REPLACING PAGE ADDENDUM
Filing Instructions:

1. **REMOVE FROM THE SECTION THE PAGES NUMBERED THE SAME AS THOSE ATTACHED TO THIS PINK SHEET.**
2. **INSERT THE ATTACHED PAGES INTO THE SECTION IN THEIR PLACE.**
3. **PLACE THIS PINK SHEET AHEAD OF PAGE 1 OF THE SECTION.**

"DATASPEED ®" PRINTER

RECEIVE-ONLY STATION

GENERAL DESCRIPTION AND OPERATION

1. GENERAL

1.001 This addendum, which supplements Section 578-500-100, Issue 3, is issued to describe engineering changes incorporated in recent units. These include a new built-in test character generator and recorder access lid (added to simplify cleaning paper dust from the recorder electrodes), addition of a paper-out switch instead of detection of a paper-out condition using electronic logic, and several minor changes which affect the appearance of the components. Arrows in the margins indicate changes and additions.

1.002 Insert the attached pages in accordance with the filing instructions above.

Attached:
Page 7 dated September 1970, reissued
Page 8 dated September 1970, revised
Page 9 dated September 1970, revised
Page 10 dated September 1970, revised
Page 13 dated September 1970, revised
Page 14 dated September 1970, reissued

Prepared for American Telephone and Telegraph Company by Teletype Corporation

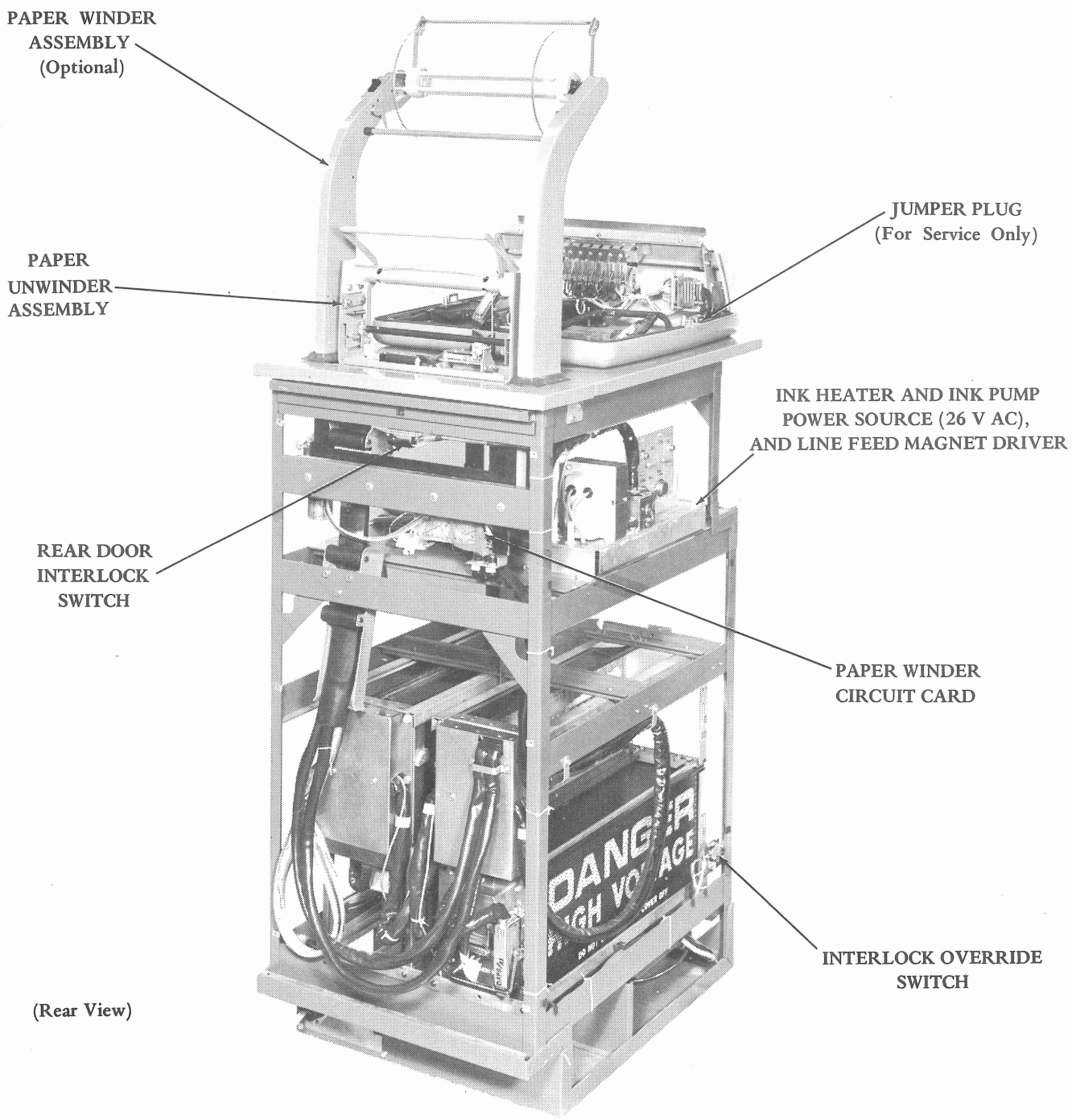


Figure 6 - Cabinet Assembly Less Removable Panels and Doors

BREAK LAMP AND KEY: When key is depressed supervisory channel signal is interrupted. Lamp remains on and signal is interrupted until key is released (see note).

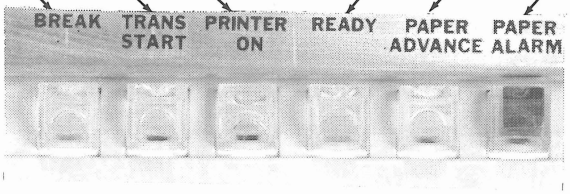
TRANSMIT START LAMP AND KEY: With key depressed, discrete calling generator is activated. Lamp remains on until generator completes its cycle. With no generator option present, lamp lights when depressed, but no action takes place (see note).

PRINTER ON LAMP AND KEY: When printer motors and high voltage supply are turned on, this lamp lights. If lamp lights when key is depressed, all interlocks are closed and paper supply is adequate. If lamp does not light, check interlocks and paper alarm circuits.

LOW PAPER ALARM LAMP AND KEY: When a low paper condition exists, as monitored by the paper unwinder, this lamp (red) lights (see note). Depressing key causes W test characters to be generated repeatedly (late design units only).

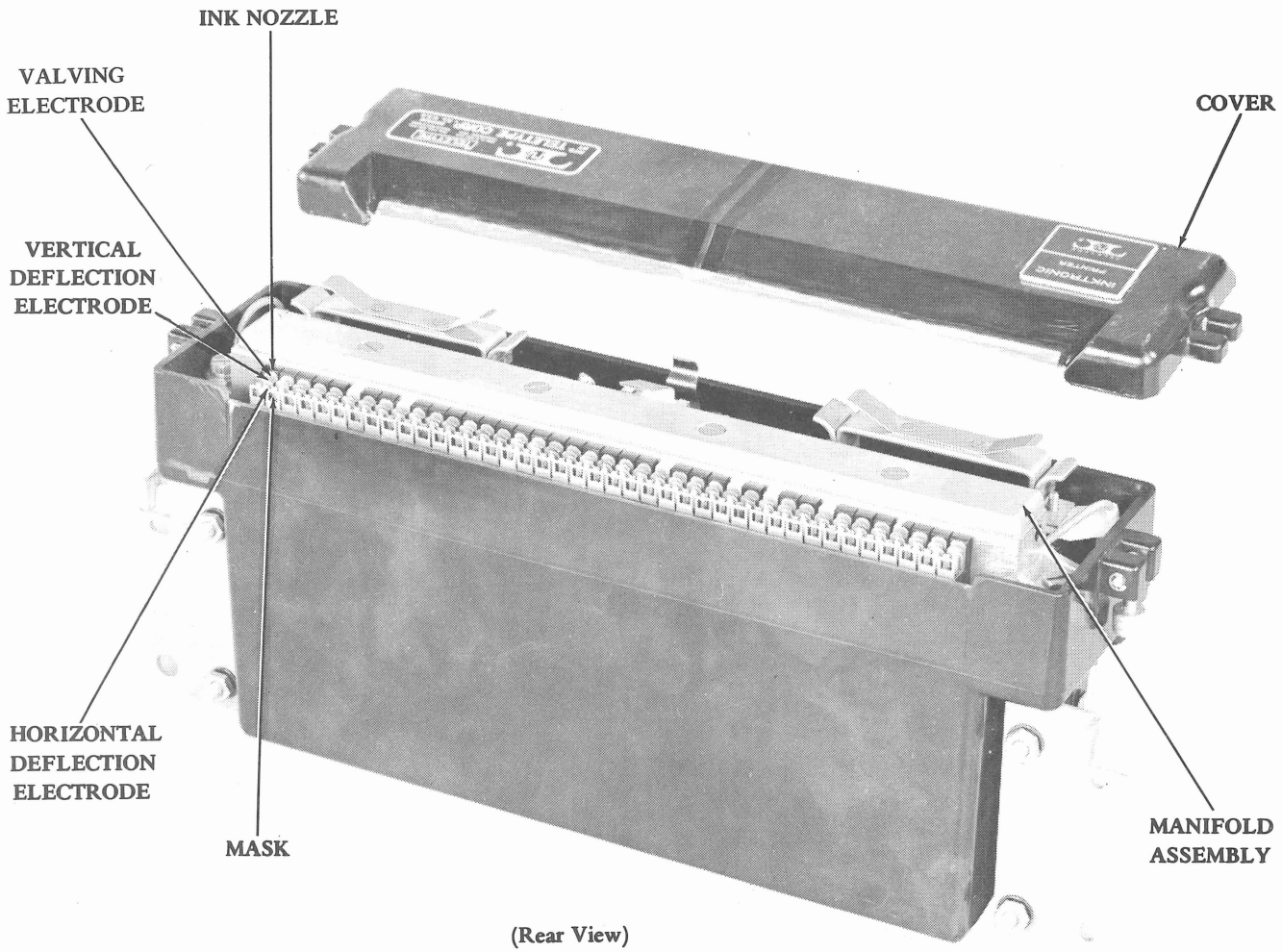
PAPER ADVANCE LAMP AND KEY: Depressing this key initiates a repetitive line feed action. Paper feed function is set for 15 lines/sec; faster rates may be selected. Lamp remains lit while key is held (see note).

READY LAMP AND KEY: When ready lamp is on, the interlock and alarm string (all interlocks, paper-out alarm, and overvoltage circuit) are in their ready state. Printer should then be capable of turning on and receiving messages, allowing for a 15-minute warmup time. Depressing key resets overvoltage monitoring circuits (see note).



Note: This is a nonlatching, nonexcluding type key (push-button) assembly.

Figure 7 - Operating Controls on Front Panel of Recorder/Transport Base Assembly



(Rear View)

Purpose

The molded container encloses the ink reservoir, ink pump, heater, thermostats, manifold, and deflecting electrode assembly. This mechanism lifts minute quantities of ink from the reservoir, and accelerates and deflects the ink droplets to form the characters.

Description

The container with cover is approximately 4-1/2 inches high, 10-1/2 inches wide, and 2-1/2 inches deep, and weighs 8 pounds. The recorder assembly is supported and positioned by the front brackets on the paper transport mechanism. Late design units have a hinged access lid above the electrode assembly with a white character position scale stamped on it (not shown in illustration), and the metal strip down the center of the cover is omitted. They also have a continuous mask strip instead of a mask for each individual set of electrodes, as shown in illustration.

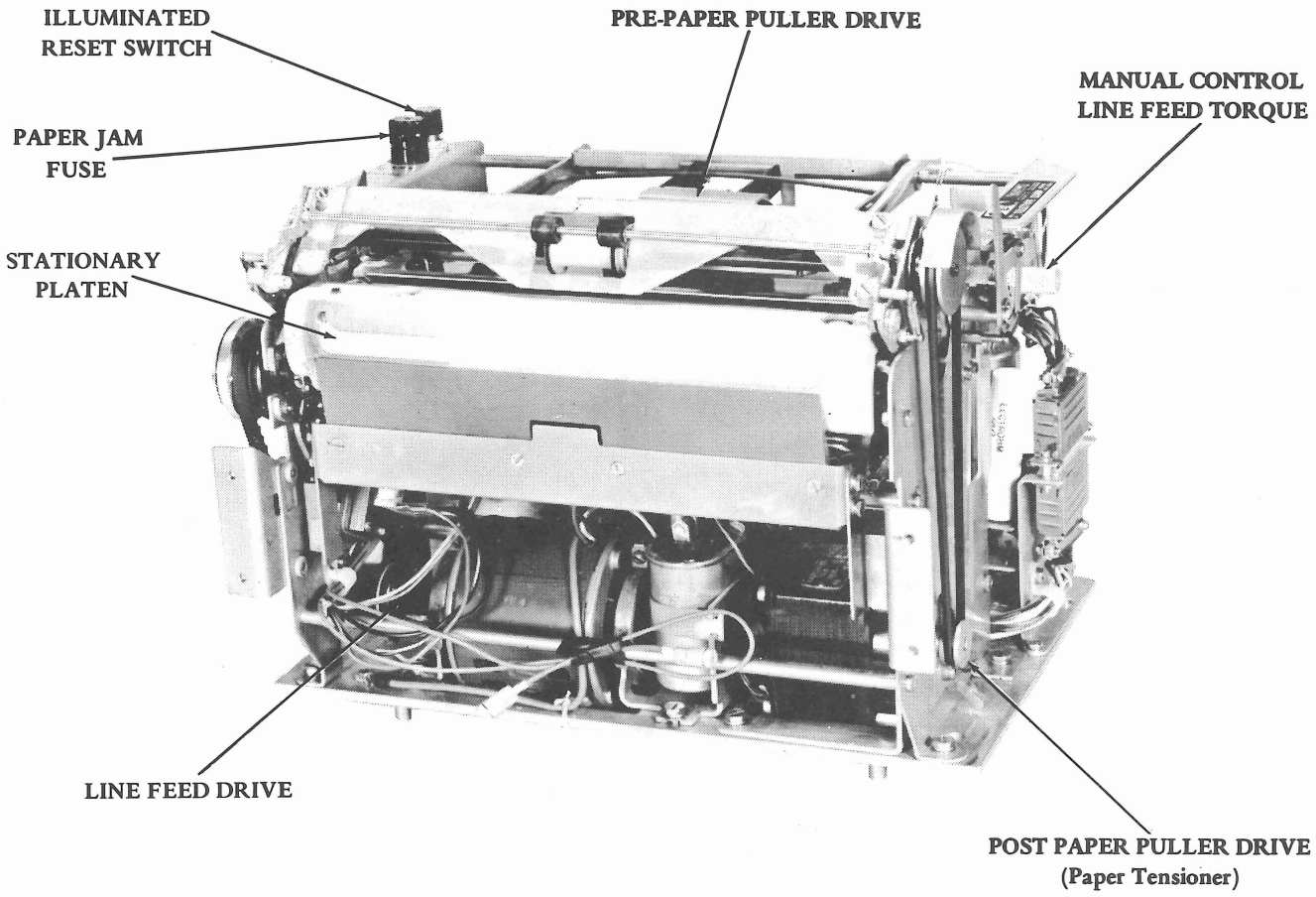
Operation

The reservoir holds one pint of ink which provides for 1000 to 1500 hours of printing at 1200 wpm. The ink is heated and held at 133°F; the warmup time for a 70°F ambient temperature in about 15 minutes. The heater is normally on and the thermostats guard against an overheated condition. (Refer to wiring diagram 8344WD for a schematic diagram of the ink pumps and ink heater circuitry.) Refer to the text for electrode description.

Maintenance

The access lid found on late design units simplifies maintenance by permitting the electrodes to be cleaned without removing the cover from the set.

Figure 8 - Recorder (Cover Removed)



Purpose

The paper transport assembly steps the paper over the platen. The line feed assembly is an escapement type stepping mechanism which positions the paper by increments of 0.167 inch. The unit operates at speeds up to 1200 wpm. Three circuit boards located at the rear of the unit provide automatic control of the paper handling mechanism. The left rear corner of the unit houses the high voltage supply which furnishes the electrostatic charges for the elements of the recorder. The recorder is mounted in front of the platen.

Description

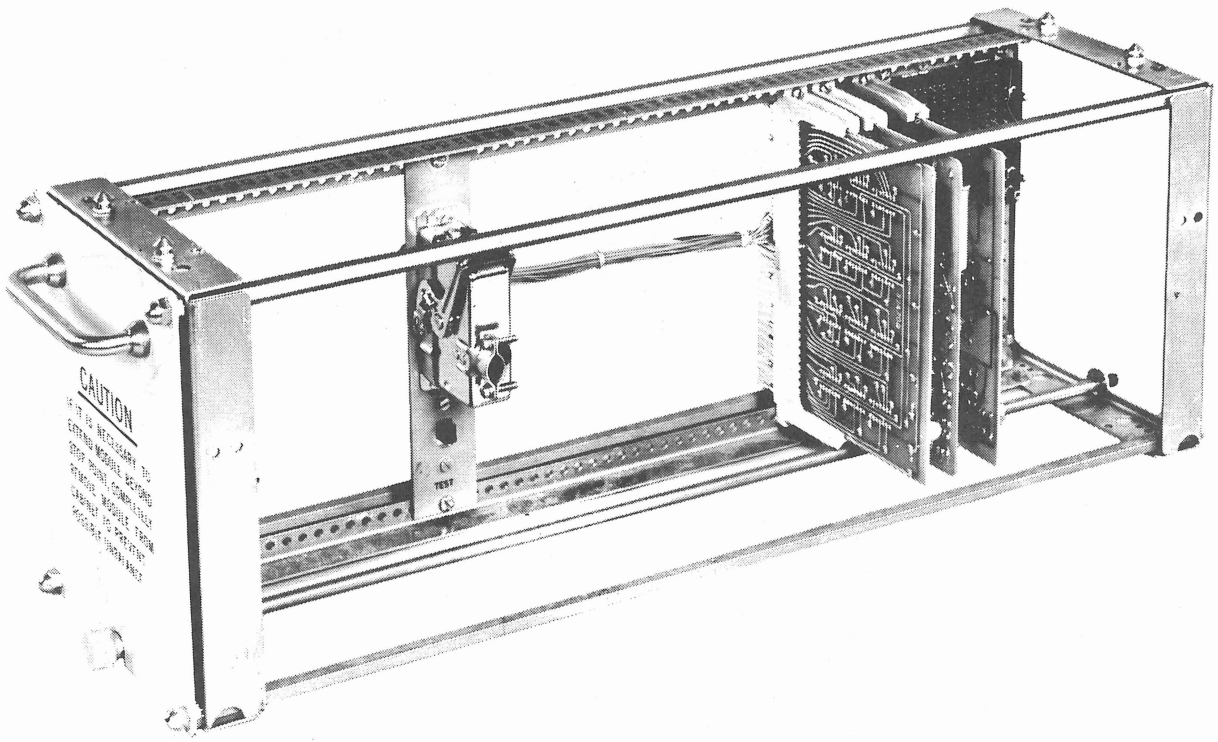
The dimensions of the transport mechanism are approximately 12 inches wide, 9-1/2 inches high, and 8-1/2 inches deep.

Operation

Three separate motors provide the torque for (a) the pre-paper puller drive roller that strips paper from the supply roll and forms a paper loop that is free of tension, (b) the line feed drive roller which advances the paper 10 lines per inch, and (c) the post-paper puller drive roller (paper tensioner assembly), which provides essentially constant paper tension during the feed cycle. Refer to Section 578-500-110 (formerly Section 592-820-110) for further description.

NOTE: Late design units look slightly different from the unit illustrated. Their function is unchanged, except that a paper-out switch (mounted on pre-paper puller drive mechanism) takes over part of the function of one of the circuit boards at the rear of the unit.

Figure 9 - Paper Transport Mechanism



Purpose

This module assembly includes the logic circuitry that converts the incoming data and call control signals into appropriate signals and controls for the printing terminal. Flexibility in providing transmission and communication procedures is available. A TEST switch and (on late design units only) test character generator circuit is included to simplify maintenance.

Description

The dimensions are approximately 6-1/2 inches wide, 7 inches high, and 19 inches deep, and the module weighs about 10 pounds. Provision is made for discrete calling or other options.

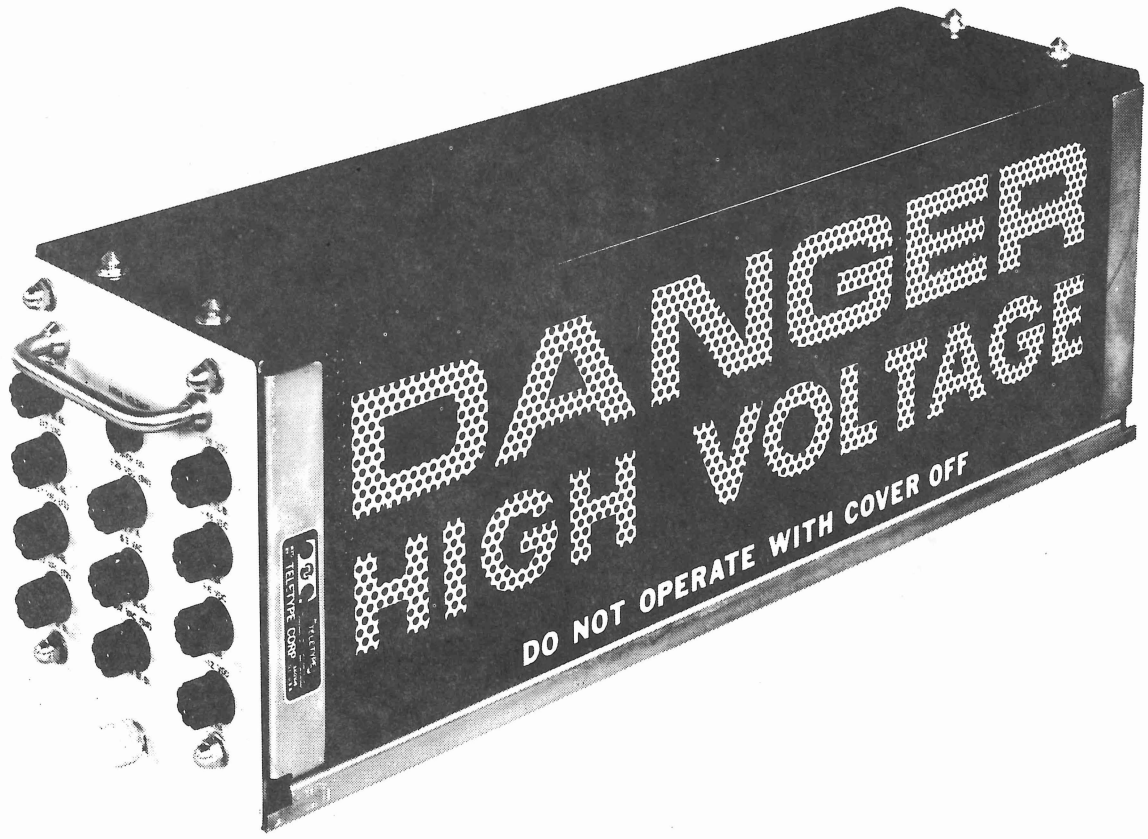
Operation

Either of two modes of operation is available on the initial offering:

(1) Serial Interface Module: Provides necessary station controls and signal conversions to enable a data interchange between a signal source such as a 202C or 202D data set and the nonimpact printer. It converts data from a polar serial asynchronous form to neutral parallel form.

(2) Parallel Interface Module: Provides station controls and signal conversions to enable a data interchange between a signal source such as a 402D data set or equivalent and the nonimpact printer. It converts data signals from parallel contact closures or equivalent to neutral parallel (voltage) form.

Figure 12 - Interface Module



Purpose

This module contains low and high voltage components that furnish the regulated multivoltage outputs for the various modules and assemblies of the printer set. The low voltage outputs energize the interface, character generator, and printer drive modules, and also supply certain paper transport, recorder and function strip assembly requirements. The high voltage outputs are routed through the printer drive module (+550 volts switched to respective valving electrode (total 40) and +3900 v dc plate supply for six high voltage amplifiers) to control the ink stream. A regulated ac output is furnished to the power supply located in the transport mechanism. Various reference voltages, signal lamp and relay supply voltages are provided by the module. Note that the interlock relays and alarm circuits are housed in this module but interconnected with the cabinet, paper handling, and cover switches to de-energize certain outputs when a malfunction is detected. Also the plate load resistors (6) for the high voltage amplifiers are contained in the left corner.

Description

The overall dimensions are approximately 6 inches wide, 7 inches high, and 22-1/4 inches deep. The operating characteristics are as follows:

Input: 117 v ac ±10%, 60 ±1/2 Hz, 6 amps.

Output: +3900 v dc, 20 ma; +550 v dc, 2.6 ma; +120 v dc, 6.0 ma; +28 v dc, 2.5 amps; 6.3 v ac, 2.0 amps; 167 v ac (peak), 50 ma; +6 v dc, 3.0 amps; -12 v dc, 0.5 amp; +48 v dc, 1.0 amp; 117 v ac fused, 0.5 amp.

Operation

This is a self-regulating ferroresonant transformer and solid state rectifier assembly with regulated dc output. Refer to Section 578-500-111 (formerly 592-820-111) for further description.

Figure 13 - Power Supply Module