



The Intelligent Choice in Information Access

Sportster ISDN TA⁰

Internal ISDN Terminal Adapter

User's manual

U.S. Robotics and the U.S. Robotics logo are registered trademarks of U.S. Robotics. Any trademarks, trade names, service marks, or service names owned or registered by any other company and used in this manual are the property of their respective companies.

Table of contents

1. INTRODUCTION.....	1
1.1. PRODUCT DESCRIPTION	1
1.2. CE MARK.....	2
1.2.1. <i>Approval</i>	2
1.2.2. <i>Electromagnetic Compatibility</i>	2
1.2.3. <i>Safety</i>	2
2. INSTALLATION.....	3
2.1. CONTENTS.....	3
2.2. INSTALLATION REQUIREMENTS.....	3
2.3. DISPLAYS AND CONTROL ELEMENTS.....	4
2.4. STANDARD PC IRQ'S.....	4
2.5. INSTALLATION OF THE SPORTSTER ISDN TA CARD	5
3. SOFTWARE INSTALLATION AND CONFIGURATION	7
3.1. INSTALLATION UNDER DOS / WIN 3.X	7
3.2. INSTALLATION UNDER WINDOWS 95.....	8
3.3. INSTALLATION UNDER WINDOWS NT	8
4. ACTIVATING THE CARD	9
4.1. ACTIVATING UNDER DOS / WIN 3.X	9
4.2. ACTIVATING UNDER WINDOWS 95.....	10
4.3. ACTIVATING UNDER WINDOWS NT	10
5. APPLICATIONS	11
6. ARE YOU STILL HAVING PROBLEMS ?	13
7. LIMITED WARRANTY.....	25

Appendix

A1: EXTENSIONS/UPDATES	17
A2: TROUBLE SHOOTING	17
A3: MULTIPLE SUSCRIBER NUMBER (MSN)	19
A4: ISDN CAUSES DSS1, NZLD	20
A5: CAPI ERROR MESSAGES	22
A6 : PINOUT OF THE ISDN CONNECTOR	23

1. Introduction

Congratulations! You have just purchased the Sportster ISDN TA. Since 1976, U.S. Robotics has grown to become a key manufacturer and developer of information access technology. U.S. Robotics' advanced technology allows you to use your ISDN-Terminal adapter to open up a new world of information access.

As an innovator in the data communications field, U.S. Robotics has a history of bringing the latest technology to market at an affordable price.

For more information on U.S. Robotics, visit the U.S. Robotics World Wide Web home page at: **<http://www.usr.co.uk>** for the **UK**, **<http://www.usr.it>** for **Italy** and **<http://www.usr.com>** for the **other European countries**.

1.1. Product description

The Sportster ISDN TA card allows ISDN access from your computer. The Sportster ISDN TA slots in to an available ISA slot inside your computer , and has an RJ45 ISDN interface to provide direct connectivity to ISDN 2 (Basic Rate Interface).

The communications software provided can control the Sportster ISDN through its Common-ISDN Applications Programming Interface (CAPI) support.

1.2. CE Mark

1.2.1. Approval

The Sportster ISDN TA has Pan-European approval. The approval number is CE 0188 X.

1.2.2. Electromagnetic Compatibility

This device complies with the following standards in accordance with the European Directives 91/263/EEC and 89/336/EEC, when mounted inside a host computer with it's bracket screwed to the computer chassis.

- Immunity EN 50082-1 06/92
- Emission EN 55022 class B 08/87

1.2.3. Safety

This device complies with the following standard in accordance with the European Directives 91/263/EEC and 73/23/EEC:

- EN 60950/ A3 10/95

2. Installation

Before removing your Sportster ISDN TA from the packaging, touch both the computer and the anti-static package of the Sportster ISDN TA card to remove any electrostatic charge. You must only handle the card at the corners or at the protective metal cover.

2.1. Contents

This packet contains the following items:

- Sportster ISDN TA PC
- RJ45/RJ45 ISDN cable
- Users manual
- Driver Software
- Communications software

Actual additional information to this manual is contained in the file README on the installation diskette 1 (TYPE A:\README).

2.2. Installation requirements

In order to install your Sportster ISDN TA, your computer must meet the following conditions:

- IBM XT or AT compatible
- MS-DOS or PC-DOS Version 3.1 and higher, Windows 95 or Windows NT
- at least 4MB memory (8MB for Windows 95, 16MB for Windows NT)
- One free ISA card slot (16 bit) with a free interrupt
- 3.5" diskette drive and hard disk

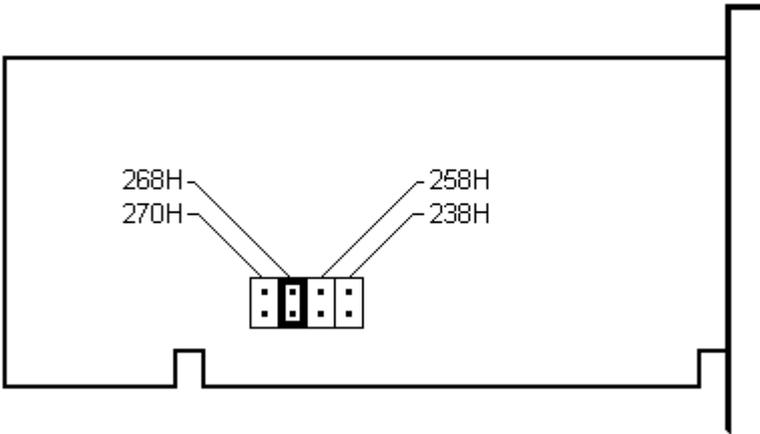
If you use another operating system or your PC does not meet one of the other requirements then consult your dealer.

Your ISDN should be fitted with an RJ45 socket (Western).

2.3. *Displays and control elements*

The Sportster ISDN TA card is pre-configured with a standard setting for an IBM-compatible computer. Hardware changes on the card should not be required. The factory setting is I/O address 268h. The interrupt level can be configured using the supplied software.

Do not install more than one Sportster ISDN TA card in your PC.



2.4. *Standard PC IRQ's*

The Sportster ISDN TA card is not a plug & play card. You must explicitly configure a free Interrupt Request level(IRQ).

There is no fixed setting for the IRQ on your computer (with the exception of COM1 and COM2). See below for the most commonly used settings.

Equipment	IRQ
EGA Video card	2
COM 2 (serial interface)	3
COM 1 (serial interface)	4
LPT 2 / XT Disk-Controller	5
Floppy Controller	6
LPT 1 (parallel printer)	7
SCSI-Controller (factory default)	11
AT bus hard disk	14

2.5. *Installation of the Sportster ISDN TA card*

- Turn off the computer and all attached auxiliary equipment (i.e. printer) and open the computer casing.
- Remove the protective cover (bracket) from a free 16-bit slot (two connectors) or from an 8-bit slot.
- Place the Sportster ISDN TA card in the slot. For safety reasons you should secure the card (bracket) with the screw from the protective cover firmly.
- Replace the computer casing.

Place one end of the RJ45/RJ45 ISDN cable into the socket at the back of the Sportster ISDN TA card (see Figure 4) and the other end in to the ISDN wall/floor socket.



Figure 4: Sportster ISDN TA PC bracket

3. Software installation and configuration

3.1. *Installation under DOS / Win 3.x*

For installation under Win 3.x, start your computer in DOS command line mode.

- Insert the driver diskette provided into the 3.5" disk drive
e.g A:\ drive
- Type A: SETUP

Follow the on-screen instructions to install and configure your Sportster ISDN TA.

To start an application see Chapter 4 "Activating the card".

Note:

1. If you are using MSN, please note the setting of the MSN number while configuring your Sportster ISDN TA.
2. To update the configuration (after a change to the hardware setting) run the program URCONFIG from the DOS command line.

3.2. *Installation under Windows 95*

- Insert the driver diskette provided into the 3.5" disk drive
e.g A:\ drive
- Type A: SETUP

Follow the on-screen instructions to install and configure your Sportster ISDN TA.

3.3. *Installation under Windows NT*

- Insert the driver diskette provided into the 3.5" disk drive
e.g A:\ drive
- Open the System Control window
- Install the Sportster ISDN TA card as a network card
- Install the CAPI as a network protocol from disk drive

Follow the instructions within the Windows NT System Control Window to install and configure your Sportster ISDN TA.

4. Activating the card

4.1. *Activating under DOS / Win 3.x*

If you are going to use software which needs the DOS CAPI then proceed as follows:

USR CAPI <return>

This activates the CAPI. Now you can start the application software which uses the CAPI.

To unload the CAPI driver please type:

USR CAPI u <return>

You can call CAPI with different parameters, i.e. for ISDN leased lines. To get a list of supported parameters type

USR CAPI ? <return>

Please have a specific look using CAPI Applications within EURO-ISDN to the correct setting of the MSN number.

If you want to use the Sportster ISDN TA with a Win 3.x application then type

WIN <return>

4.2. *Activating under Windows 95*

Once the SETUP program has completed, the Sportster ISDN TA and the CAPI will be activated.

4.3. *Activating under Windows NT*

Once the Install procedure has completed, your computer will be rebooted. Once restarted, the Sportster ISDN TA and the CAPI will be activated automatically.

5. Applications

There is a wide range of application software which can be used with the Sportster ISDN TA. When using other software you can refer to installation and set-up guidelines by consulting the appropriate software manual.

For the correct interaction of application programs with Sportster ISDN TA the following is important:

Make sure that the version of the application software does support ISDN. You can recognise this in the installation routine of the application software, or if a file with a name like "ISDN.." or "CAPI.." exists. If in doubt consult your dealer.

6. Are you still having problems ?

- **FOR THE UNITED KINGDOM**

Should you encounter any difficulties with your Sportster ISDN TA, refer to the manual first.

Call or visit your dealer, if they are unable to assist you, contact the U.S. Robotics Technical Support Department from Monday through to Friday, between 9:30am - 5:00pm on;

E-mail address: uksupport@usr.com
CompuServe: GO UKVENA
BBS: 0118 969 2200
FOD*: 0118 922 8299
Fax: 0118 969 4222
Tel: 0118 944 1000
Web page: <http://www.usr.co.uk>

*FOD = Fax on Demand

Upon contacting U.S. Robotics you will be issued with a Call Reference Number (CRN). This should be quoted when contacting the Technical Support Department in relation to your query.

Should you be advised to return your product, U.S. Robotics will repair and return the unit to you.

Please note that products can not be returned without prior approval by the U.S. Robotics Technical Support Department.

If you would like further information or the name of your nearest U.S. Robotics dealer, call us FREE on:

0 8 0 0 2 2 5 2 5 2

or look at,
<http://www.usr.co.uk>.

- **FOR ITALY**

Should you encounter any difficulties with your Sportster ISDN TA, refer to the manual first.

Call or visit your dealer, if they are unable to assist you, contact the U.S. Robotics Customer Support. When you call, specify your modem Sportster ISDN TA serial number (found on the modem Sportster ISDN TA and on the outside of the box), the software being used, and, if possible, the contents of your AT17 screen.

Hotline: 02 26.296.250
Fax : 02 26 268 334
USR BBS: +33 (0) 3 20 91 03 08
CompuServe: GO USROBOTICS
Internet: eurosupport@usr.com

Should you be advised to return your product, U.S. Robotics will repair and return the unit to you. Contact U.S. Robotics European Center Department to obtain a Return Materials Authorisation (RMA) number. YOU MUST HAVE AN RMA NUMBER BEFORE RETURNING THE MODEM TO US.

Phone : +33 (0) 3 20 91 04 97
Fax : +33 (0) 3 20 19 06 94

Ship the unit, postage paid, in a strong box made of corrugated cardboard with plenty of packing material (preferably the original container).

Include your RMA number, name, and address on the shipping label as well as inside the package.

Ship to the following address :

U.S. Robotics Logistics sarl
European Center Department
RMA#
Rue Jules Verne
Centre de Gros N°2
F-59818 Lesquin Cedex
France

- **FOR OTHER EUROPEAN COUNTRIES**

Should you encounter any difficulties with your Sportster ISDN TA, refer to the manual first.

Call or visit your dealer, if they are unable to assist you, contact the U.S. Robotics Customer Support. When you call, specify your modem Sportster ISDN TA serial number (found on the modem Sportster ISDN TA and on the outside of the box), the software being used, and, if possible, the contents of your AT17 screen.

Hotline: +33 (0) 3 20 19 24 24
Fax: +33 (0) 3 20 19 24 34
USR BBS: +33 (0) 3 20 91 03 08
CompuServe: GO USROBOTICS
Internet: eurosupport@usr.com

Should you be advised to return your product, U.S. Robotics will repair and return the unit to you. Contact U.S. Robotics European Center Department to obtain a Return Materials Authorisation (RMA) number. YOU MUST HAVE AN RMA NUMBER BEFORE RETURNING THE MODEM TO US.

Phone : +33 (0) 3 20 91 04 97
Fax : +33 (0) 3 20 19 06 94

Ship the unit, postage paid, in a strong box made of corrugated cardboard with plenty of packing material (preferably the original container).

Include your RMA number, name, and address on the shipping label as well as inside the package.

Ship to the following address :

U.S. Robotics Logistics sarl
European Center Department
RMA#
Rue Jules Verne
Centre de Gros N°2
F-59818 Lesquin Cedex
France

A1: Extensions / Updates

Extending the software functionality can be done by loading the required software supplied by U.S. Robotics or your dealer.

A2: Trouble Shooting

Once the Sportster ISDN TA has been installed

Error	Correction
Computer does not boot	Check that the Sportster ISDN TA has been properly fitted into the slot
After startup, the computer goes into error status	Try different Interrupt level, refer to the computer manual for error code
Computer shows error message	Erase new entries to AUTOEXEC.BAT
LAN access fails	Try different Interrupt level

Access to the card:

Error	Correction
Configuration program does not find Sportster ISDN TA	Try different Interrupt level
Cannot load software driver	Start configuration program URCONFIG
Configuration information not stored	Purge old Sportster ISDN TA installation

ISDN access :

Error	Correction
Not able to establish connection	Check ISDN connection with URCONFIG or ISDN telephone, try calling to test connection
Connection break off	Check ISDN cabling

Data transfer :

Error	Correction
Data not transmitted despite connection	check compatibility of the application software
data only partially transmitted	check compatibility of the application software

A3: Multiple Subscriber Number (MSN)

MSN can be offered as a supplementary ISDN service by British Telecom. This service allows you to have up to 10 directory numbers allocated to one ISDN line, configured as a 10 number Direct Dialling In (DDI) system with 2 channels, allowing you to allocate different telephone numbers to the equipment connected to the ISDN line.

The MSN number is (are) the last digit(s) of your ISDN number. With an incoming call the ISDN equipment checks the selected MSN and the required service (i.e. for fax, for voice, for video, for speech, for data and so on). If the MSN's are not different with an incoming call the first reacting device will be used.

A4: ISDN causes DSS1, NZLD

Table of ISDN causes and their explanation (DSS1, NZLD)

Cause decimal / hexadecimal	Meaning
1 / 1	unassigned number
6 / 6	channel unacceptable
16 / 0x10	normal clearing
17 / 0x11	User busy
18 / 0x12 19 / 0x13	no user responding (i. e. DTR not ON)
21 / 0x15	call rejected
22 / 0x16	number changed
26 / 0x1A	non selected user clearing
27 / 0x1B	destination out of service
29 / 0x1D	facility rejected
31 / 0x1F	normal disconnect, unspecified
34 / 0x22	no B channel available
38 / 0x26	ISDN network out of order
41 / 0x29	temporarily failure of the ISDN network
42 / 0x2A	ISDN network congestion
47 / 0x2F	ISDN network congestion
50 / 0x32	requested facility not subscribed

Cause decimal / hexadecimal	Meaning
57 / 0x39	bearer capability not authorised
58 / 0x3A	bearer capability not available
63 / 0x3F	service/option not available
65 / 0x41	bearer capability not implemented
70 / 0x46	only restricted digital bearer capability (BC) available
79 / 0x4F	service/option not implemented
88 / 0x58	incompatible destination
111 / 0x6F	protocol error, unspecified
127 / 0x7F	network interworking error, unspecified

A5: CAPI V1.1 Error messages

0x1001	:	error on API_REGISTER,
0x1002	:	illegal application id
0x1003	:	illegal message
0x1004	:	illegal command, subcmd
0x1005	:	q is full
0x1006	:	q is empty
0x1007	:	q overflow
0x1008	:	deinstall error
0x2001	:	illegal controller
0x2002	:	illegal PLCI
0x2003	:	illegal NCCI
0x2004	:	illegal type
0x3101	:	B-channel erroneous
0x3102	:	info mask erroneous
0x3103	:	service EAZ mask erroneous
0x3104	:	service SI mask erroneous
0x3105	:	illegal layer 2 protocol
0x3106	:	illegal DLPD
0x3107	:	illegal layer 3 protocol
0x3108	:	illegal NCPD
0x3109	:	illegal NCPIs
0x3201	:	general controller error
0x3202	:	non-unique LISTEN_REQs
0x3203	:	function not supported
0x3204	:	PLCI inactive
0x3205	:	NCCI inactive
0x3206	:	I2 prot. not supported
0x3207	:	can't select I2 prot. now
0x3208	:	I3 prot. not supported
0x3209	:	can't select I3 prot. now
0x320a	:	illegal DLPD parameters
0x320b	:	illegal NCPD parameters
0x320c	:	illegal NCPI parameters
0x320d	:	data length not supported

- 0x3301 : D-chan. layer 1 setup error
- 0x3302 : D-chan. layer 2 set-up error
- 0x3303 : B-chan. layer 1 set-up error
- 0x3304 : B-chan. layer 2 set-up error
- 0x3305 : D-channel layer 1 shutdown
- 0x3306 : D-channel layer 2 shutdown
- 0x3307 : D-channel layer 3 shutdown
- 0x3308 : B-channel layer 1 shutdown
- 0x3309 : B-channel layer 2 shutdown
- 0x330a : B-channel layer 3 shutdown
- 0x330b : B-channel layer 2 reestabl.
- 0x330c : B-channel layer 3 reestabl.

0x34yy: D-channel disconnect, yy = cause according to CAPI profile (DSS1 or 1TR6). Please subtract 0x80 to find the cause in the cause table.

A6: Pin-out of the ISDN connector

Pin-out of the 8 pin ISDN S-interface connector (RJ45) (CCITT I.430/ISO 8877)

Pin	Signal (S ₀)
1	not connected
2	not connected
3	STA (Transmit A)
4	SRA (Receive A)
5	SRB (Receive B)
6	STB (Transmit B)
7	not connected
8	not connected

7. Limited Warranty

U.S. Robotics Limited warrants to the original consumer or other end user that this product is free from defects in materials or workmanship for a period of five years from the date of purchase. During the warranty period, and upon proof of purchase, the product will be repaired or replaced (with the same or similar model) at our option, without charge for either parts or labour. This warranty shall not apply if the product is modified, tampered with, misused or subjected to abnormal working conditions.

To obtain service under this limited warranty, contact the U.S. Robotics Support (**see Chapter 6**).



The Intelligent Choice in Information Access

For the United Kingdom :

U.S. Robotics Limited
220 Wharfdale Road
Winnersh, Wokingham
Berkshire
England
Tel : 0118.922.8200
Fax: 0118.969.5555

For Italy :

U.S. Robotics Italia Srl
Piazza Don E. Mapelli, 75
20099 Sesto San Giovanni
Italia
Tel : 02.2629.6250
Fax : 02.2626.8334

For Nordic countries :

U.S Robotics Nordic AB
Box 1524
Parkvägen 2A
171 29 Solna
Sweden
Tel : +46.(0)8.705.88.00
Fax : +46.(0)8.83.79.20

For Benelux :

U.S. Robotics Benelux
Planetenbaan 118
3606 AK Maarssen
The Netherlands
Tel : +31.346.586.211
Fax : +31.346.586.222

For other countries :

U.S Robotics PCD s.a.r.l
Cityparc,
3 rue Lavoisier
59650 Villeneuve d'Ascq
France
Tel : 03.20.19.24.24

Fax : 03.20.19.24.34