  "u" port is user port
  "y" autosysop
  "+" 8 Mhz CPU-Clock (RMNC)
  "!" 12 Mhz CPU-Clock (RMNC)
  "#" 16 Mhz CPU-Clock (RMNC)

links: see <L>-Command

When counting the I-frames, re-iterated frames and frames which got lost due to DISC are not counted. The kilobyte statements are only the contents of the acknowledged I-frames, re-iterations are not counted, too. Thus, this is the genuine net data rate.

4.1.16. <Q>uit

Syntax: Q <CR>

The QUIT-Command ends the QSO with the node. After a "73!" you get disconnected. If you are connected from another FlexNet node, you will be reconnected to that node.

4.1.17. <S>etsearch

Syntax: S <CR>

The SETSEARCH-Command displays all digipeaters via which the FIND-Command searches for someone.
Example:

=>S<CR>
search digi's:
DB0ODW
DB0KT via DB0ODW
DB0AAI via DB0ODW
DB0DA via DB0ODW
DB0IE via DB0ODW
=>

The frame generated by the FIND-Command would be sent via
DB0ODW, DB0KT, DB0DA, DB0AAI and DB0IE.

4.1.18. <T>alk

Syntax: T <call> [<text>] <CR>

With this command you can talk to other users connected to the node. There are two modes: If there is a text given behind the callsign, then this line is sent and you get back to the prompt. Thus, you have to issue a new Talk-Command for each line. By "T <call> <CR>" you get into the permanent talk mode which can be left later by using "/q". This is similar to converse mode, with the difference that it does not happen on a converse channel. All Convers-Commands are active and the current status can be displayed with "/c".

4.1.19. <U>sers

Syntax: U [n] <CR>

The USERS-command displays all users which have a QSO with or via the
node. Additional information is provided:
Example:

=> U <CR>

```
   1:   S5      P0: DB0ODW>DG3FBL
   6:   S7 U1  P0: DB0ODW>DK7WJ

  35:   S5      P0: DL1AA>DB0GV v DB0ODW DB0KT
2014:   S5      P8: DB0GV>DL1AA v DB0KT DB0ODW
```

i.e.

1. column:	QSO number. The node uses this number for internal management of the QSO.
2. column:	QSO state. This number shows the state of the QSO. (see appendix for explanation)
3. column:	shows the number of unacknowledged frames of the QSO, if there are any.
4. column:	port
5. column:	calls and digipeater field

The QSOs with the node are shown first, then the ones which run via the node. Additional
parameters may be specified on the "U" command line. If you enter an "i", only QSOs with the
node are shown. If you enter a port number, you get all QSOs via that port. Using "U *" you get
additional information about the QSOs. The parameters may be combined. For example,
"U * 4" shows all QSOs on port 4 with detailed information.

Example:
=> U * <CR>

```
   1: S5        F100  M3   P0  : DB0ODW > DG3FBL
   6: S7  U1    F87   M7   P0  : DB0ODW > DK7WJ

  35: S5        ! F50  M4   P0  : DL1AA > DB0GV v DB0ODW DB0KT
2014: S5        ! F66  M7   P8  : DB0GV > DL1AA v DB0KT DB0ODW
```


Additionally, the actual FRACK time "Fxxx" and the MAXFRAME "Mx" are shown for each
QSO. On DAMA masters the DAMA priority is shown instead of FRACK. A "!" in front of the
F-value says, that the QSO is using header-
compression (see section 9.8).

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F6FBB-BBS User Commands

Here is an overview of what the BBS-commands do:

; :   A command-line starting with a ; is ignored. Nothing happens, and there is no prompt back..

? :   Reading the help file. Type ?[COMMAND] to obtain help on a basic command.

> :   "Break" between channels. Type > [CALLSIGN] [TEXT] to send a text to a connected callsign on another channel. The BBS will advice you that the text has been delivered. This text cannot be longer than one line.
This command is not allowed in read-only mode.

= :   Connection between two channels. Type = [CALLSIGN] to get connected to a callsign on another channel. The callsign can be connected only if it is not busy in a command; the BBS should be idle (waiting for a command). If the callsign is not available, you may either wait or you may cancel your request. The callsign currently busy in forwarding tasks cannot be connected. Use Ctrl-Z to leave this mode.
This command is not allowed in read-only mode.

! :   Provide a short and minimal information on the BBS usage.

% :   Use this command to see the status of all channels right now.

A :   Abort the BBS output at any time.
   When reading messages with paging, the commands N and C are available, too.
   Use N to skip the reading of the rest of current message, and start on the   next message.
   Use C to read the rest of the message(s) without paging.

B or Bye :   Disconnects the BBS. Note that the "last listed" parameter is updated.
   When the user does a "hard disconnect", the last-listed parameter is NOT updated.

C: Enters the conference mode, multiconnection.
CW: Shows a list of the callsigns involved in the current conference.

Commands in the Conference mode:

.C [PORT] CALLSIGN: Connection to a callsign on a port. The port indication is optional; the port of the connected user is then chosen as a default.
.D CALLSIGN   Disconnects the callsign from the conference.
.H: Help
.W: List of the participants in the conference
.Q: Exit of the conference.

D: Invokes the FBBDOS, or receives a file from the BBS if the command is followed by a file name.

F: Switches to Server mode, and access to special commands.

G: Accesses the Gateway mode, if gateway is allowed in the BBS.

B:	Exit the Gateway	**H:**	Help
K:	Enters Converse mode.	**J:**	List the last 20 stations heard on the port.
C:	Connect.	**P:**	Link from one port to another.
D:	Disconnect.	**M:**	Monitor On/Off.
Q:	Return to BBS mode.		

H: Shows short help. For help with specific commands, see the ? command.

I :   Information about this BBS. This command displays the file FRANCAIS.INF (or another language depending upon the configuration and the language attributed to the involved channel).

I callsign : Gives the information on callsign taken from the white pages database. Callsign can include wildcards.

ID :   Shows how many records there are in the WP database.

I@ bbs :   Gives the users of BBS found in the WP database.

IH route :   Gives the users of the hierarchical route area from WP database (wildcards allowed).

IN string :   Gives the WP-records including "string" in the name from the WP database.

IQ string :   Gives the WP-records including "string" in the QTH from the WP database.

IZ Zip :   Gives the users of the ZIP code area from WP database (wildcards are allowed).

J-commands list the callsigns heard by or connected on the BBS.
JK :	Shows the last 20 connected callsigns.
JA :	Connected callsigns on port A.
JB :	Connected callsigns on port B, etc...
J1 :	Heard callsigns on port A.
J2 :	Heard callsigns on port B, etc...

K-commands delete messages sent by you or to you.
K msg# :	Deletes a message identified by its number.
KM :	Deletes all the messages addressed to you, that you don't yet read. The messages not read will not be deleted.

L : Lists the new messages since the last usage of this command.

LA: List messages with status A.
LB : Lists bulletins.

LC [mask] : List the messages which "TO" filed matches with mask. * (star) allows to list all the messages and should be the default value. Type "LC *" to see all messages. LC alone gives the current mask. Mask is recorded for each user while disconnecting.

LD> YYMMDD : Lists the messages received after the specified date.

LD< YYMMDD : Lists the messages received before the specified date.

LE : List messages that could not be forwarded.

LF : List FORWARDED messages.

LH : List HELD messages.

LK : List KILLED messages.

LM : Lists the messages TO YOU.

LN : Lists the NEW messages TO YOU.

LP : List PRIVATE messages.

LU : Lists all unread messages to/from the user.

LX : List messages with status X.

LY : List messages that have been read (status Y).

LL 10: Lists the last 10 messages.

LR : Equivalent to L but the messages are listed in reverse order.

LS text : Searches for a text in the messages titles. Usage of wildcards is allowed.

LT : List Traffic (for NTS-messages).

L$: List bulletins with status $.

L< Callsign : Lists the message originated from [Callsign]. The wildcards are allowed.

L> Callsign : Lists the messages destined to [Callsign]. Wildcards are allowed.

L@ [BBS] : Lists the messages VIA BBS if specified. L@ alone lists the message without route. The wildcards are allowed.

L msg#- :   Lists all messages, starting from msg#

L msg#-msg# : Lists messages between the given numbers.

M msg# File : Transfers the text of the message msg# to the file File. This file will be placed in the directory USERS or from the root in case of a SYSOP user.

MH msg# File : Identical, but the format is the R command.

MV msg# File : Identical, but the format is the V command.

MA msg# File : Transfers the text of the message msg# to the file File. This file will be placed in the directory

 USERS or from the root in case of a SYSOP user. The message is appended to the existing file.

MHA msg# File : Identical, but the format is the R command. The message is appended to the file.

MVA msg# File : Identical, but the format is the V command. The message is appended to the file.

N :   Enters or modifies the name (max 12 characters allowed).

NH :   Enters or modifies the Home BBS. A point deletes the current Home BBS.

C: Connections – Statistics   **N**: Ham Callsigns Directory ("Call-Book").

D: Documentation.   **T**: Satellite orbits computation.

F: Switches back to BBS mode.   **Q**: QTH/Grid Square locator.

B: Quits and disconnects

Connections - Statistics:

Statistical data about the operation of the Server and the Traffic Log.

0:   Percentage of usage for the different activities.

G: General information on the server.
- Number of active messages.   - Times of connections.
- Number of connections.   - Peak traffic periods.

L: Lists the connections (Traffic Log). For each and every connection, the channel – callsign - date and time - as well as the connection duration are indicated. This information are listed in reverse chronological order.

H: Histogram by hours.

J: Histogram by days.

I: List of the callsigns that have connected to the server. This list is given in alphanumeric order.

F: Switches back to the Server main menu.

B: Quit and Disconnect.

Documentation.

L: List of available files.
You `will` find under this section the information or documentation given by various hams. The documentation is organized like the image of a tree structure. The directories represent the topics and the files represent the documentation.

       The selection of the topics or the documentation is made through numeral commands. The menu is presented with the form of one or several numbers followed with their description (topics or documentation).

       In the case of topics, the description corresponds to the name of the MsDos directory. This name is eleven characters long, the dot between the name and the extension will not appear. It is possible also to simulate the space character with an underscore character.

Callsigns Directory.

       You will find in this module the information that the users will have accepted to leave there: name, first name, address, phone number, etc...   You are also able to update your own stored information.

N: Modifies your name and address. If the information in the file is erroneous, or should it have changed, you can modify them with this command. A space or a return as an answer to the question will not modify the content. If the content of the file is correct, you can cancel the modification by replying N to the modification request.

R: Search for information about a user. If the user is known in the file, you will get information for him or her. You can concatenate the callsign of the user who is searched for behind the command. Ex.: R WA2UPK will give information about WA2UPK.

I: Lists the callsigns that have connected to the server. This list is given in an alphanumeric order.

F: Switches back to the Server main menu.

B: Quit and Disconnect.

NL :   Enters or modifies the QRA locator.

NP :   Modifies the password for the access via telephone modem.

NQ :   Enters or modifies the city (Qth).

NZ :   Enters or modifies the Zip Code.

QTH/Grid Square locator.

The QTH/Grid Square locator is made up of 2 letters, 2 figures, and 2 letters yielding the geographical coordinates of a station. You can translate the QTH/Grid Square locator into Longitude/Latitude or vice-versa, compute the distance and azimuth between two QTH/Grid Square locators or compute your Log-Sheets for contests (summing up of distances).

Q: Converts one QTH/Grid Square Locator into Longitude and Latitude. The West longitude and North latitude are given in degrees minutes, or grades.

L: Converts the Longitude and Latitude into QTH/Grid Square Locator. The west longitude and north latitude can be given in centesimal degrees, degrees minutes, or grades.

D: Computation of the distance and azimuth between two QTH/Grid Square Locators. The distance is given in Kilometers and the azimuth in degrees.

C: Sum up the distances. After having entered the QTH/Grid Square Locator which will be used as the origin for the computation, you will enter the QTH/Grid Square Locator of the destination. The computed distance can then be summed up with a second or several other computations, thus allowing you to get the total number of kilometers.

F: Switches back to the Server main menu.

B: Quit and Disconnect.

Satellite orbital computation.

Satellite orbital parameters computation, and satellite characteristics.

T: Satellite orbital computation. Once the satellite has been selected, you will have to supply the date and the time to be taken into account for the computation. The geographical position is the QTH/Grid Square Locator of the connected user, if it is known in the file. Otherwise, the QTH/Grid Square Locator of the server will be used as a default. Depending on the satellites, the computation step can be variable, and one line of parameters will be displayed per step. This line corresponds to a minimal elevation of -5 degrees, that means the satellite 5 degrees below the horizon.

P: Selected satellite orbital parameters display. These parameters will be used for the computation.

C: Characteristics and information regarding the selected satellite.

F: Switches back to Server main menu.

B: Quit and disconnects. **NQ**

Modification of your password for access via telephone modem. Entry or modification of your 6 digit Qth/Grid-

Square Locator. Entry or modification of your Zip Code.

O :   Displays the setting of various options.

OL :   Lists the available languages.

OL number : Selects a language.

ON :   Shows the number-base for messages. See also ON number below.

ON number : Defines the number of the thousand base for the messages. Example: ON 37defines number 37000 as being the base for numbering the messages. Then the command R 25 will cause the message 37025 to be read, although R 36025 will actually read the message nr 36025.

OP :   Validates or disables the scrolling of pages.

OP nbr of lines : Initializes the page scrolling

OR :   Validates or disables the ability to list all messages, if the user has access to the whole list of messages by default (See security code 256 of INIT.SRV).

PG [program]: PG alone gives the list of PG programs available in the BBS. If followed by a program name gives the control to this program. The PG program can also be called by its name. If the name is the same that an existing command, the existing command will be replaced with the PG program.

Callsign:
        Will give information on the callsign in the local White Page database.

PS :   Gives the list of servers available in the BBS.

R-commands are for reading messages.
Note:
When reading messages with paging, the commands N and C are available, too.
Use N to skip the reading of the rest of current message, and start on the next message.
Use C to read the rest of the message(s) without paging.

R msg# msg# : Reads the messages by their numbers.

RM :   Reads all the messages to you.

RN :   Reads all the NEW messages to you.

RU :   Read all unread messages to/from you.

R> callsign : Read all messages to a callsign.

R< callsign : Read all messages from a callsign.

S[type] callsign :
 Sends a message or a bulletin. If the type is not specified, it will be processed as a private, provided the destination callsign is a valid one, otherwise it will be considered as a bulletin.

SP callsign :   Sends a private message.

S callsign @ BBSCALLSIGN :
Sends a message to a station AT another BBS through forward. BBSCALLSIGN can be an address of hierarchical type, for example F6FBB.FRA.EU. Type "SB ALL" to send a bulletin addressed to ALL. The message must be terminated by a Ctl Z or /EX followed by a return. Warning: the /EX must be in the first column.

SC Msg# Callsign @ BBSCALLSIGN :
Copies a message or bulletin to the specified callsign. Such a copy will always be of the "personal" type. When relying to a CP SYSOP message, the title is changed back to the original.

SR [Msg# [title]] :
Replies to a message already read or formerly suppressed, or to a message matching the specified number. If the title is not stated, it will be the title of the read message, with the mention "Re:" placed ahead.

T :   Pages the SysOp. Should the SysOp not be available within a minute, you will be advised accordingly and automatically returned to the normal BBS menu.

TH :   Gives access to the themes-zone. Lists messages by themes, as setup   in the file THEMES.SYS. Available commands in this zone, are
    H   (list themes)
    L   (list messages in current theme)
    R msg#   (read message in current theme)
    Number   (change to theme#)

U :   Uploads a file from the user to the server of the BBS. The file will be written in the root directory of the FBBDOS. The U command is to be typed at the BBS prompt, it is not necessary to go to FBBDOS first.

V :   Version number of this BBS software. It gives also the number of active messages, and the next message number.

V msg# msg# : Reads the messages by their numbers, including the headers.

VM :   Reads all the messages TO you, including the headers.

VN :   Reads all the NEW messages TO you, including the headers.

W :   Lists the files which are within the user directory. This command can be followed by a mask specifying search criteria or a directory name; in the latter case, the directory contents will be listed.

X :   Toggles "normal" or "expert" status. "Normal" grants the extended menus, "expert" provides only minimal information.

Y :   Binary transfer program using the YAPP protocol. As a user, you should also have the YAPP protocol available your end, in order to be able to transfer binary data.

YD File : Downloads a file FROM the BBS TO you.

YI [mask] :   Lists the available binary files, and their description.

YN [mask] :   Lists the NEW binary files since your last connection.

YU File :   Uploads a binary file from you TO the BBS. You cannot replace or modify an already existing file.

YW [mask] :   Lists the available binary files.

YZ Filename : Deletes the specified filename in the YAPP directory.

Z Filename :   Deletes the specified filename in the user directory.

MULTI, server for FBB-BBS.

(By LA6CU, Per)

This server is used to send multi personal copies of messages.
MULTI may work in 2 ways.

1: WITH DAT-FILES: created and installed on the bbs by the Sysop. In this case the original is addressed to a special "call", which is a file name of a data file created by the bbs Sysop containing the calls of everyone that shall have one.

In this example all messages sent to SP CLUB will be copied to all callsigns in the file CLUB.DAT, while messages sent to SP TEST will be copied to all callsigns in the file TEST.DAT.

The .DAT-files must consist of callsigns (@BBS and H-addresses allowed) for
all those that shall have a copy.

There are 4 different copy-types.

A (action)	: This is the callsign that will receive the message, or perform the action described in the message.
C (copy)	: This callsign receives a copy of the message.
I (information)	: This callsign receives a copy for information.
H (hidden)	: This callsign receives a copy, but his callsign will not appear in the footnotes of the message, telling who has received a copy.

There may be more than one callsign on each line (starting with A, I, C or H)separated by a comma.
There may be maximum 100 callsigns altogether.
Comment-lines are extras; they MUST start with a #

From version 3.00 there will also be a separate line with a letter corresponding to the language the server will use. What letter corresponds to what language, is explained in below.

Example of CLUB.DAT:

```
E                      <----- Use ENGLISH language for CLUB-server
A  LA6CU,  LA1B,  LA2D  <----- Copies to the people doing the job
A  LA6GDA              <-----   "    "  "  "  "   "   "
                               May be several lines if there is not
                               enough room in one line.
I  LA5RBA              <----- LA5RBA is informed on the matter
C  LA6IM @ LA6IM       <----- LA6IM receives a copy for updating his
                               node-lists
H  LA2GIA              <----- LA2GIA receives a copy, but will not appear
                               in the list of callsigns at the end of
                               each message.
```

Beware: The .DAT-files shall consist of callsigns and comments, nothing
           else ! No /EX, no * and no *** end of file.

MULTI will NOT send a copy back to the originator, even if he also is in
the .DAT-file. This to avoid "looping" of messages. MULTI will send an acknowledge-message back to
the originator, telling him that the copying was successful, and show him a list of all callsigns
that will receive such a copy.

2: WITH ALL CALLSIGNS DIRECTLY IN THE ORIGINAL-MESSAGE.

MULTI still works exactly as above. Users themselves can decide what callsigns will receive a copy.
This is done by addressing the message to any one of the forms of MULTI as indicated below, which
specifies the language to be used, and by including the callsigns in the message itself.

From version 3.00 SP MULTI uses the default language. Other languages may be
configured. For example you may have:
MULTI   MULTI   (for default language)
MULTIE   MULTI   (for english language)
MULTIF   MULTI   (for french language)
MULTIH   MULTI   (for netherlands language)
MULTIN   MULTI   (for norwegian language)
So, you may send the same message SP MULTI, SP MULTIE, SP MULTIF, SP MULTIH, SP
MULTIN etc. The first 5 letters must always be MULTI, when used without DAT-file. Default
language will typically be english (SP MULTI), but the users have the possibility to use others, as
configured.

Users will now be able to send messages to MULTI, like this:
SP MULTI   The program will now collect the info on who will receive a copy, from the message itself,
and not from a separate .DAT-file like SP CLUB or SP TEST still will do.

There are 4 different copy-types.
A (action)   : This is the callsign that will receive the message, or
                                         perform the action described in the message.
C (copy)   : This callsign receives a copy of the message.
I (information)   : This callsign receives a copy for information.
H (hidden)   : This callsign receives a copy, but his callsign will not
                                         appear in the footnotes of the message, telling who has
                                         received a copy.
(In addition one may use CC: instead of only C for Copy. Special request..)

There may be more than one callsign on each line (starting with A, I, C or H) separated by a comma.
There may be maximum 100 callsigns altogether.
Comment-lines are extras; they MUST start with a #

Example:
SP MULTI
Digipeater upgrade   <----- Title of message
A LA6CU, LA1B, LA2D   <----- Copies to the people doing the job
A LA6GDA   <-----   "   "   "   "   "   "   "
I LA5RBA   <----- LA5RBA is informed on the matter
C LA6IM @ LA6IM   <----- LA6IM receives a copy for updating his
                                       node-lists
H LA2GIA   <----- LA2GIA receives a copy, but will not appear
                                       in the list of callsigns at the end of
                                       each message.
---------   <----- After the last callsign, there must be a
                                       string of at least 5 '-' before the
                                       actual message.

Then follows the contents of the message, and end with Ctrl-Z or /EX.

As usual, the sender will receive a message saying that the copies were made. The messages to all the
other callsigns will be identical, and look like this:

Message via LA6CU MULTI-server (v3.00) :

Contents of message

==
==
For action   : LA6GDA, LA6CU, LA1B, LA2D.
For copy   : LA6IM.
For information   : LA5RBA.
==
==

All copies are identical, but A, C and I determines in which line in the footnotes the callsigns will appear.
A callsign after an H will not appear in the footnotes.

Note: Original text modified by K2BJG.
Updated October 2007