

These "Inside" Telephone Systems

CREATE **NEW OPERATING EFFICIENCY** IN BUILDINGS OF EVERY TYPE!

Architects and engineers can do much to insure *efficient use* of any well-planned business building, by including a P-A-X Business Telephone System in their plans and specifications.

Thousands of business executives now depend on P-A-X Systems to provide "inside" communication throughout their organizations—and not only "business" organizations—for P-A-X Systems also bring added efficiency to hospitals, stores, hotels; schools, churches, public buildings—virtually anywhere that people work!

To meet the communication requirements of all types *and all sizes* of organizations—Automatic Electric has developed a complete range of modern P-A-X Systems, all highly flexible in their application.

THERE IS NOW A P-A-X BUSINESS TELEPHONE SYSTEM EXPRESSLY SUITABLE FOR ANY BUILDING

A P-A-X Business Telephone System is composed of equipment identical to that supplied by Automatic Electric to the hundreds of public telephone companies. It operates dependably and continuously 24 hours a day.

It works exactly like the regular public telephone service, but offers three unique advantages:

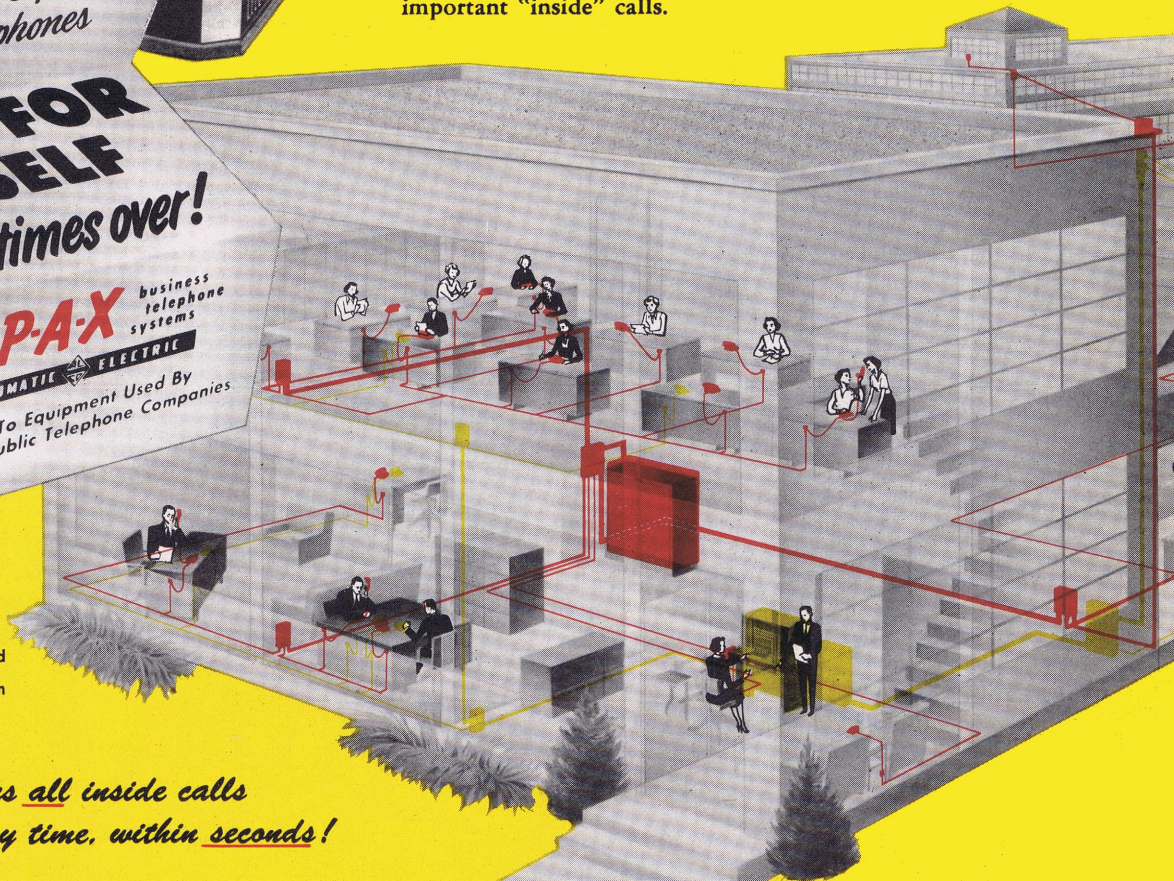
- 1—A P-A-X Business Telephone System is completely automatic, never requiring any switchboard operator.
- 2—It is privately-owned, not rented! — bringing the same economy and convenience that result from owning rather than renting desks, typewriters, files, or any other standard office equipment.
- 3—P-A-X "inside" telephones are separate from and wholly independent of the "outside" telephone service—reducing the amount of rented equipment required, and eliminating delays that otherwise occur when heavy "outside" telephone traffic conflicts with important "inside" calls.

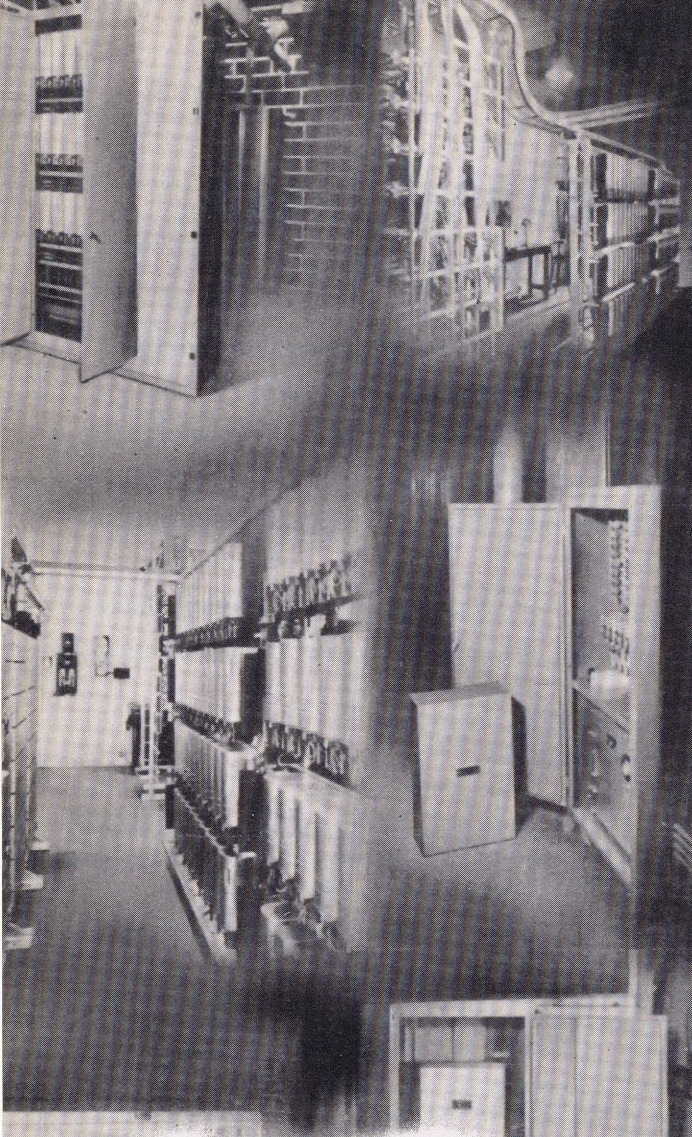


Equipment in yellow is rented city telephone equipment necessary in any organization for outside service.

EQUIPMENT IN RED IS THE
PAX Business Telephone System

A PAX establishes all inside calls
at any time, within seconds!





P-A-X business telephone systems
ADAPTABLE TO ANY COMMUNICATIONS PLAN

There are *P-A-X Business Telephone Systems* of all sizes, and a wide variety of *P-A-X Special Services* which between them furnish virtually any practical type of "inside" communication service desired.

A single *P-A-X System* is simply: 1—The required number of *telephones*; 2—The *wiring* that connects them to an automatic switching unit (the *switchboard*); 3—The *switchboard* itself (with associated power-supply unit).

The telephones are *P-A-X Monophones* of striking modern design, identical with the telephones used in hundreds of public telephone exchanges. (The complete assortment of *P-A-X Monophones* available is illustrated below.) All wiring is simple and conventional. The *P-A-X switchboards* (to be located anywhere convenient) are illustrated and described in the chart at right.

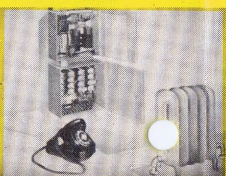
To choose the *correct P-A-X System* for any installation, it is necessary only to consider: 1—How many telephones are needed? 2—Will these requirements increase later (anticipating future expansion)? 3—What *Special Services* are desirable, now or later?

All *Special Services* are indexed in the chart as they may be supplied by various *switchboards*, and are described in detail in the column at extreme right.

The simple planning for *P-A-X installations*, and Automatic Electric's extensive engineering service (at no cost and without obligation) are described on back page.

SWITCHBOARD	TYPE	SERVICE	EXPANSON	SIZE & POWER	SPECIAL SERVICES
	32A1	10 TELEPHONES 2 CONVERSATIONS AT ONCE	NOT EXPANSIBLE	4'3" x 2'1" x 1'2" deep Power: 24 V—D.C. APPROX. WEIGHT INSTALLED 220 lbs.	Executive Direct Line Key Calling Paging Telephone (Area Communication) and Public Address Cut-In
	47A	20 TELEPHONES 4 CONVERSATIONS AT ONCE	NOT EXPANSIBLE *	4'5 1/4" x 2'3" x 1'4" deep Power: 24 V—D.C. APPROX. WEIGHT INSTALLED 300 lbs.	Executive Direct Line Executive Cut-In Key Calling Code Calling (36 codes) Paging Telephone (Area Communication) and Public Address Cut-In * Two telephones per line, with individual ringing, if required.
	32A21	22 TELEPHONES 3 CONVERSATIONS AT ONCE	NOT EXPANSIBLE	4'3" x 2'1" x 1'2" deep Power: 24 V—D.C. APPROX. WEIGHT INSTALLED 265 lbs.	Executive Direct Line Key Calling Paging Telephone (Area Communication) and Public Address Cut-In
	47B	40 TELEPHONES 6 CONVERSATIONS AT ONCE	NOT EXPANSIBLE *	5'8 1/2" x 3'3 3/4" x 1'4" deep Power: 24 V—D.C. APPROX. WEIGHT INSTALLED 500 lbs.	Executive Direct Line Executive Cut-In Key Calling Code Calling (36 codes) Paging Telephone (Area Communication) and Public Address Cut-In * Two telephones per line, with individual ringing, if required
	32A31	50 TELEPHONES 5 CONVERSATIONS AT ONCE	EXPANSIBLE TO 7 CONVERSATIONS	4'9 1/4" x 4'1/2" x 2' deep Power: 24V—D.C. APPROX. WEIGHT INSTALLED 520 lbs.	Executive Direct Line Executive Right of Way Telephone Conference Key Calling Code Calling (10 or 125 codes) Paging Telephone (Area Communication) Public Address Cut-In and Automatic Information Announcer (Message Repeating)
	25	50 TELEPHONES 7 CONVERSATIONS AT ONCE	EXPANSIBLE TO 100 TELEPHONES AND 14 CONVERSATIONS	4'9 1/8" x 4'6 1/2" x 2' deep Power: 48 V—D.C. APPROX. WEIGHT INSTALLED Depends on No. of lines; (minimum— 1600 lbs.)	Executive Direct Line Executive Right of Way Telephone Conference Key Calling Code Calling (10 or 125 codes) Paging Telephone (Area Communication) Emergency Alarm Watchman's Services Public Address Cut-In and Automatic Information Announcer (Message Repeating)
	50	75 TELEPHONES 10 CONVERSATIONS AT ONCE	EXPANSIBLE TO 200 TELEPHONES AND ANY NUMBER OF CONVERSATIONS	4'11" x 6'3 1/2" x 2' deep APPROX. WEIGHT INSTALLED Depends on No. of lines; (minimum— 2500 lbs.)	Executive Direct Line Executive Right of Way Telephone Conference Key Calling Code Calling (10 or 125 codes) Paging Telephone (Area Communication) Emergency Alarm Watchman's Services Public Address Cut-In and Automatic Information Announcer (Message Repeating)
	75	200 TELEPHONES ANY NUMBER OF CONVERSATIONS SIMULTANEOUSLY	EXPANSIBLE TO ANY NUMBER OF TELEPHONES, ANY NUMBER OF CONVERSATIONS	SPECIALLY ENGINEERED AND CUSTOM DESIGNED	Executive Direct Line Executive Right of Way Telephone Conference Key Calling Code Calling (10 or 125 codes) Paging Telephone (Area Communication) Emergency Alarm Watchman's Services Public Address Cut-In and Automatic Information Announce (Message Repeating)

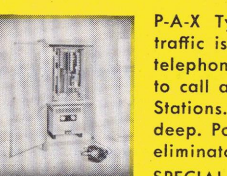
FOR SMALLER



ORGANIZATIONS; HOMES

P-A-X Type 34A16: Provides 10 telephones. Conversation is private. Pair of Cabinets: 1'11 1/2" x 10 1/4" wide x 9" deep. Power: 12-volt D.C., by battery eliminator (or dry cells). 60 lbs., installed. **SPECIAL SERVICES:** Supervisory Right-of-Way, Paging Telephone (Area Communication), Public Address Cut-In, Emergency Alarm and a dial controlled Code Call Service.

FOR SCHOOLS OR INSTITUTIONS



P-A-X Type 32A38: Excellent where traffic is light but needs require 100 telephones—of dial type, or arranged to call and be called only by Master Stations. Cabinet: 4'3" x 2'1" x 1'2" deep. Power: 24-volt D.C., by battery eliminator. 255 lbs., installed. **SPECIAL SERVICES:** Same as 34A16 (as shown at left) plus Automatic Code Call and Executive Direct Line.

P-A-X SPECIAL SERVICES

P-A-X CODE CALL — Whenever a *P-A-X* call is not answered, because the individual called is away from his desk, the calling party simply dials the individual's code-call number. Carefully chosen light signals or sound signals summon the individual, wherever he may be. He steps to any *P-A-X* telephone, dials his "answering" number, and is automatically connected to the calling party. ("Division coding" also available—permits sounding of code signals in separate, specific departments.)

P-A-X PAGING TELEPHONE ("AREA COMMUNICATION") — This service permits complete two-way conversations between one person, on a *P-A-X* telephone, and any number of others within an entire area. They hear themselves addressed over loud-speakers, and are able to reply, in a normal speaking voice, merely by facing toward one of the microphone-loudspeaker units. Called parties simply look up—listen—reply!

PUBLIC ADDRESS CUT-IN — This service extends conveniences of an existing public-address system, permitting executives to "broadcast" public address announcements from any *P-A-X* telephone; often used to page employees, visitors; instead of a separate code call system.

TELEPHONE CONFERENCE — With this service, any number of selected individuals may dial, on their own *P-A-X* telephones, a confidential number which enables them to enter into a private telephone conference, without leaving their desks! The resulting immediate group decisions enable many companies to speed their entire management operation!

EXECUTIVE RIGHT-OF-WAY — This service provides a separate, private conversation channel, reserved exclusively for executives, which enables them to join any existing conversation, to talk immediately with either party.

EXECUTIVE CUT-IN — Enables an executive to join an existing conversation, after he has received a busy signal; it does not, however, provide a separate, private conversation channel.

KEY-CALLING — Stations called most frequently from any one station can be called without dialing—simply by depressing a key in a small cabinet located near the calling telephone. A key rings the called telephone, and sounds a buzzer inside the cabinet, which stops when the called party answers. If the called party's telephone is busy, a tone indicates he is wanted by a "key-call" station. When he "hangs up", his telephone is immediately signaled, and connected to the key-calling line.

EXECUTIVE DIRECT LINE — Executives have a direct immediate priority-line connection with any member of their staff, at the flick of a key located in a special, desk-side cabinet. If the person called is engaged in another call, a special tone informs him the executive is calling. The executive uses either his *P-A-X* telephone or an attractive desk-model speaker-and-microphone unit, as he prefers.

WATCHMAN'S SERVICE — Certain *P-A-X* telephones are simply used as watchman's reporting stations. The time of each call from each station is recorded automatically on printed tape. Also, a "tracer board", indicating with lights the time and sequence of each watchman's reports, is available. Many variations of signaling and conversation between watchmen and their supervisor can be provided.

EMERGENCY ALARM — One *P-A-X* number can ring a special loud-ringing bell at the watchman's or fire marshal's desk, and also record the time and the source of the call. The fire marshal can then quickly discuss the details of the alarm over his *P-A-X* telephone. Comprehensive alarm equipment, including location indicators, time-and-location-recorders, and code-sending apparatus are also available.

AUTOMATIC INFORMATION ANNOUNCER (MESSAGE REPEATING) — Provides voice recording of any message, and then automatic repetition of that message to any person dialing the proper *P-A-X* number.

MONITORING SERVICE — For various schools and penal or other institutions, "listen-in" and/or "cut-in" service.

PLANNING P-A-X INSTALLATION IS SIMPLE!

- 1—On a rough floor plan, indicate locations at which P-A-X telephones will be desired.
- 2—Locate the P-A-X switchboard at a central point (to save wire) in a room reasonably free of dust and moisture, away from heating pipes or fire hazard, with light and space for accessibility.
- 3—Locate terminal boxes (as necessary—depending on the size and expanse of the system) on each floor, to provide for easy connecting of wires from each P-A-X telephone to the cable from the switchboard. Terminal boxes come in various sizes.

In new construction, it is advisable that suitable

ducts and conduits be provided for as many of the cable runs and wire runs as possible.

Wire from local terminal boxes to telephone terminals is standard twisted pair or triplex telephone wire, with covering suitable for the conditions. Wire support runways, insulation and protection should be consistent with good telephone wiring practice and with local codes and regulations.

Installation (and subsequent maintenance) can be handled by any competent electrician or building engineer. Or, Automatic Electric provides, in most areas, complete installation service; also periodic Service Inspections, to supplement the work of the local man.



CONSULTATION AT NO COST

COMPLETE CO-OPERATION EXTENDED TO ARCHITECTS, DESIGNERS

Automatic Electric's famed engineering staff is always available for consultation . . . on any subject related to communications—no matter if it pertains to the modernization of existing buildings or to assisting with plans for suitable ducts and runways in the blueprints for a new building. These highly

skilled engineers are continuing the Company's 60 years of constant achievement since pioneering the world's first automatic telephone. You are invited to take full advantage of Automatic Electric's unparalleled experience. There is of course no obligation whatsoever. Simply address the office nearest you as shown below.

THIS
NAME PLATE IS
THE HALLMARK OF THE VERY FINEST
IN BUSINESS COMMUNICATION EQUIPMENT



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BOSTON 16, MASS., Statler Office Bldg. — HUBBARD 2-1467
CHICAGO 7, ILL., 1033 W. Van Buren St. — HAYMARKET 1-4300
CLEVELAND 14, OHIO, 815 Superior Ave. N.E. — PROSPECT 1-6226
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WASHINGTON 5, D. C., Washington Bldg. — METROPOLITAN 5978

HOME OFFICE: **AUTOMATIC ELECTRIC SALES CORPORATION**, 1033 W. VAN BUREN STREET, CHICAGO 7, ILLINOIS

For information on P-A-X's to be installed outside the United States or U.S. Possessions, please write to
INTERNATIONAL AUTOMATIC ELECTRIC CORPORATION, 1033 W. Van Buren St., Chicago 7, Illinois.