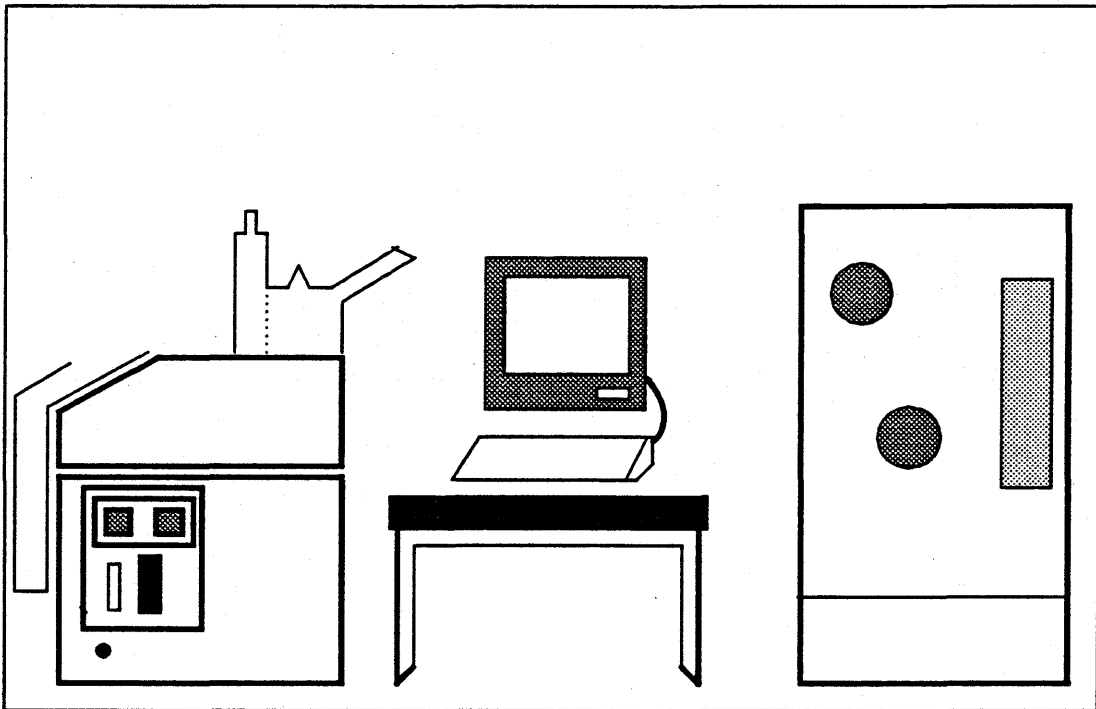


Kurzweil 4000

Intelligent Scanning System



System Administration Guide

WARNING

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been tested for compliance with the limits for Class A computing devices pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference. Operation of this equipment in a residential area is likely to cause interference, in which case the user, at his own expense, will be required to take whatever measures may be required to correct the interference.

Ordering Number: 00-03658

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PREFACE

This is the System Administration Guide for the Kurzweil 4000 Intelligent Scanning System. It describes setup and routine care of the Kurzweil workstation, system procedures and filing operations.

Users are invited to make suggestions for improving the Guide by returning the *Readers' Comments Card* on page 32.

Technical questions and problems should be directed to the Kurzweil Customer Support staff at the Cambridge, Massachusetts headquarters. The address is listed below.

**Kurzweil Computer Products
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Cambridge, Massachusetts 02139**

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Chapter 1

INTRODUCTION TO THE KURZWEIL 4000 INTELLIGENT SCANNING SYSTEM

Kurzweil Computer Products, Inc. was formed in 1974 to develop and market a reading machine for the blind, based on a unique approach to computer recognition of the English alphabet. The prototype, introduced in 1976, was the first practical device that could generate synthetic spoken English from a printed or typed page.

It became apparent that there were significant commercial applications for the scanning system. By adapting the reading machine technology, Kurzweil developed a new system that allowed automatic conversion of source documents into computer-compatible form.

The commercial marketplace demanded much higher scanning speeds than the reading machine could offer, coupled with near-perfect accuracy. Special capabilities, such as format preservation, were developed. The Kurzweil Data Entry Machine (KDEM) was introduced in 1978.

Kurzweil continues to lead the OCR (Optical Character Recognition) industry with the introduction of the Kurzweil 4000 Intelligent Scanning System. The Kurzweil 4000 is smaller, quieter, less expensive and more efficient than its precursors. It enters between 20 and 50 characters per second (cps), depending upon the print quality and format of the original. Essentially, the Kurzweil system is capable of processing text at up to 5 times the rate of a professional typesetter.

Conventional Optical Character Recognition (OCR) incorporates only a limited number of typewriter fonts in restricted page formats. The Kurzweil system recognizes thousands of combinations of type faces and type sizes in most page formats. European letter shapes and punctuation marks are readily scanned.

The Kurzweil 4000 is not restricted to predetermined typestyles. It has recognition capabilities that fine tune a unique training set of characters for a particular document. Letters are not compared to a specific shape; they are scrutinized as the human eye examines characters, looking for the general typographic pattern.

In the training process, the Kurzweil system attempts to "guess" each character's identity. Characters that do not reach the confidence level of the system software are displayed for the operator to confirm or correct. Once these characters are accepted, the Kurzweil 4000 stores their unique properties for future comparison. When scanning is completed, the processed text may be output to a variety of peripherals (e.g., mag-tape or RS-232 ports).

Because of its omni-font recognition capability, the Kurzweil system is, by far, the most versatile OCR device in the marketplace today.

Specific capabilities of the Kurzweil 4000 Intelligent Scanning System are listed below.

RECOGNITION CAPABILITY:

- * Most serif and sans serif fonts (excluding script); 6-24 point
- * Proportionally or uniformly spaced material
- * User-defined 2-3 character mnemonics for special symbols
- * Underlined characters

INPUT CAPABILITY:

- * Pages up to 11" x 14"
- * Bound books
- * Photocopies
- * Typewritten originals

OPERATIONAL FEATURES:

- * Flags any questionable character for operator attention
- * Preserves horizontal or vertical spacing
- * Recognizes true superscripts and subscripts
- * Flags underlines, superscripts and subscripts
- * Flags font and character changes

ON-LINE EDITING FEATURES:

- * Preprocessing lexicon to reduce manual editing
- * Insertion and deletion of characters and lines
- * Undoing previous editing operations
- * Disk filing of documents, training sets, output tailors and tablet files

OUTPUT:

- * ASCII, EBCDIC, TTS or user-specified codes
- * Automatic hyphen stripping at line ends as an option
- * Variable or fixed length records
- * Interfaces to Xerox, Wang and many other word processing systems
- * Character string translations/replacements
- * Character count at output
- * Provision for IBM standard labels when writing to magnetic tape
- * Operator specified "mark-ups" for end-of-line, end-of-page and end-of-paragraph

Restrictions associated with the system features mentioned above are described in Software Product Descriptions, available from the Kurzweil Customer Support Department.

OPTIONS INCLUDE:

- * Document feeder
- * Asynch or Bisynch (IBM supported) communications
- * 33,000 word English lexicon (German, Dutch, Swedish and Danish lexicons available as options)
- * Electronic tablet
- * Customized output interfaces to other systems

Chapter Two describes set-up and routine care procedures for the Kurzweil 4000.

Chapter 2

SYSTEM ADMINISTRATION

2.1 OVERVIEW

Any company that has purchased a Kurzweil Intelligent Scanning System has made a commitment to its future by investing in a sophisticated approach for developing, communicating and handling information. The System Administrator is responsible for combining a number of diverse elements into a smoothly-running whole in the workplace. Administrators are responsible for a variety of administrative and personnel related tasks, such as: training users, monitoring the system, resolving problems and maintaining contact with Kurzweil Computer Products.

System Administrators undergo an intensive Training Session at Kurzweil's headquarters prior to the installation of the Kurzweil 4000 workstation. The Kurzweil Customer Support staff will provide hands-on training that covers all aspects of the 4000 system.

Training Users

System Administrators are responsible for training new users at the customer site. Therefore, it is important for the administrator to be comfortable and competent in all aspects of system operation. The Administrator must read all supporting documentation prior to in-house training.

Qualifying Documents

The Kurzweil 4000 system is the most sophisticated OCR scanner available. It can process documents that include a variety of typestyles and sizes. Some documents that customers would like to process, however, are too deteriorated or involve page formats that are too complex.

One of the most important responsibilities of the System Administrator is to determine what constitutes a reasonable application for the "4000." It is inefficient (and frustrating) to assign operators tasks that are beyond the capabilities of any conversion device. Assessing potential applications accurately will greatly enhance the in-house work flow.

Kurzweil Liaison

The System Administrator is a critical link between the Kurzweil Support Staff and the customer site. It is important for the System Administrator to keep accurate and detailed records regarding system performance, including problems or irregularities.

Record-Keeping

The Kurzweil system employs its own record-keeping file (called **KDEMLOG**) in the system software. A description of actions performed is recorded there, along with log-in information. System Administrators also need to keep accurate records about the workflow and documents that have been scanned.

System Administrators keep records about the frequency of system back-ups, the contents of Library Floppy disks, information about any System Errors and various operator statistics (work output per shift, types of documents scanned, etc.). All of this information will be valuable in identifying trends and in diagnosing potential problems.

It is important for the Administrator to ensure that the most current software release has been installed on the Kurzweil system and that the release disks are labelled and kept separate from other Kurzweil or customer disks. The System Administrator is responsible for performing timely "backups" (copy actions) of system information. Kurzweil also provides the ability to construct *library* disks which allow a user to keep individual files or groups of files on a floppy disk for quick access.

Training Prerequisites

Prior to arriving at Kurzweil headquarters or starting the Training package, System Administrators should complete some basic prerequisites to prepare for training. The *Operator's Guides* for the Kurzweil 4000 should be read, along with any supporting documents. The System Administrator is encouraged to bring samples of typical documents to be processed in their environment, so that hands-on training can be directly applied to a "real-world" document. Also, it is important for Administrators to understand and be able to describe what the *receiving device* is in their home office (i.e., word processor, typesetter) and what is expected of the Kurzweil system/customer device interface.

2.2 KURZWEIL 4000 SETUP

Setup of the Kurzweil 4000 Scanning System is performed by Field Service Engineers at the customer site. Attention to certain physical requirements will ensure that the system operates efficiently.

Setup

Kurzweil supplies its computer cabinets with high-velocity blowers to maintain proper airflow. Air conditioning must be supplied by the customer to dissipate heat further. Ambient light can affect scanner performance. Therefore, fluorescent lighting fixtures should not be placed above the workstation.

Access

Open access to the Kurzweil 4000 workstation must be available to Field Service personnel. Maintain at least three (3) feet of access on the sides and back of the workstation cabinet. The free space will help in meeting cooling and ventilation requirements, also.

Floor Covering

Rugs are unacceptable as a floor covering underneath the Kurzweil system. They contribute to fine dirt buildup inside the cabinet, which will inhibit heat dissipation. Rugs contribute to static electricity buildup, too. If the system must be placed in a room with a rug, the purchase of a grounded static mat is recommended.

Telephone

A telephone that is adjacent to the workstation is virtually a necessity. Kurzweil Support personnel will be able to answer customer questions immediately and effectively if a telephone is present in the room. The connecting cord must be long enough to reach the back of the workstation unit.

Peripherals

Peripherals that are supplied by Kurzweil, such as the Tablet and tape drive, are preset for correct operation. If problems are encountered in their use, contact the Field Service Department of Kurzweil Computer Products.

Temperature and Humidity

External temperatures may range from 32 degrees F to 95 degrees F (0 degrees C to 35 degrees C). Computers are affected by *changes* in temperature more than extremes. The Kurzweil 4000 will function most effectively if it is protected from rapid temperature fluctuations. Humidity should be above 50%, if possible, since low humidity can increase static electricity.

Floppy Disks

Kurzweil supplies four (4) configured floppy disks with each new system. Two disks contain the most current software release and two are to be used in the event of a System Error. Refer to section 2.4 for a description of floppy disks and to subsequent chapters for instructions in their use.

2.3 ROUTINE CARE

Kurzweil Field Engineers will perform required preventative maintenance as part of their scheduled visits to the customer site (if the customer has a service contract in effect). System Administrators must ensure that the access areas around the system are kept clear and clean.

To reduce eyestrain, clean the surface of the display screen on a regular basis. Any ammonia-based cleaner is acceptable. Use a soft, lint-free cloth moistened with the cleaner on the screen surface. Clean the glass on the workstation, also. Dirt can inhibit scanner performance.

2.4 REMOVABLE STORAGE MEDIA

The Kurzweil 4000 is the first product offered by Kurzweil Computer Products that utilizes a floppy disk drive system. The floppy disk drive allows customers to load new software releases on the system quickly and provides a number of other services which will greatly enhance productivity.

Operators may now perform either full or incremental backups of valuable system information. Customers may also create and use special Library floppy disks. In the (rare) event of a System Error, operators may copy relevant information about the error for diagnosis by the Kurzweil staff, allowing the system to return to production.

Customers must provide additional floppy disks for all system functions. Kurzweil recommends the use of double-density, soft-sectored floppy disks with reinforced hubs. Kurzweil Computer Products is not responsible for any problems associated with the use of inferior or unacceptable floppy disks.

Floppy disks require special care, much like phonograph records. They are susceptible to the elements (especially dirt and moisture) and can be scratched if care is not taken to protect them.

Always store floppy disks in their protective jackets and keep them away from any device that generates electromagnetic energy. Do not touch the surface of the disk.

2.4.1 Kurzweil Floppy Disks

The Kurzweil system uses floppy disks for a variety of functions. As mentioned, software releases are delivered to customers on and loaded from, two or more floppy disks. Floppy disks are used in all backup procedures and, in a similar application, as library (archive) disks. Library floppy disks are used to copy a file or files for off-line storage.

Four floppy disks are included with each system. Two disks contain the most recent software release and two are preconfigured System Error disks. System Error disks are created prior to the occurrence of a System Error. They are kept at the workstation and used when an error message is displayed.

NOTE

In the Kurzweil system, some disks are preconfigured by the customer for use at a later date. System Error and Library disks must be initialized in this manner. Always keep at least two preconfigured System Error disks on hand.

Chapter Three describes system procedures and provides a detailed description of the use of floppy disks.

Chapter 3

SYSTEM PROCEDURES

3.1 LOADING A NEW SOFTWARE RELEASE

Software releases are installed on the Kurzweil 4000 from a set of floppy disks that are delivered with the system. Kurzweil software must be copied from these release disks onto the (hard) Winchester disk before scanning, communications, or other functions can be performed. Subsequent software updates are installed in the same manner.

Kurzweil software can be installed in two ways. An operator may choose to **Rebuild** the hard disk or simply to **Install** the latest release without reformatting the hard disk.

Rebuilding a Winchester disk erases the current contents of the disk, recreates the logical disk structure and installs the new software. All document files and training sets that are present on the Winchester disk will be deleted. This is a required procedure on a new Winchester disk, or on a Winchester disk whose structure has been damaged (system error messages will indicate "damaged disk data", for example).

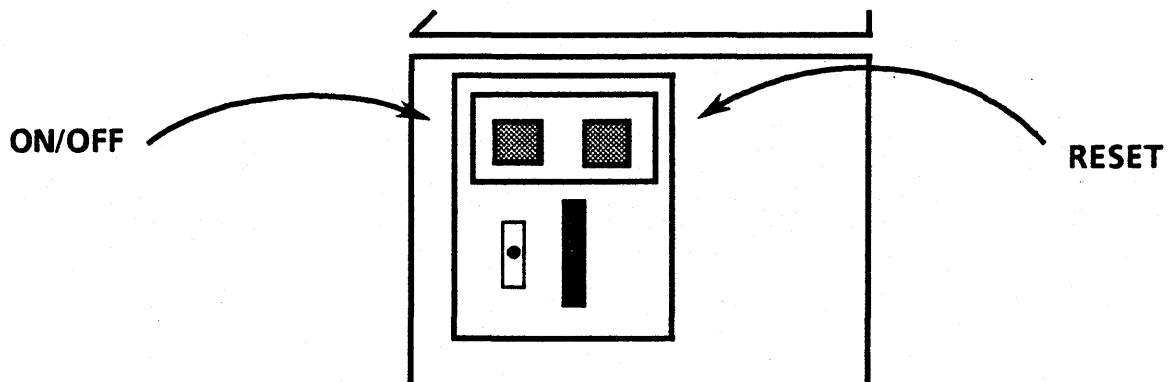
An Install operation copies new versions of the Kurzweil software onto the Winchester disk. The disk structure and all user files are left intact. An Install operation can only be performed if the disk has been rebuilt at an earlier time and the structure is still intact.

A Software Release set currently consists of two floppy disks. These are referred to as **Volume 1** and **Volume 2**. Floppy disks are loaded sequentially and may, in the future, occupy more than two disks.

PROCEDURE:

To load software on the Kurzweil system:

1. Press the ON/OFF button in, to the **ON** position.
2. When the *Status Prompt (OK!)* is displayed, insert Volume 1 of the Software Release set into the disk drive. Ensure that the the floppy disk is installed properly (label to the right) and close the door securely.



Kurzweil 4000 Disk Drive Door

3. Type "F." The status message below will be displayed, indicating that the system self-test is in progress.

Testing KDOS structure of DS0.

After a short wait (approximately 30 seconds), the operator is requested to enter the date and time. Once the software has been installed, this information is processed internally, allowing the operator to bypass the **LOGIN MENU** and proceed directly to the **TOP Level Dispatch Menu**.

4. The operator is presented with two options next. Type either:

"I" to *install* a release, or

"R" to *rebuild* a software base on the system.

WARNING

In a Rebuild operation, *all* data on the disk will be destroyed and the disk will be reformatted.

Selecting "I" will ensure that the information on the internal (hard) disk is updated to the most current level. No customer files are affected.

If option "R" is selected, the system will request verification (type either **Y** or **N**) that the operator does, in fact, want to rebuild the software base, as the rebuild operation will overwrite all files on the Winchester disk. If the software release involves more than one floppy disk, a prompt instructs the operator to remove the current floppy disk and to insert the next disk in the series.

A Rebuild procedure will take approximately twenty minutes. An Install procedure requires much less time. The Install procedure may not request that all floppy disks be inserted into the system. Additionally, some floppy disks may be processed very quickly, while others will take a longer amount of time. This is simply a function of the amount of required information resident on a particular floppy disk. After the installation or rebuilding process, the *TOP Level Dispatch Menu* is displayed to the operator.

3.2 SYSTEM BACKUPS

Information that is resident on the Kurzweil 4000 Winchester disk may be copied to a floppy disk to provide insurance against system errors and inadvertent operator deletions. Backups are performed quickly and easily and must be done on a regular basis to be useful. Text files, training sets, Character Translation Sets, Output Tailors and Format Control Files (refer to the *Tablet Operator's Guide* for information about Format Control Files) may be copied as a group, or all user files on the fixed disk may be copied to floppy disk.

The Backup Dispatch Menu is accessed by selecting the **Utilities** option from the TOP Level Menu (shown below). Refer to the *Kurzweil 4000 Operator's Guide* for a complete description of the menu structure and its functionality on the Kurzweil 4000.

TOP LEVEL DISPATCH MENU

1	Scanning
2	Communications
3	Filing
4	Utilities
5	Help
6	Log Out
Enter Call-up number to perform function	

When option 4 is selected, the **Utilities Dispatch Menu** is displayed. Operators may choose to backup or restore files, create a library floppy, or create a System Error floppy disk. Once used, System Error disks are to be forwarded to Kurzweil for evaluation by the Support Staff.

Utilities Dispatch Menu

1	Backup/Restore
2	Create a Library Floppy
3	Diagnostics
4	Create a System Error Floppy
Enter Call-up number to perform function	

To backup a file, tailor, translation set or format control file to a floppy disk, select option 1 (**Backup/Restore**) from the Dispatch Menu. Once again, control will be *dispatched* to another menu. In this case, the Backup/Restore Dispatch Menu is displayed next.

Backup/Restore Dispatch Menu

- | | |
|---|--|
| 1 | Backup Files to a Floppy |
| 2 | Restore Files from a Floppy |
| 3 | List Files That Were Backed Up to a Floppy |

Enter Call-up number to perform function

Options that allow an operator to *Restore* or *List* files associated with Floppy disks will be discussed in detail, later in this chapter. To perform a *Backup* operation, select option 1 (**Backup Files to a Floppy**). Selecting option 1 will display the Backup Menu. Once parameters have been set for the Backup Menu, the operator must press ACCEPT and the Backup operation will be initiated.

Backup Menu

- | | | |
|---|---------------------------------|----------------------|
| 1 | Type of Backup | Full / Incremental |
| 2 | Verify | No/Yes |
| 3 | Training Sets | Backup/Don't Backup |
| 4 | Documents | Backup/Don't Backup |
| 5 | Output Tailors | Backup/Don't Backup |
| 6 | Character Translation Sets | Backup/Don't Backup |
| 7 | Format Control Files | Backup/Don't Backup |
| 8 | Date from which to backup files | No options available |

Enter Call-up number to perform function

TYPE OF BACKUP

Two choices are available: *full* or *incremental*. A *full* backup will copy all customer information on the Kurzweil system, including Character Translation Sets, Output Tailors and text files (if requested). An *incremental* backup will copy these same files, but only since the date indicated in option 8. Option 8 operates in conjunction with this selection.

VERIFY

Verify is a file check option which reads back each file during a backup procedure to confirm that files were copied accurately. Selecting *YES* will increase the amount of time required to perform a backup operation.

TRAINING SETS

Operators may choose to copy (Backup) training sets, or not.

DOCUMENTS

Operators may choose to copy (Backup) documents, or not.

OUTPUT TAILORS

Operators may choose to copy (Backup) Output Tailors, or not.

CHARACTER TRANSLATION SETS

Operators may choose to copy (Backup) Character Translation Sets, or not.

FORMAT CONTROL FILES

Operators may choose to copy (Backup) Format Control Files, or not.

DATE FROM WHICH TO BACKUP

As mentioned, options 1 and 8 are dependent upon one another. If a full backup is requested in option 1, "No options available" is automatically inserted after option 8. Similarly, selecting *Incremental* in option 1 requires the operator to enter a date from which to copy files. The date of the last *Incremental Backup* is displayed as the default option setting.

3.3 FINAL BACKUP PROCEDURES

When options in the *Backup Menu* have been entered, press ACCEPT. A prompt asks the operator to

Enter title or description of this backup set.

The descriptive title is a way of identifying the backup at a later date, both to the system and to the operator. Press ACCEPT again, after entering a descriptive set name.

Another prompt will instruct the user to

Please mount a writeable floppy

and

Press the Accept key to continue.

Insert the floppy disk in the Kurzweil 4000 (label to the right, as described in *Loading a New Software Release*). A "writeable floppy" must have a write-protect label covering the write-protect notch on the bottom edge of the floppy disk cover. This label may be removed after copy operations to prevent unwarranted erasures of valuable information.

If the installed floppy disk is new, the system will automatically format and initialize the disk to accept the customer information properly. The operator must indicate that a format operation should be performed (or not). Very little operator involvement is required from this point to the conclusion of the backup operation. While the format action is in progress, various messages will be displayed indicating the status of the operation.

Whenever a floppy disk is inserted into the disk drive, the operator is informed of the disk status. If the disk has been used already, the user is informed of this and given the option to use, reject or reformat it.

If a floppy disk has been inserted that contains bad sectors or scratches on the surface of the disk, the operator will be notified. If the system indicates that the current floppy disk is unusable (or if it has bad sectors), it may be rejected and a new one inserted in its place. This does not affect the backup operation in any way -- essentially, the system waits for a new floppy to conclude the operation.

As each floppy disk is completed, the operator is instructed to

Dismount this floppy and label it Volume (#) of set: backup set name.

Press the ACCEPT key to continue. More than one floppy disk may be required to complete the backup operation. Ultimately, the system will inform the operator that the backup function has been completed and that the operator should press ACCEPT a final time. At this point, control is returned to the *TOP Level Dispatch Menu*, from which all system functions are accessed.

3.4 RESTORE PROCEDURES

Text files, Character Translation Sets, Output Tailors, Training Sets and Format Control Files that were copied (backed up) to floppy disk can be reinstalled on the Kurzweil system by performing a *Restore* operation. All files on the floppy will be restored to the Winchester disk unless a file of the same name already exists there.

The Restore Procedure is accessed by selecting the **Utilities** option from the TOP Level Menu (shown below).

TOP LEVEL DISPATCH MENU

1	Scanning
2	Communications
3	Filing
4	Utilities
5	Help
6	Log Out

Enter Call-up number to perform function

The **Utilities Dispatch Menu** is displayed next. To restore a file, tailor, translation set or format control file from a floppy disk, select option 1 (**Backup/Restore**) from the Dispatch Menu. Once again, control will be *dispatched* to another menu; in this case, the **Backup/Restore Dispatch Menu**.

Utilities Dispatch Menu

1	Backup/Restore
2	Create a Library Floppy
3	Diagnostics
4	Create a System Error Floppy

Enter Call-up number to perform function

From the **Backup/Restore Dispatch Menu**, the operator indicates exactly which operation is to be performed: a backup, a restore or a listing of files that exist on the floppy disk.

Backup/Restore Dispatch Menu

1	Backup Files to a Floppy
2	Restore Files from a Floppy
3	List Files That Were Backed Up to a Floppy

Enter Call-up number to perform function

Select option **2** to initiate the restore operation. A prompt instructs the user to:

Mount Volume 1 of the backup floppy.

Press the Accept key to continue>>>

Once **ACCEPT** is pressed, a message identifies the Volume (by title) to the operator.

If a file on the backup floppy has the same name as a file on the Winchester disk, the operator is informed of this and given the option to overwrite the Winchester file with the backup version, or to leave the Winchester copy unchanged. All remaining files will be restored to the Winchester disk. When files conflict, the following message will be displayed:

The file _____ Type:(Document, Tailor, etc.) already exists on your disk.

The version on disk was created MM/DD/YY.

The version on the backup disk was created MM/DD/YY.

*Shall the backup version replace the version on disk (i.e., Winchester disk)?
(Y or N)>>>*

The operator is instructed to *dismount* the floppy when the restore operation is complete. If there are additional backup disks in the set, they will have to be installed also. Ultimately, a message will inform the operator that the

Operation is complete.

Press Accept to continue.

Control will be returned to the **TOP Level Dispatch Menu**.

3.5 LIST FILES PROCEDURES

Select option 3 from the **Backup/Restore Menu** to list the files that were backed up to a set of floppy disks.

Backup/Restore Dispatch Menu

- 1 Backup Files to a Floppy
- 2 Restore Files from a Floppy
- 3 List Files That Were Backed Up to a Floppy

Enter Call-up number to perform function

A message will be displayed, instructing the operator to

Mount Volume 1 of the backup floppy

and

Press the Accept key to continue.

Next, a list of files on the backup set is displayed in the sample file list format, below. Additionally, the backup set date and name is provided to ensure that the correct set has been inserted.

List of files on the Backup set of: (date).

Label: (backup set name).

<i>Filename</i>	<i>Type</i>	<i>Date Created</i>
KDEMLOG	Document	12/12/83
CNF	Document	12/12/83

(End of list)

Press the Accept key to continue.

When ACCEPT is pressed, the **TOP Level Dispatch Menu** will be displayed. The operator may continue with *Utility* operations, or perform any of the other functions that are accessed from the **TOP Level Menu**.

3.6 LIBRARY FLOPPY DISKS

Library floppy disks are created so that operators may copy specific files or groups of files as part of an archival storage system. Users may wish to copy files of a similar nature (similar page formats, specific applications or specific customers) to a Library floppy for use at a future date, or for easy accessibility. Library floppy disks are created as part of the *Utilities* option that is selected from the **TOP Level Dispatch Menu**, displayed below. These configured disks are used as part of the *Filing* option, described in Chapter 4.

TOP LEVEL DISPATCH MENU

- | | |
|---|------------------|
| 1 | Scanning |
| 2 | Communications |
| 3 | Filing |
| 4 | Utilities |
| 5 | Help |
| 6 | Log Out |
- Enter Call-up number to perform function

The **Utilities Dispatch Menu** is displayed next. To create a Library floppy disk, select option 2.

Utilities Dispatch Menu

- | | |
|---|--------------------------------|
| 1 | Backup/Restore |
| 2 | Create a Library Floppy |
| 3 | Diagnostics |
| 4 | Create a System Error Floppy |
- Enter Call-up number to perform function

A message prompt will instruct the operator to

Enter title or description for this floppy: _____.

Once a descriptive title has been supplied, another prompt directs the user to:

Please mount a writeable floppy

and

Press the Accept key to continue.

The operator will be informed about what type of floppy disk (Backup, Library or new) is inserted in the disk drive. System Error or Installation disks may not be used. The floppy disk will be initialized next (as a Library floppy) and the operator will be asked to *dismount* the disk. After pressing ACCEPT again, control will return to the TOP Level Dispatch Menu.

Use the *Copy a File Menu* described in Chapter 4 to copy a file to a Library disk. Select the *To File Name* option to indicate where the file will reside. Precede the requested filename with **FLPY:.** Otherwise, the file will be copied to the hard disk.

3.7 SYSTEM ERROR PROCEDURES

Occasionally, the Kurzweil 4000 may experience a *System Error*. The problem can be diagnosed by the Technical Support Staff at Kurzweil once they examine a customer-supplied System Error floppy disk. System Error disks are created by the customer or by Kurzweil, for use by the customer. Initially, the system is delivered with two preconfigured System Error floppy disks.

System Error disks are used once only and cannot be overwritten. When a system error occurs, the operator must press Reset, insert a system error floppy disk into the floppy drive and type "F" after the OK! status prompt. All pertinent diagnostic information will be copied to the System Error disk, which should then be forwarded to Kurzweil Computer Products.

NOTE

It is imperative that at least two unused (but configured) System Error floppy disks be kept on hand at all times. The first step that an operator must perform after using a System Error disk, is to create a new (unused) System Error floppy disk.

To create a System Error floppy disk, select the *Utilities* option from the **TOP Level Dispatch Menu**.

TOP LEVEL DISPATCH MENU

1	Scanning
2	Communications
3	Filing
4	Utilities
5	Help
6	Log Out
Enter Call-up number to perform function	

The **Utilities Dispatch Menu** is displayed next. Select option **4** to create a System Error floppy disk.

Utilities Dispatch Menu

1	Backup/Restore
2	Create a Library Floppy
3	Diagnostics
4	Create a System Error Floppy

Enter Call-up number to perform function

After selecting option 4, from the Utilities Dispatch Menu, a message prompt will instruct the operator to

Please mount a writeable floppy.

and

Press the Accept key to continue >>>

The floppy disk will be formatted, tested and initialized before the system error configuration takes place. When the configuration is complete, a message is displayed that instructs the operator to *dismount* the floppy disk. Control will then be returned to the TOP Level Dispatch Menu.

SYSTEM ERROR PROCEDURE

When a system error occurs:

1. Press **Reset**. The status prompt will be displayed (**OK!**).
2. Insert a configured System Error floppy disk into the disk drive.
3. Press the letter "F."
4. Enter the date and time in response to the displayed questions.

A message prompt instructs the operator to

Press the Accept key to recover diagnostic information to this floppy.

When the system error procedure is complete, the user is instructed to *dismount* the floppy disk and to press the Accept key. Control will be returned to the TOP Level Dispatch Menu.

The System Error floppy disk must be forwarded (in a padded envelope) to the address below:

**Kurzweil Computer Products, Inc.
185 Albany Street
Cambridge, MA 02139
Attn: Customer Service Department / 4000**

Customers should include a description of exactly what actions were performed prior to the system error. Be as specific as possible in listing when the error occurred (in Scanning, in Communications, while Filing) and how it occurred (what series of keystrokes were entered immediately prior to the error). This information will assist the Kurzweil technicians greatly in their diagnosis of your system error. Additional problems or questions may be directed to the Kurzweil Customer Support Department at the following toll-free number:

(800) 343-0311.

3.8 DIAGNOSTICS

The Diagnostics option in the **Utilities Dispatch Menu** is supplied for Kurzweil Field Service Engineers only. Customers do not perform system diagnostics.

Chapter 4

FILING OPERATIONS

4.1 OVERVIEW

The Filing System is an organized structure that allows the operator to access many of the Kurzweil system's software options. To access the Filing System, select option 3 of the TOP Level Menu.

TOP LEVEL DISPATCH MENU

1	Scanning
2	Communications
3	Filing
4	Utilities
5	Help
6	Log Out

Enter Call-up number to perform function

The Filing Dispatch Menu will be displayed next. The operator has the option to copy a file, delete a file, type out a file or reedit a previously created file from the Winchester disk or from the floppy disk. *Reedit* cannot be used on a floppy disk file.

NOTES

Two document names are reserved by the system for record-keeping functions. **KDEMLOG** contains a list of various actions performed on the system. **KDEMLOG** must be deleted on a regular basis. It continually increases in size and ultimately will affect the amount of available storage area on the Winchester disk.

CNF provides a description (in code) of the system configuration, including all options that were purchased by the customer. **CNF** may not be deleted.

FILING DISPATCH MENU

1	Copy a File	Free Space = 4,422,656
2	Delete a File	
3	Type Out a File	
4	Reedit a File	
Enter Call-up number to perform function		

NOTE

"Free Space" indicates, in decimal, the number of vacant storage characters on the fixed disk.

The options in the Filing Dispatch Menu allow the operator to perform functions involving files on the fixed disk or the floppy disks. If a file on a floppy disk is to be manipulated, precede the file name with **FLPY**:

COPY A FILE

Copy a File allows the operator to duplicate any user file on the Kurzweil system. If the file is a document (text file), a portion of the document may be copied or the entire document may be appended to the end of another document. Selecting this option will display the **Copy a File Menu**, next. To copy a file from the floppy disk, be sure to precede the filename with **FLPY**:

DELETE A FILE

The *Delete a File* option permits the user to delete any file on the Winchester disk or the floppy disks. Remember to precede the floppy disk filename with **FLPY**: if a floppy disk file is to be deleted. This option presents the **Delete Files Menu** next.

TYPE OUT A DOCUMENT

Files may be displayed on the terminal screen for inspection by the operator. The text scrolls off the top of the screen, unless stopped by the user. While the text is scrolling, press any key to stop the display. Press any key to resume the scrolling action. **CANCEL** terminates the display at any time and returns control to the *Filing Dispatch Menu*.

After scrolling begins, press **SCROLL GOOD** to display text a screenful at a time (similar to turning the pages in a hardcopy version). **SCROLL UNLIMITED** will resume uninterrupted scrolling again. Files that reside on the floppy disk may also be typed out. Precede the filename with **FLPY**: if this function is desired.

REEDIT A DOCUMENT

Text may be reedited by copying a document file into the *unedited text buffer* from which the system editor retrieves text. Initially, the buffer must be empty (free of any text) and, because the buffer size is limited, larger documents will have to be converted into smaller segments. The Filing system will monitor the amount of copied text and will transmit the remainder of the file from the "break point."

4.2 COPYING FILES

The **Copy a File Menu** is used to duplicate files, convert a document to smaller segments, or append the contents of one document to another. Initially, the operator must select the *File Type* by pressing option 1, which will present the available options. Operators may "toggle" through the options by pressing 1 repeatedly.

Copy a File Menu

1	File Type	Document	(Training Set, Format Control File, Output Tailor, Character Translation Set)
2	From File Name	None	
3	To File Name	None	
4	Number of Pages to Skip	0	
5	Number of Pages to Copy	10000	

Enter Call-up number to perform function

FROM FILE NAME

The filename that is to be copied must be entered in option 2. The filename must exist already. As mentioned, if the file resides on floppy disk, precede the filename with **FLPY:**. Remember that the *List File* key will display the files that reside on the system. If a *File Type* has already been entered, then the *List File* key will display only the files of that type.

TO FILE NAME

The name of the file that is to be created must be entered in option 3. The filename that is entered cannot exist already, unless the file type is *Document*. In this case, the new file will be appended to the existing file. Use this option to copy files to a Library disk (see section 3.6 for a description of Library disks). Select option 3 and precede the filename with **FLPY:**. The file will be copied from the Winchester disk to the floppy disk and will assume the provided name.

NUMBER OF PAGES TO SKIP

This option may be changed only if the *File Type* selected is *Document*. The number of pages to be skipped (before any text is copied) can be listed here. If the entire document is to be copied, leave the setting at 0.

This option, in conjunction with option 5 (*Number of Pages to Copy*), allows a document to be converted to smaller sections. The operator must keep a record of which pages were skipped. Use the *Type Out a File* option in the *Filing Dispatch Menu* to establish which pages have been (or should be) copied.

NUMBER OF PAGES TO COPY

This option is available if the file type is *Document*. Select option 5 and enter the number of pages that are to be copied. If the entire document is to be copied, leave the default setting unchanged.

This option can be used in conjunction with option 4 (*Number of Pages to Skip*) to create small segments of a large document. Again, it is important to keep a record of the number of pages to be skipped. For example, to copy pages 5 to 7 of an existing document, skip four pages and copy three.

After setting the parameters for this menu, press ACCEPT. When the copy action is finished, the following message will be displayed:

Copy successfully completed.

Enter Cancel to go back, or enter any other key to continue.

Control will be returned to the *Copy a File Menu*.

4.3 DELETING FILES

The File Deletion Menu is used to remove files from the Kurzweil system that are no longer required. Files that may be used again in the future can be copied to a Library Floppy Disk and then deleted from the system.

1	File Type	Document	(Training Set, Format Control File, Output Tailor, Character Translation Set)
2	File Name	None	
Enter Call-up number to perform function			

FILE TYPE

This option is a toggled variable; users may step through the choices by pressing 1 repeatedly. Possible choices are described below.

- | | |
|-----------------------------|--|
| Documents | Documents consist of text that has been scanned by the Kurzweil 4000, copied from other documents or accepted from another device (e.g., RS-232 port). |
| Format Control Files | Format Control Files are created by using the Electronic Tablet (a Kurzweil option for scanning complex page formats). These files contain instructions to direct the scanner. |
| Training Sets | Training Sets are created during a scanning session and contain information learned by the Kurzweil 4000 about the characteristics of the material that was scanned. |

Output Tailors	Output Tailors are created through the <i>Output Tailor Alteration Menu</i> . Tailors contain instructions for the Output Processor that determine how files will be transmitted.
Character Translation Sets	Character Translation Sets are created from the Output Tailor Alteration Menu. Translation Sets are used for translating characters from one code set to another. Two code sets (EBCDIC and TTS) are provided with the system and cannot be deleted.

FILE NAME

File Name indicates the name of the file that is to be deleted from the Kurzweil 4000 system. Remember to indicate where the file resides. Preface the filename with **FLPY:** if the file is on a floppy disk.

As with any request for a filename, operators may press *List Files* to display a list of the files on the system. Operators may enter the associated prompt number from the left margin to indicate the desired filename.

4.4 TYPING OUT FILES

Any file may be displayed on the terminal screen. While the file is being displayed, the operator may press any key to halt the scrolling of text. To resume scrolling, press any key. The **Scroll Good** key will display text to the user a screenful at a time. **Scroll Unlim** will restore the continuous scrolling mode.

When option 3 is selected from the *Filing Dispatch Menu*, a message will be displayed that asks the operator to

Enter the name of the document to be typed out.

Again, a file on a floppy disk may be displayed by preceding the filename with **FLPY:**. After the text has been displayed, a final message informs the user that the

End of text

has been reached, and to

Enter Cancel to go back or any other key to continue.

4.5 REEDITING DOCUMENTS

Text may be reedited by copying a document file into the *unedited text buffer* from which the system editor retrieves text. Initially, the buffer must be empty (free of any text). Larger documents will have to be converted into smaller segments because the buffer is limited in size.

The Filing system will monitor the amount of copied text and can output the remainder of the file from the "break point." In a reedit operation, text is copied into the unedited text buffer and scrolled across the display screen for operator verification, then into the output buffer, where it can be renamed and saved as a document file.

To reedit files that have been previously scanned by the 4000, select the **Filing** option (3) from the TOP Level Dispatch Menu. The Filing Dispatch menu is presented next. Select option 4, **Reedit a File**.

FILING DISPATCH MENU

1	Copy a File	Free Space = 4,422,656
2	Delete a File	
3	Type Out a File	
4	Reedit a File	

Enter Call-up number to perform function

A prompt will instruct the user to

Enter the name of the document to be reedited.

NOTE

Press **List Files** to display the files that exist on the Winchester disk. From this list, an operator may select a file number from the left margin and press **ACCEPT**. The selected file will be copied to the unedited text buffer, automatically.

Press **ACCEPT**. Another question is presented to the operator

****Text will be copied to the KDEM unedited text file*

****Are you continuing with a previous reedit? (Y/N):*

Answer **No (N)** and press **ACCEPT**. A status line informs the operator about the number of pages that have been copied and also, when the operation is complete. If the file is too large for the unedited text buffer, the operation will have to be performed again, after editing. In this case the operator must answer **Yes (Y)** to the previous reedit question and the Kurzweil will automatically copy the remaining text from the "break point."

To reedit the text that has been copied to the unedited text buffer, **Cancel Filing** operations and select **Scanning** (option 1) from the TOP Level Dispatch Menu. The operator will be informed that

There is unedited scanned text in the KDEM input buffer.

Do you want to delete it? (Y/N):

Since text was just copied to the buffer for the purpose of editing it, answer **No (N)** to this question and press **ACCEPT**. The New Job Menu will be displayed next.

The Kurzweil 4000 is not an editing (or word processing) system; it is a sophisticated text processing system that interfaces to a variety of peripheral systems. As a result, the editing facility provided on the system is rather basic. Therefore, it is necessary to step through the initial scanning menus (*New Job Menu, Document Entry Menu and Text Ambiguity Menu*) to review the unedited but scanned text.

When the New Job Menu is displayed, change the Document Name and press ACCEPT. Press ACCEPT as both the Document Entry Menu and the Text Ambiguity Menu are displayed. A prompt instructs the user to

Place page on scanner, press SCAN PAGE and ACCEPT to start job.

The text that has been copied to the unedited text buffer has already been scanned. Therefore, the operator needs to press ACCEPT (only) to review (and reedit) text. Text can be displayed one line at a time by pressing ACCEPT, or text may be scrolled continuously by pressing *SCROLL GOOD* or *SCROLL UNLIM*. Press any key to stop scrolling and make editing changes.

When scrolling is completed, press the End Job key and select Save for Document Disposition. The reedited document will assume the name provided in the New Job Menu.

After pressing Accept, the New Job Menu will be presented. Operators may press *Cancel* to reach the TOP Level Dispatch Menu, from which all system functions are accessed.

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