

R A D I O N I C S

READYKEY® K6100 Readykey for Windows™

Multi-PC Operation / Installation Manual

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Radionics
Technical Writing Department
1800 Abbott Street
Salinas, California 93901

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UL Listings

UL 294 - Access Control System Units

UL 1076 - Proprietary Burglar Alarm Systems

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About this Document

This document describes how to install and use a Readykey for Windows system across a Local Area Network (LAN).

This manual should be read by anyone installing or intending to install a Readykey for Windows Multi-PC system.

It is assumed that readers are at least familiar with PCs, networking concepts and the Microsoft Windows operating system (Windows for Workgroups, Windows 95 or Windows NT). It is beyond the scope of this document to review all the features of these products and fundamentals.

Other Documents

Before installing a Readykey for Windows Multi-PC system you should be familiar with the following document:

Readykey for Windows System Overview

All people who may install, use or administer a Readykey for Windows system should read this document. It gives a general picture of the whole Readykey for Windows system and introduces concepts such as workstations, masters, etc., which needs to be understood before setting up the system.

Following successful installation of Readykey for Windows to all PCs (as described in this document), you should refer to:

Readykey for Windows System Programming Manual

Radionics will, from time to time, release Technical Application Notes that detail specific applications of using Readykey for Windows Multi PC. Contact Radionics' Customer Service Department for the latest information, or if you have specific requirements.

On-Line Help

Throughout Windows and the Readykey for Windows system help is available by either choosing a **Help** button, selecting **Help** from a drop down menu or by pressing the **F1** function key. When selected you will be presented with a help topic relevant to the operation you are performing. Once help has been selected you will be able to select other recommended topics or search for assistance with a particular function. Topics can be printed if required.

Terminology

Throughout this manual reference is made to 'Windows', 'Windows for Workgroups', 'Windows 95', Windows NT and 'Readykey for Windows'. **Windows™**, **Windows 95**, **Windows NT** and **Windows for Workgroups™** refer to the *Operating Systems* produced by Microsoft Corporation, which is now provided as standard with nearly all Personal Computers (PCs). **Readykey for Windows** refers to the *Access Control Administration Software* produced by Radionics designed to operate under the Microsoft Windows™ operating system.

The term 'PC' is used throughout this document to describe personal computers in general. The term 'workstation' is used to describe a PC on a network being used for administering a Readykey for Windows system.

System Requirements

Description of the System

Readykey for Windows is a means of administering an Access Control System consisting of Readykey Door Controllers and Readers. The software is available in several versions depending on the total number of Doors, Sites and Divisions to be administered. For a complete description of Sites and Divisions see *Readykey for Windows System Overview*.

However, the installation disks provided are the same for all types of system. The same procedure is used to copy the Readykey for Windows software from the installation disks to the hard disk of the PC that will be used to administer the Readykey for Windows system, regardless of the system being installed.

Any Readykey for Windows system can be administered from more than one PC via a Local Area Network. This document describes how this can be achieved.

Network Types

Readykey for Windows uses Microsoft Windows for Workgroups, Windows 95 or Windows NT to allow the access control system to be administered across the network, regardless of the type of network installed. Two basic types of Local Area Network (LAN) are supported:

Peer-to-Peer

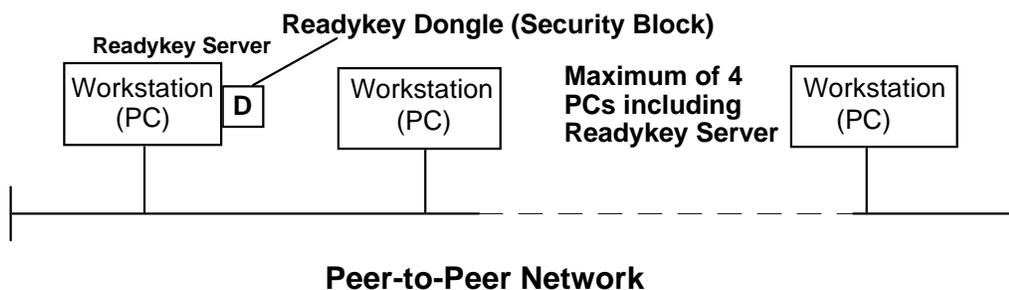
This is an arrangement in which there is no dedicated File Server. Instead, any PC can be allowed to share its hard disk and printer. Any other PC can then connect to this shared device.

In this case, the Borland Database Engine, Readykey for Windows database and application files are installed on one workstation on the network, which becomes the Readykey Server. This workstation may also be used to administer Readykey for Windows.

The Readykey Server should be running a minimum of Windows 95 or Windows NT4. We recommend that all the workstations run the same version of windows..

A maximum of four PCs, including the Readykey Server, may be used to administer Readykey for Windows at any one time when this type of network is used.

There may be an existing peer-to-peer network installed, in which case you should contact the network administrator before making any changes to PC settings or installing Readykey for Windows. However, if you are installing a new network, dedicated to Readykey for Windows administration, then you should decide who will be responsible for general network maintenance and supervision in the future.



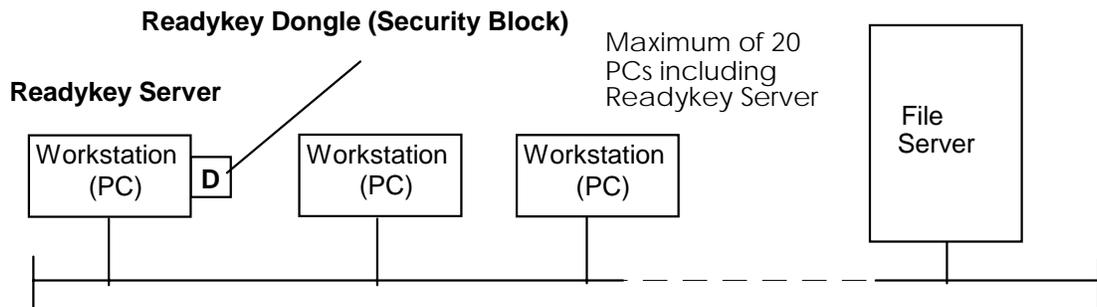
File Server-based

This involves having a powerful File Server PC which runs Novell Netware or Microsoft Windows NT Server. This allows connected workstations to share a common hard disk and other resources - e.g. printers.

Using this type of network, all the Readykey for Windows database files are stored on the server, but Readykey for Windows cannot be administered from this PC.

Each workstation must be running Microsoft Windows for Workgroups, Windows 95 or Windows NT4, however, to avoid problems the Readykey Server should be running at least Windows 95 or Windows NT4. We recommend that all the workstations should be running the same version of windows..

If you are using this type of network, then there will be a network administrator responsible for maintenance of the network. It is imperative that the network administrator is contacted before attempting to install Readykey for Windows or change any PC settings.



Server-based Network

Notes:

1. A maximum of ten PCs can be supported on a network, which is to be used for other general business traffic. With this installation, a maximum of four PCs can support Alarm running.
2. A maximum of twenty PCs can be supported if the network is dedicated for Readykey for Windows use only. Again only four PCs can run Alarm.

The configuration of all networking applications must be verified with the Readykey Technical Support department before the sale of the system.

Note: It is unlikely that Readykey for Windows PC-PC communication will work effectively over a Wide Area Network.

Recommendations

Radionics strongly recommend that a Server-based network is used wherever possible, as this includes a File Server that is dedicated to providing shared resources, and is inherently more reliable and will offer higher performance.

However, in circumstances where such a network is not available, a peer to peer network may be used, with a limit of four workstations. In this case, it is recommended that the Readykey Server is dedicated to being a Readykey for Windows server, and not used for other tasks - e.g. word processing, etc. or speed will be reduced.

Note: A peer to peer network with the system hardware connected to the READYKEY Server is quicker than a File Server based network of the same size.

It should be noted that a higher performance might be obtained on **a single workstation** (the Readykey Server) by the use of a peer-to-peer network. However, this may be to the detriment of performance and reliability of the system as a whole.

Windows NT

Microsoft Windows NT is available as either Server or Workstation software - referred to as Windows NT Server and Windows NT Workstation.

Where a Server-based network is in use, Readykey for Windows will operate with any version of Windows NT Server on the File Server.

However, regardless of the type of network in use, if Windows NT Workstation is in use on any of the PCs being used to run Readykey for Windows, then Version 4.0, build 1381 Service Pack 3 or later must be used.

Masters

A master is either a K2100/1100 or CNC that is connected to a PC, and is responsible for communications between the PC and any door controllers connected to the master.

A master may be connected to any PC on the network on any Readykey for Windows system, although if there is only one master it will usually be connected to the Readykey Server.

IMPORTANT: In order for alarms received by the master to be enunciated by Readykey for Windows, and for database changes made at any PC to be sent to the master and associated door controllers:

- The Readykey Server must be running Readykey for Windows
- **The workstation to which the master** is connected must also be running Readykey for Windows.

Workstations

A workstation is any PC that is used for administering Readykey for Windows. The number of workstations allowed on your system is dependent on the type of network you have. For peer to peer networks, the total number of workstations (including the Readykey Server) is limited to 4, but this may be increased to 20 when using a server-based network.

A workstation may also have one or more masters connected to it. Workstations that do not have a master connected directly to them will usually have a Readykey PC Interface Kit installed, in order for operators to login to Readykey for Windows and for keys and cards to be administered.

Each workstation on the Readykey for Windows system will have a unique identification number that identifies it to the system. This is set when Readykey for Windows is installed on each workstation.

Readykey Server

This is the PC on which the Readykey for Windows security block is fitted. On a peer-to-peer network the Readykey for Windows database and application files will also be stored on this PC. You will usually have at least one network master connected to the Readykey Server. The workstation number of the Readykey Server is always 1.

Security Block

This device, connected to the parallel port of one of the workstations on your system, identifies the type of Readykey for Windows you have purchased. In addition, other information about the type of system that you have, including the maximum number of workstations permitted, is programmed in the security block (dongle). The security block should be installed on the Readykey Server, as described later.

If no security block is installed on the system, then Readykey for Windows will run **on PC Number 1 only** in Demonstration Mode - this will usually be the Readykey Server. This means that no communications will take place with the door controllers - including alarms and database updates.

Network File Server

The Network Operating System has exclusive use of the File Server, and, for most Network Operating Systems, no other programs (including Microsoft Windows and Readykey for Windows) can be used at the file server itself. However, it is possible to install Readykey for Windows onto the File Server, and access the data files across the network from a workstation connected to the network.

Program Files

When installing Readykey for Windows on a network workstation, the Readykey for Windows program files will be installed locally on the hard disk.

PC Specification

Use the information below to select a suitable PC. To confirm that it is of the right specification - refer to the *Readykey for Windows PC Specification* datasheet.

Note: No information is provided here regarding the specification for a File Server. Setting up a Server-based network requires specialist knowledge from a qualified computer professional and possibly a network administrator.

Readykey Server Recommended Specification

Because of the increase in PC performance Readykey for Windows servers no longer require a higher specification PC than the Workstations. For the current recommended PC specification see the *Readykey for Windows PC Specification* datasheet.

Note that this section refers to the Readykey Server and not the file server. Specifying a file server should be done by a computer professional and depends on individual requirements.

Checking Free Disk Space

Make sure there is enough free space on the hard disk of the Readykey Server or File Server, you should have at least **300 Mbytes** before installing Readykey for Windows.

There needs to be a minimum of **100 Mbytes** of free disk space on workstations before installing Readykey for Windows where shared program files are being used. If local program files are being used, each workstation will require **126 Mbytes** of free disk space.

Windows for Workgroups 3.11

File Manager reports the amount of free space (provided you have the directory 'tree' displayed) at the bottom of its window, e.g.

```
C: 177,220KB free, 830,026KB total.
```

MS-DOS

Type *CHKDSK* at the C:> prompt. You will see something similar to the following:

```
C:\>CHKDSK
```

```
Volume MS-DOS_6    created 26/06/1997 14:16
Volume Serial Number is 22DA-7211

1054605312 bytes total disk space
  19251200 bytes in 552 hidden files
   7733248 bytes in 456 directories
 783515648 bytes in 7,614 user files
241532928 bytes available on disk

      16384 bytes in each allocation unit
      64367 total allocation units on disk
      14741 available allocation units on disk

655360 total bytes memory
586384 bytes free
```

The figure required is 'bytes available on disk', in this case 241532928, or just over 240Mbytes.

Note: Some disk compression programs, such as Doublespace or Stacker may give misleading information

Windows 95/Windows NT

In the Windows Explorer, click on the C: Hard disk icon in the tree view (left hand side). Disk Free Space will be displayed in the status bar at the bottom of the Explorer window.

MS-DOS and Windows

Readykey for Windows will operate with either Windows for Workgroups 3.11, Windows 95 or Windows NT 4.0 build 1381 or later.

Windows 95 and NT effectively replace both MS-DOS and Windows. However if using Windows 3.1 or Windows for Workgroups 3.11 then you should be using MS-DOS 5.0 or later.

You should consult an experienced PC or Network Installer if you require further advice.

Preparing to Install Readykey for Windows

Network Hardware Installation

Installation of the network hardware and cabling varies depending on the type of PC and network being used. If you are intending to administer Readykey for Windows via an existing network, or adding additional PCs to the network, then **the network administrator must be consulted before attempting to modify any settings or install any new software or equipment.**

Refer to the *Microsoft Workgroup Add-On for Windows User's Guide*, or Windows 95/Windows NT Help for general information regarding the four main different network hardware types - Thin Ethernet ('Thinnet' or 'Cheapernet'), Thick Ethernet, Twisted Pair Ethernet and Token Ring. This guide describes installing and configuring the network card in each PC in some detail.

Below are configuration guidelines for MS-DOS and Windows for Workgroups 3.11. Windows 95/Windows NT require much less configuration.

Windows Versions

Readykey for Windows multi-PC will operate with either Windows for Workgroups 3.11, Windows 95 or Windows NT Workstation 4.0 build 1381 or later. However, the Readykey Server must be running Windows 95 or Windows NT4.

Note: Readykey for Windows will not operate with Windows 3.1.

PCs running Readykey for Windows may be using any combination of the above Windows versions. However it is recommended that all of the PC's be running the same Windows version.

You should consult an experienced PC installer if you require further advice.

Windows for Workgroups 3.11

MS-DOS

You should be using MS-DOS 5.0 or later.

There are 2 files that MS-DOS uses when your PC is switched on that affect the way in which the system operates. These files, **CONFIG.SYS** and **AUTOEXEC.BAT**, are normally created when MS-DOS is installed on your PC, however some of the settings may need to be changed. In addition, there are two files that define a number of Windows settings and options, **WIN.INI** and **SYSTEM.INI**. These files are referred to collectively as the system configuration files.

While there are many possible configurations that can be used to 'fine-tune' the performance of your machine this manual only describes the settings essential to running Readykey for Windows.

The Readykey for Windows installation program will check for the existence of these settings, and will recommend (and make if requested) changes to your system configuration files.

For the purpose of this manual it will be assumed that the MS-DOS files are in a sub-directory called C:\DOS and the Windows files are in a sub-directory called C:\WINDOWS - these are the defaults used when MS-DOS and Windows are installed.

The CONFIG.SYS and AUTOEXEC.BAT files shown below are complete and should work on any PC. Be aware that other applications may be used on the PC, which require additional or different parameters to be set.

CONFIG.SYS - Windows for Workgroups 3.11

```
DEVICE=C:\WINDOWS\HIMEM.SYS
DOS=HIGH
FILES=80
STACKS=9,256
DEVICE=C:\WINDOWS\IFSHLP.SYS
```

AUTOEXEC.BAT - Windows for Workgroups 3.11

```
PATH C:\DOS;C:\WINDOWS
PROMPT $P$G
NET START
WIN
```

It is beyond the scope of this document to discuss all the above parameters however some points should be noted.

- **FILES=80** is the minimum value for the FILES statement.

Note: On a peer-to-peer network this should be set to the maximum value of 255 on the Readykey Server typically PC#1.

- The final statement in AUTOEXEC.BAT, **WIN**, starts up Windows. If you do not want Windows to start automatically then omit this line.
- You may have an entry to load **SMARTDRV** in AUTOEXEC.BAT or CONFIG.SYS. However, Windows for Workgroups provides an alternative disk caching system - **VCACHE**. Therefore any line that loads **SMARTDRV** should be hidden or removed on PCs running Windows for Workgroups 3.11.
- Windows for Workgroups v3.11 uses a different file sharing system to that provided by the MS-DOS SHARE command (see above). When installing Windows for Workgroups v3.11, you will have the opportunity of removing the MS-DOS SHARE command from AUTOEXEC.BAT. **This should be done** to prevent a conflict between SHARE and Windows for Workgroups' VSHARE.386.

Windows for Workgroups 3.11

Although easy to use, Windows is a complex system with a large number of features and functions. It is recommended that you take time to understand some of the functions supplied with Windows. The **Windows Tutorial** found under **Help** in the **Program Manager** is a good starting point.

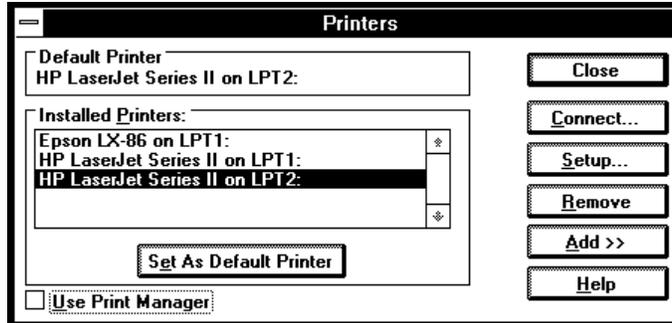
The **Program Manager** is the first application that appears when you start up Windows. It usually consists of a collection of smaller windows, or program groups, each containing various other applications. When Readykey for Windows is installed it will create its own group containing the Readykey for Windows icon.

Windows should be installed on your machine, if not already installed, using the **Setup** program. There are no particular special requirements for Windows, however, bear in mind:

- When installed, Readykey for Windows creates its own **Program Group**. If you want Readykey for Windows to run automatically on start up then you should copy the Readykey for Windows icon to the **Startup Program Group**.
- If you have enough hard disk space you should set up a **Permanent Swap File**. This can be done using Windows **Control Panel**. Select **386 Enhanced - Virtual Memory**.
- When using Windows for Workgroups, ensure that both **32-bit Disk Access** and **32-bit File Access** are enabled. This is also done in **Control Panel, 386 Enhanced, Virtual Memory**. Note, however, that some types of disk drive might not allow 32-bit Disk Access to be set.

Printing with Windows for Workgroups 3.11

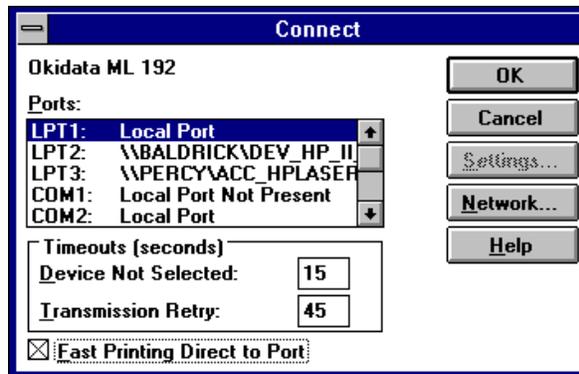
Windows has a special application called **Print Manager** used for controlling printer output sent to the printer from different applications. It allows several documents to be sent to the printer at the same time, managing the order in which they are actually printed. Readykey for Windows however, is not able to operate correctly through Print Manager, therefore you should disable Print Manager in **Control Panel: Printers**.



Note that this applies to Windows overall and not just Readykey for Windows. By disabling Print Manager you will have to wait for each printout to finish before you can send anything else to the printer.

You will need to set a default printer using the **Set As Default Printer** button - see below.

Choose the **Connect...** button.



Make sure that **Fast Printing Direct to Port** is selected for LPT1: and choose **OK**.

Choose **Close** to leave **Control Panel: Printers**, then close **Control Panel**.

Use of Printers by Readykey for Windows

Readykey for Windows uses two different 'routes' for different types of printer output.

1. All on-line transactions, that is, the continuous printing of certain events as they are reported, is sent by default to an Epson compatible dot-matrix printer on LPT1: - usually the only printer port on most PCs.
WARNING: Do **not** use a laser printer or an Ink Jet printer for on-line transactions, this will result in one transaction (event) per page!
2. All reports produced by the system, including database printouts, historical transactions etc., are sent to the Windows **Default Printer**. This may be the same printer as for on-line transactions or it may be a different type of printer, a laser printer for instance, on a different printer port - if fitted. If no default printer is set then no reports will be produced.

Network Setup (Windows for Workgroups 3.11)

Note: This section does not apply to Readykey Servers or Network File Servers, however it does apply to PCs connected to the network that are to be used for running Readykey for Windows.

If Microsoft Windows for Workgroups 3.11 is installed on the PCs which you intend to use for Readykey for Windows administration, then you should follow the procedure below. Windows for Workgroups is available in two forms - as a complete product or as an upgrade for Windows 3.1. Be sure to obtain the correct version for your system.

Although easy to use, Windows is a complex system with a large number of features and functions. It is recommended that you take time to understand some of the functions supplied with Windows. The **Windows Tutorial** found under **Help** in the **Program Manager** is a good starting point.

The Program Manager is the first application that appears when you start up Windows. It usually consists of a collection of smaller windows, or program groups, each containing various other applications. When Readykey for Windows is installed it will create its own group containing the Readykey for Windows icon.

Windows should be installed on your machine, if not already installed, using the Setup program. There are some special requirements for Readykey for Windows:

- Windows for Workgroups allows PCs to be grouped into workgroups. Each PC that is running Readykey for Windows or from which Readykey for Windows is to be administered should be in the same workgroup. Previous versions of Readykey for Windows insisted on each PC being in the same workgroup. Although this is no longer necessary, it is advisable for ease of administering the network.

Note: The term 'workgroup' when used in the context of networks and Windows for Workgroups should not be confused with the use of the term within Readykey for Windows, which allows personnel to be divided into departments and workgroups for ease of administration and reporting.

You must set up a **Permanent Swap File**. This can be done using Windows **Control Panel**. Select **386 Enhanced - Virtual Memory**. Also ensure that **32 bit File Access** is enabled and that you have a minimum cache size of 4Mb (4096kb). This can make a significant difference to the performance of the PC.

Software Installation with Windows for Workgroups 3.11

Make sure you have installed the Windows for Workgroups software on each PC to be networked, in accordance with the *Microsoft Workgroup Add-On for Windows User's Guide*. Use the **Express Setup** option unless you have a high degree of PC knowledge and expertise.

Be sure to install any printers you have connected to any PC on the network as the installation proceeds.

Network Configuration with Windows for Workgroups 3.11

If Windows for Workgroups is already installed on the PC, then use the following procedure to ensure the PC meets the requirements for Readykey for Windows:

Note: If you are installing Microsoft Windows for Workgroups from the installation disks, then this procedure will be a part of the standard setup procedure.

1. From the **Network** program group choose **Network Setup**.
2. Choose **Networks.....**
3. Choose the **Install Microsoft Windows Network** option.

4. If you are installing Readykey for Windows on a peer to peer network, then choose the **No Additional Network** option. If however, you are using a server based network, then choose the **Other** option - contact the network administrator for information regarding installing an additional network. Choose **OK** when you have finished. Windows will probably copy some files from the installation disks at this stage - follow the instructions provided on screen.
5. Choose **Sharing....** Make sure the options are selected to allow file and printer sharing. Choose **OK**.
Note: You must enable file sharing on **all** PCs. Without this the Network DDE will fail to operate.
6. Choose **Drivers**. If there is no adapter installed then choose **Add Adapter....** Select the network adapter (Network Interface Card) you have installed in the PC from the list, or choose **Detect**. Compare and amend as necessary the **Interrupt** and **Base I/O Port** (Base Address) settings with the settings you made on the Network Interface Card.
Note: With certain network adapters, Windows for Workgroups 3.11 does not operate correctly when using a combination of IRQ 5 and Base I/O Port 300. Choose an alternative setting.
 Adding a driver will also install one or more network protocols, one of which will be set as the default. The two normally installed are: 'Microsoft NetBEUI' and 'IPX/SPX compatible transport with NetBIOS'. Only one of these protocols is required. Which one depends on several factors.
 NetBEUI can only be used if the Readykey for Windows workstations are connected on the same physical network segment. The NetBEUI protocol does not allow communications across Routers.
 IPX/SPX must be used if there are one or more routers between workstations. It will also be necessary if you are connecting to a network running Novell NetWare. If in doubt make the 'IPX/SPX compatible transport with NetBIOS' the default network and remove NetBEUI. Make sure the same protocol is set on each PC.
7. Choose **Close** when you have finished setting up the adapters and protocols.
8. You will now be asked to setup the **Network Names**. It is essential that the **User Name** and **Computer Name** are unique for each PC on the network. However, the **Workgroup** name should be the same for each PC, although this is not essential. For the purposes of this document, it will be assumed that you use the Workgroup Name 'RKYFORWINDOWS'.
Note: Some characters, including spaces, are not allowed as part of a Workgroup Name.
9. When you have finished setting up the network information, setup will automatically update some or all of your PC configuration files (AUTOEXEC.BAT, CONFIG.SYS, SYSTEM.INI and PROTOCOL.INI). Any old versions of these files will be preserved in case you need to revert to them in the future. You should now restart the PC and repeat the operation for each additional PC from which you intend to run Readykey for Windows.

Windows 95 / Windows NT

Windows 95 and NT effectively replace both MS-DOS and Windows, and are in many ways different from previous versions of Windows. They operate much more closely with the PC hardware and will automatically modify files such as CONFIG.SYS and AUTOEXEC.BAT or their equivalents.

The Readykey Server must be running Windows 95 or Windows NT4.

Extensive help and tutorials are provide by clicking on the **Start** button on the Taskbar and selecting **Help**.

CONFIG.SYS / AUTOEXEC.BAT

Windows 95 and Windows NT generally do not rely on settings in CONFIG.SYS and AUTOEXEC.BAT in the same way as previous versions of MS-DOS and Windows.

Readykey for Windows has no special requirements in terms of entries in these files when using Windows 95 or NT. In fact, many settings will be ignored, and others may cause problems or conflict if present. It is recommended that the contents of these files are kept to a minimum, for example as suggested below:

CONFIG.SYS - Windows 95 / Windows NT

```
COUNTRY=44 , , C:\DOS\COUNTRY.SYS
```

AUTOEXEC.BAT - Windows 95 / Windows NT

```
C:\DOS\KEYB UK , , C:\DOS\KEYBOARD.SYS  
PROMPT $P$G
```

Printing with Windows 95/NT

Windows 95/NT do not use a Print Manager in the same way as earlier versions of Windows.

A printer, if one is connected, needs to be installed via the Printers folder. (From the **Start** menu, choose **Settings**, then choose **Printers** to access the Printers folder.)

Choose **Add Printer**, then follow the instructions given by the **Add Printer Wizard** to install the printer.

You will need to ensure the printer installed is the default printer. Right click on the printer you have installed, and choose **Set As Default**. (A tick mark will appear next to **Set As Default** to indicate if the printer is currently set as default.)

Use of Printers by Readykey for Windows

Readykey for Windows uses two different 'routes' for different types of printer output.

1. All on-line transactions, that is the continuous printing of certain events as they are reported, are sent by default to an Epson compatible dot-matrix printer on LPT1: - usually the only printer port on most PCs.
WARNING: Do **not** use a laser printer or Ink Jet printer for on-line transactions, this will result in one transaction (event) per page!
2. All reports produced by the system, including database printouts, historical transactions etc., are sent to the Windows **Default Printer**. This may be the same printer as for on-line transactions or it may be a different type of printer, a laser printer for instance, on a different printer port - if installed. If no default printer is set then no reports will be produced.

Network Setup with Windows 95/NT

Note: This section does not apply to Network File Servers, however, it does apply to PCs connected to the network that are to be used for running Readykey for Windows.

When Windows 95/NT starts, the desktop appears, which consists of a number of icons and folders. Along one edge (default is the bottom edge) will be the **taskbar**, from which the **Start** menu can be accessed. Click **Start** on the taskbar, and a menu will pop up. The menu consists of a collection of program icons and folders, each giving access to various other applications. When Readykey for Windows is installed it will create its own folder on the **Start** menu containing the Readykey for Windows and Readme icons.

If Windows 95/NT is not installed on your machine, this should be done using the Setup program. There are some special requirements for Readykey for Windows:

- Windows 95/NT allow PCs to be grouped into workgroups. Each PC that is running Readykey for Windows or from which Readykey for Windows is to be administered, should be in the same workgroup. Previous versions of Readykey for Windows insisted on each PC being in the same workgroup. Although this is no longer necessary, it is advisable for ease of administering the network.

Note: The term 'workgroup' when used in the context of networks and Windows 95/NT should not be confused with the use of the term within Readykey for Windows, which allows personnel to be divided into departments and workgroups for ease of administration and reporting.

If Windows 95/NT is already installed on the PC, then use the following procedure to ensure the PC meets the requirements for Readykey for Windows:

1. From **Control Panel**, choose **Network**.
2. Choose **Add...** then choose to add a **Client**.
3. From the list of **Manufacturers**, choose **Microsoft**, then choose the **Client for Microsoft Networks**.
4. If you are installing Readykey for Windows on a server based network, then you may need to install an additional client - contact the network administrator for information regarding installing an additional client. Choose **OK** when you have finished. Windows will probably copy some files from the installation disks/CD at this stage - follow the instructions provided on screen.
5. An adapter should be installed in the process of adding the client. Select the network adapter (Network Interface Card) manufacturer and type you have installed in the PC from the list.

Note: The latest Network Interface Cards are likely to be 'Plug and Play' or 'PnP' compliant, which means they auto-configure themselves when used with Windows 95 or Windows NT and modern PC hardware. In this case, you will be unlikely to need to change or configure the settings manually.

The **Interrupt** and **Base I/O Port** (Base Address) settings will usually be set in Windows 95/NT automatically. However, you should confirm they match with the settings you made on the Network Interface Card. When you return to the main **Control Panel: Networks** screen, click on the Network Adapter and choose **Properties**. Choose the **Resources** tab (if available) and confirm the **IRQ** and **Base I/O Port** settings.

6. One or more network protocols should also have been installed automatically, one of which will be set as the default. The two normally installed are: 'Microsoft NetBEUI' and 'IPX/SPX compatible transport with NetBIOS'. TCP/IP protocol is typically used with NT networks. Only one of these protocols is required. Which one depends on several factors.

NetBEUI can only be used if the Readykey for Windows workstations are connected on the same physical network segment. The NetBEUI protocol does not allow communications across Routers.

IPX/SPX or TCP/IP must be used if there are one or more routers between workstations. It will also be necessary if you are connecting to a network running Novell Netware.

If in doubt make the 'IPX/SPX compatible transport with NetBIOS' the default network and remove NetBEUI. Make sure the same protocol is set on each PC.

7. Choose **File and Print Sharing...**, and make sure the *'I want to be able to give others access to my files'* option is selected to allow file sharing. Choose **OK**.
Note: You must enable file sharing on **all** PCs. Without this the Network DDE will fail to operate and, on the Readykey Server on a peer-to-peer network, you will not be able to access the shared Readykey for Windows database from other workstations.
8. Now click the **Identification** tab to setup the **Network Names**. It is essential that the **Computer Name** is unique for each PC on the network. However, the **Workgroup** name should be the same for each PC, although this is not essential. For the purposes of this document, it will be assumed that you use the Workgroup Name 'RKFORWINDOWS'.
Note: Some characters, including spaces, are not allowed as part of a Workgroup Name.
9. Choose **OK** when you have finished setting up the adapters and protocols. You will be prompted to restart the computer to make the settings take effect.
10. You should now repeat the operation for each additional PC from which you intend to run Readykey for Windows.

WIN.INI

WIN.INI is a special file that contains many settings for different Windows applications. When a Windows application, including Readykey for Windows, starts up it will examine WIN.INI to establish various settings. Readykey for Windows will put lines similar to those below into WIN.INI:

```
[PAC Windows]
TRMPath=C:\RKEYWIN
SRVPath=P:\RKEYWIN

[Btrieve]
options=/m:48 /p:3584 /b:16 /f:80 /l:20 /n:12
```

These settings are described in the Troubleshooting section in Appendix B.

Note: Installing Microsoft Access after installing Readykey for Windows will over-write the settings in the [Btrieve] section of WIN.INI (shown above). This will prevent Readykey for Windows from working. Therefore do not install or use Microsoft Access on any PC on which you intend using the Readykey for Windows software.

Installing the Security Block

The security block, or 'dongle', supplied with the Readykey for Windows software should be fitted into the Readykey Server's parallel printer port, a 25 way female D-type socket on the back of your PC. A printer cable may then be connected to the similar socket on the security block.

Warning: Do not connect the security block to the parallel port of the File Server on a Server-based network. Readykey for Windows will not be able to detect the device. Instead, you should connect it to the parallel port on the Readykey Server.

The connecting of this device has no effect on the normal operation of a printer and may be permanently left in place.

Installing Readykey for Windows

The following section describes peer to peer and server based networks in terms of the software installation. It is important that you understand this section before installing.

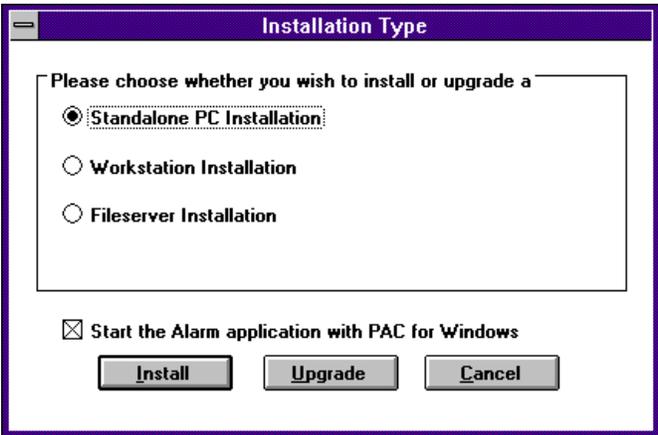
Definition: In the following section a Readykey **Server** is a Workstation PC whereas a **File Server** is a powerful specialized PC for storing files for a whole network.

Before you start you should have:

- Two Borland Database Engine Disks
- Four Readykey for Windows Disks
- These Instructions
- The *Software Installation Manual 17169*

Installation Options and Software Components

During the installation a selection of the three components are installed according to which option you pick in the following dialog:



The table below indicates which components these installation types include:

Installation Type	Database Engine	Program Files	Database Files
Standalone PC	✓	✓	✓
Workstation	✓	✓	x
Fileserver	x	x	✓

Note: The database engine must be installed separately to READYKEY for Windows using the Borland Database Engine disks provided. It must be installed **before** you install READYKEY for Windows.

Software Components

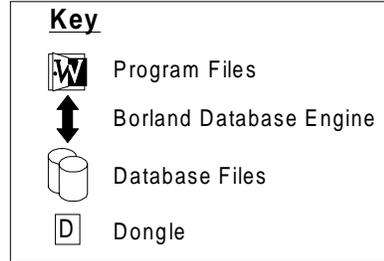
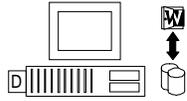
As seen above the Readykey for Windows installation divides into 3 components:

1. The **Program Files** - these contain the list of instructions which make up Readykey for Windows. The instructions tell the computer what to do next.
2. The **Database Files** - these are a store for all the details of your Readykey for Windows system. They contain information in lists, for example, personnel, areas, alarms, transactions etc.

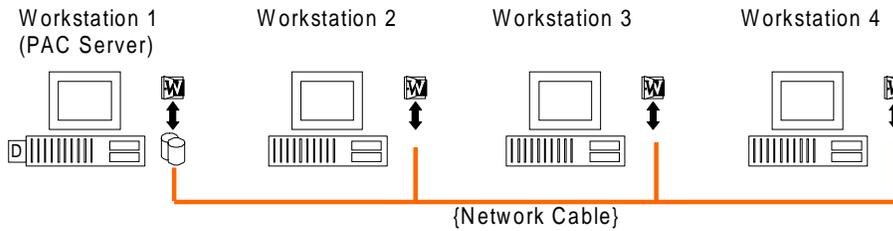
3. The **Database Engine Files** - the database engine sits between the program files and the database files and performs an interfacing function. The program files do not look at the database directly but ask the database engine to perform the searches and store/retrieve information.

The following examples show where the 3 components should be installed in the 3 types of installation. In the examples the program files, database engine files and database files are represented by symbols. Refer to the key for details.

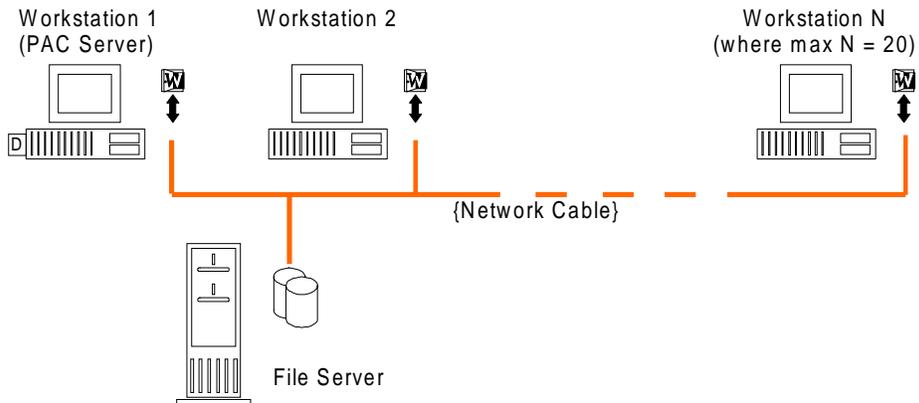
Example 1 - Standalone PC



Example 2 - Peer to Peer Network



Example 3 - File Server Network



Notes:

1. On any Readykey for Windows network installation the PC clocks must be within 5 minutes of each other.
2. The Readykey Server PC must be running Windows 95 or Windows NT4 not Windows for Workgroups 3.11.

Languages

Readykey for Windows allows multiple languages to be used on the same system. This means that different operators can use the Readykey for Windows system in different languages - all the Readykey for Windows software screens and on-line help will then appear in the language assigned to that operator.

In addition, a default language is set up - this is used for operator-independent applications, such as the alarm manager, the login screen and the on-line transaction display.

The installation program will automatically detect which languages are available on the installation disks, and offer these in the list of languages available for installation. If only one language is available then no choice will be offered, and the two screens regarding language choice will not be displayed.

Additional languages can be easily added at a later date by running Readykey for Windows Setup again, choosing to 'Upgrade Readykey for Windows' and selecting the new languages required **in addition to any existing languages in use**.

When workstation installations are performed, Setup will attempt to detect the languages installed on either the Readykey Server or File Server, and make these languages available on the workstations. If Setup is unable to detect the languages, then you will be asked to specify which languages to install.

Warning: If Setup cannot find the same languages on the installation disks that exist on either the Readykey Server or File Server, then an error message will be displayed and Setup will terminate.

Installing a Peer to Peer Network

The Readykey Server PC will need a minimum of 126 Mbytes of free disk space, but this will increase in proportion to your final database size. For more information refer to the *Readykey for Windows PC Specification 17325*.

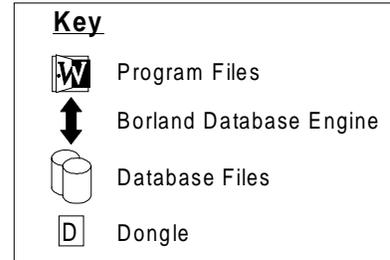
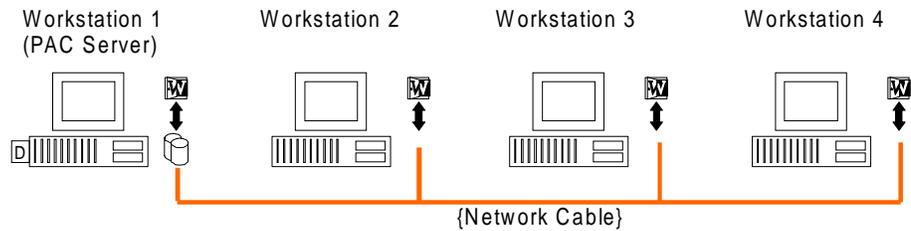
If you are using a Peer to Peer network then you are effectively storing the database on the Readykey Server and accessing it from the other PCs. To do this you should:

1. Install the dongle, the database, database engine and program files to the Readykey Server. Install READYKEY for Windows using the **Standalone PC installation**. For more detailed instructions refer to *The Software Installation Manual*.
2. On the Readykey Server, enable sharing of the root directory (usually C:\). For more detailed instructions refer to the section *Sharing the Readykey for Windows Directory*.

On the PCs which are to become the workstations, map a network drive to the root directory on the Readykey server. For more detailed instructions Refer to the section *Starting Up A Network Mapping*.

3. Start READYKEY for Windows on the Readykey Server. Refer to the section *Start Initializing Readykey for Windows on the Readykey Server*.
4. In Readykey for Windows on the Readykey Server in **Installer, Workstations** set up as many workstation accounts as necessary, keeping a note of the workstation numbers. For more information refer to the section *Logging in and Adding Workstations one the Readykey Server*.
5. Install the Borland Database Engine and program files on the other workstations. Install Readykey for Windows using the **Workstation Installation**. When the setup program asks for the location of the shared database files specify the drive mapped to the Readykey Server followed by the RKEYWIN directory (e.g. T:\RKEYWIN). Also enter the workstation number you noted previously (point 4) when prompted

Peer to Peer Network



Installing a Server-based Network

If you are using a File Server network then you are effectively storing the database on the dedicated file server and accessing it from the workstations.

The file server will need a minimum of 126 Mbytes of free disk space, but this will increase in proportion to your final database size. For more information refer to the *Readykey for Windows PC Specification*.

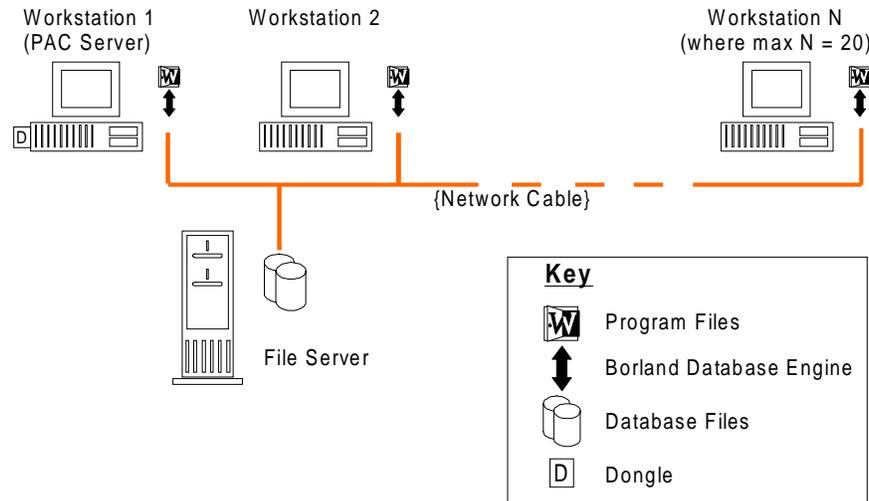
You must ensure that you have consulted the network administrator regarding installing Readykey for Windows. In addition, you must be logged in to the network as a user with sufficient privileges (rights) to install software onto the file server. These would include Read, Write, Create (Files and Directories) and Delete.

The steps to installing the system are as follows:

1. Install the database to the File Server using the **File Server Installation**. Refer to *The Software Installation Manual*.
2. On the PCs which are to become the workstations map a network drive to the shared RKEYWIN directory on the File Server. For more detailed instructions refer to *Setting Up a Network Drive Mapping*.
3. Install the dongle, the database engine and program files to the Readykey Server. Install Readykey for Windows using the **Workstation Installation**. When the setup program asks for the location of the shared database files specify their location on the File Server. When the setup program requests a workstation number enter 1 (the Readykey Server is always workstation number 1). Refer to *The Software Installation Manual* for more instructions.
4. Start Readykey for Windows on the Readykey Server. Refer to *Start Initializing Readykey for Windows on the Readykey Server*.
5. In Readykey for Windows on the Readykey Server in **Installer, Workstations** set up as many workstation accounts as necessary. Keep a note of the workstation numbers. Refer to *Logging in and Adding Workstations on the Readykey Server* for more details.
6. Install the database engine and program files on the other workstations. Install Readykey for Windows using the **Workstation Installation**. When the setup program asks for the location of the shared database files specify their location on the File Server. Also enter the workstation number you noted previously (point 4) when prompted.

Note: Once the installation is up and running all operators must be given network passwords that allow them Read, Write, Create and Delete privileges for the \RKEYWIN\ directory).

File Server Network



Sharing the Readykey for Windows Directory

Before users of other PCs can access the files contained in the Readykey for Windows directory on the Readykey Server, you need to make the directory 'shared'. This is achieved using the Windows File Manager (Windows for Workgroups 3.11) or Windows Explorer (Windows 95), as follows:

Windows for Workgroups 3.11

1. Start **File Manager** - the icon is normally found within the **Main** group in Program Manager.
2. Ensure the contents of the c: (or whichever letter corresponds to the hard disk on which Readykey for Windows is installed) drive are visible. From the **View** menu ensure either **Tree and Directory** or **Tree Only** are selected - this will display the tree structure of the hard disk where Readykey for Windows is installed.
3. Click on the root directory, usually c:\, and the name will become highlighted.
4. Click on either the button from the toolbar or from the **Disk** menu select **Share As...** Type RKEYWIN in the **Share Name** box. Select **Full** as the **Access Type**. Choose **OK**.

Warning: Do not enter a password.

At the main File Manager window, from the **File** menu select **Exit**.

Windows 95/Windows NT

1. Start the Windows Explorer from the **Start** menu, and click on the root directory (usually C:\) in the tree view on the left hand side.
2. Now right-click on the root directory and choose **Sharing...** (If **Sharing...** is not listed in the shortcut menu, then you need to go to **Control Panel: Networks** and configure sharing via the **File and Print Sharing...** option as described in the **Network Setup** section above.)
3. Make sure the **Sharing** tab is displayed, and choose **Shared As**. The default **Share Name** is recommended.

4. Make sure the **Access Type** is set to **Full** and the **Full Access Password** box is empty.
5. Choose **OK** - you will be returned to the Windows Explorer, and the folder will appear with a hand icon as shown below:



6. You can now close the Windows Explorer by choosing **Close** from the **File** menu.

Setting Up A Network Drive Mapping

Before you can proceed to install Readykey for Windows onto each workstation, you need to establish a drive mapping on each workstation which points to the network location of the Readykey for Windows database and executable files. This is achieved using File Manager/Windows Explorer on each workstation.

Windows for Workgroups 3.11

Start **File Manager** - the icon is normally found within the **Main** group in Program Manager.

Choose the  button from the toolbar or from the **Disk** menu select **Connect Network Drive....** In the **Drive** box select the drive letter you wish to assign to reference the Readykey for Windows directory on the File Server (Server-based network) or the Readykey Server (Peer-to-peer network) - for the purposes of this document, it will be assumed you have used the drive letter P:.

If you have a Server-based Network, then refer to Chapter 9 in the *Microsoft Workgroup Add-On for Windows User's Guide* regarding 'Connecting to a Directory on a Network Server'.

For peer-to-peer networks, in the **Path** box type `\\ServerName\RKEYWIN`, where *ServerName* is the Computer Name you assigned to the PC which is the Readykey Server.

Choose **OK**.

Windows 95/NT

Note: Readykey for Windows Setup does not currently support UNC paths - e.g. `\\<ServerName>\<path>`. It will therefore be necessary to map a network drive to the RKEYWIN directory on the Readykey/File Server.

From within Windows Explorer

1. Choose **Network Neighborhood**.
2. Browse the network to find the Readykey Server (peer-to-peer networks) or File Server (server-based networks).

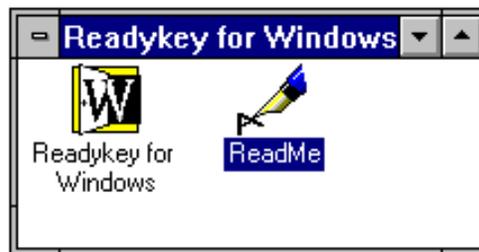
3. Find the RKEYWIN directory, and right-click on it in the right-hand side of the Explorer window.
4. From the shortcut menu, choose **Map Network Drive....** Note the drive letter assigned, and choose **OK**.

Note: You cannot map a network drive to a second level directory

Initializing Readykey for Windows on the Readykey Server

Note: This section only applies to a Server-based Network after the Setup program has been used to install Readykey for Windows to the Readykey Server.

When Readykey for Windows was installed on the Readykey Server a Program Group/Folder was created containing the Readykey for Windows icon. Also included is a 'Read Me' file which contains information not currently included in the written documentation or on-line Help. You can read this file by double-clicking the icon. (**Read Me** uses the Windows Write or WordPad programs to display the file).



If you want Readykey for Windows to start automatically when Windows itself starts up then you should copy the Readykey for Windows icon to the StartUp Program Group/Folder.

Please make sure that you have read *Readykey for Windows System Overview* before starting the system. This describes how the system works and what you need to do to prepare for programming the system.

When Readykey for Windows starts up, several different activities occur, which may result in error messages if some items, such as printers, are not connected. Most of these error conditions can be ignored at this stage.

Start Readykey for Windows on the Readykey Server as follows:

Windows for Workgroups 3.11

From the **Windows Program Manager** start **Readykey for Windows** by double-clicking its icon.



Windows 95/Windows NT

Readykey for Windows may be started by choosing the icon from the **Programs** folder on the **Start** button.

Once you have started Readykey for Windows, several different process will occur. These are described below:

Alarm / Current Alarm Queue



Firstly the **Alarm** application may start if you choose this option during **Setup**. This is the application that monitors incoming events from the system and determines whether they should be printed, sent to the On-line Transaction Display or treated as an Alarm.

On-line Transaction Display



This is part of Alarm. If this icon is activated (by double-clicking) transactions will appear on the screen on this PC as well as the printer.

Alarm Graphic



Alarm Graphic

This is also part of Alarm, and allows graphics associated with alarm events to be viewed.

Note: The **Alarm** application, **On-line Transaction Display** and **Alarm Graphic** will only start if this option was selected when the Readykey for Windows software was installed on the PC.

The Readykey Engine



After Alarm has started, the **Readykey Engine** will start up. The Readykey Engine operates continually in the background while the system is running. All communications between the Readykey for Windows administration system and the door controllers, through the masters, are controlled by the Engine. Also communications between workstations running Readykey for Windows are controlled by the Engine.

Comms Port Error



If the Engine cannot find a PC Interface Kit or CNC in **COM1:** on the Readykey Server then it will give an error similar to the one shown above. Ignore this message at this stage - choose **OK**, and the startup process will continue.

Deleting Old History Transactions

The following message may appear briefly while Readykey for Windows starts, but should also be ignored at this stage:



Security Block Not Found

If no Security Block (dongle) is connected to the parallel port of your PC, or for some reason it is not detected, then the following message will appear:



Warning: It is important to troubleshoot and resolve why the Readykey for Windows security block was not found for Multi-PC installations. Without the security block installed and correctly detected on the Readykey Server, you will not be able to run Readykey for Windows on any other PCs than the Readykey Server itself, nor will you be able to communicate with any door controllers.

Refer to the Troubleshooting section in Appendix B to resolve the problem immediately before proceeding.

Logging In and Adding Workstations on the Readykey Server

Important: Before you can install Readykey for Windows software onto other workstations on the network, you must add a workstation into the database for each additional Readykey for Windows workstation, and note the Workstation Number assigned to it. This section of the manual contains detailed instructions on how to do this.

After running Readykey for Windows on the Readykey Server the Login screen will appear:



At this stage no **System Operators** have been created. In order to gain access to the system there is one operator defined, called GUEST. This operator has full access to the whole system. As no key has been assigned to GUEST, to enter the system:

1. Type **GUEST** in the User name box.
2. Press the **TAB** key (or click in the Password box).
3. Type the password - **GUEST**. As you type each password character, a * will appear on the screen preventing anybody observing what you have typed.

Now click on **Log in** with the mouse, or press **Enter**.

Note: Now you have started Readykey for Windows you have access to the On-line Help. Just choose **Help** either from a button or from a drop-down menu for immediate help relevant to the function you are currently performing.

Adding Workstations using the Installer Application

Note: The first workstation (i.e. the Readykey Server) is provided as part of the Readykey for Windows default data.

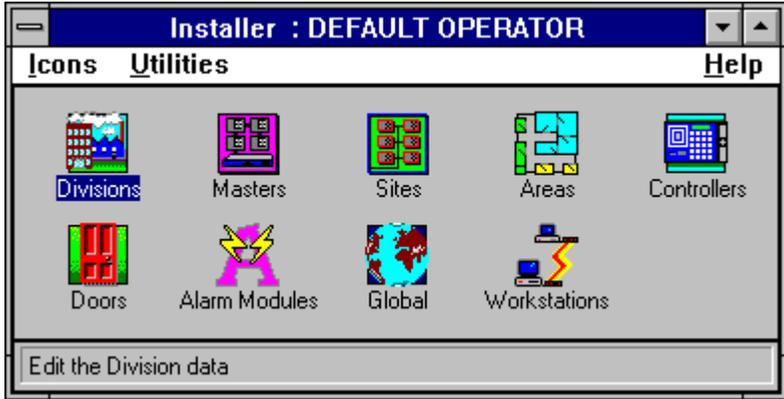
Once you have logged in you will be presented with all the Readykey for Windows **Applications**. Normally you will only see the applications your **Operator Privilege** allows you to use. As GUEST you have full access to all areas of the system so all icons are available.



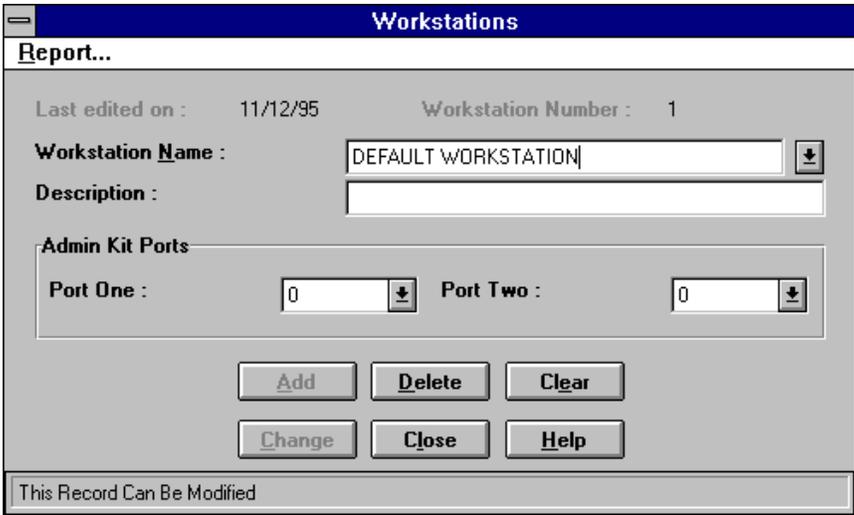
At this stage the application you will be using is **Installer**. This has a set of sub-applications that will appear as another set of icons.

First choose **Installer** by double clicking its icon.

The **Installer** sub-applications are now shown:



The sub-application you need to use at this stage is **Workstations**. Start **Workstations** by clicking on its icon from **Installer**.



Each PC on the system must have a unique Workstation Number. The Workstation Number is used by Readykey for Windows to ensure communications between workstations and the Server / Readykey Server take place properly.

Workstation Number 1 (i.e. the Readykey Server) is provided as part of the default database on the Readykey for Windows Setup disks. However, before you can install Readykey for Windows software onto other workstations on the network, you must add a workstation into the database for each additional Readykey for Windows workstation you intend to use, and note the Workstation Number assigned to it.

It is probably a good idea at this stage to change the name of Workstation Number 1 to 'Readykey Server' or something similar. Change the contents of the **Workstation Name** box and choose **Change**.

Note: If the only buttons displayed in the workstation screen are **Change, Close** and **Help** then your Readykey for Windows system only supports one workstation. Contact Radionics to obtain a password to upgrade your security block (dongle) to enable administration of your Readykey for Windows system from more than one workstation.

To add a workstation:

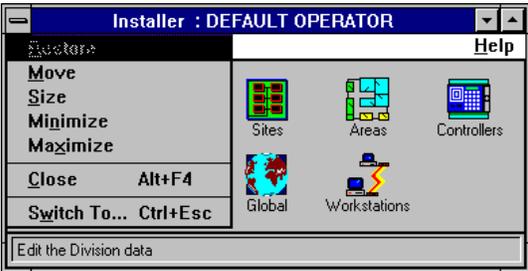
1. Choose **Clear** - this will clear the information shown on screen. In the **Workstation Name** box type a name for the workstation you are adding - each workstation you add must have a unique name.
2. In the **Description** box type a useful description for the workstation - this could be its location or the name of the main user of the workstation, etc. Entering information in this box is optional.
3. **Admin Kit Ports** - if the PC you are adding will not have a CNC or K2100/K1100 controller connected to it, then you will probably have a PC Interface Kit with Readykey Reader, a PC Interface Kit with Wiegand Interface connected to the PC to allow you to administer keys/cards or Wiegand/magstripe -compatible ID devices, and to facilitate secure logging in to the Readykey for Windows system.

These boxes are used to inform the system to which serial port on the workstation the Readykey PC Interface Kit is connected - in **Port One** select the serial port to which the first Readykey PC Interface Kit is connected. If you are using two Readykey PC Interface Kits (e.g. if you are using a combination of keys/cards and Wiegand compatible ID devices) then in **Port Two** select the serial port to which the second Readykey PC Interface Kit is connected.

Note: If you are connecting either of the Readykey PC Interface Kits directly to a K2100 or K1100 controller, or not connecting a PC Interface Kit to this workstation then leave both **Port One** and **Port Two** set to 0 (zero).

4. Choose **Add** - this will save the workstation information in the Readykey for Windows database. At the same time, the workstation will be allocated a unique number by the system - this will be displayed in the upper right hand corner of the display. You should note this number down carefully - you will need to refer to it when installing the Readykey for Windows software to the workstations.
5. Repeat the operation for each workstation being added.

When you have added all the workstations, you should close down the Workstations screen - choose **Close**. At the **Installer** main window, close down the **Installer** application by clicking on the box in the top left-hand corner of the **Installer** applications window. A drop-down menu will appear:



- 6. Choose **Close** from the menu, the screen will disappear and the Login application icons will be displayed again. An alternative is to press **Alt+F4** (that is, hold down the **Alt** key and press **F4**).
- 7. This will return you to the Application Icons screen - choose **Logoff** from the menu bar. You will then be returned to the **Login** screen. The Readykey Engine and Alarm will continue to operate (if running).



You have now completed preparation of the Readykey Server and can now proceed to install Readykey for Windows onto the other workstations, using the procedure described above.

Starting Readykey for Windows on Multi-PCs

Readykey Server

Before you will be able to start Readykey for Windows on any other workstation, Readykey for Windows must be running on the Readykey Server. The reason for this is that when you start Readykey for Windows on any PC, a message is broadcast (via the network) to locate the Readykey for Windows dongle, and to ascertain the type of Readykey for Windows system you have. The functionality of some Readykey for Windows applications is dependent on the parameters programmed in the dongle - e.g. you will not be able to add additional sites in **Installer: Sites** unless you have purchased more than one site.

Unless the dongle can be found, Readykey for Windows cannot be started on any workstation.

Windows for Workgroups 3.11

From the **Windows Program Manager** start **Readykey for Windows** by double clicking its icon.



If you want Readykey for Windows to start automatically when Windows itself starts up then you should copy the Readykey for Windows icon to the StartUp Program Group.

Windows 95/Windows NT

Readykey for Windows may be started by choosing the icon from the **Programs** folder on the **Start** button.

If you want Readykey for Windows to start automatically when Windows 95/NT itself starts then you should create a shortcut to Readykey for Windows (specifically, to the file LOGIN.EXE in the Readykey for Windows BIN directory), by choosing **Settings: Taskbar** from the **Start** menu.

Startup Activity

When Readykey for Windows starts up, several different activities occur, these may result in error messages if some items, such as printers, are not connected. If you receive a warning message during the start up process about the Readykey for Windows Security Block not being found, then you should refer to the Troubleshooting section in Appendix B and resolve this problem - you will not be able to run Readykey for Windows on any other workstations until the Readykey Server has started Readykey for Windows and correctly detected the security block.

If Readykey for Windows is not already running on the Readykey Server, start **Readykey for Windows** on the Readykey Server as described above.

Starting Readykey for Windows on Workstations

Once Readykey for Windows is running on the Readykey Server, you can now proceed to run Readykey for Windows on any workstations on which you have used the Setup program as described above.

Note: Although Readykey for Windows supports up to 20 workstations on a Server-based network, you should not run Readykey for Windows from more than 4 PCs (including the Readykey Server) on a peer-to-peer network at any one time. The reason for this is that each time you run a Readykey for Windows application on a peer-to-peer network a copy of a number of program and data files are opened on the Readykey Server. Attempting to run Readykey for Windows from more than 4 PCs simultaneously is likely to cause serious resource problems on the Readykey Server and errors are likely to occur.

Readykey for Windows is started on a workstation in exactly the same way as described above for starting Readykey for Windows on the Readykey Server.

Once Readykey for Windows starts on a workstation, three processes will occur:

- The system will try and find a Readykey for Windows dongle connected to a computer somewhere on the network. If it fails to locate a dongle, then you will receive an error message stating that the workstation is not defined in the database.



- You should choose **OK**, and troubleshoot the reason for the dongle not being detected, using the information supplied in Appendix B.
- The **Alarm** application will, if running, begin to process all the transactions (not just alarms) that have occurred on the system in the period since Readykey for Windows was last running on that workstation.

If you do not wish to view all transactions via the **Online Transaction Display** that have occurred, then these can be 'skipped' by minimizing the window and then restoring it.

- The Readykey Engine will, receive and begin to process any transactions from any masters connected to it, and store these on either the Readykey Server or File Server. In addition any updates that have been made to the database on either the Readykey Server or any other workstations will be sent to any masters connected to that workstation.

The above processes may affect the performance of your system for a while, until all transactions and updates have been processed.

Using Readykey for Windows Multi-PC

When using Readykey for Windows across a network, several unique processes and features take place which affect the general operation of Readykey for Windows. These are described below in some detail:

Record Locking

Readykey for Windows consists of a number of database files, which store the programmed data - e.g. personnel information, door and door controller information. Within each file, information is divided into records - e.g. each keyholder will be a separate record in the personnel file. It is possible for two or more workstations to view the same record at the same time. However, changes made by one operator to a record are not continuously updated on the display of all other operators accessing the same record. Therefore, in order to prevent changes made by one operator at one workstation to a record being overwritten by another operator at a different workstation, **only the first operator to access a record will be permitted to make changes to it.**

The status bar, at the bottom of each screen of information will indicate to an operator whether changes can be made to the record currently being displayed.

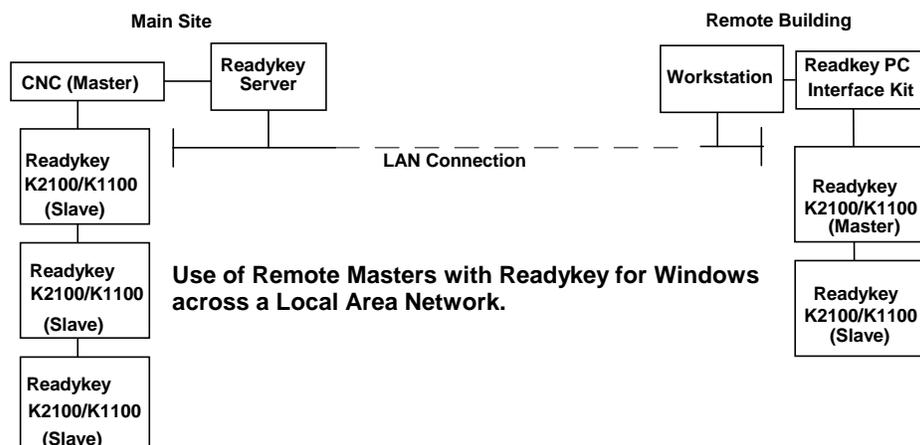
Once the first operator has finished with the record, other operators must re-select the updated record before they can modify the information contained within the record.

When records are not available for modification, certain buttons on the screen (e.g. **Change, Delete and OK**) will be grayed out and unavailable. This means that although operators may be able to modify the data on screen when they have 'View only' access to the record, they will not be able to save any changes they make.

Master Locations

As described in the *Readykey for Windows System Overview*, Readykey for Windows supports up to 20 network masters - these can be a combination of any type - K2100, K1100, Single Site CNC and Multi-Site CNC.

One of the important features of Readykey for Windows is that these masters can be distributed across the workstations and Readykey Server, eliminating the need to connect all masters to the Readykey Server, and hence reducing cabling. One example of a situation where this could be of benefit is where there will be a number of door controllers in a remote location, to which there is already a network connection. By configuring one of the door controllers as a master (K2100 / K1100 in System Type 2), and connecting it to a local PC (via a Readykey PC Interface Kit) running Readykey for Windows, the need for additional cabling from the door controllers to the Readykey Server is eliminated. This is illustrated in the diagram below:



Masters, their type and name are configured within the **Installer** application. At this point it is also specified to which workstation a master is connected.

Transaction Storage

All transactions which occur on the system will be stored on either the Readykey Server (on a peer-to-peer network) or on the File Server (on a Server-based network), regardless of where they originate.

This means that if a transaction occurs on a door controller that is connected (via a master) to a PC other than the Readykey Server or File Server, it will be transmitted across the network to either the Readykey Server or the File Server which stores all the Readykey for Windows transaction files. This process is carried out automatically by the Readykey Engine, which should be running at all times on each workstation.

When a transaction file reaches a certain size, it will be considered to be 'full'. A new transaction file will be created automatically by the Readykey Engine at this point. The old transaction file should then be archived (copied) to a floppy disk using the Backup application and stored in a safe place. This operation can be carried out from any Readykey for Windows workstation.

Transaction Routing

The Readykey for Windows **Alarm** application (which is normally running on every PC on the network) is responsible for examining each transaction generated on the system and determining whether it should be printed, displayed on the on-line transaction display or generate an alarm condition on that particular workstation.

If running, the **Alarm** application on each workstation maintains pointers to indicate the last transaction in the transaction files it has processed. As transactions are added to the centrally held transaction files, each copy of Alarm that is running on the various PCs will read the new transactions from the file and process them accordingly.

Readykey for Windows allows transactions to be handled differently by each workstation. This is achieved via **Admin: Transaction Routing**. For example, different workstations may be configured to print different (or no) transactions. This can also be controlled by a time profile - e.g. low priority transactions (access authorized etc.) may be ignored by all PCs during office hours, but outside those hours all transactions may be printed at a workstation in a 24-hour manned security office.

Backups

Backing up the Readykey for Windows database should be an essential part of routine operation to protect the programmed information against PC failure / loss, and also to maintain copies (archives) of full transaction files.

The Readykey for Windows system includes a special application (**Backup**) to carry out these processes.

However, the **Backup** application needs exclusive access to all the Readykey for Windows database and transaction files in order to make copies of them.

On a single workstation system, when Backup starts it closes down all Readykey for Windows applications (except Login) that are running at the time, including Alarm and the Readykey Engine. On a multi workstation system, it is possible that when an operator initiates a backup from one PC, other operators on different workstations may be running Readykey for Windows applications. At this point Readykey for Windows will warn the operator who is attempting to start the backup operation of which workstations are currently running applications.

Note: No warning will be given about workstations that are running **Login**, the **Readykey Engine** and **Alarm** only - these will be closed down on all workstations automatically if they are the only applications running on workstations when the **Backup** application is started.

If the operator attempting to start the backup operation has privilege to do so, then they will be given the option to force the backup to begin. This will broadcast a message to all workstations running Readykey for Windows applications to indicate that a backup operation will be started following a period of time (determined by the backup operator). This will give operators the opportunity to save any changes they were making to the Readykey for Windows database before the backup commences. During this time, the backup operator may cancel the force backup operation if they wish. Once the time has expired, all Readykey for Windows applications (except **Login**) will be closed on all workstations, and the backup operator may proceed with the backup or archive operation as normal.

While the backup or archive operation is in progress, no operators will be able to login to Readykey for Windows. Operators that were already logged in will not be able to start any Readykey for Windows applications until the backup application has been closed - the status bar of the 'Logged In' screen will indicate the current status. Workstations that were not running Readykey for Windows will not be able to start Readykey for Windows - a message will be displayed stating that a backup is in progress, and stating which PC is performing the backup. The operator can then wait until the backup is completed (at which point Readykey for Windows will start on that workstation) or choose **Close** to abandon starting Readykey for Windows.

Once the backup application has been closed, the **Alarm** application (if running) and the Readykey Engine will restart automatically on all workstations that were running Readykey for Windows prior to the Backup operation. However, other applications that were running before the backup was started (e.g. **Admin**, **Installer**) will not be restarted.

Any download operations that were in progress when the backup was started will be terminated.

Status / Lock & Unlock / Force Dial

It is not possible to use any of the above to obtain information about the current state of more than one site connected to a CNC simultaneously.

The correct information will be displayed on one workstation, however, on the other workstations, no information will be displayed.

The operator at the workstation where no information is displayed must wait until the other operator has finished viewing the state, and then re-select the site. The information will then be displayed.

Finishing Readykey for Windows

In order to continuously monitor alarms and to print events on a workstation as they happen, Readykey for Windows should never be shut down. When you have finished using the system to make changes then you should always log off.

It is recommended that Readykey for Windows is NEVER shut down on the Readykey Server while other operators may be running or intending to run Readykey for Windows, as this will prevent other operators starting Readykey for Windows from other workstations.

If you do need to shut down Readykey for Windows, such as before switching off the workstation, or when you do not want continuous monitoring, then you must logout first.

To prevent problems, set the clocks on the PCs to within 5 minutes of each other.

Workstations

When Readykey for Windows is closed down on a workstation, no alarms or other transactions that occur on the system will be reported at that workstation until Readykey for Windows is restarted.

When Readykey for Windows is not running on a particular workstation, any updates that are generated on the system which are applicable to door controllers connected to a master connected to that workstation, will not be received by those door controllers until Readykey for Windows is restarted on that workstation. In addition, any transactions that occur at those door controllers, including alarms, will not be enunciated at **any** workstation on the system until Readykey for Windows has been restarted on that workstation.

Readykey Server

Note: In order that operators can use Readykey for Windows from workstations at any time, it is recommended that Readykey for Windows is normally not closed down on the Readykey Server.

However, if Readykey for Windows is closed down on the Readykey Server, other workstations that are already running Readykey for Windows will be able to continue to run Readykey for Windows applications and changes may be made to the database.

However, no other workstations will be able to start Readykey for Windows, until Readykey for Windows has been restarted on the Readykey Server.

Warning: On a peer-to-peer network, Readykey for Windows will not operate correctly on workstations if Windows for Workgroups itself is closed down on the Readykey Server - i.e. the PC is returned to MS-DOS or switched off completely. If this occurs, Readykey for Windows may begin to report error messages or may close down some applications unexpectedly.

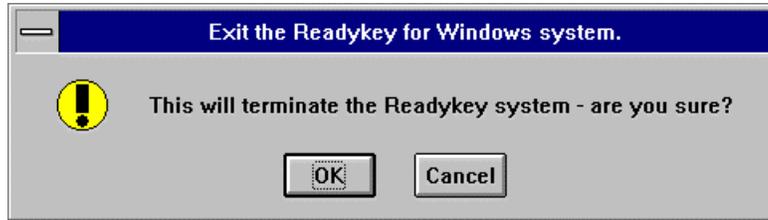
Leaving Readykey for Windows

The same procedure applies to closing down Readykey for Windows on either the Readykey Server or a workstation:

If an operator is logged in to Readykey for Windows, then they should log out first.

With the **Login** screen displayed you need to follow the same procedure as for logging into Readykey for Windows - i.e. use the operator ID device with the administration reader, type the **User name / Password**. However, instead of choosing **Log in** you need to choose **Shut down**.

This will bring up:



Choose **OK** to close down Readykey for Windows, **Cancel** to return to the **Login** screen.

Next Steps

Once you have installed and started Readykey for Windows on the Readykey Server and any workstations, you should proceed to configure the rest of your Readykey for Windows system, using the information contained *Readykey for Windows System Programming Manual*.

This document will provide instructions relating to programming the Readykey for Windows system you have purchased, including configuring and programming door controller, door and access information.

Appendix A: Network Specifications

General

- All PCs which are to be used for running Readykey for Windows must have Microsoft Windows for Workgroups 3.11, Windows 95 or Windows NT Version 4.0 (build 181 or later) installed.
- If possible, all the PCs should have the same version of Windows.
- It is recommended that all PCs are on the same workgroup.
- Network Card: Radionics recommend the use of a branded network card, such as an Intel EtherExpress or 3COM Etherlink III.
- Radionics **Strongly** recommend that a Server-based network is used wherever possible, as this includes a File Server that is dedicated to providing shared resources, is inherently more reliable and will offer higher performance.

However, in circumstances where such a network is not available, a peer to peer network may be used, with a limit of four workstations. In this case, it is recommended that the Readykey Server is dedicated to being a Readykey for Windows server, and not used for other tasks - e.g. word processing, etc. or a reduction in speed and performance can be expected.

It should be noted that a higher performance may be obtained on **a single workstation** (the Readykey Server) by the use of a peer-to-peer network. However, this may be to the detriment of performance and reliability on the system as a whole.

Server-Based

- Any Server-based network can be used that supports access by Windows for Workgroups, Windows 95 or Windows NT Version 4.0.
- A maximum of 20 Readykey for Windows workstations may be used to run Readykey for Windows at any one time.

Peer to Peer

- The only peer to peer network supported is Microsoft Windows Networking - i.e. that offered by Windows for Workgroups 3.11, Windows 95 and Windows NT Workstation Version 4.0.
- A maximum of 4 PCs (including the PC designated as the Readykey Server) may be used at any one time.
- The Readykey Server should be dedicated to running Readykey for Windows or a reduction in speed and performance can be expected.

Appendix B: Troubleshooting

Network Communications Testing

Networks are complex, and as such may give rise to complex problems which may take considerable amounts of time and expertise to resolve. Before troubleshooting Readykey for Windows problems, it is a good idea to verify that all the PCs are operating correctly and communicating across the network.

To confirm that the PCs can 'see' each other across the network use either File Manager (Windows for Workgroups 3.11) or Windows Explorer (Windows 95/Windows NT4).

In either File Manager or Explorer on one of the PCs, select the root directory on the hard disk (usually C:\) by clicking on it with the mouse.

- Windows for Workgroups - Click on either the  button from the toolbar or from the **Disk** menu select **Share As...** Type RKEYWIN in the **Share Name** box. Select **Full** as the **Access Type**. Choose **OK**.
- Windows 95/Windows NT4 - Right-click on the directory and choose **Sharing...** Make sure the **Sharing** tab is displayed, and choose **Shared As**. The default **Share Name** should be used. **Do not set a password**.

If you cannot achieve either of the above steps, then you need to confirm in **Control Panel: Networks** that **File Sharing** has been enabled as described above.

Once this has been configured on one PC, then you should go to File Manager/Windows Explorer on each of the other PCs in turn and try to 'connect' to the shared RKEYWIN directory, as described below:

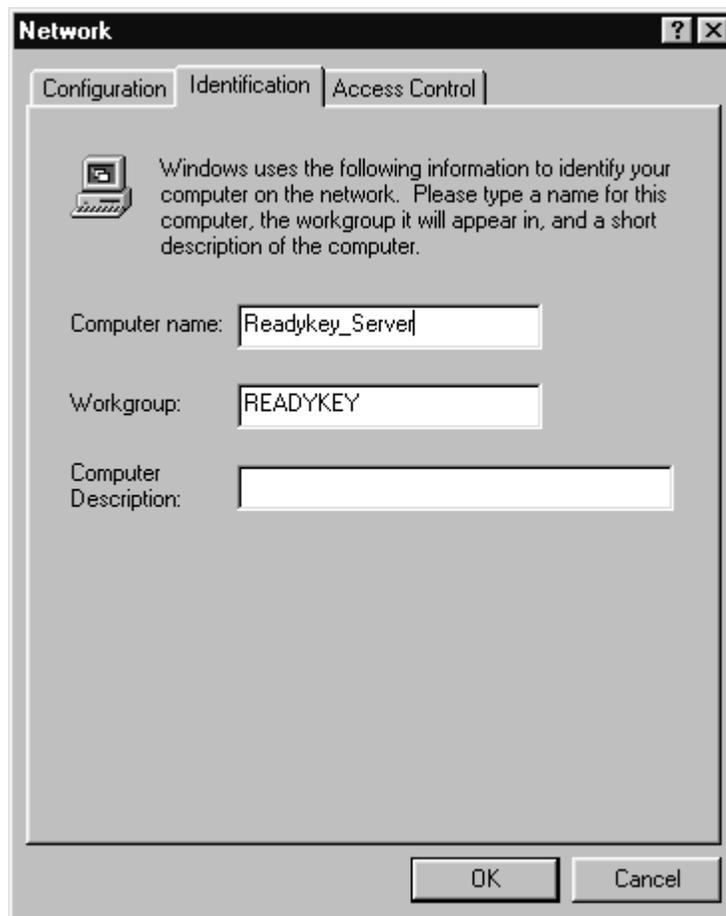
- Windows for Workgroups - Choose the  button from the toolbar or from the **Disk** menu select **Connect Network Drive**. Note the contents of the **Drive** box. Now choose **Browse...** and you should see a list of Workgroups. Double click on the Readykey for Windows workgroup and you should see the 'test' PC on which you shared the directory above. Select this PC by clicking on it in the list, and the lower box (**Share Names**) should now include **the shared drive**. . Select **the shared drive** and choose **OK**.
- Windows 95/Windows NT4 From within Windows Explorer, choose **Network Neighborhood**, and browse the **Entire Network** to try to find the 'test' PC you were using above. Now try to find the RKEYWIN directory - you should see the 3 sub-directories BIN, DATA and GRAPHICS.

At this point, if all of the above tests fail, then you should confirm the network setup within Windows is as described in the earlier section, and all cabling is correct, then call your network installer for advice.

Security Block Not Found

There are a number of reasons why the Readykey for Windows Security Block may not be detected when Readykey for Windows starts. However, the reasons may vary between the Readykey Server and the Workstations. The most common explanations for this problem are listed below. When the problem has been resolved, you will need to close down and restart Readykey for Windows.

Note: All workstations including the Readykey Server must not have any spaces in the PC Identification name or Workstation name.



Readykey Server

Is the Security Block installed?

Confirm that the Readykey for Windows security block is installed in the parallel port of the Readykey Server. The parallel port will be a 25-way D-type female connector.

Is the Parallel Port operational?

Confirm that the parallel port itself is operational by connecting a parallel printer to it, and printing a text file - the Readykey for Windows Readme file could be printed using the Windows Write/WordPad application (supplied with every copy of Microsoft Windows).

Is the PC a Laptop or Portable?

Some laptop or portable PCs may not be able to detect the Security Block. This will probably be due to the parallel port of the PC having a special setting, such as 'Bi-directional', for file transfer software. Try using the configuration programs that come with the laptop to change this setting.

Is the PC an IBM PS/2?

Users of IBM PS/2 systems that use MCA (Micro Channel Architecture), who find that the Security Block is not detected, should use the Reference Disk, supplied with the machine, to disable the *Parallel Port DMA*.

Workstations

Is Readykey for Windows running on the Readykey Server?

Make sure Readykey for Windows is running on the Readykey Server. If the problem persists, then close down Readykey for Windows and Windows on the Readykey Server, reboot the Readykey Server and restart Windows and Readykey for Windows. Make sure no error messages appear when Readykey for Windows starts on the Readykey Server about the Security Block not being found.

Has each Workstation got a unique number?

Each workstation that is to be used for running Readykey for Windows must have a unique number. This number is 'created' by running **Installer: Workstations** on the Readykey Server, and adding 'Workstations' as required. The Workstation number will be displayed in the upper right corner of the window.

The workstation number is then specified during the Readykey for Windows Setup process, and is stored in the `LOGIN.INI` file in the Readykey for Windows `BIN` directory on the workstation. Use a text editor (e.g. Windows Notepad) to examine the file and locate the line:

```
PCNumber = n
```

where `n` represents the workstation number.

Note: The workstation number should be 1 on the Readykey Server, regardless of the type of network.

Unable to Add a Workstation

If the **Clear**, **Add** and **Delete** buttons are not visible in **Installer: Workstations**, then it is likely that the Readykey for Windows dongle is not programmed for multiple PCs. This can be confirmed by using the **Dongle Upgrade** function from the **Utilities** menu in **Installer**.

Confirm the **No. Of PCs** (number of PCs) setting, and contact Radionics if necessary to purchase a dongle upgrade password to add a workstation.

Unable to Start Readykey for Windows

Is a Backup In Progress?

You will not be able to start Readykey for Windows on any workstation while a Readykey for Windows backup operation is in progress. However, a warning will be displayed when you attempt to start Readykey for Windows while a backup operation is taking place.

Error messages displayed when using Readykey for Windows

When you attempt to start Readykey for Windows, if the installation process has not been carried out correctly, then any number of error messages may be displayed at this time.

Any Readykey for Windows installation relies on a number of files being available and settings being made before it will operate correctly. These are summarized below, and the validity of the settings and correct location of the files should be checked if any error messages occur when starting or using Readykey for Windows. Contact Radionics Customer Service Department for further advice.

Local Readykey for Windows Directory

On the hard disk of either the Readykey Server or a workstation using shared program files will exist three sub-directories in the Readykey for Windows directory (default is `C:\RKEYWIN`) - these will be called `BIN`, `DATA` and `GRAPHICS`.

In these directories on the Readykey Server on a Server-based network and on a workstation, there will be many files (most ending in .DLL or .EXE) in the BIN directory and a small number (less than 10) files in the DATA directory.

Shared Readykey for Windows Directory

This is the location of the shared Readykey for Windows database files, and also a copy of the program files. On the File Server (on a Server-based network) or on the Readykey Server (on a peer to peer network) three sub-directories (BIN, DATA and GRAPHICS) will exist in the Readykey for Windows directory.

The BIN directory will contain a number of files (over 20), most of which will end in .DLL or .EXE. These are the Readykey for Windows program files, which may or may not be used by a workstation running Readykey for Windows.

The DATA directory will also contain a number of files, typically over 40. Most of these will end in .DAT or .CFG. These are the Readykey for Windows shared database files.

WIN.INI

Readykey for Windows Setup inserts a number of lines into WIN.INI:

```
[Readykey Windows]
TRMPath=directory_A
SRVPath=directory_B

[Btrieve]
options=/m:48 / p:3584 /b:16 /f:80 /l:20 /n:12
```

where:

- `directory A` is the path to the **local** Readykey for Windows directory (usually `C:\RKEYWIN`)
- `directory B` is the path to the **shared** Readykey for Windows directory (usually `P:\RKEYWIN`)

TRMPath

This is used to indicate the location of local program, configuration and data files. This will be on a local drive.

SRVPath

This indicates the location of the main Readykey for Windows data files, which are stored on either the Readykey Server or the file server, depending on whether you have a peer-to-peer network or server-based network respectively. This will be a remote (network) drive normally. However, on a peer-to-peer network on the Readykey Server it will be a local drive.

Btrieve Options

Readykey for Windows uses a database manager called Btrieve. This line is used to set special Readykey for Windows options for Btrieve.

Note: There is a possibility of a conflict with other applications that use the Btrieve filing system. These applications, just like Readykey for Windows, will seek out the section labeled `[Btrieve]` and use the values in the above line to set up their filing system. Readykey for Windows inserts this section because it needs specific Btrieve settings. If, however, another application also requires Btrieve settings, these may overwrite the Readykey for Windows values. If this occurs then Readykey for Windows may start giving errors or stop working altogether. One popular application that may cause trouble in this way is Microsoft Access. If you intend installing Access, either before or after installing Readykey for Windows, then use the *Access Custom Setup* and do **not** include support for Btrieve databases. This will prevent the Btrieve section in WIN.INI being overwritten.

LOGIN.INI

This file is a special Readykey for Windows file, which contains a number of settings which Readykey for Windows uses to decide which applications to display in the Login screen, which to start automatically, etc.

Warning: Modifications to these settings should only be made on the advice of Radionics Customer Service Department.

The option of most importance in LOGIN.INI to Readykey for Windows Multi-PC installations is:

`PCNumber=n`

- which is located in the [`PAC_ENGINE`] section. N is the number of the individual workstation - each workstation must have a unique number, and the number of the Readykey Server must be 1 in order for Readykey for Windows to operate correctly.