

Sytos Plus[®]

File Backup Manager



Getting Started Under DOS

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Sytron[®]

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Getting Started Under DOS

This booklet contains instructions for installing Sytos Plus[®] and information specific to running under the DOS operating system and DOS-based network environments.

Please review this booklet carefully before installing and running Sytos Plus. It contains information you should be familiar with while installing the product and a brief overview of terminology that may assist you during the installation process. Refer to the *User's Guide* for complete information about the terms, features, and functionality of Sytos Plus.

System Requirements

Sytos Plus for the DOS environment requires the following hardware and software to run properly.

Software

Sytos Plus runs on these operating systems and network environments:

- PC-DOS and MS-DOS[®] versions 3.0 and above.
- Novell[™] Advanced NetWare[™] versions 2.1 or later.
- IBM[®] PC LAN Program versions 1.12 or later.
- Other compatible networking environments such as 3COM[®].

Hardware

The following hardware is required to run Sytos Plus:

- An IBM Personal Computer, an IBM Personal System/2™, a COMPAQ® Personal Computer, or one that is compatible.
- A fixed disk.
- At least 640Kb of memory.

Providing 512Kb of expanded memory for Sytos Plus will increase the performance of the user interface.

If you do have Extended or Expanded memory on your system, we recommend using a disk cache utility when you have a large number of files to backup. Disk caching can reduce the time required to access files on your fixed disk and therefore speed up the operation of Sytos Plus. Refer to the disk cache utility's manual for more information about setting up your system for optimum performance.

- A Microsoft® compatible mouse (optional).

If you have a Microsoft mouse, be sure that you are using version 6.11.06 or later of the mouse driver, MOUSE.SYS or MOUSE.COM.

If you have a PC Mouse Systems™ mouse, be sure that you are using version 5.5a or later of the mouse driver MSCMOUSE.SYS or MSCMOUSE.COM.

Sytos Plus also supports other Microsoft compatible mice.

- A backup device (for example, a tape or diskette drive).

Note: Sytos Plus is designed to operate with a variety of backup devices. Refer to your particular device's hardware reference manual for installation and setup instructions.

You should become familiar with your backup device hardware options (for example, board switches and jumpers, if applicable) before installing Sytos Plus in case you need to change their settings. Refer to **Appendix A: Hardware Configurations** in this booklet for examples of configurations which may be unavailable because they are being used by other devices already installed in your system.

Before You Begin

Before beginning the installation process, make sure you have all of the Sytos Plus diskettes appropriate for your system's diskette drive.

This booklet assumes that you know how to complete key tasks with the DOS operating system, for example:

- Starting and running applications
- Working with files and directories
- Using DOS commands such as DISKCOPY and CHKDSK
- Making changes to AUTOEXEC.BAT and CONFIG.SYS files
- Running batch files

You may want to refer to your operating system manuals for details about these or other DOS-specific topics.

Make Copies of the Sytos Plus Diskettes

Before installing Sytos Plus you should make copies of the Sytos Plus diskettes using the DOS command `DISKCOPY`. Label the copies with the information found on the Sytos Plus diskettes (for example, the product code printed on the diskette label). Store the originals in a safe place and use the copies to install Sytos Plus.

Check for a README File

Check the Sytos Plus diskettes using the DOS command `DIR` for a file called `README.BAT`. This file contains important information that could not be included in the printed documentation. Once you have reviewed the `README` file, we recommend that you print it and keep it with the *User's Guide* for future reference.

1. To view the contents of the `README` file, place the diskette into drive A:.
2. At the DOS command prompt, type `A:` and press `<Enter>`.
3. Type `README` and press `<Enter>`.
4. To print the file, type `PRINT README.BAT` and press `<Enter>`.

Key Terminology

The following list of terms describes concepts mentioned in the installation utility and in this booklet. Brief descriptions of those concepts are provided to help answer any questions you might have when installing Sytos Plus.

Backup Device. The unit that houses the backup media to which files are copied by Sytos Plus. Backup devices include tape drives, diskette drives, and fixed disk drives.

Backup Sets. A group of files copied during a Backup or Move Procedure.

Configuration Settings. The DMA Channel, Interrupt, and Address settings for certain types of backup devices.

Device Driver. Software that runs a backup device such as a tape drive.

Procedures. The Sytos Plus operations that backup, move, restore, or compare files. Each Procedure contains lists of specified files, a selected backup device, and options that you specify for customization.

Volume. One or more tapes or diskettes that hold a Backup Set or a series of appended Backup Sets.

Installation Overview

Before installing Sytos Plus: When you install your backup device, please pay special attention to the DMA, Interrupt, and Address settings—since you will set up Sytos Plus to work according to those settings. If your particular backup device comes with a diagnostic program, it's a good idea to run it first to be sure your device is working correctly.

The Sytos Plus installation utility copies the contents of the Sytos Plus diskettes to your fixed disk and it will also:

- Ask you to specify a disk and directory where it will place the files.
- Create sample Procedures which you can use immediately upon entering Sytos Plus. The sample Procedures allow you to quickly begin running the most common types of operations.
- Ask you to assign a default Volume name and a default Backup Device to the sample Procedures.

Once the installation process is complete you can follow the instructions in this booklet to:

- Modify the CONFIG.SYS file to make sure that **BUFFERS** and **FILES** statements are set correctly.
- Modify the configuration settings of your chosen backup device if your system has special requirements.

Re-installing Sytos Plus to the Same Directory

If Sytos Plus has already been installed on your system and you need to re-install it for any reason, you should be aware that the sample Procedures created during the previous installation will be overwritten. If you have modified the sample Procedures according to your needs and did not save them with new names, you may want to rename them using **Save as . . .** within Sytos Plus before re-installing to preserve them with your changes.

After re-installing, you will need to select **Utilities: Backup device setup** to reconfigure any backup devices which were previously customized for your system. You may also want to use **Utilities: Preferences** to reset your Sytos Plus working environment. All existing Logs and Volumes will be preserved.

Installing Sytos Plus

Sytos Plus must be installed on a fixed disk. Follow these steps to begin the process:

1. Place the first Sytos Plus diskette into drive A:.
2. At the DOS command prompt, type **A:** and press **<Enter>**.
3. At the DOS command prompt type **INSTALL** and press **<Enter>**.

Note: If your system hangs or your screen is unreadable while installing Sytos Plus, rerun **INSTALL** in text mode by typing **INSTALL /T**.

The Installation Process

Sytos Plus will prompt you through three steps before it copies or creates any files.

Step 1. Choose the **DISK** and **DIRECTORY** where you want to install the Sytos Plus files.

Step 2. Choose a default **BACKUP DEVICE** to be used with Sytos Plus.

Note: Device names with the extension "AT" are used with PCs, XTs and non-Micro Channel systems. Names with the extensions "MC" are used with Micro Channel systems.

Choose **<Driver Disk...>** if your backup device does not appear on the list and you have another diskette that contains it.

If you want to install any drivers that are not on the Install disk, you must copy them into the **SYFILES** directory.

Step 3. Choose a default **VOLUME NAME** for the Sytos Plus sample Procedures.

Once you have completed these three steps, you will be given the opportunity to confirm or change the settings you have specified. To change one of your choices, select it and you will be returned to that particular screen.

Once you have modified your selection, you will be returned to the confirmation screen where you can repeat the above process for any other choices you would like to change.

When you are sure that these settings are the ones you want, select **Accept these settings . . .** and Sytos Plus will be installed.

Note: Warning/Error Messages under Utilities: Preferences allows you to control the message "beep" within Sytos Plus.

Check CONFIG.SYS

Before running Sytos Plus, you must check the CONFIG.SYS file to make sure that the BUFFERS and FILES statements are set to at least 20. If these statements do not exist in the file, you should include them. For example, these entries would appear in CONFIG.SYS as:

```
BUFFERS=20  
FILES=20
```

After editing the CONFIG.SYS file, you must reboot the system for the new values to take effect.

Check Your Backup Device Configuration

The backup device you have chosen was shipped with default configuration settings. These settings should be sufficient for most system setups. However, if your system requires a special configuration, you should modify it as necessary.

For example, suppose your backup device was shipped with settings of DMA 1, IRQ 3, and Address 300, but you already have a network card installed with those settings. If two devices in your system have been assigned the same configuration settings, your system will not function correctly.

To modify the configuration settings, choose **Backup Device Setup** from the Utilities pull-down menu in Sytos Plus. For more information about setting up a backup device, refer to **Chapter 5: Utilities, Exit, and Help** in the *User's Guide*. For examples of DMA, Interrupt, and Address settings commonly used by other devices, refer to **Appendix A: Hardware Configurations** in this booklet. You may want to make a note of your own system settings there.

Upgrading from SY-TOS

If you are using a non-Micro Channel system, and you plan to use the same backup device with Sytos Plus, you can check the device's settings easily. Run the SY-TOS utility ST-CONFIG and record the DMA, Interrupt, and Address settings in the Configure window. Then use **Utilities: Backup device setup** within Sytos Plus to set up the backup device with these same settings.

Starting Sytos Plus

There are several ways to run Sytos Plus. They are discussed in the following sections.

Before you backup any files, we recommend that you run the DOS CHKDSK command. The CHKDSK command gives you a status report including the number of files on your disk, the amount of disk space in use, and any errors within the file system. You should correct any problems before running Sytos Plus so that your backup copies do not contain damaged files.

Note: If you assign drive letters to other drives (for example, SUBSTituted or ASSIGNED drives), use care when performing Sytos Plus operations on these drives. You may inadvertently backup the same file multiple times or leave some files out.

Running Sytos Plus From Any Directory

To run Sytos Plus from any directory, you'll need to modify the PATH statement in your AUTOEXEC.BAT file to include the disk and directory where Sytos Plus resides.

For example, your AUTOEXEC.BAT file could contain the following:

```
PATH=C:\;C:\DOS;
```

After adding C:\SYPLUS; to the PATH statement, the new line would be:

```
PATH=C:\;C:\DOS;C:\SYPLUS;
```

Interactive Operation

If you wish, you can run Sytos Plus from the operating system command prompt and begin to work with the sample Procedures created during the installation process. From the disk and directory where Sytos Plus is installed, type:

```
SYPLUS
```

As Part of a Batch File

Depending on your backup strategy, you may want to include a specific Sytos Plus Procedure within a batch file. When the batch file is executed, Sytos Plus is invoked and a Procedure that you specify is loaded and run.

To run a Sytos Plus Procedure from a batch file, you must include the following statement within the file:

SYPLUS "Procedure Name"

Sytos Plus sets exit codes to represent certain conditions encountered during batch file processing. By using these codes with the DOS internal `IF ERRORLEVEL` command, you can verify quickly that the process finished without error or you can determine if any problems occurred. You may check the Log for details.

Sytos Plus sets the following exit codes:

- 0:** Procedure completed — All files processed. (This means that no unfound, unmatched, damaged, or busy files were found.)
- 1:** Procedure completed — All files not processed. (This means that one or more busy files were encountered.)
- 2:** All other cases — All files not processed. (This can occur when one or more unfound, unmatched, or damaged files were encountered or in other situations, such as when you cancel the Procedure.)

Refer to your Operating System's User's Guide for more information about using the `IF ERRORLEVEL` command in batch processing.

Note: SYPLUS runs Sytos Plus; the information in quotes is the name of the Procedure that you wish to load and run. Make sure that you enclose the Procedure name in quotes.

As a Scheduled Procedure

The Sytos Plus Schedule feature allows you to set up Procedures or other files (for example, batch or executable files) to run at specific times. This feature is described in more detail in the *User's Guide*, but there are a few things to know before scheduling Procedures in the DOS environment.

- You must exit any application programs and return to your operating system command prompt before scheduled Procedures can run.
- If you are running in shell environments such as the DOS 4.0 shell, you must exit the shell and return to the DOS command prompt for scheduled Procedures to run at their designated times.

Activating the Schedule from Outside of Sytos Plus

To install the schedule from a batch file or from the command line, include the following statement within the file or at the operating system command prompt by typing:

```
SYPLUS /I
```

To remove the Schedule, include the following statement within the batch file or at the command prompt by typing:

```
SYPLUS /R
```

Permanently Activating the Schedule

Once you turn off your computer, your operating system will no longer recognize the Sytos Plus Schedule. If you want the Schedule to be automatically activated each time you turn your computer on, you must modify your system's AUTOEXEC.BAT file to include the following statement (placed after the drive and pathname where Sytos Plus resides):

```
SYPLUS /I
```

For example, if Sytos Plus is located on C:\SYPLUS, you would add the following line to your AUTOEXEC.BAT file:

```
C:\SYPLUS\SYPLUS /I
```

Sytos Plus and DOS: Complete System Restore

If you need to fully restore your system (for example, after replacing your hard disk), we recommend following these steps to fully restore your system to its original state:

1. Reformat your hard disk and re-install DOS.
2. Re-create the original partitions (if applicable).
3. Re-install Sytos Plus to a different directory than the one to which you originally installed it (so that the previous version of Sytos Plus can be completely restored).
4. Run Sytos Plus and do a FULL RESTORE for the latest FULL BACKUP and INCREMENTAL/PROGRESSIVE BACKUPS, including the old Sytos Plus files.
5. Run a FULL COMPARE of the Volumes you just restored.
6. Print out the Logs for these Restore and Compare Procedures for your records.
7. Delete the version of Sytos Plus that you installed in Step 3 and use Sytos Plus from the original directory so you have access to your existing Logs, Volumes, and Procedures. Your system is now restored to its original state.

Network Environments

The following sections contain information you should review before running Sytos Plus in a network environment. Refer to the *User's Guide*, **Appendix A: Multi-user/Multi-tasking Environments** for more information about running Sytos Plus in these environments.

Installing Sytos Plus on a Network

We recommend consulting the network system supervisor before installing Sytos Plus.

It is recommended that you install Sytos Plus on a workstation rather than on the file server. However, if your workstation does not have a fixed disk, Sytos Plus can be installed on the file server; however, you can only run Sytos Plus from the workstation to which the tape subsystem is attached.

Be sure that the backup device settings (for example, DMA) are not used by the network adapter card or other cards in your system. Sytos Plus will not operate properly when backup device settings conflict with those of other cards.

To change these settings, select **Backup device setup** from the Utilities pull-down menu in Sytos Plus. Make sure the settings on the backup device adapter card match the values specified in Sytos Plus. You may want to try the DMA 3, Interrupt 5 combination (if it is available for your card) for all computers except 8086 and 8088 models. The Address generally does not need to be changed.

Running Sytos Plus

You can run Sytos Plus from any workstation or non-dedicated file server provided that the Sytos Plus files, the associated backup device controller card, and the backup device are locally present.

Selecting Files

For quick selection of all network files, network volume names are displayed alphabetically in the list of sources along with the network drives. If you want to backup an entire server, select *only* the network volume names; otherwise files will be backed up more than once.

Mapped Drive Letters

Be careful when backing up and restoring files that are being referenced by "mapped" drive letters. If mappings change after files are backed up, the files would be restored to the original locations or may not be restored if that drive is no longer valid.

In this situation, you should use the Sytos Plus Redirection option during the Restore to reference the new drive letter, or you may want to change the mapping (using your network utilities) to what it was when the files were backed up.

Selecting All Files on a Mapped Drive

Mapped drive letters typically reference directory pathnames suitable for an individual system. When you select **All files** from a mapped drive letter, you actually select all files from the mapped directory and its subdirectories rather than all files from the root directory. For example, the user Joe's drive M: could reference the whole pathname `\PUBLIC\USERJOE`. When Joe selects **All files** from drive M:, he actually selects all files on `M:\PUBLIC\USERJOE` and its subdirectories. Sytos Plus keeps track of the entire pathname on a mapped drive letter, so you'll notice that after selecting **All files**, your file selection will appear as **Specified files** in the main screen because you haven't selected all files from the root.

Backing up Files

It is important to check the Log after backing up a server because files that are open ("busy") cannot be backed up. To backup these files, ensure that the files are closed and run another Backup Procedure, selecting only those files that were busy. If you must backup all files on a server in a single Procedure, make sure that no one else is using the network. This guarantees that you have access to all files and will ensure a complete backup.

Note: To obtain access privileges to all files, we recommend that you log in as the Supervisor or Administrator.

Restoring Files

When restoring files to a server, make sure that users are not using files in the directory you want to restore, since files that are open ("busy") cannot be overwritten.

With Redirect Files Option

When using the Redirection option during Restore Procedures, be sure you specify exact pathnames of the files you intend to restore. This is especially important in a networking environment because files with the same names may exist in different locations within the network.

Important: Make sure that no other users are logged in when you are restoring network system files or other shared program or data files.

Advanced NetWare: Special Considerations

Please refer to these sections, in conjunction with the previous sections which described networks in general, before installing or running Sytos Plus on a NetWare system.

Installing Sytos Plus

If you wish to install Sytos Plus on a non-dedicated file server, we recommend that it is installed on the DOS partition.

Backing up Files

Sending Messages during Backup Procedures

Sytos Plus can send messages during Backup Procedures to users working with files, giving them an opportunity to close them so they can be backed up. To activate this feature, you will need to:

- Log in as Supervisor.
- Select the **Retry busy files . . .** option for the Backup.

When Sytos Plus encounters a busy file, it will send a message to the user(s) the *first* time it retries the file. Busy files will be retried at recurring intervals of 60 seconds.

It is important to include the Log as part of any Procedure and to check it after the Procedure to see if any busy files could not be backed up.

(For information about other broadcasting features, contact Sytron's Technical Support Department.)

Broadcasting with Multiple Logons

If you are logged on to the same network at more than one location, any network broadcasts that Sytos Plus sends to you will go to the location where you first logged on.

Temporary Files

Temporary files created by NetWare will not be backed up. Examples of these files are NET\$SPL.QUE, NET\$MESSG.SYS, and DIRSTAMP.SYS. When backing up under Novell 2.15 TTS, certain other temporary files in the root directory will be "Unfound" and not backed up. None of these temporary files need to be saved.

Backing Up User and Group Security Information

In order to backup the user and group security information recorded in the \SYSTEMNET\$BIND.SYS and \SYSTEMNET\$BVAL.SYS files, you must log in to the network as Supervisor or you must have Supervisor equivalent rights. It is important that these files are backed up in the event that a full system restore is required. If these files are not on the backup media, all user and group information will have to be re-created after a Restore Procedure.

Restoring Files

NetWare Filename Limits

NetWare filenames longer than the eight character DOS limit will be truncated if those files are restored to DOS environments. You should use the Sytos Plus Redirect files option to shorten their names when restoring these types of files to ensure that the final filenames are the ones that you want.

Reboot after Restore

Because NetWare remains in memory during Restore Procedures, we strongly recommend that you reboot the system after a full system restore or after restoring any system directories or files which record user and group security information. This will ensure that NetWare is updated with respect to the information on disk that has been restored (such as changed “rights”), thereby preventing possible data corruption or loss.

Non-existent or Deleted Users

Description

When a Supervisor adds a user to the system, NetWare assigns the user an ID number. The files or directories subsequently created by users are assigned to their unique number. Each user will be assigned a different ID in other NetWare file systems.

Occasionally, files are transported to different file systems in which users may not be defined. Also, after files are backed up, their owners may be removed from the file system. If Sytos Plus encounters a file or directory whose owner no longer exists on the system it is being backed up from or restored to, Sytos Plus will prompt you for confirmation on how to proceed.

When Backing Up or Comparing Files

During Backup Procedures, Sytos Plus updates each file's Last Archived Date (if the Backup Set option "Mark files as backed-up" was chosen) and preserves the file's Last Accessed Date. However, if Sytos Plus determines (after backing up a file), that the file's owner no longer exists on the current system, it must first assign an owner in order to access the file information.

When this situation is encountered after backing up a file, you have the following options.

1. To preserve the owner and Last Archived Date, choose <Cancel> or press <Esc>. The Last Accessed Date will be updated.
2. To assign the current user as owner and update the Last Archived Date, choose <OK> or press <F2>. The Last Accessed Date is preserved.
3. To stop the Procedure, choose <Stop Procedure> or press <F7>.

When Restoring Files

If the owner no longer exists on the file system being restored to, you have the following options.

1. To preserve the owner, choose <Cancel> or press <Esc>. Last Access will be modified to reflect the date and time of the Restore.

Exception: If the file being restored does not exist on disk, it WILL be assigned the current user as owner with the corresponding access rights.

2. To assign the current user as owner with the corresponding access rights, choose <OK> or press <F2>. If necessary, each file's access rights may later be changed using the appropriate NetWare utility.

3. To stop the Procedure, choose **<Stop Procedure>** or press **<F7>**.

Restoring Directory Trustees and Access Rights

Description

During Restore Procedures, some NetWare directories being restored from the backup media may have different trustees and access rights than the corresponding directories on the network. This may occur when the rights are changed on the network after a backup.

The first time Sytos Plus attempts to restore a file to a network drive, it prompts to determine what to do in any situation where directories have different trustees and access rights on the network and on the backup media. The options are to preserve the rights as they are on the network or to overwrite them with those from the backup media.

Options

You may choose one of the following options.

1. To preserve the directory trustees and access rights as they exist on the network, choose **<Cancel>** or press **<Esc>**.
2. To overwrite the directory trustees and access rights that exist on the network with those on the backup media, choose **<OK>** or press **<F2>**.
3. To stop the Restore Procedure, choose **<Stop Procedure>** or press **<F7>**.

Notes

If you choose **<Cancel>**, the directory rights that exist on the network will not be overwritten when the directories are restored from the backup media. This option is useful if directory rights have changed since the backup and you need to restore the contents of the directories without losing the new trustee rights.

If you choose <OK>, the rights recorded on the backup media will be restored to the network. This option is useful if you need to restore both the directories AND their access rights. Any trustees added to a directory after the backup operation (which therefore do not exist on the backup media) will not be overwritten when the directory information is restored to the network. If you do not want to keep the new trustees after the Restore Procedure, you should remove them using the appropriate NetWare utility.

For example, suppose there was a directory called \ACCOUNTS which was backed up. After the Backup Procedure, the following changes were made to the trustees and rights on the network: user Carol was added, user Stephen was removed, and the rights were modified for both users David and Diane. Table 1 shows the differences between the new rights on the network and those on the media after the backup.

TRUSTEES	Rights on Backup Media	New Network Rights
David	R,W,M	R,W
Diane	R,W,P,M	S
Stephen	R,W	Not a Trustee
Carol	Not a Trustee	R,W,C

Table 1 Differences between the new rights on the network and those on the media after the backup

Table 2 shows the resulting directory trustees and rights on the network after restoring information from the backup media. Example 1 will occur if you choose to overwrite network rights, Example 2 if you choose to preserve them.

In Example 1, all trustees and their corresponding rights are restored from the backup media. At this time, user Stephen is re-created on the network with the same rights that exist on the backup media. Because user Carol does not exist on the backup media, there is no information to replace her rights on the

network. Therefore, her rights on the network remain unchanged after the Restore Procedure.

TRUSTEES	Example #1: Choose <OK> to Overwrite Network Rights	Example #2: Choose <Cancel> to Preserve Network Rights
David	R,W,M	R,W
Diane	R,W,P,M	S
Stephen	R,W	Not a Trustee
Carol	R,W,C	R,W,C

Table 2 Resulting directory trustees and rights on the network after restoring information from the backup media

In Example 2, the trustee rights for \ACCOUNTS are preserved exactly as they exist on the network.

This feature offers you the flexibility of recovering the rights from only one or a few of the directories you are restoring from the backup media. To do so, follow these steps.

1. Create a Restore Procedure which will copy **ONLY** the directories whose rights you want to **PRESERVE ON THE NETWORK**. Run the Procedure and choose **<Cancel>** or press **<Esc>** to preserve the network rights when prompted.
2. Create a second Restore Procedure which will copy **ONLY** those directories whose rights you want to **COPY FROM BACKUP MEDIA**. Run the Procedure and choose **<OK>** or press **<F2>** to overwrite the network rights when prompted.

Complete System Restore

When restoring a *complete system*, we recommend you follow these steps. This process allows NetWare to distinguish all files and directory security correctly.

1. Bring up the file server and then restore *only* the \SYSTEM directory from the backup media. When prompted, choose to

PRESERVE the directory trustees and access rights that exist on disk.

2. Reboot the file server to initialize the new system files you have just restored. Then, restore all of the desired files (including the \SYSTEM directory), choosing to **RESTORE** all directory trustee and access rights from the backup media.

Any trustees added to a directory after the Backup Procedure (which therefore do not exist on the backup media) will not be overwritten when the directory information is restored to disk. If, after the Restore Procedure, you no longer want these new trustees to exist, they must be removed using the appropriate NetWare utility.

Managing Your Files

As a general rule, you should understand the following aspects of your network if you need to restore files: user ID assignments, and directory trustee and access rights. It is important that you understand how Sytos Plus will interact with your network in any special situations.

Also, to help you manage the files on your network system, Sytos Plus preserves each file's Last Accessed Date during Backup Procedures. Therefore, you can use the appropriate NetWare utility (for example, **FILER**) to check your system for files that have not been accessed for a specific period of time and archive them (using a Sytos Plus Move Procedure) to free up disk space.

With Netware, Sytos Plus displays file dates according to their Last Update Date. Therefore, when you use the Selection Sheet to include or exclude files based on certain dates, you will be selecting them by their Last Update Date.

Sytos Plus will also set each file's Last Archived Date (in addition to the archive bit) if you choose the **Mark files as backed-up** option during Backup Procedures. This will assist you during Restore Procedures if a file has been backed-up more than once and you want to specify that only the most recent

version is restored, or during your next backup if you only want to include files which have changed since that date.

Appendix A: Hardware Configurations

Once you have installed Sytos Plus, you may need to modify your backup device configuration settings if there are other devices on your system already set to those values. The chart on the next page lists some common configurations for different types of hardware controller cards when they are installed on specific types of systems. Use this information as a guideline when configuring your backup device for examples of configurations which may be unavailable because they are being used by other devices already installed in your system. You may also want to make a note of your system's settings for reference.

Whenever a change is made to the switches or jumpers on the backup device controller card, be sure to make the same changes to the backup device configuration settings within Sytos Plus.

The configuration utilities used to set up devices on PS/2 systems with Micro Channel Architecture will inform you if there is a conflict with the hardware settings.

If you are running Sytos Plus on an EISA system, you may need to refer to this chart if there is a conflict with another device. However, if your particular system has an automatic configuration utility, you will be informed of any conflicts when installing your backup device.

Common Hardware Configurations						Your System
		PC	PC XT	PC AT and 386 AT's	EISA	
DMA	1					
	2*	Diskette Drive				
	3		Fixed Disk Drive			
IRQ	2	Expansion Card	Expansion Card	Reserved	Reserved	
	3	Serial Port 2 (COM2)				
	4	Serial Port 1 (COM1)				
	5	Fixed Disk Drive	Fixed Disk Drive	Parallel Port (LPT2)		
	6*	Diskette Drive				
	7	Parallel Port (LPT1)				
Address (hex)	1F0-1F8			Fixed Disk Drive		
	200-20F	Game Controller				
	278-27F	Parallel Port (LPT2)				
	2F8-2FF	Serial Port 2 (COM2)				
	320-32F		Fixed Disk			
	378-37F	Parallel Port (LPT1)				
	380-3BF	Monochrome adapter				
	3D0-3DF	Color/graphics adapter				
	3F0-3F7	Diskette Drive				
3F8-3FF	Serial Port 1 (COM1)					

Please see the following page for explanations of the terms and conventions used in this chart.

Notes:

* Although DMA 2 and IRQ 6 are used by the diskette drive, in most cases they can still be used by Sytos Plus backup devices.

COM1 and COM2 are commonly assigned to a serial device such as a serial printer, modem, or mouse.

LPT1 and LPT2 are commonly assigned to a local parallel printer.

Blank fields in the “Common Hardware Configuration” columns signify that there is not a common device specifically assigned those settings. However, your system may have a special configuration that uses these settings.

Appendix B: Technical Support Information

If you encounter a problem when installing or running Sytos Plus, please consult this booklet or the *User's Guide* to determine if you can correct it. You can also receive context-sensitive help on Sytos Plus features, prompts, and error messages by choosing <Help> or by pressing the <F1> function key within Sytos Plus. If you can't solve the problem by referring to the documentation or the Sytos Plus help utility, you may wish to contact Sytron's Technical Support Department between the hours of 8:30 AM and 6:00 PM Eastern Time (U.S.A.):

Phone : U.S.A. + (508) 898-0193
FAX : U.S.A. + (508) 898-2677

For the quickest solution, please be prepared to give the Technical Support representative the information listed on the next pages when you call.

If you would prefer to FAX the description of the problem, you may want to photocopy the following pages and use them as templates for your correspondence.

Sytos Plus Technical Support Information

Describe the current system setup and the problem or error.
Please include a printout of the contents of your
AUTOEXEC.BAT and CONFIG.SYS files.

• **Product Serial Number** _____

(Located on the Sytos Plus registration card)

• **System Configuration (One Choice on Each Line)**

Processor 286 386 486
Bus Architecture ISA/AT MCA EISA
Manufacturer/Model _____
System Speed _____ MHz
RAM _____ Mb

• **Operating System**

Type _____ Version _____

• **Network**

Type _____ Version _____

Topology:

- ____ Arcnet
- ____ Ethernet
- ____ Token Ring
- ____ Other _____

• **Backup Device**

Manufacturer/Model _____

Capacity of Media _____

Controller Manufacturer/Model _____

• **Other Installed Devices and Their Configurations**

(for example, serial printer, modem, mouse)

• Problem Description

Please be descriptive. If an error message was displayed, please give the error number in the error message window and the *exact* message.

Error Number _____

Error Message _____

Description _____

• General Comments

Please use this space to provide any additional information.

Notes

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