

R A D I O N I C S

READYKEY® K6100 Readykey for Windows™

Multi-PC Operation / Installation Manual

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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, MS-DOS and Windows for Workgroups. It is beyond the scope of this document to review all the features of these products.

Other Documents

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

Readykey for Windows System Overview

This document should be read by all people who may install, use or administer a Readykey for Windows system. It gives a general picture of the whole Readykey for Windows system and introduces concepts such as workstations, masters, etc. which should 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 Software Installation Manual

Readykey for Windows System Programming Manual

Radionics will, from time to time, release Technical Application Notes which detail specific applications of using Readykey for Windows Multi PC. Contact Radionics Customer Service 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' and 'Readykey for Windows'. **Windows™**, **Windows 95** and **Windows for Workgroups™** refer to the *Operating Systems* produced by Microsoft Corporation either of which are 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 which will be used to administer the Readykey for Windows system, regardless of the system being installed.

A Readykey for Windows system 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 or Windows 95 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

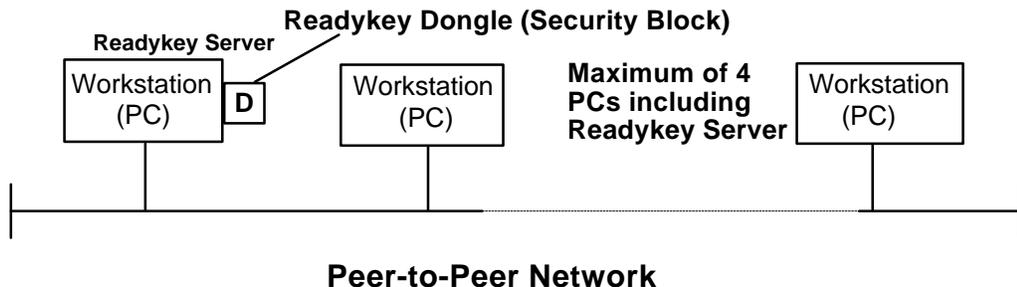
This is an arrangement in which there is no dedicated File Server. Instead, any PC can be allowed to share its hard disk and printer. Any other PC can then connect to this shared device.

One PC (preferably the machine with the highest specification) will be designated the Readykey Server, and will store all the Readykey for Windows database and program files.

Although several different peer to peer networks are available, Microsoft Windows for Workgroups 3.11 or Windows 95 are the only ones supported by Readykey for 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

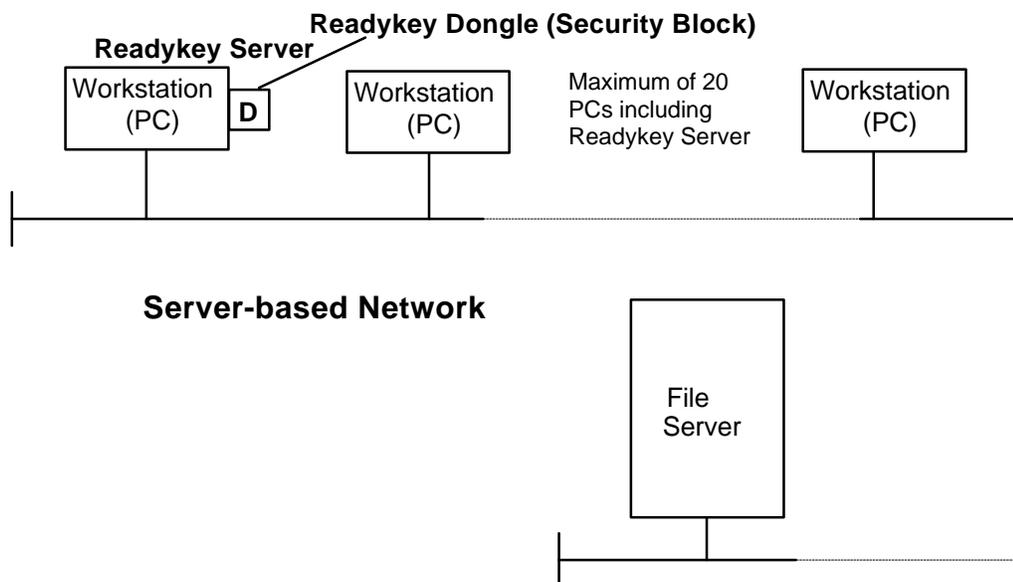
In this alternative arrangement, a powerful computer, the 'File Server', runs a special program, the Network Operating System (e.g. Novell Netware, Windows NT Advanced Server) which allows other computers connected to it to share a common hard disk, printers, etc.

The Readykey for Windows database and program files are stored on the File Server. Each PC from which Readykey for Windows is to be administered will then have a local copy of a small number of Readykey for Windows setup and configuration files. In most cases, however, the Readykey for Windows program files will be stored locally on each PC. This allows faster loading of different applications than if they were always loaded over the network.

In addition, each PC (except for the File Server) will be running Windows for Workgroups or Windows 95. A Readykey Server (as described below) will still exist, although this will be of less importance than with a Peer to Peer Network.

Readykey for Windows is compatible with server-based networks that support access by Windows for Workgroups or Windows 95.

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.



Recommendations

Radionics 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. 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.

Masters

A master is either a K2100/1100 or CNC which 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: Both the Readykey Server and the workstation to which a master is connected must be running Readykey for Windows in order for alarms received by the master to be enunciated by the Readykey for Windows software and for database changes made at any PC to be sent to the master and door controllers connected to the master.

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 it 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 which identifies it to the system. This is set when Readykey for Windows is installed on each workstation.

A workstation will access the Readykey for Windows database files using the network. It may also access the Readykey for Windows program files in the same way. However, in most cases you should install using the 'Local Program Files' option, as this will improve network performance.

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.

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 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 still possible to install Readykey for Windows onto the File Server, and access the program and data files across the network from a workstation connected to the network (which has been configured to run Readykey for Windows in this way).

Program Files

When installing Readykey for Windows on a network workstation, you will have the choice of either **Shared Program Files** or **Local Program Files**. In most cases you would select 'Local Program Files'. This means each workstation has the program files stored locally on its own hard disk. This allows much faster program start-up and switching of applications. If 'Shared Program Files' is selected then the workstation will load its programs from the Readykey Server or File Server, resulting in delays when loading applications and increased network traffic.

PC Specification

Use the information below to select a suitable PC or, if a PC is already provided, to confirm that it is of the right specification.

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.

Selecting a PC System

Below is a **Recommended** PC specification for non-networked PCs. However, when buying a new PC, you should install a PC with a high enough specification to easily meet current and future needs, particularly for systems controlling more than 32 doors.

Here are some pointers that will help you select the best system:

- The type and speed of the processor will determine the overall performance of the system. The processor types, in order of power, are 386SX, 386DX, 486SX, 486DX, 486DX2, Pentium. The higher the speed, measured in MHz, the better. Typical speeds are 16MHz, 20MHz, 25MHz, 33MHz, 50MHz, 66MHz.
- Windows performs better with more RAM, the minimum being 8 Mbytes, the more the better. Make sure when purchasing a system that there is room for RAM expansion, up to at least 16 or 32 Mbytes. It is better to spend money on increasing the memory of a PC than to improve the processing power.
- Usually the larger the hard disk the better its performance.
- A good quality color display should be used, preferably a 'SuperVGA' monitor with a resolution of 800x600 pixels (dots).
- Readykey for Windows requires a mouse, or other pointing device, to be used.
- Most PCs are now supplied with MS-DOS and Windows, or Windows 95 already installed.

In general, the more doors and personnel you will have on your system, the higher the PC specification you should have. Factors that may affect the choice of PC for your Readykey for Windows system include:

- Number of personnel
- Total number of sites
- Number of divisions

- Whether the Photo-ID module is being used, or intended to be used in the future
- How 'busy' the system is likely to be - this will depend largely on the number of keyholders and doors, but there may be other factors - e.g. some times of day may be busier than others, etc.

Radionics has carried out investigations to determine the PC-related factors which are likely to affect performance of the Readykey for Windows system:

- PC Specification - for example a 60MHz Pentium performed around 60% better at dealing with transactions than a 486sx 33 MHz.
- Windows version - Windows for Workgroups 3.11 gave an enhanced performance over Windows 3.1 - remember that Windows for Workgroups may be used on standalone PC systems, not just on those connected to a network.

Workstations Specification:

This is the PC specification that Radionics recommend you use for a Readykey for Windows system, to obtain a reasonable performance. **If a PC of a lower specification is used then the performance of Readykey for Windows will be reduced.**

If you have an existing PC of a lower specification, which you wish to use for your Readykey for Windows system, then please contact Radionics Customer Service for advice on suitability.

Processor: Pentium 75MHz
RAM: 8 Mbytes (preferably 16 Mbytes)
Hard Disk: 120 Mbytes
Floppy Disk: 3½" High Density
Display: Color SuperVGA (800x600)
Ports: 1 parallel, 2 serial
Mouse: *Windows supported
Printer: *Windows supported
MS-DOS: Version 5.0 or later
Windows: ‡ Version 3.11 or Windows 95
Network Card: *Windows supported

Readykey Server Specifications:

For a Server based network the recommended specification is the same as above. For a Peer to Peer network the following is recommended:

Processor: Pentium 90MHz
RAM: 16 Mbytes
Hard Disk: 500 Mbytes
Floppy Disk: 3½" High Density
Display: Color SuperVGA (800x600)
Ports: 1 parallel, 2 serial
Mouse: *Windows supported
Printer: *Windows supported
MS-DOS: Version 5.0 or later
Windows: ‡ Version 3.11 or Windows 95
Network Card: *Windows supported

***Windows supported or Windows for Workgroup supported** means any device that is compatible with Windows or Windows for Workgroups. When Windows is installed you will be required to tell it what types of printer, mouse and network card are connected / installed. If the particular make or model is not listed by Windows then the printer, mouse or network card will almost certainly be compatible with one of the standard types, e.g. Microsoft Serial for the mouse; Epson, IBM or Hewlett Packard for printers; NE2000 compatible for the network card.

Network Card: The network interface card will need to be compatible with the type of network and the cabling system being used. For instance, the most common type of network is Ethernet, but there are three different types of Ethernet cable. Because of this it is recommended that you use an interface card which supports all cable types. Such cards include the Intel EtherExpress Combo and 3COM 3C509C Etherlink III.

The other type of network which may be utilized is Token Ring. Token Ring networks can vary in their operational speed, either 4Megabits per sec (Mbps) or 16Mbps. If connecting to a Token Ring network you should use an interface capable of both speeds. Such cards include those made by IBM, Madge Networks and Thomas Conrad.

Printers

As stated above any Windows supported printer may be used. A dot-matrix type printer **must** be used for transaction printing as this gives an immediate, line by line, report of events - using a laser printer will result in one line per page! You may use a laser printer, *as an additional printer* for producing reports on request. Overall, unless the best quality output is required, a good quality dot-matrix printer is most suitable.

Ensure that a **PC to Printer Cable** is supplied for connecting the printer to the **Parallel Port** of the PC.

For a printer connected to the Readykey Server, the Security Block is connected between the PC's parallel port and the printer cable. This has no effect on the normal operation of the printer.

Hard Disk Space

A number of factors will affect the amount of hard disk space required on a Readykey for Windows workstation:

- Size of database - the main factor to affect this will be the total number of personnel in the system.
- Number of transactions required to be stored on the hard disk

- these are now described below in more detail:

Database Size

All the information that forms part of the Readykey for Windows system is stored in a database on the hard disk of a PC. The main factor that affects the size of the database is the volume of keyholder information to be stored.

Readykey for Windows can support up to 18,000 keyholders in each of up to 128 divisions. As the number of keyholders in the system database expands, then so does the amount of disk space required.

If the Photo-ID module is also being used to store pictures of keyholders, then the amount of disk space required for each keyholder more than triples.

The table below illustrates the amount of disk space required for some typical database sizes:

Total Number of Personnel	Disk Space Required (No Picture)	Disk Space Required (All Keyholders have Picture)	Disk Space Required (50% of Keyholders have Picture)
4000	15 Mb	54 Mb	35 Mb
8000	30 Mb	109 Mb	69 Mb
10000	38 Mb	136 Mb	87 Mb
18000	68 Mb	246 Mb	156 Mb

Note: The above values are per division.

It is important that the number of keyholders, and whether the Photo-ID facility is being used is taken into consideration when purchasing the PC.

Transaction Storage

Every event (transaction) that occurs on a Readykey for Windows system will be stored on the hard disk of the PC which stores the system database.

All transactions are stored in files, which are usually 1.2 Mb in size, although this value can be changed. The number of transactions stored in each file will vary between 18,000 and 40,000; dependent on how busy the system is - more transactions will be stored in a file on a busier system.

When a transaction file is full, Readykey for Windows will automatically create a new one.

A number of completed transaction files are stored on the hard disk of the PC (usually six), after which the oldest will be automatically deleted to conserve disk space.

Completed transaction files can and should be copied ('archived') to floppy disk, network or tape, to allow operators to perform a transaction search at a future date of past system activity.

The more transaction files required to be stored on the hard disk of the PC, the more disk space will be required.

Serial Ports

Most PCs are now supplied with two **Serial Ports**. Usually one will have a 25-pin male connector, the other will have a 9-pin male connector, although sometimes both connectors will be of the same type. One of the ports will be assigned by MS-DOS as **COM1**; the other will be assigned as **COM2**. It is possible that there will be no external markings on the PC indicating what the port assignments are, refer to the documentation that came with the PC system for identification.

Some PCs have a special port, usually a small DIN connector, for a **Bus Mouse**. This is a normal mouse that connects directly to the PC's internal bus without using a serial port. This type of mouse is ideal if you need to use two serial ports for Readykey Interfaces. For example, if you are using a Readykey for Windows CNC based system with Wiegand compatible readers as well as (or instead of) Readykey readers, then you will need a port for the CNC plus a port for a PC Interface Kit with Wiegand Interface. The PC Interface Kit with Wiegand Interface will be needed to administer the Wiegand ID devices.

It is recommended that you install the mouse in COM2:, or use the special bus mouse port, and install the PC Interface Kit, or CNC, in COM1:.

The mouse, CNC or PC Interface Kit and Network Card must use different IRQ levels. If you have problems with the serial ports then ensure, using diagnostic software, that the mouse, network card, PC Interface Kit or CNC are not sharing the same IRQ number. Normally the COM1: serial port is assigned IRQ4, COM2: is assigned IRQ3. Network cards can usually be safely assigned to IRQ 5 or IRQ 10.

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 **10 Mbytes** (megabytes, or one million bytes) before installing Readykey for Windows.

There needs to be a minimum of **2 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 **10 Mbytes** of free disk space.

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

```
C: 17,220KB free, 83.026KB total.
```

From MS-DOS, type *CHKDSK* at the C:> prompt. You will see something similar to the following:

```
C:\>CHKDSK

Volume TECHWRITING created 13/11/1991 16:59
Volume Serial Number is 176D-8B42

85018624 bytes total disk space
 3956736 bytes in 7 hidden files
 319488 bytes in 146 directories
70443008 bytes in 1137 user files
10297344 bytes available on disk

    2048 bytes in each allocation unit
 41513 total allocation units on disk
 5028 available allocation units on disk

655360 total bytes memory
570368 bytes free
```

The figure required is 'bytes available on disk' , in this case 10297344, or just over 10 Mbytes.

Note: You cannot use CHKDSK to find out the amount of space on a File Server.

Warning: Some disk compression programs, such as DOUBLESPACE, may give misleading information regarding free disk space.

MS-DOS and Windows

Use the latest versions of MS-DOS and Windows available. It is highly recommended that you use MS-DOS version 5.0 or above with Windows.

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

Using Other Applications with Readykey for Windows

Windows is a multi-tasking operating system. This means you may have several different applications running at the same time such as Word Processing, Spreadsheet, Diary etc. etc. Provided that Readykey for Windows has been started up then the operator should be able to switch from one task, such as Word Processing, to Readykey for Windows and back again. Any alarms that may occur that require acceptance will cause a message to appear over any other Windows application.

If you intend to use your PC for other applications then consider the following:

- Your PC should be outfitted with the maximum possible RAM, at least 16 Mb.
- If you use 'full screen' DOS applications then alarms will not be reported until you return to a Windows screen.
- If you have a busy system, processing many transactions, then for maximum efficiency at reporting alarms, you should consider dedicating the PC to operating Readykey for Windows only.
- It is recommended that the Readykey Server on a peer to peer network is not used for running other applications.

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 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 requires much less configuration.

Windows 95

Windows 95 requires little or no configuration before installing Readykey for Windows. You should ensure that Windows 95 has been setup correctly for use on your Network. If you follow the default settings and Recommended steps when using Setup or installing hardware, then you should find that the PC will operate correctly on the network.

You should ensure the following have been configured:

- In Control Panel: Networks, the NetBIOS service should be enabled.
- The WIN.INI file should have the line `Load=NetDDE.EXE`

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:

```
[Readykey 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.

MS-DOS

There are 2 files that MS-DOS uses when a 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 the PC, however some of the settings may need to be changed. Both files consist of several lines of text which can be modified by a simple text editor such as **EDIT** in MS-DOS or **Notepad** in Windows.

There are many possible configurations that can be used to 'fine-tune' the performance of your machine. Here will be described just the essential settings for running Readykey for Windows.

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 file shown below are complete and will work on any PC conforming to the minimum specification. Be aware that other applications may be used on the PC which require additional or different parameters to be set.

CONFIG.SYS

```
DEVICE=C:\WINDOWS\HIMEM.SYS
DOS=HIGH
FILES=80
STACKS=9,256
COUNTRY=44,,C:\DOS\COUNTRY.SYS
DEVICE=C:\WINDOWS\IFSHLP.SYS
```

AUTOEXEC.BAT

```
C:\DOS\KEYB US,,C:\DOS\KEYBOARD.SYS
PATH C:\DOS;C:\WINDOWS
PROMPT $p$
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.
- The **COUNTRY** statement in CONFIG.SYS and the **KEYB** command in AUTOEXEC.BAT are specific to the country and language. The examples shown are for the US, you will need to use the correct local parameters.
- The final statement in AUTOEXEC.BAT, **WIN**, starts up Windows. If you do not want Windows to start automatically then omit this line.

Windows for Workgroups 3.11

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.

You must have Microsoft Windows for Workgroups 3.11 installed on every PC which you intend to use for Readykey for Windows administration. Windows for Workgroups is available in two forms - as a complete product or as an upgrade for existing Windows 3.1 users. 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.

- Network DDE must be enabled via **Control Panel**. Select **Networks - Startup**, and ensure the **Enable Network DDE** box is checked. Network DDE is a method provided by Windows for Workgroups and used by Readykey for Windows for PCs to communicate across a network.

Note: Network DDE is enabled by default when Windows for Workgroups is installed.

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**. Also ensure that **32 bit File Access** is enabled, this can make a significant difference to the performance of the PC, especially the Readykey Server.

Windows for Workgroups 3.11 Setup

Software Installation

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 Setup

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.

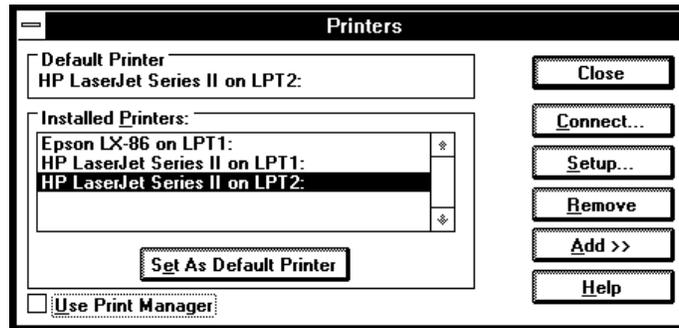
7. Choose **Close** when you have finished setting up the adapters and protocols.
8. You will now be asked to setup the **Network Names**. It is essential that the **User Name** and **Computer Name** are unique for each PC on the network. However, the **Workgroup** name should be the same for each PC, 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.

Printing with Windows

Windows has a special application called **Print Manager** used for controlling printer output sent to the printer from different applications and for sharing printers across the network. It allows several documents to be sent to the printer at the same time, managing the order in which they are actually printed. The Readykey for Windows on-line transaction printout however, is not able to operate correctly through Print Manager, therefore you should disable Print Manager in **Control Panel: Printers** on those PCs that you intend to use for on-line transaction printout.



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. Print Manager in Windows for Workgroups 3.11 permits printers to be shared by other PCs on the network. By disabling Print Manager, you will not be able to share any printer from or on the PCs on which you have disabled Print Manager.

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

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 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 printed.

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:

```
[Readykey 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.

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 left in place permanently.

Installing Readykey for Windows

Overview

The procedure for installing Readykey for Windows to the server differs slightly, dependent on whether you have a peer-to-peer or server-based network. However, the general procedure is the same.

Peer to Peer Network

In this instance, installation of the Readykey for Windows database and program files is to the Readykey Server PC. This PC should have the Readykey for Windows security block (dongle) already connected to the parallel port, as described earlier.

The Readykey Server PC will need a minimum of 10 Mbytes of free disk space.

Server-based Network

In this instance, installation of the Readykey for Windows database and program files is to a network file server. 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 to install software onto the file server. These would include, Read, Write, Create (Files and Directories) and Delete.

The file server will need a minimum of 10 Mbytes of free disk space.

Using Readykey for Windows Setup to Install to the Server

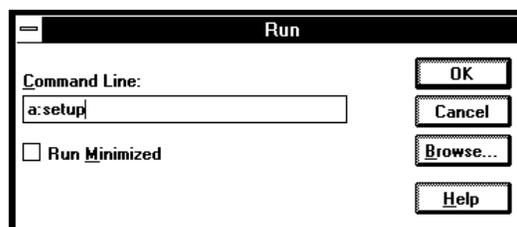
Start Microsoft Windows (if it has not been started) by typing `WIN` at the MS-DOS `C:>` prompt, on either the Readykey Server itself (on a peer to peer network), or on any PC connected and logged into the network (on a Server-based network).

Windows for Workgroups 3.11

1. From the Windows **Program Manager** choose **File** from the menu bar.
2. This drop down menu will now appear:



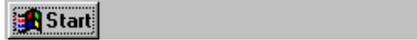
3. From this drop-down menu select **Run...**, the following dialog box will now appear:



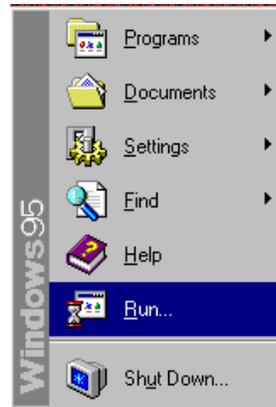
4. In the Command Line box type **a:setup** and then choose **OK**. This assumes that you are installing from drive a:, if you are installing from drive b: then type **b:setup** instead.
Now go to step 5 below.

Windows 95

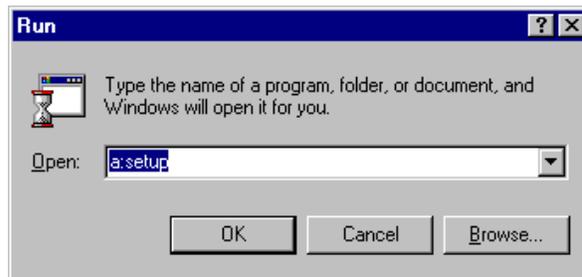
1. Click on the **Start** button on the Task Bar.



2. This menu will now appear:



3. From this menu select **Run...**, the following dialog box will now appear:



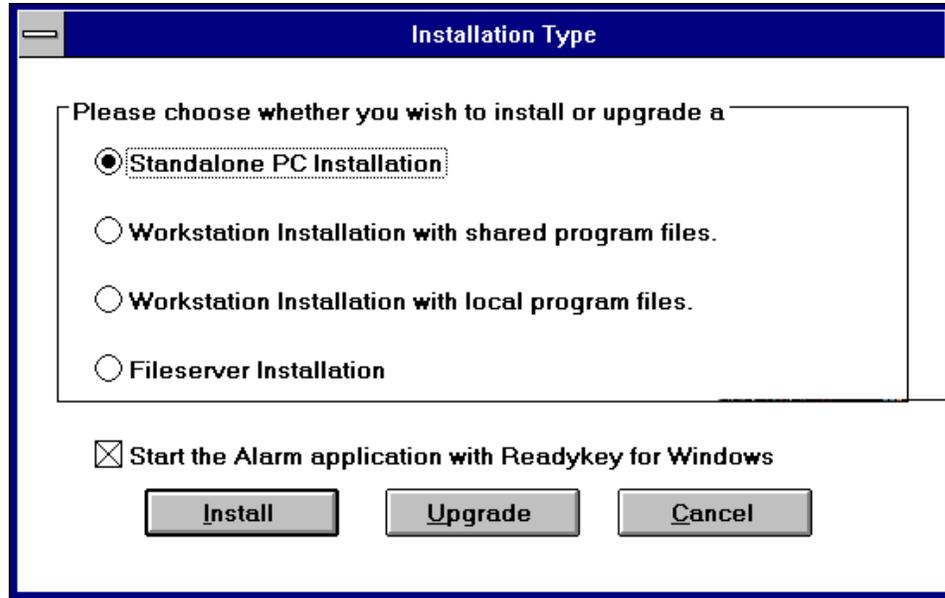
4. In the Command Line box type **a:setup** and then choose **OK**. This assumes that you are installing from drive a:, if you are installing from drive b: then type **b:setup** instead.

From this point the procedure is the same for all versions of Windows.

5. The setup icon will be displayed for a period while Setup initializes itself:



6. You will be asked for the type of Readykey for Windows installation you require:



- For a peer to peer network, ensure **Standalone PC Installation** is selected and choose **OK**.
- For a Server-based network, choose **File Server Installation** and choose **OK**.

Notice that there is an option to start **Alarm** application. When selected this means that the **Alarm** application will start automatically when Readykey for Windows starts.

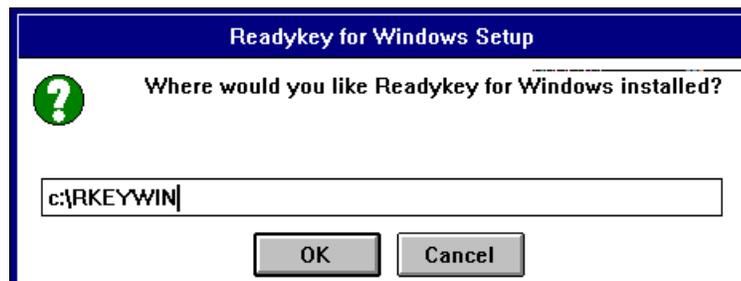
Note: If you do not start **Alarm** then you will not be able to respond to alarms, display or print events as they happen. You will, however, be able to view events using the **Transaction** application.

Now either choose **Install** or **Upgrade**. Choose **Install** if you are installing for the first time, or you want to start your system over again. Selecting **Install** will destroy any existing database. Use **Upgrade** if you are either upgrading from a previous version or reinstalling Readykey for Windows.

You will be warned if you are going to overwrite an existing database.

Note: You can choose **Cancel** to abort the Setup process. A warning will appear, stating that the process was incomplete.

7. You will now be asked to which directory and drive you wish to install Readykey for Windows.



8. Use the default name, C:\RKEYWIN, and choose **OK** for a peer to peer network. For a Server-based network, change the drive and directory to indicate the path to the file server hard disk where you wish to store the Readykey for Windows database and program files.

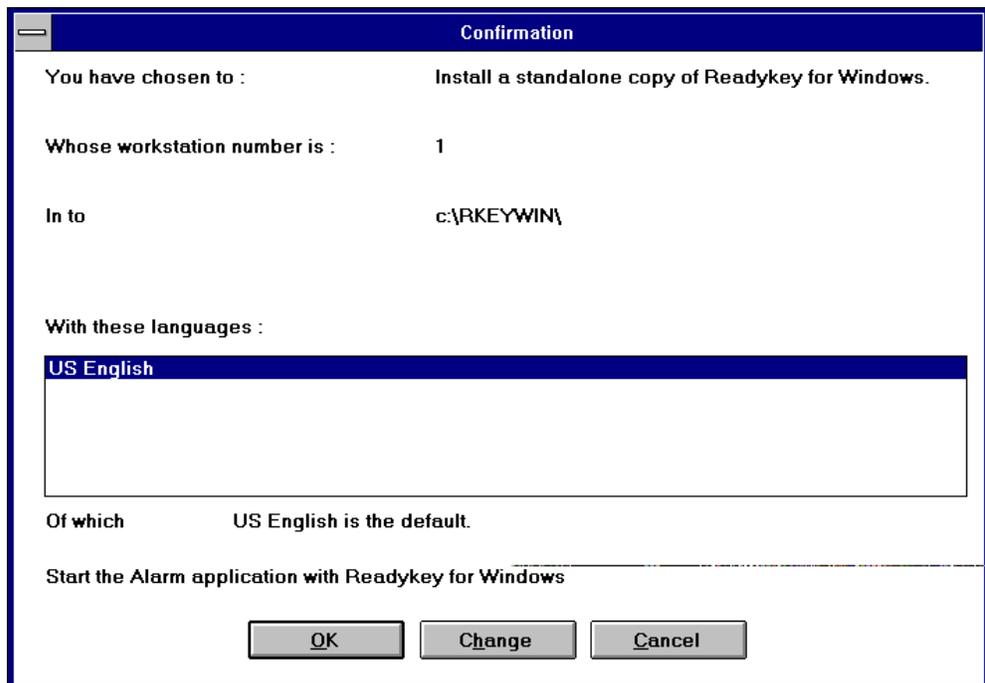
- The hard disk of the Readykey Server or File Server will be checked at this stage for available space. You must have a minimum of 10 Megabytes of free disk space before Setup can proceed further.

Note: 10 Megabytes of free space is required even if you are upgrading from a previous version of Readykey for Windows.

If the hard disk has insufficient space to proceed, then the following message will appear:

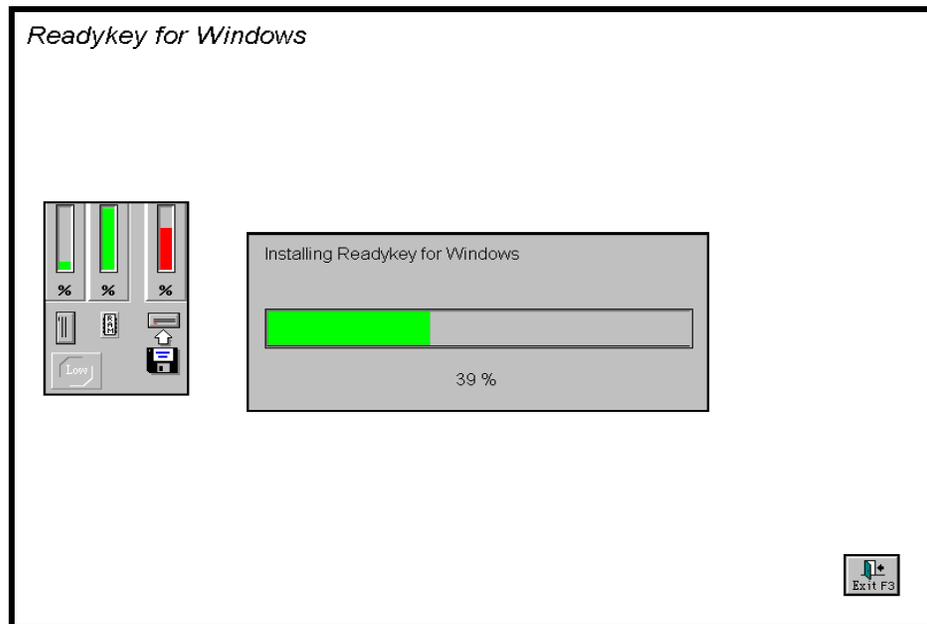


- You are now given the opportunity to review the options and settings you have chosen before the setup program starts to copy Readykey for Windows files.



- Should you wish to amend any of the options chosen, choose **Change**. This will return you to step 6 above.
- Once you are happy with the installation options you have chosen, choose **OK** to proceed with the installation of Readykey for Windows.

13. As the installation progresses you will see a box displaying which files are being copied and a moving horizontal bar across the center of the screen giving an indication of progress. Three vertical bars at the left of the screen indicate available hard disk space, % of available memory (RAM) used and % of current file being copied that is complete.



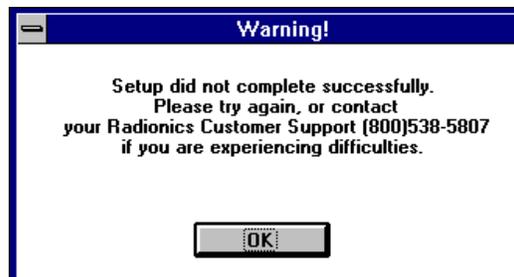
You can abort the installation at this stage by choosing the **Exit F3** button at the bottom right of the screen.

14. When the time comes to change disks a message box like the one below will appear. At this point remove the disk currently in the drive and insert the next disk being requested. Choose **OK** when the new disk is inserted.

If you insert the wrong disk the message will be repeated.



15. If Setup should fail for any reason or be aborted the following screen will appear. You will not be able to run Readykey for Windows until the setup process has succeeded. Call Radionics Customer Service if you require assistance.



16. When installing on a peer to peer network, several system checks are performed at this stage to ensure the PC, MS-DOS and Windows are suitable. If there is a problem you will get one or more of the following warnings:
 - Your version of Windows may not be suitable, it must be Version 3.11 or later.
 - Your version of MS-DOS may not be suitable, it must be Version 3.3 or later (Version 5.0 or later is recommended).
 - The FILES= statement (in CONFIG.SYS) may not be large enough, it must be FILES=80 or higher.
 - No file sharing utility is installed on your computer - you must have either the DOS program SHARE.EXE loaded (via AUTOEXEC.BAT, with some additional parameters) or the Windows equivalent VSHARE.386 loaded.
Note: You will still receive a warning about file sharing if both SHARE.EXE and VSHARE.386 are loaded, as having both programs installed can cause conflicts.
17. On a peer to peer network, Setup will offer you the opportunity to modify your AUTOEXEC.BAT and CONFIG.SYS files to meet the specification required for Readykey for Windows to work properly. You should accept the changes in most cases, unless you believe they are likely to cause conflict with other programs you use on the same computer as the one on which you intend to run Readykey for Windows. Contact Radionics Customer Support for advice.
18. Readykey for Windows also needs to make similar changes to those below to WIN.INI when installing onto the Readykey Server. This is a special file used by Windows itself and most Windows-based programs that contains essential setup and configuration information.

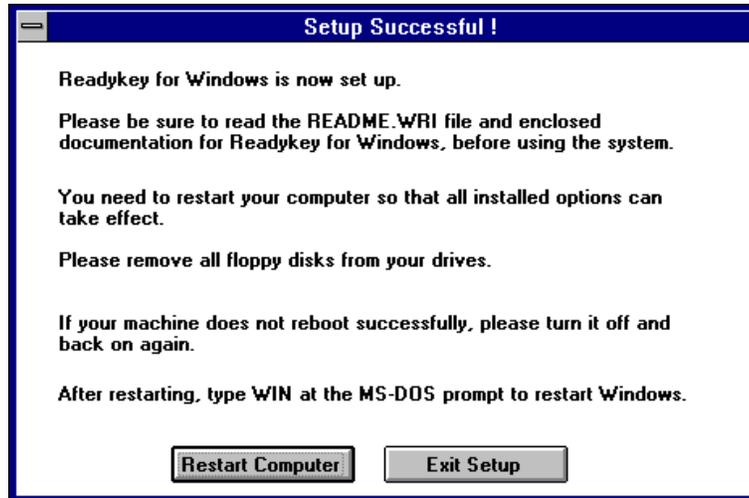
```
[Readykey Windows]
TRMPath=C:\RKEYWIN
SRVPath=C:\RKEYWIN
```

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

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

19. When Setup is complete and successful you will see this box. On a peer to peer network, it is recommended that the Readykey Server is restarted before running Readykey for Windows so that any installed options or changes to your system configuration files can take effect. Choose **Restart Computer** to reboot your Readykey Server immediately, or choose **Exit Setup** to return to Microsoft Windows.

Note: It is not necessary to reboot the File Server on a Server-based network.



20. After rebooting your PC, if Windows does not start automatically then type `WIN` at the MS-DOS `C:\` prompt to start Windows.

Note: Before you can use Readykey for Windows on a Server-based network, you need to repeat the installation process on the PC that will become the Readykey Server.

Sharing the Readykey for Windows Directory

Note: This section applies to peer to peer networks only.

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, as follows:

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

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.

Click on the Readykey for Windows directory - usually `RKEYWIN` - the directory name will become highlighted.

Click on either the  button from the toolbar or from the **Disk** menu select **Share As...** The **Share Name** should be set to `RKEYWIN` automatically - if it is not then 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**.

Readykey Server Installation - Server based Networks

You now need to install Readykey for Windows onto the Readykey Server.

Installation to the Readykey Server on a Server-based network is identical to installing Readykey for Windows to a workstation - follow the procedures described in the next section for setting up a network drive mapping and installing Readykey for Windows on workstations. The workstation number will be set to 1 for the Readykey Server.

Workstation Installation

Note: References to workstations in this section also include the Readykey Server on a Server-based network.

The instructions in this section should be repeated for each workstation (including the Readykey Server on a Server-based network) from which Readykey for Windows is to be used.

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 on each workstation.

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'.

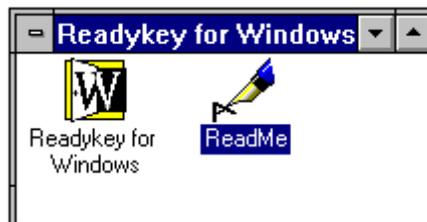
For peer-to-peer networks, in the **Path** box type `\\ServerName\RKEYWIN`, where *ServerName* is the Computer Name you assigned to the PC which is the Readykey Server.

Choose **OK**.

Starting 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 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 program 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.

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, these 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.

On the Readykey Server, from the **Windows Program Manager** start **Readykey for Windows** by double-clicking its icon.



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

Alarm / Current Alarm Queue



Firstly the **Alarm** application will start. 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.

Note: The **Alarm** application and **On-line Transaction Display** 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 will appear briefly while Readykey for Windows starts, but should also be ignored at this stage:



Security Block Not Found

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

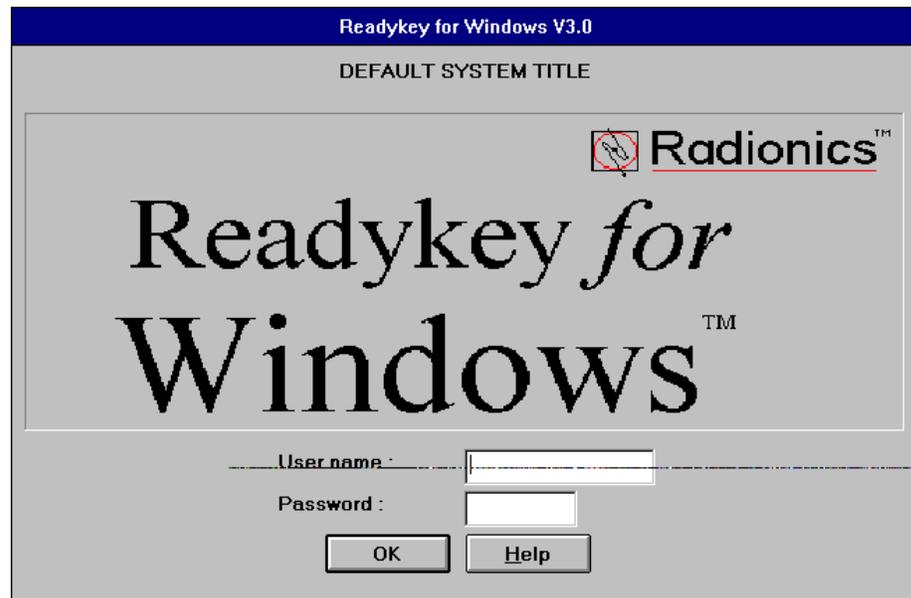


Warning: It is important to troubleshoot and resolve why the Readykey for Windows security block was not found for Multi-PC installations. Without the security block installed and correctly detected on the Readykey Server, you will not be able to run Readykey for Windows on any other PCs than the Readykey 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.

Login

The Login screen will now 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 you can enter the system by:

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.

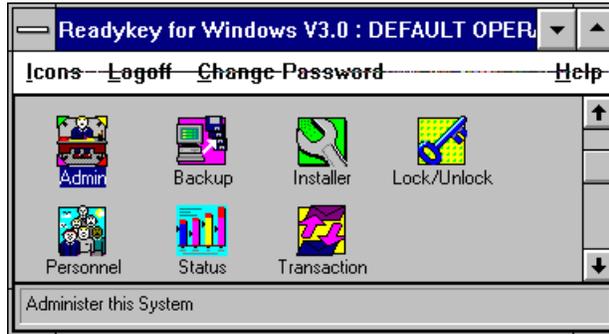
Now choose **OK** with the mouse, or just press **Enter**.

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 has full access to all areas of the system 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 workstation you intend to use to administer Readykey for Windows, 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:

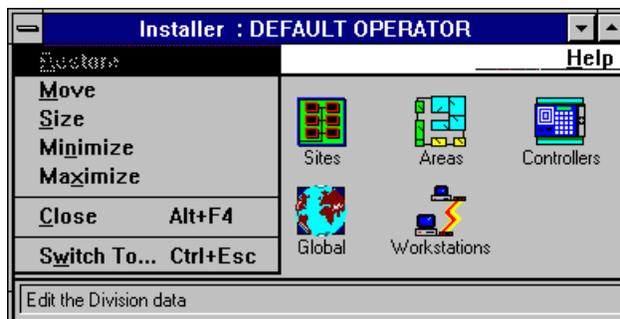
1. Choose **Clear** - this will clear the information shown on screen. In the **Workstation Name** box type a name for the workstation you are adding - each workstation you add must have a unique name.
2. In the **Description** box type a useful description for the workstation - this could be its location 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-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.

Installing Readykey for Windows Software on Workstations

Note: This procedure includes installing Readykey for Windows to the Readykey Server on a Server-based network.

When using Readykey for Windows on a network, the majority of the Readykey for Windows files are stored on either the Readykey Server or the Network File Server. However, a smaller number of files need to be installed on each workstation, and in addition the workstation needs to be configured and informed of the location of the Readykey for Windows files on the network. This is achieved using the setup program, selecting a special option which copies only the files required and sets up the PC correctly.

Two options are available for Workstation Installations - the Readykey for Windows program files stored on the Readykey Server or File Server can be shared, or a local copy of the program files can be installed on the hard disk of the workstation. The latter option is recommended, and will result in enhanced performance. However more hard disk space is required on the workstation - 10 Mbytes instead of 2 Mbytes when using shared program files.

The procedure is similar to that used to install Readykey for Windows to the File Server or Readykey Server, however some different options are chosen. The steps to be followed are summarized below.

1. From the Windows **Program Manager** choose **File** from the menu bar.
2. From the drop-down menu select **Run....**
3. In the Command Line box type **a:setup** and then choose **OK**. This assumes that you are installing from drive a:, if you are installing from drive b: then type **b:setup** instead.

The setup icon will be displayed while Setup initializes itself.

4. You will next be asked whether you want to install a brand new system 'Install' or upgrade an existing system 'Upgrade'. Be sure to choose **Install**.

Note: You can choose **Cancel** at any stage to abort the Setup process. A warning will appear, stating that the setup process was incomplete.

5. You will next be asked for the type of Readykey for Windows installation you require. Two Workstation Installation options are available, as described above. Select either **Workstation Installation with shared program files** or **Workstation Installation with local program files** and choose **OK**.

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

6. You will now be asked to which directory and drive you wish to install Readykey for Windows.
7. Next you will need to enter the path to the drive and directory on the file server or Readykey Server to which you wish to install Readykey for Windows. Choose **OK**.
8. Assuming no error messages have been displayed so far, you will next be asked to enter the Workstation Number, and choose **OK**.
9. You are now given the opportunity to review the options and settings you have chosen before the setup program starts to copy Readykey for Windows files to the workstation hard disk.
10. Should you wish to amend any of the options chosen, choose **Review**. This will return you to step 4 above.
11. Once you are happy with the installation options you have chosen, choose **OK** to proceed with the installation of Readykey for Windows.
12. The hard disk of the workstation will now be checked at this stage for available space. You must have a minimum of 2 Megabytes of free disk space when using shared program files, or 10 Megabytes when using local program files before Setup can proceed further.

If your hard disk has insufficient space to proceed, then a warning message will appear.
13. As the installation progresses you will see a box displaying which files are being copied and a moving horizontal bar across the center of the screen giving an indication of progress.

Note: You can abort the installation at this stage by choosing the **Exit F3** button at the bottom right of the screen.
14. If Setup should fail for any reason or be aborted a warning screen will appear. You will not be able to run Readykey for Windows until the setup process has succeeded. Call Radionics Customer Service if you require assistance.
15. When setup is complete and successful a message will be displayed to inform you of this.

You can now use the Readykey for Windows software on the workstation on which you have just installed Readykey for Windows. You should repeat the setup operation if you intend to have any further workstations on your system.

Starting Readykey for Windows

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.

When Readykey for Windows was installed on the Readykey Server a Program Group was created containing the Readykey for Windows 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.

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, then from the **Windows Program Manager** start **Readykey for Windows** on the Readykey Server by double-clicking its icon.

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. MS-DOS permits a maximum of 255 files to be open on a PC at any one time. Attempting to run Readykey for Windows from more than 4 PCs simultaneously is likely to cause this limit to be exceeded and errors 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 the following error message:



- 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.
- The Readykey Engine will, if running, receive 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 an 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.

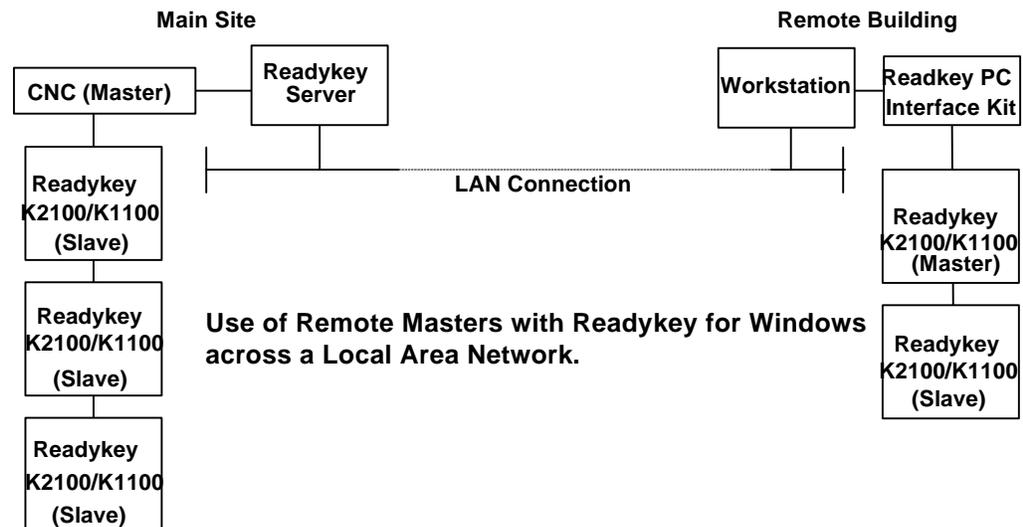
Once the first operator has finished with the record, other operators must reselect the updated record before they can modify the information contained within the record.

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 from 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 the computer (either Readykey Server or 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 PC's 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 those 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 reselect 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 login first.

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

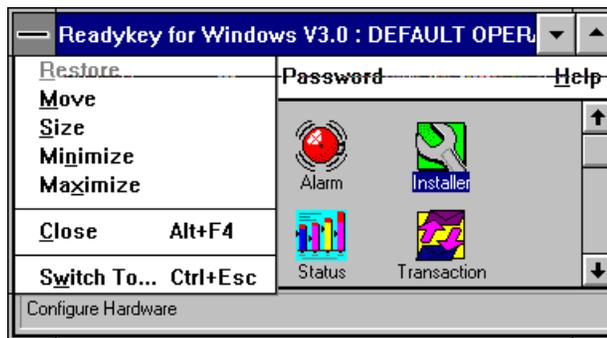
The same procedure applies to closing down Readykey for Windows on either the Readykey Server or a workstation:

If an operator is not logged in to Readykey for Windows, then they should log in first.

With the applications screen displayed you can:

Either:

Click in the top left control box of the application screen, this will bring down the following menu:



Select **Close**.

Or:

Press **Alt+F4**.

Both these methods will bring up:



Choose **OK** to close down Readykey for Windows, **Cancel** to return to the Application icons 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 or Windows 95 installed.
- Network DDE must be enabled on all PCs.
- 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 recommend that a Server-based network is used wherever possible, as this includes a File Server that is dedicated to providing shared resources.

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

Server-Based

- Any Server-based network can be used that supports access by Windows for Workgroups or Windows 95.
- 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's Windows for Workgroups 3.11 or Windows 95.
- 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

General

Networks are complex, and as such may give rise to complex problems which may take considerable amounts of time and expertise to resolve.

If the methods given here fail to resolve a particular problem, or if you encounter a problem not documented here, then contact Radionics Customer Service or experienced network personnel for further advice.

Network Communications Testing

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. Windows for Workgroups provides several means of testing network communications:

1. Chat

This is the easiest method to use. Start **Chat** on the PC which is to become the Readykey Server by double-clicking its icon from within the **Network** program group.

From the **Conversation** menu, select **Dial...** This should bring up list of all the computer names that you have setup. If no names are listed, then leave Chat by choosing **Cancel** and then selecting **Exit** from the **Conversation** menu and proceed to 2, below.

Select each of the computer names in turn and choose **OK**. This should start Chat automatically on the selected PC. The status bar at the bottom of the Chat window should indicate that the PC is being dialed. On the destination PC the Chat icon will be minimized but animated - double-click the icon to bring it to a window. This will establish the connection. The window on each PC will now split into two - the upper window allows you to type messages that will appear on the destination PC, the lower window will display messages typed on the destination PC. Once you have established communications, hang up (select **Hang Up** from the **Conversation** menu) and repeat the operation from the Readykey Server PC to each of the other workstations.

Select **Exit** from the **Conversation** menu when you have established communications from the Readykey Server to each other PC.

2. NET DIAG

If you have difficulty in using Chat to communicate between PCs, another diagnostic tool is provided with Windows for Workgroups which may assist in establishing the cause of communications problems. In order to use it, however, you should first leave Windows. From the **File** menu in Program Manager, select **Exit Windows**. Choose **OK** when asked to confirm ending your Windows session. You should close Microsoft Windows in this way on each PC.

Firstly, on the PC that is to become the Readykey Server, at the MS-DOS `C:\` prompt, type:

```
NET DIAG
```

and press Enter.

The PC will now ask if Microsoft Network Diagnostics are currently running on any other machines on the network. At this stage, none are, so press N. The PC will now begin acting as a diagnostics server.

Now move to a different PC and, in the same way type `NET DIAG` and press Enter at the MS-DOS `C:\` prompt. If network communications are operating correctly, then the PC should 'find' the Readykey Server PC and communicate with it. The display will indicate when communications are taking place.

If however, the two PCs cannot communicate over the network, then the PC will be unable to locate the Readykey Server PC and will report an error. In this case you should check the network cable and the installation and configuration of the network interface card. Refer to the *Microsoft Workgroup Add-On for Windows User's Guide* appendices C, D and E for detailed troubleshooting information.

Warning: You will be unable to complete installing Readykey for Windows across a network until you have successfully established network communications. If in doubt contact experienced network personnel or Radionics Customer Service for assistance.

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.

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 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 Network DDE Enabled on the Workstation and the Readykey Server?

Use **Control Panel : Network: Startup** to ensure that Network DDE is enabled on the Readykey Server and the workstation.

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** 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 for further advice.

Local Readykey for Windows Directory - Shared Program Files

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

In these directories on the Readykey Server on a Server-based network and on a workstation, there will be just 3 files in the `BIN` directory (`ALARM.INI`, `BTRIEVE.TRN` and `LOGIN.INI`) and between 3 and 5 files in the `DATA` directory (`BUNACCEP.DAT`, `BCURRENT.DAT` and `BHISTORY.DAT`). (`BUUPDATE.CFG`, and `ATRANS.DAT` may also exist).

Local Readykey for Windows Directory - Local Program Files

The same files as described above will exist in the `DATA` directory of a workstation with Local Program Files. However, many more files (most ending in `.DLL` or `.EXE`) will be in the `BIN` directory.

Shared Readykey for Windows Directory

This is the location of the shared Readykey for Windows database and 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 configuration and data files. This will be on a local drive.

SRVPath

This indicates the location of the main Readykey for Windows program and 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 need 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.

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

PCNumber=n

- which is located in the [Readykey 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.

