

Wenz

TELETYPE 600 WPM START-STOP

TELEGRAPH SYSTEM

Teletype 600 WPM Start-Stop

Telegraph System

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SECTION 1

Description

600 WPM Start Stop System

Teletype 600 Word Per Minute
Start-Stop Telegraph System

The Teletype 600 WPM start-stop telegraph system provides a high speed means (60 characters per second) of converting the code holes in a perforated tape (5 or 6 unit) into telegraph signals for transmission over a single telegraph channel and reproducing these signals in perforated tape form at a distant receiving station at this same high speed. The system consists of the following equipment which can be supplied eventually packaged as shown in the photographs in Section III or as individual units.

Sending Station:

600 WPM tape reader
Sending distributor set
Table

Receiving Station:

600 WPM reperforator
Receiving distributor set
Table

The equipment is small in size and has been carefully designed for ease of handling and operation. The photograph shows one way of handling the tape, however a variety of methods can be provided to suit specific applications.

Section III of this folder shows a proposed method of packaging and supplying the equipment for this system. Section II shows the equipment available at present.

Pricing Information
Sending Station
Receiving Station

How the System Works

A previously prepared tape, either chadless or fully perforated, is placed in the tape gate of the tape reader at the sending station. The code holes for a complete character are converted into electrical impulses which are fed simultaneously on a multi-wire basis into the electronic sending distributor. The distributor generates the start-stop signals and places the code signals in proper time sequence on a single telegraph channel. The stop pulse may be of any length desired. Two tape gates can be provided, as an optional feature, for alternately reading two tapes. One tape is held stationery and automatically starts to feed when the other has been completely fed through its gate, providing "flip-flop" operation between the two readers. The equipment normally operates from a 60 cycle, 115 volts A-C power source but can be arranged to operate from a variety of power supplies.

The code signals are received, at the receiving station, in sequential order by the receiving distributor and fed into the control unit on a multi-wire basis where they are stored until called for by the reperforator unit. Synchronizing pulses are continuously generated by the reperforator unit which trigger the control unit at the proper time in the cycle to feed the stored code signals simultaneously to the selector magnets.

The perforated tape produced at the receiving station can then be used

To print hard copy on a Teletype printer

To control a Teletypesetter equipped line casting machine

To control a business machine equipped with a tape reader

For the input of a computer

For re-transmission to other points

SECTION II

Commercially Available Equipment

The equipment described in items 1 to 4 of this section has been supplied in limited quantities packaged as shown. This equipment can be made available commercially.

600 WORD PER MINUTE

TAPE READER

TELETYPE HIGH SPEED TAPE READER

The Teletype high speed tape reader, shown in attached Photo 540313-26 and 540313-27 is a motor driven, magnet controlled device for reading either chadless or fully perforated tape at speeds up to 3600 characters per minute (60 per second). It converts the code holes in a perforated tape into electrical impulses which are transferred simultaneously on a multi-wire basis into the sending distributor, for conversion into telegraph start-stop signals or into other auxiliary apparatus for the control of various electronic and electrical apparatus. It is available in five, six and seven hole code and can be supplied as a single unit as shown in Photo 54013-26 or eventually as a double unit as shown in Photo 540315-30 in Section III.

A constantly rotating eccentric operates the tape sensing fingers through a magnet controlled mechanism that receives its impulse from either a manual or mechanically operated switch to control the sensing and feeding of the tape. An end of tape contact is provided to stop the sensing mechanism when the tape has been completely fed through the tape gate and to control the alternate feeding of two tapes in the double tape gate.

The motor is of the synchronous type for operation on 110-120 volt, single phase 60 cycle A. C. power supplies.

The high speed tape reader is a single unit named:

TR-600 WPM Tape Reader (Photo 540313-26)

TECHNICAL DATA
FOR
THE TELETYPE HIGH SPEED TAPE READER

Dimensions - Single tape gate - 7-1/2" wide, 5" high, 9" deep
Double tape gate - 12" wide, 5" high, 9" deep

Weight - Single tape gate - 12 lbs.
Double tape gate - 14 lbs.

Control Magnet Characteristics

Attract - 12 milleseconds at 115 V D.C. with
.075 amp through the coil
Release - 12 milleseconds

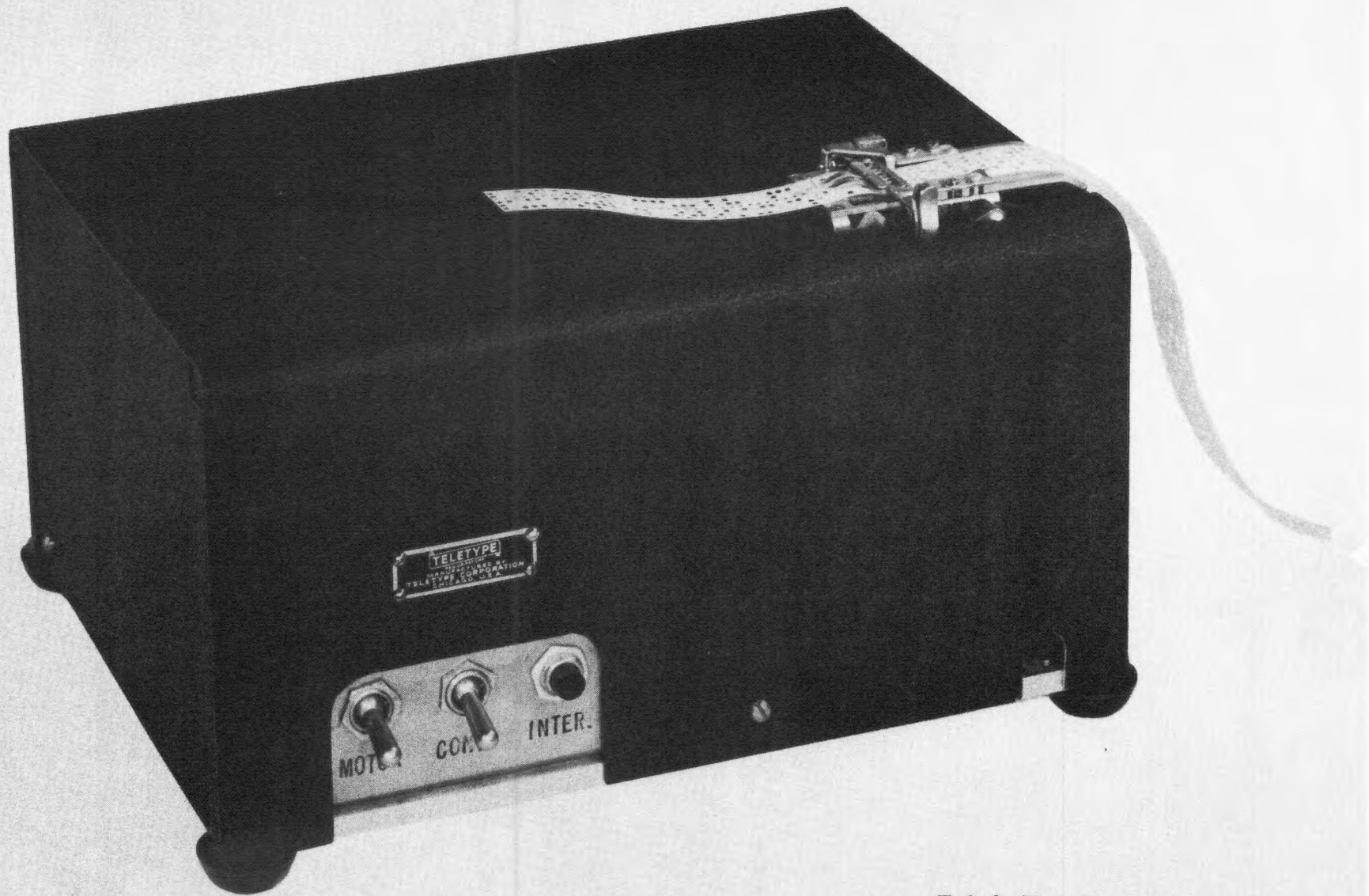
Tape Sensing Contacts

One contact of the rocker, make-break type which can be wired for either polar or neutral signals, is provided for each code element (5, 6 or 7).

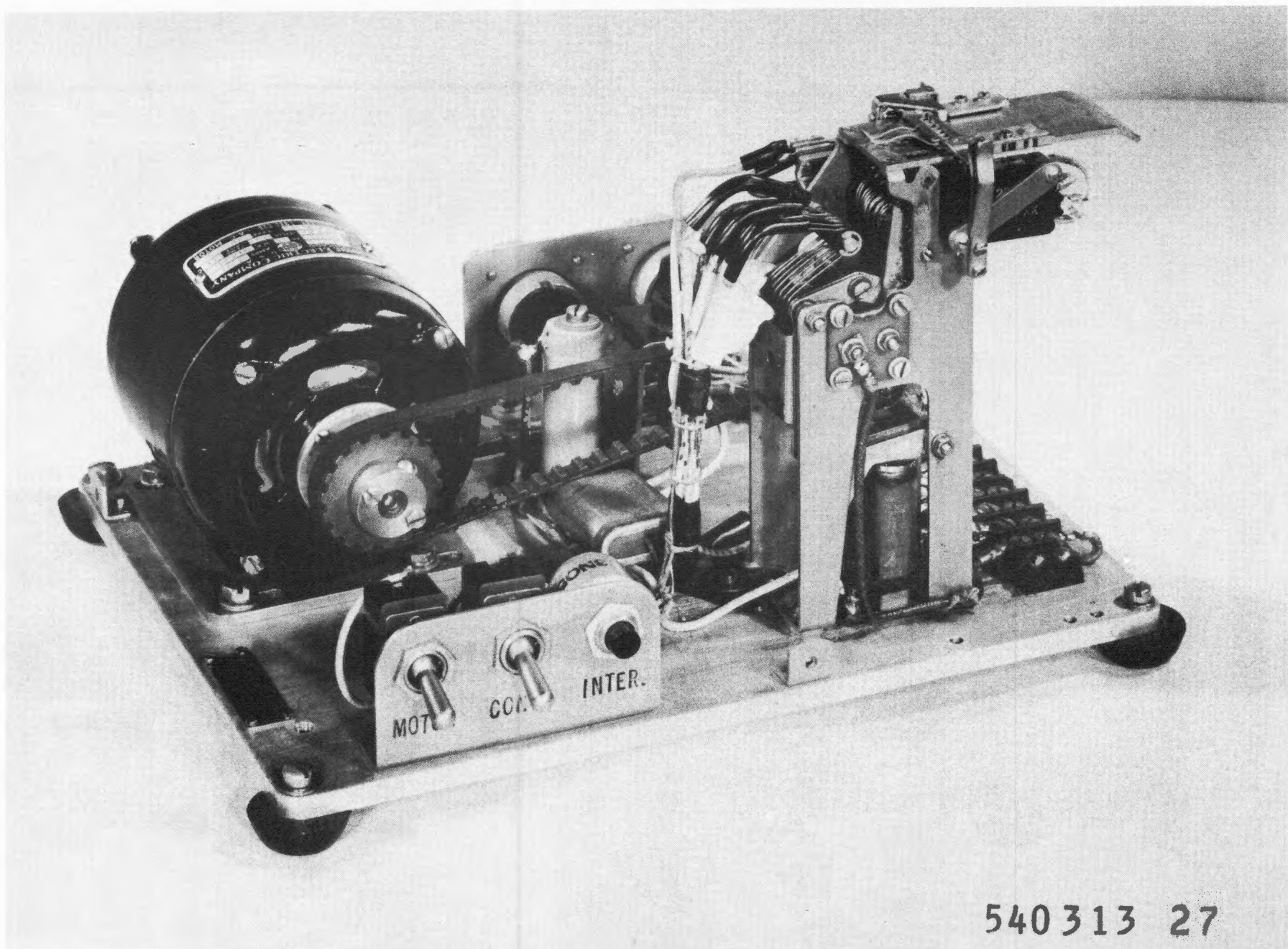
Contact Time - 50% of operating cycle
(at 600 WPM this would be 8.3 milleseconds)
Max Current - .050 amp

Input Connections - AN Type Connectors

Motor - - - - - 4 contacts
Signal and Controls - 14 contacts



540313 26



540313 27

600 WORD PER MINUTE

SENDING DISTRIBUTOR SET

600 WPM Sending

Distributor Set

The Teletype electronic sending distributor set, shown in photo 540313-29 consists of a sending distributor and power supply unit assembled into a cabinet. The distributor stores the impulses received on a multi wire basis from the tape reader, generates the start-stop signals and distributes the stored impulses in proper time sequence to a single telegraph channel. The power supply unit furnishes heater, bias and plate power to the electron tubes in the distributor. Each unit consists of a chassis and front panel, mounted on slide rails in the cabinet, on which all of the components are assembled. Standard glass envelope electron tubes are used and the front panel is fitted with the necessary control knobs and neon lamp indicators. The set is operated from a 60 cycle 115 volt AC power source.

Photo 540315-30 in Section III shows a proposed commercial arrangement of apparatus using a single distributor and power supply unit.

TECHNICAL DATA FOR

TELETYPE ELECTRONIC SENDING DISTRIBUTOR SET

Equipped with electron tubes:

Dimensions

Cabinet	24" wide	26-1/2" high	19" deep
Distr. Unit	19" wide	7" high	13-3/4" deep
Power Unit	19" wide	7" high	13-3/4" deep

Weight

Complete set - 140 lbs.

Single Unit

Dimensions

Distr. and Power Unit - 4" wide 15" high 15" deep

Weight

30 lbs.



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600 WORD PER MINUTE
RECEIVING DISTRIBUTOR SET

600 WPM RECEIVING

DISTRIBUTOR SET

The Teletype electronic receiving distributor set, shown in photo 540313-28 consists of a receiving distributor, control unit and power supply unit assembled into a cabinet. The signals arriving at the receiving station, over a single telegraph channel, are received in the distributor in sequential order. The distributor transfers these signals on a multi-wire basis to the control unit where they are stored until called for by the reperforator unit. The power supply unit furnishes heater, bias and plate power to the electron tubes in the distributor and control units. Each unit consists of a chassis and front panel, mounted on slide rails, on which all of the components are assembled. Standard glass envelope electron tubes are used and the front panel is fitted with the necessary control knobs and neon lamp indicators. The complete set is operated from a 60 cycle 115 volt A. C. power source.

Photograph 540315-31 in Section III shows a proposed commercial arrangement of apparatus using a single distributor, control and power supply unit.

TECHNICAL DATA
FOR
TELETYPE ELECTRONIC DISTRIBUTOR SET

Equipped with electron tubes:

Dimensions:

Cabinet	24" wide	26½" high	19" deep
Rec. Distr.	19" wide	7" high	13-¾" deep
Control Unit	19" wide	7" high	13-¾" deep
Power Unit	19" wide	7" high	13-¾" deep

Weight:

Complete set - 158 lbs.

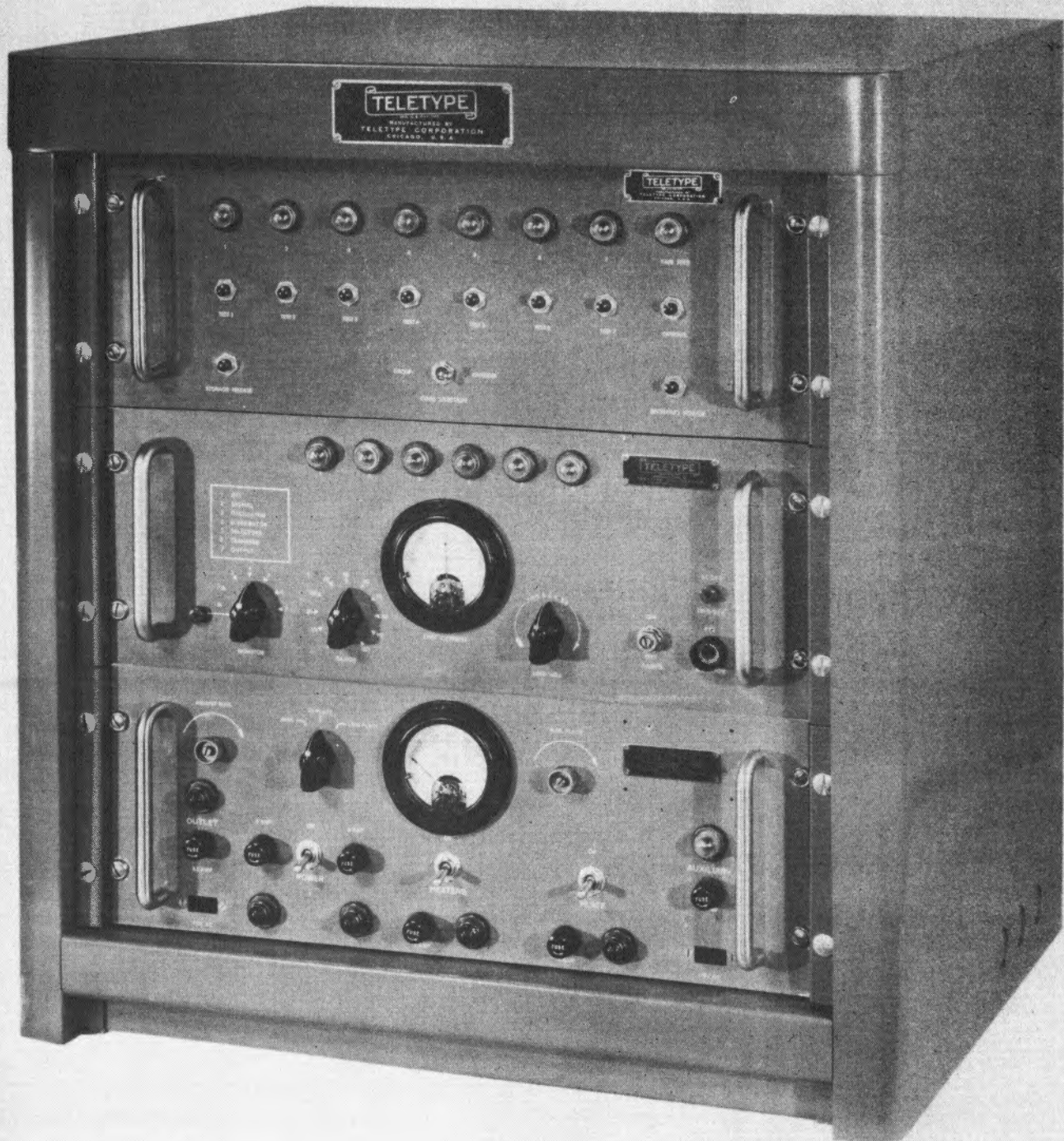
Single Unit

Dimensions:

Distr.-Control-Power Unit 4" wide 15" high 15" deep

Weight:

30 lbs.



540313 28

TELETYPE HIGH SPEED

PUNCH

TELETYPE HIGH SPEED PUNCH

The Teletype High Speed Punch shown in attached photo - 540209-73 is a motor-driven, magnet controlled device, consisting of a perforating unit and a base, for producing fully perforated tape at speeds up to 3600 operations per minute (60 per second). It is available in five, six and seven hole code. Each code hole has an associated code punch controlled by its own magnet. Tape feeding is controlled by a magnet which receives its signal with each group of code impulses. All magnets involved in a given code combination receive their impulses simultaneously from auxiliary apparatus which is triggered by a synchronizing pulse originating within the punch unit.

The punch has capacity for perforating a single standard tape, two standard tapes simultaneously or parchment tape. Single or double tape reels can be supplied as part of the base unit. The motor is of the synchronous type for operation on 110-120 volt, single phase 60 cycle A.C. power supplies.

The high speed punch consists of two sub units, namely:

BRPE - 600 WPM Punch Head (Photo - 540209-70)
BRPEB - Base Unit (Photo - 540209-72)

Price Information

BRPE - 600 WPM Punch Head

Approximately \$500 in lots of 100
Approximately \$345 in lots of 1,000

BRPEB - Base Unit

Approximately \$200 in lots of 100
Approximately \$135 in lots of 1,000

TECHNICAL DATA
FOR
THE TELETYPE HIGH SPEED PUNCH

Dimensions - Single Tape Reel - 6-3/4" wide, 10" high, 1 1/2" deep.
Double Tape Reel - 8-3/4" wide, 10" high, 1 1/2" deep.

Weight - 25 Lbs.

Punch Magnet Characteristics: -

Attract - 6 to 8 milliseconds at 115 V. D.C. with series resistors limiting current to .025 amp.

Release - Within 6 milliseconds.

Feed Magnet Characteristics: -

Attract - 8 to 10 milliseconds at 115 V. D.C. with series resistors limiting the current .025 amp.

Release - Within 4 milliseconds.

Note: The magnet operating characteristics are largely dependent upon the circuitry of the auxiliary apparatus, therefore, the above values can be varied somewhat for specific applications.

Synchronizing Contacts: -

Two contact assemblies are provided, each one equipped with a rocker type contact which may be wired for make-break or break-make operation.

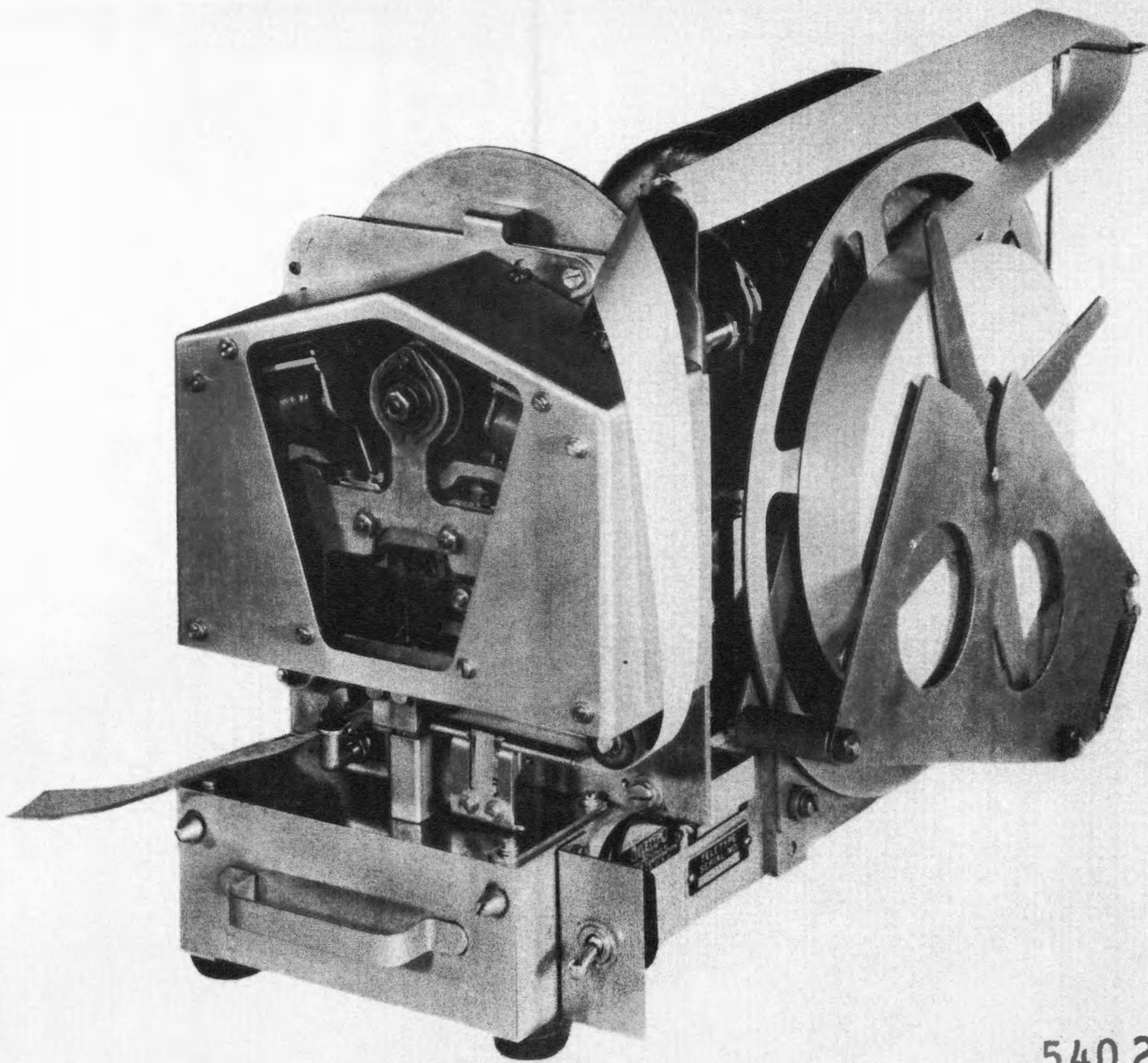
No. 1 Contact - This contact is fixed to an adjustable disc and the make or break point is variable within a range of 225° in the operating cycle.

No. 2 Contact - Secured to a movable arm on the adjustable disc. Make or break point is variable within a range of 170° with respect to a fixed position of the disc.

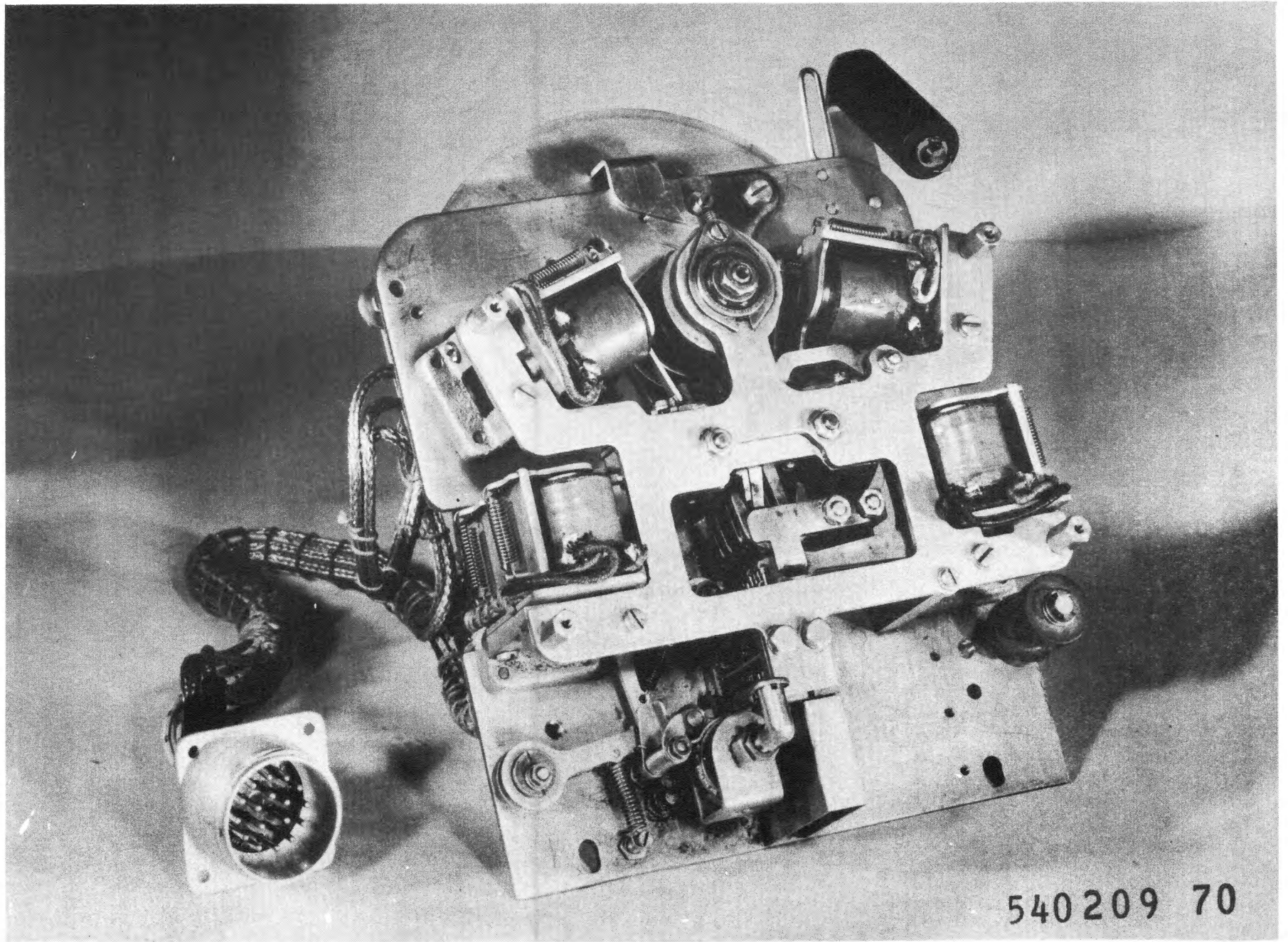
By connecting these contacts in series or in parallel, the length and timing of the synchronizing pulse may be varied extensively.

Input Connections - AN type connectors.

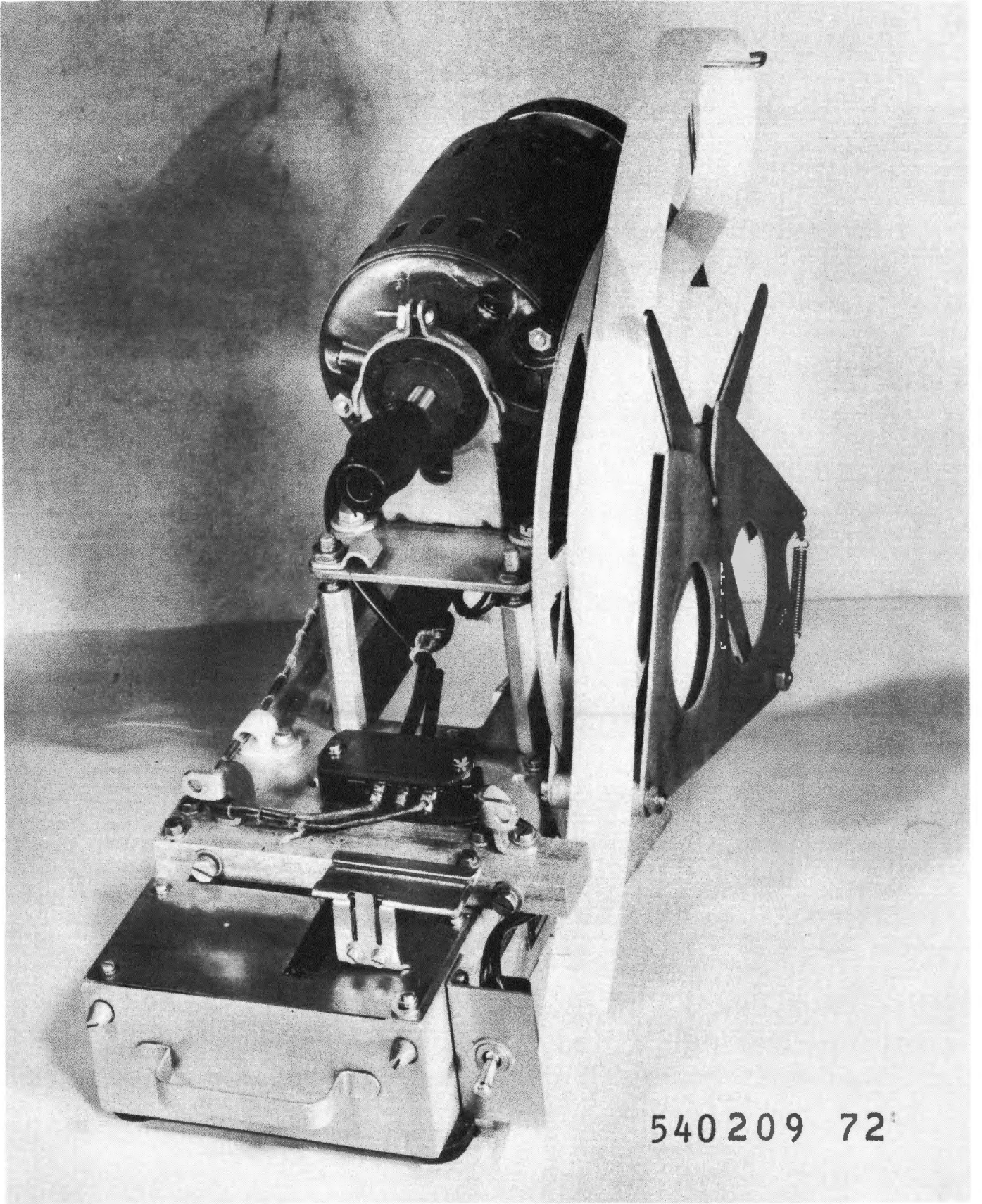
Motor - - - - - 4 contacts
Signal and controls - 17 contacts



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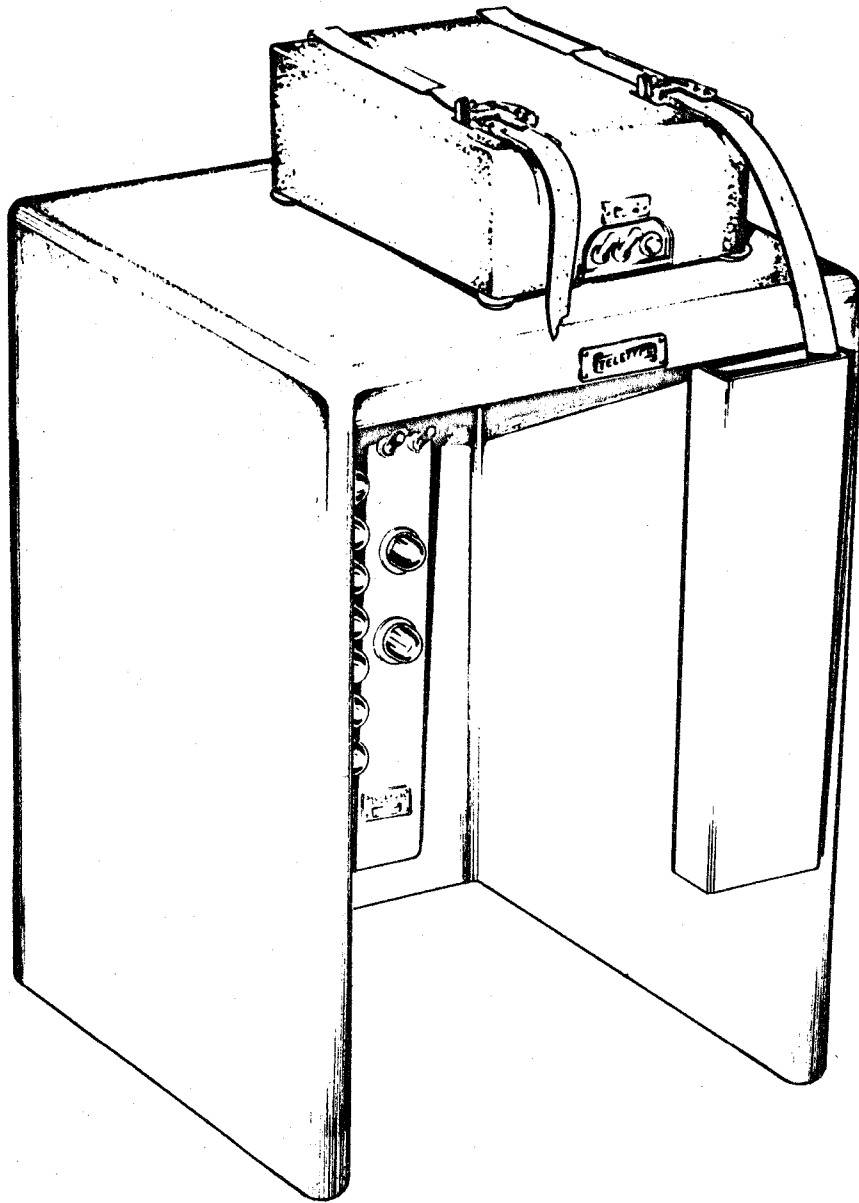
540209 70



540209 72

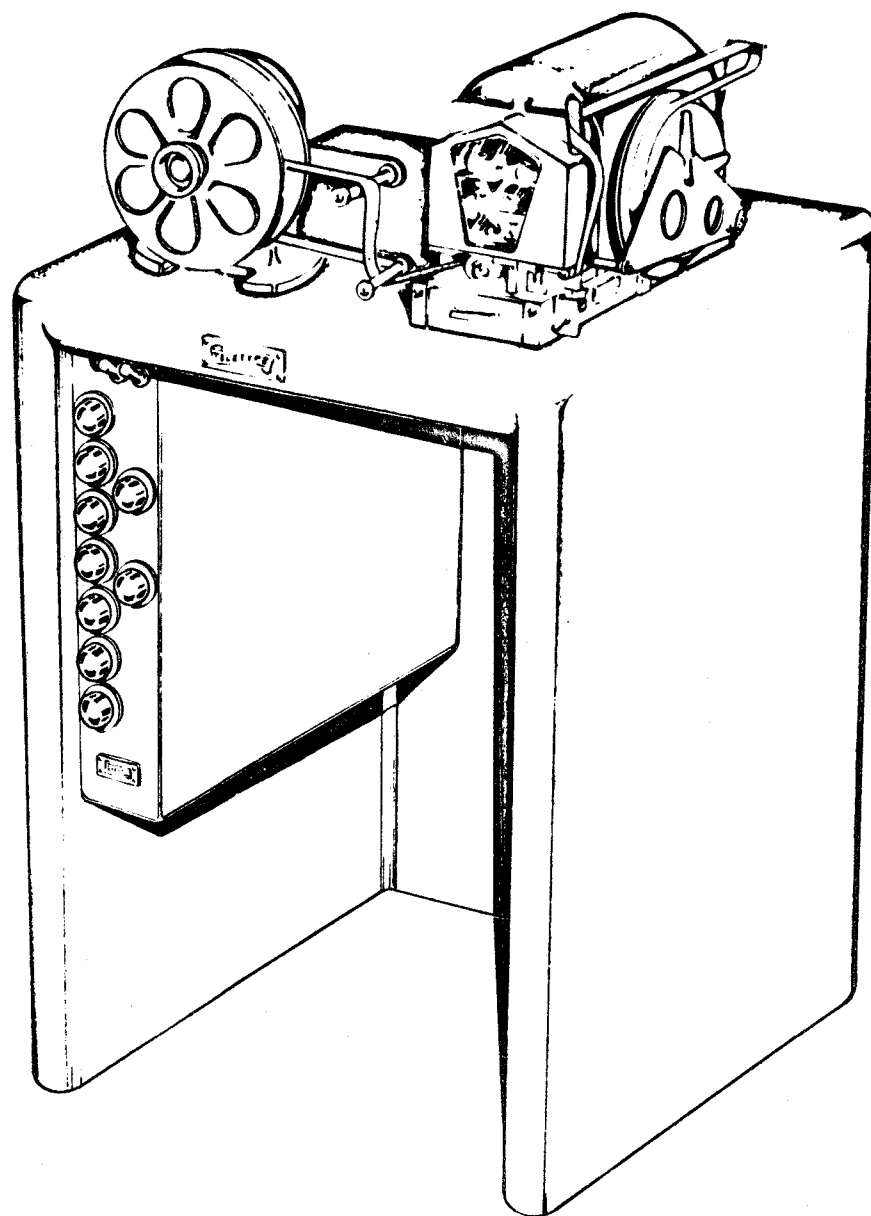
SECTION III

**Photographs of 600 WPM Start-Stop equipment packaged
for commercial applications.**



**SENDING STATION
OF
TELETYPE 600 WORD PER MINUTE
START STOP SYSTEM**

540315 30



**RECEIVING STATION
OF
TELETYPE 600 WORD PER MINUTE
START STOP SYSTEM**

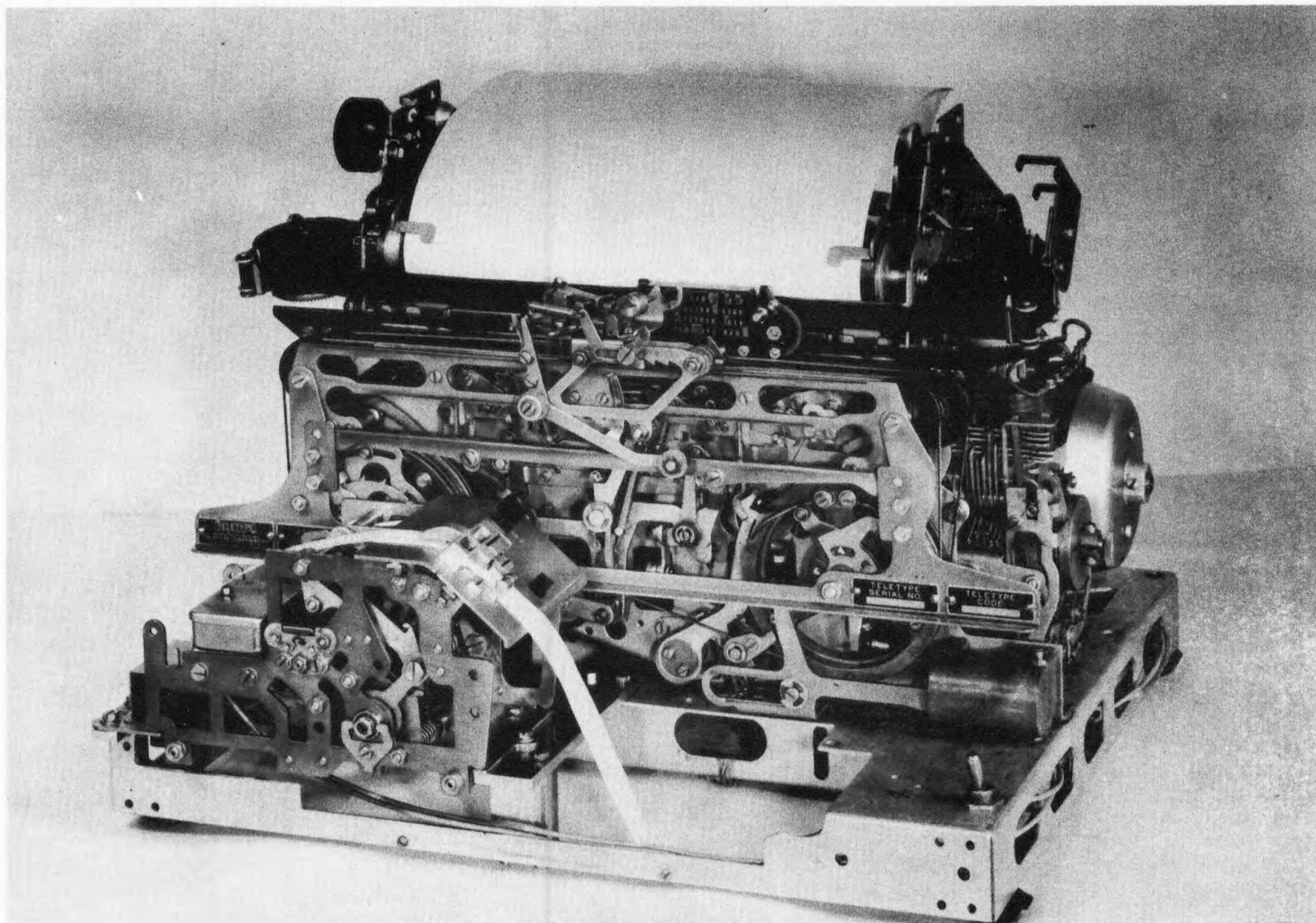
540315 31

MODEL 28 TAPE-TO-PAGE CONVERTER

The 600 word per minute system produces punched tape which can be converted to page copy at its final destination.

For this application Teletype has developed the Model 28 Tape-to-Page Converter, which combines in a compact set a tape reader and a page printer. An immersion proof carrying case is available which provides the maximum in protection combined with portability, thus permitting the most varied uses in military or emergency civilian communication problems. Tape may be converted to page copy with the unit mounted in a moving vehicle, ship, plane or any other location, fixed or mobile, that can provide necessary power input.

The same instrument can be used for reception over conventional telegraph lines or, with suitable radio facilities, over radio links. The accompanying illustrations show the Tape-to-Page Converter and its immersion proof carrying case.



MODEL 28 PRINTER WITH TRANSMITTER DISTRIBUTOR

For Making Page Copy Locally From Tape



IMMERSION PROOF CARRYING CASE -
Advance Base Model 28 Page Printer