



IBM PC Voice Communications Operating Subsystem

IBM PC Voice Communications Operating Subsystem (6280708)

The IBM PC Voice Communications Operating Subsystem provides and controls the functions of the IBM PC Voice Communications Adapter. It regulates basic hardware operations and also supports compatible voice and telecommunications applications.

The Operating Subsystem is included in the IBM PC Voice Communications Option offering. It is also available separately.

With this program, the IBM PC Voice Communications Adapter, and appropriate applications, a personal computer from IBM can emulate modems, synthesize speech, respond to voice commands, record and play back voices, transmit data, monitor telephone lines, and support telephone management functions.

To help software developers take advantage of these capabilities, the IBM PC Voice Communications Operating Subsystem contains a standard set of programming commands defined as the Application Program Interface (API). With the API, programmers can write IBM PC Voice Communications applications without having to use machine language.

Also helpful to end-users, this API simplifies the use of voice communications programs. It automatically translates users' application commands into the adapter's machine language, then controls the execution of those commands. Both processes—and the Operating Subsystem itself—are transparent to PC users.

Other IBM PC Voice Communications Software

Program	Announcement Number
IBM Voice/Phone Assistant—to use a personal computer as a sophisticated answering service	SA-112
IBM Voice-Activated Keyboard Utility—to enable software developers to create voice-command programs	SA-113
IBM PC Voice Communications Application Program Interface (API) Reference—to help programmers write applications that use modem emulation, recognize voice, synthesize speech and perform other advanced functions	SA-114
IBM Augmented Phone Services—to provide special telephone services for the hearing or speech impaired	SA-115
IBM Personal Telephone Manager Program or IBM Personal Telephone Manager Program / Voice Communications Option—to link your telephone to an IBM Personal Computer	SA/HA-116

Highlights

With the IBM PC Voice Communications Adapter and appropriate applications software, the IBM PC Voice Communications Operating Subsystem can perform the following functions:

- Text-to-Speech—converts serial ASCII data streams into synthetic speech heard through a speaker or over the phone. Distinguishes abbreviations, acronyms and other unique forms of usage.
- Voice Command Recognition—allows speakers to train one or more command vocabularies (one for each speech-based application). Accepts and groups command vocabularies into subvocabularies to activate applications.
- Voice Record/Playback—digitizes and mathematically compresses audio signals. Provides three compression modes to meet differing voice quality and storage requirements.¹

- Asynchronous Modem Emulation—supports full-duplex Bell 103A/212A modem-compatible capabilities at speeds of 110, 300 or 1200 bits per second
- Telephone Line Monitoring—recognizes touch-tone signals and responds as if the signals were keyboard commands or data
- Telephone Management—supports automatic dialing and some PBX/CBX functions and receives telephone calls

System Requirements

- One of the following IBM Personal Computers:
 - IBM Personal Computer
 - IBM Personal Computer XT™ system
 - IBM Personal Computer AT® system
- One double-sided diskette drive
- Memory requirements are determined by DOS level, application requirements and functions in use serially or concurrently. Functions can be memory resident for performance reasons or can be loaded as required. IBM PC Voice Communications Operating Subsystem memory needs vary from 22KB to 256KB. Each application indicates its own memory requirements. The "Exploring Voice Communications" demonstration program runs on an IBM PC with 320KB.

¹Recording rates and minutes per megabyte of storage are:

Bytes per second	Minutes per megabyte
3.6K	4.5
2.4K	6.8
1.8K	9.2

- IBM PC Voice Communications Adapter, which is also part of the IBM PC Voice Communications Option and is approved by the FCC for attachment to telephone systems when used with this program
- IBM Disk Operating System (DOS) 2.10 or higher
- Applications must be written to the IBM Voice Communications Application Program Interface or used with the IBM Voice-Activated Keyboard Utility program

Compatibility

The IBM PC Voice Communications Operating Subsystem is compatible with and requires the IBM Personal Computer Disk Operating System Version 2.10 or higher.

Installation and Operation

Using the instructions in the Installation and Setup Guide, the customer installs the IBM PC Voice Communications Adapter in an available I/O expansion slot and loads the Operating Subsystem Program.

Security, Auditability and Control

User management is responsible for evaluation, selection and implementation of security features, for administrative procedures, and for appropriate controls in application systems. User management may wish to pursue the application of cryptography if sensitive data is sent over external communication facilities.

Customer Responsibilities

The customer is responsible for program setup and operation and for implementation of backup procedures, applicable problem determination procedures, and appropriate security measures to limit the risk of unintended modification, destruction or disclosure of sensitive data.

Packaging

The IBM PC Voice Communications Operating Subsystem is distributed with the following:

- Two diskettes containing the Operating Subsystem Program and an "Exploring Voice Communications" demonstration

Warranty—U.S.

The IBM Program License Agreement with standard Limited Warranty provisions applies to this software product (standard 90-day, media-only Licensed Program provisions).

IBM Program License Agreement

A copy of the Agreement is packaged and shipped with each program and is visible to the customer before opening the package. The customer is advised that opening the package indicates acceptance of these terms and conditions. No signature is required.

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