

## THENET X1-J QUICK REFERENCE GUIDE

### SWITCH COMMANDS

```
ACL    [{ CALLSIGN + VALUE } | { CALLSIGN - VALUE } | { * VALUE }]
ALIAS  [ * | NEW_ALIAS ]
ARP    [ipaddr [{ - ptcl } | [ + [ P ] ptcl callsign [ DG | VC ]]]
AUDIT  [ NUMBER_FROM_0_TO_255 ]
BBS    [ CALLSIGN | * | ? ]
BBSALIAS [ * | NEW_ALIAS ]
BTEXT  [ * | BEACON_MESSAGE_TEXT ] (see note 6)
BYE
CALIBRATE [ PERIOD_VALUE_FROM_1_TO_60 [ TOGGLE_VALUE_1_TO_PERIOD ] ]
CLOSEDOWN A
CONNECT [ CALLSIGN [ [V] DIGILIST ... ]
CQ     [ MESSAGE_FOR_CQ_PACKET ]
CTEXT  [ * | CONNECT_MESSAGE_TEXT ] (see note 6)
DXCLUSTER [ CALLSIGN | * | ? ]
DXCALIAS [ * | NEW_ALIAS ]
HELP
HOST   [ CALLSIGN | * | ? ]
HOSTALIAS [ * | NEW_ALIAS ]
INFO   [ SYSOP_SET_MESSAGE ] (see note 6)
IPADDRESS [ NEW_IP_ADDRESS ]
IPBROADCAST [ NEW_IP_ADDRESS ]
IPROUTE [ipaddr [ /bits ] [ - | { + port [ ipgateway [ metric ] ]}]
IPSTATS [ { NEWPARAM | * } { NEWPARAM | * } ..... ] (see note 5)
LINKS
MANAGER
METER  [ new_value ] (see note 5)
MHEARD [ NUMBER_FROM_1_TO_100 ]
MODE   [ { NEWPARAM | * } { NEWPARAM | * } ..... ] (see note 5)
MTU    [ list_of_parameters ] (see note 5)
NODES  [ * [*] | NODECALL {+|-} IDENT QUAL COUNT PORT NEIGHBOUR
        [DIGIS]]
PARMS  [ { NEWPARAM | * } { NEWPARAM | * } ..... ] (see note 5)
QUIT
RESET  [ ANY_CHARACTER ]
ROUTES [ PORT NODECALL [ DIGILIST ... ] { + | - } PATHQUALITY ]
STATS
SYSOP
TALK   [ STRING ]
UI     DEST STRING_OF_TEXT_TO_BE_SENT_IN_UI_FRAME
USERS
```

Note 1 Any command may be enabled or disabled by the use of the '+' or '-' modifier, as shown below :

```
ANY_COMMAND [ + | - | THAT_COMMANDS_PARAMETERS ]
```

Note 2 IP addresses are of the form nnn.nnn.nnn.nnn  
where nnn is a number 0..255

Note 3 IProute port paramter takes the form 0 or 1 for radio or rs232 AX.25 or Net/Rom for Net/Rom  
( May be abbreviated )

Note 4 ARP ptcl parameter is AX.25 or Net/Rom ( may be abbreviated )

Note 5 The commands will accept the 'old' syntax of '\* \* \* value...' or the new offset & value syntax of '/ parameter\_number value'

HOST 'ESCAPE' COMMANDS

<escape> C  
 <escape> D  
 <escape> P [ NEW\_PASSWORD ]

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UNDERSTANDING ACL VALUES                      UNDERSTANDING AUDIT BITS

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Bit	Function		Bit	Function
0	Bar all incoming L2 connects		0	Issue L1 stats every 10minutes
1	Bar outgoing L2 downlinks		1	Audit L2 connects & disconnects
2	Ignore nodes broadcasts		2	unused
3	Bar gatewaying at level 3		3	Audit L4 connects & disconnects
4	Bar incoming L4 connects		4	Audit L7 use of sysop command
5	Bar outgoing L4 connects		5	Audit all L7 switch commands
6	ignore SSID in searching		6	Issue CPU stats every 10minutes
7	unused		7	unused

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PARMS PARAMETERS

Number	Min	Max	Function
1	1	400	Maximum number of destination nodes
2	0	255	Minimum quality for auto update
3	0	255	HDLC ( radio, port 0 ) default quality
4	0	255	RS232 ( crosslink, port 1 ) default quality
5	0	255	Initial value for obsolescence counter
6	1	255	Minimum obsolescence for node broadcast
7	0	65535	Auto update broadcast interval ( seconds )
8	0	255	Level 3 ( network ) Time To Live Initialiser
9	5	600	Level 4 ( transport ) timeout ( seconds )
10	1	127	Level 4 ( transport ) retries
11	1	60	Level 4 ( transport ) acknowledge delay (seconds)
12	1	1000	Level 4 ( transport ) busy delay ( seconds )
13	1	127	Level 4 ( transport ) window size ( frames )
14	1	127	Level 4 ( transport ) congestion control threshold
15	0	65535	Level 7 ( switch ) inactivity timeout ( seconds )
16	0	255	Persistence for transmit delay
17	0	127	Persistence slottime delay (10's of milliseconds)
18	1	15	Level 2 ( link ) T1 timeout, ie FRACK ( seconds )
19	1	7	Level 2 ( link ) window size ( packets )
20	0	127	Level 2 ( link ) retries
21	0	6000	Level 2 ( link ) T2 timeout (10's of milliseconds)
22	0	65535	Level 2 ( link ) T3 timeout (10's of milliseconds)
23	0	1	Level 2 ( link ) digipeat enable flag
24	0	1	Callsign validation flag
25	0	2	Node beacon control (0=off, 1=if active,2=always)
26	0	1	CQ broadcasts enable flag

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MODE PARAMETERS

Number	Min	Max	Function
1	0	1	Hardware handshake host control mode flag
2	0	3600	CWID repeat period ( seconds )
3	4	10	CWID speed ( 10's msec per dot )
4	0	3	Nodes broadcast channel enable flags where 0=none, 1=HDLC only, 2=RS232 only, 3=Both ports
5	0	3	Crosslink protocol selection 0=crosslink, 1=KISS, 2=KISS+selcopy, 3=KISS+allcopy
6	0	255	TX keyup delay ( 10's of milliseconds )
7	0	1	Full duplex enable flag
8	0	65535	RS232 ( port 1 ) node broadcast period ( secs )
9	0	3	Node broadcast algorithm control flags 0=off, 2=RS232 port, 1 & 3 not normally used
10	600	3600	Beacon interval ( seconds )
11	0	2	Connect redirection to BBS flag
12	0	127	Help messages enable flags, 8 bit TALK & case
13	0	3	Hash node broadcast disable ( one bit per port )
14	0	1	Enable extra aliases monitoring if set
15	0	1	Enable auto reconnection to node after remote dis
16	0	3	Slime trail control. Each bit controls a function, Bit 0 if set hides slime trails in nodes listing Bit 1 if set causes slime trails to be ignored
17	0	3	Digipeat control. Each bit controls a function... Bit 0 set causes node to refuse digi'd L2 uplinks Bit 1 set, node refuses to allow digi downlinks

IPSTAT PARAMETERS

Number	Min	Max	Function ( Those marked '*' are not used )
1	0	3	ip L2 AX.25 Modes ( 1 bit per port, 1=DG )
2	0	1	ip Forwarding, 1=enable router, 0=disable
3	2	255	ip Default TTL
4	0	0	ip In Receives
5	0	0	ip In Header Errors
6 *	0	0	ip In Address Errors
7	0	0	ip Forwarded Datagrams
8	0	0	ip In Unknown Protocols
9 *	0	0	ip In Discards ( TTL exceeded )
10 *	0	0	ip In Delivers
11	0	0	ip Output Requests
12 *	0	0	ip Output Discards
13	0	0	ip Output No Routes
14 *	1	30	ip Reasm Timeout
15 *	0	0	ip Reasm Requireds
16 *	0	0	ip Reasm OKs
17 *	0	0	ip Reasm Fails
18	0	0	ip Frag OKs
19 *	0	0	ip Frag Fails
20	0	0	ip Frag Creates

MTU PARAMETERS

Number Min Max Function

1	64	1024	IP Port 0 ( Radio Port ) Level 2 AX.25 MTU
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2	64	1024	IP Port 1 ( RS232 Port ) Level 2 AX.25 MTU
3	64	236	IP Net/Rom port MTU
4	257	1025	Level 2 Max data bytes in a packet before error
5	328	1096	Level 2 Total max packet size in bytes