Voice Solutions

Digital Dictation System
Technical Manual

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INTRODUCTION

It is recommended that you read this entire manual prior to engaging in any service activities (including system installation, upgrading system software, or installing additional voice boards).

Voice Solutions Digital Dictation System offers phone-in access from anywhere there is a touch-tone telephone.

In addition it can be accessed through input stations that have control buttons on the handset or microphone, and output stations that have headset and foot-pedal connections. These input and output stations can be connected directly to the system or via telephone lines.

Optionally it can be accessed through network connected pc recorders, portable recorders, and pc player software.

Every Voice Solutions system comes to you pre-tested with its software and voice cards preinstalled per your specifications. Upon its arrival plug the local stations and/or telephone wires into its voice cards, enroll its users, and it's ready for use! It's that simple.

This manual provides important information on the following topics:

• Installing the system.

• Configuring the system to meet your needs.

• Maintaining the system at peak performance.

• Upgrading the system software.

• Installing additional voice boards.

INSTALLATION CHECK LIST

To help insure a smooth and swift installation you should adhere to the following checklist:

Assign a System Administrator
The first step to preparing to install the system is to speak with the persons whom selected it and whom are familiar with where it is to be installed, who its users will be, and how the work will flow through it. Ask them to assign a person to be its System Administrator. The System Administrator is usually either the department manager or the lead transcriptionist. It is important that this person be selected as a first step because you will train this person to be locally responsible for the system. The System Administrator will be responsible for enrolling new users, fine tuning system configurations (such as record gains and playback volumes), monitoring the workflow, and engaging certain maintenance tasks.

Perform a Site Survey
The second step is to go to the site to meet the System Administrator and walk through the site. Assist the System Administrator in choosing the best location for the system and **prepare a written diagram of the system's location in relation to the placement of the local stations and that of the external telephone lines**.

The system should be placed in an air-conditioned area, preferably in a rack or on a table (where it is less likely to be bumped into and is away from the static of a rug and the dust of a floor). It is also preferable to locate the system in a secure room so that only the System Administrator or other authorized persons will have direct access to it.

Always connect the system to an uninterruptable power supply (UPS) to maintain its operation through power glitches, surges, brownouts and short term power loss.

With the assistance of the System Administrator **compile a list of the system's users, assign i.d. numbers to each, and decide upon a configuration to make the best use of the system's workflow capabilities.**

Prepare a Schedule
The third step is to prepare a schedule in conjunction with the System Administrator for the physical wiring tasks, the system installation and checkout, and the user training.

Allow slack in each step of the schedule to allow for some delays so as not to slip the user-training schedule.

Specify Telephone Line Requirements
Speak with the telephone company (or those in-house responsible for the telephone system) to make sure they understand the quantity, type, configuration, and location of the telephone lines you'll need.

The type of telephone lines required are Analog (not Digital) whether they be from extensions or direct central office lines, and most times you'll want them setup in a hunt group. In a hunt group a user will need to dial just one telephone number to reach the system, then the telephone system will automatically hunt (rollover) to the next extension or telephone number when one line is already in use. **Write down the main telephone number and also each separate telephone numbers or extension numbers.**

Most often the telephone company will supply the lines at a patch panel and you will have to supply the necessary cable to transition from the patch panel to the RJ connections on the voice boards.

Specify to the telephone company that each line, upon hang-up should return one of the following (in order of preference):

- CPC (calling party disconnect) signal. This is a line break for a few milliseconds upon the calling party hang-up.

- Dial Tone, or Busy Tone, or Trunk Busy Tone upon the calling party hang-up.

It's fine if they can supply both. In rare circumstances they can not supply either, in which case upon the calling party hang-up the line might simply go silent.

The voice board can be configured to sense the calling party hang-up by any of these means.

Power-up and Configure
When the system first arrives, prior to installation, you should quickly open its case and insure that all components, boards and cables are securely fastened. This is important because it is possible for some of these to be loosened during shipment.

You should then connect the system and power it up. Using the user data and workflow configuration you gathered during your site survey, pre-configure the System Manager with this information. Then record some dictations and check that the work is flowing to the transcriptionists in the desired manner.

Create customized laminated instruction sheets for the authors and transcriptionists to refer to.

Deliver, Connect, and Fine Tune
Now you are ready to deliver the system, connect its wiring, and test each telephone line.

Label all cables with source and destination and add this to your system diagram.

Using a cell phone (to simulate someone calling in from an outside line) call each individual telephone (or extension) number that you gathered earlier. On each line, log-in as an Author and make a short recording speaking the telephone (or extension) number into the recording. Now using a direct wired station log-in as a transcriptionist and listen to each recording, noting the relative loudness or weakness of each recording. For those that playback weaker than the others, compensate for those weaker telephone lines by raising the Record Gain of the Channel from which that recording was made.

Direct wired stations should have their Record Gain and Playback Volume settings for the Channel they are connected to set to 0 dB or perhaps –1 or –2 dB because there is generally no signal attenuation when stations are direct wired to the voice board.

Channels that are connected to telephone lines generally do experience some signal attenuation and so their Record Gain and Playback Volume may need to be set a few dB's positive to compensate for a weak telephone line. *If you notice a decrease in the response to touch-tone commands when recording, lower that Channel's and/or Author's Record Gain.*

The next step is to fine tune the record gain and playback volume in each user's profile to compensate for the differences in an individual user's hearing and voice characteristics. If they are soft or loud speakers you may want to compensate for this by raising or lowering the Record Gain in their individual user profile. If their hearing is weak you may want to compensate for this by raising the Playback Volume in their individual user profile.

If the telephone system is configured in a hunt group you should now test to insure all telephone lines are rolling over as desired.

System Administrator Training

Prior to training the system's users, you should train the System Administrator. Familiarize the System Administrator with how to shutdown the system and what the startup process looks like. Show the System Administrator how to enter the System Manager, how to enroll new users, describe those features which he or she will need to fine tune the system configuration on their own, how to use the Navigator's filter mechanism, and a description of the statistics window. And of course instruct the System Administrator in how the system interacts with the Authors and with the Transcriptionists through recording and transcribing a few samples.

The time invested in properly training the System Administrator is well worth it. A properly trained System Administrator will result in a much lower number of times you are consulted for fine tuning needs and recalled to the site to provide remedial user training.

Transcriptionist Training

Now you are ready, with the System Administrator's help to train the transcriptionists.

Author Training

And finally you are ready, with the System Administrator's help to train the authors.

User Training Follow-up

It is important to be available throughout the first training day and as necessary into the day after to monitor how well the authors and transcriptionists are adapting to their new system. You should also plan to give the System Administrator a follow-up call a week or so later to check how everyone is adjusting to the system.

SYSTEM STARTUP

Once the system has been fully configured, it will automatically start each time the computer is powered-on or re-booted.

The system startup sequence is as follows:

- Windows boots-up

- Startup Manager is started

- Maintenance tasks are engaged
  - License Validation
  - Database Maintenance
  - Document Maintenance
  - Statistic Tabulation

- Module Initialization
  - File Manager is started
  - Channels are started
  - Navigator is started

- Startup Manager runs the System Sentinel or exits
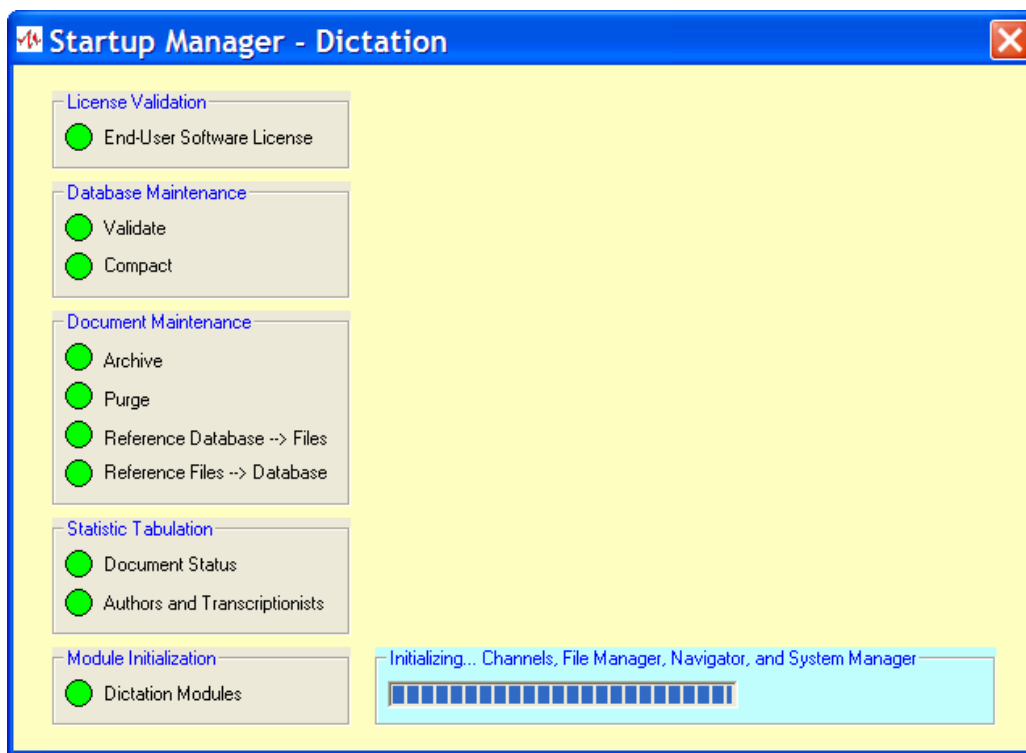
SYSTEM CONFIGURATION

The following information highlights the minimum parameters you'll need to configure before you commence system operations. *Please refer to the Dictation System User Manual for complete details on all System Manager settings.*

System Manager Log-in:
At the Log-In prompt, click on Log-In without entering a Password as the Administrator's password is initially turned off.
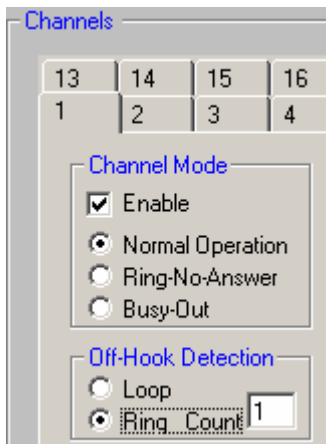
Set System Parameters:
Enable Startup Manager, File Manager and the Navigator.
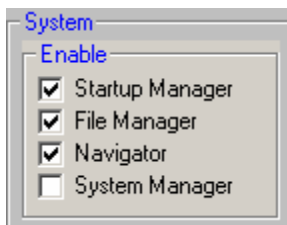
Set Channel Parameters:
Enable each physical channel, set each to Normal Operation, and then set each to Loop or Ring mode as appropriate.
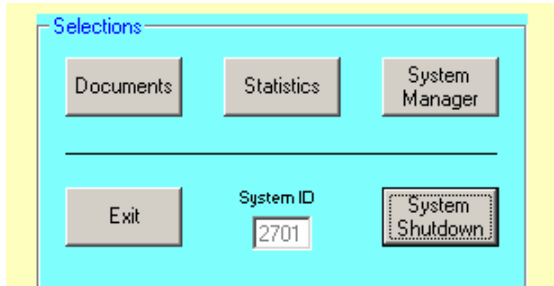
Exit:
Exit the System Manager. Upon the next re-boot the system will be ready for use.

SYSTEM SHUTDOWN

Use the Navigator's "**System Shutdown**" command key to shutdown the system automatically.

Please check that all Channels are Idle before you continue with the system shutdown. *If you shutdown the system while a Channel is not Idle that user will be hung-up on without warning. Those documents that are In-Dictation or In-Transcription during shutdown will become In-Queue at system startup.*
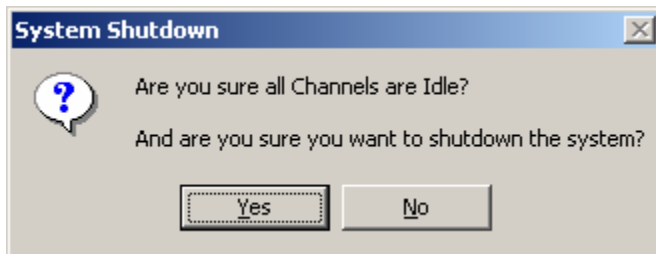
To manually shutdown the system follow this sequence to properly shutdown the system:

a)   Exit the System Manager (if it is open).

b)   Exit the Navigator.

c)   Click on each ⋀⋎ icon on the task bar (at the bottom of the screen) to maximize the File Manager and each Channel.

d)   Wait until a Channel state shows "Idle" (this tells you that no one is using that channel), then exit that Channel.

e)   Once all Channels have been exited, exit the File Manager.

f)   Shutdown Windows ("Start, Shutdown, OK").

g)   After Windows presents the message "It is now safe to turn off your computer", you may power the computer off.
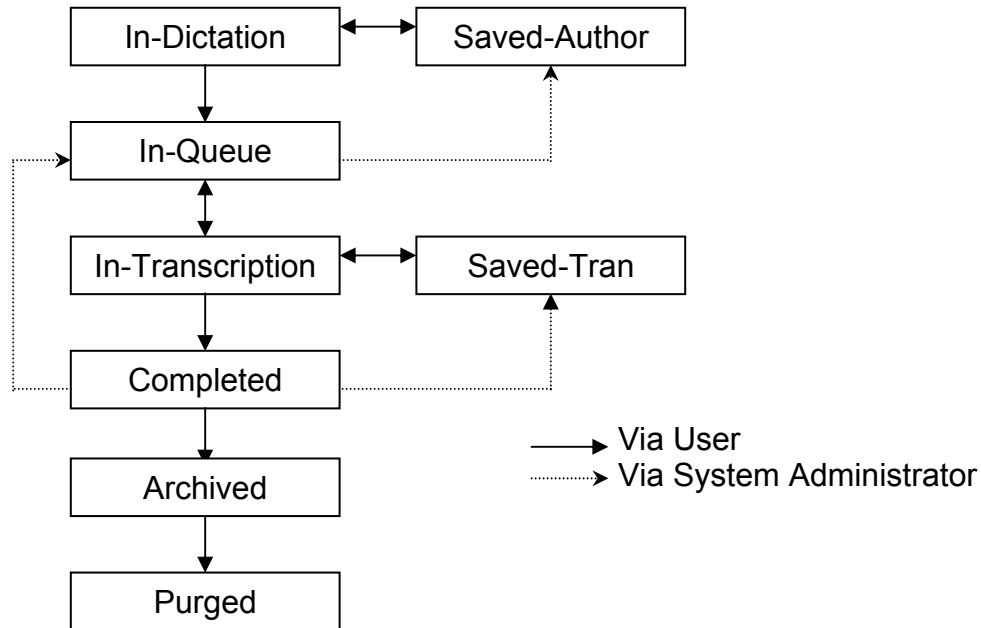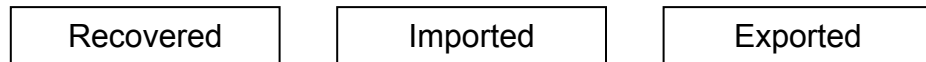
SYSTEM MAINTENANCE

The system is designed to be virtually self-maintaining. Voice files traverse through various states during their life cycle. They are created by an author, completed by a transcriptionist, and then archived and purged by the system. Voice files can be temporarily suspended from this cycle when they are saved.

Life Cycle of a Voice File:
The primary states are:

```
 ┌──────────────┐         ┌──────────────┐
 │ In-Dictation │◄───────►│ Saved-Author │
 └──────────────┘         └──────────────┘
        │                         ▲
        ▼                         ┊
 ┌──────────────┐                 ┊
 │   In-Queue   │                 ┊
 └──────────────┘                 ┊
        │                         ┊
        ▼                         ┊
 ┌─────────────────┐      ┌──────────────┐
 │ In-Transcription│◄────►│  Saved-Tran  │
 └─────────────────┘      └──────────────┘
        │                         ▲
        ▼                         ┊
 ┌──────────────┐                 ┊
 │  Completed   │                 ┊
 └──────────────┘                 ┊
        │
        ▼                    ────────►  Via User
 ┌──────────────┐            ┄┄┄┄┄┄┄►  Via System Administrator
 │   Archived   │
 └──────────────┘
        │
        ▼
 ┌──────────────┐
 │    Purged    │
 └──────────────┘
```

The secondary states are:

Recovered	Imported	Exported

Automatic Archive and Purge:
It is recommended to enable the Archive and Purge features. Enabling these features allows the system to retain completed voice files and their database entries only as long as desired. After which the system will delete the completed voice files (archive) to free-up hard drive space, and later on delete their database entries (purge) to maintain the efficiency of the database.

Scheduled Warm-boot:
It is recommended to enable the Scheduled Warm-boot feature. *Enabling this feature provides a daily or weekly opportunity for Windows and the Voice Solutions Startup Manager to perform certain automatic maintenance tasks that only take place during system startup.*

These startup maintenance tasks include:

a)   Windows initialization.
b)   Archive and purge (if they are enabled).
c)   Compaction of the voice file & system management databases.
d)   Verification and update of the content of the voice file database. *A voice file entry that is in an "In-Dictation" or "In-Transcription" state will be returned to an "In-Queue" state. A voice file entry which does not have a corresponding voice file will be transferred to an "Auxiliary" state.*
e)   Verification of the completeness of the records in the voice file database. *A voice file that does not have a corresponding entry in the voice file database (such as one that was transferred to an "Auxiliary" state) will have a new entry created, thus restoring it into the database.*
f)   Verification and update of the system's statistics.

System Sentinel:
It is recommended to enable the System Sentinel feature. *Enabling this feature (by enabling Automatic Module Re-initialization) enables the Startup Manager to monitor and secure the operational status of the File Manager, the Channels, and the Navigator.*

Four times per minute the Sentinel monitors the operational state of the File Manager, each Channel, and the Navigator. If after 1 minute the File Manager, or a Channel or the Navigator has not confirmed its operational state the Sentinel will automatically reinitialize it.

Windows Maintenance Tasks:
To maintain the system at peak performance Windows maintenance tasks should be performed at routine intervals. The required interval depends on how active the system is.

The Windows maintenance tasks consist of running Windows Disk Cleanup and Disk Defragmenter utilities. It also consists of regularly running a Virus Scan when the system is connected to a network.

To run these tasks manually, shutdown the system. Then reboot the computer and Cancel the startup of the Startup Manager. Then you can exercise the following two Windows system tools to remove temporary files and defragment the hard drive:

- Disk Cleanup
- Disk Defragmenter
- Virus Scan

If you use Windows Task Scheduler to perform these tasks automatically, ensure they are run when the system is expected to be least busy and at a time that will not overlap with the system's archiving, purging, or warm-boot schedule.

SYSTEM SOFTWARE UPGRADE

Software upgrade files (prepackaged in an "Upgrade" folder) and the latest documentation are available on-line.

Copy the entire Upgrade folder onto a memory card so that it may be transferred in its entirety to the system to be upgraded.

Software Upgrade Sequence:
1. Backup the old C:\Mercury\Upgrade folder.
2. Copy the new Upgrade folder to C:\Mercury.
3. Shutdown the system and cold-boot it (power it off, wait a few seconds and then power it on).
4. The Startup Manager will automatically open Support Manager's Software Upgrade menu.

5. Click on "**Initiate Upgrade**" and follow the instructions it presents.

6. The upgrade process is automated. When it displays the "…completed successfully" message click OK. The system will then reboot and restart the system.

7. After the system starts up confirm that it is fully operational and verify that the documents and system configuration were accepted.

8. Then shutdown the system, cold-boot it, "Cancel Startup", run Windows maintenance tasks (Disk Cleanup, Disk Defragmenter, and Virus Scan) as described on the preceding page, and then cold-boot the system again. The system is now ready for operation.
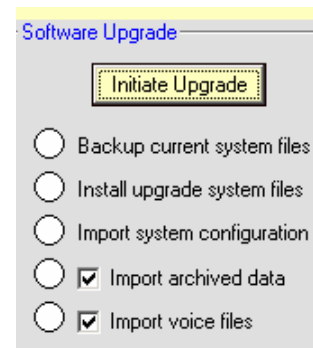
PERSONAL NAVIGATOR UPGRADE

Windows 2000

1. Copy the current Personal Navigator database into the Personal Navigator's /PlaceOldDatabaseHere directory.
The database is: Mercury_PersonalNav.mdb file.

2. Copy the Personal Navigator's executable and database files from the Upgrade folder's \2000PersonalNavigator folder into the Personal Navigator directory. The database and executable files are:
Mercury_PersonalNav.mdb and Mercury_Personal_Navigator_Project.exe.

3. Run the Personal Navigator. It will automatically upgrade. When the process is complete, re-run the Personal Navigator and check that its configuration is as desired.

Windows 98/Me/Nt/Xp
Windows 2000

1. Copy the current Personal Navigator database into the Personal Navigator's /PlaceOldDatabaseHere directory.
The database is: Mercury_PersonalNav.mdb file.

2. Copy the Personal Navigator's executable and database files from the Upgrade folder's \98MeNtXpPersonalNavigator folder into the Personal Navigator directory. The database and executable files are:
Mercury_PersonalNav.mdb and Mercury_Personal_Navigator_Project.exe.

3. Run the Personal Navigator. It will automatically upgrade. When the process is complete, re-run the Personal Navigator and check that its configuration is as desired.

ADDING VOICE BOARDS

Voice Board Installation:
Voice boards are packaged in anti-static or static shielded bags to protect them from the damage of ESD (Electro Static Discharge). You can recognize these bags by their distinctive shinny look and silver-gray color.

Prior to installing or removing a voice board from the computer connect a grounding wrist strap from the computer chassis to your wrist. The power cord should be plugged in (so the computer is grounded) with the power switch in the **OFF** position. Connect the grounding strap to a non-painted part of the computer chassis. **Handle the board by its nonconductive edges and do not touch the board's connectors.**

If a grounding strap is not available, touch both of your hands to a non-painted surface of the computer to discharge any static electricity. Then carefully handle the board only by its nonconductive edge. Do not move your feet or walk while handling the board until it is installed in the computer or until it is placed into an anti-static or static shielded bag or a double layer of aluminum foil.

License Key Installation:
Replace the existing license key with the new license key to enable the larger quantity of ports.