Command Line Summary 20

This chapter provides a summary of the syntax for all of the commands available from the command line interface for ComOS 3.1.4, 3.2.1R, and 3.2L, except for obsolete or experimental commands. The ISDN-related commands are available in ComOS 3.3 and ComOS 3.3L.

The Values table in the next section describes the different kinds of values that are used with the various commands. These values are shown in uppercase italics (like this: *Device*) to distinguish them from the actual keywords of the commands, which are in a lowercase plain font (like this: `version`).

The rest of the tables in this chapter describe the syntax for commands related to various functions. The choices are seperated by vertical bars, like this: `on|off`, where one keyword from the list should be used. Optional portions of a command are surrounded by square brackets, like this: `[optional]`. Default values are underlined like this: on|<u>off.</u>

Values

Table 20-1 does not contain commands, it describes the different kinds of values that are used in commands.

Table 20-1 Values

Variable	Usage
Device	`/dev/network` or a pseudo-tty on a UNIX host
Ether0	`ether0` or `ether1` (on IRX-211), defaults to `ether0` if omitted
Filtername	string up to 12 characters long naming a filter
Group	an integer from 0 to 99, 0 is default
Handle	n followed by a number, with no space between them
Hex	hexadecimal number with leading 0x
Interface	interface specification, e.g. ether0, frm1, ptp1, frmW1, ptpW1

Table 20-1 Values *(Continued)*

Variable	Usage
Ipaddress	IP dotted quad or hostname
Ipmask	dotted quad with 1's in high order bits, 0's in low order bits
Ipxaddress	IPX address in hex format Ipxnetwork:node
Ipxnetwork	32-bit hexadecimal number
Isock	IPX socket
Itype	ICMP packet type, 0 or higher
Locname	string up to 12 characters long naming a location
MTU	integer from 100 to 1500
Metric	integer from 1 to 15, defaults to 1
Minutes	integer from 0 to 240; note that 1 has special meaning
ModemName	Modem table entry
NM	integer 0 to 32, expressing the number of high-order bits set to 1 in a netmask
Number	number 0 or higher
Password	string up to 16 characters long
Rule Number	integer 1 or higher
S0	any async port s0-s29, or all
S1	any async or sync port s0-s29, w1, or all
S10	ISDN port s1-s2 or s10-s29, depending on model
Seconds	number 0 or higher
String	string of ASCII characters
Tport	TCP/IP port, integer from 0 to 65535
Uport	UDP/IP port, integer from 0 to 65535
Username	string up to 8 characters long naming a user
W1	any sync port s1-s4, w1, or all

General Commands

Table 20-2 lists commands for troubleshooting, general administration, and displaying the configuration of the PortMaster.

Table 20-2 General Commands

Command Syntax
`version`
`reboot`
`quit`
`done`
`exit`
`help`
`ifconfig interface [ address` *`Ipaddress`* `] [ netmask` *`Ipmask`* `] [ destination` *`Ipaddress`* `] [ ipxnet` *`Ipxnetwork`* `] [ ipxframe ethernet_802.2|ethernet_802_ii|ethernet_802.3|ethernet_ii ] [ up ] [ down ] [ private ] [ -private ]`
`dial` *`Locname`* `[ -x ]`
`ping [` *`Ipaddress`* `]`
`traceroute [` *`Ipaddress`* `]`
`ptrace [` *`Filtername`* `]`
`pmlogin` *`Ipaddress`*
`rlogin` *`Ipaddress`*
`telnet` *`Ipaddress`*
`set debug` *`Hex`*
`set debug isdn [ on|off ]`
`set register` *`Hex Hex`*
`set console [` *`S0`*`|p0 ]`
`save` *`Ether0`*`|`*`S0`*`|`*`W1`*`|all|console|filter|host|location|netmask|p0|routes|snmp|user`

Table 20-2 General Commands *(Continued)*

Command Syntax
`reset` *`Handle`*`|`*`S0`*`|`*`W1`*`|all|console|dialer|nic|p0`
`show all`
`show arp` *`Interface`*
`show global`
`show ipxroutes`
`show memory`
`show netconns`
`show netstat`
`show routes`
`show sap`
`show sessions`
`show table filter|host|location|netmask|snmp|user`

Global Configuration

Table 20-3 contains all the global configuration commands that affect the entire PortMaster. For more information about global commands, refer to Chapter 4, "Configuring a PortMaster."

Table 20-3 Global Configuration Commands

Command Syntax
`show global`
`set password` *`Password`*
`set telnet` *`Tport`*
`set host [ 1|2|3|4 ]` *`Ipaddress`*
`set loghost` *`Ipaddress`*
`set namesvc domain|nis`
`set nameserver` *`Ipaddress`*

Table 20-3 Global Configuration Commands *(Continued)*

Command Syntax
`set domain` *String*
`set gateway` *Ipaddress Metric*
`set default on`|<u>`off`</u>|`broadcast`|`listen`
`set assigned_address` *Ipaddress*
`set reported_ip` *Ipaddress*
`set netbios on`|<u>`off`</u>
`set pap` <u>`on`</u>|`off`
`set maximum pmconsole` *Number*
`set isdn-switch att-5ess`|`5ess`|`dms-100`|<u>`ni-1`</u>

RADIUS Client Configuration

The commands shown in Table 20-4 allow you to configure the PortMaster to use a RADIUS server. RADIUS is consulted if a port is set for `security on` and a user is not found in the PortMaster User Table. For more information about RADIUS commands, refer to the *RADIUS Administrators Guide*.

Table 20-4 RADIUS Client Commands

Command Syntax
`set authentication_server` *Ipaddress*
`set alternate_auth_server` *Ipaddress*
`set accounting [ 2 ]` *Ipaddress*
`set secret` *Password*

Ethernet Configuration

The commands shown in Table 20-5 allow you to configure the Ethernet interface(s) `ether0` and (on the IRX-211) `ether1`. For more information about Ethernet interface commands, refer to Chapter 5, "Configuring the Ethernet Interface."

Table 20-5 Ethernet Interface Commands

Command Syntax
`set` *`Ether0`* `address` *`Ipaddress`*
`set` *`Ether0`* `netmask` *`Ipmask`*
`set` *`Ether0`* `broadcast high|`<u>`low`</u>
`set` *`Ether0`* `routing` <u>`on`</u>`|broadcast|listen|off`
`set` *`Ether0`* `ipxnet` *`Ipxnetwork`*
`set` *`Ether0`* `ipxframe ethernet_802.2|ethernet_802.3|ethernet_ii`
`set ether0 ip up|down|enabled|disabled` [1]
`set ether0 ipx up|down|enabled|disabled` [1]

1. This command is nly available on ether0 port, even on the IRX-211

Asynchronous Port Configuration

The commands shown in Table 20-6 allow you to configure asynchronous serial ports. Commands marked with a leading bullet (•) can only be used if the port is configured for network hardwired operation. For more information about asynchronous port commands, refer to Chapter 6, "Configuring an Asynchronous Port."

Table 20-6 Asynchronous Port Commands

Command Syntax
`show all`
`show S0`
`save S0`
`set S0 extended on|`<u>`off`</u>

Table 20-6 Asynchronous Port Commands *(Continued)*

<table>
<tr><th></th><th>Command Syntax</th></tr>
<tr><td></td><td><code>set S0 login [device Device]
[network dialin|dialout|twoway]</code></td></tr>
<tr><td></td><td><code>set S0 device Device [network dialin|dialout|twoway]</code></td></tr>
<tr><td></td><td><code>set S0 twoway Device [network dialin|dialout|twoway]</code></td></tr>
<tr><td></td><td><code>set S0 network dialin|dialout|twoway</code></td></tr>
<tr><td>•</td><td><code>set S0 network hardwired</code></td></tr>
<tr><td></td><td><code>set S0 speed [1|2|3] 300|600|1200|2400|4800|<u>9600</u>|19200|
38400|57600|76800|115200</code></td></tr>
<tr><td></td><td><code>set S0 parity even|<u>none</u>|odd|strip</code></td></tr>
<tr><td></td><td><code>set S0 databits 5|6|7|<u>8</u></code></td></tr>
<tr><td></td><td><code>set S0 stopbits <u>1</u>|2</code></td></tr>
<tr><td></td><td><code>set S0 xon/xoff <u>on</u>|off</code></td></tr>
<tr><td></td><td><code>set S0 rts/cts on|<u>off</u></code></td></tr>
<tr><td></td><td><code>set S0 override xon|rts|speed|parity|databits on|<u>off</u></code></td></tr>
<tr><td></td><td><code>set S0 modem|cd on|<u>off</u></code></td></tr>
<tr><td></td><td><code>set S0 modem ModemName</code></td></tr>
<tr><td></td><td><code>set S0 group Group</code></td></tr>
<tr><td></td><td><code>set S0 idletime Minutes</code></td></tr>
<tr><td></td><td><code>set S0 security on|<u>off</u></code></td></tr>
<tr><td></td><td><code>set S0 message String</code></td></tr>
<tr><td></td><td><code>set S0 prompt String</code></td></tr>
<tr><td></td><td><code>set S0 username|autolog String</code></td></tr>
<tr><td></td><td><code>set S0 hangup on|<u>off</u></code></td></tr>
<tr><td></td><td><code>set S0 dialback_delay Seconds</code></td></tr>
<tr><td></td><td><code>set S0 dtr_idle on|off</code></td></tr>
</table>

Table 20-6 Asynchronous Port Commands *(Continued)*

	Command Syntax
	set S0 service_login netdata|portmaster|rlogin|telnet [*Tport*]
	set S0 service_device netdata|portmaster|rlogin|telnet [*Tport*]
	set S0 host default|prompt|*Ipaddress*
	set S0 access on|off
	set S0 termtype *String*
	set S0 ifilter *Filtername*
•	set S0 ofilter *Filtername*
•	set S0 protocol slip|ppp
•	set S0 address *Ipaddress*
•	set S0 netmask *Ipmask*
•	set S0 destination *Ipaddress* [*Ipmask*]
•	set S0 mtu *MTU*
•	set S0 routing on|off|broadcast|listen
•	set S0 ipxnet *Ipxnetwork*
•	set S0 compression on|off

Synchronous Port Configuration

The commands shown in Table 20-7 are used to configure synchronous serial ports. Commands marked with a leading bullet (•) can only be used if the port is configured for network hardwired operation. For more information about synchronous port commands, refer to Chapter 7, "Configuring a Synchronous WAN Port."

Table 20-7 Synchronous Port Commands

Command Syntax
show all
show W1

Table 20-7 Synchronous Port Commands *(Continued)*

	Command Syntax
	`save W1`
	`set W1 extended on|`<u>`off`</u>
	`set W1 network dialin|dialout|twoway|hardwired`
	`set W1 protocol ppp`
•	`set W1 protocol frame`
•	`set W1 address` *`Ipaddress`*
•	`set W1 netmask` *`Ipmask`*
•	`set W1 destination Ipaddress [` *`Ipmask`* `]`
•	`set W1 ipxnet` *`Ipxnetwork`*
•	`set W1 routing on|off|broadcast|listen`
•	`set W1 ifilter` *`Filtername`*
•	`set W1 ofilter` *`Filtername`*
•	`set W1 mtu` *`MTU`*
•	`set W1 lmi|annex-d` *`Seconds`*
•	`set W1 dlci` *`Dlci_list`*
	`set W1 group` *`Group`*
	`set W1 hangup on|off`
	`set W1 idletime` *`Minutes`*
	`set W1 modem|cd on|`<u>`off`</u>
	`set W1 speed 9600|14400|19200|38400|57600|76800|115200|` `56000|64000|1344k|1536k|2048k|t1|t1e|e1`
	`set W1 encode nrz|nrzi`

ISDN Port Configuration

ISDN BRI ports can be configured similarly to synchronous and asynchronous (V.120) ports. In addition, there are commands that allow you to configure the SPID and (optionally) the directory number (DN). The ISDN port configuration commands are shown in Table 20-8. For more information about ISDN port commands, refer to Chapter 18, "ISDN Connections."

Table 20-8 ISDN Port Commands

Command Syntax
`show all`
`show S10`
`save S10`
`set S10 extended on|off`
`set S10 login [ device` *`Device`* `]` `[ network dialin|dialout|twoway ]`
`set S10 device` *`Device`* `[ network dialin|dialout|twoway ]`
`set S10 twoway` *`Device`* `[ network dialin|dialout|twoway ]`
`set S10 network dialin|dialout|twoway`
`set S10 spid` *`String`*
`set S10 directory|dn` *`String`*
`set S10 group` *`Group`*
`set S10 idletime` *`Minutes`*
`set S10 security on|off`
`set S10 message` *`String`*
`set S10 prompt` *`String`*
`set S10 username|autolog` *`String`*
`set S10 hangup on|off`
`set S10 dialback_delay` *`Seconds`*
`set S10 service_login netdata|portmaster|rlogin|telnet` `[` *`Tport`* `]`

Table 20-8 ISDN Port Commands

Command Syntax
`set S10 service_device netdata|portmaster|rlogin|telnet [ Tport ]`
`set S10 host default|prompt|Ipaddress`
`set S10 termtype String`
`set S10 ifilter Filtername`

Parallel Port Configuration

The commands shown in Table 20-9 allow you to configure the parallel port P0.

Table 20-9 Parallel Port Commands

Command Syntax
`show p0`
`save p0`
`set p0 extended on|off`
`set p0 device Device`
`set p0 disabled`
`set p0 service_device netdata|portmaster|rlogin|telnet [ Tport ]`
`set p0 host default|Ipaddress`
`set p0 disconnect Seconds|infinity`

DLCI Table Configuration

The commands shown in Table 20-10 allow you to configure the DLCI table, which is used to split a Frame Relay interface into two subinterfaces. For more information about Frame Relay commands, refer to Chapter 16, "Synchronous Frame Relay Connections."

Table 20-10 DLCI Table Commands

Command Syntax
`show location` *Locname*
`add dlci` *Locname Dlci* [*Ipaddress*]
`add ipdlci` *Locname Dlci* [*Ipaddress*]
`add ipxdlci` *Locname Dlci* [*Ipxnetwork*]
`delete dlci` *Locname Dlci*
`delete ipdlci` *Locname Dlci*

Host Table Configuration

The commands shown in Table 20-11 allow you to configure the host table inside the PortMaster in cases where DNS or NIS is not available.

Table 20-11 Host Table Commands

Command Syntax
`show table host`
`save host`
`add host` *Ipaddress String*
`delete host` *Ipaddress*|*String*

Filter Table Configuration

The commands shown in Table 20-12 allow you to configure the filter table. Filters can be applied to users, locations, or network hardwired ports, and can be used for debugging with the `ptrace` command. For more information on setting filters, refer to Chapter 10, "Configuring Filters."

Table 20-12 Filter Table Commands

Command Syntax
`show table filter`
`show filter` *`Filtername`*
`save filter`
`add filter` *`Filtername`*
`delete filter` *`Filtername`*
`set filter` *`Filtername RuleNumber`* `permit|deny` `[` *`Ipaddress/NM Ipaddress/NM`* `] [ log ]`

`set filter` *`Filtername RuleNumber`* `permit|deny`
`[` *`Ipaddress/NM Ipaddress/NM`* `] tcp [ src eq|lt|gt` *`Tport`* `]`
`[ dst eq|lt|gt` *`Tport`* `] [ established ] [ log ]`

`set filter` *`Filtername RuleNumber`* `permit|deny`
`[` *`Ipaddress/NM Ipaddress/NM`* `] udp [ src eq|lt|gt` *`Tport`* `]`
`[ dst eq|lt|gt` *`Tport`* `] [ log ]`

`set filter` *`Filtername RuleNumber`* `permit|deny` `[` *`Ipaddress/NM Ipaddress/NM`* `] icmp [ type` *`Itype`* `] [ log ]`

`set ipxfilter` *`Filtername RuleNumber`* `permit|deny`
`[ srcnet` *`Ipxnetwork`* `] [ srchost` *`Ipxaddress`* `]`
`[ srcsocket eq|gt|lt` *`Isock`* `] [ dstnet` *`Ipxnetwork`* `]`
`[ dsthost` *`Ipxaddress`* `] [ dstsocket eq|gt|lt` *`Isock`* `]`

`set sapfilter` *`Filtername RuleNumber`* `permit|deny`
`[ server` *`String`* `] [ network` *`Ipxnetwork`* `]`
`[ host` *`Ipxaddress`* `] [ socket eg|gt|lt Isock ]`

Location Table Configuration

The commands shown in Table 20-13 are used to configure the Location Table, used to specify network dial-out locations. For more information about Location Table commands, refer to Chapter 9, "Configuring Dial-Out Locations."

Table 20-13 Location Table Commands

Command Syntax
`show table location`
`show location` *`Locname`*
`save location`
`add location` *`Locname`*
`delete location` *`Locname`*
`set location` *`Locname`* `continuous|manual|on_demand`
`set location` *`Locname`* `protocol slip|ppp|frame`
`set location` *`Locname`* `destination` *`Ipaddress`*
`set location` *`Locname`* `netmask` *`Ipmask`*
`set location` *`Locname`* `ipxnet` *`Ipxnetwork`*
`set location` *`Locname`* `routing on|off|broadcast|listen`
`set location` *`Locname`* `group` *`Group`*
`set location` *`Locname`* `map` *`Hex`*
`set location` *`Locname`* `compression on|off`
`set location` *`Locname`* `mtu` *`MTU`*
`set location` *`Locname`* `script|v25bis` *`RuleNumber String String`*
`set location` *`Locname`* `maxports` *`Number`*
`set location` *`Locname`* `high_water` *`Number`*
`set location` *`Locname`* `idletime` *`Minutes`*
`set location` *`Locname`* `ifilter` *`Filtername`*
`set location` *`Locname`* `ofilter` *`Filtername`*

Table 20-13 Location Table Commands *(Continued)*

Command Syntax
`set location` *`Locname`* `multilink on|off`

Modem Table Configuration

The commands shown in Table 20-14 allow you to configure the modem table, which describes how to initialize a modem attached to an asynchronous port. See the `set modem` command in Table 20-6 on page 20-6 for additional information. For more information about configuring modems, refer to Chapter 6, "Configuring an Asynchronous Port."

Table 20-14 Modem Table Commands

Command Syntax
`show table modem`
`show modem` *`ModemName`*
`add modem` *`ModemName String Speed String`*
`delete modem` *`ModemName`*

Netmask Table Configuration

The commands shown in Table 20-15 allow you to configure the netmask table used for routing noncontiguous subnets. Use caution if configuring static netmasks.

Table 20-15 Netmask Table Commands

Command Syntax
`show table netmask`
`save netmask`
`add netmask` *`Ipaddress Ipmask`*
`delete netmask` *`Ipaddress`*

Route Table Configuration

The commands shown in Table 20-16 allow you to add and remove static routes to the routing table. The `show route` command marks static routes with the `HS` (for host) and `NS` (for network) flags.

Table 20-16 Route Table Commands

Command Syntax
`show route`
`save route`
`add route` *`Ipaddress Ipaddress Metric`*
`delete route` *`Ipaddress`*
`add ipxroutes` *`Ipxnet Ipxaddress Metric Ticks`*

SNMP Configuration

The commands shown in Table 20-17 allow you to configure the PortMaster as an SNMP agent. Use caution if you are allowing SNMP writes.

Table 20-17 SNMP Commands

Command Syntax
`show table snmp`
`save snmp`
`set sysname` *`String`*
`set snmp on|off`
`set snmp readcommunity|writecommunity` *`String`*
`add snmphost reader|writer any|none|`*`Ipaddress`*

User Table Configuration

The commands shown in Table 20-18 allow you to configure the User Table that is used to authenticate dial-in users. RADIUS can also be used to authenticate dial-in users; however, the User Table is consulted first. For more information about User Table commands, refer to Chapter 8, "Configuring Dial-In Users."

Table 20-18 User Table Commands

Command Syntax
`show table user`
`show user` *`Username`*
`save user`
`add netuser` *`Username`* `[ password` *`Password`* `]`
`add user` *`Username`* `[ password` *`Password`* `]`
`delete user` *`Username`*
`set user` *`Username`* `password` *`Password`*
`set user` *`Username`* `dialback` *`Locname`*`|`*`String`*
`set user` *`Username`* `host default|prompt|`*`Ipaddress`*
`set user` *`Username`* `service netdata|portmaster|rlogin|telnet [` *`Tport`* `]`
`set user` *`Username`* `protocol slip|ppp`
`set user` *`Username`* `destination Assigned|Negotiated|`*`Ipaddress`*
`set user` *`Username`* `netmask` *`Ipmask`*
`set user` *`Username`* `ipxnet` *`Ipxnetwork`*
`set user` *`Username`* `routing on|off|broadcast|listen`
`set user` *`Username`* `compression on|off`
`set user` *`Username`* `ifilter` *`Filtername`*
`set user` *`Username`* `ofilter` *`Filtername`*
`set user` *`Username`* `mtu` *`MTU`*
`set user` *`Username`* `map` *`Hex`*