Wavit11 User's Manual

Revision 1.01

CONFIDENTIAL

Revision History

December 6, 2001	Revision 1.0	Translated from Japanese edition (Rev. 1.0)
January 19, 2002	Revision 1.01	Regulatory Compliance Notice changed

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About This Guide

Absolutely do not do the operation when the instruction is given with this mark.

Please pay attention in the case you do the operation indicated with this mark.

The relevant usage is explained. Please refer, as occasion demands.

This is for an explanation such as terminology.

Regulatory Compliance Notices

Class B Equipment

This equipment has been tested and found to comply with limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. 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 not 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 more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit deferent from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Modifications

Change or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CAUTION (United States only)

FCC Radio-Frequency Exposure Statement

This equipment generates and radiates radio-frequency energy. In order to comply with FCC radio-frequency radiation exposure guidelines for an uncontrolled environment, this equipment has to be installed and operated while maintaining a minimum body to antenna distance of 20 cm.

Canadian Notice

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference received, including interference that may cause undesired operation of the device.

If this product is used near the television set or radio receiver, the TV display may be sometimes disturbed or the noise may be heard in audio output. In such a situation, it will be necessary to install this product far from TV and radio set.

This product may affect the medical apparatus, so you cannot install this product inside a hospital.

If you install this product near the microwave oven, communication performances may degrade due to the radio wave emitted from microwave oven. Install this product far from microwave oven or prevent from the simultaneous usage.

Accompanied AC adapter is designed for 117volts AC use only. The use of AC other than 117volts is dangerous and not permitted. The use of other AC adapters is prohibited. If other AC adapters were used, the product would heat or it may lead to a fire.

Wavit is a registered trademark of Mitsumi Electric Co., Ltd.
Wi-Fi™ is a registered trademark of Wireless Ethernet Compatibility Alliance.
RC4 is a registered trademark of RSA Security Inc. in United State and other country.
Microsoft, Windows, and Windows NT are trademarks of Microsoft Corporation.
All company names and product names are trademark of their respective companies.
Mitsumi are not responsible for any damage or loss caused by the Wavit11 Wireless LAN.
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1. Preface

Thank you for purchasing the Wavit11. This user's manual includes various notices to allow you to use the Wavit11 safely and properly. Keep this anytime and read carefully. In this way, you can always refer to this.

2. Accompanied Accessories

The following accessories are accompanied to Wavit11.
If you could not check all accessories, contact with the distributor.

Accessories

Item	Quantity	Note
Wavit11 Wireless LAN	1	
AC Adapter	1	
Ethernet Cable	1	Straight Cable (1m)
Wall Mount Attachment	1	
User's Manual	1	This document
Wavit11 Configuration Utility	1	3.5 inch Floppy disk

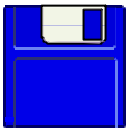
Wavit11 Wireless LAN

AC Adapter

Ethernet Cable

Wall Mount Attachment

Users Manual


Wavit11 Configuration Utility

3. Features

The Wavit11 is standalone wireless LAN with 10BASE-T interface. When using Wavit11, you can install wireless network not only to personal computers but also to printer and other network equipment that have 10BASE-T ports. The Wavit11 is connected to network devices with 10BASE-T cable, so you do not need to install device drivers to set up Wavit11.

The Wavit11 operates as Access Point that supports up to 16 Wavit11. Also, it operates as Wireless Bridge. Wireless Bridge connects two networks that are physically separated by two Wavit11s.

Access Point

If you install the combination network of wired LAN and wireless LAN, you will need intermediary device in order to connect the wired and wireless networks. Such equipment is called Access Point.

4. How to use Wavit11

1. Select a kind of wireless LAN network according to the omtended use of Wavit11.
2. Install Wavit11 Configuration Utility to the personal computer.
3. Set up the Wavit11 by using Wavit11 Configuration Utility.
4. In the case that an encryption is used, set up the encryption mode.
5. Set up Wavit11.

"About Wireless LAN Network" page10

"Installation method of Wavit11 Configuration Utility" page15

"Wavit11 Set Up" page33

"Encryption Setting" page65

"Wavit11Setting up" page79

5. About Wireless LAN Network

There are 4 types of wireless LAN network that using Wavit11.
Make a selection according to the usage of the wireless LAN network.

Wireless LAN Type	Function
Ad-Hoc LAN	The network consists of only wireless clients.
IBSS LAN	The network consists of only wireless clients.
Infrastructure LAN	The network combined both wired and wireless clients.
Wireless Bridge	The network connects two networks wirelessly.

"Ad-Hoc LAN" page11

"IBSS LAN" page12

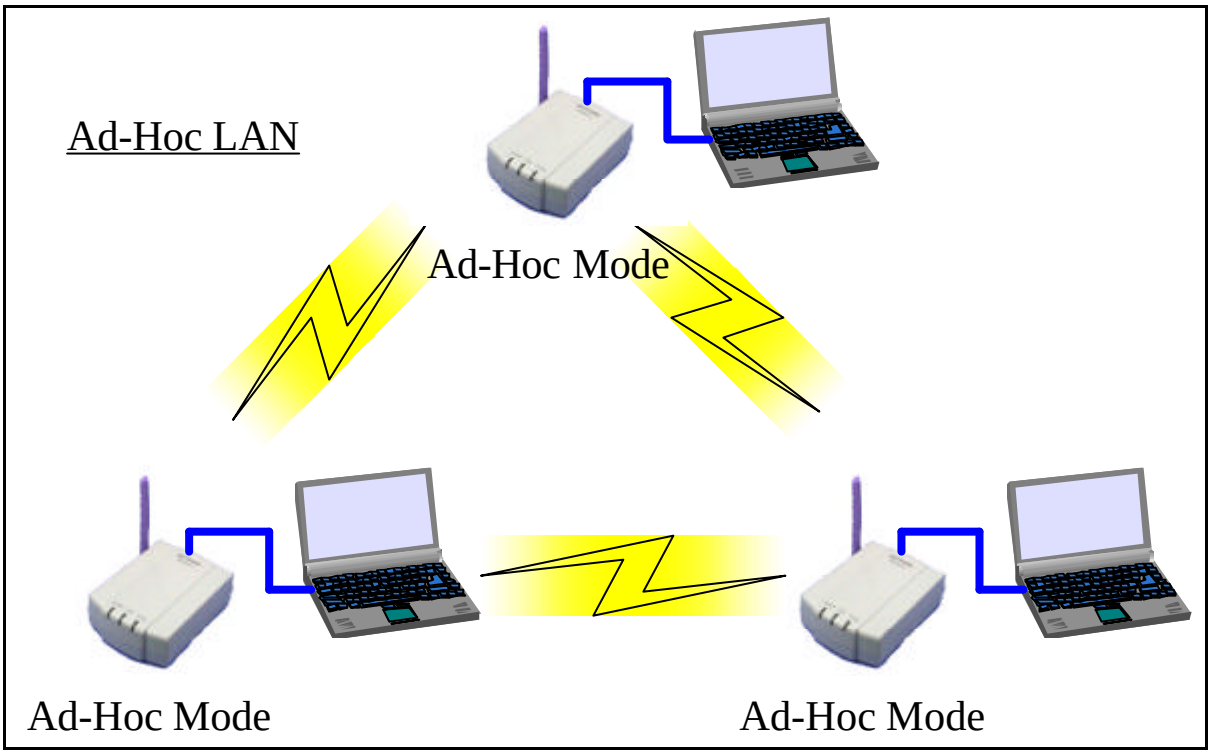
"Infrastructure LAN" page13

"Wireless Bridge" page14

5.1. Ad-Hoc LAN

The Ad-Hoc LAN is a network consisting of only wireless LAN. It is the network that does not connect to the Ethernet backbone and external network such as Internet. There is not a restriction on the number of wireless LAN units in the Ad-Hoc LAN.

Set the communication mode of Wavit11 to “Ad-Hoc” mode.



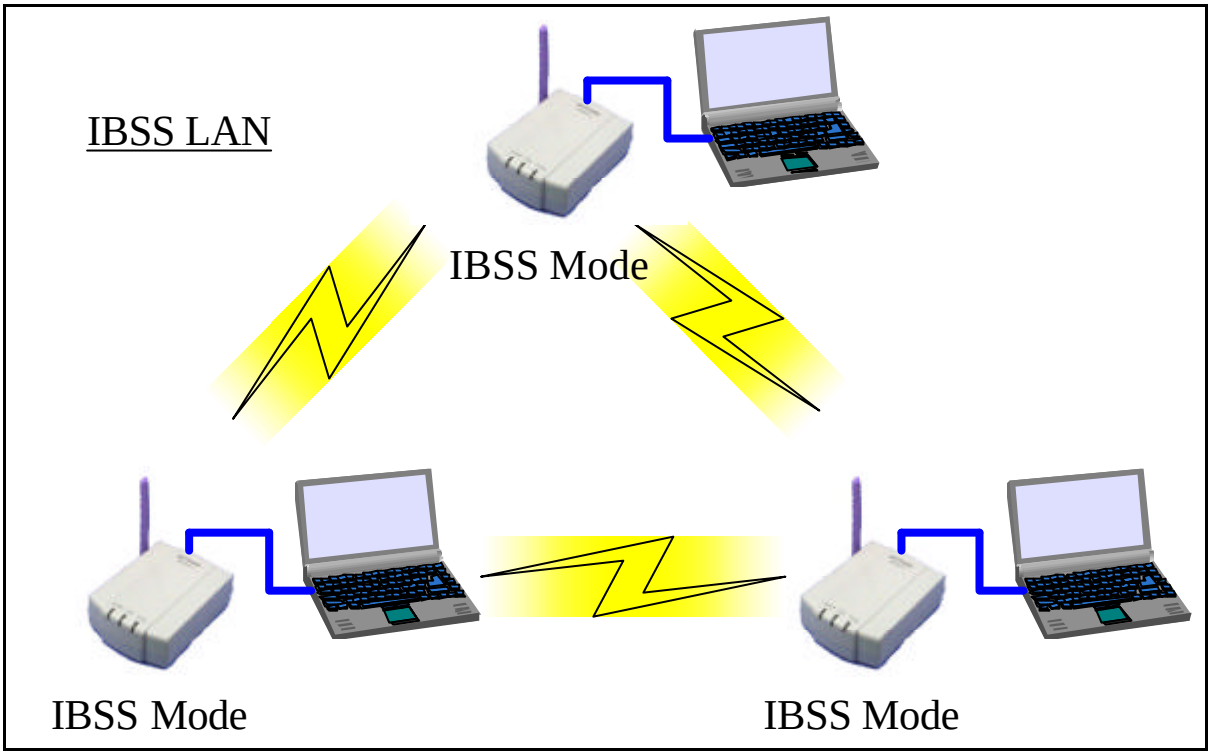
The communication between all Wavit11 will be possible if the channel and encryption setting agree in the Ad-Hoc LAN. Paying attention on the security is necessary for the setting up.

“How to setup the Ad-Hoc mode” Page38

5.2. IBSS LAN

The IBSS LAN is a network of only wireless LAN. It is the network that does not communicate to the Ethernet backbone and external network such as Internet. There is not a restriction on the number of wireless LAN units in the IBSS LAN.

Set the communication mode of Wavit11 to “802.11 Ad-Hoc” mode.



Communication between Wavit11 is possible as long as their SS ID agree in contrast to Ad-Hoc LAN, although intended use of IBSS LAN is similar to that of Ad-Hoc LAN.

“How to Setup the 802.11 Ad-Hoc mode” page41

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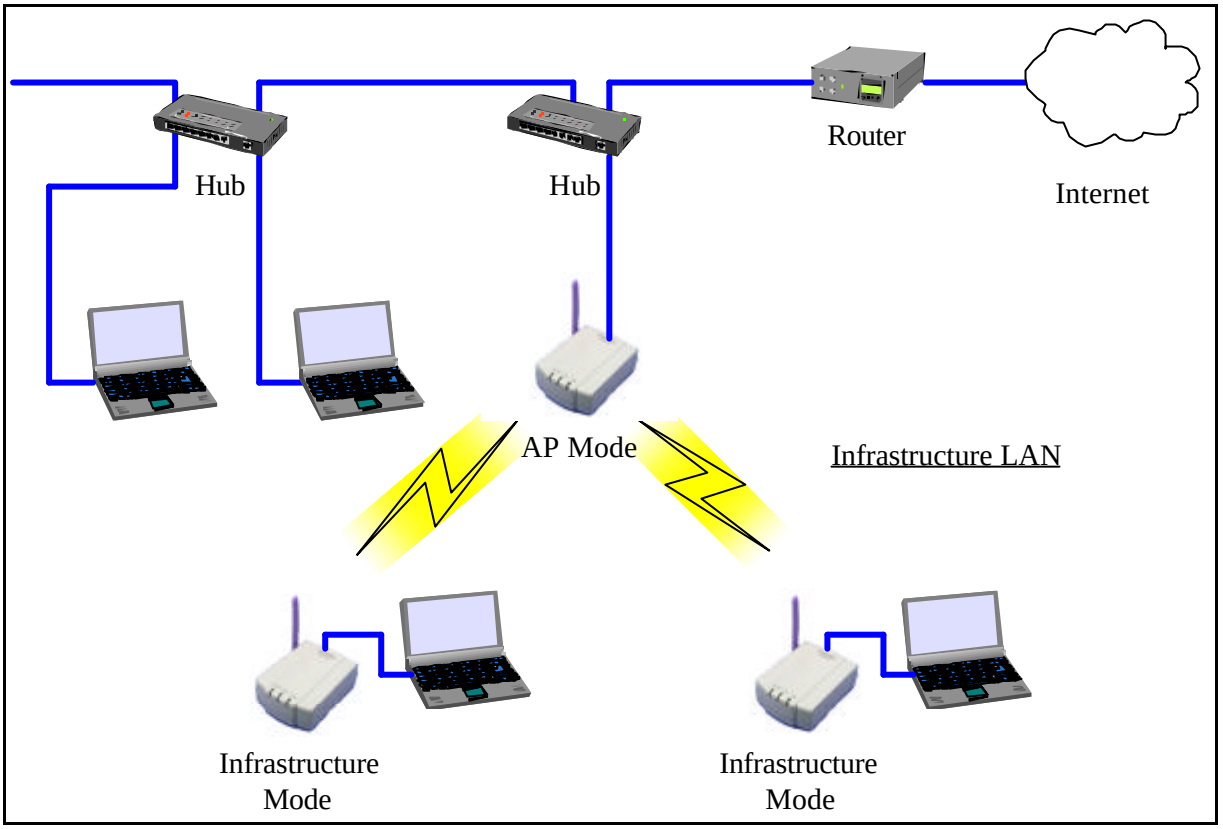
5.3. Infrastructure LAN

Communication is established via an Access Point in the infrastructure LAN, therefore direct communication with other Wavit11s is not possible. This is the network that is used in such an occasion where Ethernet is being connected to Access Point and Internet access is carried out through Ethernet.

Set the communication mode of one Wavit11 to "AP" mode and set the other Wavit11 communication mode to "Infrastructure" mode.



One Wavit11 can support up to 16 units of Wavit11 in AP mode.

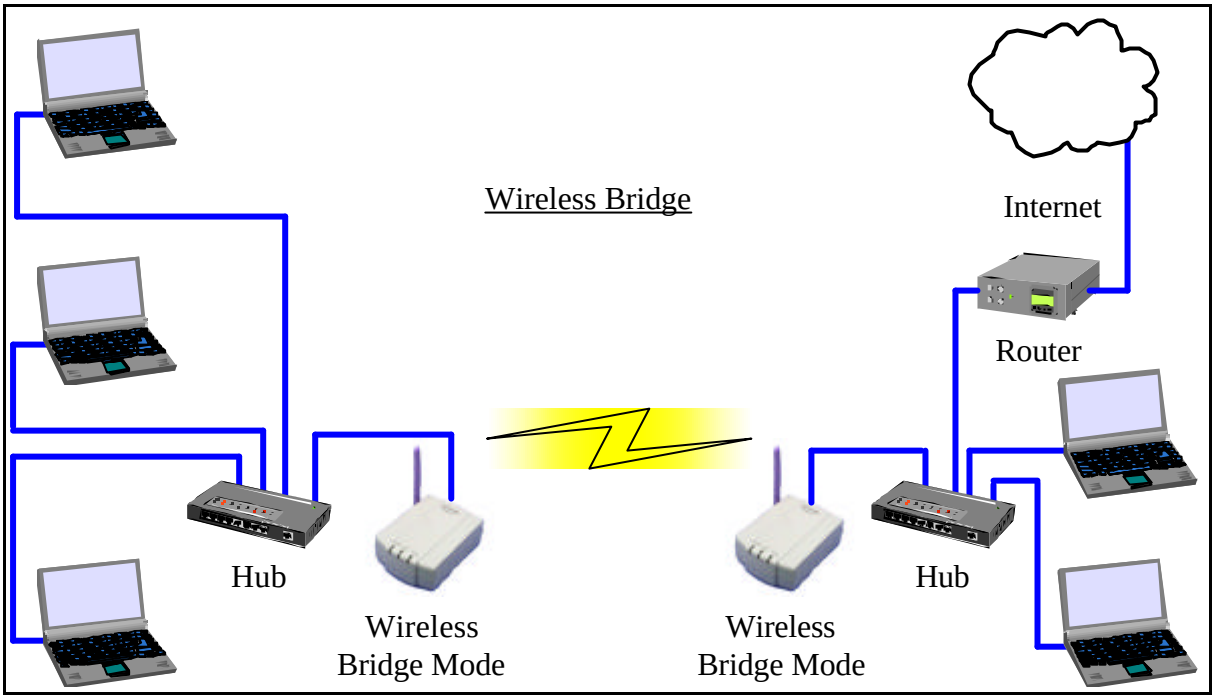
"How to Setup the Infrastructure mode" page44

"How to Setup the AP mode" page51

5.4. Wireless Bridge

The Wireless Bridge connects two wired network using two Wavit11. The maximum number of network equipment that can be connected to wired LAN is 16.

Set the communication mode of Wavit11 to “Wireless Bridge” mode.



If more than 16 network equipment are connected, there will be cases where some network equipment cannot access to the other side network equipment.

“How to Setup the Wireless Bridge Mode” page55

6. Installation method of Wavit11 Configuration Utility

1. Confirm the operating system of personal computer and its version.
2. Confirm the existence of Ethernet port in your personal computer.
3. Confirm if the TCP/IP protocol is installed and set up appropriately in your personal computer.
4. In the case "Obtain an IP address automatically" is set in a TCP/IP of your personal computer IP address will be confirmed.
5. Install Wavit11 Configuration Utility to your personal computer.

"Microsoft Windows Version" page16

"Confirm an Ethernet port" page17

"Confirm the TCP/IP protocol" page19

"Confirm an IP Address" page25

"Installation of the Wavit11Configuration Utility" page28

Wavit11 Configuration Utility does not operate on the operating system other than Microsoft Windows, such as MAC operating system and Lynux. At least one personal computer in which Microsoft Windows operating system runs is necessary to set up Wavit11 using Wavit11 Configuration Utility.

6.1. Microsoft Windows Version

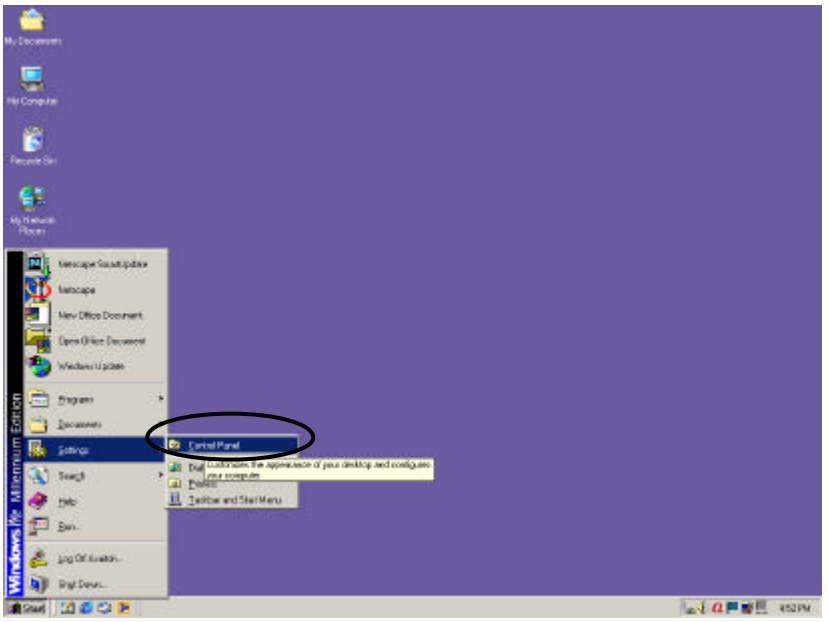
Wavit11 Configuration Utility runs on Microsoft Windows of the following version.

OS	Status	Notes
Windows95		Install 4.01 or above Internet Explorer
Windows95 OSR2		Install 4.01 or above Internet Explorer
Windows95 OSR2.5		Install 4.01 or above Internet Explorer
Windows98	OK	
Windows98 SE	OK	
Windows Me	OK	
Windows NT 4.0 WorkStation		Install 4.01 or above Internet Explorer Windows NT SP3 is required to install Internet Explorer 4.01.
Windows 2000	OK	
Windows XP	OK	

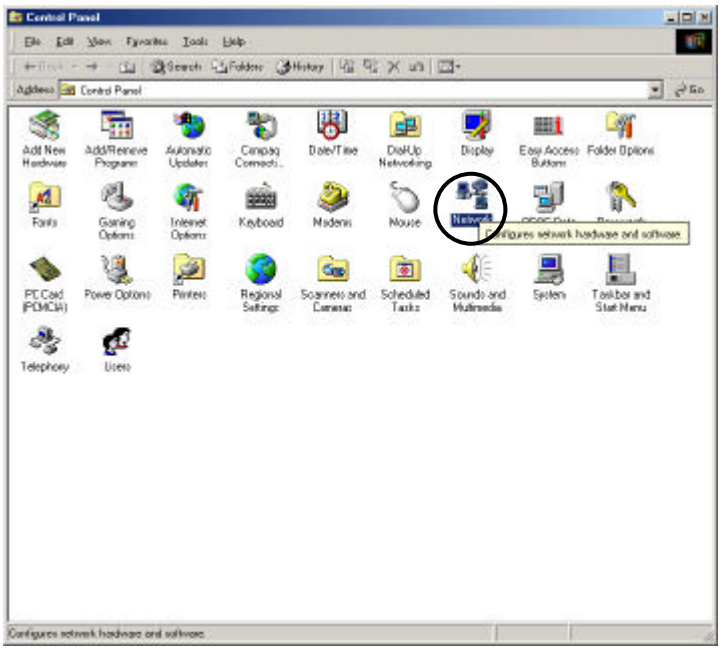
6.2. Confirm an Ethernet port

Wavit11 Configuration Utility should be installed to the personal computer with Ethernet port. Also, the device driver needs to be set up appropriately. Confirm in accordance with the following procedure.

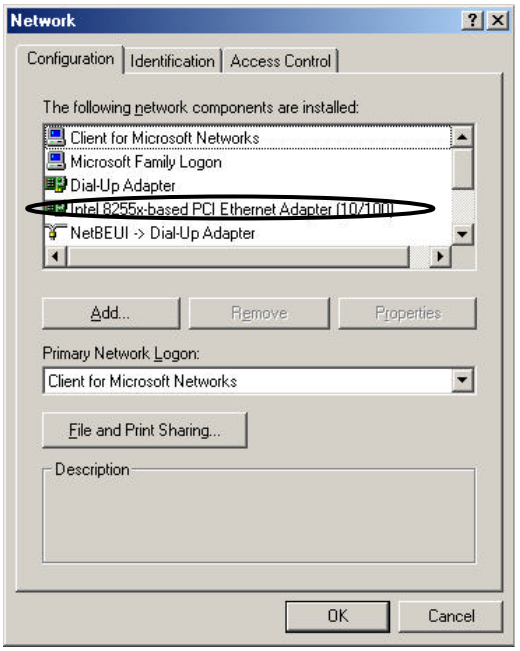
[STEP1] Select “Start”->”Setting”->”Control Panel”.



[STEP2] Click “Network” icon in the control panel.

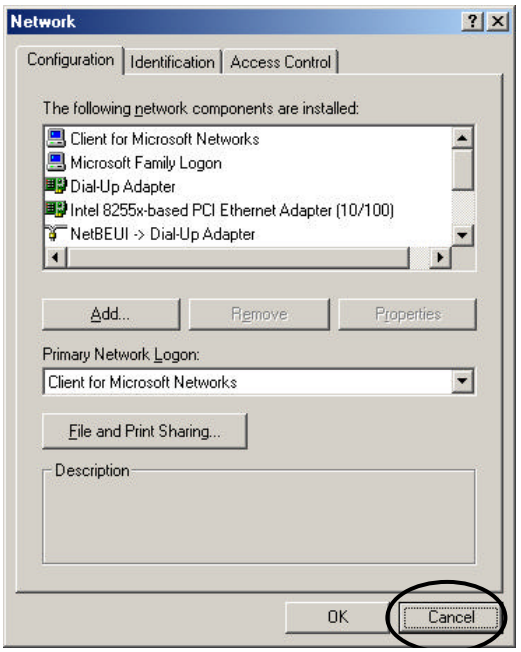


[STEP3] Check to see that an Ethernet adapter is installed in "Configuration" page.



If there is no Ethernet adapter in the "Configuration" page, install Ethernet adapter according to the user's manual of your personal computer or the user's manual of Ethernet adapter you use.

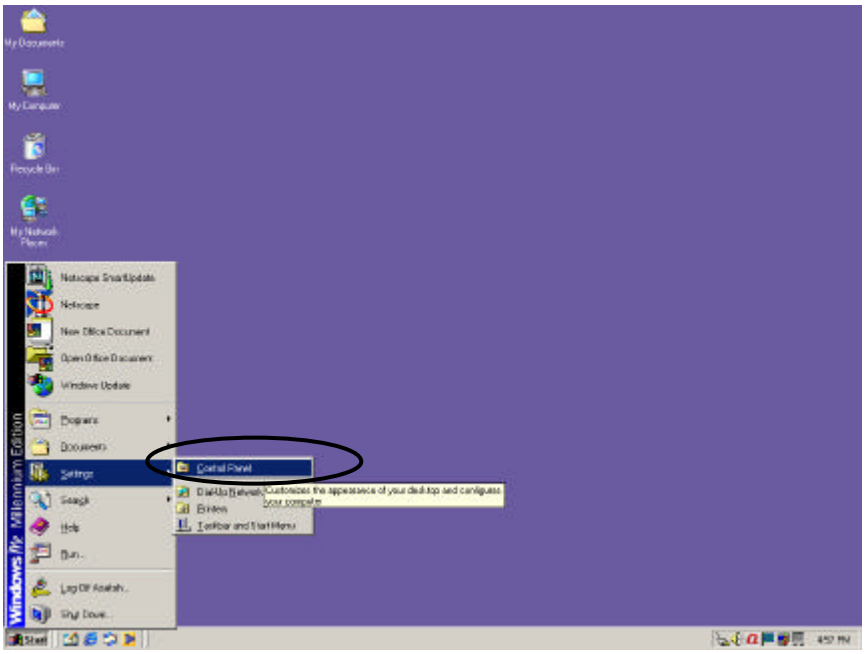
[STEP4] Click the "Cancel" button.



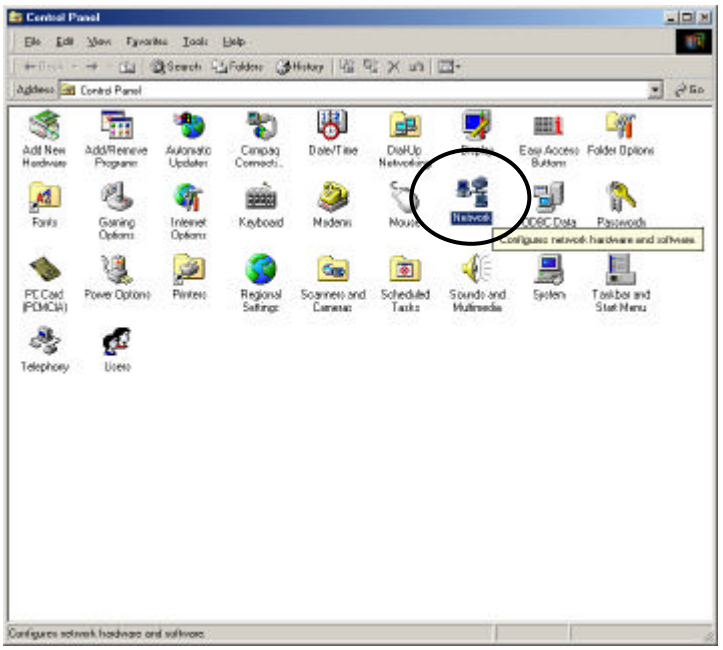
6.3. Confirm the TCP/IP protocol

The TCP/IP protocol should be installed to the personal computer with Wavit11 Configuration Utility. It is necessary that Wavit11 Configuration Utility is set up appropriately. Confirm the TCP/IP protocol in accordance with the following procedure.

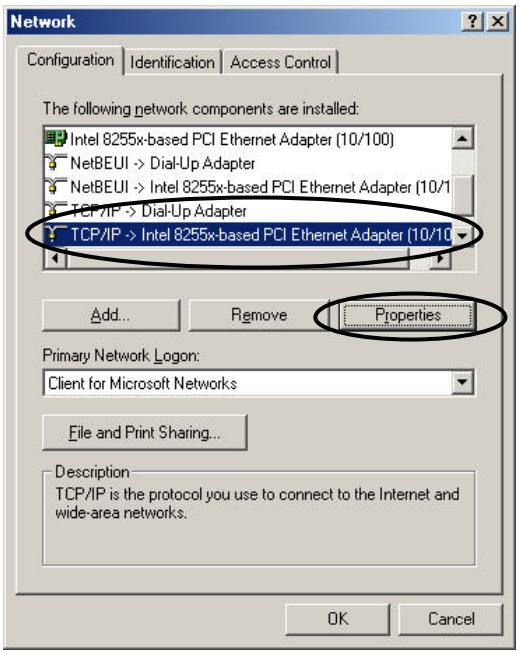
[STEP1] Select “Start”->”Setting”->”Control Panel”



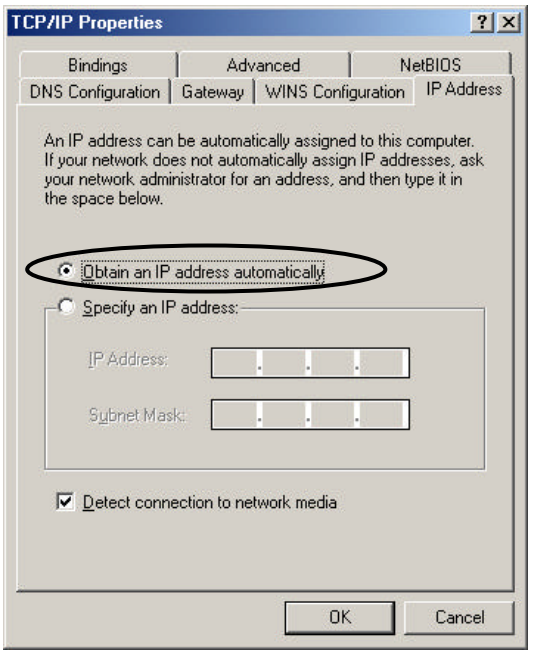
[STEP2] Click “Network” icon in the “Control Panel”.



[STEP3] Check to see that the relevant TCP/IP protocol is installed that corresponds to the Ethernet adapter used in the “Configuration” page. Select TCP/IP protocol corresponding to the Ethernet adapter and click the “Properties” button.



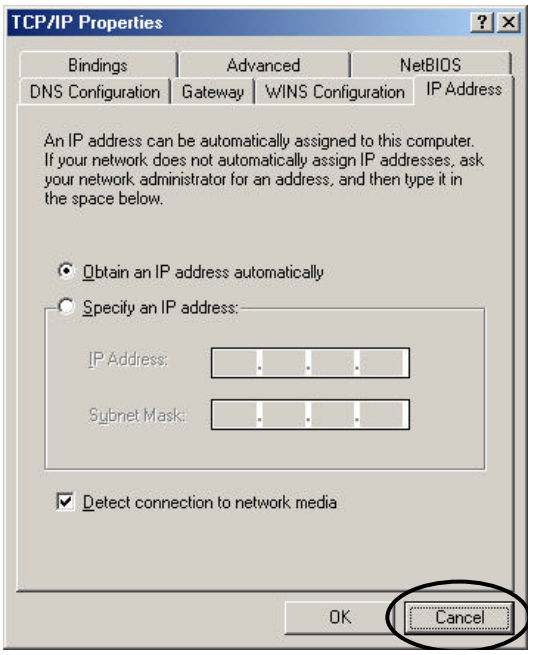
[STEP4] Confirm your selection in the “IP address” page. Which one is selected, either “Obtain an IP address automatically” or “Specify an IP address”?



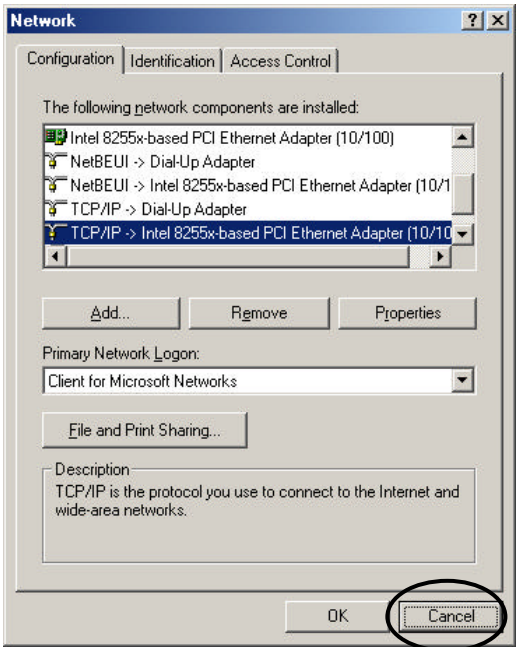
In the case that "Specify an IP address” is selected proceed to "STEP10".

Consult your network administrator, in the case that you do not know whether you should select “Obtain an IP address automatically” or “Specify an IP address”.

[STEP5] Click “Cancel” button.



[STEP6] Click “Cancel” button.



Proceed to “Confirm an IP Address” page25

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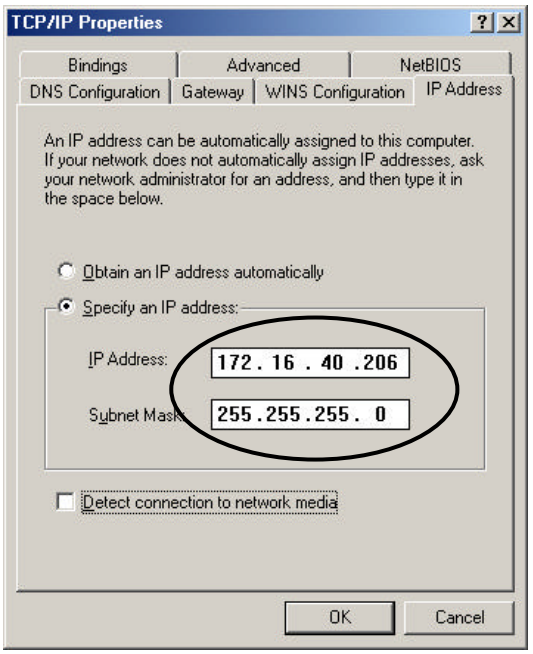
[STEP10] In the case that “Specify an IP address” is selected in the “IP Address” page, check that the “IP Address” and “Subnet Mask” are set.

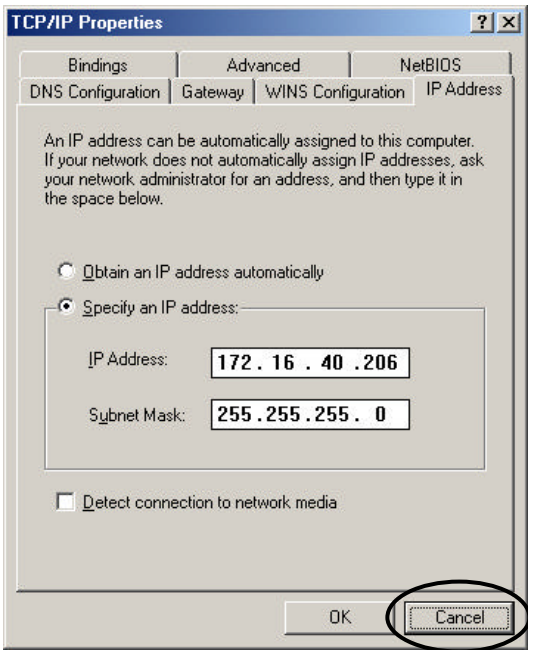


Take notes of the "IP Address" and "Subnet Mask" that are confirmed here.

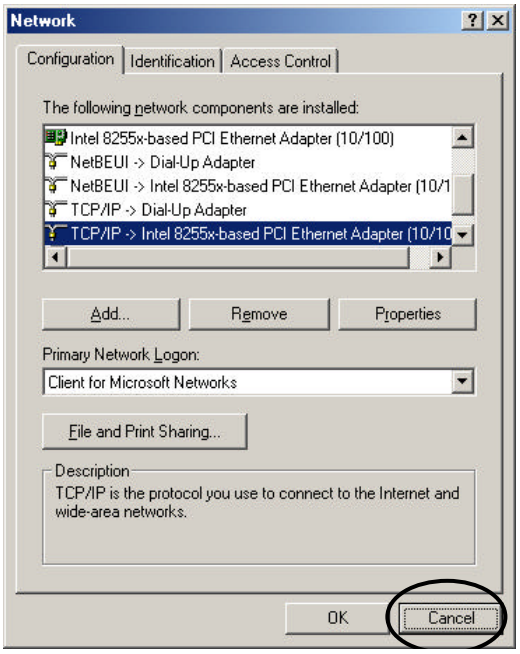
Return to “STEP5” in the case that “Obtain an IP address automatically” is selected.

Consult your network administrator, in the case that an "IP Address" and "Subnet Mask" are not set.

[STEP11] Click the “Cancel” button.

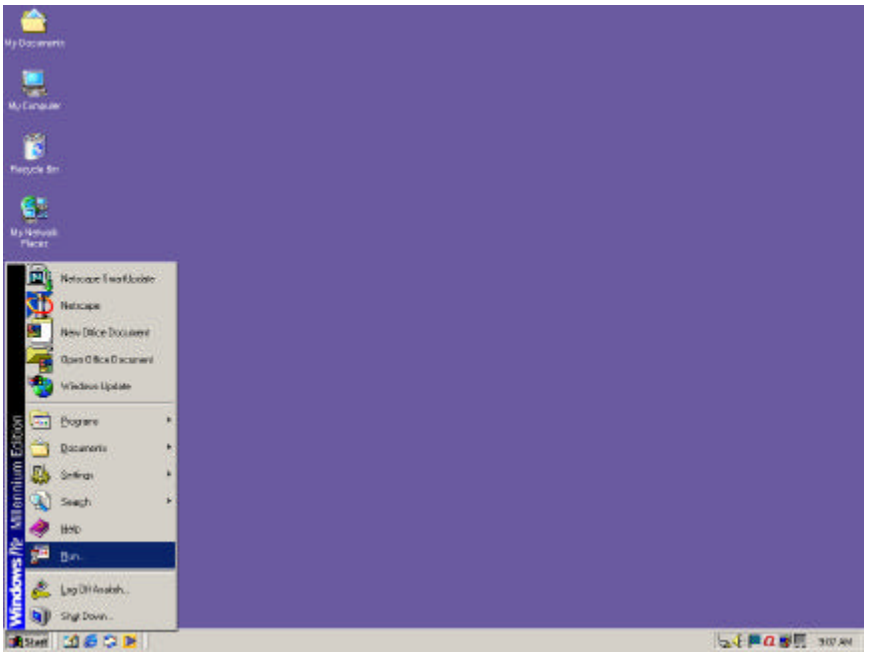


[STEP12] Click the “Cancel” button.

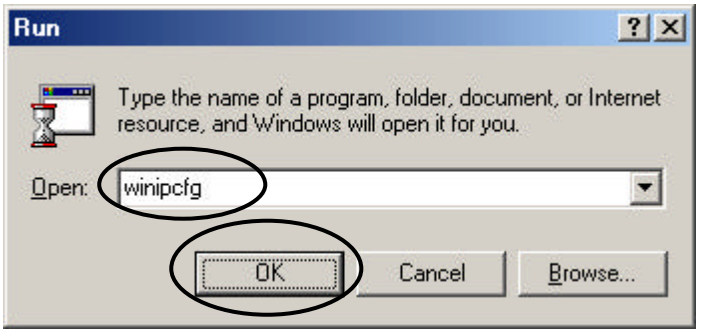


6.4. Confirm an IP Address

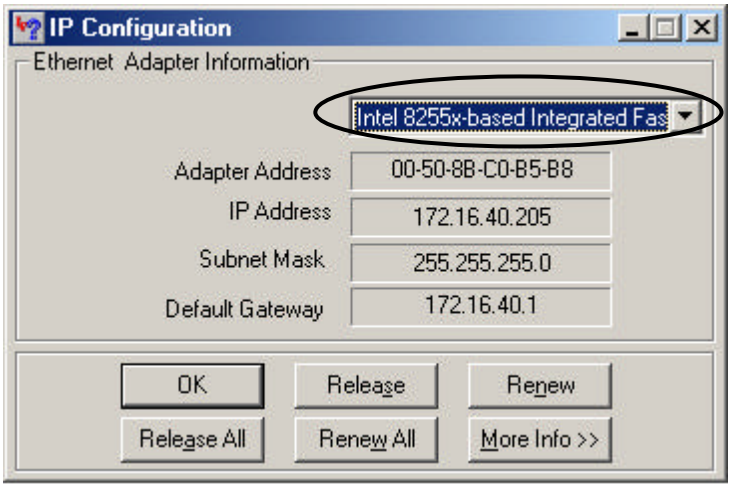
[STEP1] Click “Start”->”Run”



[STEP2] Input “winipcfg” to “Open” and click “OK” button.

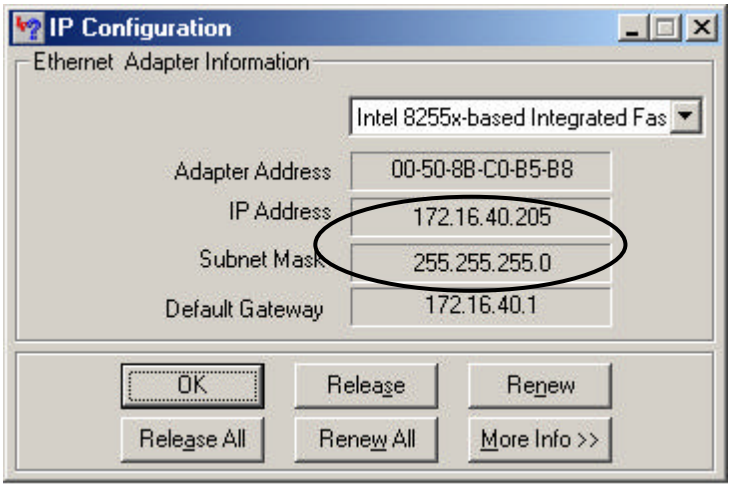


[STEP3] Select Ethernet adapter at “Adapter Address” in “IP Configuration” window.



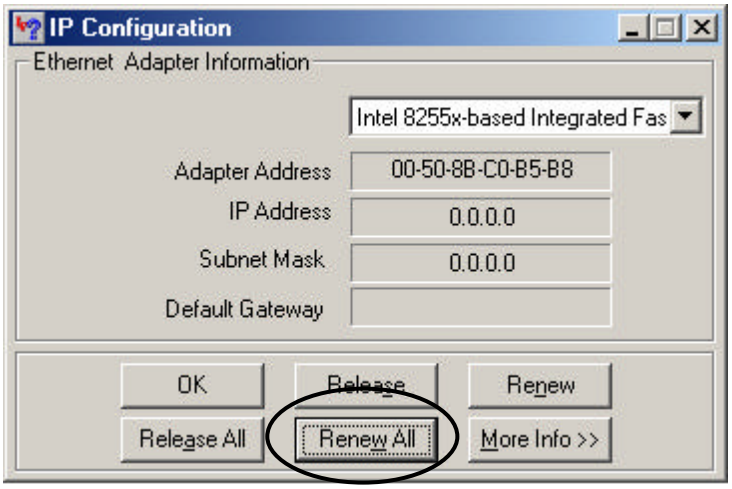
Install an Ethernet adapter, in accordance to the user’s manual of the personal computer and Ethernet adapter you use, in the case that no "Ethernet adapter" is discovered.

[STEP4] Confirm the “IP Address” and “Subnet Mask”.

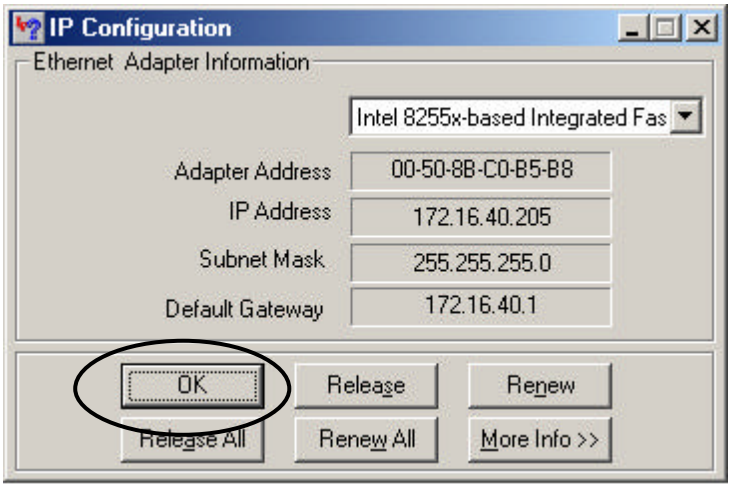


Take notes of the “IP Address” and “Subnet Mask” you confirmed here.

In “IP Address” and “Subnet Mask” are both “0.0.0.0”, it will mean that the IP address acquisition is not accomplished successfully. Click “Renew All” button to obtain an IP Address.



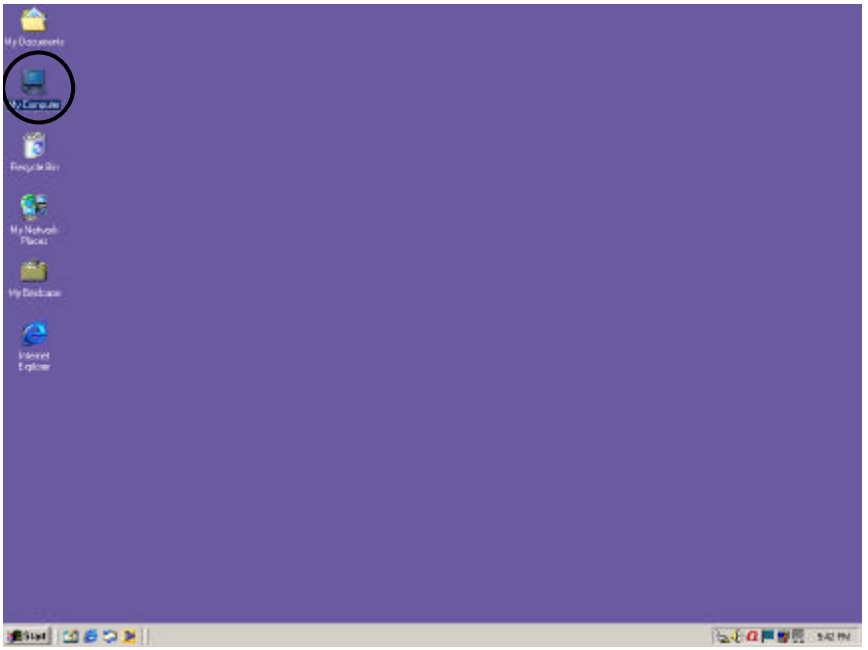
[STEP5] Click “OK” button.



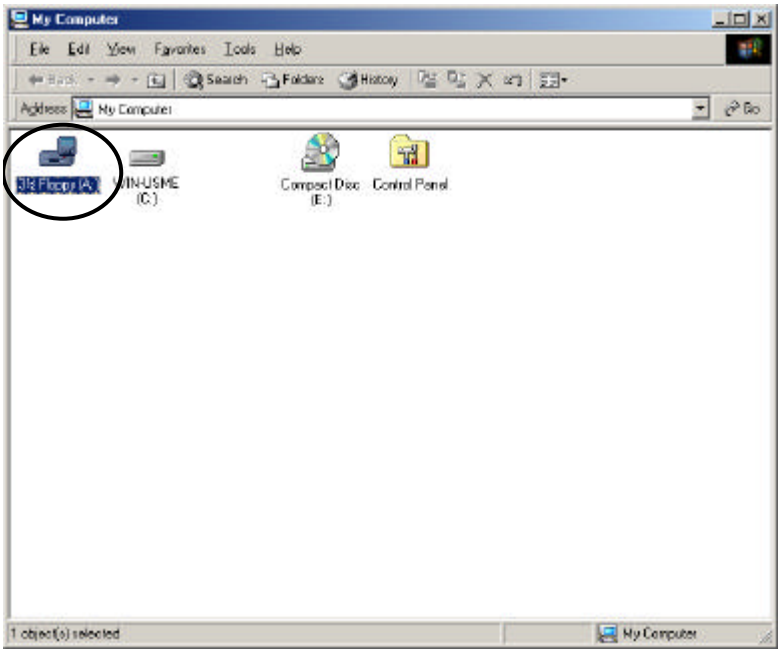
6.5. Installation of the Wavit11Configuration Utility

[STEP1] Insert Wavit11Configuration Utility disk to drive A.

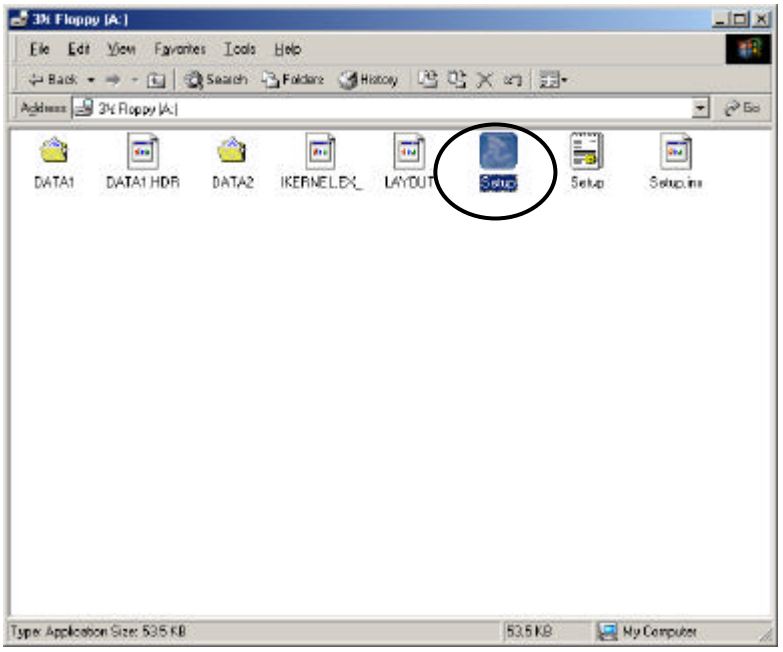
[STEP2] Click “My Computer” icon.



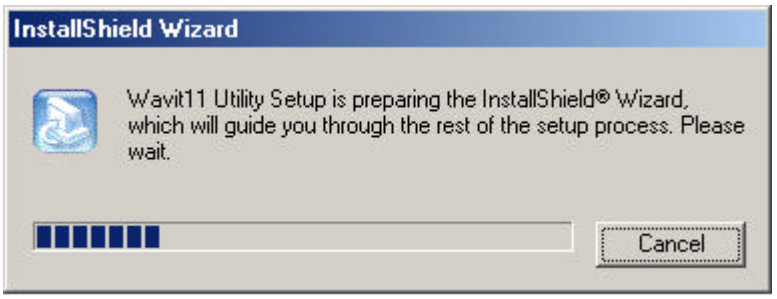
[STEP3] Click “3.5 ½ floppy (A:)” icon.



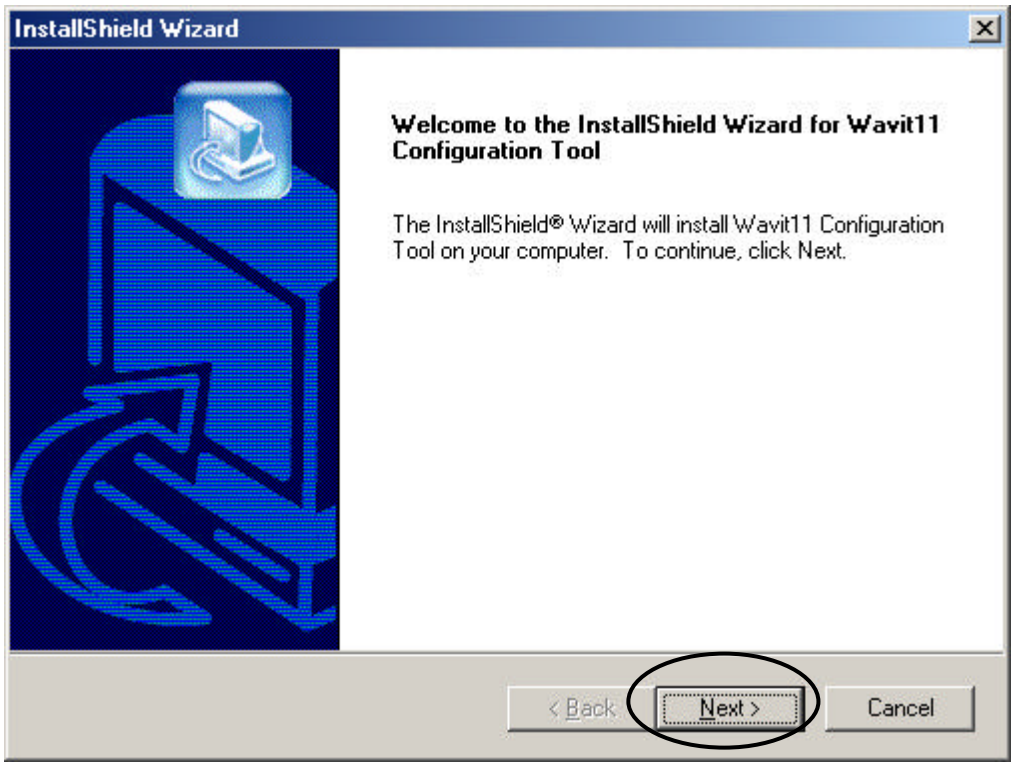
[STEP4] Click “Setup” icon.



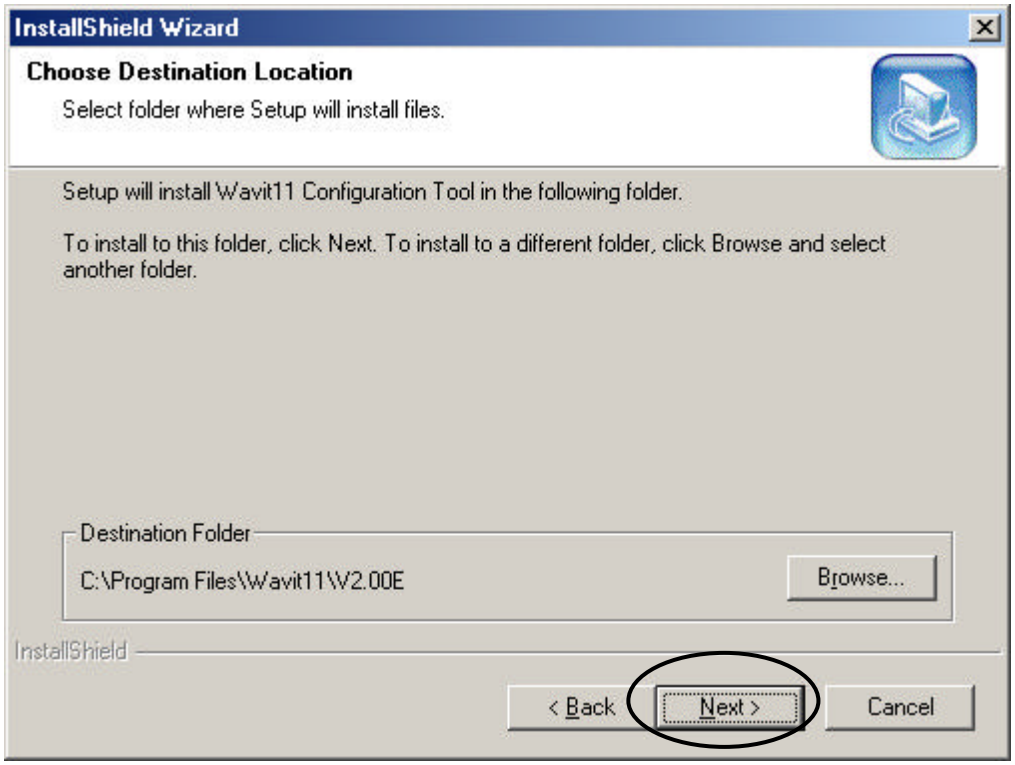
The “Install Shield Wizard” window appears.



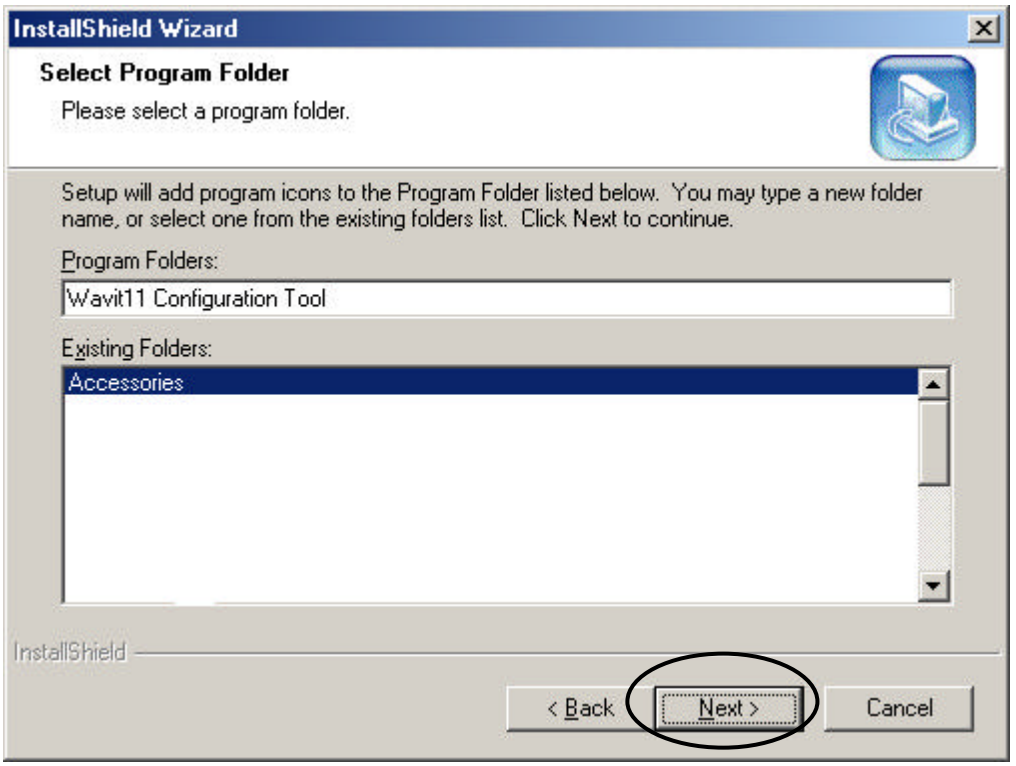
[STEP5] Click the “Next>” button in “Install Shield Wizard” window.



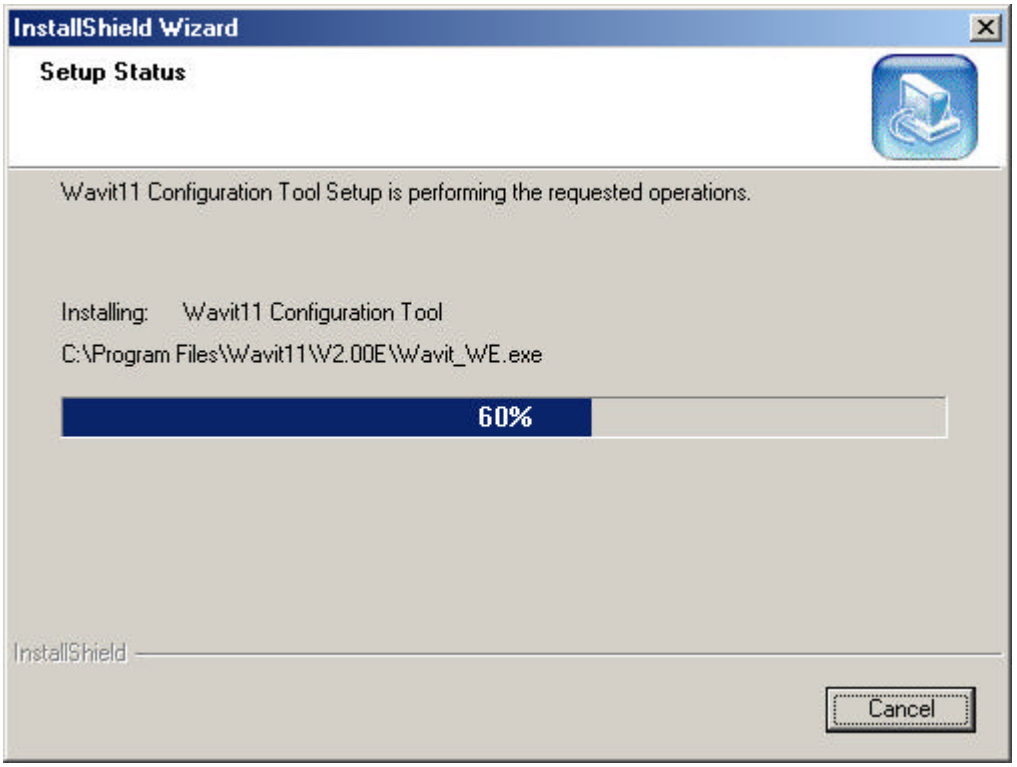
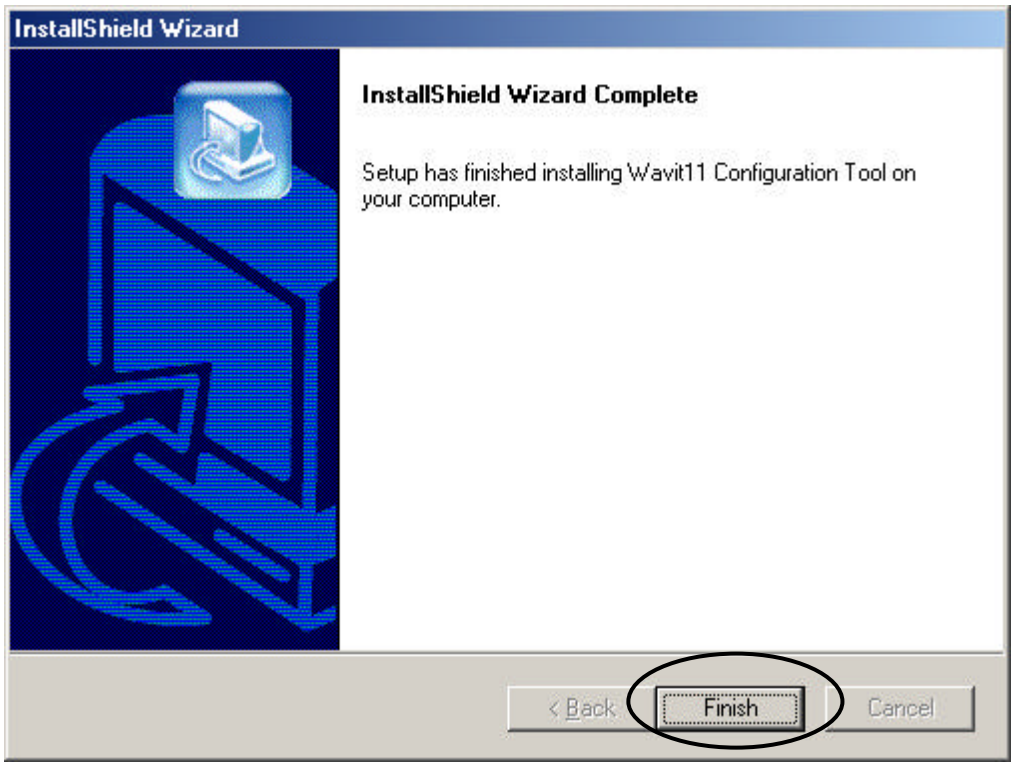
[STEP6] Select “Destination Folder”. Click “Next>” button to install the Configuration Utility to the default folder. Click the “Browse” button in the case that you want to install to a different folder.



[STEP7] Select Program Folder. Click "Next>" button if you agree the default folder. If you prefer to install it to another folder, select from the "Existing Folders" and click "Next" button.



The "Setup Status" appears.



[STEP8] Install Shield Wizard Complete appears. Click the “Finish” button.