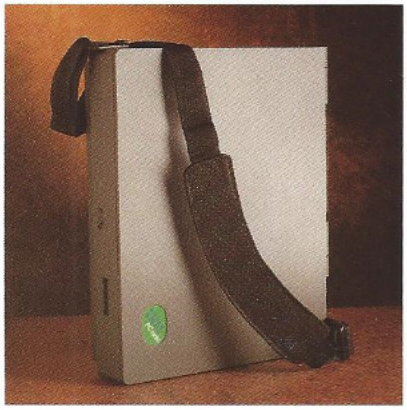
IBM

9075 PCradio

A rugged, hand-held system for wireless communications and control



Communications and control for the mobile field force

The IBM 9075 *PCradio*™ is a hand-held communications system that enables wireless voice, data and FAX communications, as well as local processing, in rugged environments. Using the 9075, mobile workers can exchange near-realtime information with managerial, technical and support personnel via land-line, cellular and radio communications networks. The 9075 also allows them to harness the power of central business systems through direct links to enterprise networks.

The IBM 9075 *PCradio* can be tailored to support the unique requirements of all mobile field workers. It provides:

Survivability: The 9075 is designed and constructed to withstand the shock, rain and temperature variations encountered by field and transport personnel. The system uses integrated circuit (IC) memory cards as removable SRAM and flash storage devices. These shock-and spill-resistant memory cards employ no movable parts – thus maximizing system reliability – and store up to 64MB of data. Thermoplastic resin packaging, shock-mounted display, positive latching internal connectors and water-resistant keyboard, doors and seals further enhance system durability.

Mobility: Compact and lightweight, the 9075 can be cradled in one arm for use in constricted environments and may be easily mounted and removed from vehicles. Advanced storage technology enables the unit's rechargeable battery to work a full shift. The power management system extends battery life by invoking "doze," "sleep," and "suspend" modes to power down non-active devices. Transmission modes for cellular and radio communications have also been selected to maximize battery life.

Wireless universality: The IBM 9075 supports industry-standard communications protocols for land-line, cellular and radio-packet networks. Both cellular and radio-packet modems are frequency-agile for operation on a nationwide basis. The 9075 also supports leading protocols for cellular data and FAX transmission.

Integrated communications: This single, compact unit offers capabilities for both out-of-doors and in-building voice, data and FAX communications. For radio-packet communications, reception is optimized by a built-in polarization diversity antenna system. An internal, electronically tuned antenna enhances signal strength during cellular communications.

Versatility: An optional handset and integrated printer are available. Furthermore, using the optional breakout box, you can add specialized capabilities – a bar code reader or scanner, for example – while minimizing I/O peripherals.

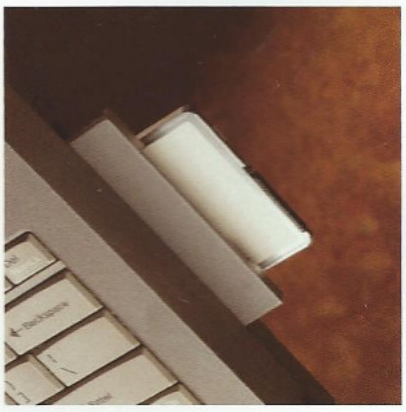
Application portability: The IBM 9075 uses the DOS (4.01) industry-standard operating system; existing DOS applications can be transferred to the 9075's industry-standard IC memory cards. The 9075's operating system also supports standard terminal emulation applications.

Seamless growth: With the 9075, you can upgrade your communications capabilities as your application requirements change. Cellular and radio-packet modems can be upgraded and enhanced by downloading software.

Bottom-line benefits

The benefits your organization can derive from mobile communications and control solutions are many and significant. They include:

Reduced operating costs. Mobile field workers can access information without mediation. They can also enter information once and distribute it to the functions that need it. This information can then be processed automatically, reducing errors and increasing the return on investment in automated systems.



Streamlined practices. Mobile workers can prepare on-site estimates and schedules, print work summaries, and create accurate billing or lading forms. Payments are collected faster and financial float is reduced.

Better customer service. As mobile workers receive complete information in-vehicle, they can respond faster to customer problems. At the work site, mobile field personnel can get the detailed information they need to complete jobs. They can also access host computing resources for processing, analysis and testing.

Improved public relations. As mobile personnel report on their activities on an end-of-task basis, service representatives can respond to customer calls with complete and up-to-date information.

Dynamic routing. Mobile workers can download detailed daily schedules. They can then be directed along the most efficient routes. The result: More service calls and deliveries are completed; fewer "deadhead" miles are logged.

Just-in-time coordination. Distribution and sales staff, technicians with complementary skills, construction foremen and engineers, transport and warehouse personnel... all can effectively coordinate their activities and increase productivity by rapidly exchanging data.

More proactive decisions. As managers receive better information faster, they can target developing trends and act proactively.

Realtime planning. All your planning functions – forecasting, scheduling, inventory management – can be more effective when you use today's data.

Select from three 9075 models

Model 1, which can be upgraded to Models 2 and 3, provides:

- 5 or 10 MHZ 80C186 processor with power management system
- 640KB memory
- Integrated circuit (IC) memory card slot (drives A and B)
- 124KB SRAM (drive C)
- ROM DOS 4.01 (drive D)
- 640 x 200 CGA backlit LCD
- Internal modem (2,400 bps and send FAX)
- 79-key QWERTY keyboard with embedded numeric keypad
- Ports: RJ11, charge, I/O connector.

Model 2 contains Model 1 features, plus:

- An integrated radio-packet modem for data communications via ARDIS℠-based networks
- An internal polarization diversity antenna.

Model 3 contains Model 1 features plus:

- An integrated cellular radio modem for data, voice and FAX communications
- An integrated electronically tuned antenna
- Group III FAX send/receive capability
- Voice communications port (handset optional).

A breakout box is available for standard interface to serial and parallel ports for all three 9075 models.

In addition, an optional integrated thermal printer (with an automatic paper roll feeder) is available.

The IBM publication, "A Guide to Operations," is also furnished.

Software

In addition to running off-the-shelf DOS applications, the IBM 9075 is supported by several software packages, customized to enable powerful end-to-end solutions that ensure optimum performance from the PCradio.

For cellular networks using the Model 3, software is available for links to major electronic mail systems and to host systems via batch or interactive 3270 terminal emulation. IBM's High Performance Option (HPO) software provides the Model 3 with high-speed access to the IBM Information Network. Cellular phone and FAX applications allow the Model 3 to manage voice and FAX functions in background mode. An application program interface (API) and network initialization software are also available.

IBM 9075

Physical	
Size:	W267.3 mm x H64.7 mm x D212.8 mm (10.5 x 2.6 x 8.4 inches)
Weight:	5.25 to 6.4 lbs.
Display type:	Liquid crystal – black on white
Backlight:	Cold cathode fluorescent
Format:	25 lines x 80 characters per line
Character set:	Upper- and lower-case alphanumeric keys, 11 punctuation keys; IBM graphics printer character set
Keyboard:	79 keys, 36 alphanumeric, imbedded numeric keypad, special function keys.
Environmental	
Power:	7.2-volt battery at 1.7 AH nominal, rechargeable nickel-cadmium
Operating temperature:	0 to 50 degrees C. (32.0 to 122 degrees F.) at 5 to 95 percent RH
Storage temperature:	–20 to +60 degrees C. (–04 to 140 degrees F.) at 5 to 98 percent RH
Altitude:	0 to 10,000 feet
Rain:	Water-resistant to MIL STD 810E, Method 506.2, Procedure 2
Vibration:	IBM Standard CS-9711-002
Communications	
Telephone line:	2,400 bps, send facsimile, external RJ11, FCC Part 68
Packet radio modem:	3 Watts; 4,800 bps; CFR Title 47 Part 90 and Part 15 Hayes® AT command set
Cellular modem:	Selectable 0.6 and 1.2 Watts; EIA/IS-19-5 spurious emissions; CFR Title 47, part 22/15 Hayes AT and extended cellular AT command set; (send/receive facsimile at 9,600 bps) MNP5 and V.42 bis. protocols supported
Parallel interface:	Bi-directional; implements the IBM-compatible parallel port interface
Serial interface:	RS232-C; up to 19,200 bps
Connector:	104-pin; standard parallel and serial devices require breakout box.
Internal Memory	
Random access memory:	640KB system RAM, 124 kilobytes (KB) as drive C; battery backup with one-year battery life
Read-only memory:	512KB accessed as drive D; primary IPL device; contains operating system and internal diagnostic program
Memory backup:	Internal lithium battery provides one year of backup support under normal use
IC memory card slot:	JEIDA/PCMCIA; architecture addresses up to 64MB.
Accessories	
	One 115 volt ac stationary system unit charger is included with all three models. Additional ac system unit chargers may be purchased separately. 12-volt dc mobile charger for system unit. Battery packs; carrying cases; cellular handset; modem cable; IC memory cards; breakout box.

For radio frequency networks using the Model 2, the Radio Frequency (RF) Communications Manager supports communications using the Motorola® MDC-4800 protocol, which includes the ARDIS network.

The RF Communications Manager provides an easy-to-use application program interface. As a result, applications can be developed with little or no knowledge of RF network infrastructures.

Customized industry solutions that take advantage of specific network and end-user applications are also in place. For more information on these and other software solutions, see your IBM Business Partner or local IBM representative.

Warranty and service

The IBM 9075 comes with a one-year customer carry-in repair warranty. An IBM maintenance service contract is also available.

For additional information, contact the IBM Mobile Field Force Assistance Center at 1-800-426-9950, or send a FAX to 612-339-5965.

IBM United States
Department ZVO
1133 Westchester Avenue
White Plains, NY 10604

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