

TELETYPE® UNIVERSAL TORN-TAPE SYSTEM



...and how it can
help your operation
run more economically



WHAT TORN·TAPE IS

STATED SIMPLY...

a Universal Torn·Tape System is a group of equipment to relay messages between a number of different locations. It thereby provides complete intercommunication for locations, with a minimum of equipment. It also provides a coordinating control over total message traffic. With this control, you can effect savings in line time, and in operator time and labor, by more orderly message handling. These savings in equipment, time and labor result in a more economical operation of your business.

And, to realize these savings, it doesn't matter if the locations you interconnect are local or remote . . . local, such as departments or buildings at one location (orderwriting, inventory, billing sections, etc.); or remote, such as widely separated offices across the country (branch offices, warehouses, dealers, etc.).

HOW IT GOT ITS NAME

In a Torn·Tape System, the continuous strip of punched tape, which bears incoming messages, is torn into individual message lengths to facilitate handling. This facet of operation suggested the name.

CURRENT USERS INCLUDE...

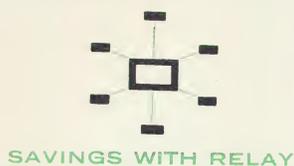
manufacturing, servicing and distributing firms in several industries . . . communications, transportation, electronics, etc. Various government agencies also find Torn·Tape beneficial to their operations. The Navy, Air Force, and Signal Corps account for military users.

WHAT TORN-TAPE WILL DO

By including TORN-TAPE in your present or planned communications system, you'll help your operation run more economically by...

1. CUTTING The Initial Capital Investment Needed.

Just refer to the simplified diagram at right. Each block is a send-and-receive machine, each line a send-and-receive connection channel. Notice the line and equipment savings you'll effect by use of a relay center over complete interconnection of all stations.



2. SAVING On Installation Costs.

Essentially, all you do is connect your Torn-Tape Groups to a power source and to external communication lines. You're in business! There's no problem with the wiring of complicated relays as with fully automatic equipment.



3. GAINING Optimum Use Of Valuable Line and Operator Time.

Think of Torn-Tape as an efficient "message clearing house". With it you control message traffic to result in substantial time savings. Peak message loads are levelled out to eliminate costly idle line time because the sending of messages accumulated at the center during "rush times" can be evenly distributed. Also, a line is always available to operators sending messages to your center. This eliminates unproductive waiting time.



OPERATOR TIME SAVINGS

4. TRIMMING Overhead Expenses.

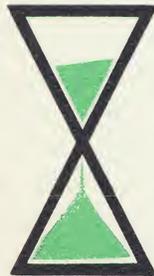
Special cabinets house all equipment vertically to save you money-costing floorspace. In addition, the cabinets themselves have been redesigned to occupy less area. Finally, the equipment is more compact due to Model 28 innovations. The single contact signal generator is an example. It takes the place of the old bulky transmitting disc. All this is why 6 distant sending and 6 distant receiving stations can be accommodated on less than 14 sq. ft. of floorspace . . . that's less than the space occupied by an average desk!



MINIMUM FLOOR SPACE

5. LOWERING Maintenance Costs.

Model 28 equipment is made to the exacting standards of the Bell System. Torn-Tape equipment therefore needs little maintenance month after month after month. Just the simple preventive maintenance of inspection, cleaning, and lubrication every 6 or 12 months (depending on the speed of operation) under normal operating conditions. That means hundreds of thousands of feet of tape before even oil is needed. Maintenance can be performed by your regular printing telegraph personnel who are trained at Teletype's tuition-free school. Also, there's less chance of costly breakdowns due to (A) Torn-Tape's simplicity of construction and (B) Teletype's usual reliability.



LONG MAINTENANCE PERIOD

6. LESSENING Expansion or Alteration Costs.

Torn-Tape's unique package design makes it a simple task to "add on" more equipment to increase your center's message handling capacity. That's why it's known as the most flexible relay system in wide use today. (No bother and time loss with the rewiring of complicated electronic relays, etc.) Just connect additional senders and receivers to lines from the new locations. The stations are "automatically" interconnected with the rest of the network. This flexibility also makes it an easy matter to relocate your center if necessary. Just disconnect from lines, move, and reconnect to new communication channels.

EASY-TO-ADD-UNIT



HOW TORN-TAPE RELAYS COMMUNICATIONS

Since Teletype's introduction of its first Torn-Tape System, the emphasis has been in its economical simplicity of operation . . . messages are received by the communications center, are readily sorted, and are sent on to their destinations.

RECEIVING

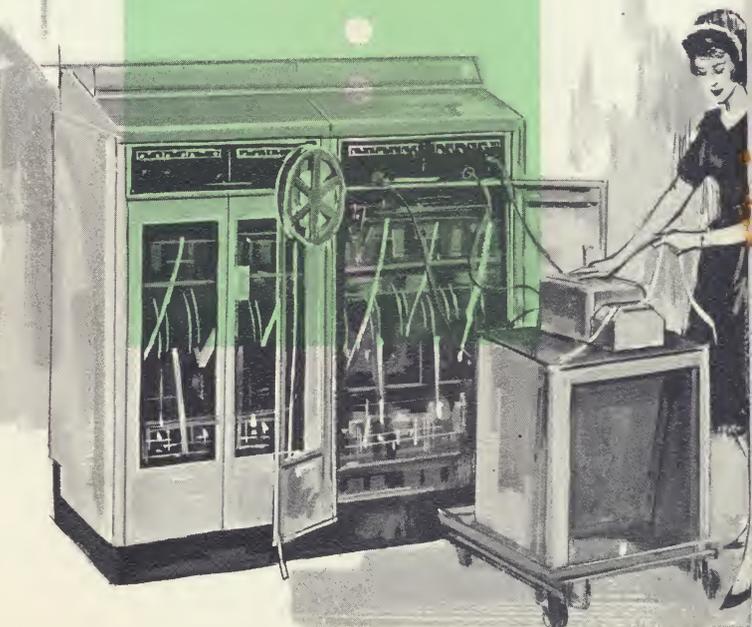
The No. 1 attendant works between the Receiving Cabinets and the Transmitting Cabinets. She simply (A) tears off incoming tapes from the Receiver when the messages are complete, (B) notes their addresses (printed on the tape so skilled code-reading operators are unnecessary), and (C) places them in the appropriately labelled grid slots (or the bins above the slots for exceptionally long tapes) atop the Transmitting Cabinets. As she does this, she arranges them in the grid according to their destination and priority.

TRANSMITTING

The No. 2 attendant works in front of the Transmitting Cabinets. She merely (A) removes tapes from the labelled grids and (B) inserts them in the proper transmitters. The machines then take over and the messages are automatically numbered and flashed off to their destinations. Upon completion of a tape, the transmitter automatically shuts off.

MONITORING

The Monitor Cabinets are equipped to automatically punch complete duplicate tapes (including message number, address and text) of all messages sent by the transmitting equipment. If a message is lost or destroyed wherever it was sent, it's an easy matter to locate (thanks to automatic numbering) and resend the duplicate tape. Here's how. The attendant in charge (A) wheels a single Mobile Transmitter Group to the Monitor Cabinet, (B) plugs it in, (C) locates the duplicate of the message on the monitor tape reel, (D) inserts it in the mobile transmitter, and (E) flips the immediate-line-seizure switch. As soon as the signal line from the main transmitter to the destination is vacant, a light informs the attendant and she flips a switch to send the duplicate tape.



THE TORN·TAPE PACKAGE

GENERAL FEATURES

YOU CUSTOM DESIGN YOUR SYSTEM...

to fit your operation's requirements and meet your specific objectives. Here Torn·Tape's extreme system-flexibility is apparent. The simple "add-on principle" of installation means from 6 to 60, or more, locations can be interconnected by one relay center. Thus, you can use the equipment to establish a small relay station, part of a larger network; or you can form a major communication center. Also, you may have all your outlying stations completely interconnected for 2-way communication, or just a select few, with 1-way traffic from the rest. This would apply to situations in which information is only sent from certain points and is only used by certain other points. One current user receives information from many outlying stations, and relays all of it to only one central point for utilization. This data integration function keeps the processing center free from excess equipment as well as making its operation less complicated. Torn·Tape Systems are composed of 6 basic packages of equipment . . . 3 standard groups, 1 optional group and 2 auxiliary groups as may be required.

The standard **Receiving Group** receives incoming electrical pulses from 6 distant stations and punches corresponding tapes. The **Transmitting Group** has 6 tape transmitters. Each one senses holes in tape fed into it and sends out corresponding electrical signals to a distant station. The **Monitoring Group** punches duplicate tapes of all messages sent by its assigned Transmitter Group.

The **Transmitter-Monitor Group** is the optional unit. It consists of 3 transmitters and 3 monitoring punches; i. e., a combination of the Transmitting and Monitoring Groups to serve only 3 stations.

The first auxiliary piece is a single receiving (or monitoring) punch mounted on a mobile dolly; the second, a transmitter on a dolly. Both are used to substitute for equipment in the groups during routine maintenance, the changing of tape reels, etc. They promise continuous operation of your relay center.

YOUR SYSTEM'S RELIABILITY...

is assured due to 3 reasons. (1) All Model 28 Equipment is initially designed for heavy-duty operation under normal conditions. To accomplish this, the Model 28 Line incorporates certain innovations long ignored in communications machines. For instance, designs that recognize natural resonant frequencies and harmonic motion mean vastly reduced operating stress on materials for a remarkably long service life. (2) Certain new material usages also extend the longevity of your machines. One new usage is nylon gears that are tough, but not brittle. All-metal clutching is yet another. (3) Finally, thorough testing of all equipment, to rigid standards, keeps quality at a peak.

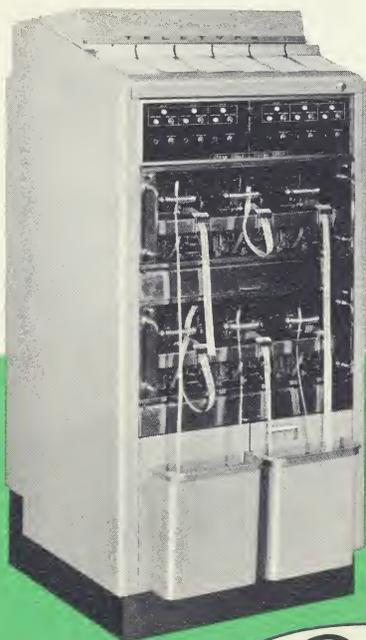
TORN·TAPE IS COMPATIBLE...

with almost any 5-level tape equipment you may have at present. Teletype's Model 28 equipment-flexibility allows you to gear down, if necessary, from the 100 words-per-minute operation, to 60 or 75 wpm. Your Torn·Tape Equipment will accommodate 5-level tape of either the chadless or fully perforated variety. It's designed to harmonize with most surroundings . . . distinctive, compact-looking and extremely attractive. A wide variety of colors is available.

SOME "EXTRAS" YOU GET...

with Torn·Tape include quieter operation because motors and tape winders are cushioned in vibration-absorbing cradles. Circuit identification card holders are provided for easy labelling to facilitate operations. Warning and informational lamps are extremely helpful and easy to read. They tell when tape is low or lines are busy, etc. AC convenience power outlets are readily accessible on all your cabinets. Front, rear and top accessibility to machines provides for easier maintenance.

TORN·TAPE CAN HELP YOUR OPERATION RUN MORE ECONOMICALLY



1. RECEIVING GROUP (STANDARD)



2. TRANSMITTING GROUP (STANDARD)



3. MONITOR GROUP (STANDARD)



TORN-TAPE EQUIPMENT

1. RECEIVING GROUP

Description. The group consists of a cabinet which houses two 3-gang printing tape punches (a total of 6 punches powered by 2 motors). These punches receive incoming electrical pulses and punch corresponding tapes. Simultaneously, they print the contents of the messages on the tapes.

Features. A feed-out mechanism brings the end of a completed message tape to the front of the cabinet. This feature permits the tape to be torn off at the tear-slot without leaving any part of the message between the punch and the front of the cabinet. Feed-out can be manual or automatic. For manual feed out, the operator flips a switch after a message is received. For automatic feed out a mechanism in the punch feeds out a predetermined length (up to 18 in.) of blank tape after a certain period of idle line time.

Other Receiver Group features include the special inner frame construction in the cabinets that reduces the radiation of normal operating sounds. Magnetic door latches mean smoother opening and closing with no bounce-back. Tape handling is facilitated in 3 ways . . . by 2 tape storage bins, by tear slots built into the plexiglass cabinet fronts, and by tape holders. Punches are on pullout shelves for easier maintenance.

And, a final feature, 6 log-sheet clips atop the cabinet make easier the recording, for later cross-checking and reference, of messages handled.

Specifications. Speed: 60, 75 or 100 wpm. Tape Width: $1\frac{1}{8}$ in. Tape Supply Reel Capacity: 1000 ft. Cabinet Size: $56\frac{1}{2}$ "x $25\frac{1}{4}$ "x $26\frac{1}{4}$ " deep.* (4.602+ sq. ft. of floorspace.) Weight: 270 lbs. fully equipped. Power: 115 V 60 cycle (or 50/60 cycle**) AC.

2. TRANSMITTING GROUP

Description. The group consists of a cabinet which houses two 3-gang transmitters (a total of 6 transmitters powered by 2 motors). Each transmitter senses the holes in tape and transmits corresponding electrical pulses.

Features. Optional flip-flop transmission saves valuable operator waiting time and eliminates costly idle line time. With flip-flop, transmitters are hooked up in tandem to one signal line. As soon as the tape in one transmitter is sent, the other one automatically takes over the line to send its tape. With this feature incorporated, each transmitting cabinet becomes a three-circuit unit. All outgoing messages from each transmitter are automatically numbered in sequence by a 3-digit mechanical counter and 12 supplementary codes. A free-wheeling switch allows quick insertion of tapes into transmitters. Tape bins are provided to the rear of the transmitters. As soon as tape has been fed through the transmitter and sent, it drops into the bins for easy disposal. Each

transmitter is equipped with a tape deflector that, when in the down position, deflects the tape back to the operator. This allows the operator to shunt tape from one transmitter to another when a message is addressed to several stations. This saves time.

Emergency line-seizure switches on the transmitters enable your operators to temporarily halt a message being sent, then later resume transmission without losing a single word. Your operators would use these switches to free the signal line for more important communications, in the event of line trouble, etc. Number-delete switches keep the automatic number mechanism from functioning at your operator's option (in case you prefer messages to be numbered by group, etc., rather than individually). Bristle-type grids hold tapes firmly and safely until your operator is ready to send them. Log-sheet clips atop the cabinet facilitate keeping of records for later reference.

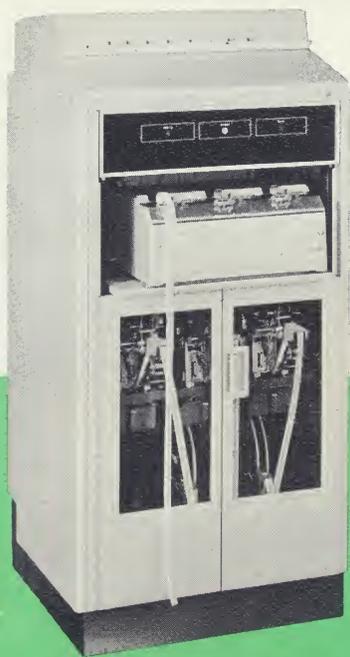
Specifications. Speed: 60, 75 or 100 wpm. Tape Width: $1\frac{1}{8}$ in. (or $\frac{7}{8}$ in.). Size: $65\frac{3}{4}$ " High, (including tape grid)x $25\frac{1}{4}$ "x $26\frac{1}{4}$ " deep.* (4.602+ sq. ft. of floorspace.) Weight: 365 lbs. fully equipped. Power: 115V. 60-cycle (or 50/60 cycle**) AC.

3. MONITOR GROUP

Description. The group consists of a cabinet which houses two 3-gang printing tape

*Side enclosures for the cabinets are 1 in. thick and so will add 2 in. to the width of a single cabinet. They need be used only on the end cabinets when the cabinets are arranged in continuous rows and so will add only 2 in. to the entire width of the bank.

**Special governed motors are supplied where necessary.



4. TRANSMITTER-MONITOR GROUP (OPTIONAL)



5. MOBILE RECEIVER GROUP (AUXILIARY)



6. MOBILE TRANSMITTER GROUP (AUXILIARY)

AND HOW IT WORKS

punches (a total of 6 punches powered by 2 motors). Each punch is connected to a transmitter in the Transmitter Group. The punch receives electrical pulses from the transmitter and punches a duplicate tape of everything sent out by that transmitter. It simultaneously prints the message or data on the tape. Two 3-gang tape winders are also in the cabinets. They store the punched tape on reels.

Features. A number-delete switch permits your operator to keep the transmitter from automatically numbering a message being resent. This avoids later confusion as the messages in the cabinet were already assigned identification numbers when they were initially sent. Each of 6 reels holds fully 1000 feet of either chadless or fully perforated tape to reduce the number of times replacement is needed. A convenient unwinding stud to hold tape reels is located on the left door of the cabinet. It facilitates the locating of messages. The smooth, quiet operation of the doors is due to magnetic latches.

Specifications. Speed: 60, 75 or 100 wpm. Tape Width: 1 $\frac{1}{8}$ in. Tape Supply Reel Capacity: 1000 ft. Size: 56 $\frac{1}{2}$ "x25 $\frac{1}{4}$ "x26 $\frac{1}{4}$ " deep* (4.602+ sq. ft. of floorspace.) Weight: 270 lbs. fully equipped. Power: 115V 60-cycle (or 50/60 cycle**) AC.

4. TRANSMITTER-MONITOR GROUP

Description. The group consists of a cabinet which houses a 3-gang transmitter (3 transmitters powered by 1 motor), a 3-gang printing tape punch (3 punches, 1 motor), and a 3-gang tape winder. Each punch is assigned to one of the transmitters and punches a duplicate tape of every message sent out by that transmitter. The winders store the punched tape.

Features. This versatile group can serve to cut down your initial capital investment. It eliminates the need for additionally obtaining the 2 standard groups, which have the facilities for 6 stations, if you have only 1 to 3 more stations to be serviced. The reels store 1000 ft. of fully perforated or chadless tape from the punches. An unwinding stud located on the left door facilitates the locating messages to be resent. Magnetic door latches mean smooth and quiet operation.

Specifications. Speed: 60, 75 or 100 wpm. Tape Width: 1 $\frac{1}{8}$ in. (transmitters also take $\frac{7}{8}$ in.). Tape Supply Reel Capacity: 1000 ft. Size: 56 $\frac{1}{2}$ "x25 $\frac{1}{4}$ "x26 $\frac{1}{4}$ " deep.* (4.602+ sq. ft. of floorspace.) Weight: 315 lbs. fully equipped. Power: 115V 60-cycle (or 50/60 cycle**) AC.

5. MOBILE RECEIVER GROUP

Description. The group consists of a single printing tape punch mounted on a table which is, in turn, mounted on a

mobile dolly. This auxiliary group substitutes for tape punches in either the standard Receiving or Monitor Groups. It serves to permit uninterrupted service while a regular punch undergoes routine maintenance or while tape reels are being changed.

Features. The simple operations of plugging it into the main cabinet and flipping a switch put it in use.

Specifications. Speed: 60, 75 or 100 wpm. Tape Width: 1 $\frac{1}{8}$ in. Size: 36 $\frac{1}{2}$ "(Approx.)x23 $\frac{5}{8}$ "x24 $\frac{1}{8}$ " deep. Weight: Approx. 116 lbs. complete. Power: 115V 60-cycle (or 50/60 cycle**) AC.

6. MOBILE TRANSMITTER GROUP

Description. The group consists of a single transmitter mounted on a table which is, in turn, mounted on a mobile dolly. This auxiliary group is used as a substitute for a regular transmitter in the Transmitter Groups. It permits uninterrupted service to any distant station while that station's regular transmitter is incapacitated (for routine maintenance, etc.).

Features. The simple operations of plugging the group into the regular cabinet and flipping a switch put it in operation.

Specifications. Speed: 60, 75 or 100 wpm. Tape Width: 1 $\frac{1}{8}$ in. (or $\frac{7}{8}$ in.). Size: 33 $\frac{7}{8}$ "(approx.)x23 $\frac{5}{8}$ "x24 $\frac{1}{8}$ " deep. Weight: Approx. 95 lbs. complete. Power: 115V 60-cycle (or 50/60 cycle**) AC.

TORN TAPE CAN HELP YOUR OPERATION RUN MORE ECONOMICALLY

if you think

a **UNIVERSAL TORN-TAPE SYSTEM**

can help your operation run
more economically by...

1. Cutting Your Initial Investment
2. Saving You Installation Costs
3. Giving You Optimum Time Use
4. Trimming Your Overhead Expenses
5. Lowering Your Maintenance Costs
6. Lessening Your Alteration Costs

just contact us by letter, telephone, TWX or telegram at the address shown below. One of our sales engineers will be happy to help you decide on the practicality of using Torn-Tape in your communications system.

Teletype Corporation
5555 West Touhy Avenue
Skokie, Illinois

Phones: Skokie; ORchard 6-1000
Chicago; COrnelia 7-6700
Direct Distance Dialing: Area Code 312

TWX: SKOK 3454 (Also unattended
after-hours service.)
Western Union Services on premises.



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CORPORATION SUBSIDIARY OF *Western Electric Company* INC.

find out how

other Teletype machines and high-speed equipment
can help your operation run more efficiently. Contact us at the above address
for information on any or all of the equipment listed below.

PAGE PRINTERS

SEND-RECEIVE PAGE PRINTERS (KSR)—send and receive page printed communications.

RECEIVE-ONLY PAGE PRINTERS (RO)—receive page printed communications in 1-way systems.

WALL-MOUNTED PAGE PRINTER—a send-receive set to save valuable floorspace.

TAPE PUNCHES

PRINTING TAPE PUNCH (LPR)—punches AND prints 5-level tape.

MULTI-LEVEL TAPE PUNCH (LARP)—receives parallel-wire electrical pulses and punches corresponding 5-, 6-, 7-, or 8-level tapes.

HIGH-SPEED TAPE PUNCH (BRPE)—for operations dealing in voluminous amounts of data. Punches 5-, 6-, 7-, or 8-level tapes at 1000 words-per-minute.

TAPE READERS

STANDARD TAPE READER (LXD)—senses 5-, 6-, 7-, or 8-level tape and sends corresponding electrical pulses.

MINIATURE TAPE READER (MIN LXD)—like the Standard Reader above, but equipped with a smaller motor to save space.

MULTI-CONTACT TAPE READER (LBXD)—senses 5-, 6-, 7-, or 8-level tape and sends corresponding electrical pulses. Also acts as a converter to change parallel-wire electrical pulses to serial electrical pulses.

HIGH-SPEED TAPE READER (CX)—senses and sends 5-, 6-, 7-, or 8-level tape at 1000 words-per-minute.

COMBINATION SETS

PUNCH-AND-READER SET (RT)—a combination of a tape punch, a tape reader, and tape winding and storage facilities.

AUTOMATIC SEND-RECEIVE SET (ASR)—most versatile machine offered on the market today . . . a combination of a Send-Receive Page Printer, a Tape Punch, and a Tape Reader.

HIGH-SPEED TAPE-TO-TAPE SET—equipment to send and receive taped data at 1000 words-per-minute over regular telephone lines.

Teletype Corporation manufactures this equipment for the Bell System and others who require the utmost reliability from their message and data communications systems.