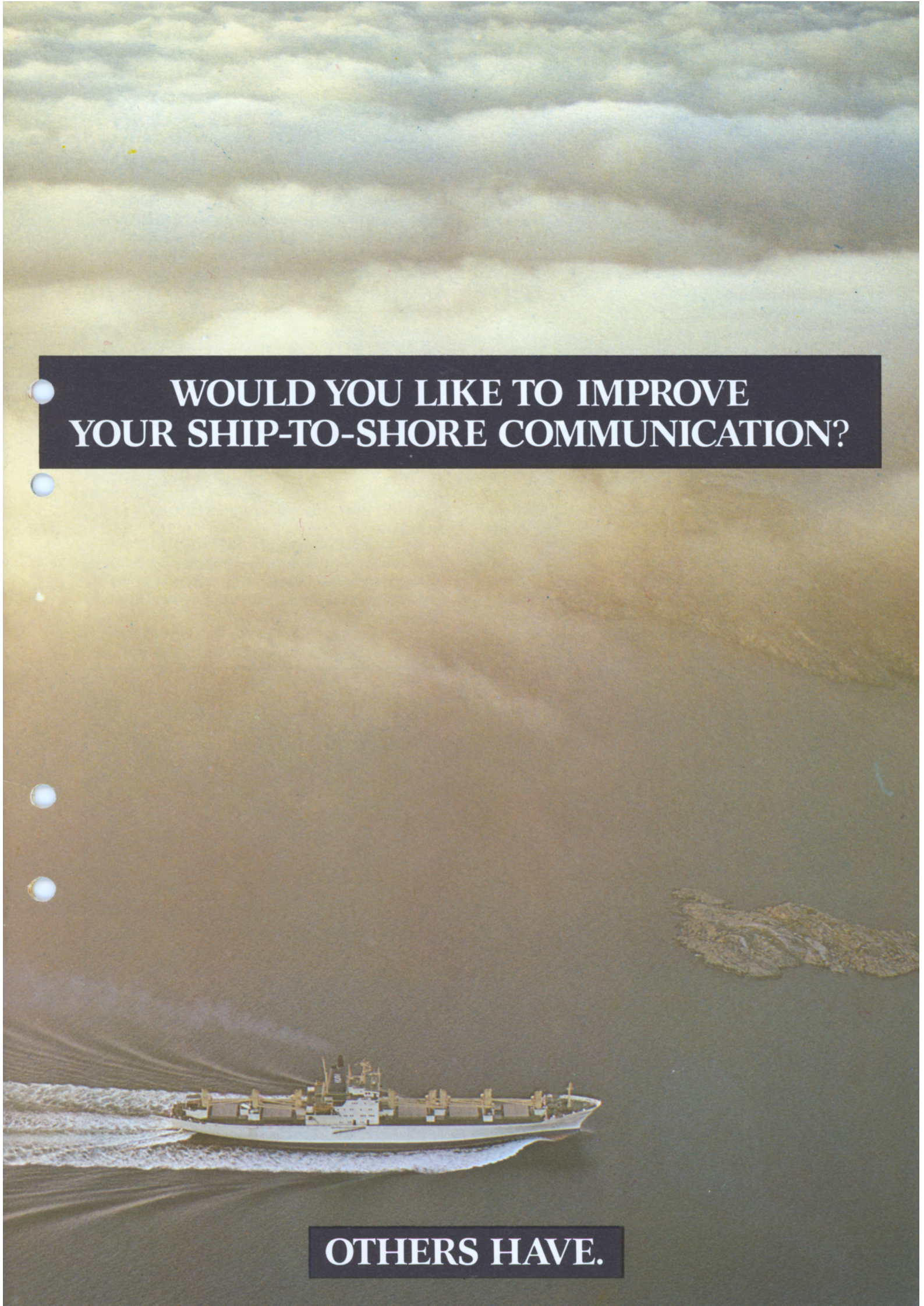
WOULD YOU LIKE TO IMPROVE YOUR SHIP-TO-SHORE COMMUNICATION?



OTHERS HAVE.

MARITEX IS THE KEY TO MARITIME CO

In shipping, telex and teleprinters are the most important means of communication. They have many advantages. Their information is printed out and transmitted swiftly.However, their application has until now been confined to interoffice use. Ship-to-shore contact has been limited to radio telegrams and radio calls.

AN AUTOMATED SYSTEM.

But from now on, Maritex automates communication between owners and their ships.
Statistics show that 50 percent of all Maritex messages reach their destinations within 30 minutes.

COMPUTERIZED.

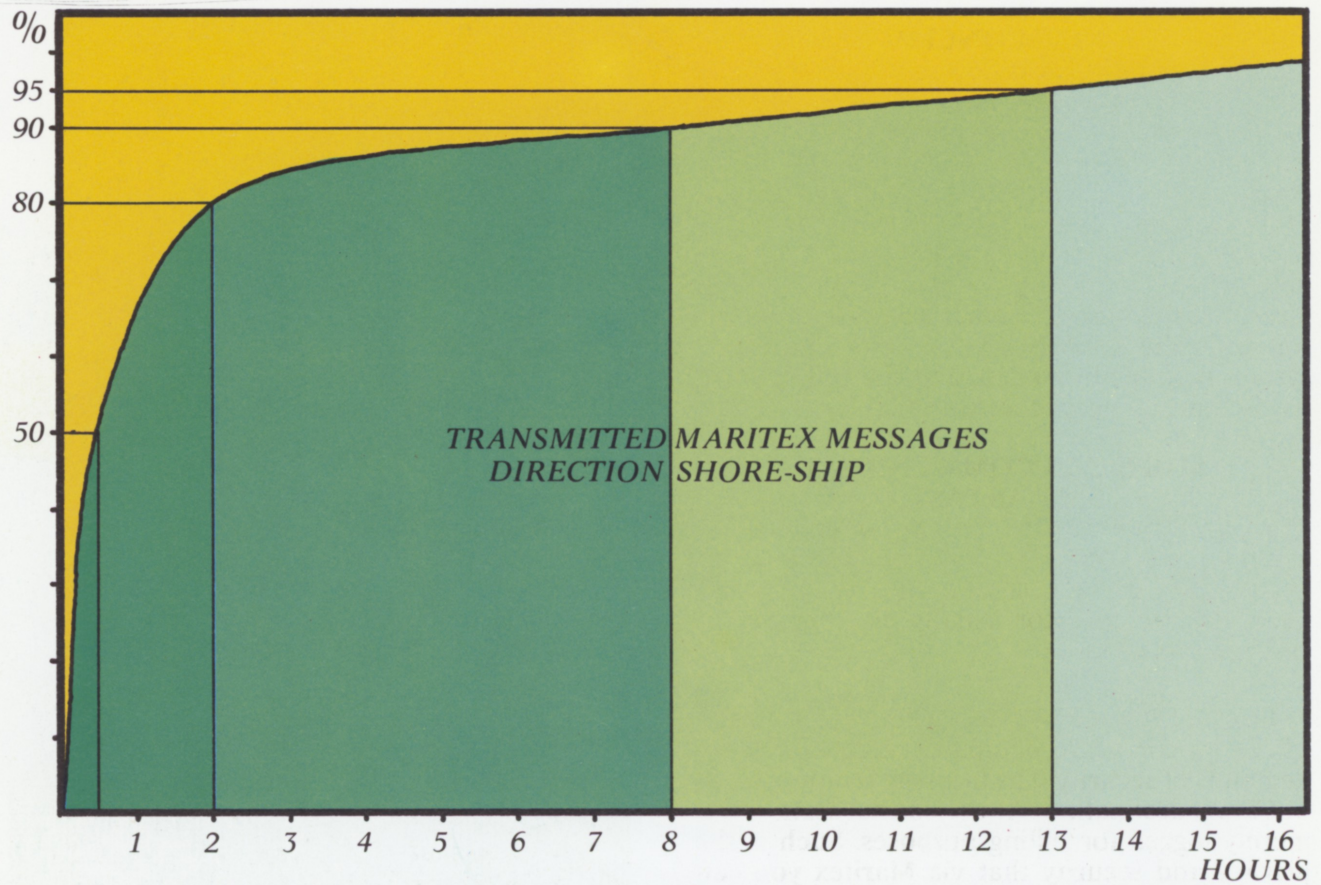
A message can be typed on a telex anywhere in the world. Via the international telex network it then goes to the Maritex computer in Gothenburg, Sweden. The computer stores the message. It knows the position of all Maritex ships. Using directional aerials it makes selective calls every three minutes. Once radio contact is established, the identity of the answering ship is checked. This identification is a feature of the selective contact and no outsider can copy a Maritex message.

Transmissions are made in an error-correcting way which ensures that every single character is received exactly as typed by the sender.

OPERATES WORLDWIDE.

Maritex is a recent development in maritime ship-to-shore communication. It has proved so successful that by 1977 more than a third of the bigger ships in the Swedish merchant fleet, which sail throughout the world, had been equipped with Maritex. To the owners, Maritex has meant entirely new possibilities for fast and efficient control, enabling them to direct their ships to those areas where the demand for transport is most urgent. Maritex is an essential complement to radio telegrams and radio calls. In a constantly more acrid economic climate, shipping needs fast, safe and economical communication to stay in action.

We know that Maritex with its speed, safety and outstanding economy competes successfully with satellite communication which may be uneconomic for the required volume of communication.



The Maritex System optimizes radio communication to the extent that 80 percent of all messages reach their destinations within two hours.

SPEED AND ECONOMY IN MMUNICATION.

FASTER ACCESS SPEEDS OPERATIONS.
Today shipping demands as much communication flexibility and speed as transport on land. Every hour and every seamile are precious. For years the speed of Maritex has proved its superiority over Morse telegraphy. And Maritex speed has come to mean much to shipowners who value daily contact with their ships.

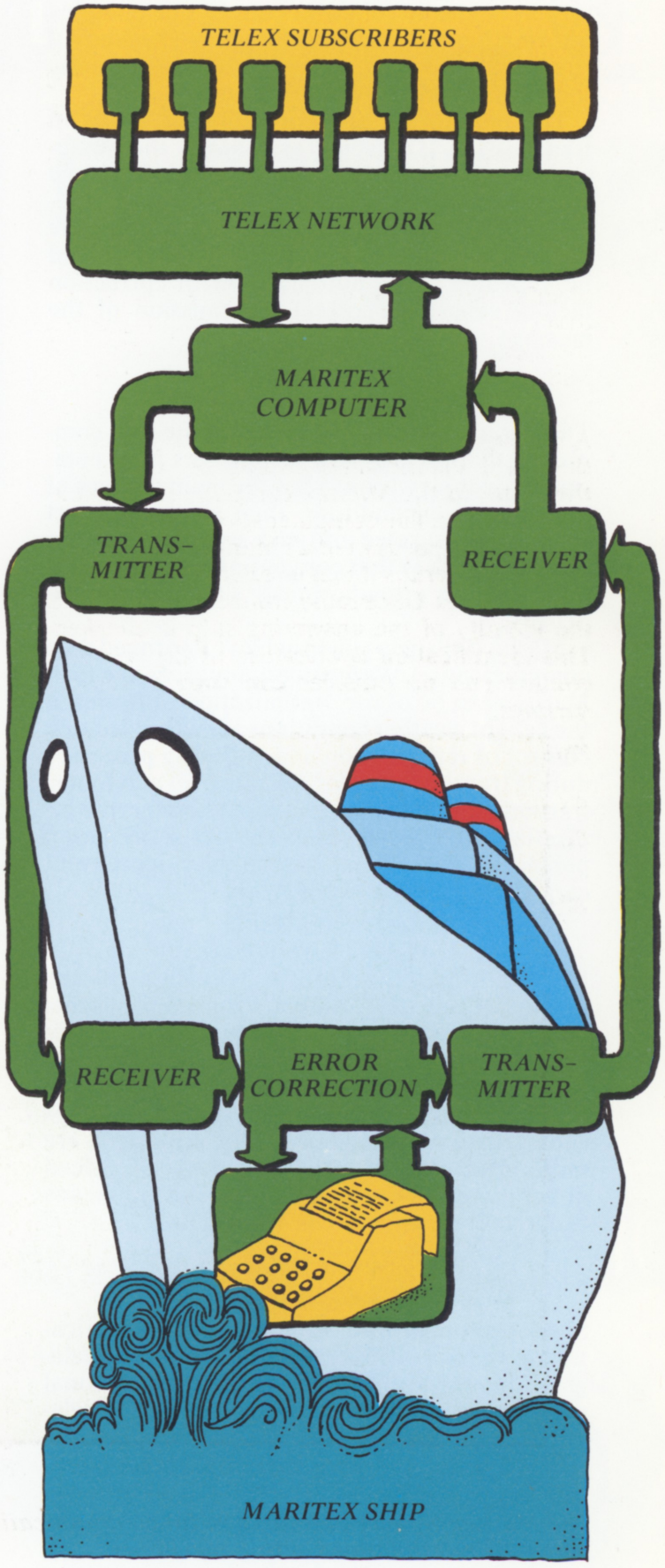
Just imagine the saving in time and money if an order to backtrack reaches the ship five hours earlier: ten hours saved, ten hours' earlier arrival and maybe even a few days' earlier delivery. In a time-conscious trade like shipping this could mean the difference between a new contract and several days of expensive waiting time. In short, Maritex has a number of practical advantages over more conventional means of communication: faster access, total privacy and complete safety.

THE INSURANCE FACTOR.
Imagine the immense value of easy and quick access to any type of advice or assistance in case of emergencies, accidents and damage to machinery or hull and the simple position reporting. A single Maritex contact at the right moment can pay for an entire Maritex installation.

A NEW CONCEPT.
Maritex operates on different principles from Morse telegraphy. The error-correcting equipment requires a return channel which is used to detect and correct errors. When a telex subscriber ashore decides to send a message via Maritex, a telex call is made to the ship's telex number. The Maritex computer in Gothenburg answers the call, stores the message and shortly afterwards it makes contact automatically and forwards the message to the ship. The entire system is fully automated, and the only person whose time is engaged is the sender.

SHIPS CAN COMMUNICATE JUST AS FAST.
The operator on board a ship makes a call by pressing a start button. When the radio link is established the message is transmitted. For economy the operator usually punches a tape prior to transmission.

SECURITY ALLOWS BETTER ROUTINES.
The error-correcting equipment meets very high demands of security. The message is only printed out at its destination. At the coastal station it is merely logged for billing purposes. Such is the privacy and security that via Maritex you can transmit information which formerly had to be sent in specially-sealed envelopes.



SAFETY FROM PRECISE INFORMATION.

Modern ships have complex equipment which provides complex information. The Maritex system is ideally suited to convey this complex information since each message is checked en route and arrives at its destination in precisely the form in which it was originated.

The monitoring and correcting of errors in transmission is effected as follows: the equipment sends groups of three characters at a time and then pauses for a return signal from the receiver. The return signal indicates whether the group was received correctly or whether it should be repeated. This automatic error-correction facility ensures a correct transmission of the message.

DATA COMMUNICATION.

There is a latent demand for maritime data communication. Today most shipowners have computerized their routines but the main sources of income and expenditure – their ships – have yet to be fully integrated into such systems. The main reason for this is that conventional communication methods are laboriously slow and too expensive.

Maritex will help you to achieve improved data communication. We foresee many areas in which Maritex can be of use: optimization of routes in the light of weather conditions and other factors; control of refrigeration and maturing processes during transportation of delicate fruit and foods; transmission of ship status reports and error indications to enable the technical shore-based personnel to optimize maintenance; stores and cargo lists; payrolls and so forth.

AGENTS AS WELL.

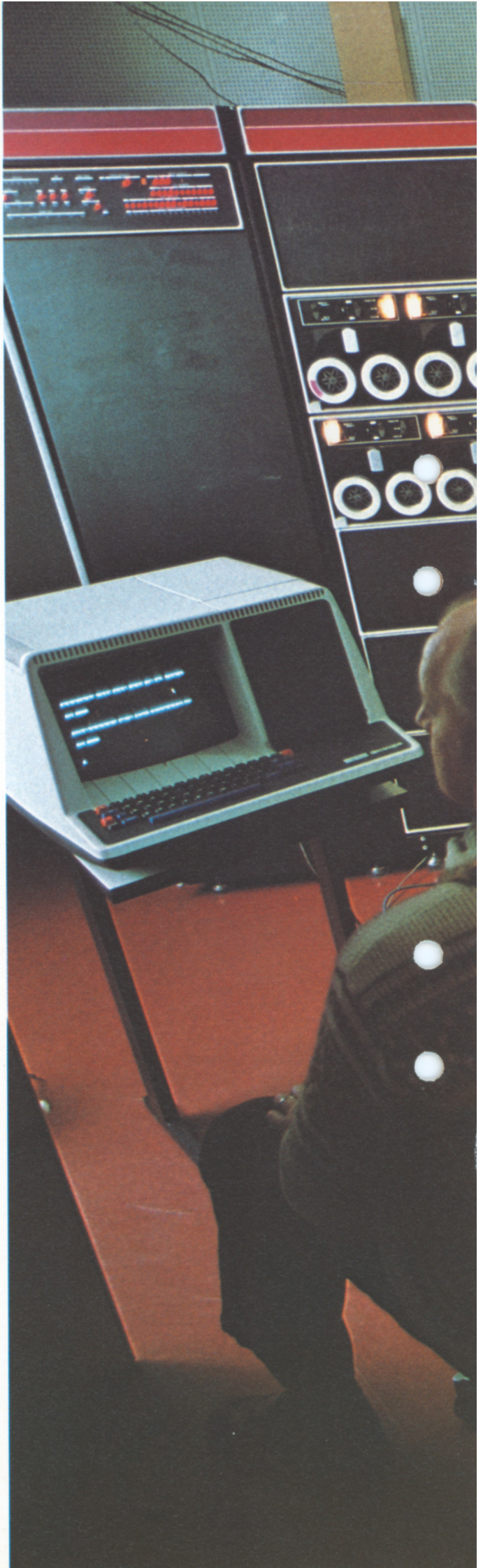
Maritex not only improves contact with the owners. It also helps others, for instance agents and bunker suppliers, with whom ships can establish direct contact, instead of having to route messages via their own offices.

Experience with Maritex-equipped ships shows that orders for stores, food and spares are more effectively dealt with, if they are placed directly with the supplier. This usually means faster delivery and shorter waiting time.

MARITEX LETTERS IMPROVE WELFARE.

Ships' personnel need better private communication to remain in touch with their families. Telegrams may be too expensive; moreover, personal matters are not always easily conveyed by telegram.

The Maritex letter has therefore become very popular. Crew members can write letters and have them sent to the coastal station, from where they are then mailed.



Maritex computer center
in Gothenburg, Sweden.

MORE COMMUNICATION C

COSTS BEFORE INSTALLING MARITEX.

When you evaluate the use of a communications system, the results always depend on the volume of traffic handled. Let us now give an example of how to calculate the savings from using Maritex on board a merchant ship.

We compare Maritex with radio telegrams, since that is the method of communication which Maritex complements. The calculations are based on actual costs from a number of ships that have been using Maritex for some years. We believe they provide a realistic picture of Maritex economy. An analysis of communications between ship and owner gave an annual breakdown as shown in Table 1.

TABLE 1. NUMBER OF TELEGRAMS.

	Operations	Technical	Spares	Personnel	Agents	All
Shore-ship	220	190	110	150	0	670
Ship-shore	410	230	180	260	250	1 330
					Total	2 000

The average telegram contained 15 words, making a total of 30,000 words per year. The analysis also showed that two-thirds of the telegrams came from the ship and that one-third was sent to it.

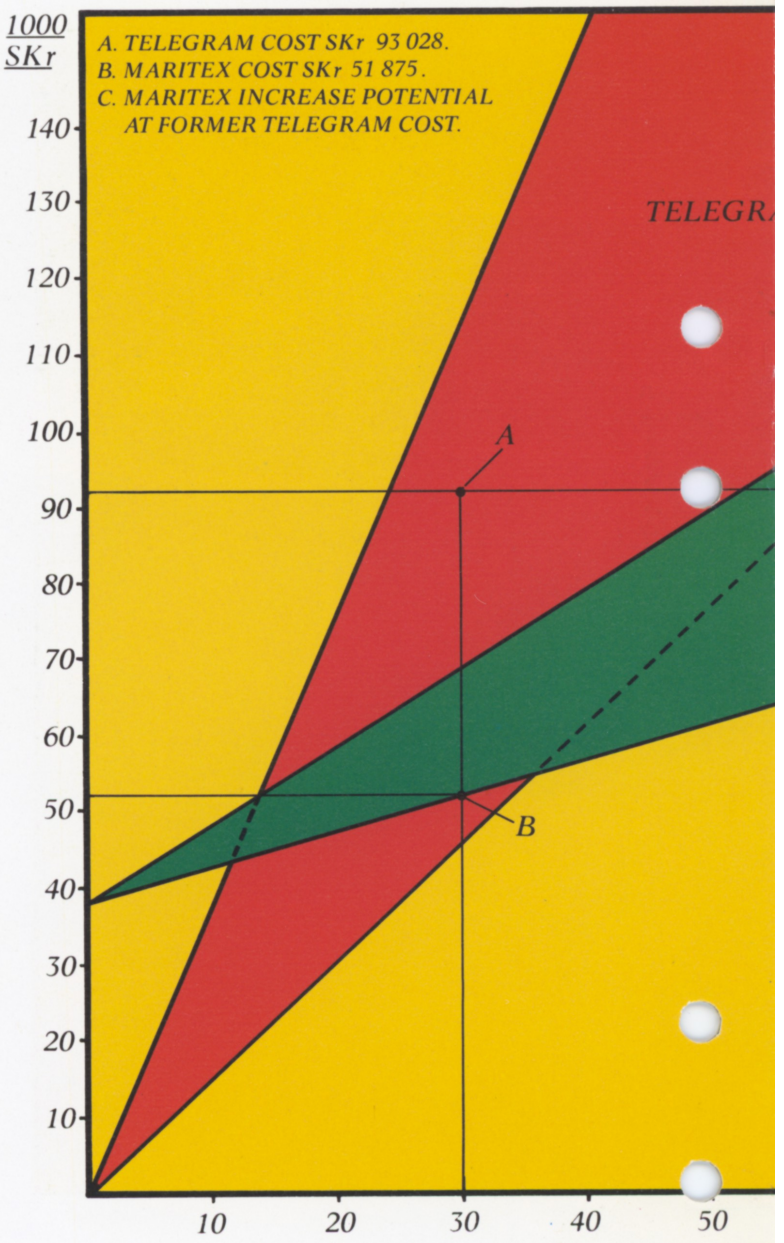
TELEGRAM COSTS.

The basic Charge (1979) for a Swedish radio telegram is SKr 17.50. The charges per word are SKr 2.30 from shore to ship; SKr 1.75 from ship to shore. The cost of 2,000 15-word telegrams is given in Table 2.

TABLE 2. TELEGRAM COSTS.

	Tele-grams	×	Basic charge	+	Words	×	Word charge	
Shore-ship	670	×	SKr 17.50	+	10,050	×	2.30	= 34,840.–
Ship-shore	1,330	×	SKr 17.50	+	19,950	×	1.75	= 58,187.50
							Total SKr	93,027.50

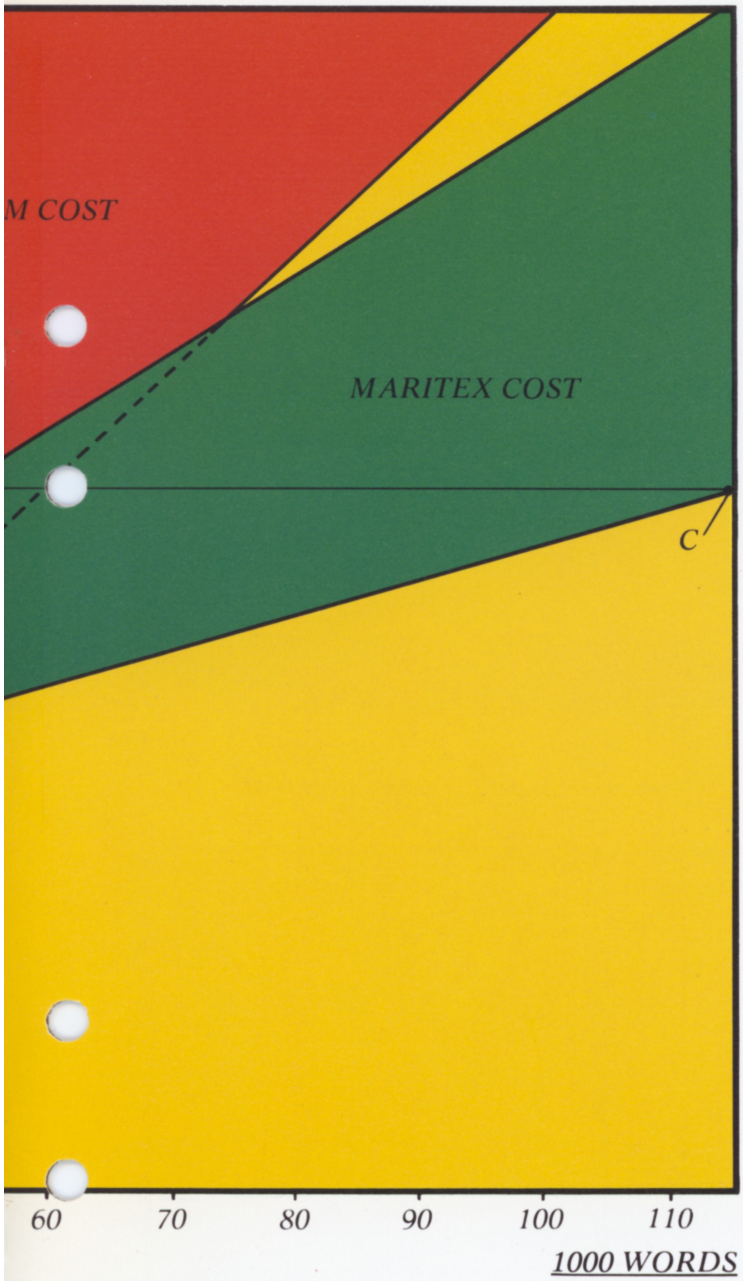
Point A in diagram.



200 PERCENT INCREASE.

When we project traffic in Maritex ships we find that the volume of communication traffic normally increases. In our example, a single ship spends SKr 93,028.– on 30,000 words in 2,000 telegrams. With Maritex, that sum would buy more than 100,000 words.

OSTS LESS WITH MARITEX.



See point C in diagram.

The volume of traffic can therefore be increased by over 200 percent without any increase in cost. Add to this the other advantages – speed, safety and security.

COSTS AFTER MARITEX INSTALLATION.

Our traffic statistics show that the length of an average message is about one minute. This corresponds to 40 words per minute, since Maritex handles 400 characters per minute. Assuming the volume of communication remains at 30,000 words per annum, the situation is as shown in Table 3.

TABLE 3.
NUMBER OF MARITEX MINUTES.

Shore-ship	10 000 ./. 40	= 250 minutes
Ship-shore	20 000 ./. 40	= 500 minutes
Total	30 000 words	= 750 minutes

Maritex messages are charged per commenced minute. The charge is made up of two elements: a radio charge of SKr 18,00 per minute (1979) which covers the communication between the ship and the computer in Sweden or vice versa. And a line charge corresponding to the rate-per-minute charge for telex between Gothenburg and the sending or receiving telex subscriber.

The costs of communicating 30,000 words in 750 messages per annum appear in Table 4.

TABLE 4. MARITEX COSTS.

Shore-ship	250 (18.00+0.50)	= 4,625.–
Ship-shore	500 (18.00+0.50)	= 9,250.–
		Total 13,875.–

If we now compare the totals in Table 2 and 4, we find that Maritex communication is very economical.

But, in order to make a fair comparison, we need also to consider the cost of the equipment, which has to be added to the existing radio station aboard the ship. The Maritex station is rented out by the STA. The rental agreement stipulates an entrance fee and an annual subscription, which also covers maintenance.

A standard Maritex installation is charged as follows (1979):
Entrance fee: SKr 33,000.–
Subscription per annum: SKr 33,000.–
(Other terms can be arranged.)

If we spread the entrance fee over 10 years at 10% interest, the annual subscription will be about SKr 38,000.–.

Thus the Maritex transmission costs plus the annual subscription total as follows (1979):
Transmission: SKr 13,875.–
Rent, annual: SKr 38,000.–
SKr 51,875.–

This compares very favourably with the costs of SKr 93,028.– for radio telegrams.

See point B in diagram.

MAKE YOUR OWN CALCULATION.

This page is all yours. We have laid out this table to help you make your own calculation.

We suggest that you first determine your annual radio telegram word total. Then find out what it costs per year. With these two figures you can mark your annual costs in the diagram. This is your point A.

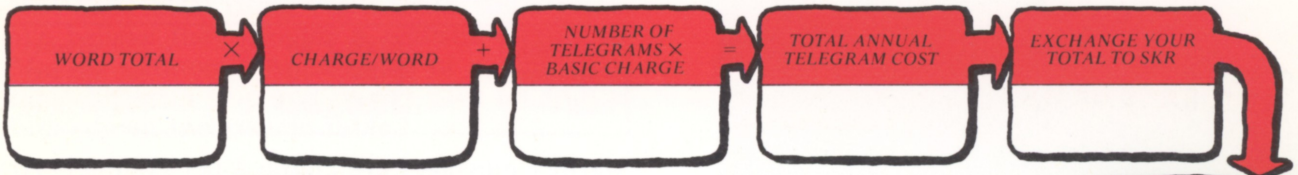
To determine your Maritex cost for the same amount of communication, divide your word total by 40. You will then get the approximate amount of Maritex minutes that takes care of your annual communication.

In the table below, find your one minute landline charge between the land subscriber and Gothenburg. If you don't find it, you can look it up in your telex directory. Add this rate to the radio-charge, which is fixed at SKr 18.–

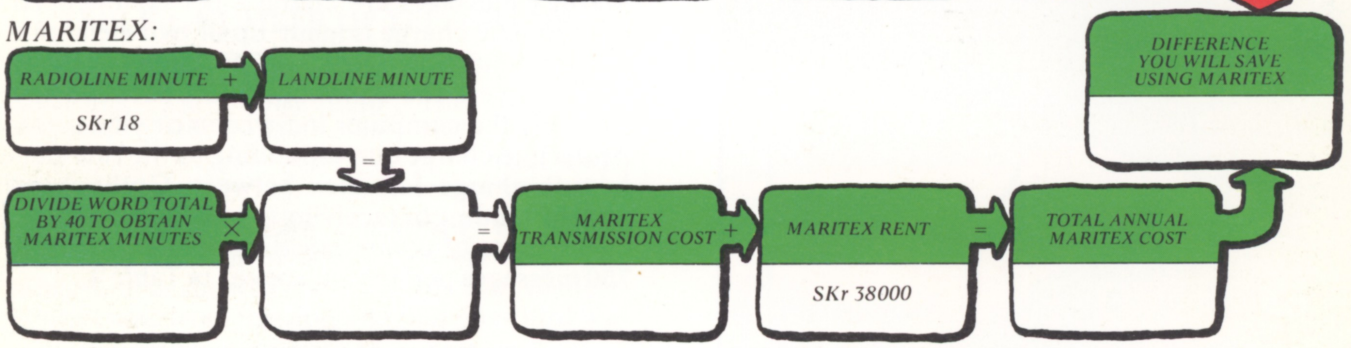
Multiply the number of minutes by the minute charge and add the fixed yearly rent. Mark the sum in the diagram. This is your point B. The difference equals your annual saving per ship.

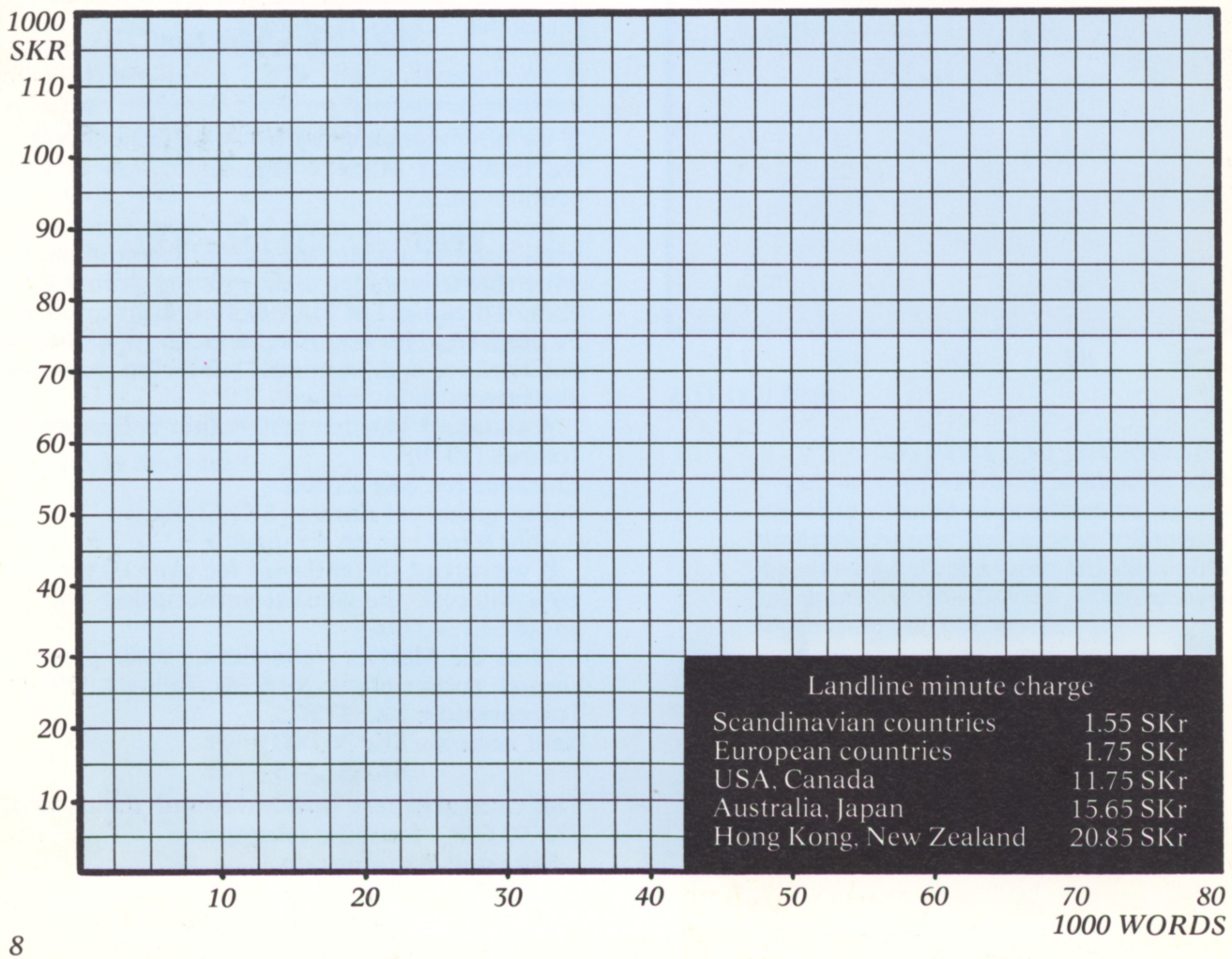
Ask yourself: Can I afford to sail without Maritex.

TELEGRAMS:



MARITEX:





MARITEX CHARGE PER MINUTE

To USA US $6.80

To Belgium BF 134

To Finland Fmk 17.75

To Netherlands Fl 9

To Fed. Rep. of Germany DM 8.45

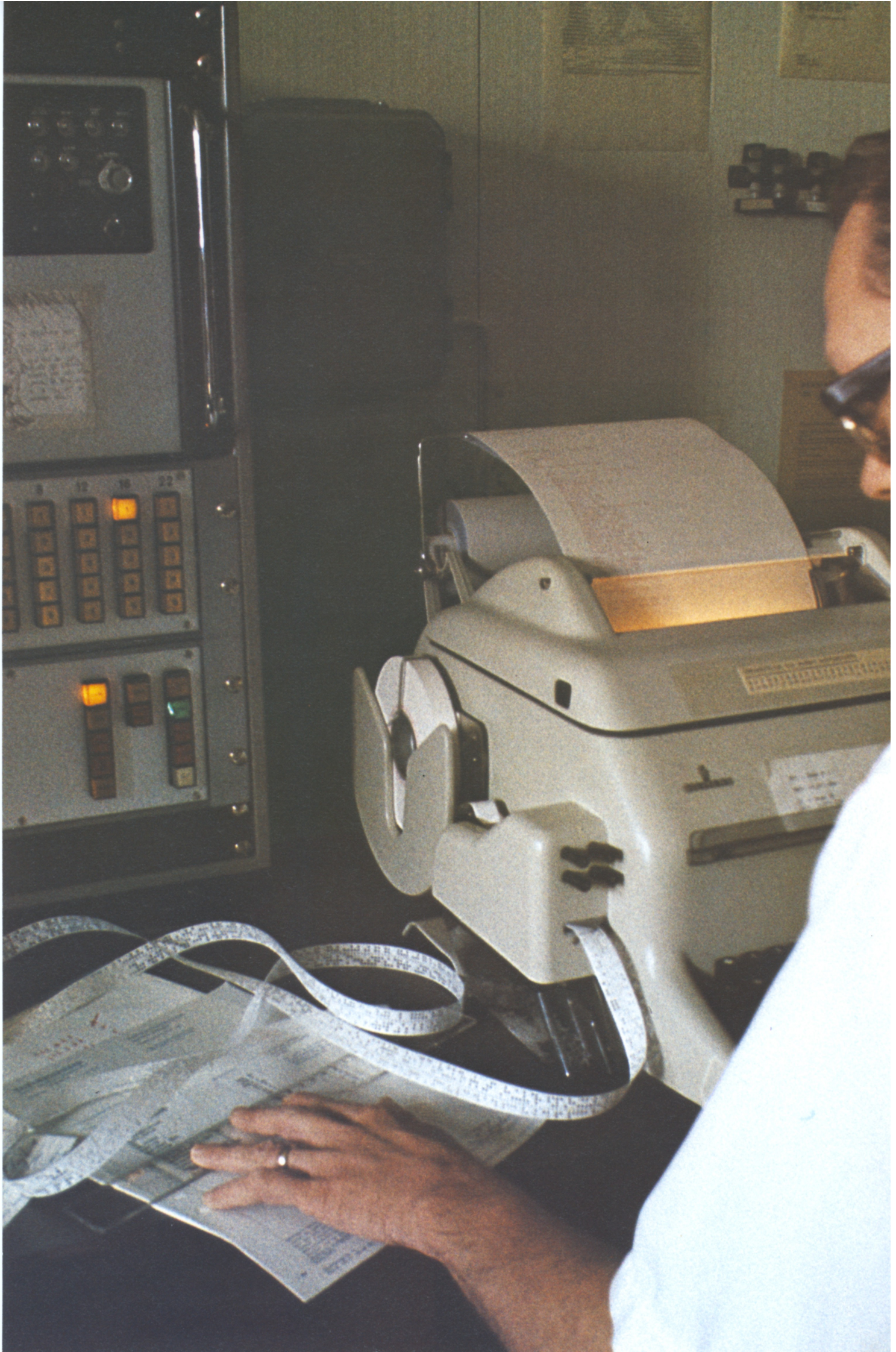
To Great Britain £2.20

To Greece Dr 120

To Norway NKr 23

To France FF 19.40

To Denmark DKr 23.30



STA DELIVERS.

The Swedish Telecommunications Administration is a government agency under the Department of Communications. We operate national and international telecommunications traffic by telephone, telex, telegraph, computer, radio and television. We have 44,000 employees and the value of our technical equipment is estimated at US$ 2,500 m.

Our organization for maritime communication is unique in the world. Like other administrations we are responsible for legal regulations and for the operation of coastal stations. But unlike other administrations we are also an operational company which provides radio equipment on a rental basis to 2,500 ships. We also run a worldwide maintenance network for these ships.

Our unique position in the world of maritime communication has always been the basis for major innovations of which the Maritex System is the most recent.

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MARITEX SHIPS