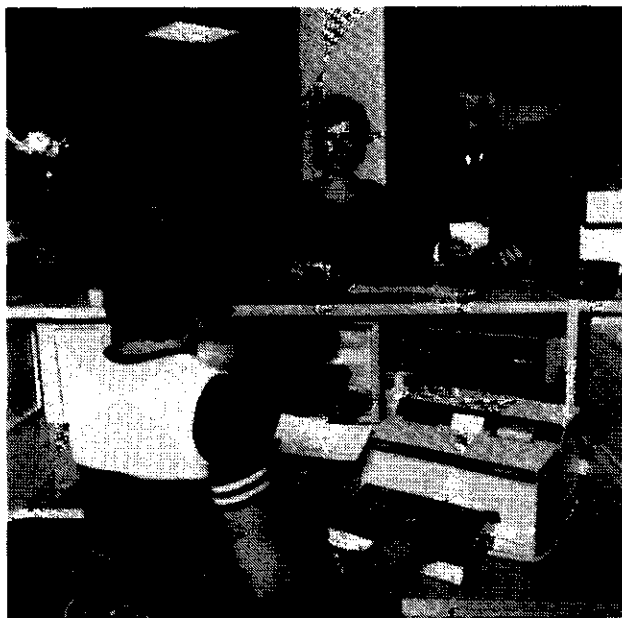# PHILIPS PTS 6000 TERMINAL SYSTEM

Philips PTS 6000 Working positions

displays, printers, and which types, are best suited for individual working positions.

With the Philips PTS 6000 Bank Terminal System the terminal devices are modular. They vary in function and capacity, and they can also be adapted easily to suit detailed requirements (as to printable characters, for example).

Thus, no matter how specific or unique the needs of an individual bank may be, the most appropriate configuration for each working position can always be selected, more or less 'off the shelf'.

The philosophy of the Philips PTS 6000 Bank Terminal System is that it is adaptable to the individual needs of any bank.

For each bank, the total terminal system will be made up of a series of working positions, connected to the terminal computer, and having access to the bank's main computer via this terminal computer.

At each working position, specified banking operations are performed — cash handling, savings account operations, foreign exchange transactions, cheque and giro clearance, etc., and detailed records of all the transactions are kept. The manner in which these operations are organised, and the amount of work each of them involves, varies from bank to bank and from branch to branch. It follows that each working position will require a different configuration of terminal devices — keyboards, displays and printers. Added to which, the devices must not only fit the functions they have to perform, they must also fit the space available for them and, to a great degree, fit the staff who will operate them.

Thus, in building up the total bank system, each working position in each bank must be considered — what operations are to be performed, how much capacity is required. This defines which terminal devices, keyboards,

PHILIPS PTS 6000 TERMINAL SYSTEM

Philips PTS 6000 Philosophy of working positions

At the working position, the various Philips PTS 6000 terminal devices — keyboards, displays and printers give the operators — the bank staff — the same benefits that the terminal system gives the bank as a whole.

Bank terminal devices

— should fit any possible application

Each type of Philips PTS 6000 terminal device is available in a range of functional capabilities and capacities. The requirements of any working position can be accurately met — no matter how small or large, no matter how simple or complex.

— should adapt easily to the needs of the individual operators who will have to use them

The Philips PTS 6000 keyboards, printers and displays can be positioned for the optimum convenience and comfort of the operator, regardless of whether he normally has to stand or sit to work. The displays have generous viewing angles, they are clear and easy to read without strain, with the normal background lighting. The [...] have [...] requirements for [...] of [...] they can be placed right where the operator needs them — to hand on his [...]

This combination of flexibility, adaptability and tolerance makes the terminal device very easy to use and thus reduces effort and fatigue.

— should fit easily into normal bank offices.

Philips PTS 6000 terminal devices are very compact. They assist the operator to do his work, without taking up too much of his space and thus making his other work uncomfortable or awkward to carry out. They work quietly, most of them at a whisper — the others make less noise than a normal office typewriter. The operator is not distracted and fatigued by noise. The displays are clear and do not require shades or subdued lighting.

— should be reliable.

Staff quickly learn that Philips PTS 6000 devices work smoothly, without fuss, without constant attention and adjustment. This increases the confidence of staff, confidence in their ability to handle increasing volumes of transactions without strain, and without being let down by equipment failure.

— should be easy to service.

The modular design of the Philips PTS 6000 terminal devices, computers and peripherals ensures maximum availability. Restoration of working is quickly achieved by the replacement of a complete device — a matter of minutes. Philips' service organisation is highly-organised and widespread. Thus, staff are not subjected to annoying delays due to faulty equipment, or to the presence of servicemen working under their feet.

The Philips PTS 6000 bank terminal devices are friendly to staff — because they were designed around the needs of banking staff. They were made that way.

PHILIPS PTS 6000 TERMINAL SYSTEM

Philips PTS 6000 Build-up of working positions

The Philips PTS 6000 Terminal System is designed for the easy build-up of working positions for any desired banking operation. This is ensured by its compactness and modular construction, the wide choice of functions and capacities available with each type of terminal device, and the adaptability of the system hardware and software.

When it comes to the build-up of a specific system, Philips experts, working in co-operation with the bank staff, will put together the special package most suitable for the individual application, and for each working position. However, a bank considering the installation of a terminal system will like to have some background knowledge of how a working position can be built up, of how any practical requirement can be met from the modular parts.
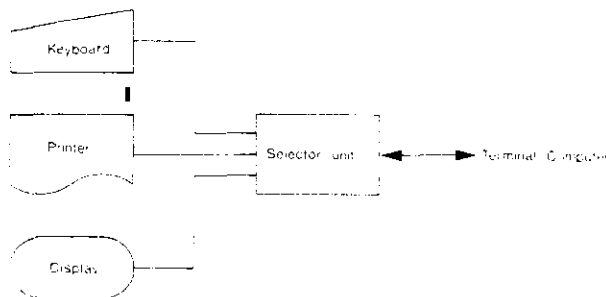
From the block diagram we can see the possibilities. At the working position itself — the desk — is a group of terminal devices — keyboard, display, printer, selected for functions and capacities. These are the devices which the operator uses.

At any convenient position, out of the way, is the selector unit, mounted under the desk top, say. This provides the terminal devices with power and logic and handles their communications with the terminal computer.

The build up of a working position is thus very simple. It is, really, only a matter of choosing the appropriate devices from the extensive Philips range. All the physical connections between the various terminal devices are by means of cables and plugs.

This type of build up gives

— minimum space demands at the actual working position, e.g. desk top

— easy matching of bank requirements for volume and type of data to be handled at each working position.

— easy servicing — complete terminal devices are quickly exchanged.

Let's consider some actual working conditions.

A great deal of a teller's work is concerned with cash deposits and withdrawals. In the simplest case, where current accounts only are involved, he can perform his work with greatly increased efficiency using a numeric and function keyboard and an 8-signal and numeric display. These allow him to enter and receive all the transaction data. Where more capacity and flexibility are required, a choice of alphanumeric and function keyboards is available, together with a range of alphanumeric displays, and a plasma display unit capable of showing him facsimile signatures. With these, his ability to communicate with the system is greatly increased — he can handle a wider range of enquiries from customers and thus serve them, and the bank, more quickly and more efficiently. With savings account work, a teller terminal printer will handle all his routine work — allow him to enter data, print entries and issue a receipt. At the teller's desk, in particular, space is severely restricted, and the compactness of the Philips PTS 6000 terminal devices give them an outstanding advantage.

The bank manager must have information at his fingertips, and the Philips PTS 6000 system gives him just that. A modern, well-styled compact keyboard and display unit will not look out of place in his office — or take up much space in it — and will link him directly with his own staff and also with the expert advice and information available at his head office.

In the back office, the area of administration, easy communication with the system is provided by an alphanumeric keyboard and a display unit. These will handle all types of clearing work — giros, cheques, transfers, etc. A general terminal printer will provide hard copy backup for displays and will meet all the most usual printing needs. Where large volumes of bulk data are to be handled, they can be dealt with by the faster and highly-reliable line printer, directly connected to the terminal computer.

The selector unit controls the communications between the terminal computer and the terminal devices, and also supplies the latter with power. This is an important feature of the Philips PTS 6000 system, since it removes the bulk of a power supply unit from the operator's desk. With a modular selector unit, in particular, functions can be easily and quickly changed by replacing the plug-in printed circuit boards, so that working position

PHILIPS PTS 6000 TERMINAL SYSTEM

7.1.4

November 1978

Philips PTS 6000 Build-up of working positions

configurations can be modified, e.g. expanded, at any time
without difficulty.

     With the Philips PTS 6000 Bank Terminal System it
is easy — and economical — to build up the working
positions and the terminal system required by any individual
bank. All that is necessary is to define the nature and extent
of the operations to be carried out — Philips can supply the
devices to match.

Philips PTS 6000 Build-up of working positions

The Philips PTS 6000 Terminal System is designed for the easy build-up of working positions for any desired banking operation. This is ensured by its compactness and modular construction, the wide choice of functions and capacities available with each type of terminal device, and the adaptability of the system hardware and software.

When it comes to the build-up of a specific system, Philips experts, working in co-operation with the bank staff, will put together the special package most suitable for the individual application, and for each working position.

The build-up of a working position is very simple. It is really only a matter of choosing the appropriate devices from the extensive Philips range. All the physical connections between the various terminal devices are by means of cables and plugs.

This type of build-up gives

— minimum space demands at the actual working positon, e.g. desk top.

— easy matching of bank requirements for volume and type of data to be handled at each working position.

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Let's consider some actual working conditions.

A great deal of a teller's work is concerned with cash deposits and withdrawals. In the simplest case, where current accounts only are involved, he can perform his work with greatly increased efficiency using a numeric and function keyboard and a 1 line plasma display.
These allow him to enter and receive all the transaction data. Where more capacity and flexibility are required, a choice of alphanumeric and function keyboards is available, together with a range of displays.
With these, his ability to communicate with the system is greatly increased — he can handle a wider range of enquiries from customers and thus serve them, and the bank, more quickly and more efficiently. With savings account work, a teller terminal printer will handle all his routine work — allow him to enter data, print entries and issue a receipt. At the teller's desk, in particular, space is severely restricted, and the compactness of the Philips PTS 6000 terminal devices give them an outstanding advantage.

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Where large volumes of bulk data are to be handled, they can be dealt with by the faster and highly-reliable line printer, directly connected to the terminal computer.

With the Philips PTS 6000 Bank Terminal System it is easy — and economical — to build up the working positions and the terminal system required by any individual bank. All that is necessary is to define the nature and extent of the operations to be carried out — Philips can supply the devices to match.
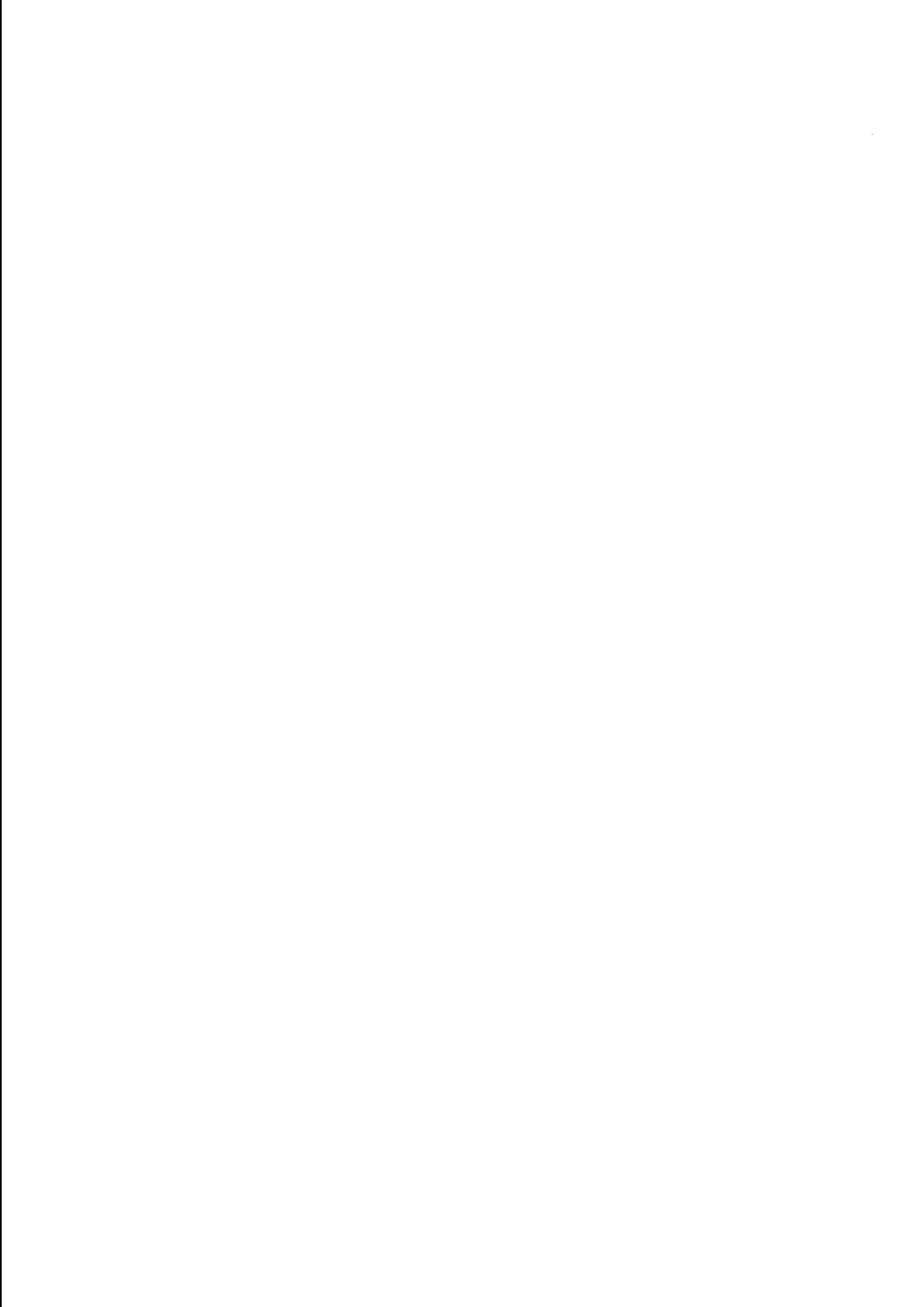
PHILIPS PTS 6000 TERMINAL SYSTEM

Philips PTS 6212 Selector Unit Local
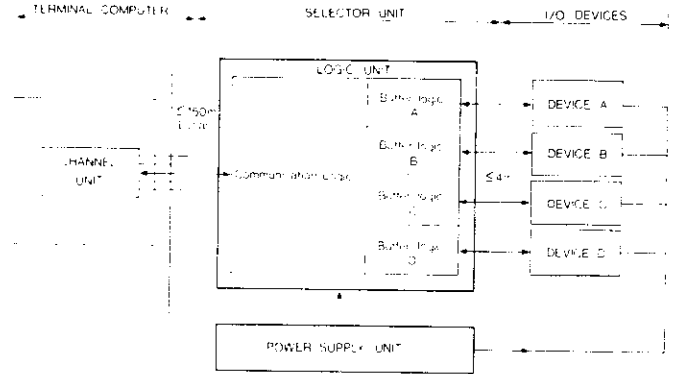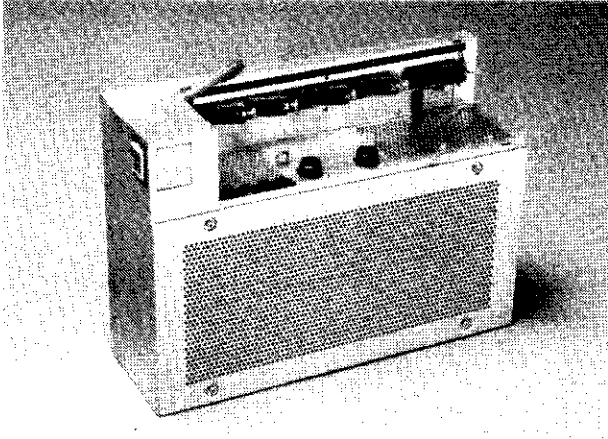
Structure of selector unit

INTRODUCTION AND APPLICATIONS

The Philips PTS 6212 Selector Unit Local handles the communications between the terminal computer and the terminal devices. It also provides power for the latter.

As a result the terminal devices are more compact and fit better in their locations. The selector units are usually installed under the table or counter on which the terminal devices are located.

Their small dimensions and the absence of special environmental or power requirements make installation particularly easy. Normal mains of 220V/50Hz and free circulation of air are the only requirements.

PRODUCT DESCRIPTION

The structure of the selector unit is shown in the figure. Basically, there are two main modules — the logic module and the power supply module fitted in a metal chassis with built-in cooling fan.

The logic module can be divided into:

— Communication logic for local terminals

— Logic buffers adapted to the type of terminal device used (printers, key-boards, displays).

The logic circuits are mounted on one printed circuit board which is mounted in the metal chassis. Different versions of this board are available to suit the terminal configuration used.

The power supply module provides approximately 100W of regulated DC power. The power switch has two positions — on/off, indicated on the panel by 1/0.

Triple space characters

By inserting an optional ROM-package on the printed circuit board, one or two triple-space characters can be included in the character repertoire of a printer. These characters may take the form of special symbols, logos, etc. Note that this option also requires a new character generator in the printer.

OPTIONS/USER ADAPTATIONS

— Two triple-space characters can be generated for special symbols, logotypes, etc.

— Position of mains switch — the standard position is at the side but this can be changed to the front during installation.

— a mounting frame can be supplied as an accessory.

CONNECTIONS

The following terminal devices may be connected to the Philips PTS 6212-001 Selector Unit Local.

— one terminal printer

— one or two keyboards (Philips PTS 6232)

— one signal display (Philips PTS 6241).

The selector unit is connected via a 2 x 3 wire cable to the channel unit local of the terminal computer via a cable of 150m max. length.

Power is obtained from the normal mains via a standard 2,5m cable and safety earth.

PHILIPS PTS 6000 TERMINAL SYSTEM

Philips PTS 6212 Selector Unit Local

TECHNICAL SUMMARY

Dimensions
depth	135 mm
height	300 mm
width	420 mm
weight	11 kg
Power	220V ± 10% 50Hz ± 2%
Power consumption	150VA

Environmental conditions	in operation	during storage
Temperature	15 to +35°C	-40 to +70°C
Humidity	20 to 80%	20 to 95%
Heat Dissipation	100W	

Philips PTS 6314 Selector Unit Modular
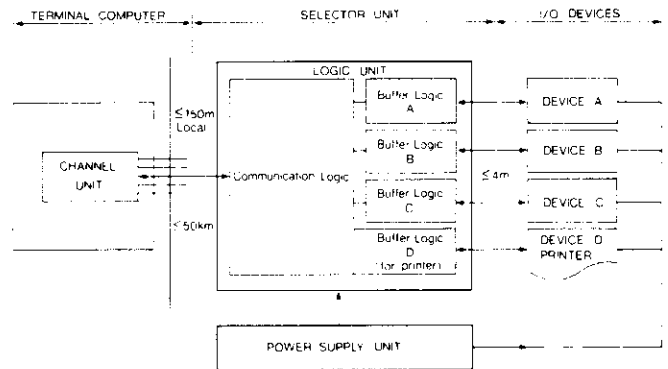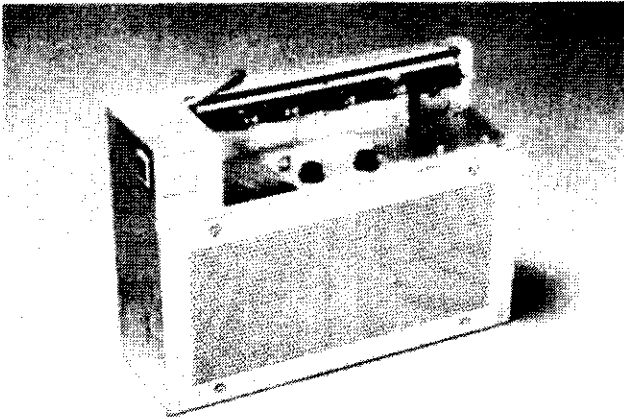
Structure of the selector unit

INTRODUCTION AND APPLICATIONS

The Philips PTS 6314 Selector Unit is called "Modular" since the interfaces for the terminal devices are in the form of interchangeable, plug-in printed circuit boards. This modular system gives the greatest possible flexibility to the configuration of a Philips PTS 6000 working station. It also allows the configuration to be easily changed after installation.

The Philips PTS 6314 Selector Unit Modular handles the communications between the terminal computer and the terminal devices. It also provides power for the latter.

As a result the terminal devices are more compact and fit better in their locations. The selector units are usually installed under the table or counter on which the terminal devices are located. Their small dimensions and the absence of special environmental or power requirements make installation particularly easy. Normal mains and free circulation of air are the only requirements.

PRODUCT DESCRIPTION

The structure of the selector unit is shown in the figure. Basically, there are two main modules — the logic module and the power supply module fitted in a metal chassis with built-in cooling fan.

The logic module can be divided into:
— Communication logic for local or remote communication with the terminal computer.
— Logic buffers adapted to the type of terminal device used (printers, keyboards, displays).

The logic circuits are mounted on:
— a communication and printer interface board, and

— separate interface boards for the terminal devices, called device interfaces (adapter boards).

The power supply module provides approximately 100W of regulated DC power.

The power switch has two positions — on/off; indicated on the panel by 1/0.

Communication and printer interface board

The communication and printer interface board is mounted in the metal chassis. Two versions of this board are available; one handles the communication procedure for the "Channel unit for Local Terminals" the other handles the communication procedure for the "Channel unit for Remote Terminals". Both boards also have an interface for connection of a printer.

Device interfaces (Adapter boards)

In addition to the communication and printer interface board the adapter boards for terminal devices can be mounted in the selector unit modular. There is space for three adapter boards. The adapter boards have identical mechanical dimensions and can be inserted in any of the three places in the basic module.

Triple space characters

By inserting an optional ROM-package on the printed circuit board, one or two triple-space characters can be included in the character repertoire of a printer. These characters may take the form of special symbols, logos, etc. Note that this operation also requires a new character generator in the printer.

Philips PTS 6314 Selector Unit Modular

OPTIONS/USER ADAPTATIONS

— Mains connection

— Local or remote connection to the terminal computer.

— Configuration of terminal modules

— Two triple-space characters can be generated for special symbols, logotypes etc.

— Position of the mains switch — the standard position is at the short side but this can be changed to the long side during installation.

CONNECTIONS

The terminal modules are connected to the Philips PTS 6314 Selector Unit Modular via the standard 3m cables. With a special cable the length can be up to 10 meters.

For connection to a local computer the selector unit is directly connected by a 2 × 3 wire cable (maximum length 150 m) to the Channel Unit for Local Terminals of the terminal computer.

For connection to a remote computer, the selector unit is connected by a 2 × 12 wire cable to a MODEM (maximum cable length 15m) or to a Philips PTS 6471 Transfer Unit (maximum cable length 50m). A telephone line and modem then completes the connection to the Channel Unit for Remote Terminals of the terminal computer.

Power is obtained from the normal mains via a standard 2.5m cable with safety earth.

TECHNICAL SUMMARY

Dimensions

depth	155 mm
height	300 mm
width	420 mm
weight	12 kg

Power requirement	200—240 V ± 10%, 50 Hz ± 2%
	100—127V ± 10%, 60 Hz ± 2%

Environmental

conditions	in operation	during storage
Temperature	+ 15 to + 35°C	—40 to + 70°C
Humidity	20 to 80%	20 to 95%
Heat dissipation		

PHILIPS PTS 6000 TERMINAL SYSTEM

Philips PTS 6471 Transfer Unit
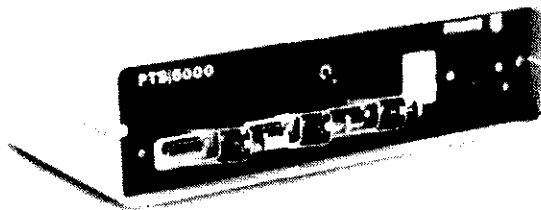
INTRODUCTION AND APPLICATION
The Philips PTS 6471 Transfer Unit is used to connect
two remote selector units to one modem.

The Transfer Unit also includes a test facility for
fault locating to the PTT domain or the remote terminal
why the Transfer Units must be used in configurations
where the modems do not have this test facility. (Nor-
mally the modems also include this test facility.)

Their small dimensions and the absence of special
environmental or power requirements make installation
particularly easy. Normal mains and free circulation of
air are the only requirements.

PRODUCT DESCRIPTION
The Philips PTS 6471 Transfer Unit consists of a metal
chassis fitted with a front panel and covered by a metal
case. On the chassis is mounted a PC-board for the
power supply and the logic functions. On the front panel
is mounted three connectors and five light emitting
diodes for modem functions and error indications plus
an indicator lamp showing "power on".

OPTIONS/USER ADAPTIONS
Two main versions of the unit are available differing on
the power supply side:

— The European standard version with Europlug,
  preset to 220 V mains

— The US/Canadian (UL/CSA) version with US-plug,
  preset to 120 V mains.

Both versions are adjustable to 100, 110, 120, 127, 200,
220, 230 and 240 V and can be used on both 50 and 60 Hz
without adjustment.

CONNECTIONS
The Philips PTS 6471 Transfer Unit is connected either to
a modem (a 4 m cable) or directly to the channel unit for
remote terminals in the terminal computer by a cable
not exceeding 50 meters. The mains cable is 2.5 m.

TECHNICAL SUMMARY

Transfer rate	up to 9.6 K baud

Dimensions	
depth	220 mm
height	85 mm
width	315 mm
weight	2 kg

Power	
Input	Voltage variation ± 10%
	47—62 Hz
Output	+ 5V ± 2% 200 mA
	+ 12V ± 10% 150 mA
	— 12V ± 10% 150 mA

Environmental conditions	in operation	during storage
Temperature	+ 15 to + 35°C	— 40 to + 70°C
Humidity	20 to 80%	20 to 95%
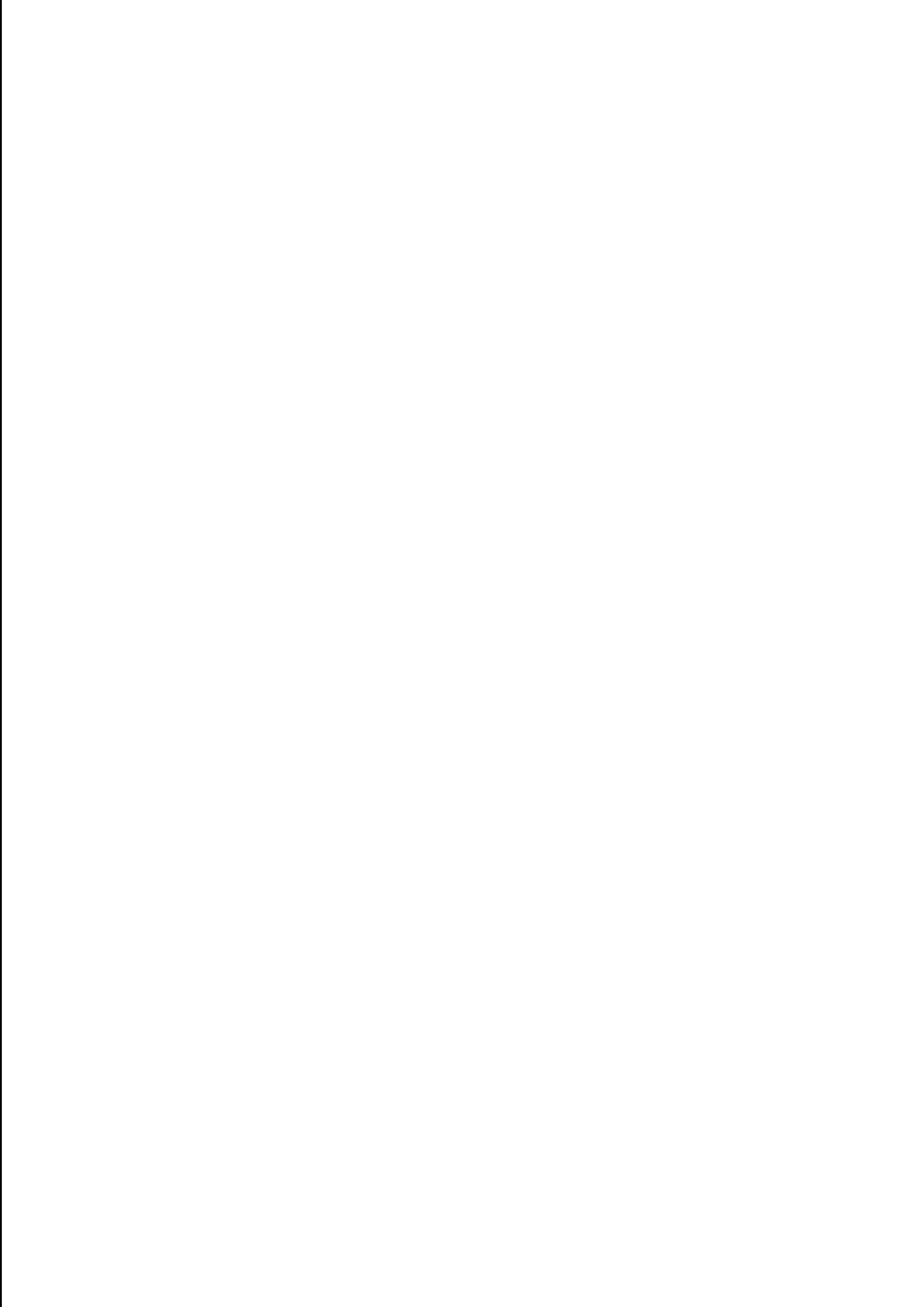
Philips PTS 6411 Modular Device Adaptor
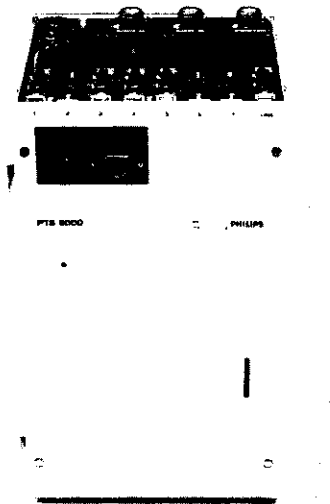
The Philips PTS 6411 Modular Device Adaptor handles in a workstation the communication between up to 7 connected workstation modules and the terminal computer or workstation controller. In some cases it also provides power for the workstation modules. The communication takes place over a multipoint network for either locally sited (LWSI) or remotely sited (RWSI) workstations.

The PTS 6411 MDA is intended to be used in

● extended configurations with many connected modules in a workstation

● configurations where special equipment from other suppliers are connected

● configurations where terminal modules from different generations are mixed in the workstation.

The Philips PTS 6411 Modular Device Adaptor is usually installed under the table of the counter on which the workstation modules are located. The small dimensions and the absence of special environmental requirements makes installation particulary easy. Normal mains and free circulation of air are the only requirements.

PRODUCT DESCRIPTION

The Philips PTS 6411 Modular Device Adaptor is built in a rack system. It comprises

● power supply unit

● one slot for network interface board

● three slots for module interface boards

● connector panel

Power Supply
The power supply is a detachable module. It is adjustable for different voltages and frequencies. Three power cable outlets are provided for work station modules that require more power than can be supplied through SDI/SUM, for example plasma display unit. The mains cable has a length of 2.5 m. A "power on/off" switch is provided.

Network Interface
The standard network interface boards are:

● LWSI Local Workstation Interface

● RWSI Remote Workstation Interface

One at a time can be used and occupies one slot in the rack.

Module Interface
There are three (3) available slots in the rack for module interface boards. The standard board has four (4) SDI ports, with a jumper at each port it is possible to select SDI/SUM or SDI/V24 interface.

For work station modules using other interfaces than SDI, special interface boards can be developed on a project basis.

Up to seven (7) work station modules can be connected to three (3), or less, module interface boards.

Philips PTS 6000 Terminal System

Philips PTS 6411 Modular Device Adaptor

Connector Panel

The top cover of PTS 6411 MDA serves as connector panel. The connectors are

- Mains receptable.

- "LINE" for network cable. Internally connected to the network interface board.

- Up to 7 connectors for workstation modules. Internally connected to the module interface board(s).

- 3 power outlets for certain workstation modules, e.g. PDU 6386, MSU 6266, TTP 6225.

TECHNICAL SUMMARY

Mains requirement	100–130 V ±10% 200–240 V ±10% 50 or 60 Hz ±2%

Environmental conditions	Temperature
	  In operation +10 to 35°C
	  During storage −40 to +70°C
	Humidity
	  In operation 20 to 80% RH
	  During storage 20 to 95% RH

Heat dissipation	max 120 W
Power consumption	max 200 W
Dimensions	Depth 210 mm Height 390 mm Width 220 mm
Weight	9 kg