Atrie NMS
MODEM
User's Manual

Atrie

ATRIE NMSVIEW

Network Management System

(Version 1)

USER'S MANUAL

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CHAPTER 1

INTRODUCTION

ATRIE NMSVIEW

The Atrie NMSVIEW is a network management system for Atrie Rack Mounted Modem Series. It can manage the Atrie 1442RM,2842RM and 288RMaand also can manage the Atrie 144LCD and 288LCD through Remote Access function. The whole system can manage up to 4000 Atrie Modems and up to 8000 Atrie Modems if Remote Access is enabled.

System

The management system uses the NMSVIEW software that installed inside the PC and connecting the CM (Control Module) card on the Atrie rack shelf through the 10 BASE-T Ethernet. The CM card connecting the individual modem through the Local Bus on the backboard of the Rack shelf to control and manage the modem. Due to the 10MHz Ethernet, you can establish a high-speed standardized Network within a short time period, no special equipment required.

System function

The function of Atrie NMSVIEM Network management system listed below:

*Changing the active parameters of the modem
*Checking the active parameters of the modem
*Executing the Diagnostics
*Direct Dial the telephone numbers.
*On screen display, Audible or printout the Alarms
*Alarm analysis and management.

*Line efficiency analysis and management.
*Retrain analysis and management.
*Support Scan function to ensure dial-up network.
*Unlimited storage capacity.
*Using the color icon and English characters to display status
  and alarms.

Hardware Requirement

* 80386 32Bits or up CPU
* VGA Display card(suggest 800*600*256 resolution and small
  font under WINDOWS 95/NT or up)
* Mouse
* Parallel port(for printer)
* Serial port
* Ethernet card
* HUB

Software Requirement

* NMSVIEW software
* The Firm Ware of the CM
* Windows 3.1/95/NT or up

Installation Procedure

There are two major steps for installing Atrie NMSVIEW. First
 setup the TCP/IP under windows. Second installing the Atrie
NMSVIEW software.

Setup the TCP/IP under windows

1. Click Start, point to Settings, click Control Panel, and then
   double-click Network.
2. Next, click Add, click Protocol, click Microsoft, and then
   double-click TCP/IP.
3. Verify that TCP/IP has been bound to the network adapters.

Click the TCP/IP Setting button, and then specify an IP
Address, Subnet Mask and Default Gateway. Restart the
computer when you are prompted.

4. IP address 255.255.255.255 is a broadcast. X.X.X.0 is
specified the network address. The user specifies these
address is forbidden.

5. After finish above procedure, you have already finished the
TCP/IP installation.

Network Management System installation

Put the installation diskette into Drive A, execute the
"setup.exe". The installation program will install the Atrie
NMSVIEW automatically. The installation program will
generate directory of "Atrie NMS Vx.xx" under Programs.

CHAPTER 2

NMSVIEW

This chapter describes the function and operation of the Atrie NMSVIEW.

Main Screen

The Main screen shows right after executing the Atrie NMSVIEW. There are two windows of the main screen. The upper window is the Modem status display window. The lower window is the alarm monitor window.

Modem status display window

This window shows the status of the rack-mounted modem, each line shows a rack including a CM (purple) and 16 modems (00 to 15). White icon represents empty and purple icon represents exist of CM card. White icon represents empty, green icon represents on line, blue icon represents idle, yellow icon represents self-testing and red icon represents alarm of the modem. Inside the icon there are characters, "D" represents Dial-up line, îLî represents leased line. There are rack numbers on the left side of the window. The maximum number is 250.The system can manage up to 250 Rack shelves.
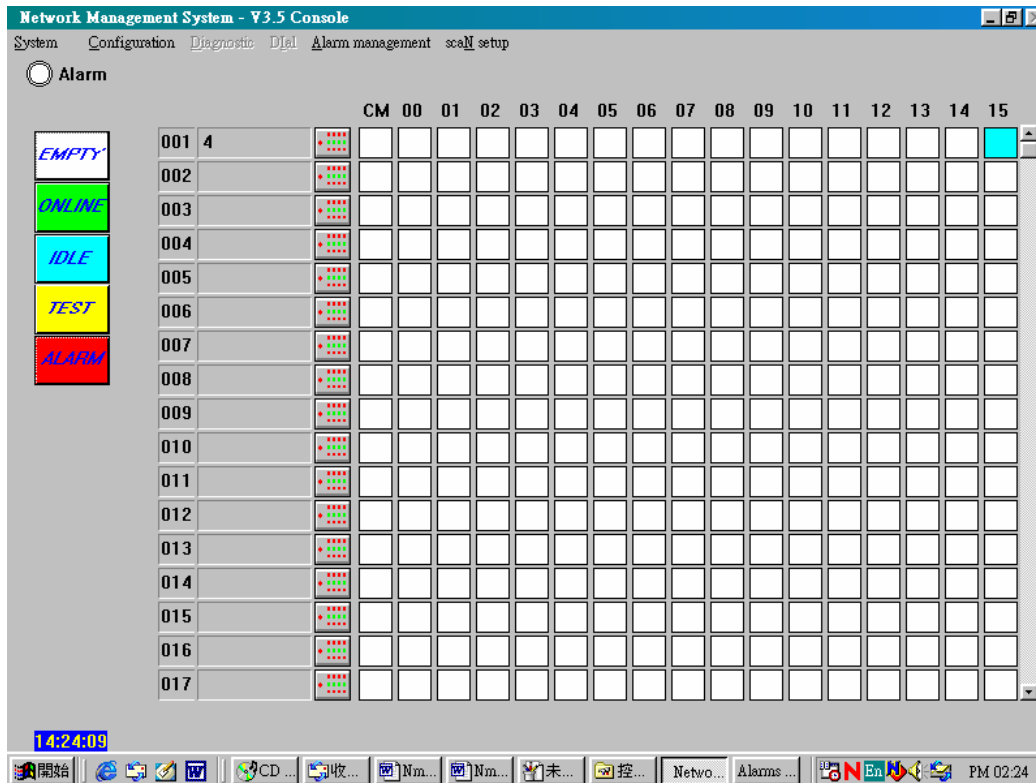
Fig 2-1 Modem Status Display window

※ Set the DIP SW 2-8 to "ON" position, the NMSVIEW will shows two lines as one rack shelf, you can than manage the dual port modem (such as 288RMa). Upper line represents port, lower line represents porta and the CM icon shows and .

Alarm monitor window

Alarm monitor window displays the latest 300 Alarms occur after the NMSVIEW executed. It displays the date, time, rack shelf number, user name, line type and the alarm name. Alarm that exceeds 300 will be removed. All the alarm will automatically store into system alarm database. User can use alarm management function to analysis the alarm data. Please refer to Chapter 3 for detail description about Alarm management.
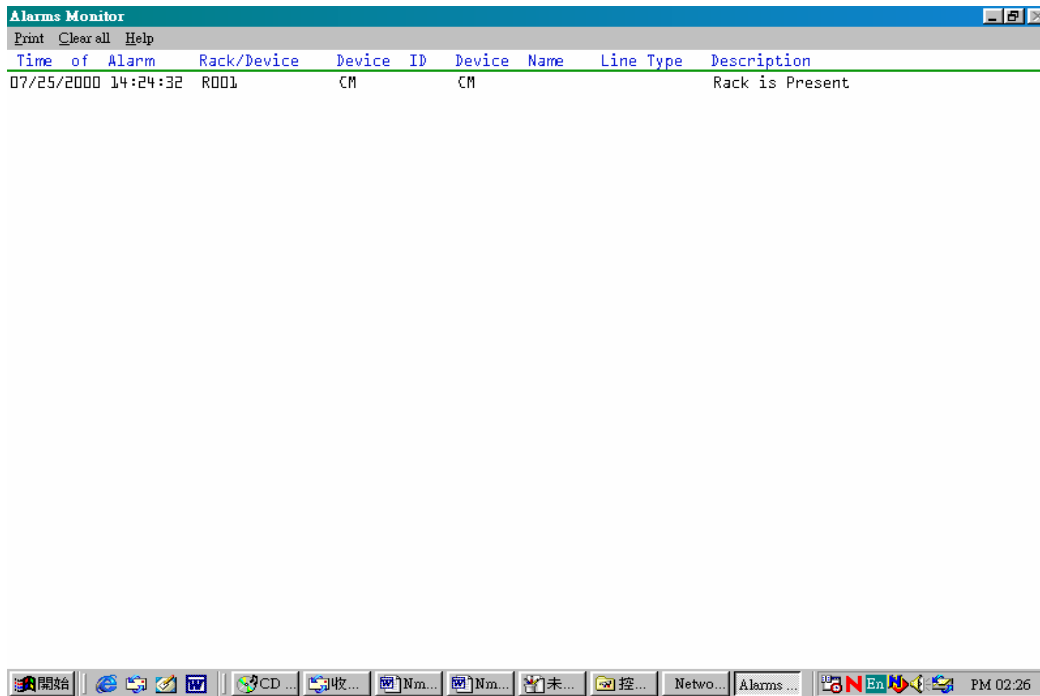
Fig 2-2 Alarm monitor

CM (Control Module)

There are two version of CM card. One is control card only, and the other is with LCD panel.

Setting of IP address:

For the control card only version, you need to pull out the board and set the DIP SW1 for IP ADDRESS Setting, the default address is 156.27.4.x. The SW1 is the last byte of the IP address. The address define describes below:

ADDRESS	1	2	3	4	5	6	7	8
1	Off	Off	Off	Off	Off	Off	Off	ON
2	Off	Off	Off	Off	Off	Off	ON	Off
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
250	ON	ON	ON	ON	ON	Off	ON	Off

Table 2-1   IP address of DIP SW1

The version that come with LCD control module, you need to plug into shelf and use the LCD controller to set the IP ADDRESS.

Setting of IP address:

1. Press "EXIT" key for serial times, until the version number shows.

2. Press "LEFT" key until the "SYSTEM CONFIGURATION" shows.

3. Press "ENTER" key and key in password. The factory default of the password is the "NULL" character. Press "ENTER" key to show "SET IP ADDRESS". If you want to change password, please go to "SET KEYLOCK PASSWORD" menu.

4. Press "ENTER" to show IP ADDRESS. Press "LEFT", "RIGHT" to select number, "ENTER" to shift to NEXT digit, "EXIT" to abort.

5. After key in IP ADDRESS, press îRIGHTî Key to show "SET SUBNET MASK", press "ENTER" to show SUBNET MASK, change the SUBNET MASK ADDRESS as item 4.

6. After key in SUBNET MASK, press "ENTER" to show "SET IP ROUTER" press ìENTERî to show and change the "IP ROUTE R" address.

The Network IP address had been set through item 1~6. The IP address must be unique and authorized by authority.

CHAPTER 3

OPERATION

This chapter describes the operation and function of the ATRIE NMSVIEW.

Start

Select "Start" from the window screen click "Program file", execute the NMSVIEW from the folder "Atrie Nms Vx.x". The NMSVIEW starts and show the login screen (fig 3-1). Please enter user name and password. The system default is "CONSOLE" for both user name and password. After key in user name and password, the system shows Main Screen. The Main screen divided into two windows. Upper window is the Atrie Network Management System, and the Lower window is the Alarm monitor
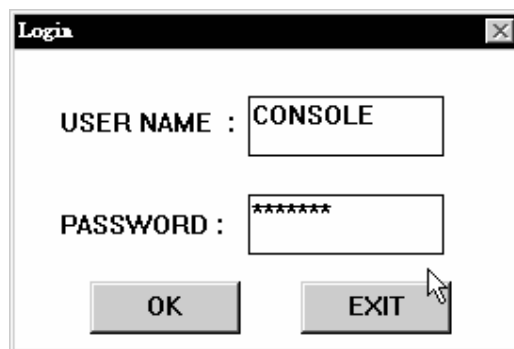
Fig 3-1 Login screen

Atrie Network Management System

There are six item in the main menu of the Atrie Network Management System :

System

Select the "System". It shows the pull down menu (fig 3-2).
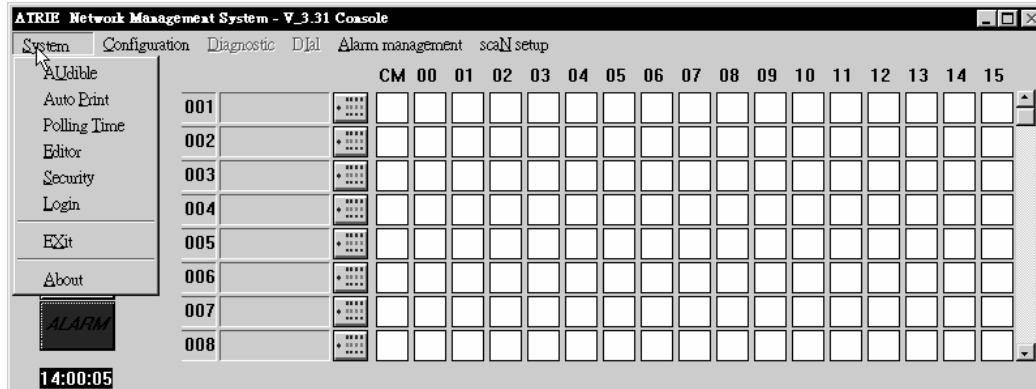
Fig 3-2 System

1. AUdible

The Audible controls the Audible Alarm, range from 0 to 30. When the Alarm occurs the PC speaker will sound (fig 3-3).
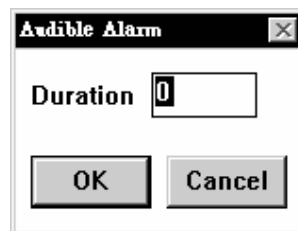
Fig 3-3 Audible control

2. Auto Print

The Auto print prints every Alarm if selected.

3. Polling Time

This item controls the system polling time. The default is 15 seconds, range from 10~60 seconds (fig 3-4).
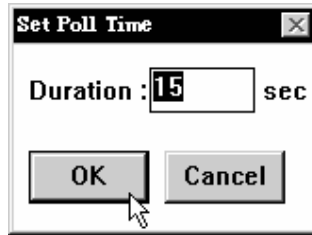
Fig 3-4 Polling time control

4. Editor

Edit the basic data of each modem from Data Editor (fig 3-5). The basic Data include Rack No., Device No., Line No., Name, phone Number, Double click the Device No., shows the "Edit" screen (fig 3-6). Key in the Line Number, Name, telephone number, click the "Finish" to complete the Input. User can also use the "Copy" function to copy to other modem. Click the "Exit" to end the Editor.

The telephone number is the dial-up number. Please do not key-in leased line number.
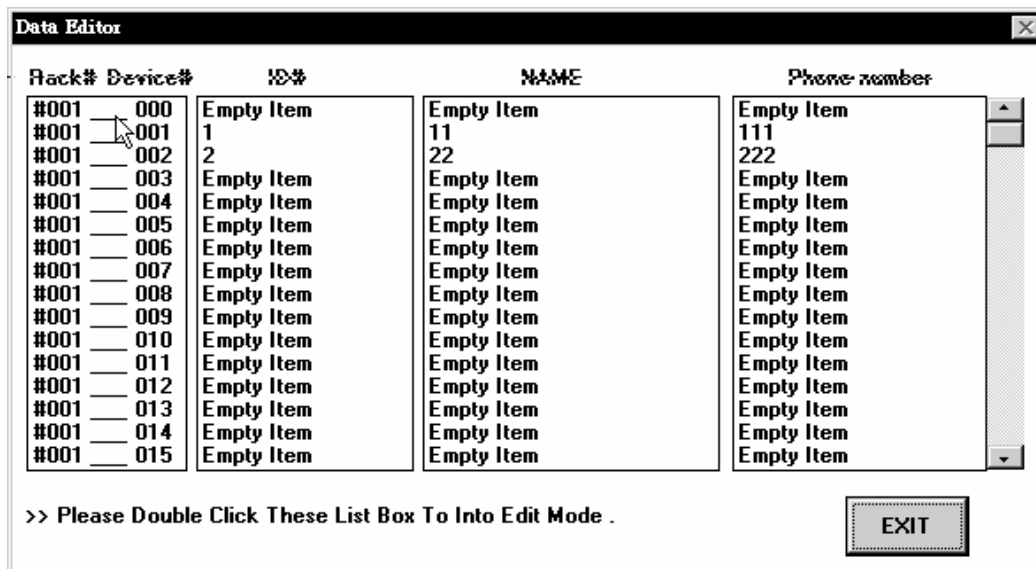
Fig 3-5 Data editor

Fig 3-6 Edit

5. Security

The security controls the Authorization of the Management system. Only Supervisor can access this screen (fig 3-7), the user is divided into three degree. The Supervisor can edit user, password, and change system parameters, change modem parameters. The User can change system and modem parameters and the Guest can only read system or modem parameters. Click the "ADD USER" to show the User Name window (fig 3-8). The Supervisor can add user here.

Fig 3-7 Security

Fig 3-8 User name

6. Login

The system starts with Login screen (fig 3-1), user must key-in user name and password to access the system. If user leaves the PC, it is strongly recommended that re-login to Guest user to avoid unauthorized change parameters.

7. EXit

End the program and Exit to windows.

8. About

Display the Atrie company name, Logo and version number (fig 3-9).
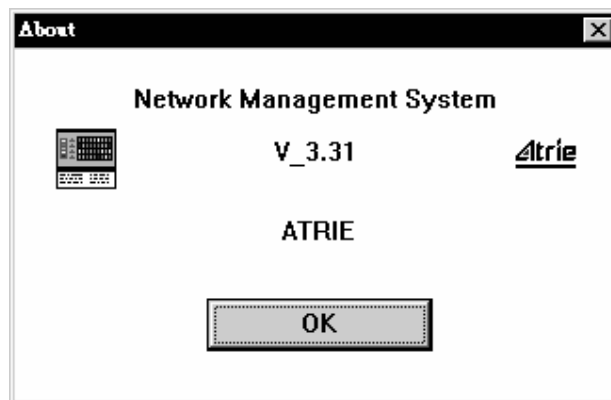
Fig 3-9 About

Configuration

Click the modem icon that you want to change configuration before you click the Configuration menu. The system shows the local and remote pull-down menu. The modem must be On -line and turn on the secondary channel to select the Remote Configuration. The configuration window (fig 3-10) shows the Rack shelf address, Model name, Version, Line type, Modem mode, Terminal setting.....etc. you can change or read the parameter of the modem.

CONFIG ☒

Rack #1   Device #5   Model : 288RMII   Version: 1.6

ID :   Name :

Line
PSTN
Tone Dial
Dial Backup : Disable
Restore Timer :   60   min
Backup Timer :   60   sec

Terminal
Speed :   300
Asynchronous
DTR 108.2
Char Length   :   10   Bits
AT CMD Dial Up

Profile :
[▼]
[Load]   [Save]

Modem
Speed : 33600
Protcol : V.34
Retrain   Retrain+FB/FF
Guard Tone   No Guard Tone
PSTN TX Level   - 7   dbm
L.L TX Level   - 7   dbm
Internal Clock
Auto Answer Enable
Answer Mode
Smart Mode

Protocol
Mode : LAPM,MNP4,NORMAL
Flow CTL: Bidirct RTS/CTS

[Send Local Configuration]

CMD: AT&WH0
☐ Off Line
☑ Write NVRAM

[Protocol]
[Modem]
[Auxiliary]
[Terminal]
[Line Setup]
[Threshold]
[S_Register]

[HELP]
[Print]
[Exit]

Fig 3-10 Configuration

1. Protocol

Read or change the Modem mode, Flow control, Compression type, Transmission buffer and MNP 10 setting (fig 3-11).
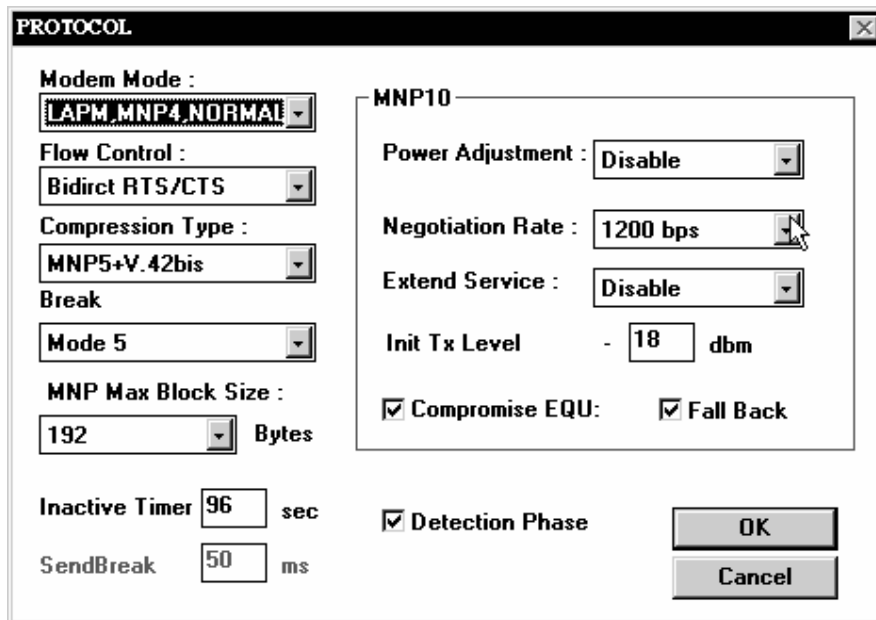
Fig 3-11 Protocol

2. Modem

Changes the modemís DCE speed, Transmission level, Wait for carrier time, also can modify the Auto answer, Secondary channel, Clock source, Guard tone, Multi-mode and Retrain setting (fig 3-12).
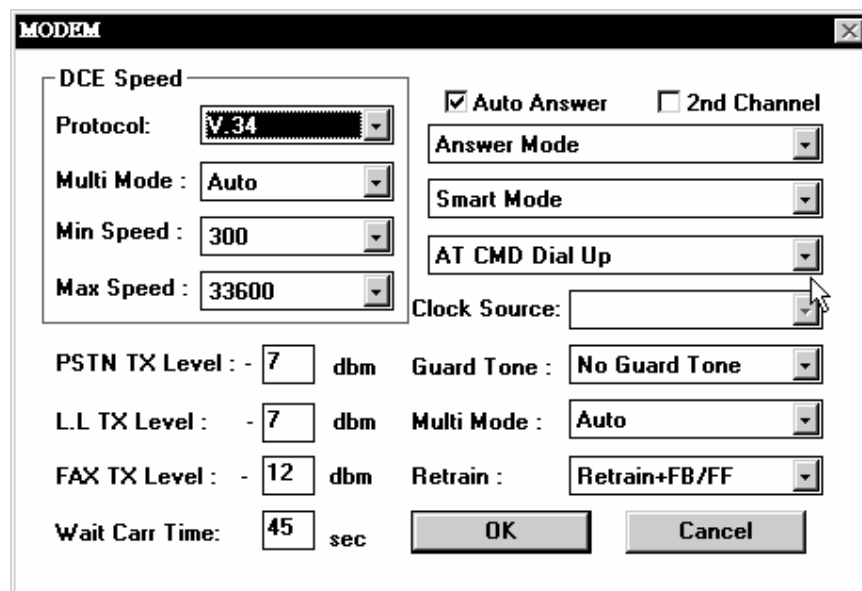
Fig 3-12 Modem

3. Auxiliary

In the Auxiliary Menu, user can change the Speaker ON/OFF, Volume, Result code type, Protocol status, Extension result code (fig 3-13).
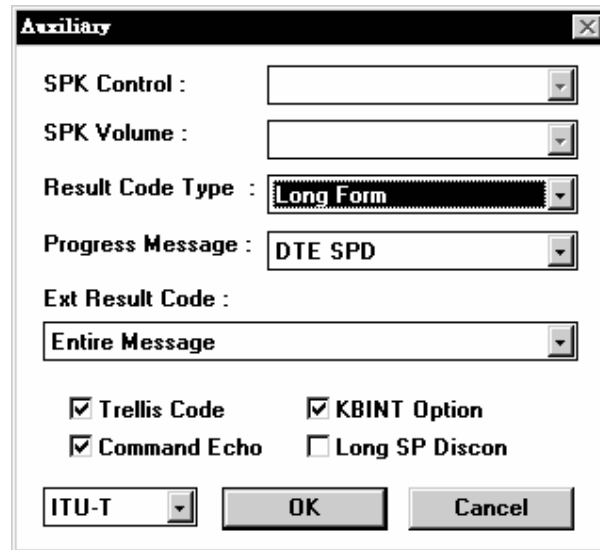
Fig 3-13 Auxiliary

4. Terminal

Change the Synchronous/ Asyschronous mode, AT/V.25bis command set, DIR Status, Frame type, Character length, DTE speed, DSR, DCD, RTS, CTS status (fig 3-14).
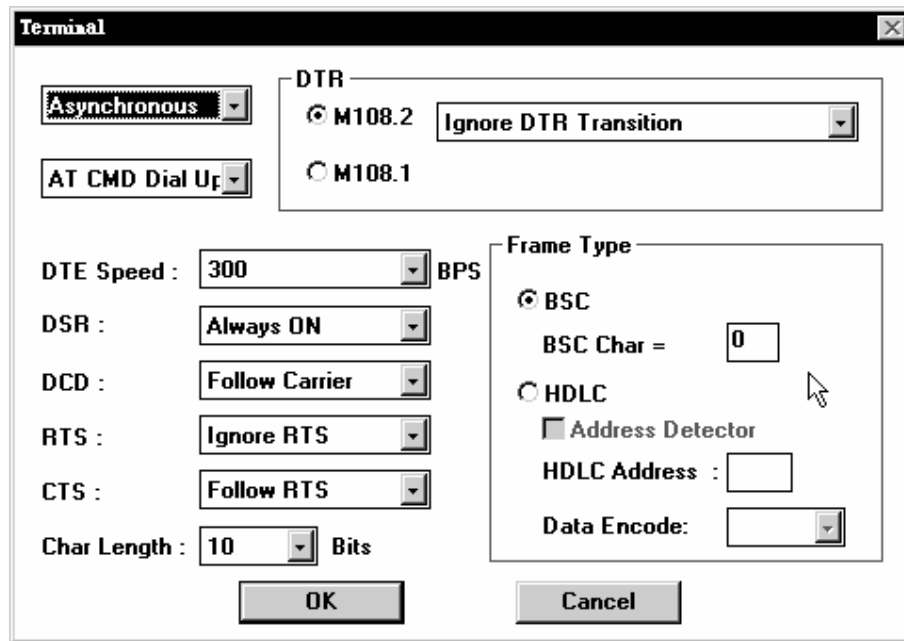
Fig 3-14 Terminal

5. Line Setup

Line setup allows you to modify the Dial-up/ Leased Line, Pulse dialing/ DTMF dialing, Pulse dial type, DTMF duration (fig 3-15).
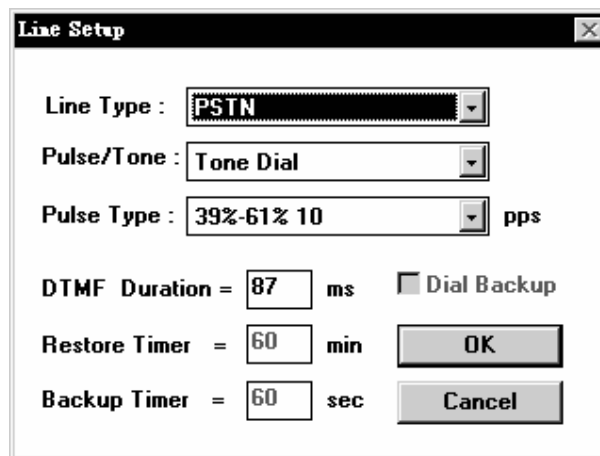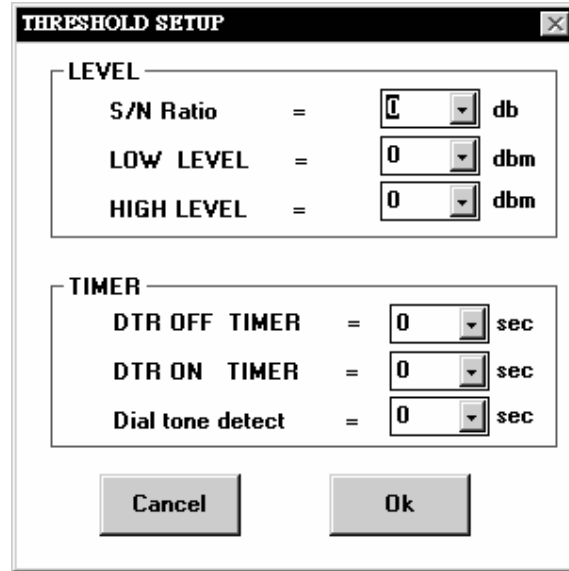
Fig 3-15 Line setup

6. Threshold

Changes the threshold level of the Alarm, DTR ON/OFF

duration, No dial-tone time limit (fig 3-16).
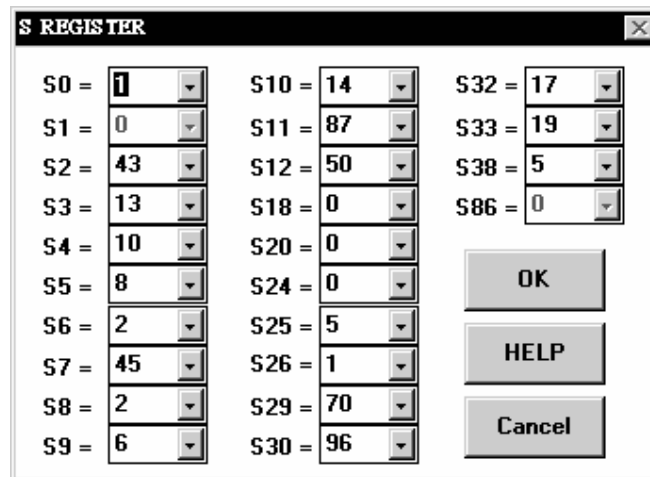
Fig 3-16 Threshold

7. S_register

You can read or change the content of all the S-registers
(fig 3-17).

Fig 3-17 S register

8. Help

There is help for configuration when click the "HELP"

(fig 3-18).
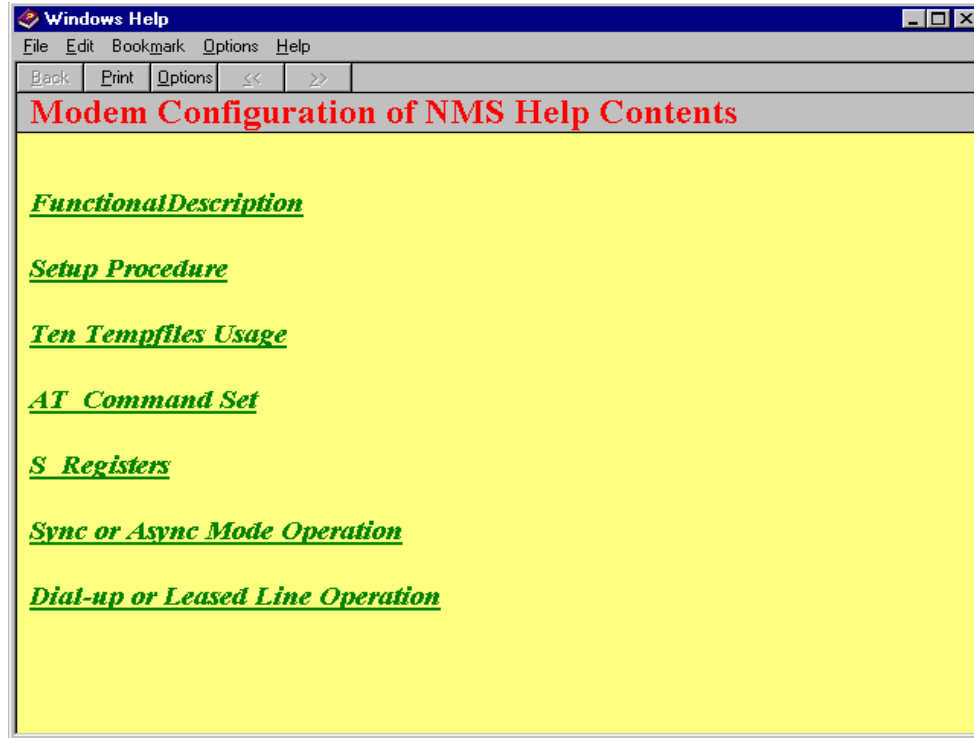
Fig 3-18 Help

9. Print

Print out pre-selected modem parameters.

10. Save

There are ten user define configuration profiles, (Temp 0~Temp 9) for user to save for future use.

11. Load

There are twenty profiles to load to selected modem, ten profiles are user definable, and the other ten are preset profiles.

12. Send local configuration

When user finish setting, click the "Send Local Configuration", the system shows "Send the parameters to other modem?" (fig 3-19) click "Yes" to show "Multiple Select" window (fig 3-20), user can chose up to 18 Modems at one time to copy the same configuration.
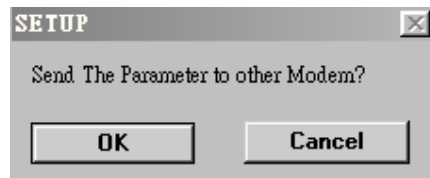
Fig 3-19 SETUP
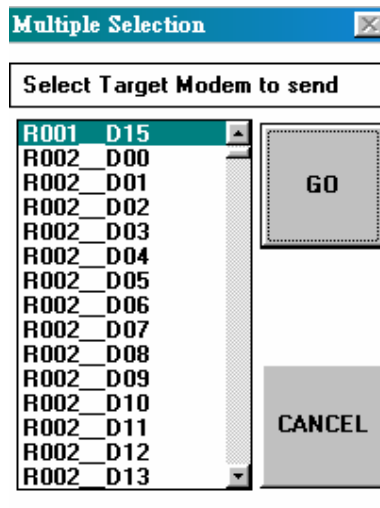
Fig 3-20 Multiple Selection

13. Exit

Click "Exit" to leave Configuration.

Diagnostic

The system provides diagnostic for each modem. Click the selected modem and click the diagnostic, it shows diagnostic window (fig 3-21), you can select:
　　　　(a) Analog Loop

(b) Digital Loop

(c) Remote Digital Loop

(d) Analog Loop + Test Pattern-- 511

(e) Remote Digital Loop + Test Pattern-- 511

Item(a)-(c) shows status, item (d), (e) shows BER (bit error rate) and Los Sync counts.

Fig 3-21 Diagnostic

Select the desire diagnostic item, click the "start", the modem starts self-test. Click the ìEnd Testî to end the test click the "Exit" to exit.

DIal

Each Atrie modem can store 10 sets of telephone number, click the desire modem and click the Dial menu. You can Store, Load, dial the telephone number using this window (fig 3-22).
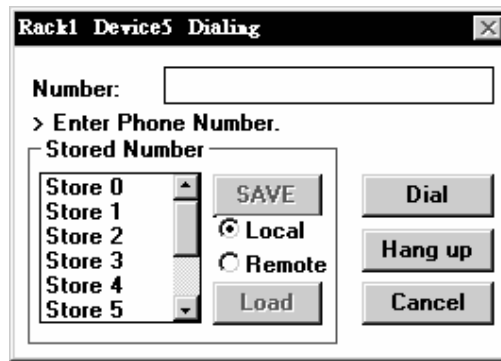
Fig 3-22 Dial

Alarm Management

There are more then 100 thousand records can store into alarm database. The system provides alarm access, analysis function (fig 3-23).
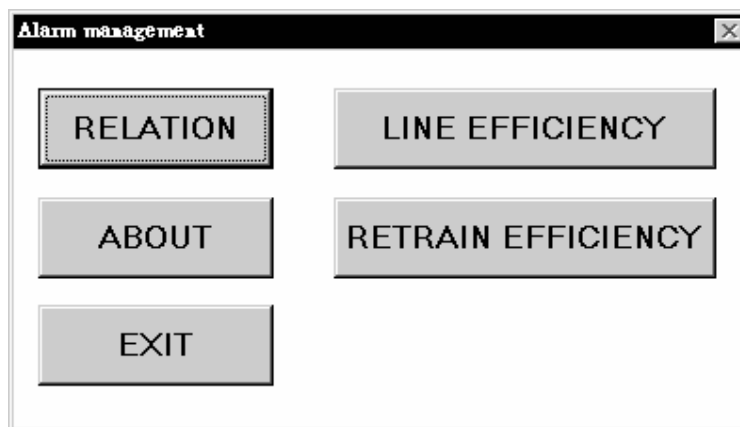
Fig 3-23 Alarm Management

1. Alarm Analysis

Select the RELATION to enter the relation editor (fig 3-24,fig 3-25). You can store 3 sets of relation, key in the item, opera, value, to complete the relation formula, click the "OK" to generate the Report.
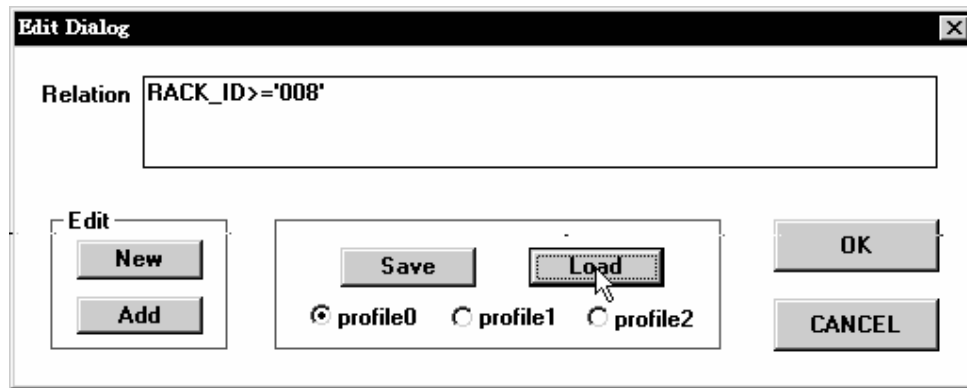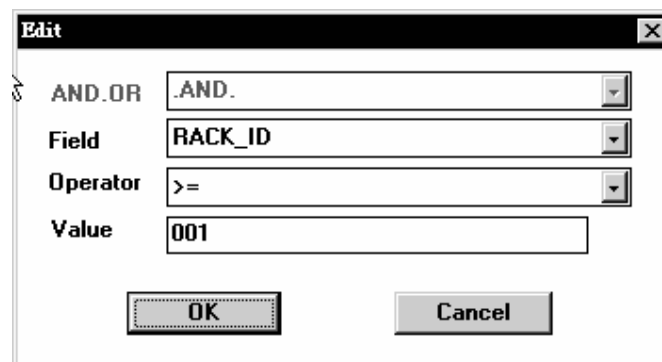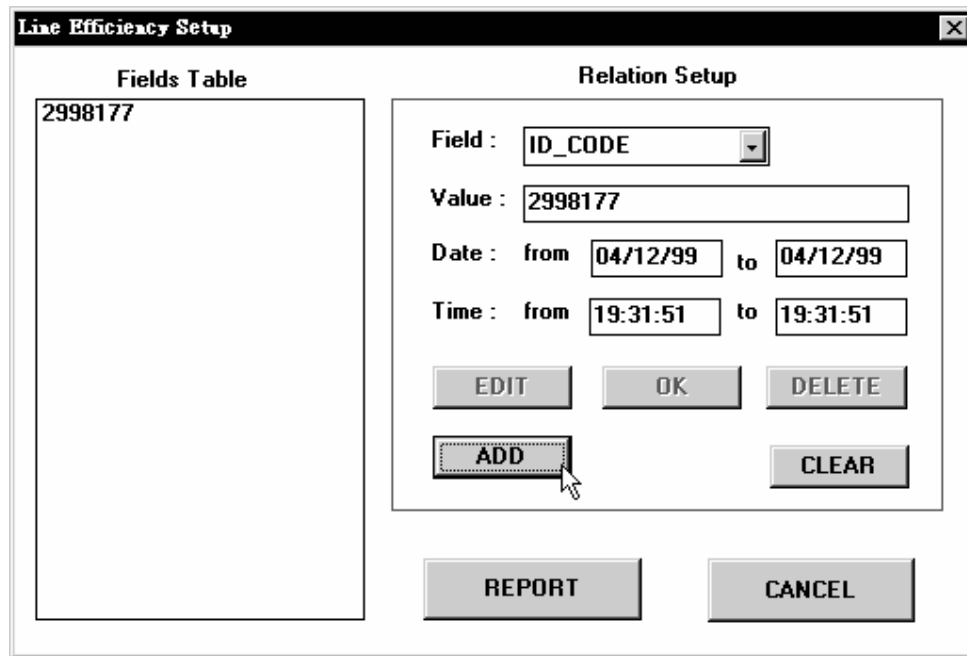
Fig 3-24 Edit Dialog

Fig 3-25 Edit

2. Line Efficiency

Line Efficiency provides the carrier on and off time and the efficiency report according to the Line Number, Name or Shelf/ Device number (fig 3-26).

Fig 3-26 Line Efficiency Setup

3. Retrain Efficiency

The Retrain Efficiency provides the modem retrain analysis. The report shows the number of retrain according to Line number, Name, Rack number, Device ID, and Time period (fig 3-27).

4. About

Shows the Alarm management version (fig 3-28).

Fig 3-28 About

ScaN Setup

You can set the time to start automatically to scan the system. Assign one of the modem as Master Device (fig 3-29), the scan setup will scan the modem that uses Dial up line for three times. If fail to pass for three times, the system will record and print it if necessary.

Fig 3-29 Scan Setup

Alarm Monitor

The Alarm Monitor provides the information below: (fig 2-2)

      (a) The alarm data and time

      (b) Rack ID and Device ID

      (c) Line number

      (d) Name

      (e) Line type

      (f) Alarm content

Select the "Help" to check the alarm description (fig 3-30).

The alarm can be print out from a printer or Audible alarm from PC speaker.
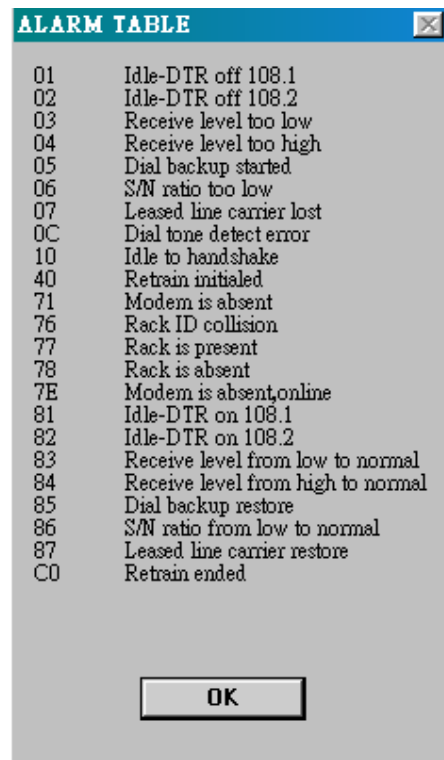
ALARM TABLE

01	Idle-DTR off 108.1
02	Idle-DTR off 108.2
03	Receive level too low
04	Receive level too high
05	Dial backup started
06	S/N ratio too low
07	Leased line carrier lost
0C	Dial tone detect error
10	Idle to handshake
40	Retrain initialed
71	Modem is absent
76	Rack ID collision
77	Rack is present
78	Rack is absent
7E	Modem is absent,online
81	Idle-DTR on 108.1
82	Idle-DTR on 108.2
83	Receive level from low to normal
84	Receive level from high to normal
85	Dial backup restore
86	S/N ratio from low to normal
87	Leased line carrier restore
C0	Retrain ended

OK

Fig 3-30 Help

Shelf Status

Double click the Rack icon, the system shows the Rack status screen. (fig 3-31)
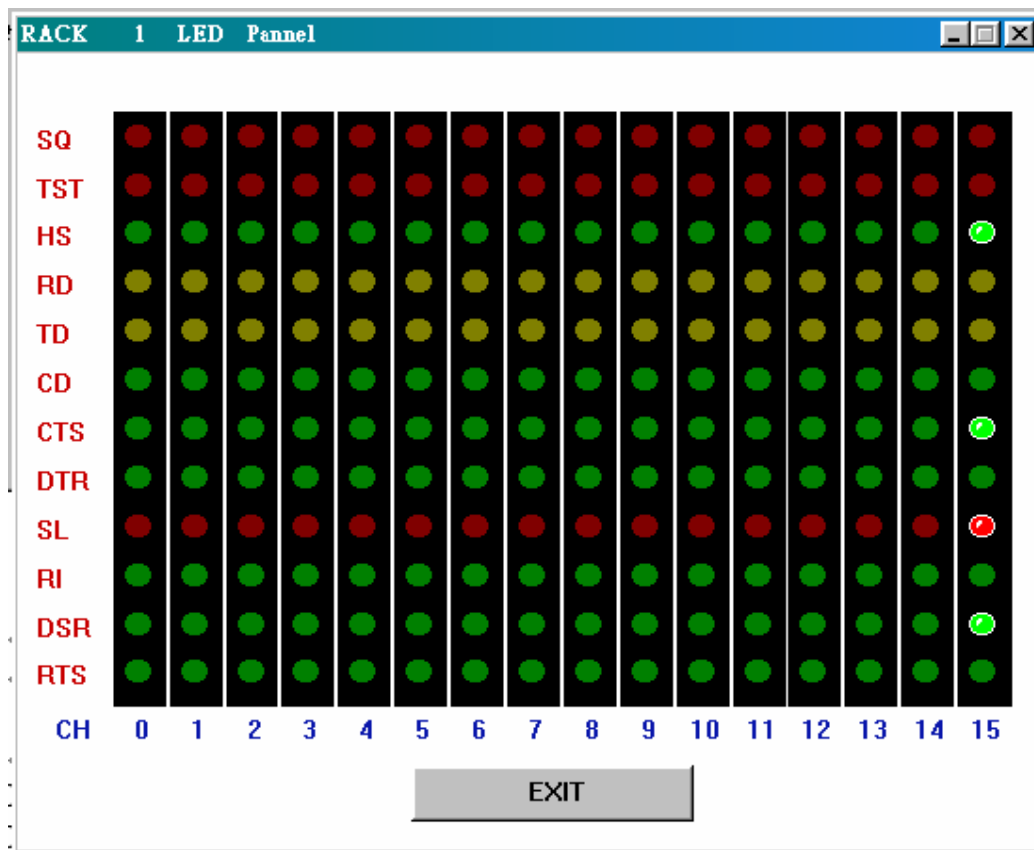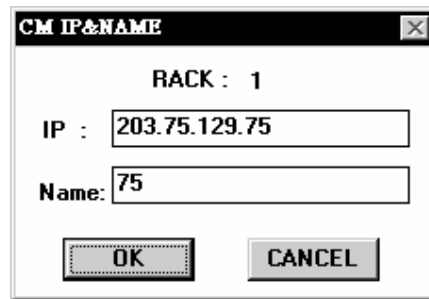
Fig 3-31 Rack Status

Description : SQ   : Signal Quality

TST   : Testing

HS   : High Speed

RD   : Receive Data

TD   : Transmit Data

CD   : Carrier Detected

CTS   : Clear to Send

DTR   : Data Terminal Ready

SL   : Switched Line

RI   : Ring Indicator

DSR   : Data Set Ready
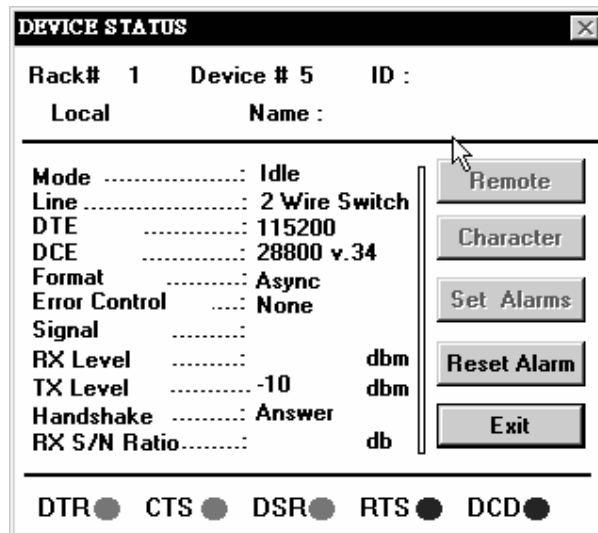
RTS   : Request to Send.

Click the CM icon to change the CM name and IP address.
(fig 3-32)

CM IP&NAME

RACK : 1

IP : 203.75.129.75

Name: 75

OK   CANCEL

Fig 3-32 CM IP & Name

Double click the Modem icon to show the Modem status screen (fig 3-33). Remote status can be shown when the Modem is on -line and secondary channel is ON.

DEVICE STATUS

Rack# 1   Device # 5   ID :

Local   Name :

Mode ....: Idle
Line ....: 2 Wire Switch   Remote
DTE   ....: 115200
DCE   ....: 28800 v.34   Character
Format   ....: Async
Error Control ....: None   Set Alarms
Signal   ....:
RX Level   ....:   dbm   Reset Alarm
TX Level   ....-10   dbm
Handshake   ....: Answer   Exit
RX S/N Ratio.........:   db

DTR●   CTS ●   DSR●   RTS ●   DCD●

Fig 3-33 Modem Status