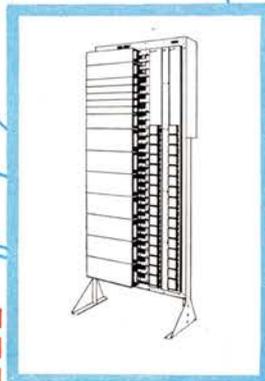
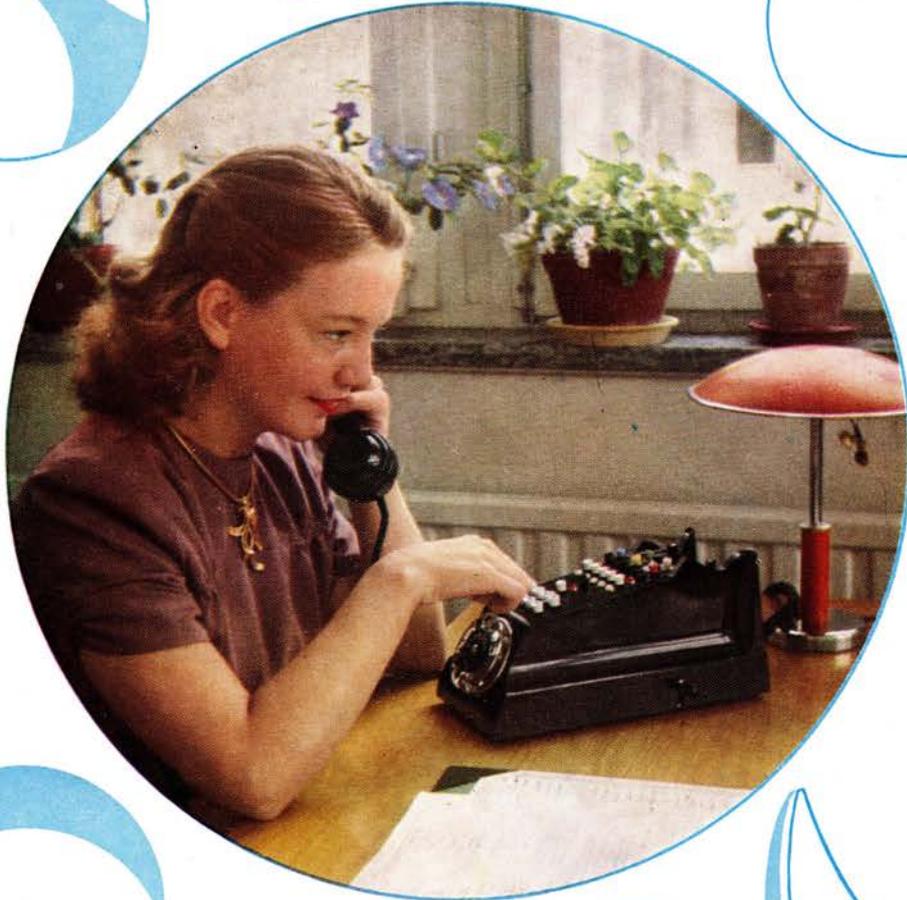


Ericsson
LM

**can answer your
telephone problem**



The Automatic Exchange

A21D

is the right answer

Telephone problems?

As a rule there is no telephone problem

while a business is small and its offices consist of no more than say a couple of rooms. One or more telephone instruments directly connected to the public telephone system, "the city network", are usually enough for the job. But as business grows and premises are enlarged, the more urgent becomes the problem of arranging better telephone facilities especially for internal communication within the enterprise.

A good solution of the problem is given by a private branch exchange. With the private branch exchange it is possible through one and the same instrument to establish communication with people in the same office, internal communications, and with subscribers to the city network, external communications. And if the private branch exchange is automatic then connection is obtained quickest and with least trouble — just a matter of lifting the receiver and dialling a number. Such exchanges are made by L M Ericsson for different numbers of lines and of various designs.

L M Ericsson introduces the automatic private branch exchange bearing the designation ALD 21. Up to 38 local lines and 6 public exchange lines may be connected to this branch exchange, enabling 5 internal and 6 external calls to be carried on at the same time.

ALD 21

Operating Features

The Branch Exchange May Be Connected to Any Public Telephone Exchange

- The private branch exchange may be connected to an automatic or a manual public exchange. The automatic public exchange may be of any system, as the branch exchange ALD 21 comprises devices for impulse correction. The manual exchange may be constructed for central battery feed or for local battery feed.

Even Distant Extensions May Be Connected

- The resistance in a two-wire local line connected to the ALD exchange may amount to as much as 500 ohm for a leakage resistance not below 20000 ohm. These figures correspond to a 2.8 km long (1 ¾ mile) two-wire cable line with 0.5 mm (No 24 AWG) copper conductors and normal insulation.

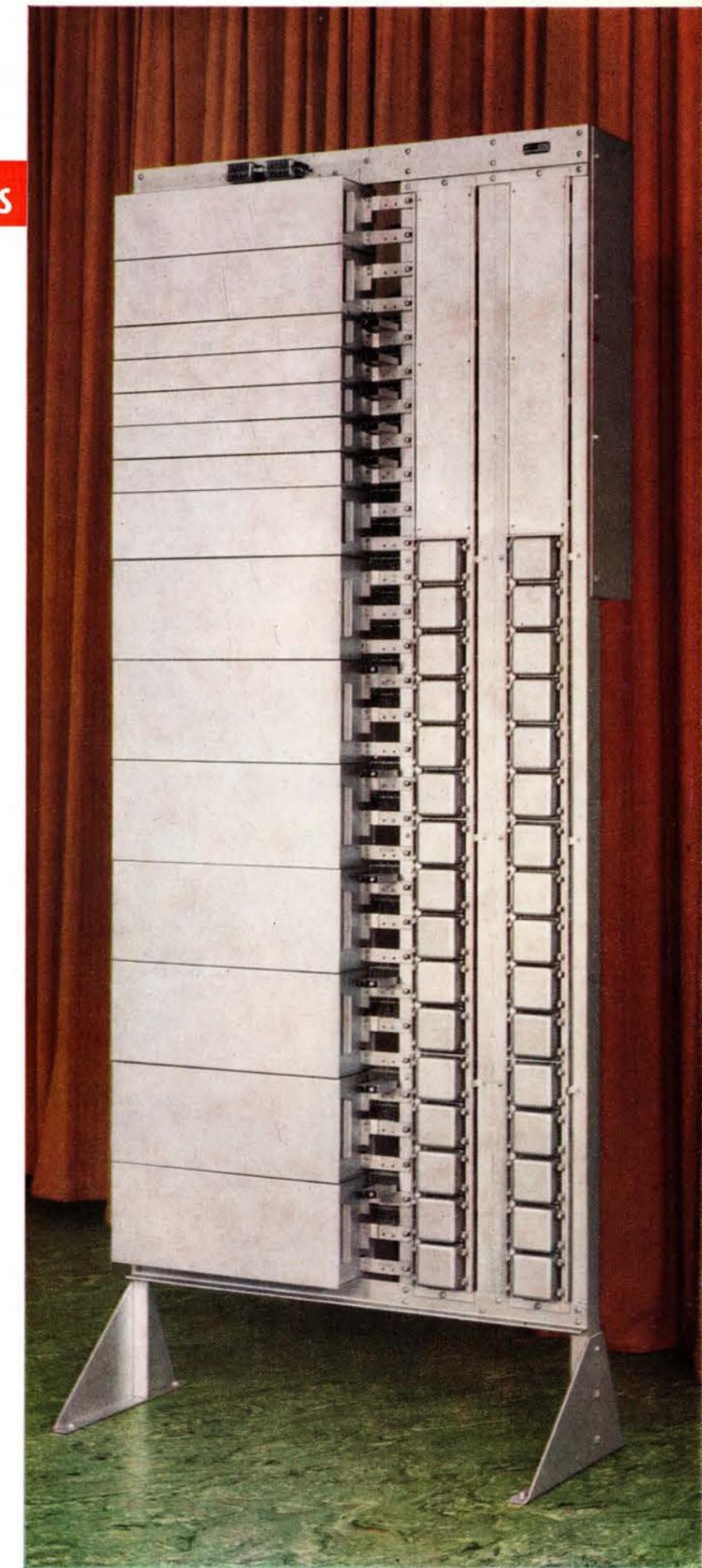
Low Current Consumption

- The current consumption at 24 V is only 0.4 A for an internal call and 0.5 A for an external call.

Great Voltage Variation Permissible

- The exchange is designed to work with a voltage of 24 V, but the voltage may vary between 22 V and 28 V without endangering reliability.

ALD 21 ensures quick and direct connections at low cost, besides saving time and staff

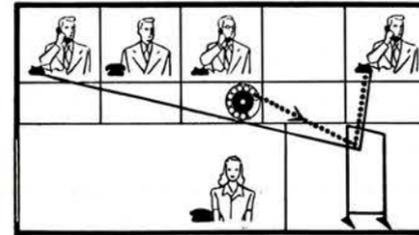
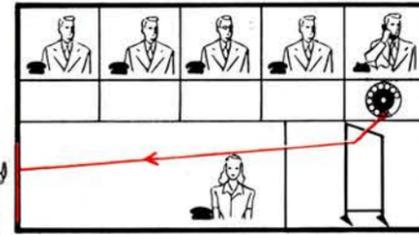
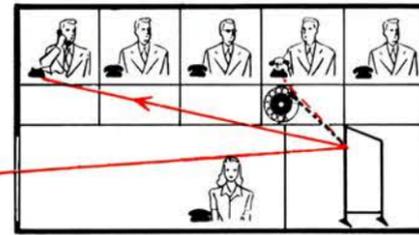
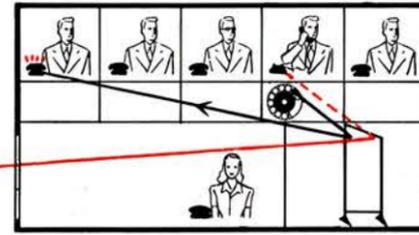
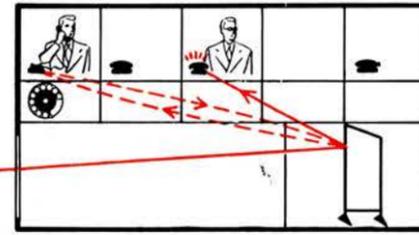
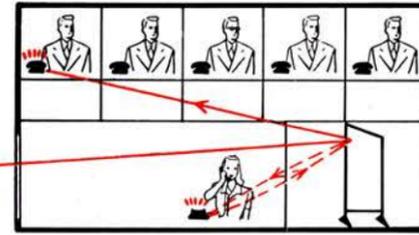
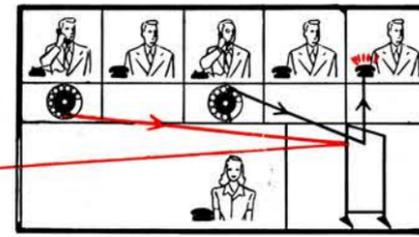


Note details of design, as described on the last page →

ALD 21 — the Private Branch Exchange for 38 local lines and 6 public exchange lines

Traffic Facilities

- Internal and Outgoing External Calls are Established Automatically
- Call from Outside is Switched by Key-set
- Call from Outside is Dealt with even if the Operator is off Duty
- Inquiry during External Call
- External Call Can Be Transferred directly to Another Extension
- Barred Extension Instruments Mean Cheaper Subscriptions
- Executive Calls May Be Given Priority



● Internal calls are established quite automatically — the number is dialled and the exchange automatically rings the person wanted. If a call to the city network is required, the »0« is first dialled and the branch exchange automatically connects the caller over an unoccupied line to the city exchange.

● An incoming call from the city network is signalled to the telephone operator, who answers the call and quickly passes it on — she has only to press a few buttons in her instrument and the person wanted is automatically rung. If the wanted person happens to be engaged with another telephone call, the operator can inform him that a call is waiting and if necessary she may interrupt the first call in favour of the new one.

● Whenever the operator leaves her place, as at the close of office hours, she should throw the night connection switch in her instrument. Calls from outside will then go direct to an predetermined extension instrument and from there are switched to another local extension. To ensure calls not being held up in the operator's instrument if the operator goes away without throwing the night connection switch, any call from outside not answered in about 1/2 minute is always connected over to the extension above referred to.

● If one wishes during an external call to make an inquiry to another person in the business, it may be done from the instrument used for the external call, by dialling the figure »1« and then the number of the wanted extension. On completion of the inquiry, return to the original external call is done by again dialling »1«. It is also possible in the course of an external call to make inquiry to the firm's operator or to a person *outside* the firm.

● If one wishes to transfer the external call to another person in the firm (see picture above) after making inquiry, the telephone receiver is simply replaced while the other person keeps his raised. The external call is then automatically transferred.

● The local extensions can be had open, semi-barred or barred as desired. Those with *open extensions* may both receive and make external calls. Persons with *semi-barred extensions* may receive external calls but cannot themselves ring the city network. Those with *barred extensions* have no facility of call whatever with the city network. Barred extensions usually involve lower subscription charges than open or semi-barred, thus reducing the cost of subscriptions.

● Up to three local extensions may be given the facility of always getting through to other extensions, even when these are busy. Such priority is usually arranged for executives or the operator or other persons needing immediate answer.

ALD 21

Details of design

- The connecting devices of the automatic private branch exchange are fitted in a floor-rack, aluminium lacquered. The rack has the following dimensions: height 2 260 mm, width 920 mm and overall depth 475 mm.

Convenient Arrangement of Selectors and Relays

- The relays of the branch exchange are divided into units and sets, conveniently fitted in the rack. Great attention has been given to ensuring that each relay, each relay set and each selector is distinctly marked. This facilitates inspection.

Reliable Connecting Devices

- The selector devices of the branch exchange consist of step-by-step driven 25-position selectors, thoroughly protected against dust. Their functional design and the absence of dust makes them very reliable. The relays are single coil relays with double contact points. These relays also are protected against dust. The precaution against dust and the duplication of contacts ensure that practically all possibility of contact failure is eliminated. Maintenance costs are therefore low.

Simple to Extend and Inspect

- The detachable relay sets are connected to the private branch exchange by plugs and jacks. Thus an exchange not installed for full capacity at the start, can easily be extended by adding relay sets. The sets are also easy to remove for inspection, without interrupting of the other functions of the plant.

Alteration of Call Numbers Unnecessary

- The call number once given to a person need never be altered. If he moves to another room, his call number can be connected to his new place by a simple jumpering in the private branch exchange. If he is given additional traffic facilities, such as the right to make and receive external calls, this too is done without alteration of number.

Small Operator's Instrument, easily Attended to

- The operator's instrument comprises — in addition to what is included for ordinary extensions — separate operating devices for the external lines, buttons for ringing extensions and common operating devices. The instrument occupies hardly more space than an extension instrument, so that it can easily be placed on a desk. All signals are distinct. Operation is simple. Thus, to ring an extension, only two or three buttons need to be pressed.

