HelloDevice Lite

LS100

1.2.0

2004-05-21

HelloDevice LS100

1.2.0

1.2.X

Printed in Korea

HelloDevice(tm)   , Inc.   .

Windows(r)   Microsoft Corporation   .

Ethernet(r)   XEROX Corporation   .

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210

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1:

1.1

HelloDevice Lite

　　　　　　　　　　　　. 　　　,
　　　.

LS100 　　　　　　　　　　　　　　　　　　　　　　. LS100 RS232
　　　　　　　　　　　　　　　.

　　　　　　　　　LS100 TCP/IP
　　　　　　　LAN(　　　　　) 　　　　　　　　　　　　　.

LS100 　　　　　　　telnet 　　　　　　　　　　　　　.
HelloDevice Manager 　　　　　　　　　　　　.

LS100 　　/POS, 　　,
　　.

　　　　　　　　　　　　　　　　　　　　　　　　　　　.
　　　　　　　　　　.

1.2

- HelloDevice LS100
- 110V   230V
-          /
-
- HD-IDE, HD-VirtualCOM, HD-Manager   CD-ROM

1.3

	/ DB9 x 1
	1200bps ~ 115200bps
	: None RTS/CTS
	: Rx, Tx, RTS, CTS, DTR, DSR, GND
	10 Base-T (RJ45)
	IP
	ARP, IP/ICMP, TCP, Telnet, DHCP client, PPPoE
	ID
	Telnet HelloDevice Manager
LED	Power Ready 10 Base-T Link, Rx/Tx
Power	: 7.5V ~ 15V DC
	: 140mA ( )
	: 0 ~ 55 ^{o}C : -4 ~ 66 ^{o}C
	100 mm L (3.9 in.) 72 mm W (2.8 in.) 29 mm H (1 in.)
	230g
	FCC(A), CE(A), MIC
	5

1.4

LS100

MAC

LAN   MAC(Media Access Control)

          . (LAN   .)

6   OUI(Organization Unique Identifier)   6

12   . LS100   MAC   00-01-95-xx-xx-xx   ,

                                        .

                              .

                    "   "

              .   IP   "

      "   .

                                                                                      .

                                                                          ,

                        ("   ").

            .

            /

            /   ,

                                                    .

            ,   /

      .   ,

                  .   HTML

      .   HTML   .

ISP	(Internet Service Provider)
PC	(Personal Computer
NIC	(Network Interface Card)
MAC	(Media Access Control)
LAN	(Local Area Network)
UTP	(Unshielded Twisted Pair)
ADSL	(Asymmetric Digital Subscriber Line)
ARP	(Address Resolution Protocol)
IP	(Internet Protocol)
ICMP	(Internet Control Message Protocol)
UDP	(User Datagram Protocol)
TCP	(Transmission Control Protocol)
DHCP	(Dynamic Host Configuration Protocol)
SMTP	(Simple Mail Trans fer Protocol)
FTP	(File Transfer Protocol)
PPP	(Point-To-Point Protocol)
PPPoE	(Point-To-Point Protocol over Ethernet)
HTTP	(HyperText Transfer Protocol)
DNS	(Domain Name Service)
SNMP	(Simple Network Management Protocol)
UART	(Universal Asynchronous Receiver/Transmitter)
Bps	(Universal Asynchronous Receiver/Transmitter)
DCE	(Data Communications Equipment)
DTE	(Data Terminal Equipment)
CTS	(Clear to Send)
DSR	(Data Set Ready)
DTR	(Data Terminal Ready)
RTS	(Request To Send)

2:

LS100   .

- 2.1   LED   .
- 2.2   LS100   ,
    .
- 2.3   telnet
    .
- 2.4   LS100
    .

    .

- DC   (   ) x 1
-                            (   ) x 1
- RS-232   RS-232   x 1
-              (NIC)   PC x 1   RS232   x 1
- PC
-              x 1

2.1

LS100   5   LED   .   10 Base-T
    .
    .   2   .

  2-1   LED   .

<p align="center">2- 1. LED</p>

10 Base-T	**Link**	10 Base-T .
	Act	LS100 .
	Rx/Tx	LS100 .
	Ready	.
	Power	.
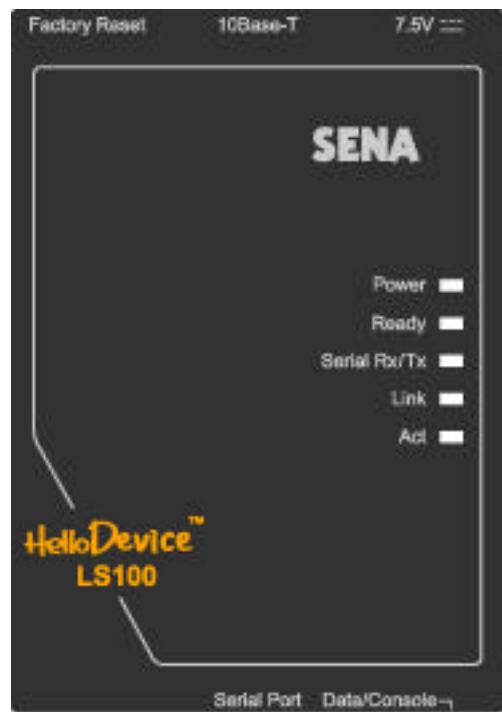
2-1. LS100

2.2

LS100   .
- LS100   .
- LS100   .
- LS100   .

2.2.1

DC   LS100   .
, LS100   [Power]   .
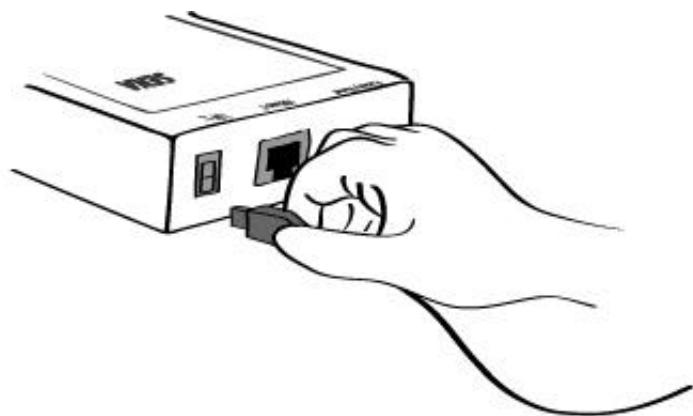
2- 2. LS100

2.2.2

LS100   10Base-T
.   , LS100
.
- LS100   [Link]   .
- [Act]   .

LS100   .
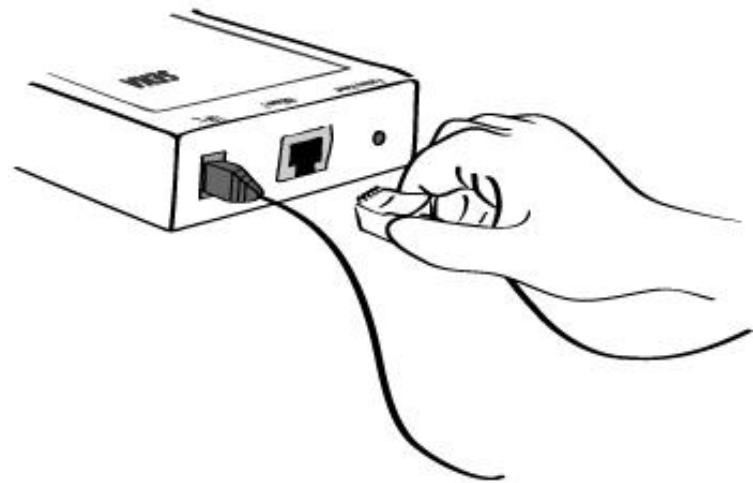
2-3. LS100

2.2.3

LS100   .   LS100

.

2- 4. LS100

2.3

LS100

-         :

/   (   )   LS100

. LS100

.   /   .

-         :

TCP/IP   LS100   (23) telnet

.
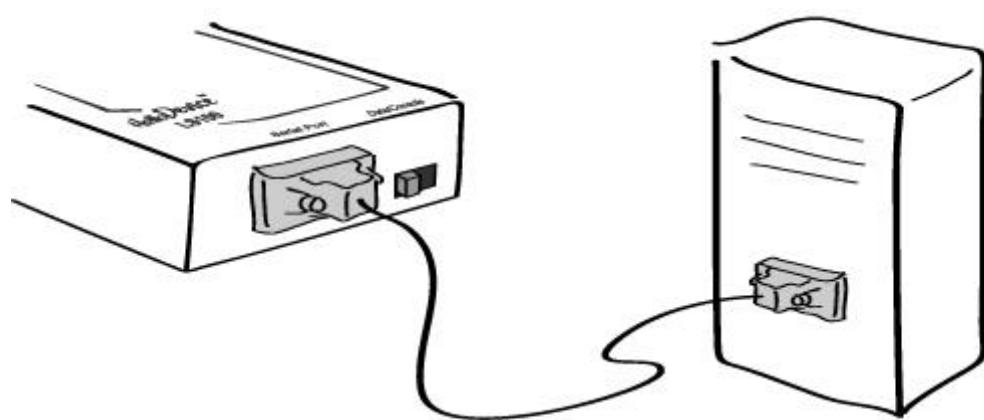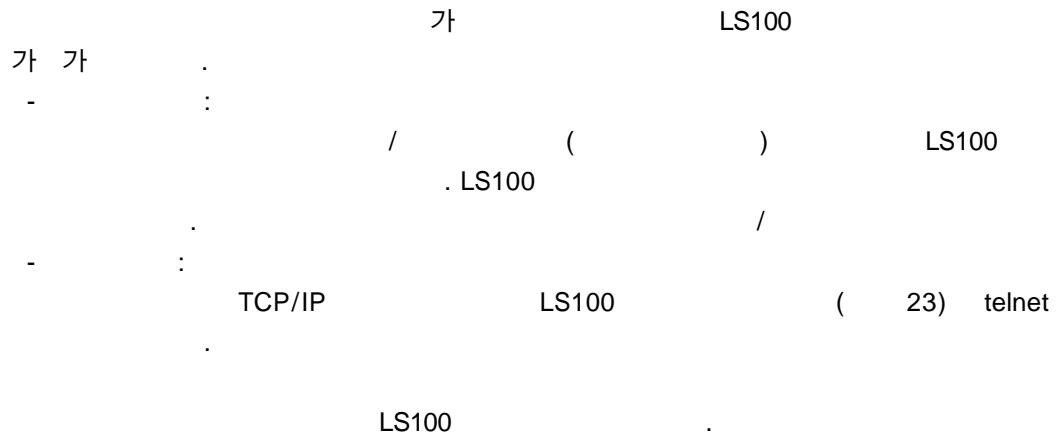
LS100   .

2.3.1
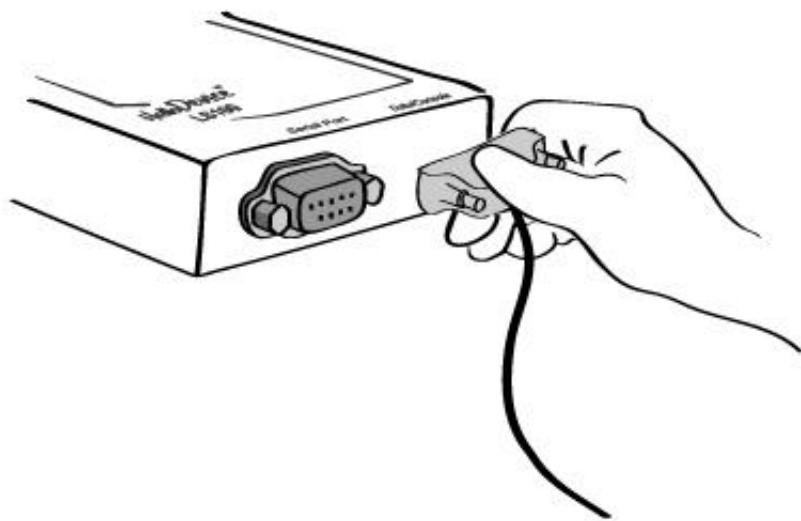
1)   LS100   .

2-5. LS100

2)   .
3)   /   .
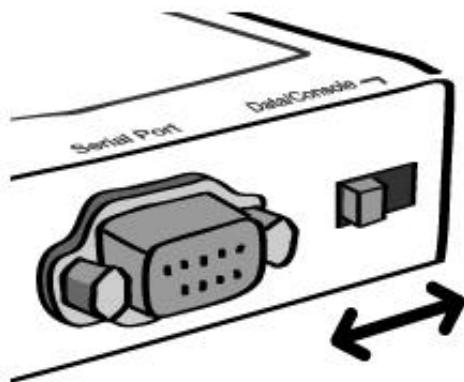
2- 6. LS100   /

4)   (HyperTerminal)   .

                                                            .

9600 Baud rate, Data bits 8, Parity None, Stop bits 1, No flow control

5) [ENTER]   .
6)   LS100   .
                                    admin   .
7)   LS100   2-7
              .

```
login: admin
password: *****
Type 'help' to get command usages
> help
set group par1 [par2 ...] + <CR>
- group = 'ip','host','serial' or 'admin'
- par1 ... = configuration parameters. Use * to keep a parameter's value
get [group] + <CR>
- group = 'ip','host','serial','admin' or 'status'
- If group is specified, shows settings of the group.
- If group is omitted, shows settings of all groups.
factorydefault [option] + <CR>
- if option is omitted, all parameters are set with factory default values.
- if option='-ip',
  all parameters except IP settings are set with factory default values.
help [group] + <CR>
- If group is omitted, shows this screen.
- If group is specified, shows 'set' command usage of the group.
save + <CR>
- Save changes
exit + <CR>
- Exit without rebooting the device
reboot + <CR>
- Exit and reboot the device

>
```

2- 7. LS100

'set', 'get'   'save'   ,
,   .   'exit'   'reboot'
. 'help'   .
2.4   .

2.3.2

LS100   telnet
LS100   .
LS100   IP   .   telnet   TCP
23   .
.
,
.
LS100   .

    1)   TeraTerm-Pro   telnet   . Target IP
LS100   .   23   .
.

```
telnet 192.168.1.254
```
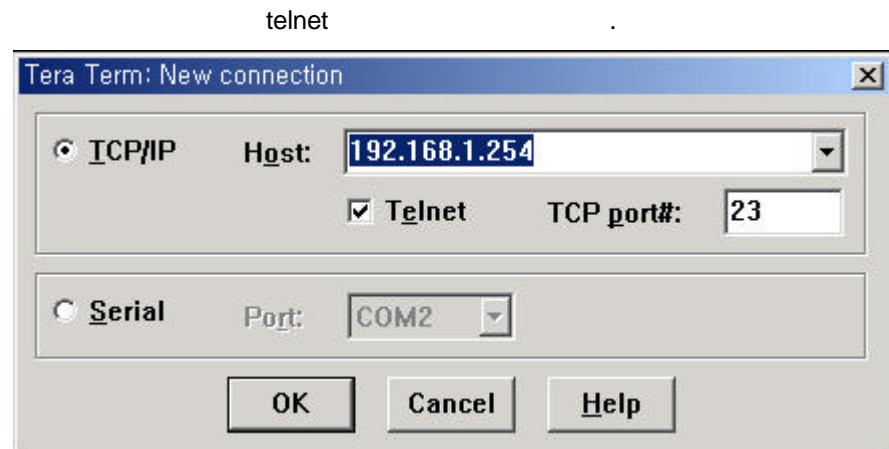
telnet   .

2- 8 Telnet

   2) LS100   .
admin   .
   3) LS100   .
,   ,
.
   4)   ,   .

2.4

LS100　　　　　　　　　　　　　　　　　　　　　　　　　　.　　　2-2　　LS100
　　　　.

2- 2 LS100

set group par1 [par2 ...] + <CR>	- group = 'ip', 'host', 'serial'　　'admin' - par1 ... =　　　　　　. 　　　　　　*	, "OK" + <CR> + <LF> If error "ERROR" + <CR> + <LF>
get [group] + <CR>	- group = 'ip', 'host', 'serial', 'admin'　　'status' -　　　　　　　, 　　　　　. -　　　　　　　　　, 　　　　　.	
help [group] + <CR>	. -　　　　　　, 　　.. -　　　　　,　　'set' 　　　　.	
factorydefault [option] + <CR>	. -　　　　　　, 　　　. - if option='-ip'　　IP 　　　.	, "OK" + <CR> + <LF> "ERROR" + <CR> + <LF>
save + <CR>		, "OK" + <CR> + <LF> "ERROR" + <CR> + <LF>
exit + <CR>	( )	, "OK" + <CR> + <LF> "ERROR" + <CR> + <LF>
reboot + <CR>		None

2.4.1 'set'

'set'   LS100   .   'set'
                              .

set group par1 [par2 ...] + <CR>
where,
    group = 'ip','host','serial' or 'admin'
    par1 par2 ... = configuration parameters. Use * to keep a parameter's value

'group'   .   , IP   2-
9   set   .

```
> set ip static 192.168.1.100 255.255.255.0 192.168.1.1
OK
>
```

2- 9 IP

                                'ip'   IP   .
          'static'   LS100   '192.168.1.100'   static IP   IP
                .
                  .
                                                                                              '*'
                        .   IP   IP
                      .

```
> set ip static * 255.255.0.0
OK
>
```

2- 10

'set'   . 'help group'   'set'
                    .   , IP   'set'   , 'help ip' + <CR>
              2-11   IP   'set'   .

```
> help ip
set ip ipmode par1 par2 ...
- ipmode: static=Static IP / dhcp=DHCP / pppoe=PPPoE
- parameters:
if ipmode = static,
       par1 = IP address,
       par2 = subnet mask,
       par3 = gateway
if ipmode = dhcp,
       no parameters required
if ipmode = pppoe,
       par1 = PPPoE username,
       par2 = PPPoE password

>
```

2- 11

주의:

'save' 'reboot'   . 2.4.5 ~ 2.4.7
.

2.4.2 'get'

'get'   LS100   .   'get'
.

get [group] + <CR>
where,
    group = 'ip','host','serial', 'admin' or 'status'
    - If group is specified, shows settings of the group.
    - If group is omitted, shows settings of all groups.

'set'   , IP
2-12   get   .

```
> get ip
IP_mode: static
IP_address: 192.168.1.100
Subnet_mask: 255.255.255.0
Gateway: 192.168.1.1
>
```

2- 12 IP

'status'   'set'   . 'get status'
.

```
> get status
Serial_no.: LS100-0207_test
MAC_address: 00-01-95-77-88-99
F/W_REV.: V1.2.0
Current_IP: 192.168.0.125
>
```

2- 13

, get   2-14   .

```
> get
--- Status ---
Serial_no.: LS100-0207_test
MAC_address: 00-01-95-77-88-99
F/W_REV.: V1.2.0
Current_IP: 192.168.0.125
--- Admin ---
Username: admin
Password: admin
Devicename: LS100 Device
--- IP ---
IP_mode: dhcp
```

```
--- Host ---
Host_mode: tcps
Local_port: 6001
Inactivity_timeout(sec): 300
--- Serial ---
Baudrate: 9600
Data_bits: 8_bits
Parity: None
Stop_bits: 1_bit
Flow_control: None
DTR_option: Always_high
DSR_option: None
Interchar_timeout(ms): 50
>
```

2- 14

2.4.3 'help'

'help'   .

                            .

help [group] + <CR>

where,

   if group is omitted, overall help screen will be displayed

   if group is specified, 'set' command usage of specified group will be displayed.

      2-15   2-16   'ip'
                .

```
> help
set group par1 [par2 ...] + <CR>
- group = 'ip','host','serial' or 'admin'
- par1 ... = configuration parameters. Use * to keep a parameter's value
get [group] + <CR>
- group = 'ip','host','serial','admin' or 'status'
- If group is specified, shows settings of the group.
- If group is omitted, shows settings of all groups.
help [group] + <CR>
- If group is omitted, shows this screen.
- If group is specified, shows 'set' command usage of the group.
factorydefault [option] + <CR>
- if option is omitted, all parameters are set with factory default values.
- if option='-ip',
      all parameters except IP settings are set with factory default values.
save + <CR>
- Save changes
exit + <CR>
- Exit without rebooting the device
reboot + <CR>
- Exit and reboot the device
```

2- 15

```
> help ip
set ip ipmode par1 par2 ...
- ipmode: static=Static IP / dhcp=DHCP / pppoe=PPPoE
- parameters:
if ipmode = static,
       par1 = IP address,
       par2 = subnet mask,
       par3 = gateway
if ipmode = dhcp,
       no parameters required
if ipmode = pppoe,
       par1 = PPPoE username,
       par2 = PPPoE password
```

2- 16 'ip'

2.4.4 'factorydefault'

'factorydefault'   .
'factorydefault'   .

factorydefault [option] + <CR>

where,

   - if option is omitted, all parameters are set with factory default values.

   - if option='-ip', all parameters except IP settings are set with factory default values.

                'save'   .   'factorydefault'
    'save'   'reboot'   .

```
> factorydefault (or factorydefault -ip)
OK
> save
OK
> reboot
```

2- 17

2.4.5 'save'

'save'   . 'save'
                 .

save + <CR>

'reboot'   LS100   .

2.4.6 'exit'

'exit'   .
LS100   . 'exit'   .

exit + <CR>

2.4.7 'reboot'

'reboot'   LS100   . LS100
            . 'reboot'   .

reboot + <CR>

3: IP

LS100   IP   .
                    IP   .   IP
                    .   LS100   .
                    IP   ,   **Static IP, DHCP**   **PPPoE**   IP
        .   IP   **DHCP**   .   3-1   IP
        .

3- 1 IP
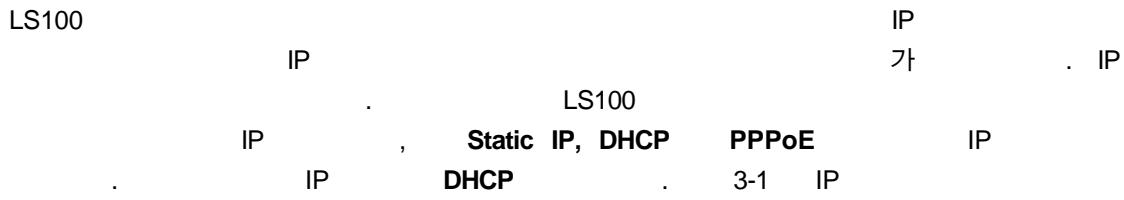
Static IP	IP address
	Subnet mask
	Default gateway
DHCP	No parameters required
PPPoE	PPPoE username
	PPPoE password

IP   'set'   .

set ip ipmode par1 par2 ...
where,
    ipmode: 'static' for Static IP / 'dhcp' for DHCP / 'pppoe' for PPPoE
    parameters:
        if ipmode = static,
            par1 = IP address, par2 = subnet mask, par3 = gateway
        if ipmode = dhcp,
            no parameters required
        if ipmode = pppoe,
            par1 = PPPoE username, par2 = PPPoE password

3.1   Static IP

3.1.1

Static IP   LS100   **IP**   ,   IP
                                      .

IP   .   IP
                                                      . IP
              .

                          ,   LAN   .
                                              LS100   TCP/IP
                                                        .   LS100
              LS100
        .

                                                                                                    .
                    ISP   . LS100
                                                                                  IP   .
            IP   .
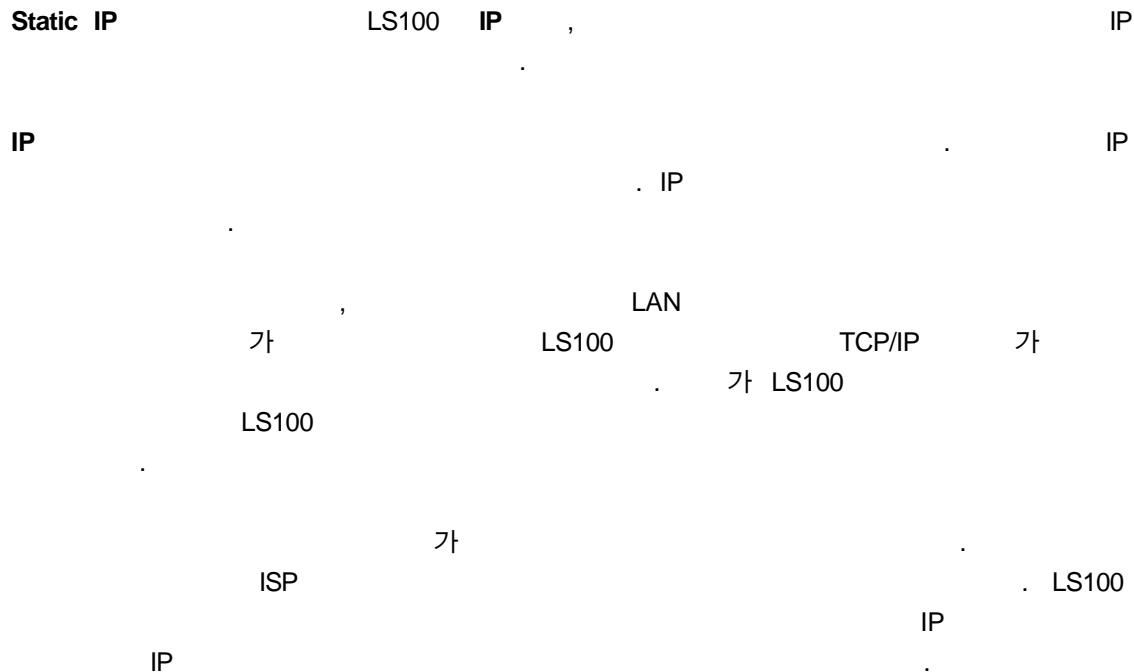
3.1.2 Static IP

LS100   IP   set   .

set ip static ip_address subnet_mask default_gateway + <CR>
where,
    ip_address = IP address of the LS100
    subnet_mask = Subnet mask
    default_gateway = Default gateway IP address

   3-1   IP   .   'save'   'reboot'
              .

```
> set ip static 192.168.1.10 255.255.255.0 192.168.1.1
OK
```

3- 1. Static IP   IP

3.2 DHCP

3.2.1

(DHCP)   IP

. DHCP   IP

,   IP

.

3.1   IP   Static   IP   ,

IP   . ,

IP   DHCP   IP   ,   ,   , DNS

. DHCP   IP   ,

"   (lease)"   . IP   DHCP

,   DHCP   IP   .

LS100   IP   DHCP   .

DHCP   IP   ,   , DNS

. LS100   .

, LS100   DHCP   . DHCP

LS100   IP   .   LS100   DHCP

IP   .

DHCP   IP   IP   .

DHCP   ,   LS100   IP   ..

LS100   IP   IP   DHCP   . DHCP

IP   LS100   MAC

.

```
MAC=00:01:95:04:0c:a1
```

3.2.2 DHCP

LS100   DHCP   3-2   IP   DHCP   .

```
> set ip dhcp
OK
>
```

3- 2. DHCP

3.3   PPPoE

3.3.1

PPPoE   LAN   (Customer Premises
Equipment)   . ((Customer Premises
Equipment)   .) PPPoE
                                             ADSL,   .
PPPoE   ADSL   .
LS100   PPPoE   PPPoE   ADSL   PPPoE
             . LS100   PPPoE   ADSL
             . PPPoE   .
IP   PPPoE   LS100   PPPoE   PPPoE
             .   IP   ,   ,   DNS
                          .   LS100   .
             LS100   PPPoE   .
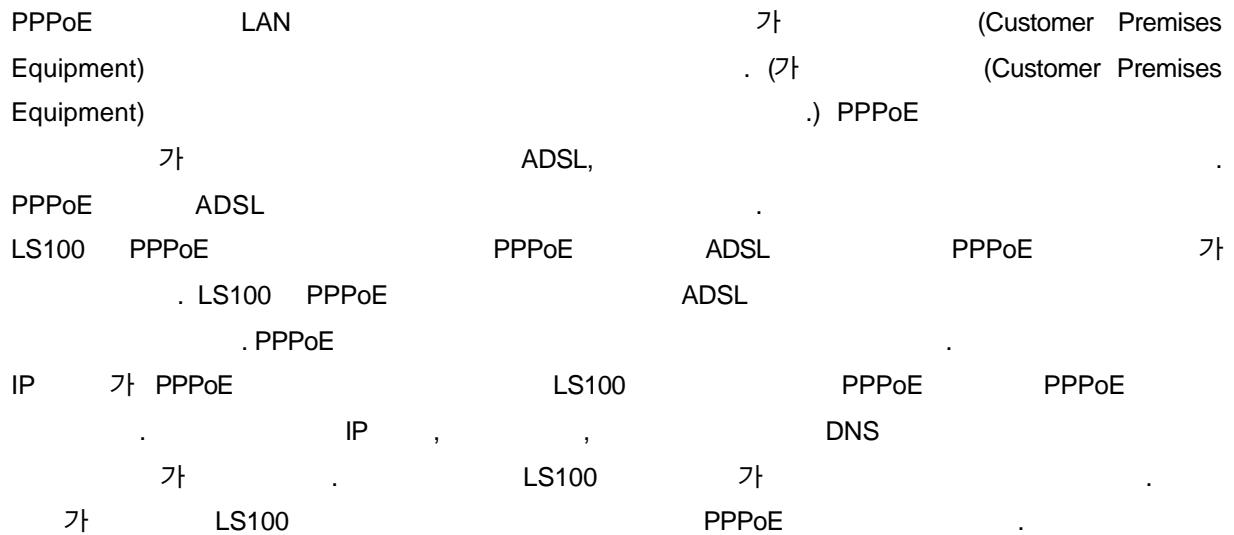
3.3.2   PPPoE

LS100   PPPoE   3-3   ADSL   PPPoE
                               .

```
> set ip pppoe pppoeuser pppoepassword
OK
>
```

3- 3. PPPoE

4.

LS100   .

                              . TCP   ,   ,   /

                     .   4-1   .

TCP   .

4- 1. LS100 TCP/IP

TCP	LS100 TCP . LS100 TCP
	                . TCP LS100
	              .
	                                                    . LS100 TCP
	                                         , TCP .
	                                                                                      .

TCP	LS100 TCP .
	                                              LS100 TCP TCP
	                  . TCP LS100 .
	                                                                                                          .
	LS100 .

TCP
/
	. LS100 TCP .
	                                                                                                       ,
	                                              . .
	LS100 .

4-2   .

4- 2

TCP Server	Listening TCP port
	Inactivity timeout (sec)
TCP Client	Destination IP
	Destination TCP Port
	Cyclic connection Interval
	Inactivity timeout (sec)
TCP Server/Client	Listening TCP port
	Destination IP
	Destination TCP Port
	Cyclic connection Interval
	Inactivity timeout (sec)

'set' 　　　　　　　　　　　　.

set host hostmode par1 par2 ...
where,
    hostmode: tcps=TCP server / tcpc=TCP client / tcpsc=TCP server & client
    parameters:
    if hostmode = TCP server (tcps),
        par1 = listening TCP port,
        par2 = inactivity timeout (sec)
    if hostmode = TCP client (tcpc),
        par1 = destination IP address,
        par2 = destination TCP port,
        par3 = cyclic connection interval (min),
        par4 = inactivity timeout (sec)
    if hostmode = TCP server & client (tcpsc),
        par1 = listening TCP_port,
        par2 = destination IP address,
        par3 = destination TCP port,
        par4 = cyclic connection interval (min),
        par5 = inactivity timeout (sec)
    * set cyclic connection interval to 0 not to use cyclic connection
    * set inactivity timeout to 0 for unlimited timeout

TCP 　　　　　　　　　　　　　　　　　　 **(State Transition Diagram)** 　　.
　　　　　　　　　　　　　　　　LS100 　 TCP
　　　.

- Listen
" 　　　　　　　　　　　　　　　　　 " 　　　. *TCP*
　　　　　　　　　　. 　　　*TCP* 　　　　　　　　　　.
- Closed
" 　　　　 " 　　　.
　　　　　　　　　. *TCP* 　　　　　　　　　　　 [Listen]
　　. *TCP* 　　　　　*TCP* 　/
　　.

- Sync-Received
TCP 　　　　　　　　　　　　　　　　　　 [Listen] 　 [Sync-
Received] 　　. LS100 　　　　　　　　　 [Established] 　.
　　TCP 　　　　　　　　.
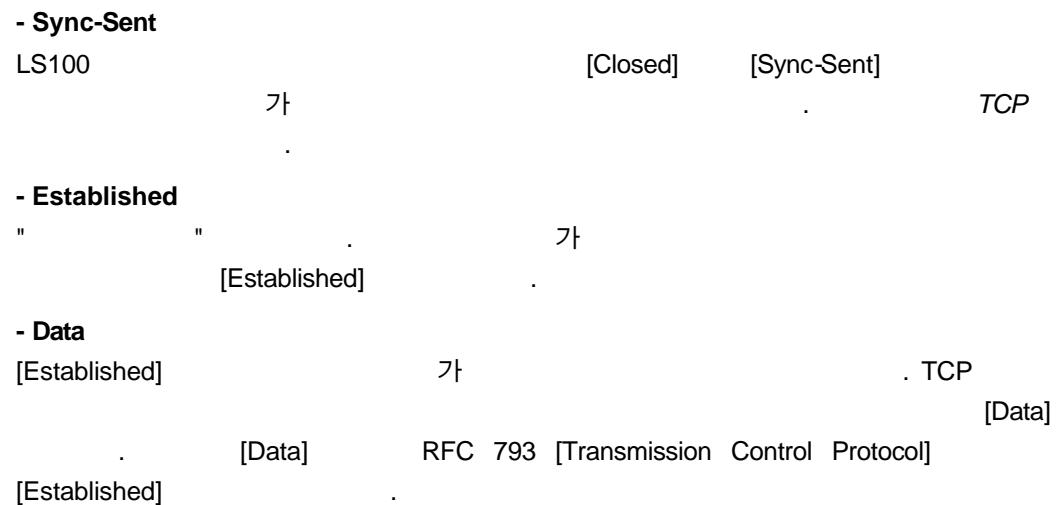
- Sync-Sent

LS100   [Closed]   [Sync-Sent]   .

                                        .   *TCP*

           .

- Established

"   "   .

               [Established]   .

- Data

[Established]   . TCP

                                           [Data]

       .   [Data]   RFC 793 [Transmission Control Protocol]

[Established]   .   .

4.1 TCP

4.1.1

LS100 TCP   TCP   [Listen]   . LS100
TCP   .
          .   TCP   -
PC   TCP   .

1)

[Listen] --> [Sync-Received] --> [Established] --> [Data] --> [Closed] --> [Listen]

       TCP   [Listen]   . TCP   [Sync-Received]
        [Established]   ,   .
                    .   [Data]   .
            [Closed]   .   ,   [Listen]
    .

2)

            LS100   *Inter-character*
timeout   .
              IP   . LS100   ,
            .

      "*Inactivity timeout*"   .

4-1 *TCP* .
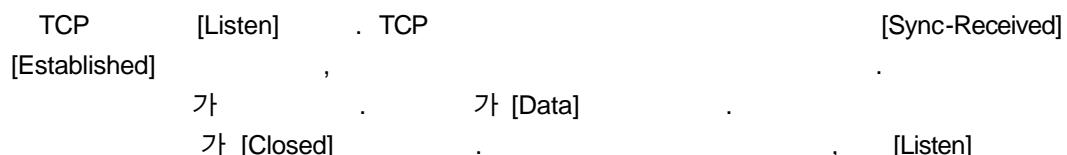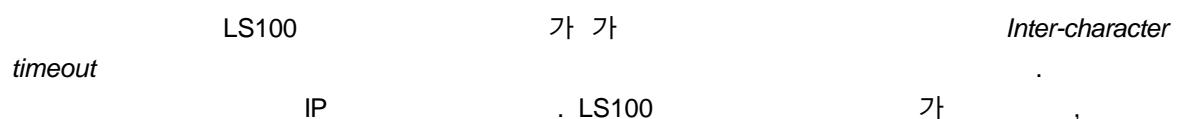
Figure labels: TCP, Sync-Recvd, Listen, Closed, Established, TCP, Data, TCP
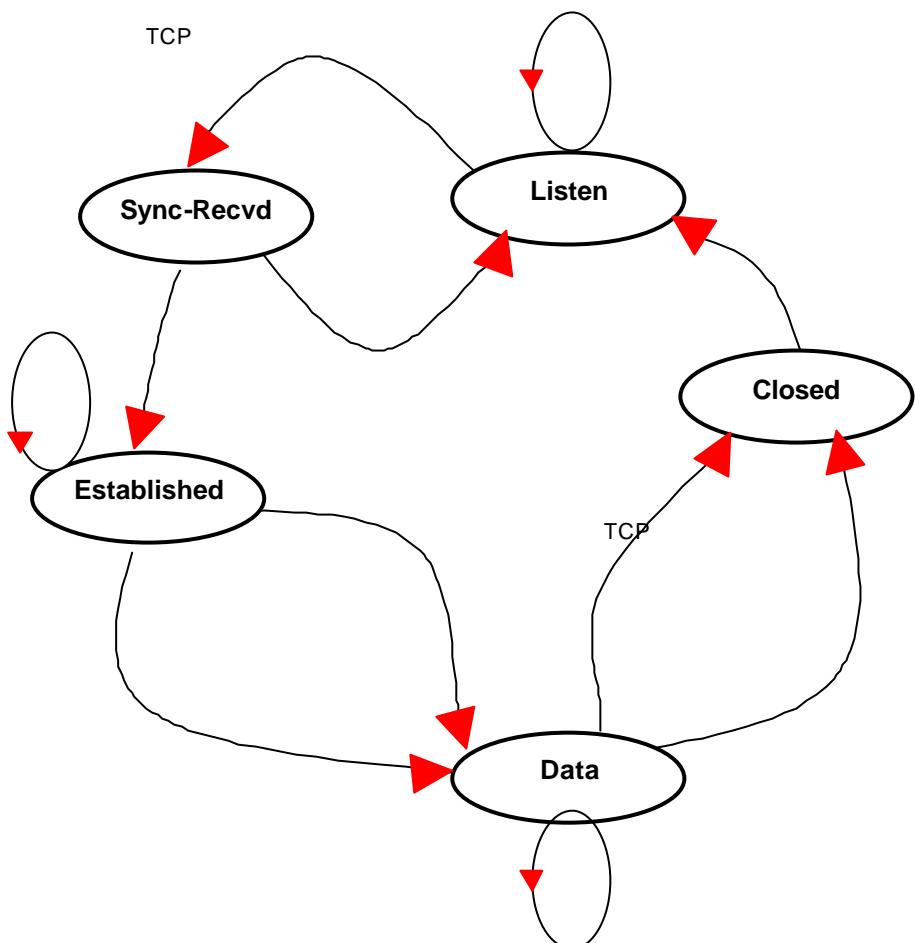
4- 1. TCP

4.1.2 TCP

LS100   TCP   'set'   .

set host tcps listening_TCP_port inactivity_timeout + <CR>
where,
    listening_TCP_port: Listening TCP port
    Inactivity_timeout: Inactivity timeout in seconds.

Listening TCP port   TCP   TCP
        . *Listening TCP Port*   . LS100
                  .
        . (D.   .)   *TCP*
           2   .

Inactivity timeout   TCP host   LS100   TCP
        Closed   Listen   .   *Inactivity timeout*
                        TCP   .

Inactivity timeout   0   ,   TCP   .
Inactivity timeout   LS100   "keep alive"   LS100
                     .
               .   LS100   TCP   .

   :
            Inter-character timeout   .

    .
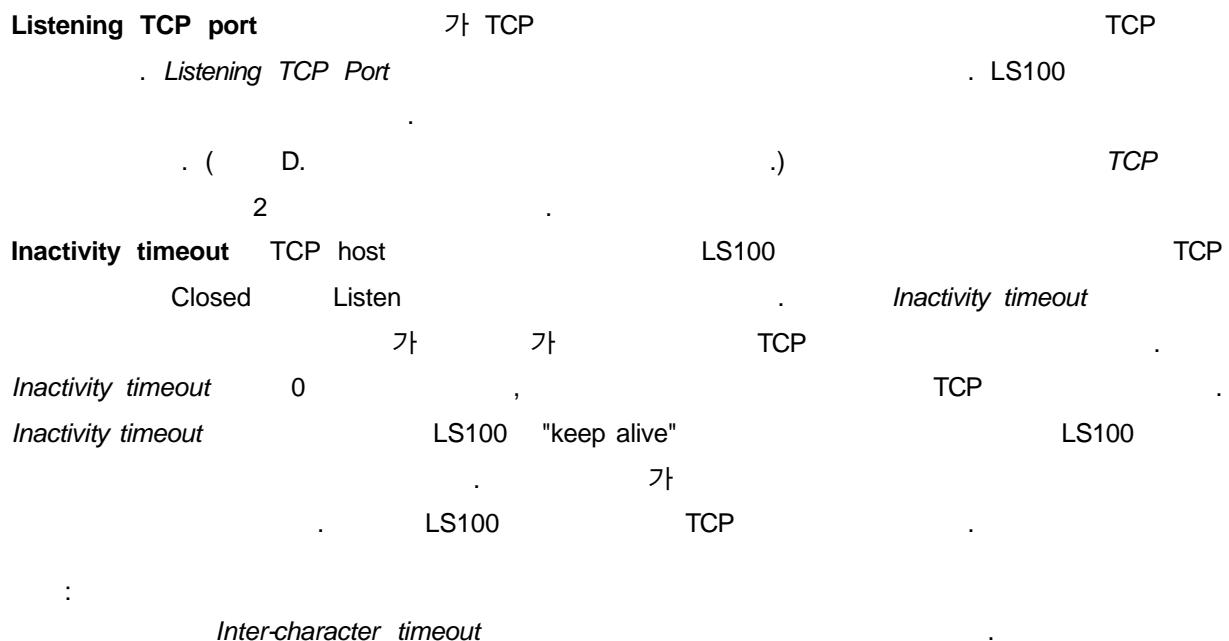
   4-2 TCP   .

```
> set host tcps 6001 300
OK
>
```

Figure 4- 2. TCP

32

4.2 TCP

4.2.1

LS100   TCP   ,   TCP   [Closed]   .
TCP   -   PC   TCP
                      .

1)

[Closed] --> [Sync-Sent] --> [Established] --> [Data] --> [Closed]
                  TCP   [Closed]   .   LS100
                                                                      .   [Sync-Sent]   ,
                                                    .   [Established]
          ,   .
              .   [Data]   .
[Closed]   .

2)

                                    LS100   LS100
                              . TCP
                                        Inter-character timeout   ,
                          IP   . LS100
                                                                                .
              .

                    "Inactivity timeout"   .
                                                        .

      TCP   TCP   .

Cyclic Connection   LS100
                                                                                            .
                                                                ,
                              .   LS100
LS100   .
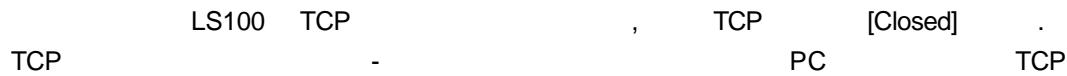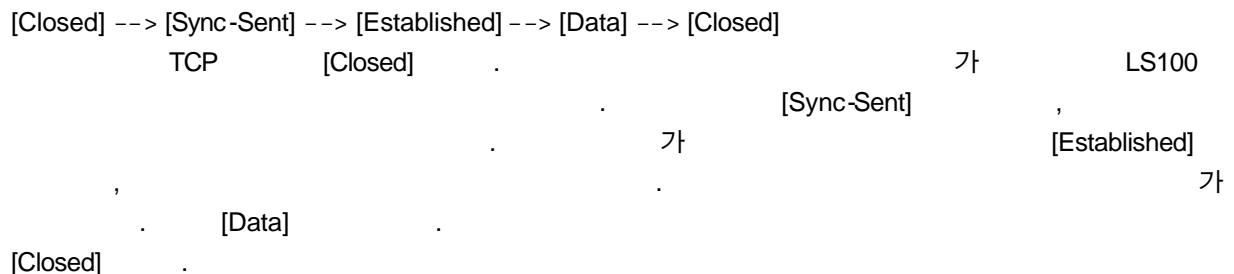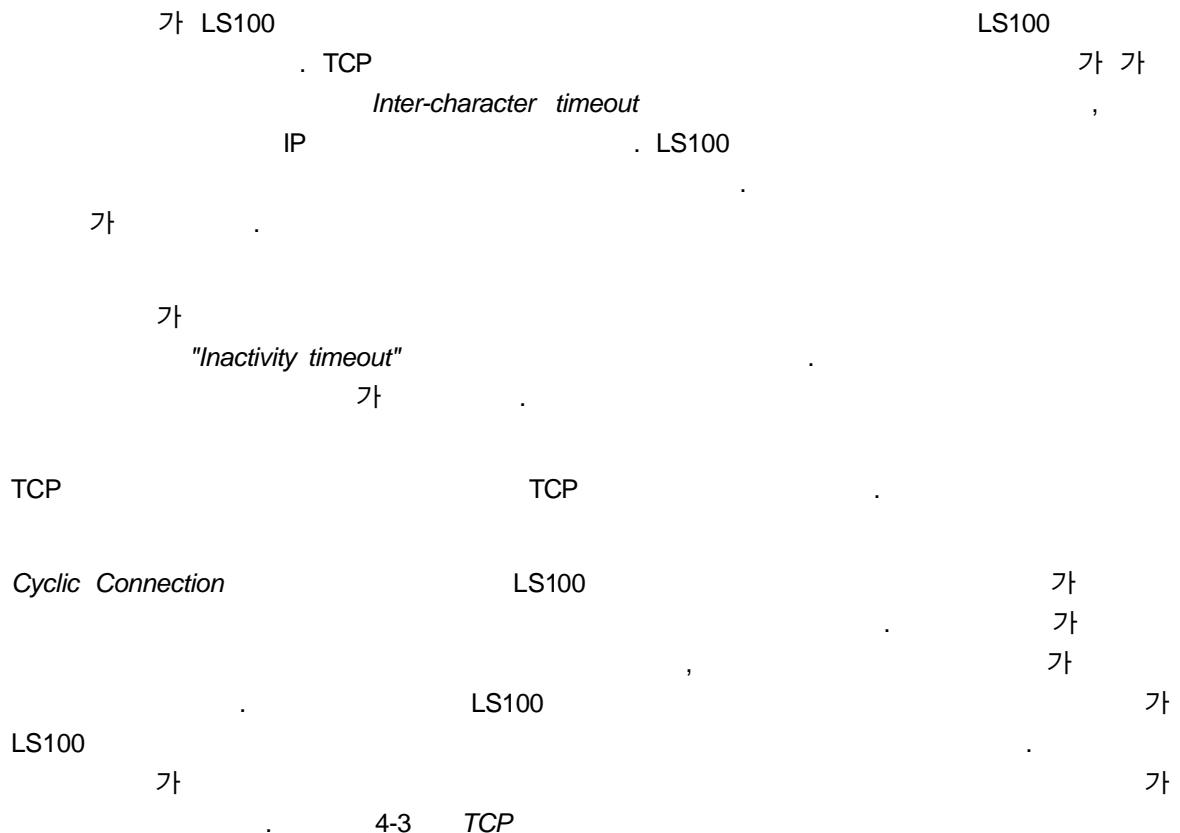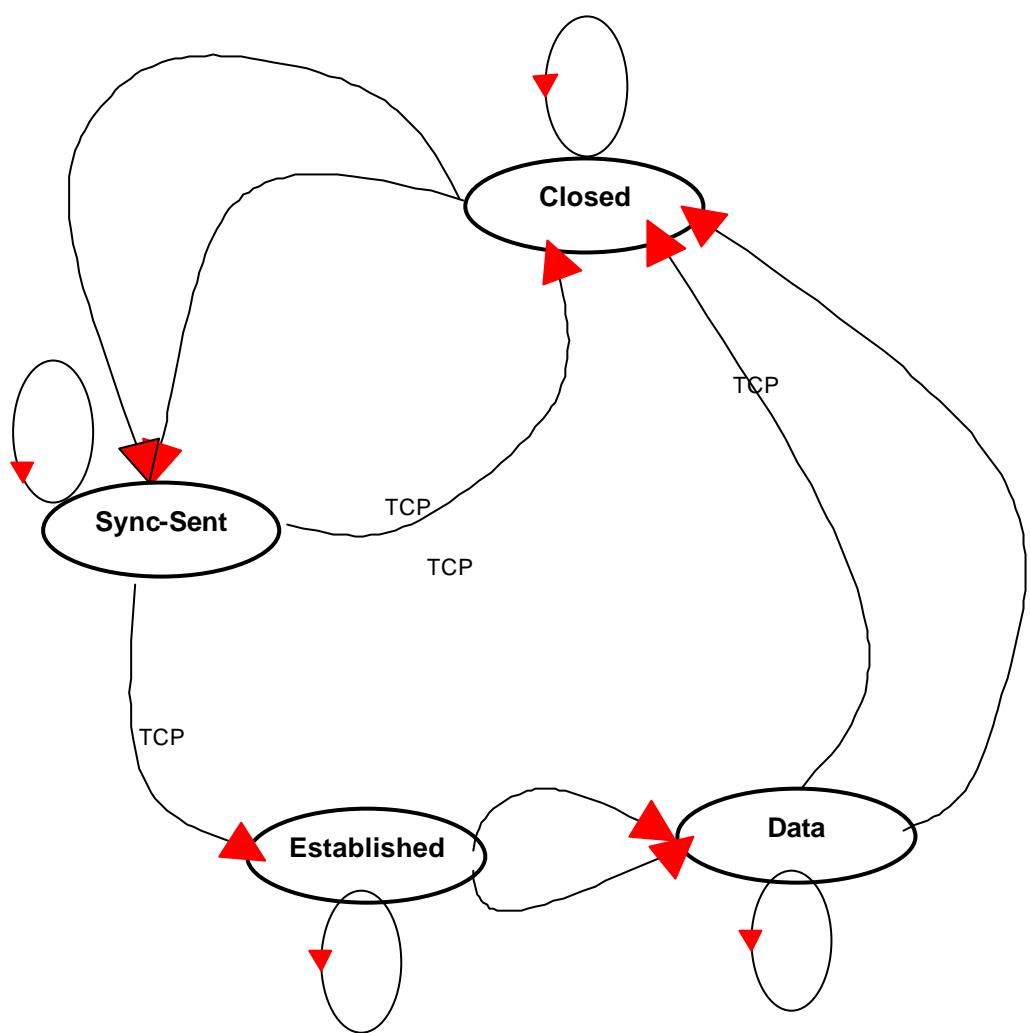
                              .   4-3   *TCP*
                .

4- 3. TCP

4.2.2 TCP

LS100   TCP   set   .

set host tcpc dest_ip dest_port cyclic_connection_interval inactivity_timeout + <CR>
where,
  dest_ip = destination IP address
  dest_port = destination TCP port
  cyclic_connection_interval = cyclic connection interval in minutes
  inactivity_timeout = inactivity timeout in seconds.

  IP   **TCP**   LS100 TCP client
  . IP (   ) TCP   .
      LS 100
       . 0
 .   .   0   ,
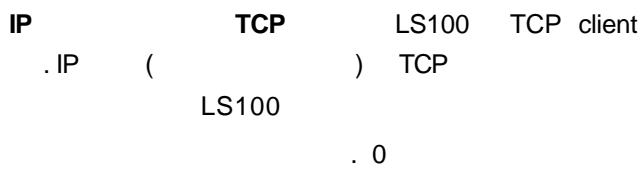
Inactivity timeout TCP

  4-4 TCP   .

```
> set host tcpc 192.168.1.1 6001 10 300
OK
>
```

4- 4 TCP

4.3   TCP   /

4.3.1

LS100   TCP   .   TCP
                                                                                                          .   TCP
TCP   [Listen]   .

1)
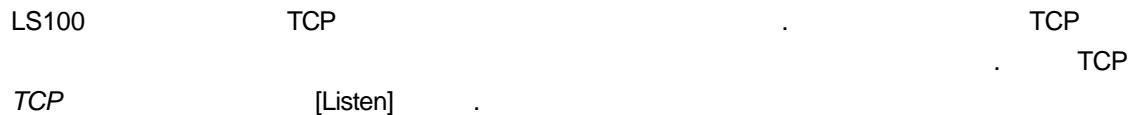
[Listen] --> [Sync-Received] --> [Established] --> [Data] --> [Closed] --> [Listen]
Or
[Listen] --> [Sync-Sent] --> [Established] --> [Data] --> [Closed] --> [Listen]

                        [Listen]   .   TCP
                                             .   TCP
                                                                                    .   LS100
                                                            .

2)

TCP   TCP   LS100

. *TCP*

. *TCP*

TCP   .

TCP

TCP

TCP

Sync-Sent

TCP

Established   **Data**   **Closed**

Sync-Recvd   **Listen**

TCP
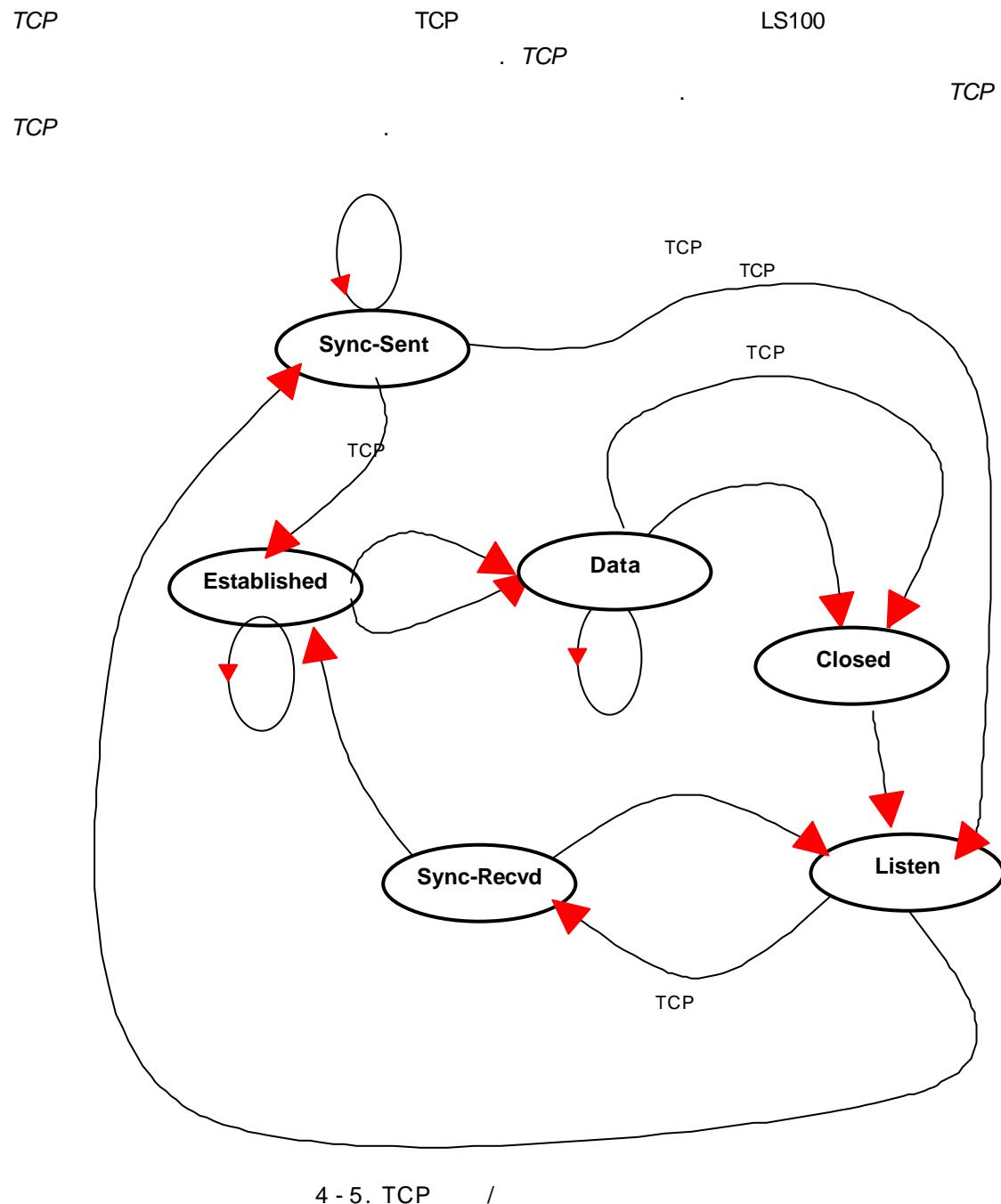
4- 5. TCP   /

4.3.2 TCP   /

LS100   TCP   /   'set'
           .

set host tcpsc listening_port dest_ip dest_port cyclic_connection_interval inactivity_timeout
where,
    listening_port = listening TCP port
    dest_ip = destination IP address
    dest_port = destination TCP port
    cyclic_connection_interval = cyclic connection interval in minutes
    inactivity_timeout = inactivity timeout in seconds.

TCP   /   TCP   TCP
                       .
    4-6   TCP   /   .

```
> set host tcpsc 6001 192.168.1.100 7001 10 300
OK
>
```

4- 6 TCP   /

5:

LS100

.   5-1   .

5- 1.

	Values
Baud rate	1200, 2400, 4800, 9600, 19200, 38400, 57600, or 115200
Data bits	7 bits or 8 bits
Parity	None, Even or Odd
Stop bits	1 bit or 2 bits
Flow control	None, Hardware (RTS/CTS)
DTR option	Always HIGH, Always LOW, Show TCP connection
DSR option	None, Accept TCP connection only by HIGH, Open/Close TCP connection
Inter-character timeout	Inter-character timeout value in milliseconds

'set'   .

set   serial   baudrate   data_bits   parity   stop_bits   flow_control   dtr_option   dsr_option   interchar_timeout(ms)
where,
   baudrate: 1200, 2400, 4800, 9600, 19200, 38400, 57600, or 115200
   data_bits: 7=7-bits / 8=8-bits
   parity: n=none / e=even / o=odd
   stop_bits: 1=1-bit / 2=2-bits
   flow_control: n=none / h=hardware
   dtr_option: h=always high / l=always low / s=show tcp connection
   dsr_option: n=none / a=accept only by high / o=open,close TCP connection
   interchar_timeout: inter-character timeout value in milliseconds

         ,   ,   ,   *9600 bps, 8   ,   , 1*
         .   LS100   . LS100   7
   ,   , 1   LS100   2   . 8
             ,   (   )   , 2   LS100   1
         .

                                    None   . LS100   RTS/CTS
   .

.

DTR/DSR   TCP
                    . DTR   , DSR   LS100   .
DTR option   *always high, always low*   *show TCP connection*
          . DTR   *show TCP connection*   DTR   TCP
     HIGH   .
DSR option   *none, allow TCP connection only by high*   *open/close TCP connection*
                                    . *Allow TCP connection only by HIGH*   TCP
                              .   TCP   DSR
HIGH   . *Open/close TCP connection*   TCP
                                    . DSR   *Open/close TCP connection*   ,
DSR   HIGH   LS100   , LOW
                    .

Inter-character timeout   LS100   .
                                                    LS100   .
LS100   ,   *Inter-character timeout*
                              TCP/IP   .
      Inter-character timeout   baud rate
                              ,   1200 bps, 8 Data bits, 1 stop bit   no
parity   ,   10
                    10 (   ) / 1200 (/   ) * 1000 (/   ) = 8.3   .
          Inter-character timeout   8.3 ms   . *Inter-character timeout*
              10 ms   .
                                          ,
                    Inter-character timeout   ,
LS100   . LS100   1400
          .

    5-1   9600 bps, 7   ,   , 2   ,   , DTR   TCP
              , DSR   , 10 ms   inter-character time-out


```
> set serial 9600 7 e 2 h s n 10
OK
>
```

5- 1

6:

set   ,

.

set admin username password devicename
      username: login username
      password: login password
      devicename: device name

7-1

```
> set admin adminuser adminpassword LS100_test1
OK
>
```

7- 1

A:

A.1   Pin Outs

LS100   AT&T258   .   A-1
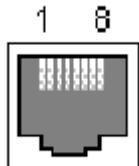
A- 1. RJ45

A- 1. RJ45

1	Tx+	
2	Tx-	
3	Rx+	
4	NC	
5	NC	
6	Rx-	
7	NC	
8	NC	

A.2   Pin Outs

LS100   DB9   A-2   .
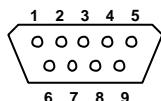
A- 2. DB- 9

A- 2. DB- 9

	RS 232
1	-
2	Rx
3	Tx
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	-

A.3

HelloDevice   **Remote Host**

Rx+(1)   Rx+(1)
Rx-(2)   Rx-(2)
Tx+(3)   Tx+(3)
Tx-(6)   Tx-(6)

A- 3.

HelloDevice   **Hub**

Rx+(1)   Rx+(1)
Rx-(2)   Rx-(2)
Tx+(3)   Tx+(3)
Tx-(6)   Tx-(6)

Remote Host

Rx+(1)   Rx+(1)
Rx-(2)   Rx-(2)
Tx+(3)   Tx+(3)
Tx-(6)   Tx-(6)

A- 4.

A.4

HelloDevice   **Serial Device**

Tx(3)   Rx

Rx(2)   Tx

RTS(7)   CTS

CTS(8)   RTS

DTR(4)   DSR

DSR(6)   DTR

GND(5)   GND
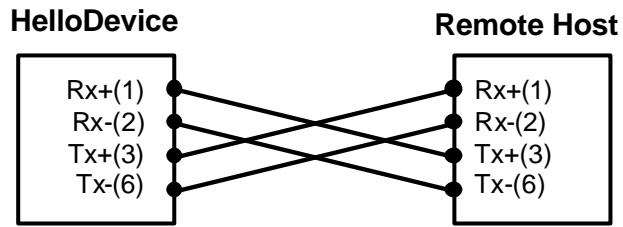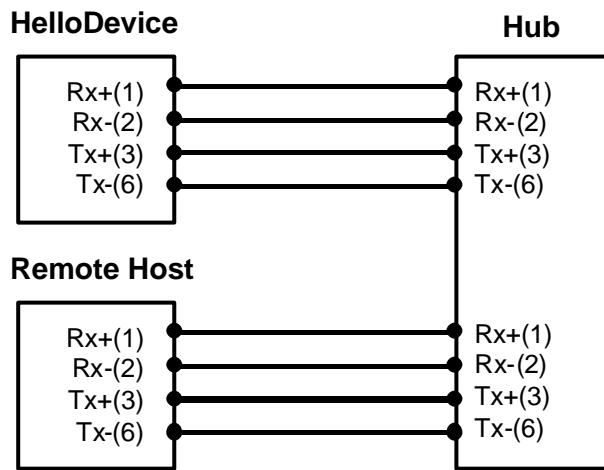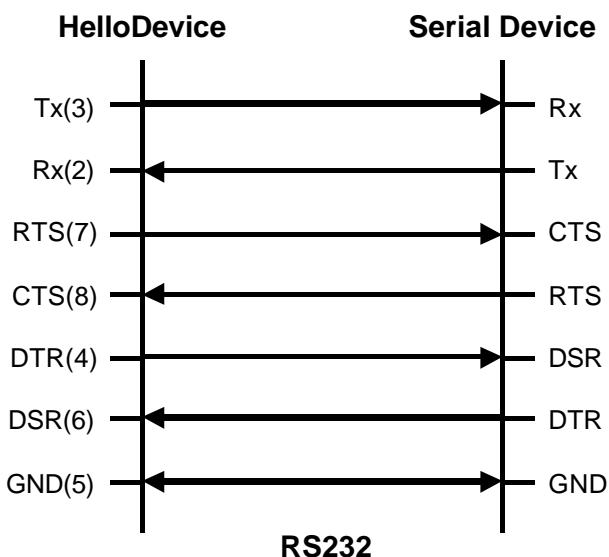
RS232

A- 5. RS232

B:

, , / .
0 1023 . 1024 49151 .
49152 65535 .
IANA ,
. B- 1
. IANA .
URL http://www.iana.org/assignments/port-numbers .

B- 1.

		TCP/UDP
21	FTP (File Transfer Protocol)	TCP
22	SSH (Secure SHell)	TCP
23	Telnet	TCP
25	SMTP (Simple Mail Transfer Protocol)	TCP
37	Time	TCP, UDP
39	RLP (Resource Location Protocol)	UDP
49	TACACS, TACACS+	UDP
53	DNS	UDP
67	BOOTP server	UDP
68	BOOTP client	UDP
69	TFTP	UDP
70	Gopher	TCP
79	Finger	TCP
80	HTTP	TCP
110	POP3	TCP
119	NNTP (Network News Transfer Protocol)	TCP
161/162	SNMP	UDP

C:

C.1   /LED

Power LED .	.	.
Link LED .	.	.
	.	. LS100 , .
ACT LED .	IP .	IP .

C.2

.	.	( ) .
	.	. 9600 bps, 8 Data bits, No parity, 1 stop bit, Hardware flow control
	/ .	/ .
.	IP DHCP IP .	IP DHCP DHCP IP 20 . IP static IP
.	.	. . admin .

C.3

Telnet LS100 .	LS100 IP .	LS100 IP .
	.	telnet .
.	.	. . *admin* .

C.4 IP

LS100 IP		IP .
		HelloDeviceManager LS100 .
HelloDeviceManager LS100 .	LS100 IP .	LS100 IP .
	HelloDeviceManager LS100 .	LS100 PC HelloDeviceManager .

C.5 DHCP

IP .	DHCP .	DHCP .
LS100 IP .	DHCP .	DHCP .

46

C.6　TCP

LS100 ．	IP ．	IP　　　　　　　　　　　　　．
	LS100 　　　TCP ．	LS100　　　　　　　　TCP　　　TCP ／　　　　　　　　．
	LS100　IP TCP ．	LS100　　　　IP　　　TCP　　　　　　　　　．
	DSR 　　　DSR HIGH ．	DSR　　　　　　　　　　　LS100　DSR　　　HIGH
	TCP ．	TCP　　　　　　　　　　　　　　．

C.7

TCP/IP ．	Inter-character timeout ．	Inter-character tim eout　　　　　　　　　　　．
LS100 ．		LS100 ．
．	．	．