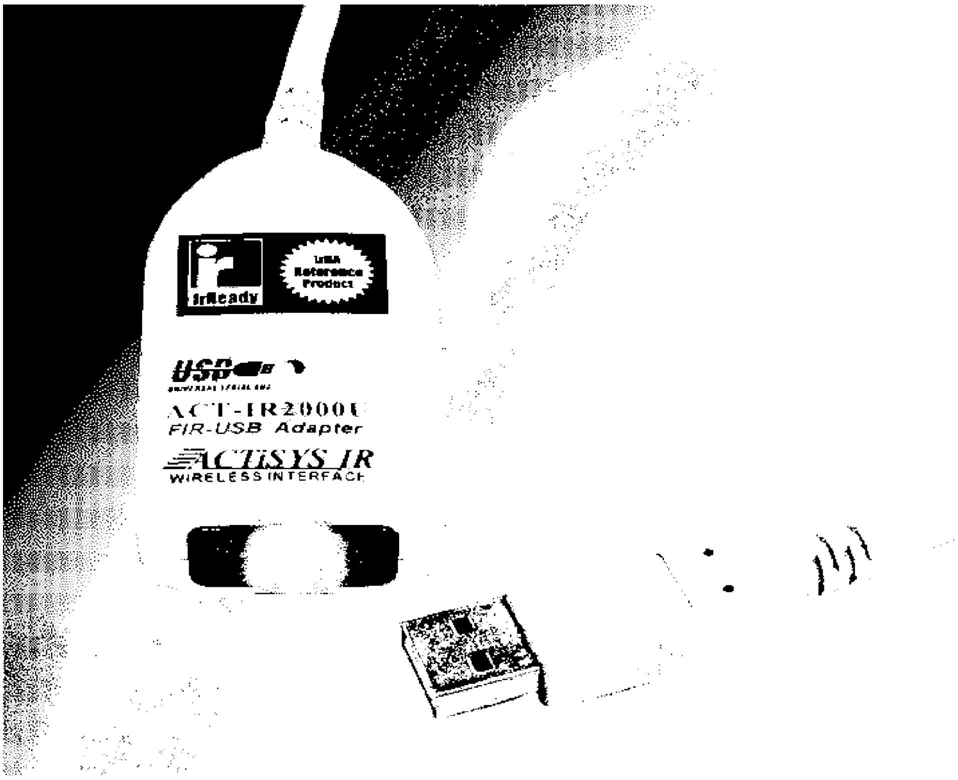
ACT-IR2000U
FIR-USB Adapter

User's Manual


IrReady
IrDA Reference Product
USB
UNIVERSAL SERIAL BUS
ACT-IR2000U
FIR-USB Adapter
ACTiSYS IR
WIRELESS INTERFACE

ACTiSYS Corporation
48511 Warm Springs Blvd, Suite 206
Fremont, CA 94539, USA
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E-Mail: irda-support@actisys.com
Web: www.actisys.com

Release V1.43

FCC & VCCI Compliance Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1)This device may not cause harmful interference, and (2)this device must accept any interference received, including interference that may cause undesired operation.

WARNING-FCC Regulations state that any unauthorized changes or modifications to this equipment not expressly approved by the manufacturer could void the user authority to operate this equipment

NOTE: This equipment has been tested and found to comply with the limits for Class B digital device, pursuant to Part 15 of the FCC Rules. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will nor occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Increase the separation between the equipment and receiver.

-Reorient or relocate the receiving antenna.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

This equipment is in the 2nd Class category (information equipment to be used in a residential area there to) and conforms to the standards set by the Voluntary Control Council For Interference by Data Processing Equipment and Electronic Office Machines aimed at preventing radio interference in such residential area.

When used near a radio or TV receiver, it may become the cause of radio interference. Read the instructions for correct handling.

NOTE: Must be used with shielded cable only.

FOR YOU RECORDS.....

For your assistance in reporting this product in case of loss or theft, please record below the model number and serial which are located on the bottom of the case. Please retain this information.

Model Number	**Serial Number**
Date of Purchase	**Place of Purchase**

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INTRODUCTION

ACTiSYS IR2000U is an advanced wireless Fast Infrared USB adapter designed to replace the serial port or FIR controller based FIR/SIR wireless peripheral through the PC USB (Universal Serial Bus) port. Taking advantage of the true plug-and-play nature and the high bandwidth of USB, IR2000U offers the easiest conversion of existing wireless to the legacy-free personal computer platform with the following features:

- Fully compliant to USB specification 1.1 and IrDA specification 1.1
- Full-speed (12 Mbps) USB device operation
- Supports FIR (4Mbps) and all SIR speeds (9.6, 19.2, 38.4, 57.6 and 115.2Kbps).
- Bus-powered device. Obtain power from USB port. No external power supply required.
- Low power consumption in standby mode (Standby current is less than 0.5 mA
- Not occupy PC's COM or Parallel port and has no complicated hardware port and resource setting and conflict, such as IO address / IRQ / DMA numbers.
- True PNP (Plug And Play) device. Without re-installing USB driver when re-plugs in.
- Small package size: 2.4"L x 1.4"W x 0.74"H, 2.4 oz (65.0 gr)

PACKING CHECK LIST

When you unpack the package, the following items should be found.

1. ACT-IR2000U.
2. User’s Guide
3. 2 floppy disks. One is for ACT-USB Driver, another is for User’s manual.

SYSTEM REQUIREMENTS

To use ACT-IR2000U, your computer MUST meet the following requirements.

1. Window 98/ME/2000/XP.
2. One unoccupied USB port.

BIOS SETUP

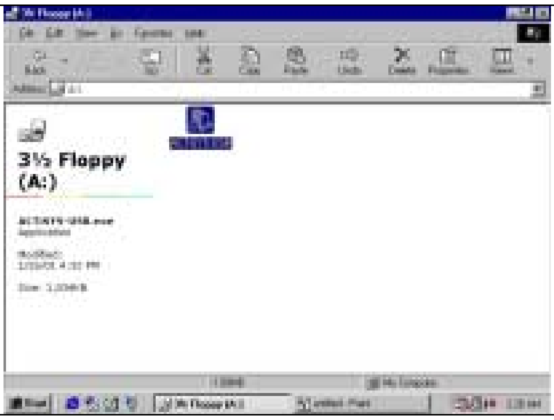
Before you are trying to use this device, You MUST enable your computer USB port in BIOS Settings.

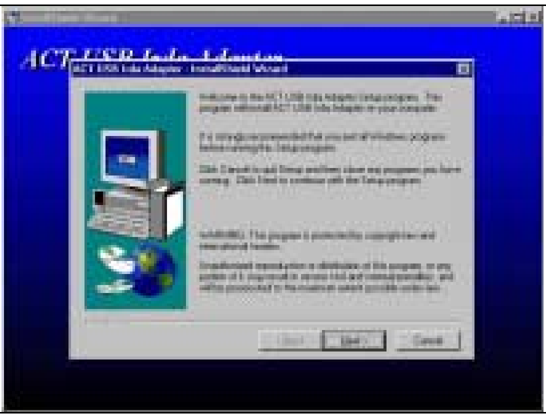
WINDOWS 98 INSTALLATION GUIDE

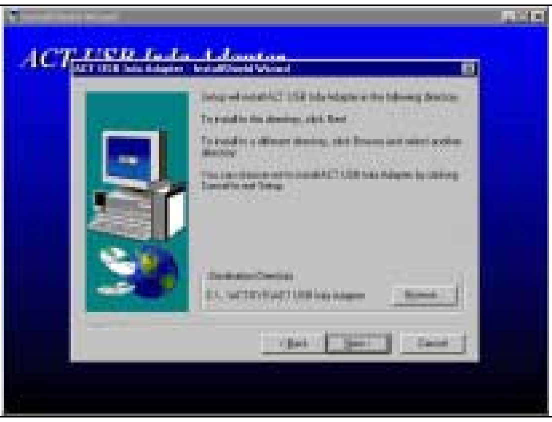
Note: Make sure no hardware or software is occupying or binding the USB port that you intend to use for ACT-IR2000u. Plugging and unplugging multiple USB devices on the same USB port may cause damage to your registry and may make your Windows O.S unstable.

Note: **UNPLUG** ACT-IR2000U on your computer before you boot your system.
No prior similar IrDA-USB driver software was installed. If yes, please refer to Un-installation Guide to remove the old driver, before installing this new driver software

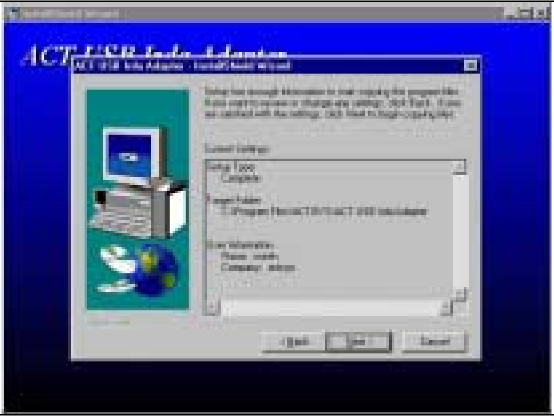
1. Boot your system.
2. Go to A: driver

3. Double Click **ACTiSYS IR2000U20.exe**	

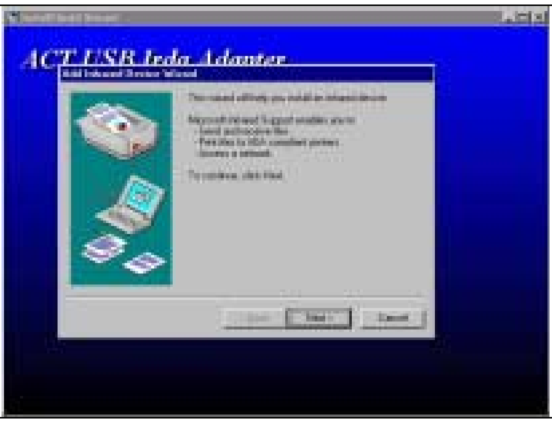
4. Click **Next>**	

5. Click **Next>**	

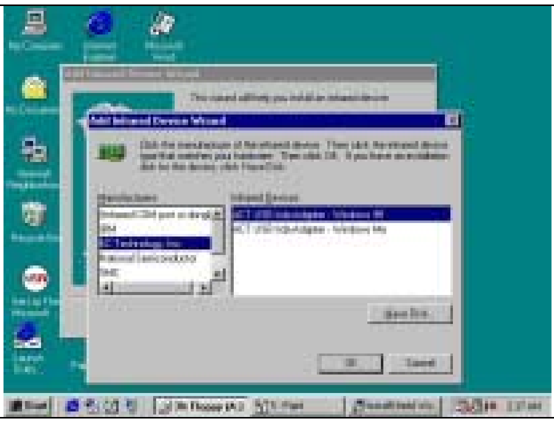
6. Click **Next>**


ACT USB Irda Adapter

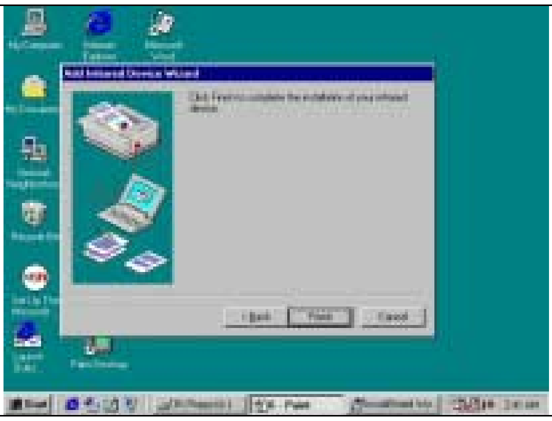
7. Click **Next>**

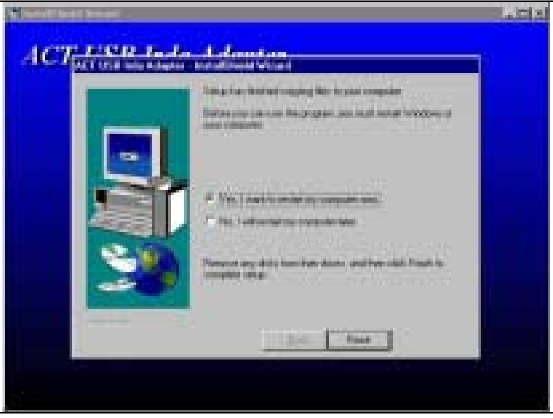

ACT USB Irda Adapter

8. Highlight **ACT-IR2000UIC** from Manufacturers list, Highlight **ACTiSYS USB IrDA Adapter – Windows 98**

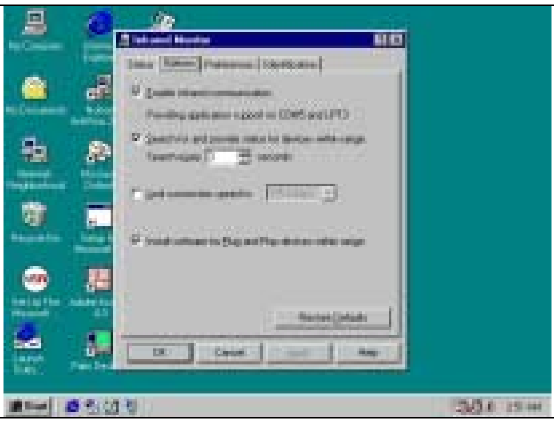


9. Click **Finish**



10. Click **Finish**, reboot your system.	

11. Plug ACT-IR2000U on USB port when your computer start.

12. After booting your system, enable infrared communication.	

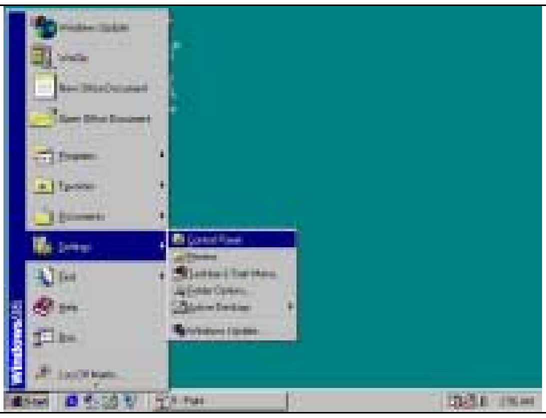
After a few seconds, the light on the top of ACT-IR2000U begins to blink every three seconds. The device has been successfully installed on you computer.

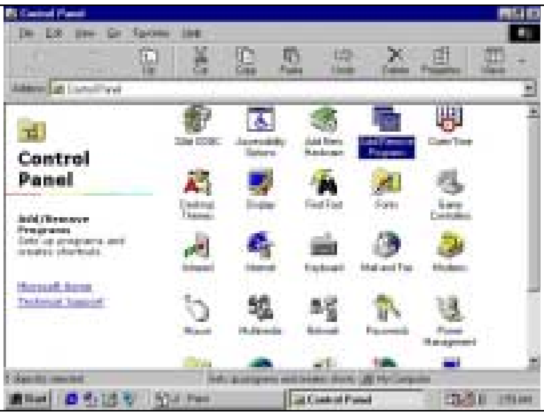
WINDOWS 98 UN-INSTALLATION GUIDE

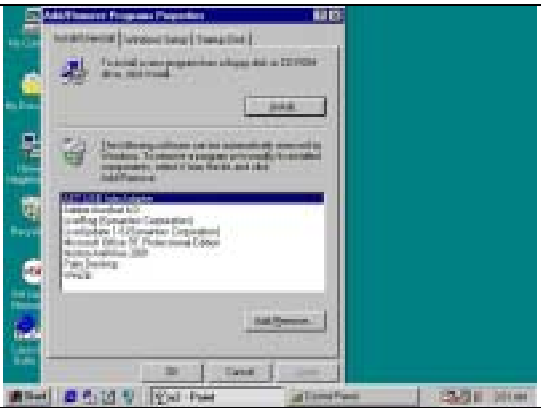
Warning: You must be very careful if you decide to remove system files or delete registration keys. If you have removed the wrong components, your Windows system may have to be reinstalled and ACTiSYS will not be liable for your fault. If you are not a PC advanced user, you should choose only the Simple Uninstall Procedure. It will leave some components in your system but harmless.

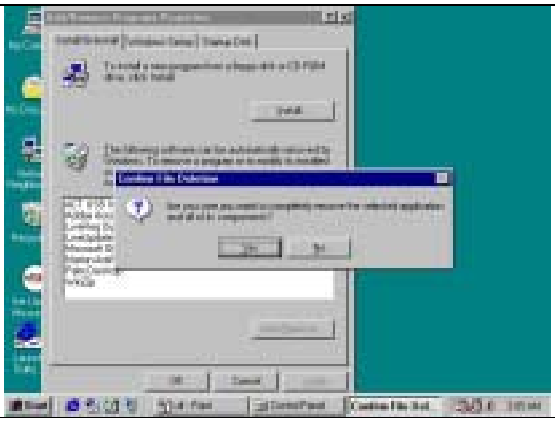
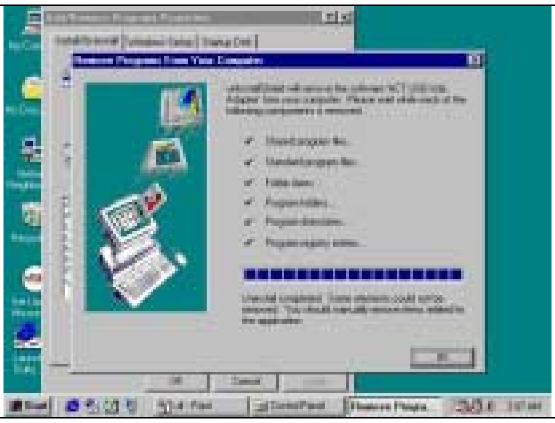
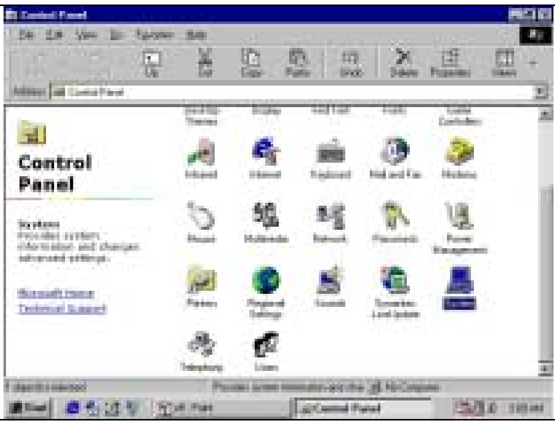
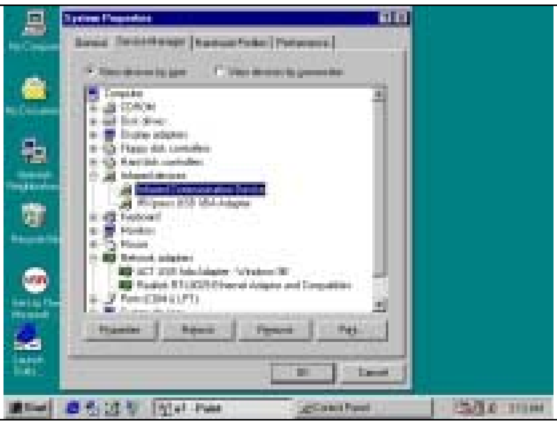
Note: Make sure of **PLUGGING** ACT-IR2000U on your computer before you uninstall the device.

1. Boot your system

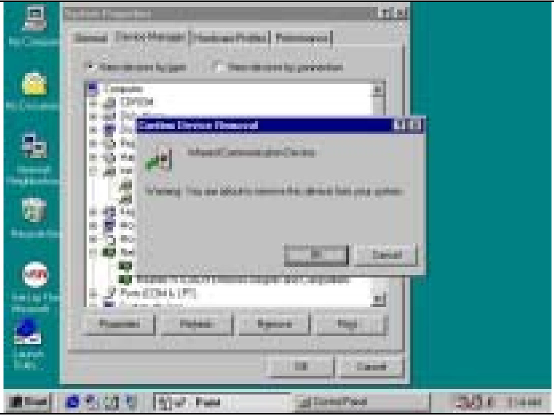
2. Go to the **Control Panel**	

3. Double Click **Add/Remove program** icon	

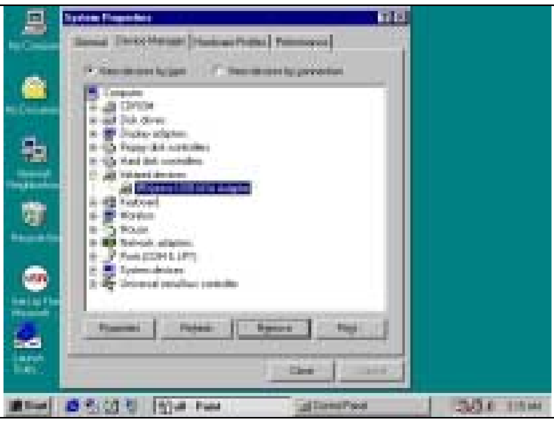
4. Choose the **ACT USB IrDA Adapter**, Click **Add/Remove** button.	

5. Click **Yes**	
6. Click **OK**	
7. Double click **System** icon	
8. Go to **Device Manager**, highlight **Infrared Communication Device**, Click **Remove**	

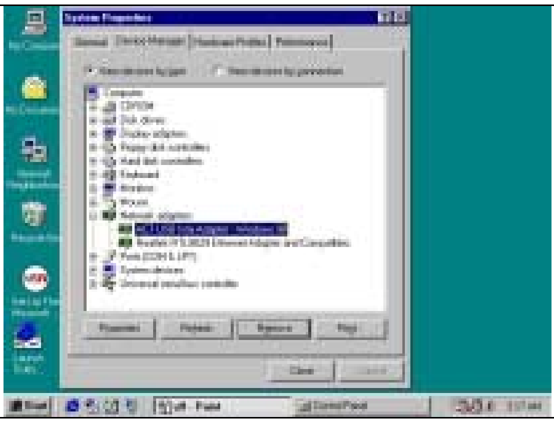
9. Click **OK**



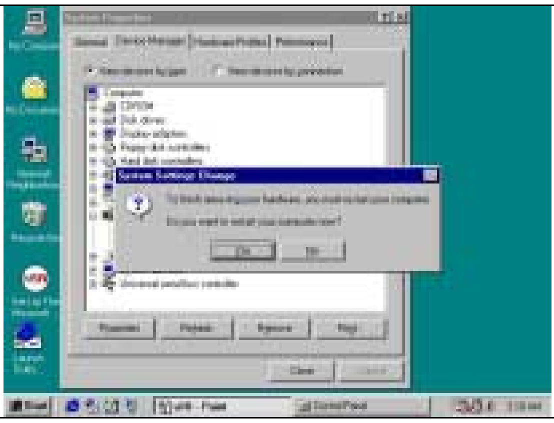
10. Highlight **IRXpress USB IrDA Adapter**, then Click **Remove**



11. Highlight **ACT USB Irda Adapter – Windows Me**, then Click **Remove**



12. Click **Yes**



13. **Unplug** ACT-IR2000U when your system reboots. So far, you have successfully uninstalled the device.

ADVANCED UNINSTALL PROCEDURE

1. Remove drivers **kcIrUSB.sys** and **kcIrNet.sys** files under **c:\windows\system32\drivers\**
2. Remove **kcirnet.inf**, precompiled information files **DRVDATA.BIN** and **DRVIDX.BIN** under **c:\windows\inf**
3. Remove copies of inf files **ACTiSYS Corp. KCIRUSB.INF** and **ACTiSYS Corp. KCIRNET.INF** under **c:\windows\inf\other\**
4. Delete registration key:
   Run Start | Run…| regedit
   Find HKEY_LOCAL_MACHINE\Enum\USB\VID_09C4&PID_0011 and delete it.

NOTE: You may have to uninstall all components of previous version of IR2000U, such as Infrared and Network components, windows registration, driver and information files, completely before beginning installation of new version IR2000U.

WINDOWS 2000 INSTALLATION GUIDE

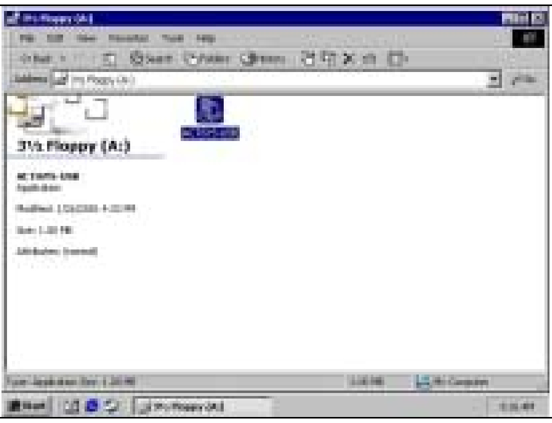
Note: The Win2000 driver of IR2000U works only under the release build 2195 or above.

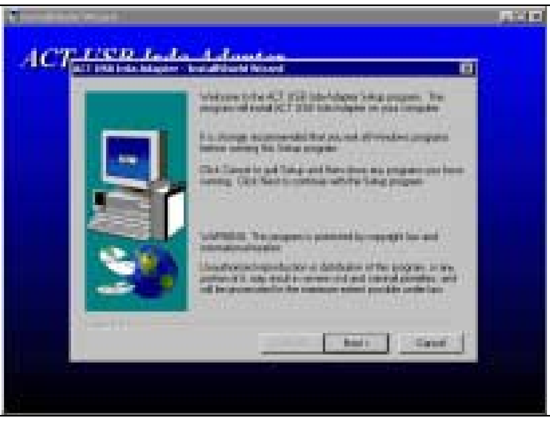
Note: Make sure no hardware or software is occupying or binding the USB port that you intend to use for ACT-IR2000u. Plugging and unplugging multiple USB devices on the same USB port may cause damage to your registry and may make your Windows O.S unstable.

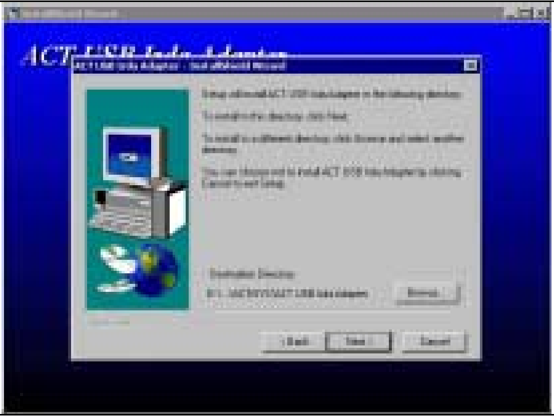
Note: Registry files in Windows 2000 cannot be modified or deleted. If the above precautions are not taken and the installation guide is not followed step by step it may require you to re-install Windows2000 again in many cases.

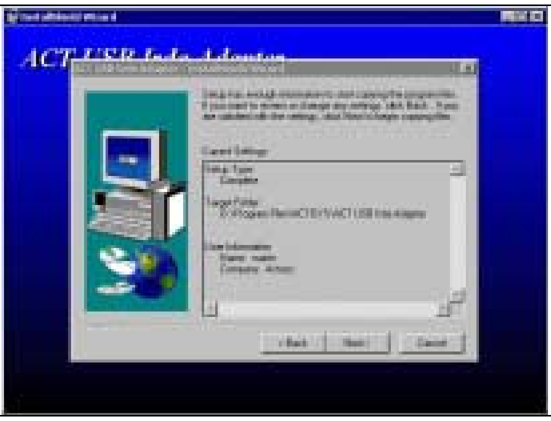
Note: **UNPLUG** ACT-IR2000U on your computer before you boot your system. No prior similar IrDA-USB driver software was installed. If yes, please refer to Un-installation Guide to remove the old driver, before installing this new driver software

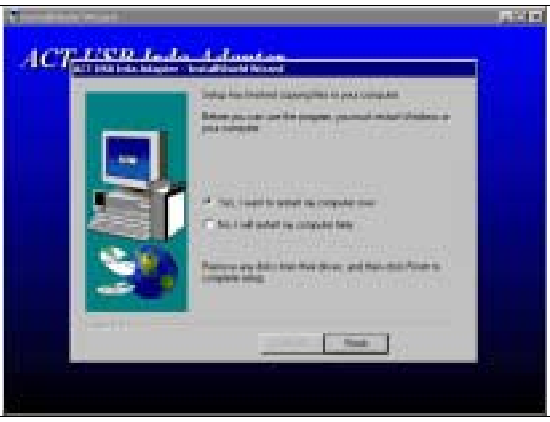
1. Boot your system.
2. Go to A: driver

3. Double click **ACTiSYS IR2000U20.exe**	

4. Click **Next>**	

5. Click **Next>**	

6. Click **Next>**	

7. Click **Finish**	

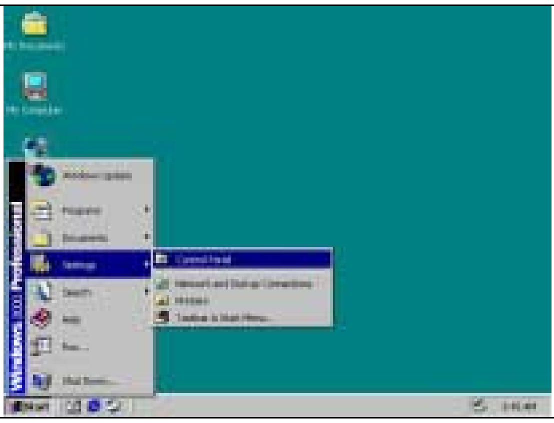
8. **Plug** ACT-IR2000U on USB port when your computer start.

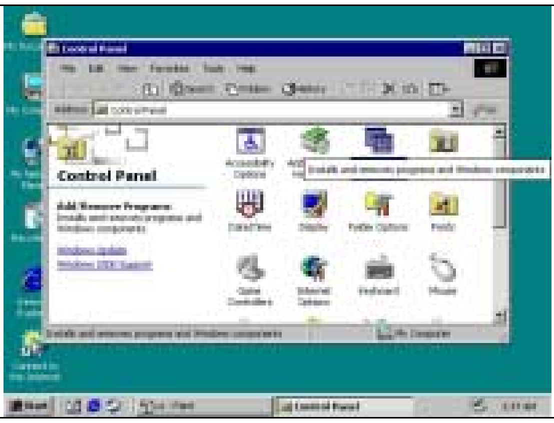
After a few seconds, the light on the top of ACT-IR2000U begins to blink every three seconds. The device has been successfully installed on you computer.

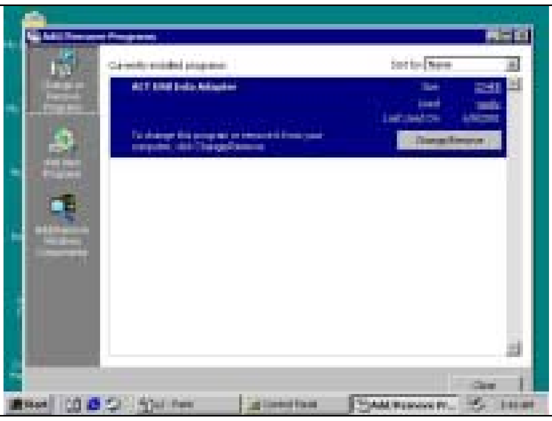
WINDOWS 2000 UN-INSTALLATION GUIDE

Note: Make sure of **PLUGGING** ACT-IR2000U on your computer before you uninstall the device.

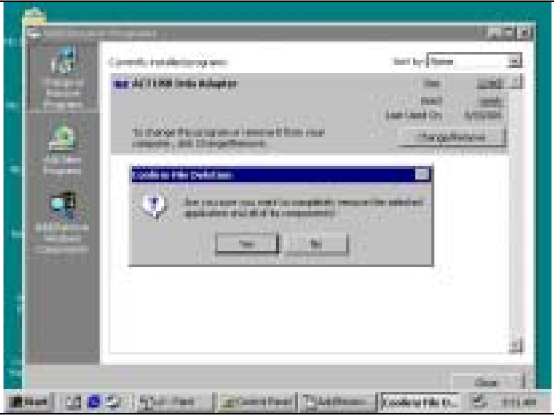
1. Boot your system

2. Go to **Control Panel**	 Windows 2000 Professional Control Panel Start

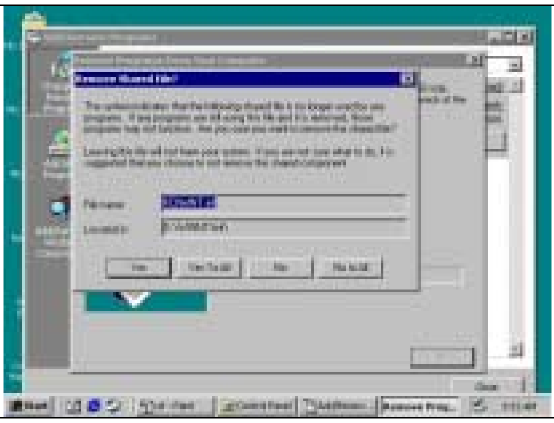
3. Double click **Add/Remove Program** icon.	 Control Panel Start

4. Highlight **ACT USB Irda Adapter**, Click **Change/Remove**	 ACT USB Irda Adapter Change/Remove Start

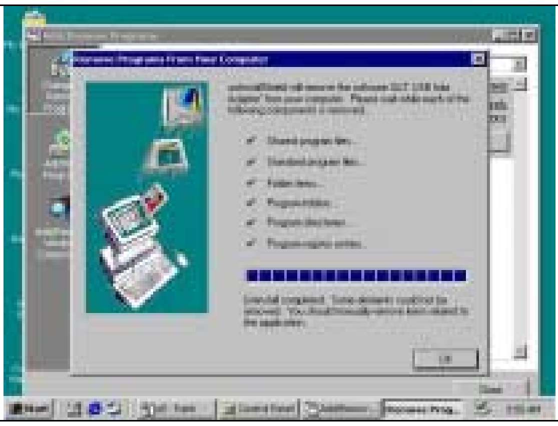
5. Click **Yes**



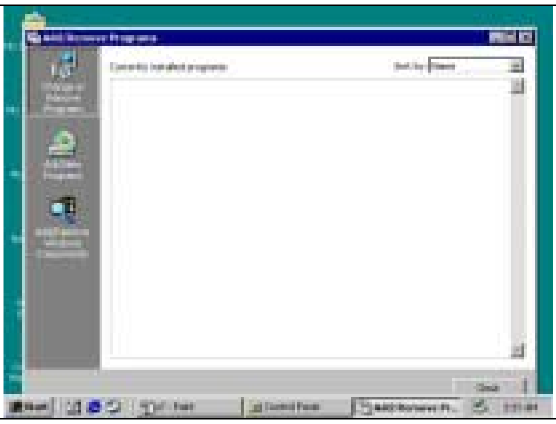
6. Click **Yes To All**

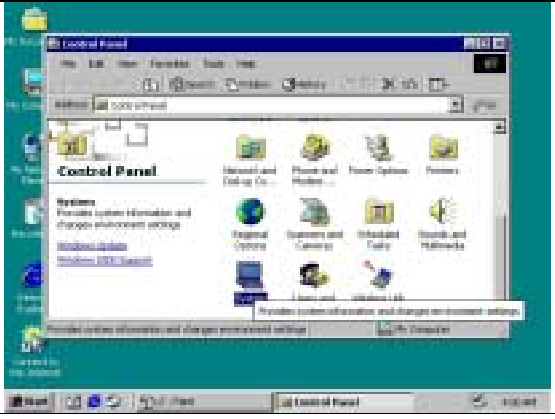
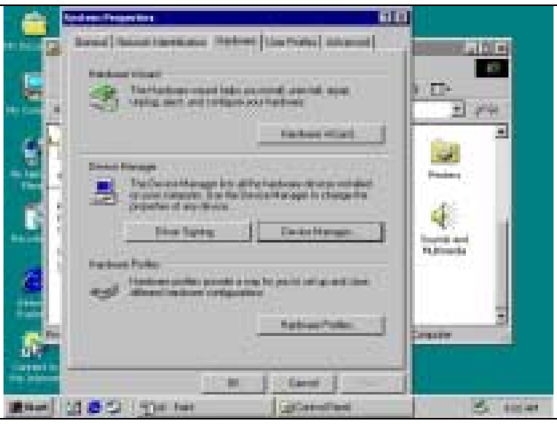
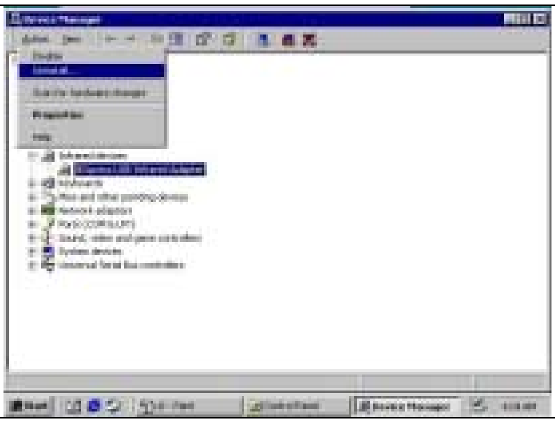
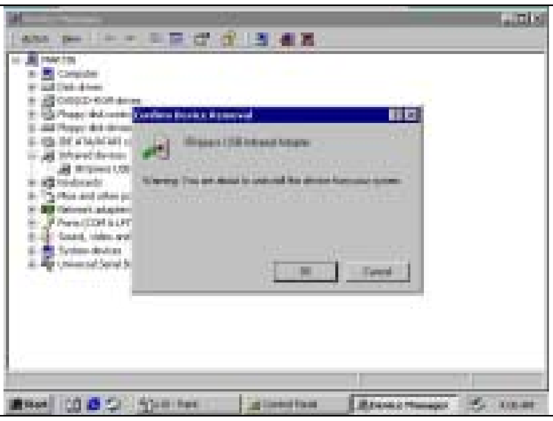


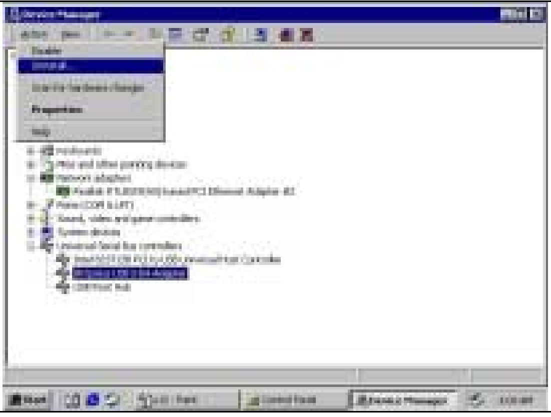
7. Click **OK**

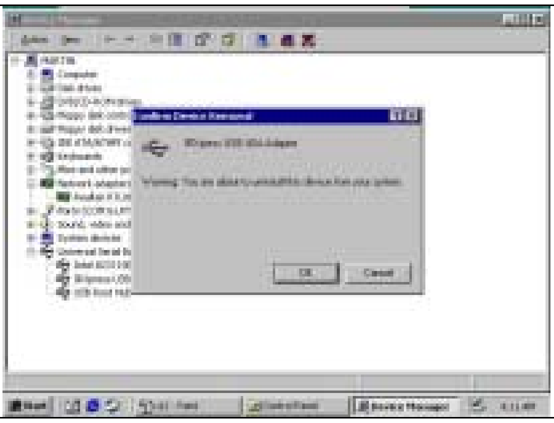


8. Click **Close**



9. Double click **System** icon	
10. Click **Device Manager**	
11. Highlight **IRXpress USB Infrared Adapter** in **Infrared devices,** then **Uninstall**	
12. Click **OK**	

13. Highlight **IRXpress USB IrDA Adapter** in **Universal Serial Bus controller,** then **Uninstall**	

14. Click OK, then close the **Device Manager**	

15. **Unplug** ACT-IR2000U when your system reboots. So far, you have successfully uninstalled the device.

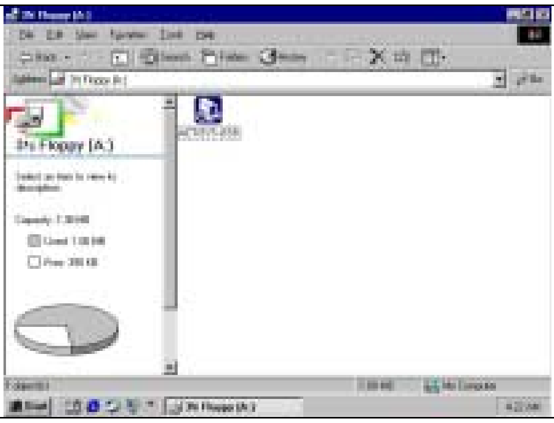
WINDOWS ME INSTALLATION GUIDE

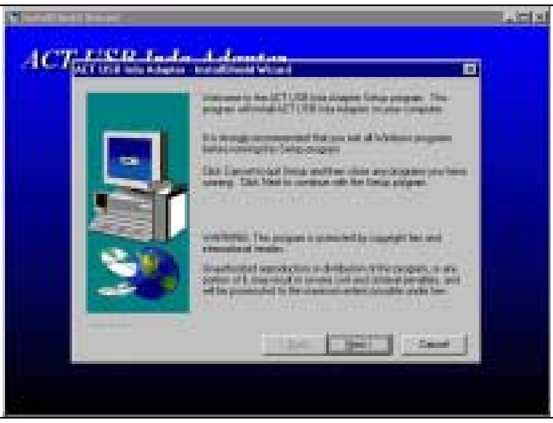
Note: The Win2000 driver of IR2000U works only under the release build 9.30.2000 or above.

Note: Make sure no hardware or software is occupying or binding the USB port that you intend to use for ACT-IR2000u. Plugging and unplugging multiple USB devices on the same USB port may cause damage to your registry and may make your Windows O.S unstable.

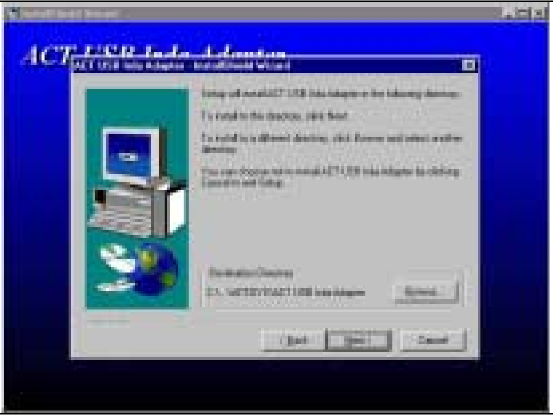
Note: **UNPLUG** ACT-IR2000U on your computer before you boot your system. No prior similar IrDA-USB driver software was installed. If yes, please refer to Un-installation Guide to remove the old driver, before installing this new driver software

1. Boot your system.
2. Go to A: driver

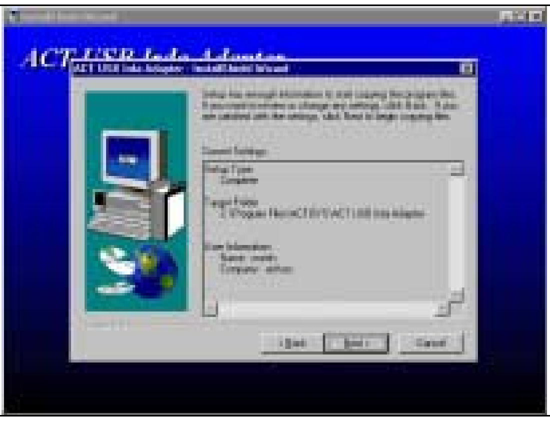
3. Double click **ACTiSYS IR2000U20.exe**	

4. Click **Next>**	

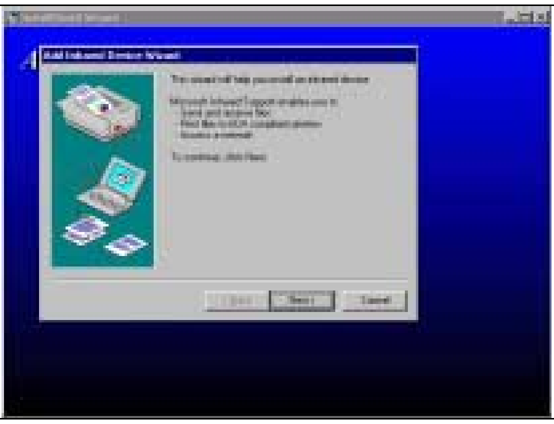
5. Click **Next>**



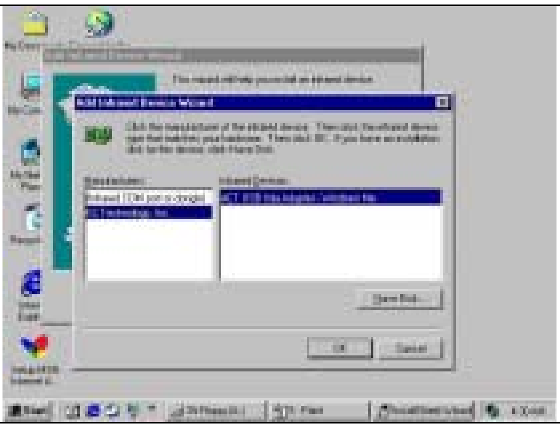
6. Click **Next>**

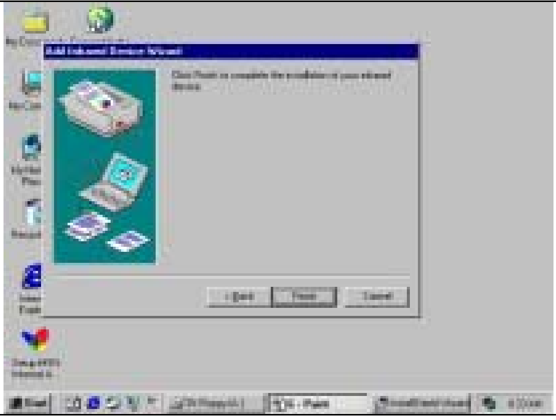


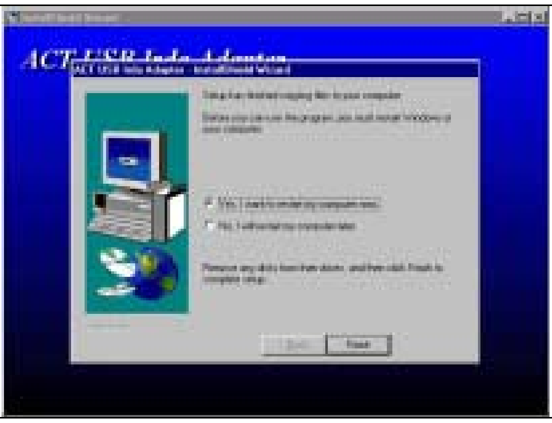
7. Click **Next>**



8. Highlight **ACT-IR2000UIC** from **Manufacturers** list and **ACT USB Irda Adapter – Windows Me** from **Infrared devices** list, then click **OK**



9. Click **Finish**	

10. Click **Finish**	

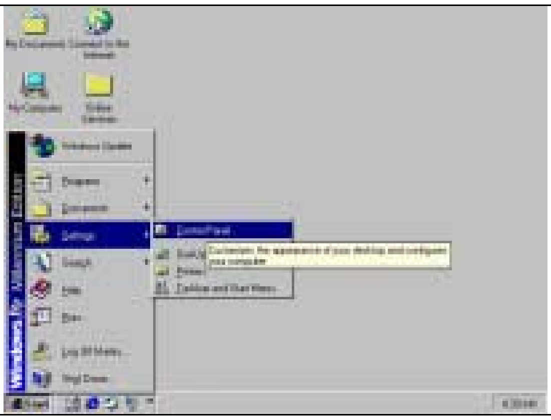
11. **Plug** ACT-IR2000U on USB port when your computer start.

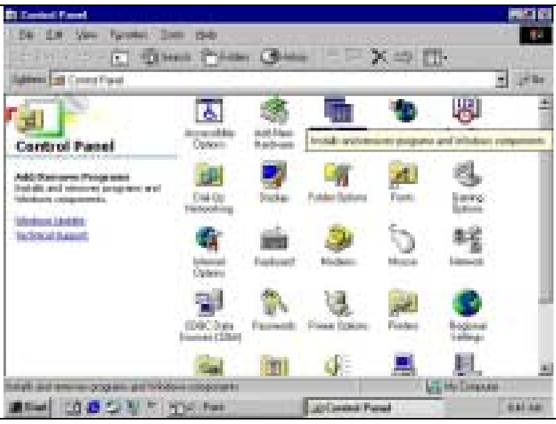
After a few seconds, the light on the top of ACT-IR2000U begins to blink every three seconds. The device has been successfully installed on you computer.

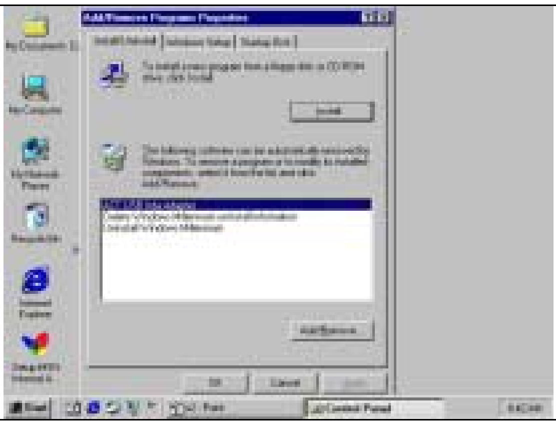
WINDOWS ME UN-INSTALLATION GUIDE

Note: Make sure of **PLUGGING** ACT-IR2000U on your computer before you uninstall the device.

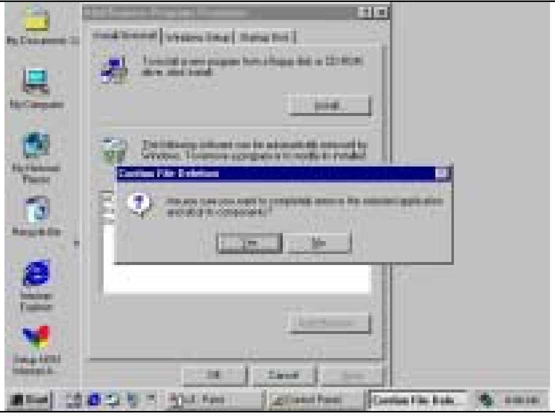
1. Boot your system

2. Go to **Control Panel**	

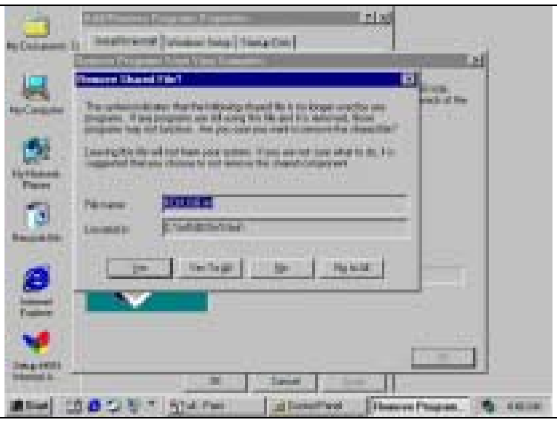
3. Double click **Add/Remove program** icon	

4. Highlight **ACT USB Irda Adapter**, then click **Add/Remove**.	

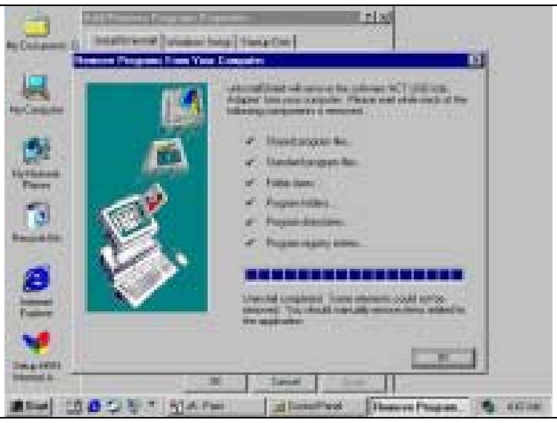
5. Click **Yes**



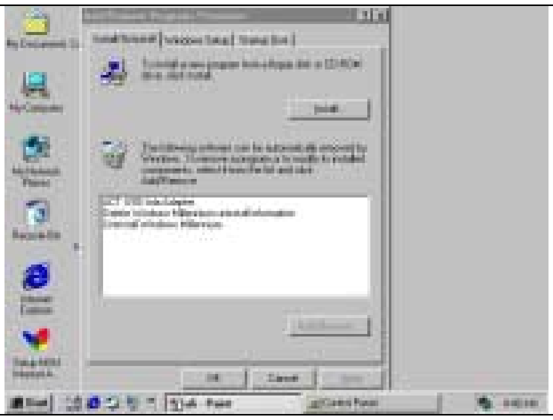
6. Click **Yes To All**



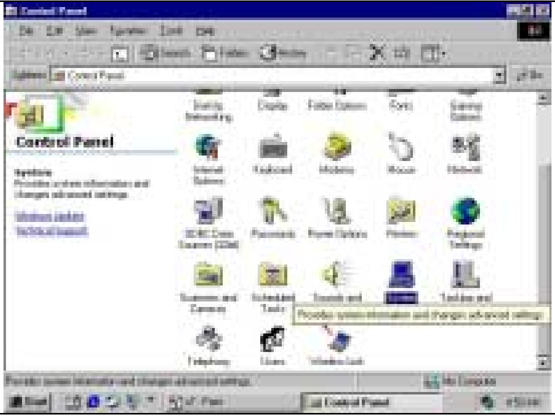
7. Click **OK**



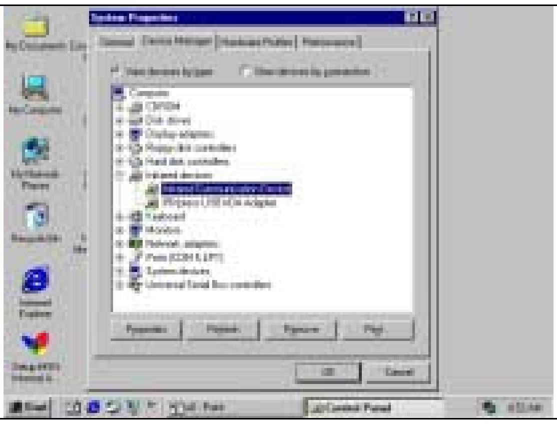
8. Click **OK**



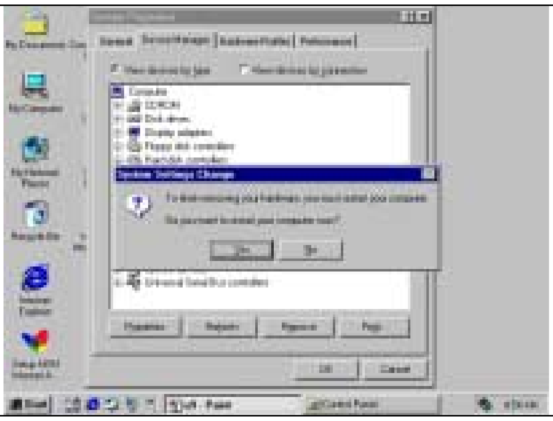
9. Double click **System** icon



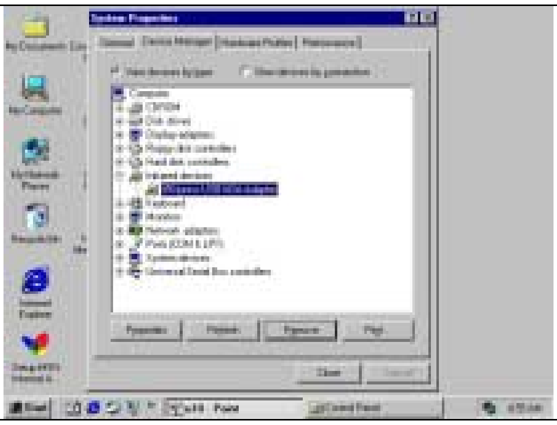
10. Go to **Device Manager**, highlight **Infrared Communication Device**, click **Remove**

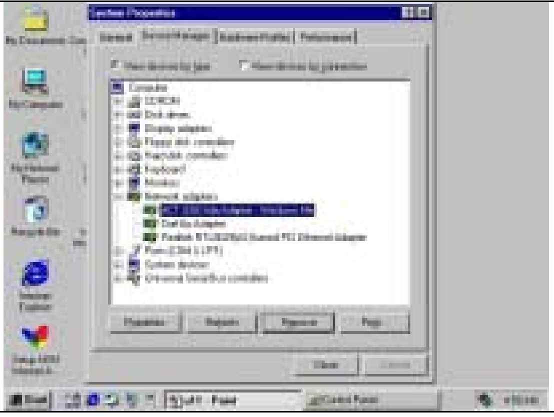


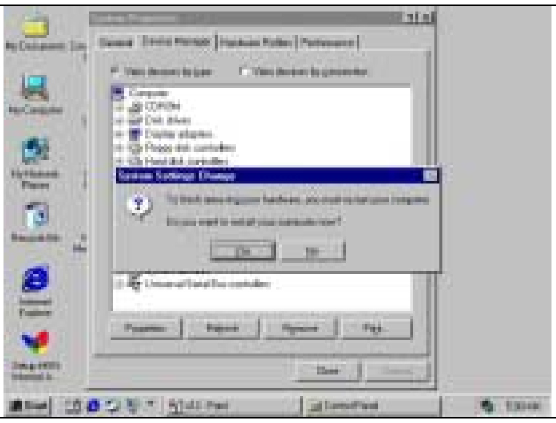
11. Click **No**



12. Highlight **IRXpress USB IrDA Adapter**, then **Remove**



13. Highlight **ACT USB Irda Adapter – Windows Me**, then **Remove**	

14. Click **Yes**	

15. **Unplug** ACT-IR2000U when your system reboots. So far, you have successfully uninstalled the device.

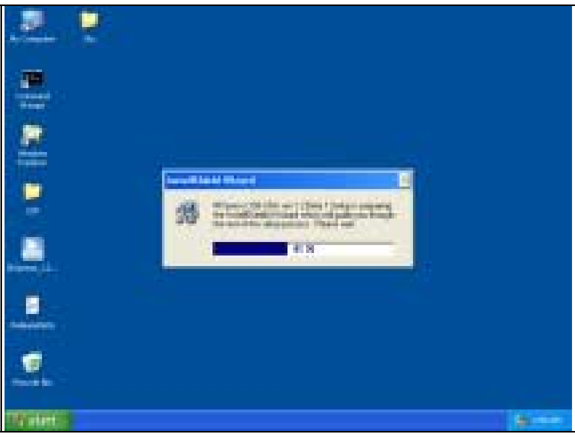
WINDOWS XP INSTALLATION GUIDE

Note: Make sure no hardware or software is occupying or binding the USB port that you intend to use for ACT-IR2000u. Plugging and unplugging multiple USB devices on the same USB port may cause damage to your registry and may make your Windows O.S unstable.

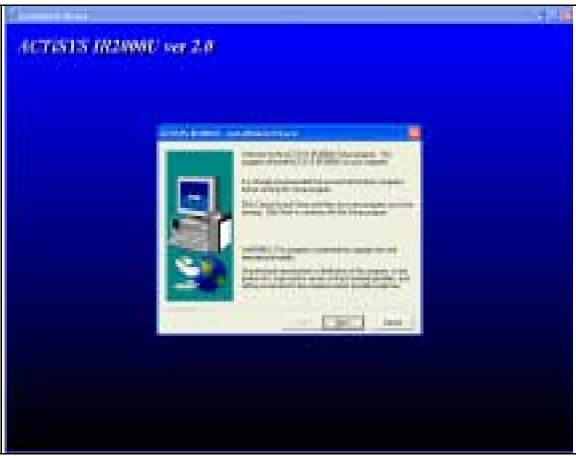
Note: **UNPLUG** ACT-IR2000U on your computer before you boot your system. No prior similar IrDA-USB driver software was installed. If yes, please refer to Un-installation Guide to remove the old driver, before installing this new driver software

1. Do not connect ACT-IR2000U to your computer while booting the system.
2. Double-click **Actisys IR2000U20.exe.**

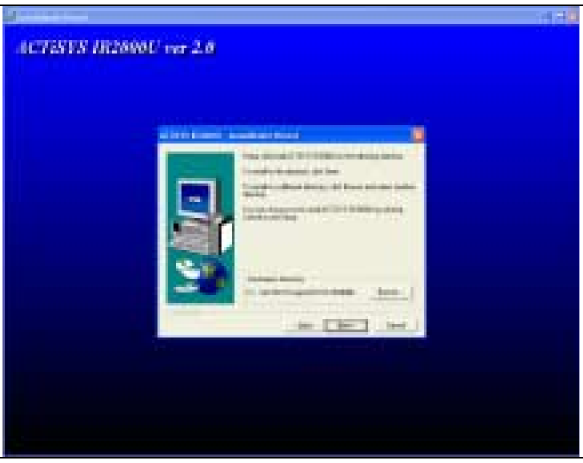
3. Wait…



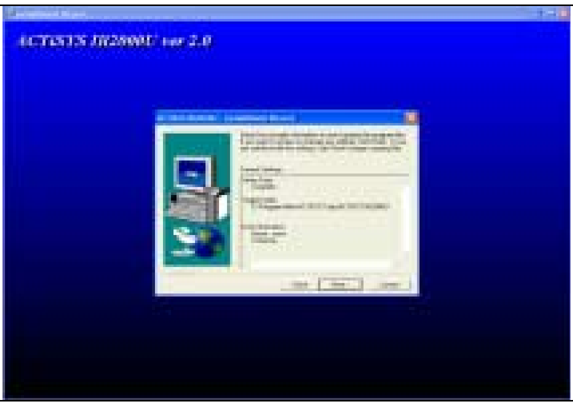
4. Click **Next>** on the following window.



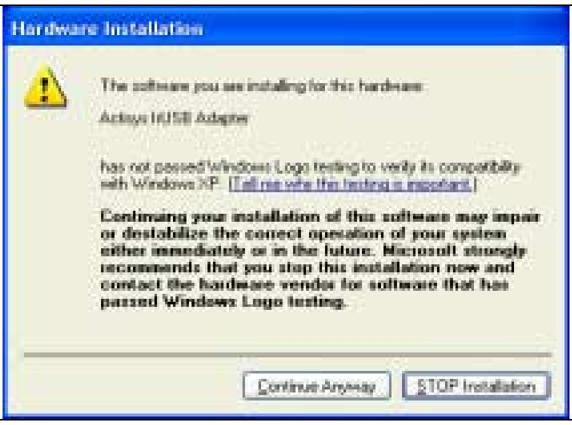
5. Click **Next>**


ACTiSYS IR2000U ver 2.0

6. Click **Next>**


ACTiSYS IR2000U ver 2.0

7. Click **Continue Anyway**



Hardware Installation

The software you are installing for this hardware:

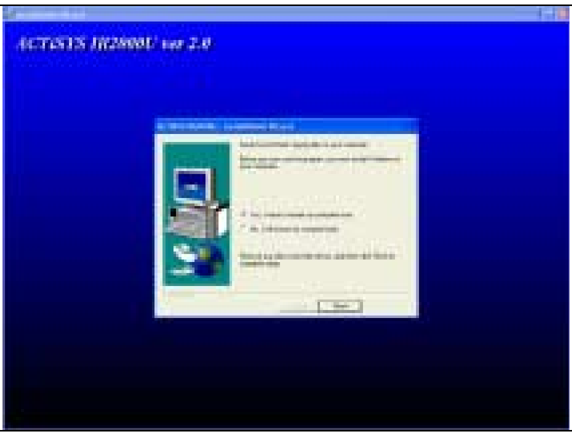
Actisys IrUSB Adapter

has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)

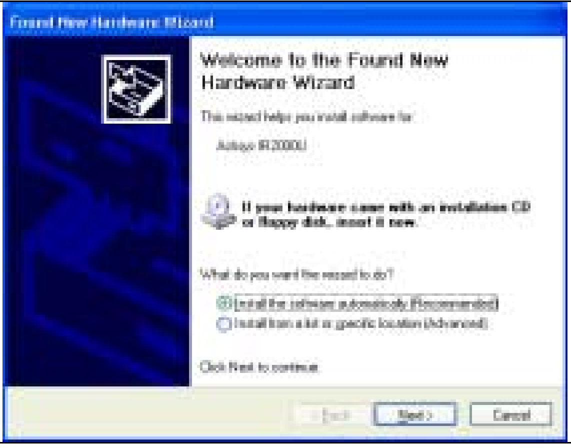
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.

Continue Anyway
STOP Installation

8. Choose **Yes, I want to restart my computer now**, then click **Finish**


ACTiSYS IR2000U ver 2.0

9. Restart your computer and plug ACT IR2000U into your computer. Your computer will pop up to a window. Choose **Install the software automatically**, then click **Next>**.


Found New Hardware Wizard
< Back
Next >
Cancel

Welcome to the Found New Hardware Wizard

This wizard helps you install software for:

Actisys IR2000U

If your hardware came with an installation CD or floppy disk, insert it now.

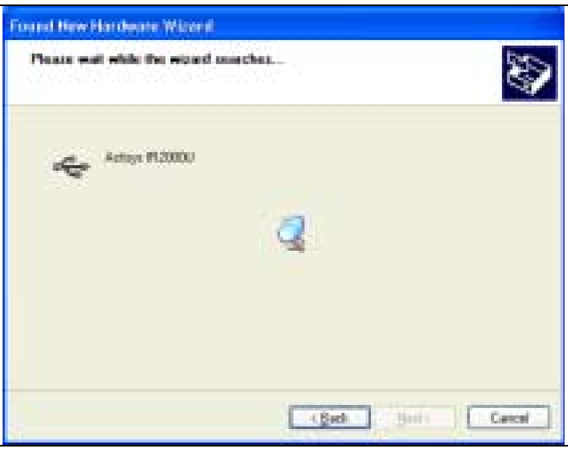
What do you want the wizard to do?

● Install the software automatically (Recommended)

○ Install from a list or specific location (Advanced)

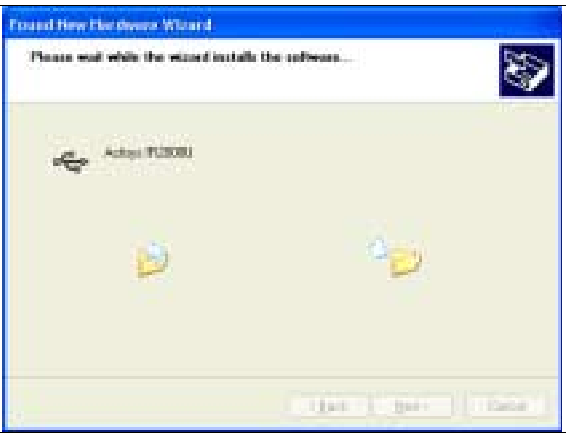
Click Next to continue.

10. **Wait…**


Found New Hardware Wizard
Actisys IR2000U
< Back
Next >
Cancel

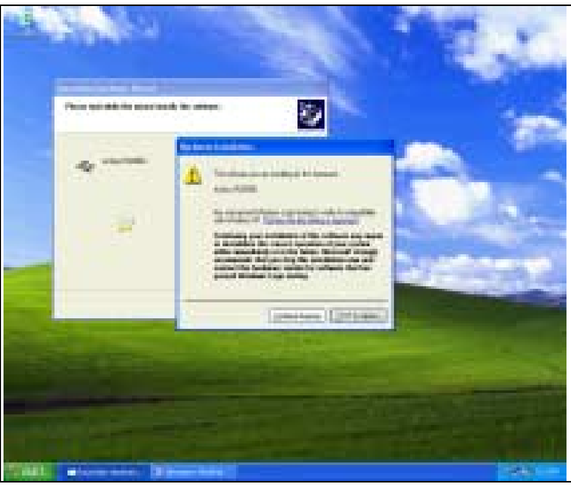
Please wait while the wizard searches...

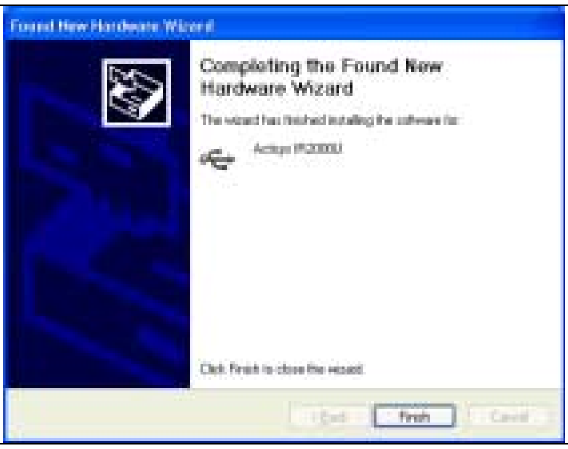
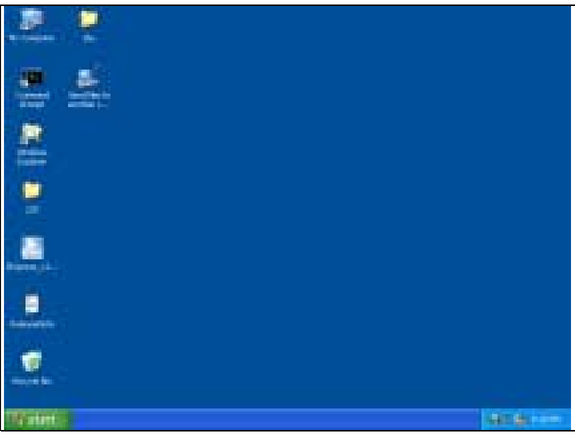
11. **System will install driver for ActIsys IR2000U**


Found New Hardware Wizard
Actisys IR2000U
< Back
Next >
Cancel

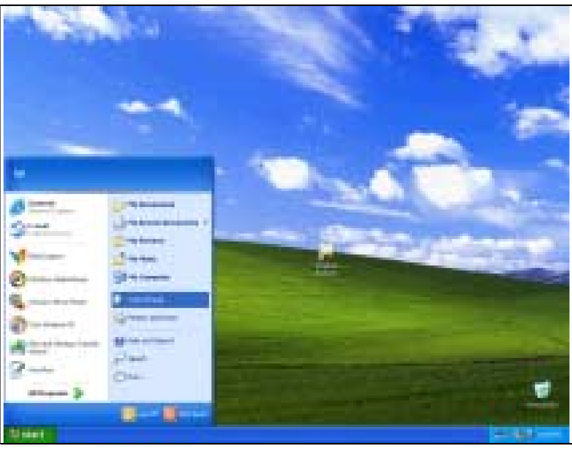
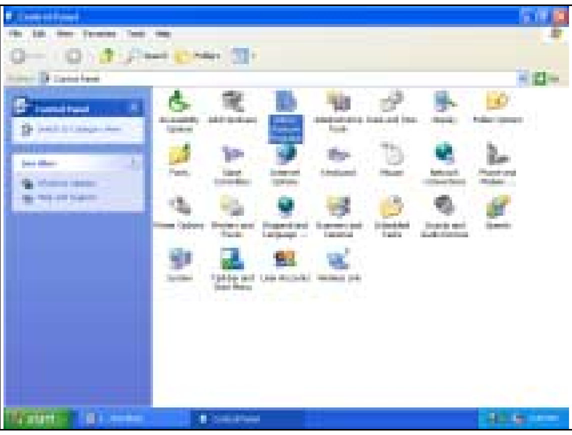
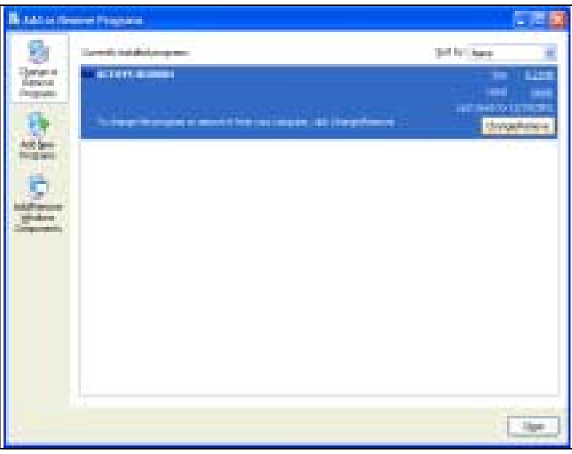
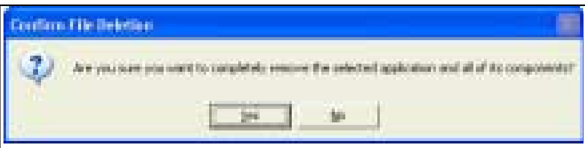
Please wait while the wizard installs the software...

12. Click **Continue Anyway**

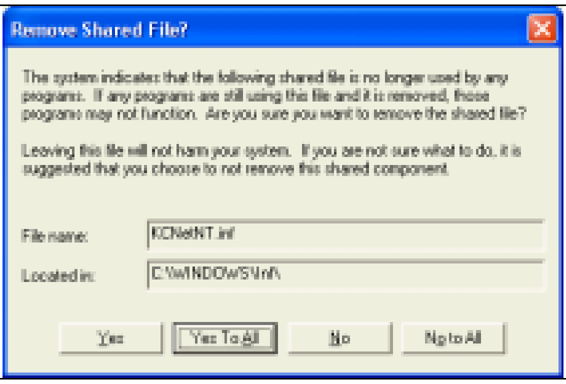


13. Click **Finish**	 Completing the Found New Hardware Wizard The wizard has finished installing the software for: Actisys IR2000U Click Finish to close the wizard. Found New Hardware Wizard < Back Finish Cancel
14. You have successfully installed the device.	

WINDOWS XP UN-INSTALLATION GUIDE

1. Go to **Control Panel**	
2. Double Click **Add or Remove Programs** icon.	
3. Highlight **KC ACTiSYS IR2000U** then click **Change/Remove**	
4. Click **Yes**	 Confirm File Deletion Are you sure you want to completely remove the selected application and all of its components? Yes No

5. Click **Yes To All.**



Remove Shared File?

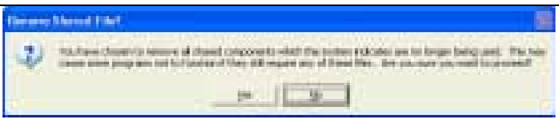
The system indicates that the following shared file is no longer used by any programs. If any programs are still using this file and it is removed, those programs may not function. Are you sure you want to remove the shared file?

Leaving this file will not harm your system. If you are not sure what to do, it is suggested that you choose to not remove this shared component.

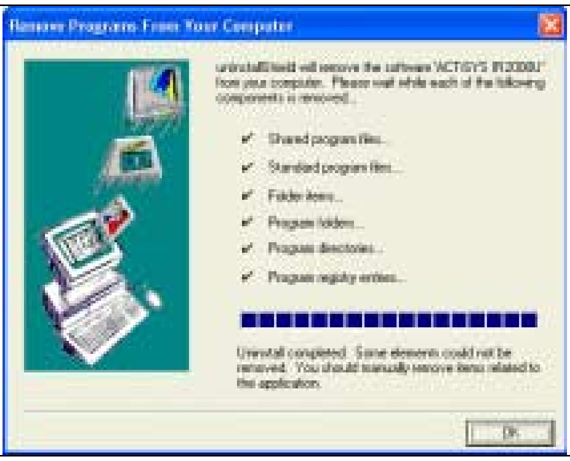
File name: KCNetNT.inf

Located in: C:\WINDOWS\Inf\

6. Click **Yes.**



7. Click **OK**. You have successfully uninstalled the device from your system.



Remove Programs From Your Computer

UninstallShield will remove the software 'ACTiSYS IR2000U' from your computer. Please wait while each of the following components is removed...

- ✓ Shared program files...
- ✓ Standard program files...
- ✓ Folder items...
- ✓ Program folders...
- ✓ Program directories...
- ✓ Program registry entries...

Uninstall completed. Some elements could not be removed. You should manually remove items related to the application.

TROUBLE SHOOTING

For help on general and miscellaneous problems you may be experiencing with your printing, refer to the following pages for possible solutions. Look up your problem and try the solution.

SYMPTOM	PROBLEM	Solution
Can not establish link (General)	1. The two IR devices are not aligned properly. 2. Distance is too near or far. 3. Device is inactivated 4. BIOS setting incorrect 5. Installation is not correct.	1. Properly align them again 2. Move one device to a proper distance. 3. Enable the device by IR monitor. 4. Correct the BIOS Setting. 5. Refer to un-installation guide to remove the device, then install again.
File Transfer between IR-equipped PDA and ACT-IR device-attached host computer stops before finishing up and an error message appears.	The infrared communication is interfered. For example, something blocks out the infrared beam or the burst of string light source, etc.	Check to find out the source of interference and eliminate it before trying again.
The device work well before. But after I unplug it then plug, it does not work again.	Improper unplug and plug procedure	Before you unplug it, you should disable the device. And enable the device after you plug it into your computer

SPECIFICATION

- **Product Name:** ACT-IR2000U FIR-USB Adapter
- **Compatibility:** Fully compliant to USB specification 1.1 and IrDA specification 1.1
- **Communication speed and Distance:**
  IrDA-1.0 (9.6, 19.2, 38.4, 57.6, 115.2Kbps): 3-100cm;
  IrDA-1.1 (4Mbps): 3--100cm;
- **Connection:** Standard USB connector with 4-ft USB cable
- **Power Source:**
  Obtain power from USB port. No external power supply required.
- **Power Consumption:**
  Active current < 400 mA), standby current: < 0.5 mA
- **Dimension:** 61mm(L) X 35mm(W) X 18mm(H), 2.4"(L) X 1.4"(W) X 0.7"(H)
- **Weight:** 2.4 oz (65.0 gr)
- **Operating Temperature:** 0° C TO 40° C
- **Storage Temperature** -20° C TO 85° C

PRECAUTIONS

To ensure trouble-free operation, please observe the following precautions:
Optical communications are easily affected by external light sources, weak batteries, transfer distance, transfer angle, etc. Any of these conditions may cause a data transfer failure, incomplete, missing or incorrect data. Make sure that the wireless interface is away from direct sunlight and other strong light source.

- Do not terminate arbitrarily during file transfer process between DUT and computers until finished. Otherwise DUT internal data integrity may be damaged, which is due to the violation of DUT's.
- Do not expose the unit to moisture, as this will damage the internal circuitry.
- Do not expose the unit to extreme temperatures. It should not be placed in direct sunlight or in a closed vehicle, neither should it be placed near heaters nor other heat sources.
- Do not store the unit in a humid or dusty place.
- Use a soft, dry cloth to clean the unit. Do not use a wet cloth or any solvent.
- Do not drop the unit or handle the unit carelessly.

CAUTION:

- Never touch the pins of computer connection terminal. The internal circuits can be damaged by a static Electricity discharge. If this device requires any servicing, use only an ACTiSYS service dealer, an ACTiSYS approved service facility, or an ACTiSYS repair service.
- When exchanging data with host computer, be sure the appropriate serial communication port is available and is not in conflict with other peripheral device or software.

WARRANTY INFORMATION

THE FOLLOWING WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

ACTiSYS Corporation warrants to the first consumer purchaser, for a period of one year from the date of purchase, that this wireless interface (“the Product”) will be free from defective workmanship and materials, and agrees that it will, at its option, either repair the defect or replace the defective Product or part thereof at no charge to the purchaser for parts or for labor.

This warranty does not apply to any appearance items of the Product, any consumable items such as paper, ink ribbon, or batteries supplied with the Product, or to any equipment or any hardware, software, firmware, or peripheral other than the Product. This warranty does not apply to any Product the exterior of which has been damaged or defected, which has been subjected to misuse, abnormal service or handling, or which has been altered or modified in design, construction or interfacing. **Tampering With Label Voids Warranty**.

In order to enforce the rights under this limited warranty, the purchaser should mail, ship, or carry the Product, together with proof of purchase, to ACTiSYS.

The limited warranty described above is in addition to whatever implied warranties may be granted to purchasers by law. To the extent permitted by applicable law, ALL IMPLIED WARRANTIES INCLUDING THE WARRANTIES OF MERCHANT ABILITY AND FITNESS FOR USE ARE LIMITED TO A PERIOD OF ONE YEAR FROM THE DATE OF PURCHASE. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

Neither the sales personnel of the seller nor any other person is authorized to make any warranties other than those described above, or to extend the duration of any warranties beyond the time period described above on behalf of ACTiSYS Corporation.

The warranties described above shall be the sole and exclusive remedy available to the purchaser. Correction of defects, in the manner and for the period of time described above, shall constitute full satisfaction of all claims, whether based on contract, negligence, strict liability or otherwise. In no event shall ACTiSYS Corporation be liable, or in any way responsible, for any damages or defects in the Product which were caused by repairs or attempted repairs performed by anyone other than ACTiSYS technician. Nor shall ACTiSYS Corporation be liable or in any way responsible for any incidental or consequential economic or property damage. Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply for you.

ACTiSYS Corporation warrants to the first consumer purchaser, for a period of 1 year from the date of purchase, that this wireless interface (The Product? Will be free from defective workmanship and materials, and agrees that it will, at its option, either repair the defect or replace the defective Product or part thereof at no charge to the purchaser for parts or for labor.

This warranty does not apply to any appearance items of the Product, any consumable items such as paper, ink ribbon, or batteries supplied with the Product, or to any equipment or any hardware, software, firmware, or peripheral other than the Product. This warranty does not apply to any Product the exterior of which has been damaged or defected, which has been subjected to misuse, abnormal service or handling, or which has been altered or modified in design, construction or interfacing. Tampering With Label Voids Warranty.

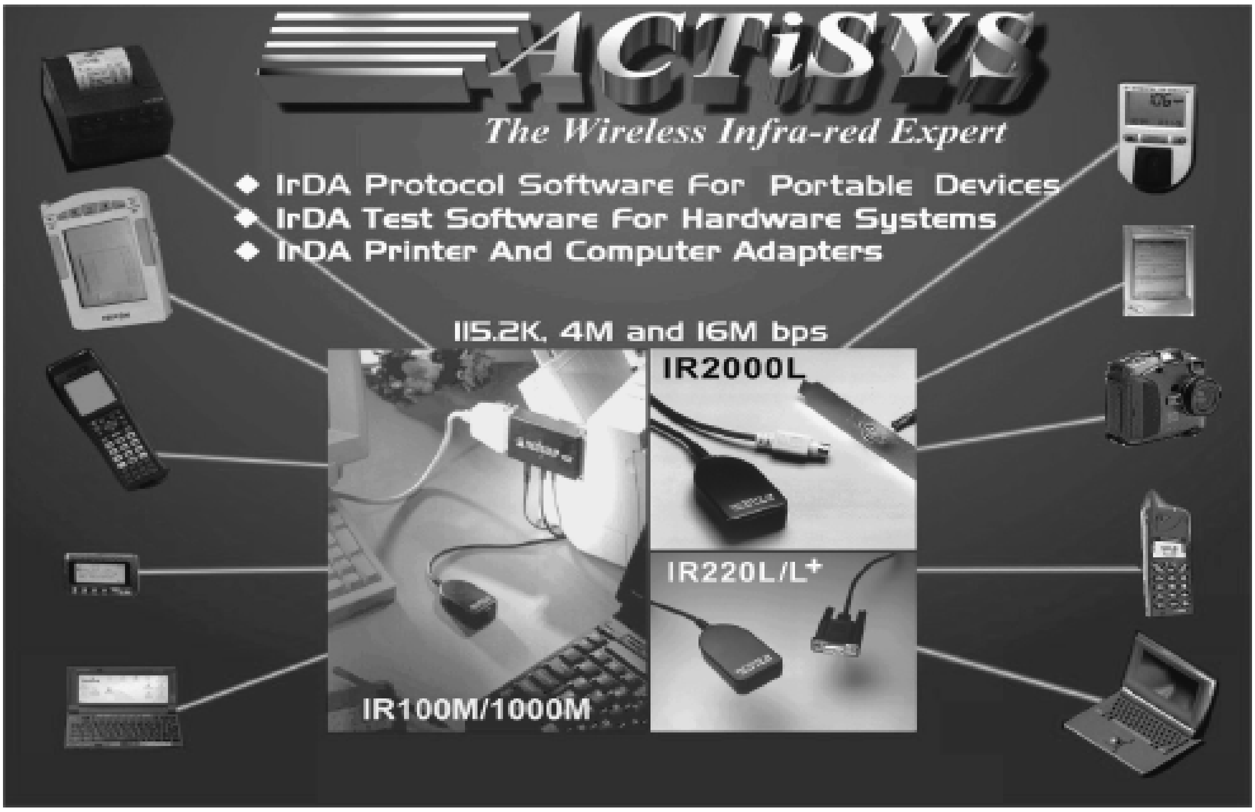
In order to enforce the rights under this limited warranty, the purchaser should mail, ship, or carry the Product, together with proof of purchase, to ACTiSYS .

The limited warranty described above is in addition to whatever implied warranties may be granted to purchasers by law. To the extent permitted by applicable law, ALL IMPLIED WARRANTIES INCLUDING THE WARRANTIES OF MERCHANT ABILITY AND FITNESS FOR USE ARE LIMITED TO A PERIOD OF 1 YEAR FROM THE DATE OF PURCHASE. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

Neither the sales personnel of the seller nor any other person is authorized to make any warranties other than those described above, or to extend the duration of any warranties beyond the time period described above on behalf of ACTiSYS Corporation.

The warranties described above shall be the sole and exclusive remedy available to the purchaser. Correction of defects, in the manner and for the period of time described above, shall constitute full satisfaction of all claims, whether based on contract, negligence, strict liability or otherwise. In no event shall ACTiSYS Corporation be liable or in any way responsible, for any damages or defects in the Product which were caused by repairs or attempted repairs performed by anyone other than ACTiSYS technician. Nor shall ACTiSYS Corporation be liable or in any way responsible for any incidental or consequential economic or property damage. Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you.

CONTACT INFORMATION


ACTiSYS
The Wireless Infra-red Expert
◆ IrDA Protocol Software For Portable Devices
◆ IrDA Test Software For Hardware Systems
◆ IrDA Printer And Computer Adapters
115.2K, 4M and 16M bps
IR2000L
IR220L/L+
IR100M/1000M

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