USER'S MANUAL

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Chapter 1 Introduction

Congratulations! You have purchased the terminal adaptor with the finest, smartest, high-speed features.

This Documentation is valid for the products:

ISDN-TA: External ISDN teriminal adaptor with two analog interface.

The term of 'TA' below represents ISDN-TA for the indication of general features.

1.1 Product Description

TA is an ISDN terminal adaptor connecting a existing PC (or other device with.serial port) to the ISDN. It gives access to on-line services as the Internet, CompuServe and T-Online and is also suitable for a remote LAN access. You can see it as a digital replacement for an analog modem.

If you are connecting to the Internet you will be able to use all of the features offered by your Internet access program. These features vary from program to program. They may include browsing, uploading and downloading files, using electronic mail, and accessing World Wide Web sites and chat rooms.

If you are telecommuting,you will use the office network just as you would if you were at work. For example, if you normally log into the office network for file retrieval and storage, you will use the same procedure from your home PC to open and save files. If you use electronic mail over a local area network (LAN) at work, you will be able to use the same electronic mail program at your home.

You can also use the TA to connect to a single remote PC that contains another TA via ISDN line. This allows you to use peer-to-peer network programs for file sharing between two PCs. It also means you can transfer files between two PCs via common communication software.
To work with TA you need.

- a ISDN Basic Rate Interface (BRI) (replacing an analogue telephone line)
- a PC with online software for a modem terminal program

The serial port of the PC should be capable of a data rate of up to 230400 bps. This might require an additional PC card for external model.

The TA includes the following features:

-Compatible with ISDN central office switches for DSS1
-Status display LED
-Operating parameters saved in nonvolatile memory
-ISDN AT command set
-Convent configuration command
-Multi-link PPP (128Kbps)/ PPP async-to-sync HDLC transparent for main Internet service provider
-Two optional analog telephone interface enable you to connect an analog terminal (e.g. telephone, fax, PBX, or modem) to an ISDN Basic Rate line
-ITU-T V.120 - for Compuserve or others Internet service provider
-ITU-T X.75/ T.70NL - for T-Online Videotex service

1.2 Internet Access

There are several ways to access the Internet via ISDN.

- by Multi-Link PPP asynchronous-to-synchronous HDLC transparent
- by PPP asynchronous-to-synchronous HDLC transparent
- by bit rate adaption V.120

It depends on the access facilities of your Internet service provider (ISP) or Point-of-presence (POP) which one you may use.

1.3 CompuServe Access

CompuServe is accessed via ISDN by the protocol V.120 or X.75.

1.4 T-Online

T-Online (German Online Service) is accessed via ISDN by the protocol T.70NL/X.75.

1.5 Remote LAN Access

To access a LAN remotely via ISDN you have to choose the appropriate protocol that is used by the ISDN router on the LAN.

1.6 Licence

TA has the CE European approval

TA fulfills the European safety requirements IEC 60 950.
Connect the TA only to S0-interfaces with SELV (Safety Extra Low Voltage) related to EN60950.

The TA is also conform to the European regulations of EMC. EN50081-1, here EN55022 Class B, for electromagnetic field emission and EN50082-1 for tolerance against electromagnetic interference.

This ISDN Terminal Adapter is only to be used in private or business premises for the sending or receiving of data and speech together with a personal computer. Unauthorized modifications, which are not described in this user's manual, are not allowed.

Chapter 2 Installation

This manual describes installation of the external terminal adaptor. Set up your TA according to hardware configuration you get.

2.1 Packing List

The complete package should include:

1) The terminal adaptor unit
2) The user's manual
3) The RJ-45 modular ISDN cable
4) A power adaptor
5) Communication software (optional)
6) DTE interface serial cable (optional)

Carefully inspect for shipping damage. If any is found, immediately repack the TA into the original packing material and contact your dealer.

2.2 Look at the TA

There are several LED indicators at the front panel of your TA as shown in the schematic below (Fig2-1, the front panel of the TA) each of which displays an operational status:

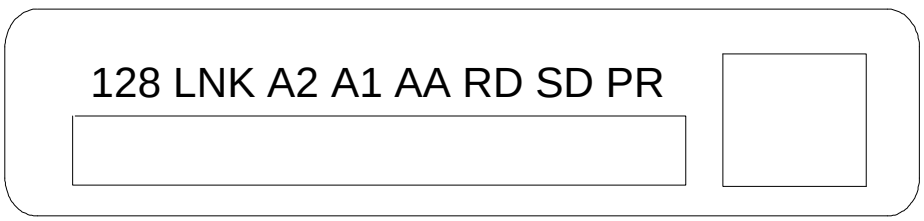


Fig2-1: The front panel of the TA

Light	Meaning		Function
PR	Power ready	ON	The TA is turned on.
		OFF	The TA is turned off.
SD	Send data	ON	You are either entering a command to the TA or transmitting data to a remote computer.
		OFF	The TA is neither receiving a command from you nor transmitting data to a remote computer.
RD	Receive data	ON	The TA is receiving data from a remote computer. The TA is configured for full-duplex, and its echo feature is turned on, when you send a command to your TA, it will return a response to you.
		OFF	The TA is neither receiving data from a remote computer nor receiving a command from you.
AA	Autoanswer	FLASH	Ringing.
		ON	Auto answer.
A1	POTS1	OFF	POTS is idle.
A2	POTS2	FLASH	Call is in progress.
		ON	POTS is active.
LNK	S/T Link	OFF	ISDN S/T interface is idle.
		ON	ISDN S/T interface is active.
128	ML-PPP	ON	Two B-Channel are active for a ML-PPP connection.

The rear panel of the TA

On the rear panel of the TA are the power switch, the power jack, and RS-232D connector and one modular jack, as shown in the schematic below.

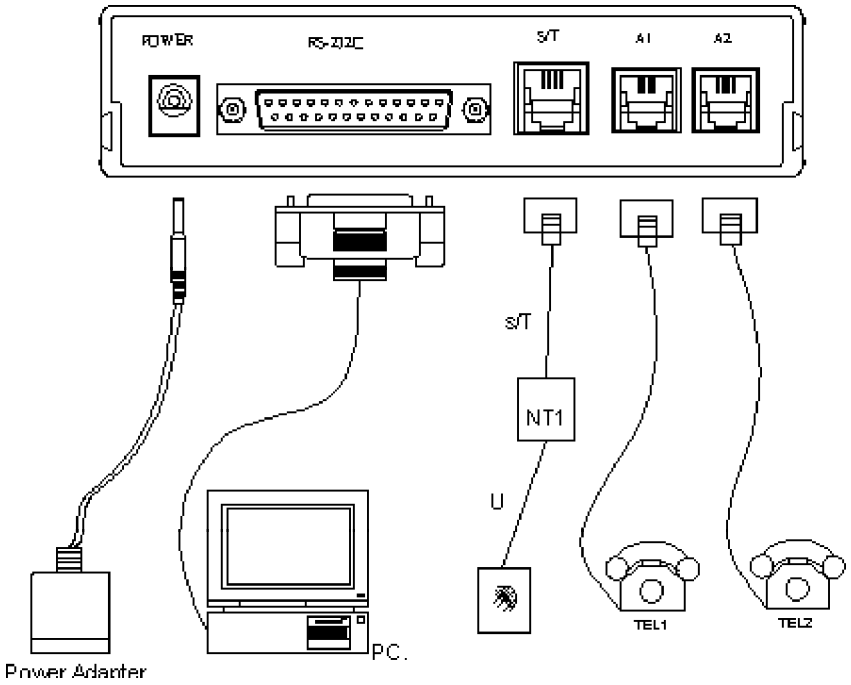


Fig 2-2 The rear panel of the TA

he power switch

Toggling the power switch to "ON" turns the TA on, while toggling the switch to "OFF" turns the TA off. It is recommended that you always turn on your computer prior to turning on the TA, and turn off your TA prior to turning off the computer.

The power jack & power adaptor

The power jack for the power adaptor which is included with your TA. This TA **MUST** use an AC 12V power adaptor. Always use the one supplied with your TA. Use of another power adaptor may cause safety problems

The RS-232D connector

The RS-232D connector can be connected to the serial port of the computer through a RS-232D cable. Your computer or terminal must have an industrial standard RS-232D serial port to use this TA. Please have an RS-232D port (available from your dealer) installed if your computer does not have one.

The TA can be connected to the serial port of the computer via a serial cable. Be sure to specify the appropriate type of connector (DB-25 or DB-9, male or female) for each end of the cable. Your TA follows industry standards in wiring the pins of the cable connectors, therefore, any cable that would connect a TA to your computer will work.

Refer to Appendix C RS-232D connection, or consult your dealer if you need the pin assignment of the connector.

The modular ISDN jack
The one modular jack labeled " TO S/T " , located on the right side of the rear panel, is for the connecting cables from the ISDN BRI line.

Be sure that the ISDN line condition is in good order before connecting the TA. Test it by lifting for example an ISDN telephone handset and listening for a clear dial tone.

Note: We strongly recommend that you connect the TA directly to the central office outside ISDN telephone line. Do not hook your TA to a business ISDN system (PBX) unless the system is guaranteed to be good enough for correct protocol handling data transmission and call control.

The analog telephone jack (A1 / A2)
The interface enables you to connet an analog terminal (e.g. telephone, fax, PBX, or modem) to an ISDN Basic Rate line. Any conver tional analog terminale equipment which supports DTMF tone dialing can be plugged into the RJ-11 jack.

2.3 Installation Preparation

To install your TA the following items are required:

- A S0 interface (basic rate interface) with IAE plug (Western RJ).
- A PC with the appropriate Internet software installed.

2.4 Installing the TA

The distance between the computer and the TA will be determined by the length of the RS-232D cable. A suitable location for your TA should be:

1) Near a reliable AC power source.
2) Close to a good quality ISDN telephone line.(According to I.430)
3) Where the LED indicators on the front panel are clearly visible.
4) Where the power switch could be easily reached.
5) Where you are able to monitor the TA's carrier signal.

To connect the hardware, Please follow the procedures below:

1) Make sure both the TA and the computer are turned off.
2) Connect the TA to the computer:
   Use a RS-232D cable between the TA and the computer. Plug the male DB-25 connector of the RS-232D cable to the TA.
   Then, plug the other end of the cable to your computer serial port. Fix all of the screws on the connectors.
   For the use of data rates up to 11.5K bps. The RS-232 cable should not be too long.

   Note: Write down the computer serial port number (COM1, COM2, COM3, COM4) to which you have connected the TA. This port number should be identical to the number listed in the communication software configuration.

3) Connect the TA to a ISDN telephone line:
   Plug one end of the supplied ISDN telephone cable to the outlet.
   Then, plug the other end to the jack marked "S / T" on the rear panel of the TA.

4) Connect the power supply to the TA:
   Insert the plug of the power adaptor into the jack marked "POWER" on the rear panel of the TA.

Please check if the factory settings fit with your environment. The factory setting is described in the parameter list show in chapter "AT Command Set".

If you want to change the factory default setting, please do the following steps:

- Connect the TA to ISDN interface and connect the power supply to the mains socket.
- Start a terminal emulation program on your PC.
- Setup the parameter of the TA from the terminal emulation and save the parameter.
- Leave your terminal emulation and start your application program.

2.5 Communications Software Configuration (for all of models)

Most popular communications software packages will work well with your TA. You may, however, prefer to purchase the recommended Telix™ communications software package, which should be available from your dealer.

Turn on your computer first, then the TA. Boot the communications software and check the following parameters:

1) The serial port number.
2) The communication speed and protocol.
3) Data format : data bit, stop bit, parity.

Set the serial port number to COM1, COM2, COM3 or COM4 according to which your TA is connected. Note that one port should be assigned to only one device; otherwise, the two devices will conflict with each other.

To use the TA to dial a remote TA or server, the protocol, speed and data format of both side should be set to match each other. For example, if the remote side you are going to dial supports V.120, 57600bps, 8 data bits, no parity, 1 stop bit; you should set communication software to the same parameters.

Software configuration tips

If your computer is an IBM PC, XT, AT, 386, 486 or Pentium and you are using Procomm™, Bitcomm™, Crosstalk™ or most other communications software packages, the factroy default settings of the TA should correct.

However, if you are using Smartcom™, the software requires that the DTR (Data Terminal Ready) always be forced true. You should insert the command &D0 into the dialing prefix.

To use the terminal in manual operation, you should insert both commands &C0 and &D0. For example, AT&C0&D0DT.

To configure your TA for auto-answering, set register S0 to a non-zero value. For example, inserting S0=2 into the command string instructs the TA to auto-answer incomming calls calls after the second ring.

To meet some special requirements, you may need to change some other parameters, such as the duplex mode, the auto line feed, the emulate, and so on. Consult an experienced modem or ISDN TA user or your dealer for the required adjustments.

Regrettably, we are unable to describe software configuration procedures in greater detail, as the procedures vary from software package to software package, from computer to computer,and depend on the application. Refer to your software manual for more detailed information. If you have any difficulty, consult an experienced modem or ISDN TA user or your dealer.

Getting Started

Now boot the communications software and instruct it to dial a server, or remote computer with a TA. Your TA should proceed with the call and establish a connection automatically. Then you can:

1) Read or send electronic mail.
2) View the most updated news or information.
3) Upload or download computer programs.
4) Transmit or receive a text message or spread sheet data.
5) Play interactive games with the remote user.

With your TA completely installed, discover the fun and convenience of data communication.

Chapter 3 Using the TA

3.1 Configuration for Internet

To access the Internet via ISDN you have to have a contract with a Internet service provider (ISP) who runs an ISDN access. To configure the TA you need the following information of the ISP:

- ISDN telephone number
  This phone number is used to enter the Internet every time you call.
- Layer 2 protocol
  This protocol should be configured in the TA, via command or Windows setup procedurce.
- Internet access protocol
  These protocol stacks are provided by the Internet software. For example:
  TCP/IP, PPP protocol.

To configure the Internet access software on the PC you need some additional information like TCP/IP address, user name, password etc. Please refer to the softwaremanual.

3.2 Configuration for CompuServe

To access the CompuServe network via ISDN, you have to have a contract with CompuServe. To configure the TA you need the following information from CompuServe:

- ISDN telephone number
  This phone number is used to enter the Internet every time you call.
- Layer 2 protocol: V.120 async
  This protocol should be configured in the TA via typing "AT!Z=5".

You can use a CompuServe access by a running standard terminal emulation.

3.3 Configuration for end-to-end data transfer

To transfer data at end-to-end point via ISDN you have to a terminal program access. For configuration you have to setup the following parameter:

- ISDN telephone number at both side
  This phone number is used to enter the remote site every time you call.
- Layer 2 protocol
  Give one kind of the initial string as follows at TA of both side:
  AT!Z=5 <Enter> -use V.120
  When V.120 is used,DTE speed can be selected from300, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200bps.
  When V.110 is used,DTE speed can be selected from 115200, 57600, 38400, 19200, 14400, 9600, 7200, 4800, 2400, 1200bps.
- Select the appropriate file transfer protocol like Z-MODEM in your terminal program after connection to send the file you want.

Chapter 4 AT Command Set

With the exception of the A/ command all of commands begin with the prefix AT and are terminated with <Enter>. Corrections in a command line are done with <Backspace>. A command line has a maximum of 40 characters,the command line is automatically cancelled by longer input. Blanks are ignored, capital/small letters are notsignificant.

The parameter settings of the TA obtained via using the AT commands are permanently stored by typing AT&W and are not lost by reset or by leaving the AT command mode.

To enter the AT command mode during an active data connection you must use the following sequence:("Escape sequence")

at least 1 sec pause <+><+><+> 1 sec pause

The time gap between all three plus signs may not exceed 1 sec.
The escape sequence is transmitted transparent to the remote device.

4.1 AT Commands

/ Repeats the previous command.

A Answer incomming calls

Dn Places an originating call. If the call is rejected,an appropriate response such as "NO CARRIER","BUSY",OR "NO DIALTONE" will be displayed command mode will be re-entered. The commands "**DT**"and "**DP**"are identically as the "**D**" command.

DS DIAL using saved number

E0 Disable character echo in command state
E1 Enable character echo in command state (default)

H Hung-up

I0 Product identification
I1 Eprom cheksum
I3 Model function
I6 Version product name

O Go back to connectio n state from escape mode

Q0 Return response codes after command input (default)
Q1 Do not return response codes

Sr=n SET register value
This command is used to alter an internal "modem" register.
This command supports three different means of accessing S-register values:
Decimal form: Sr=d -Set register "r" to decimal value "d".
Sr? -Display value of register "r" in decimal.

Examples:
```
S23=39
OK
S23?
39
OK
```

Hexadecimal from: Sr:=x -Set register "r" to hexadecimal value "x".
Sr:? -Display register "r" in hexadecimal.

Examples:
```
S23:=E2
OK
S23:?
E2
OK
```

Binary form: Sr:=x -Set register "r",bit "p",to binary value"b"
Sr:? -Display register "r" in binary.

Examplex:
```
S23.?
10010100
OK
S23.?
00010100
OK
```

Sr? QUERY of register

V0 Display results in numeric form
V1 Display results in verbose form (default)

X0 base responses (default)
X1 extended responses
X2 extended ISDN responses
X3 DCE connection speed responses

Z The active configuration will be reset to stored configuration.
Z1 Recall system default setting

&C0 DCD always on
&C1 DCD on after connection (default)

&D2 Terminates the call after delay specified in S25 when DTR drops(default)

&F Recall factory default

&K0 Disables flow control
&K3 Enables RTS/CTS Flow Control (default)
&K4 Enables XON/XOFF Flow Control
&K5 Enables Transparent XON
&K6 Enables RTS/CTS and XON/XOFF

&M0 Asynchronous mode (default)

&R0 CTS tracks RTS
&R1 CTS on (default)

&S0 DSR on
&S1 DSR on after connection

&V Display current configuration

&W Store current configuration in non-volatile memory
&Z=x Store phone number

\S Display current configuration

!B0 Disable MSN

!B1 Enable MSN

!In=X set calling party number sending
n-0 pots1
n-1 pots2
n-2 DTE
x-0 disable
x-2 enable

!Nn=X set MSN number
n-0 pots1
n-1 pots2
n-2 DTE
x- phone number

!Z=n Set operating protocol
5- V.120
7- raw HDLC
9- PPP
10- X.75 Tmaparent
14- MLPPP
15- BOD
22- T.70 BTX
23- T.90 NL

***Nn** Set UART Baud Rate
***NA** Enable Autobaud(all other values disable) for UART
***N0** 300bps fixed for UART baud rate
***N1** 1200bps fixed for UART baud rate
***N2** 2400bps fixed for UART baud rate
***N3** 4800bps fixed for UART baud rate
***N4** 9600bps fixed for UART baud rate
***N5** 19200bps fixed for UART baud rate
***N6** 38400bps fixed for UART baud rate
***N7** 57.6kbps fixed for UART baud rate
***N9** 115.2kbps fixed for UART baud rate
***N14** 230.4kbps fixed for UART baud rate
***N15** Reserved
***N16** Reserved
***N17** Reserved

4.2 Register Description

S0 0-255. 0 disables Auto_Answer, a non-zero value will Auto_Answer an incoming call.

S2 0-127. The "escape character", in decimal. The default is 43("+")

S3 0-127. The "carriage return", or command terminator character. The default is 13(<CR>).

S4 0-127. The "line feed" character. The default is 10(<CR>).

S5 0-127. The "backspace" character. The default is 8 (<BS>).

S12 0-255. Number of milliseconds for escape characters. The default is 50.

S14 This register is bit-mapped for use with various options. The default is 138.

Bit0-Ext. baud rates
- 0-38400
- 1-19200

Bit1-Command echo (ATE Command)
- 0-no echo
- 1-echo

Bit2-Result codes (ATQ Command)
- 0-enabled
- 1-disabled

Bit3-Verbose mode (ATV Command)
- 0-terse
- 1-verbose

Bit4-Abort code
- 0-ON
- 1-OFF

Bit5-Not Used

Bit6-Not Used

Bit7-Originate/Answer
- 0-answer
- 1-original

S21 This register is bit-mapped ofr use with various options. The default is 19.

Bit1-0-Not Used

Bit2-CTS behavior
- 0-CTS on
- 1-CTS track RTS

Bit4-3-DTR behavior
- 00-DTR ignored
- 01-reserved

10-DTR falling terminates call
Bit5-DCD behavior
0-DCD on
1-DCD on after connection
Bit6-DSR behavior
0-DSR on
1-DSR on after connection
Bit7-Reserved

S22 0-255. This register povides a "bit-map" of options for result code usage.
0 -Display CONNECT Message Only.
64 -Display standard CONNECT Message.
112-Display Enhanced ISDN CONNECT Messages

S23 This register is bit-mapped to control baud rate and parity as follows
Bit 0-Not Used
Bits3-1-Baud rate
000-300bps
001-Use extended baudrate sets
010-1200bps
011-2400bps
100-4800bps
101-9600bps
110-19200bps
111-38400bps
Bits4-5-Parity
00-Even
01-Space
10-Odd
11-Mark/None
Bits7-6-Extended baudrates
00-57600bps*
01-78400bps
10-115200bps
11-Use other baudrates noted in S24.

S24 This register is bit-mapped to control autobaud and extra baudrates.
The default is 192.
Bits3-0-Extra baudrates.
0000-7200bps
0001-14.4kbps

0000-7200bps
0001-14.4kbps
0010-28.8kbps
0011-153.6kbps
0100-230.4kbps
0101-460.8kbps
0110-921.6kbps
0111-1111-Reserved

Bit4-6-reserved

Bit7-Autobaud select
0-Disabled
1-Enabled

S25 0-255. Delay for DTR management. The default is 5.

S26 0-255. Delay for CTS tracking RTS. The default is 1.

S32 XON flow control character. The default is 17.

S33 XOFF flow control character. The default is 19.

S39 This register stores the Flow Control Selection. The default value is 3.
0-No Flow Control
1-Reserved
2-Reserved
3-RTS/CTS Flow Control
4-XON/XOFF Flow Control
5-Transparent Flow Control
6-Both RTS/CTS and XON/XOFF Flow Control
255-7-Reserved

S40 This register stores the POTS Dialing Timeout Selection.The default value is 14

S54 Number of rings to wait before disconnect if S0=0. The default is 30.

4.3 Result codes

0	OK	19	CONNECT 56000
1	CONNECT	20	CONNECT 64000
2	RING	21	CONNECT 57600
3	NO CARRIER	22	CONNECT 76800
4	ERROR	23	CONNECT 115200
5	CONNECT 1200	24	CONNECT 7200

6	NO DIALTONE	25	CONNECT 14400
7	BUSY	26	CONNECT 28800
8	NO ANSWER	27	CONNECT 153600
9	CONNECT 600	28	CONNCET 230400
10	CONNECT 2400	29	CONNECT 460800
11	CONNECT 4800	30	CONNECT 921600
12	CONNECT 9600		
13	CONNECT VOICE		
14	CONNECT 128000		
15	(aborted!)		
16	CONNECT 19200		
17	CONNECT 38400		
18	CONNECT 48000		

MLPPP bandwidth on demand setting

Set period timer to calculate throughput for MLPPP BOD
AT!T=n n:1~180 sec (120 default)

Data flow threshold for active second channel in MLPPP BOD
AT!U=n n:1~64 Kbps (60 default)

Data flow threshold for dropping second channel in MLPPP BOD
AT!V=n n:1~64 Kbps (20 default)

Chapter 5 Configuration Hints

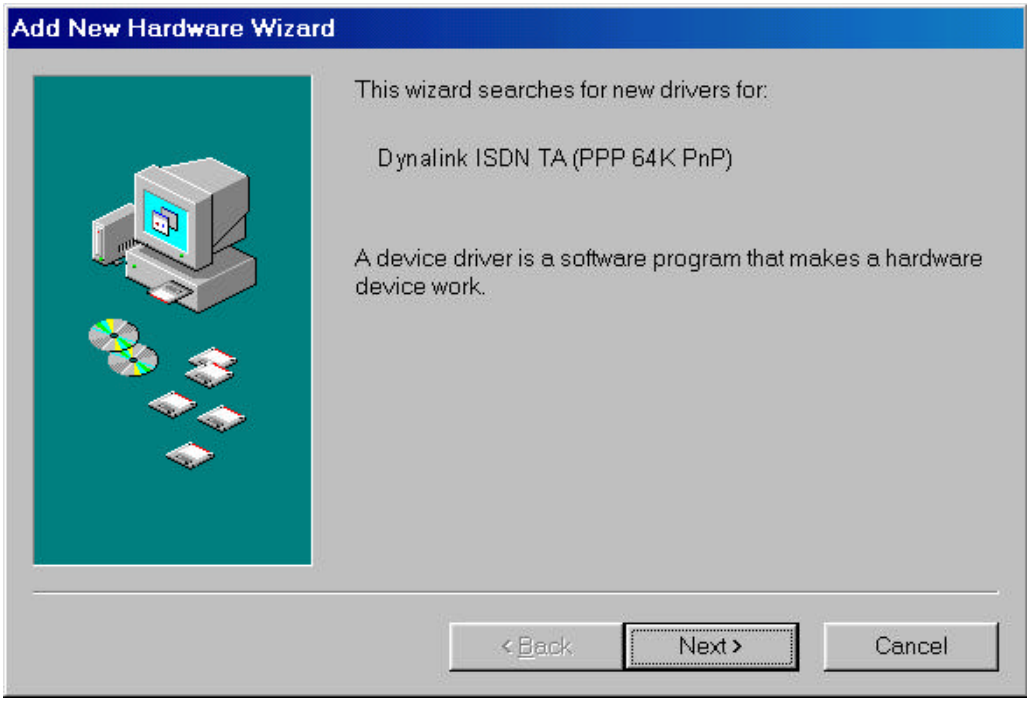
The following configurations should used when connecting a PC via TA to an Internet provider.

5.1 Configuration under Windows

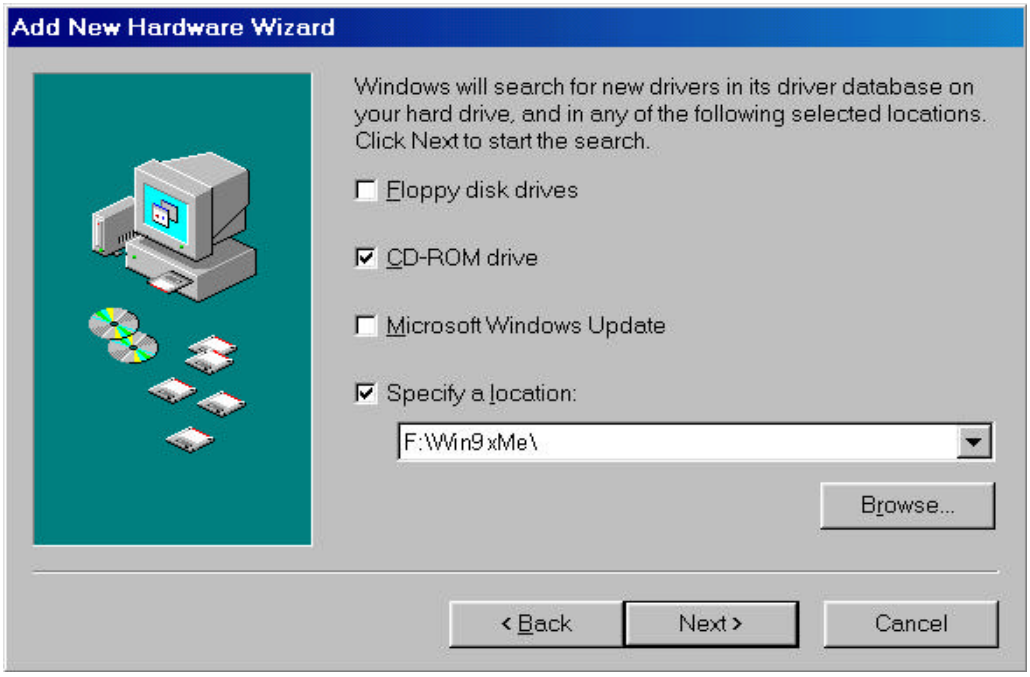
Installation for Windows Environment.

5.1-1 Install ISDN TA via plug and play

<Step01> Select Start -> Settings -> Control panel -> System -> Device Manager -> Refresh.



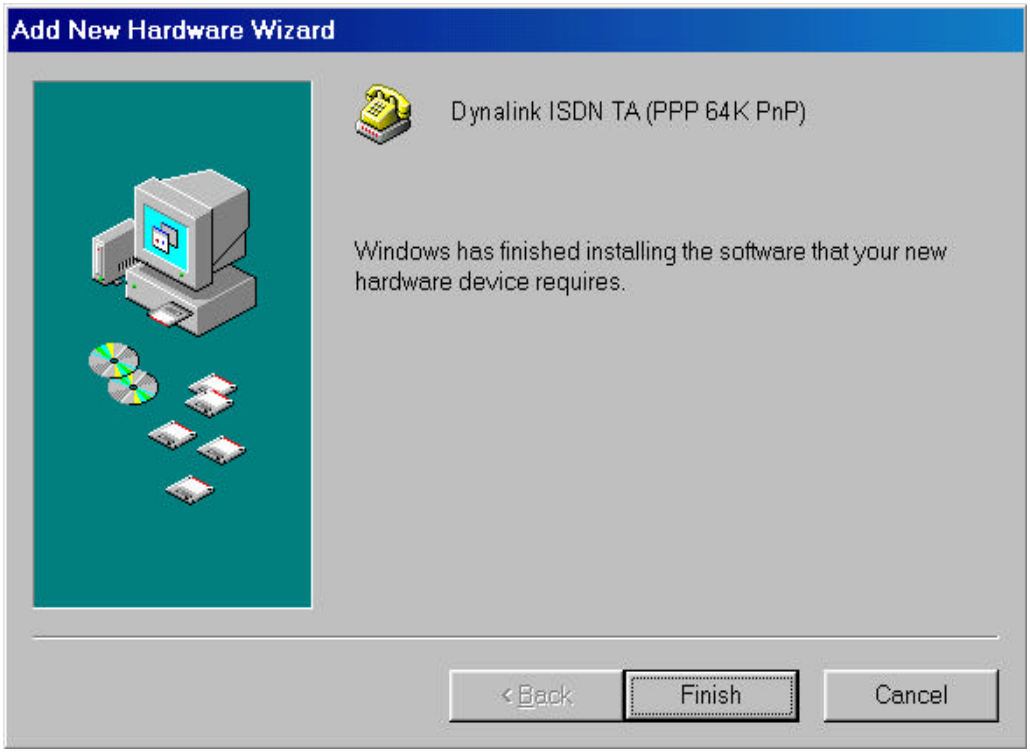
<**Step02**> Insert driver CD to CD-ROM drive, Click Next >



<**Step03**> The ISDN TA will use "PnP" driver, Click Next >

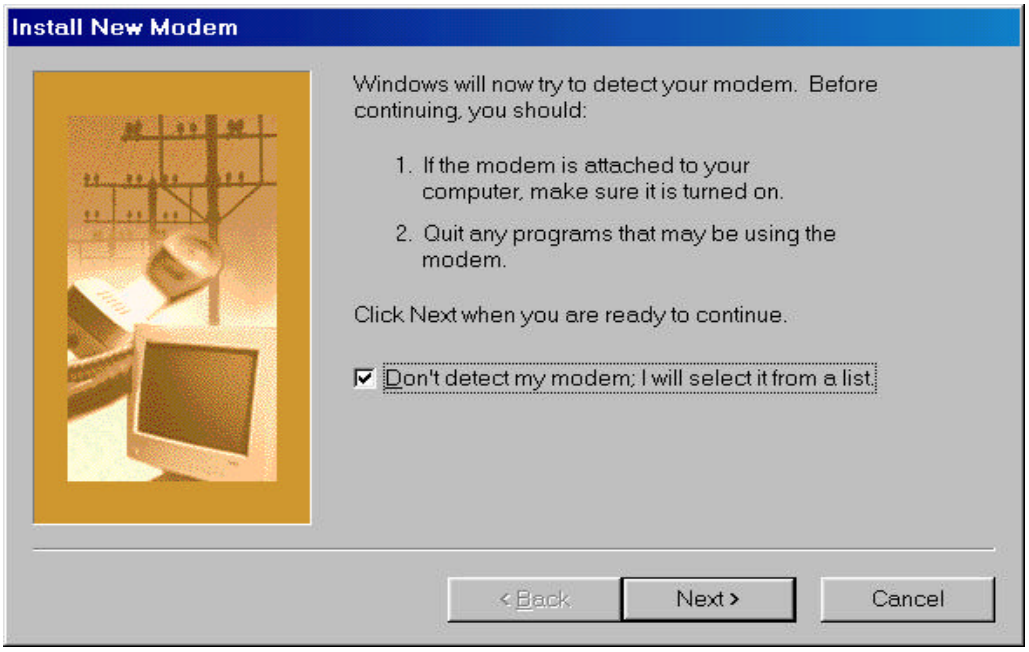
The "PnP" driver won't use any protocol command to the device, The appropriate protocol depending upon the B channel setting in Configurationutility.

<**Step04**> Click Finish



5.1-2 Adding virtual modems connecting with ISDN TA

<Step01> Select Start -> Settings -> Control panel -> Modems -> Add -> "Don't detect my modem; I will select it from a list".

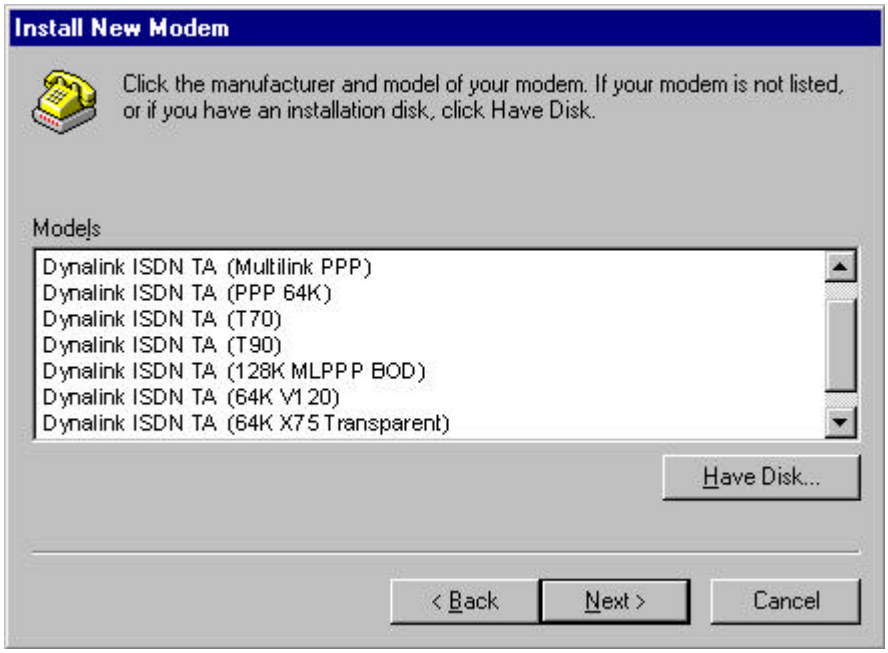


<Step02> Insert driver CD to CD-ROM device.

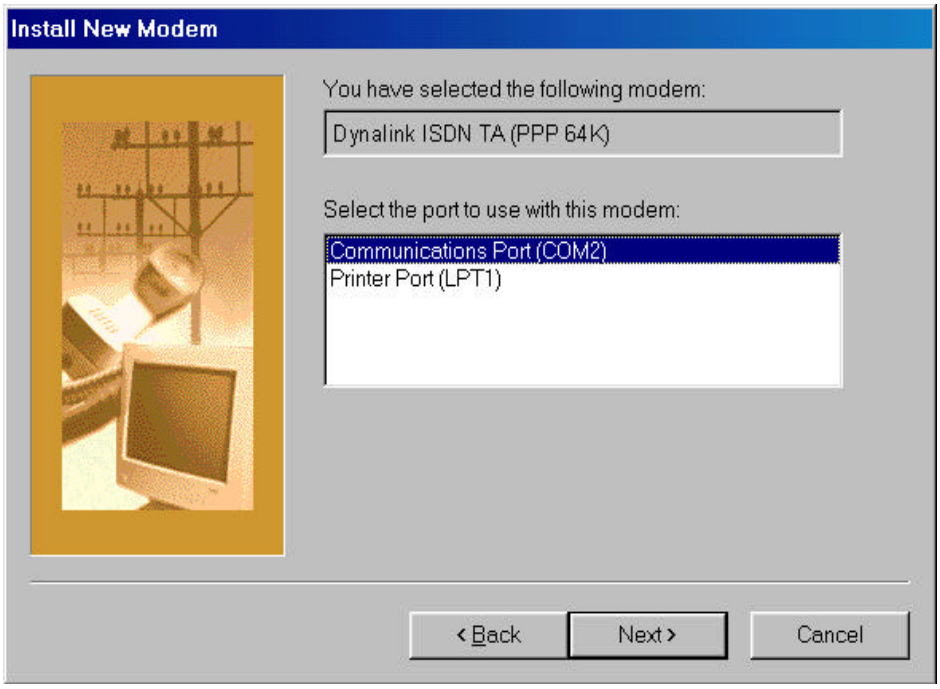
<Step03> Click "Have Disk" and browse to devices such as F:\Win9xMe Select the tadw9xme.inf file.

<Step04> "Dynalink ISDN TA (Multilink PPP)" is for 128K Internet Access. The used protocol in B channels are Multilink PPP.
"Dynalink ISDN TA (PPP 64K)" is for 64K Internet Access. The used protocol in B Channel is Async-to-Sync PPP conversion.
"Dynalink ISDN TA (64K X75 Transparent)","Dynalink ISDN TA (64K V120)" are for most BBS Access and file transfer.
"Dynalink ISDN TA (T70)" and "Dynalink ISDN TA (T90)" are for special connection protocol. These modems are added one by one manually in turn. Each modem will use the appropriate protocol command to ISDN TA terminal adapter when you select it to make a connection.

Select the modem that you require from the list and Click Next >



<**Step05**> Select the Com Port which connects to modem, Click 

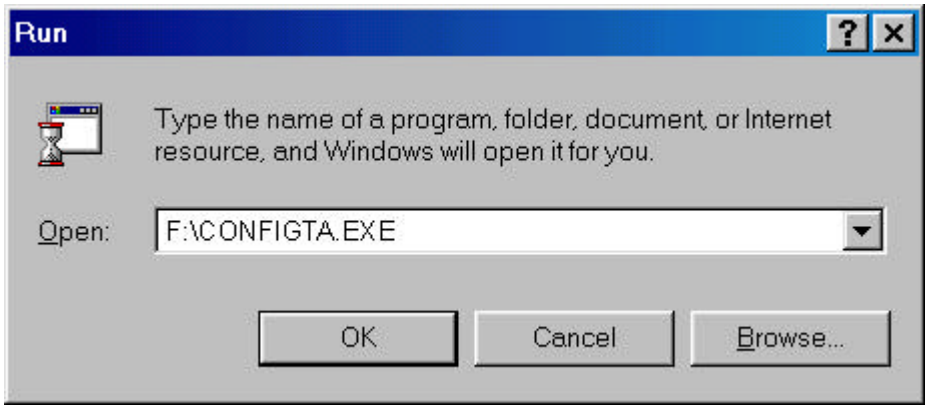


5.1-3 About Configuration Utility for Windows

<Step01> Insert driver CD to CD-ROM device.

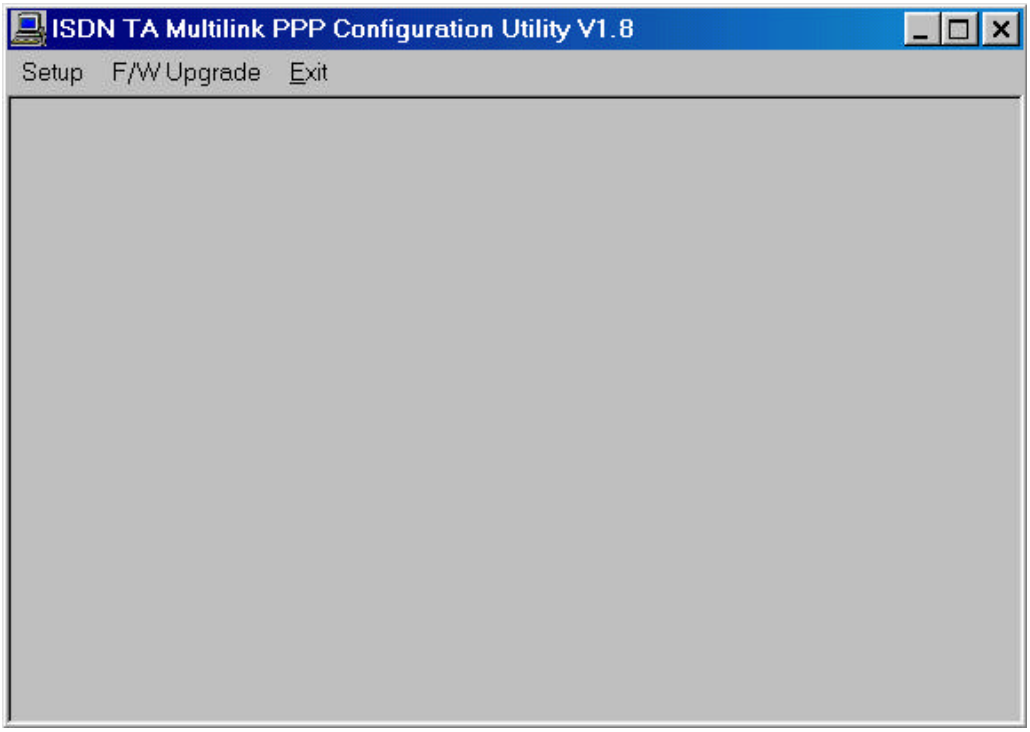
<Step02> Make Sure ISDN TA is ready.

<Step03> Select Start -> Run -> "CONFIGTA.EXE"

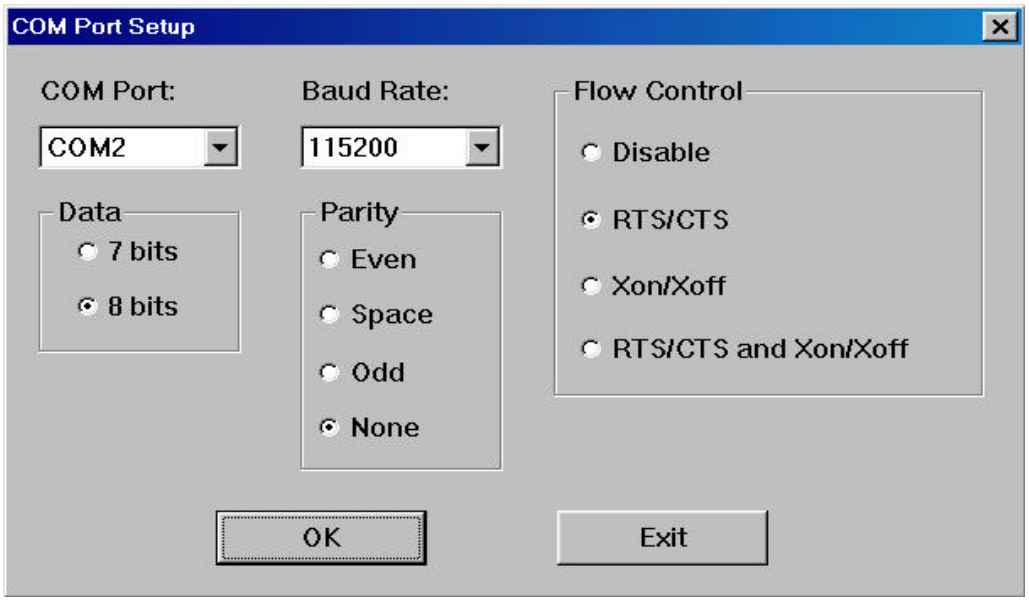


<Step04> Select "Setup" for COM port, protocol, S-register and Mutilple Subscriber Nember Setting, Select "F/W Upgrade" for flash download.

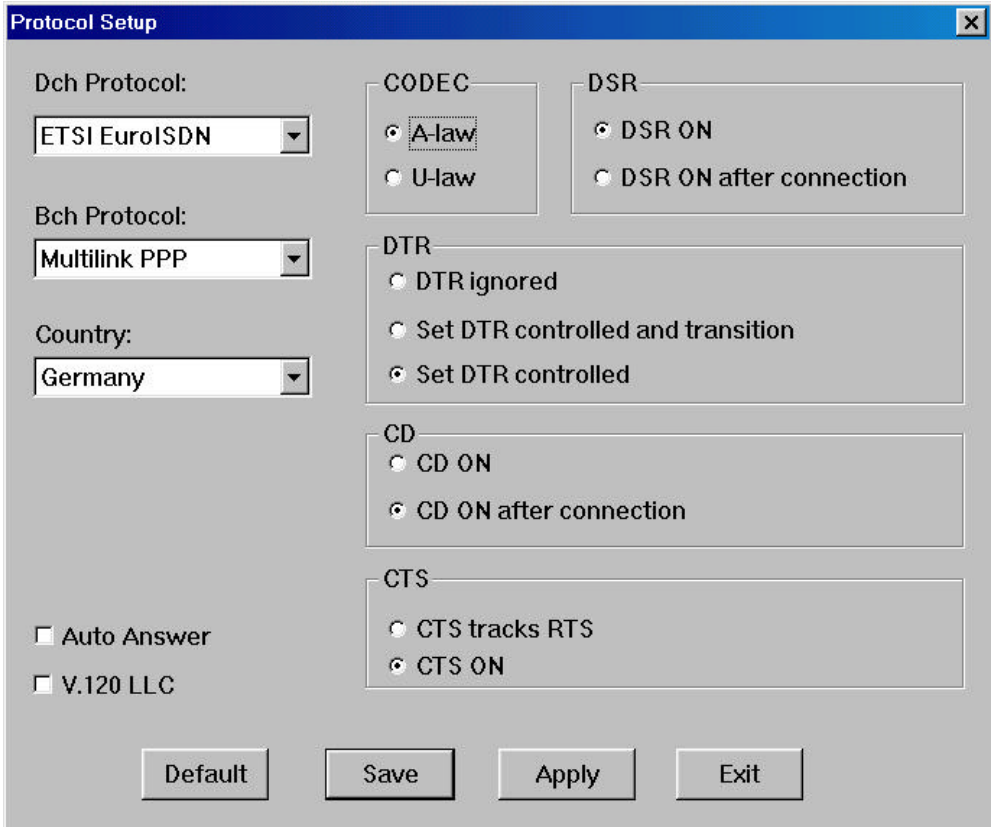
* Please close the other application software before flash download.



<Step05> Select COM Port location and baud rate which connect to the ISDN TA

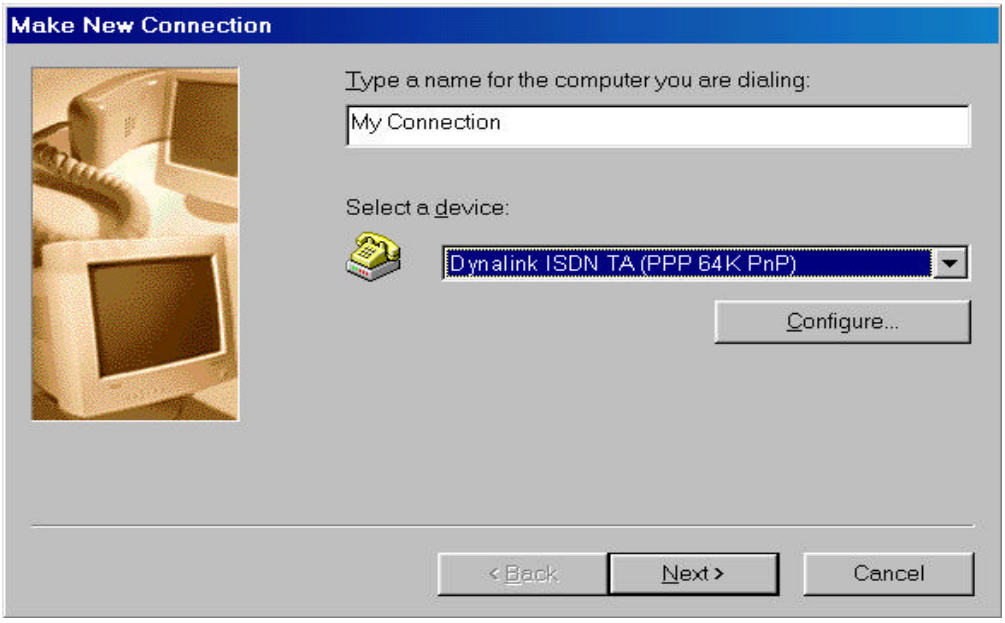


<Step06> Click "Default" , The ISDN TA will restore default profile. If you modify some setting such as Bch Protocol or Country. you need click "Apply" then "Save" to save to NVRAM.

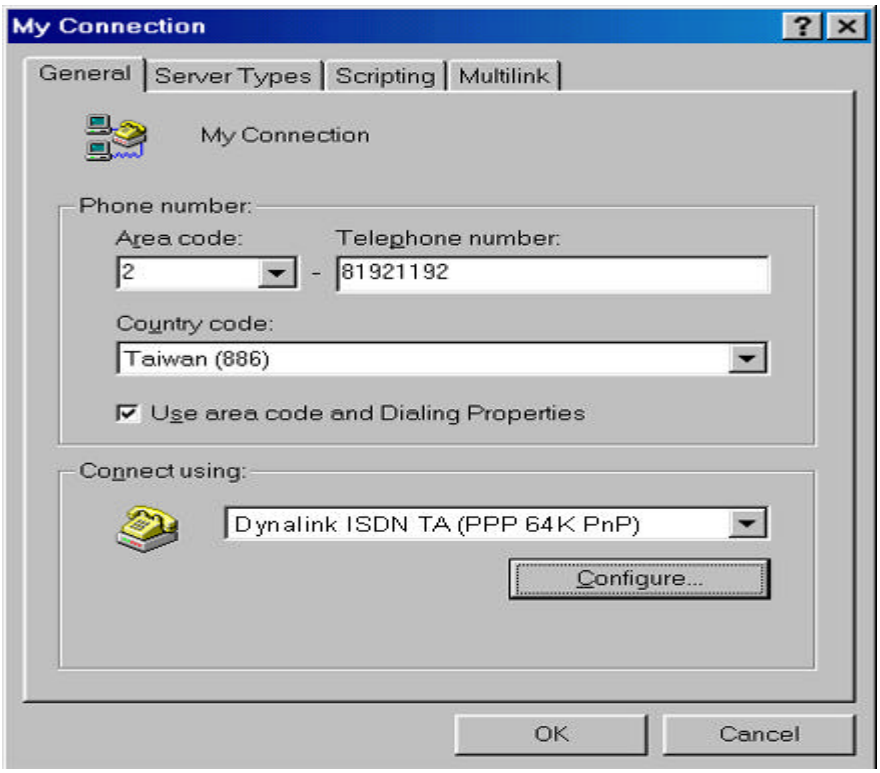


5.1-4 Configure the Dial-Up Networking

<Step01> Select Start -> Programs -> Accessories -> Dial-Up Networking -> Make New Connection. Select the Dynalink ISDN TA (PPP 64K PnP) which is connected to ISDN TA.



<Step02> Check and modify if necessary the properties of a connection.

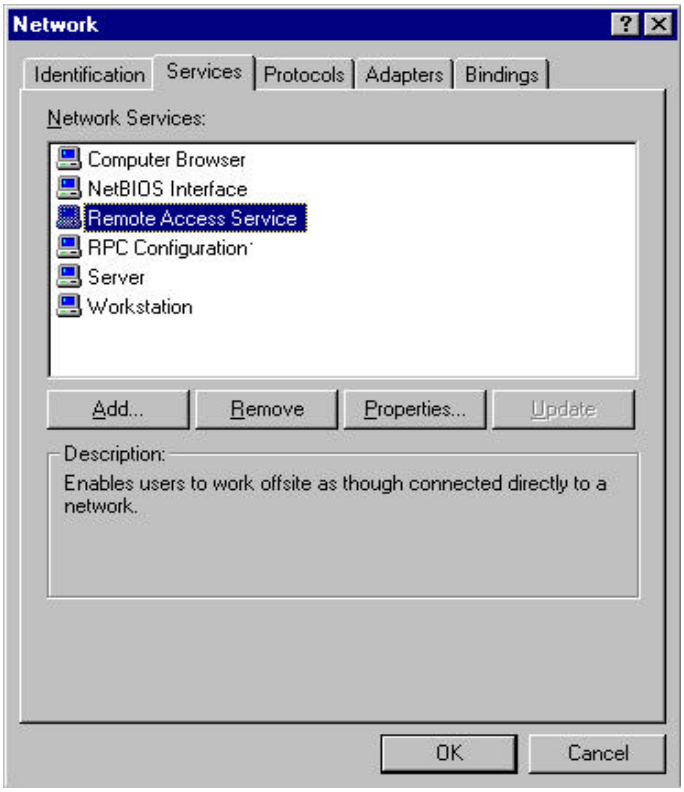


5.2 Configuration under Windows NT4.0

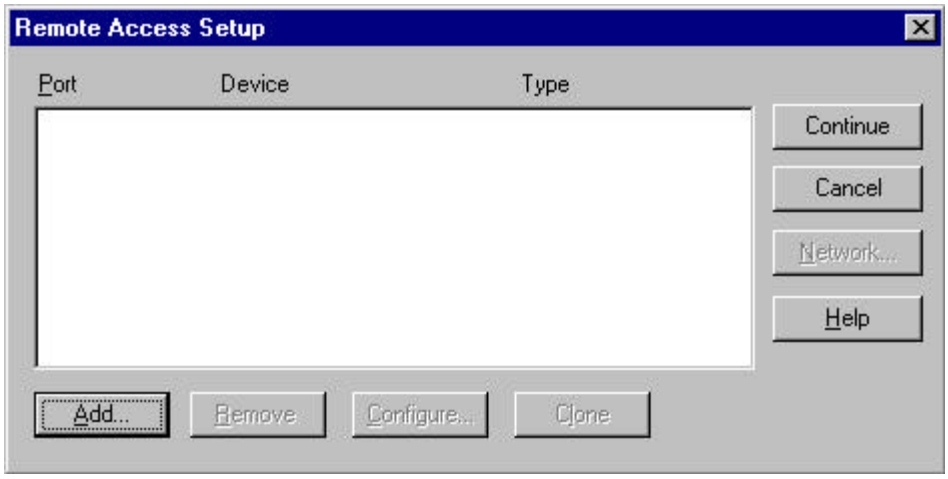
5.2-1 Adding virtual modems connecting with ISDN TA

<Step01> Select Start -> Settings -> Control Panel -> Network -> Services.

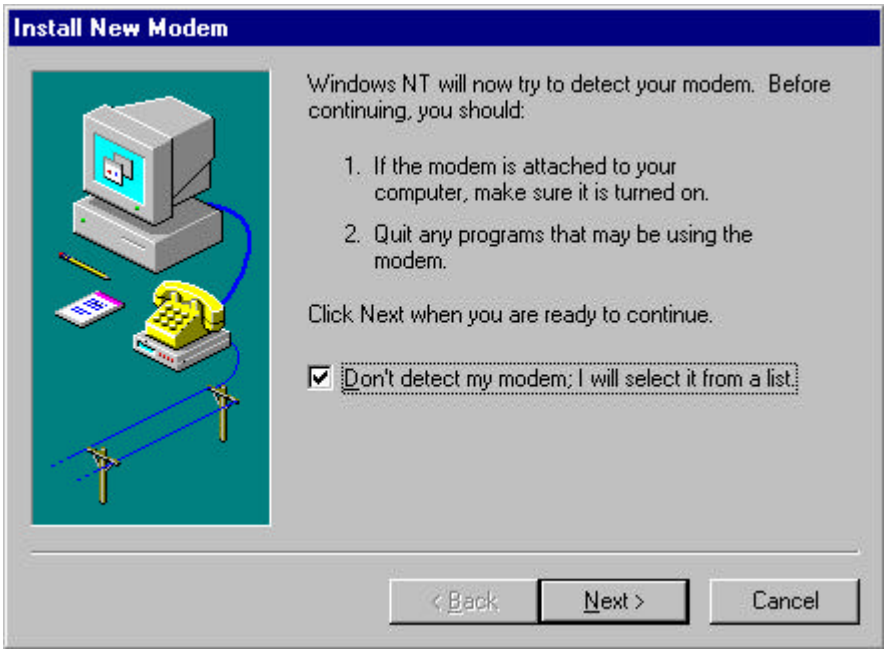
<Step02> Select Remote Access Service -> Click Properties...



<Step03> Click Add... -> Install Modem



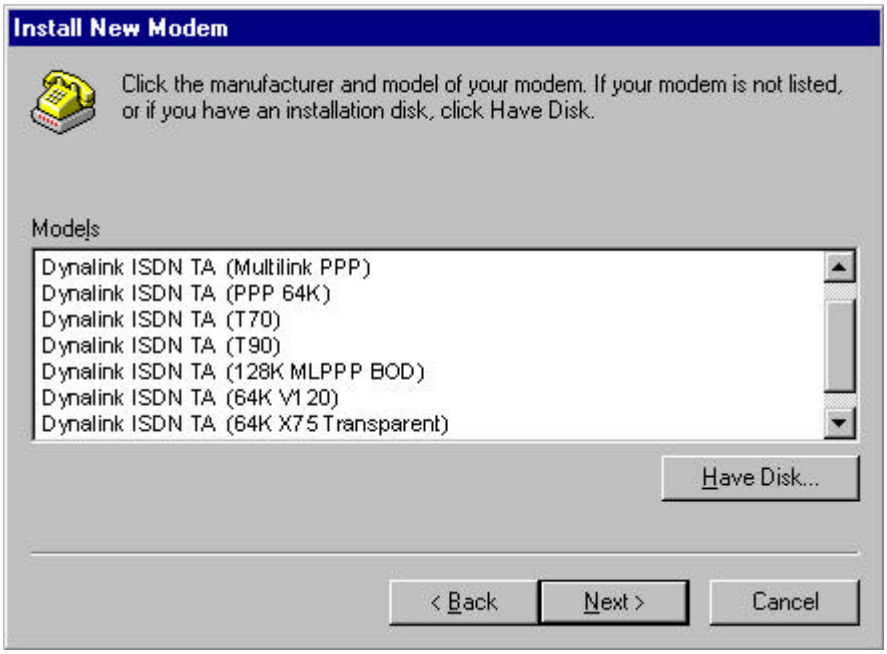
<Step04> Check "Don't detect my modem, I will select it from a list" then Click Next >



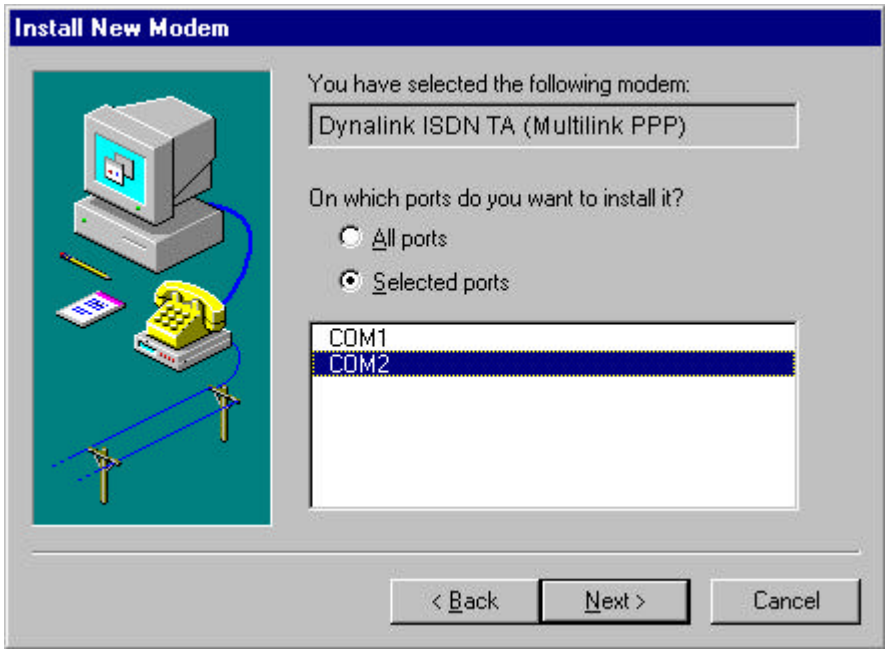
<Step05> Insert the driver CD to CD-ROM device.

<Step06> Click "Have Disk" and browse to devices such as F:\Win9xMe Select the tadw9xme.inf file.

<Step07> Select the modem type that you reguire from the list and then Click Next >



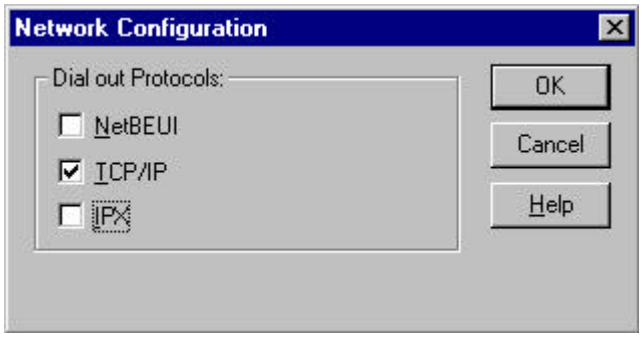
<Step08> Select the Com Port which connects to modem, Click Next >



<Step09> After you install the modem, select the virual modem in the RAS Capable Devices field then Click OK

<Step10> Select this virtual modem and Click the "Configure Tab" to set port usage the Click OK

<Step11> If you chose "dial out only" and then click the network tab; choose "TCP/IP" for internet access.



5.4-2 Configure the Dial-Up Networking

<Step01> Select Start -> Programs -> Accessories -> Dial-Up Networking.

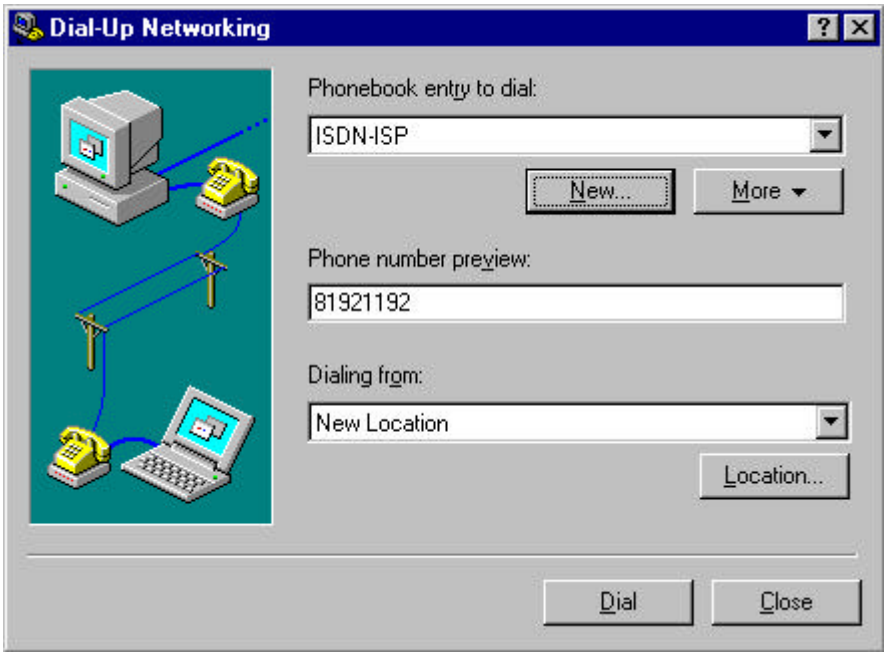
<Step02> Enter the name of Dial-Up account and Click Next >

<Step03> Enter the server type details for ISP and Click Next >

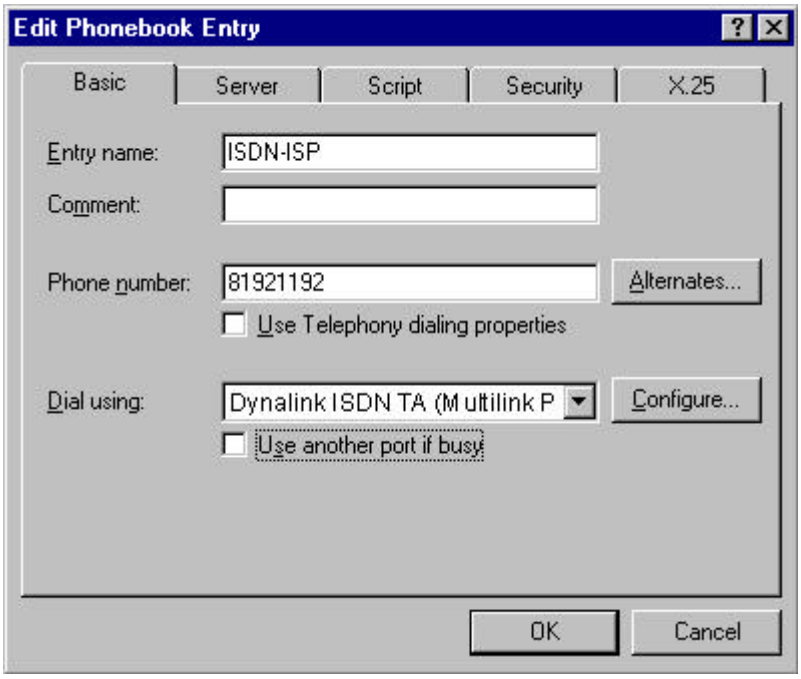
<Step04> Enter the phone number of ISP and Click Next >

<Step05> Click Finish

<Step06> Click More to configure setting



<Step07> Click [Dial] to make a connection



Appendix A

Specifications

Terminal Adaptor Specifications

ISDN interface	S/T interface ITU-T I.430
ISDN standards	DSS1(Euro-ISDN) for Europe INS Net-64 for Japan NI-1 for USA
B channel protocol	ML-PPP asynchronous-to synchronous HDLC transparent PPP asynchronous-to-synchronous HDLC transparent ITU-T V.120/64000 bps ITU-T X.75/T.70NL(option)
DTE data rate	1200 - 115200 bps (asynchronous)
Data format	8 data bits;1 or 2 stop bits;no parity
B channel speed	2 channel 64000 bps (synchronous)
Computer interface	ITU-T V.24/EIA-232D/DB25 connector
Command set	AT command set
Data rates	115200 to 1200 asynchronous
Operation	Half duplex or Full duplex operation
Extra memory	Modificable non-volatile memory stores: One configuration profile
Line requirements	ISDN Basic Rate line (Order from your telephone company)
Pots	Two Analog telephone interface for the conventional analog telephone device (e.g. fax modem. or PBX)

Appendix B

RS-232D Connections

This appendix provides EIA RS-232D connector pin assignments and circuit descriptions of each signal.

Answer on V.24/V.28/RS-232D pin assignments

	CCITT	DIN	EIA	I/O	TEXT
1				-	Protective Ground
2	103	D1	TD	I	Transmit data
3	104	D2	RD	O	Receive data
4	105	S2	RTS	I	Request to send
5	106	M2	CTS	O	Clear to send
6	107	M1	DSR	O	Data set ready
7	102	E2	GND	-	Signal ground
8	109	M5	DCD	O	Data carrier detect
20	108/1 108/2	S1.1 S1.2	DTR	I	Data terminal ready
22	125	M3	RI	O	Ring indicator

Appendix C

Special Note for application software

C.1 Note for the NetManage Internet Chameleon

1. Configure the TA according to chapter 3 description prior to install the NetManage Internet Chameleon.
2. Install the NetManage Internet Chameleon.
3. Start the Custom application by double-clicking its icon in the Internet Chameleon program group.
4. Choose Open... from the File menu. Open the file tcpip.cfg.
5. Choose Interface type... from the Setup menu.Select PPP,and click OK.
6. Choose Host Name... from the Setup menu. Enter a name to identify your PC and click OK.
7. Choose Port... from Communications of the Setup menu. Set the Connect field to the COM port where your TA is attached. Then clear the Carrier detect checkbox so that no X appears there.Click OK.
8. Choose Modem... from Communications of the Setup menu.In the field labeled Modem Init,replace the current string displayed there with AT&C1&D2^M. Then click OK.
9. Choose Dial... from Communications of the Setup menu. In the field labeled Dial enter the ISDN telephone number for Internet access.
10. Choose Login... from Communications of the Setup menu. Enter your user name and password from Internet service provider given.
11. Click the Connect menu item to actually connect to the Internet.
12. The Custom application must remain running while you are connected.
13. When you wish to disconnect from Internet, restore the Custom application (if you minimized it) and select the Disconnect menu item.

C.2 Note for the RVS-COM software application

The TA works with RVS-COM Lite V1.52 or later version.
RVS Datetechnik GmbH
http://www.rvscom.com