MANUAL MESSAGE ADDRESS SEGREGATOR

DESCRIPTION AND OPERATION

CONTENTS PAGE

1. GENERAL

1.01 This section provides a general description and operation of the Manual Message Address Segregator, and also includes a list of components with associated literature.

1.02 The segregator normally operates in conjunction with the "tape factory" of a Torn Tape Message Relaying System that includes from one to eight reperforators and a monitor printer. The monitor printer, when connected to its designated loop, will copy all characters transmitted by the segregator. The segregator supplies nine separate loops, one for each reperforator and one for a monitor printer. Only the manually selected reperforators will operate and they will then punch only the addresses manually directed to them.

1.03 For the most applicable circuit description and wiring diagrams, refer to the Wiring Diagram Package WDP0116 shipped with the equipment or, if this is not available, refer to Section 573-114-400TC.

2. DESCRIPTION

2.01 The basic function of the segregator is to transmit messages with manually selected addresses for each reperforator from a multiple addressed message tape. The segregator transmits at a rate of 107 words per minute (75 baud) to any combination of up to 8 external reperforators. Selection (all switching) is accomplished through use of the switching control assembly which is placed with the transmitter distributor on top of the segregator table

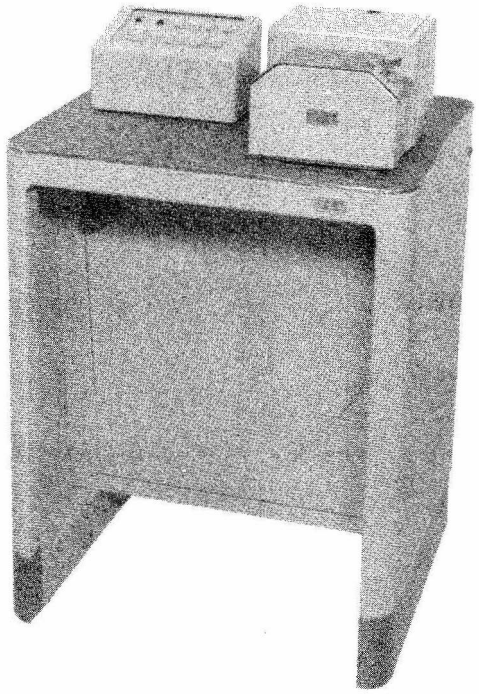

Figure 1 - Manual Message Address Segregator

(Figure 2). Selection of the reperforators that are to receive from the segregator is made by operation of a control assembly SELECT lever (lighted) for each reperforator. Selection of the dc loop with its associated reperforator that is to receive a specific address is made by operation of the control assembly rotary CONNECT switch.

2.02 The segregator eliminates only those addresses that are not wanted for each individual reperforator. Each address in the multiple addressed tape is manually directed to only those reperforators that require it. An external reperforator will punch both address and message in tape only if its SELECT lever is operated and either its loop or all loops are connected by the rotary CONNECT switch on the switching control assembly.

2.03 The segregator supplies 120 v dc, 0.020 amp local line (loop) current to the external reperforators and monitor typing unit sets.

2.04 Addressed message transmission is accomplished by means of the Self-Contained Transmitter Distributor Set (LXD Type) of the segregator (Figure 3). This transmitter distributor set has special code reading contacts and includes the proper base, synchronous motor unit, TP173595 gearset, cover, and cables.

2.05 All line (loop) switching and reperforator selection is accomplished manually by means of the TP329324 switching control assembly. The SELECT levers that are operated to select a reperforator are also illuminated (Figure 2).

2.06 All logic, power supply, and terminal boards for external equipment connections, option strapping, and programming are mounted on the TP329325 logic panel assembly which is mounted behind the front panel in the lower part of the table (Figures 3 and 4).

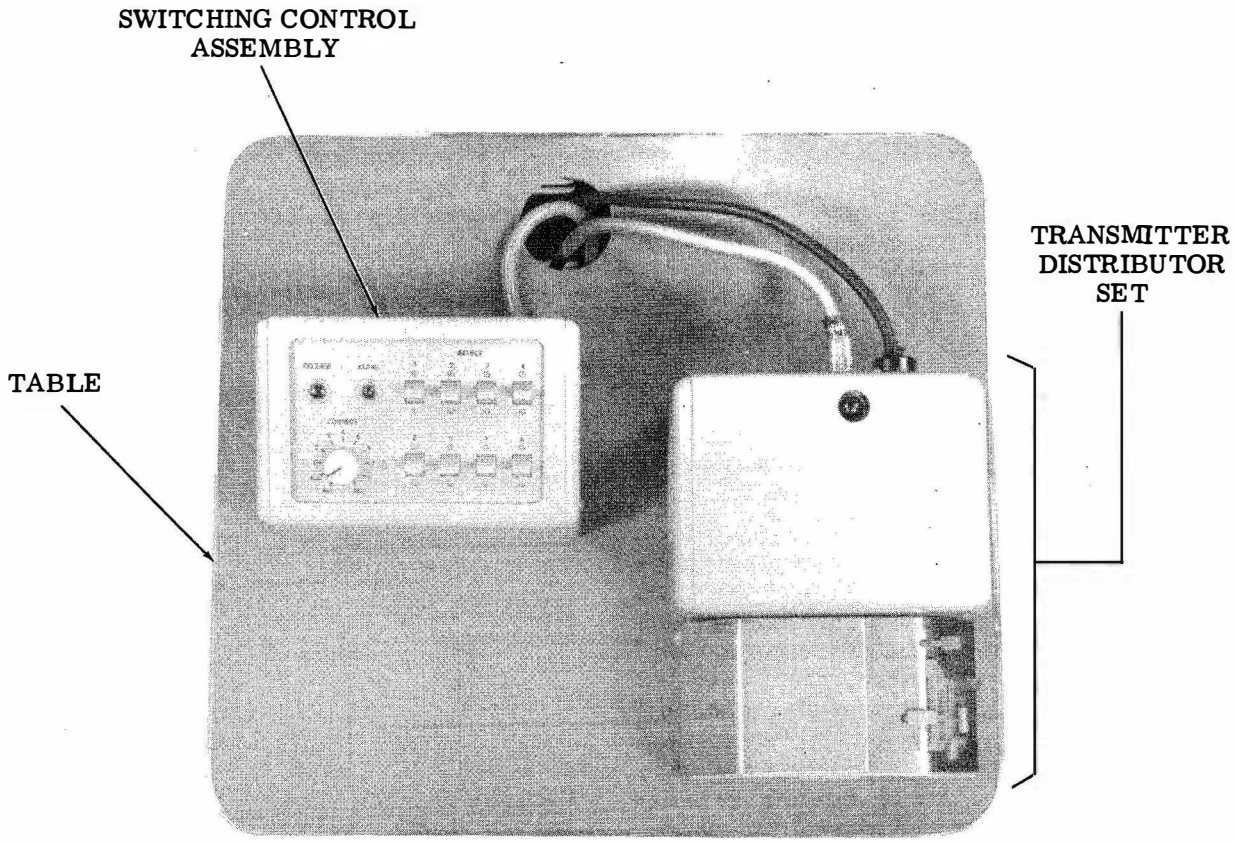

Figure 2 - Manual Message Address Segregator

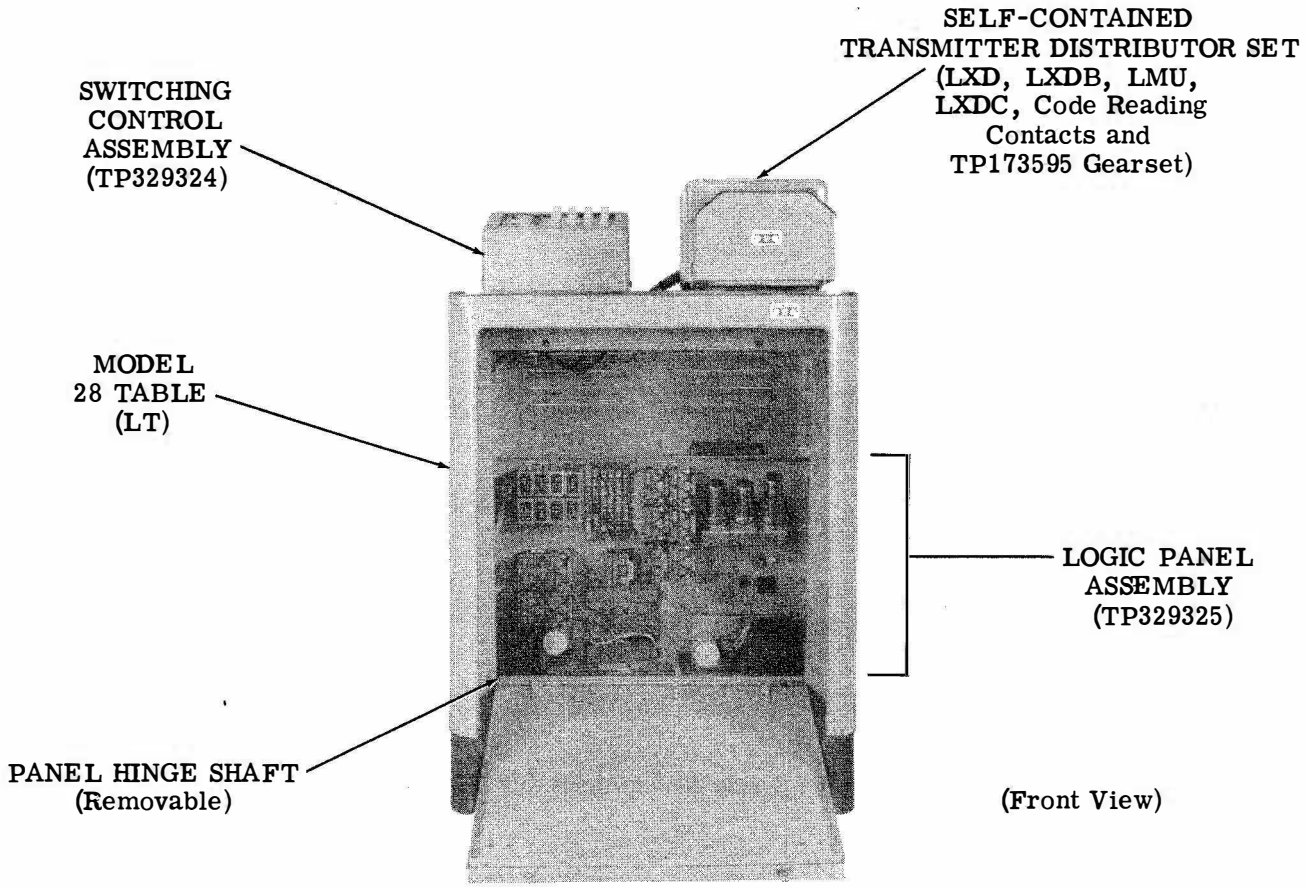

Figure 3 - Manual Message Address Segregator With Front Panel Open

2.07 The table top supports the switching control assembly and the transmitter distributor, both of which may be positioned for convenience by the operator (Figure 2).

COMPONENTS

2.08 The following is a list of basic components that are included as part of the Manual Message Address Segregator.

1. Model 28 Transmitter Distributor Set (LXD Type) with code reading contacts.
   (a) Model 28 Transmitter Distributor Base (LXDB Type).
   (b) Synchronous Motor Unit (LMU Type).
   (c) TP173595 Set of Gears.
   (d) Model 28 Transmitter Distributor Cover (LXDC Type).
2. TP329324 Switching Control Assembly.
3. TP329325 Logic Panel Assembly (Mounted in Table - Figures 3 and 4).
4. Table (LT Type - Figures 1, 2 and 3).
5. Miscellaneous
   (a) 1 - TP308478 Cable Assembly (Power).
   (b) 1 - TP332540 Cable Assembly.
   (c) 12 - TP312684 Electrical Wire Assemblies.
   (d) 1 - TP159373 Apparatus Mounting Rack.
   (e) Miscellaneous mounting hardware.

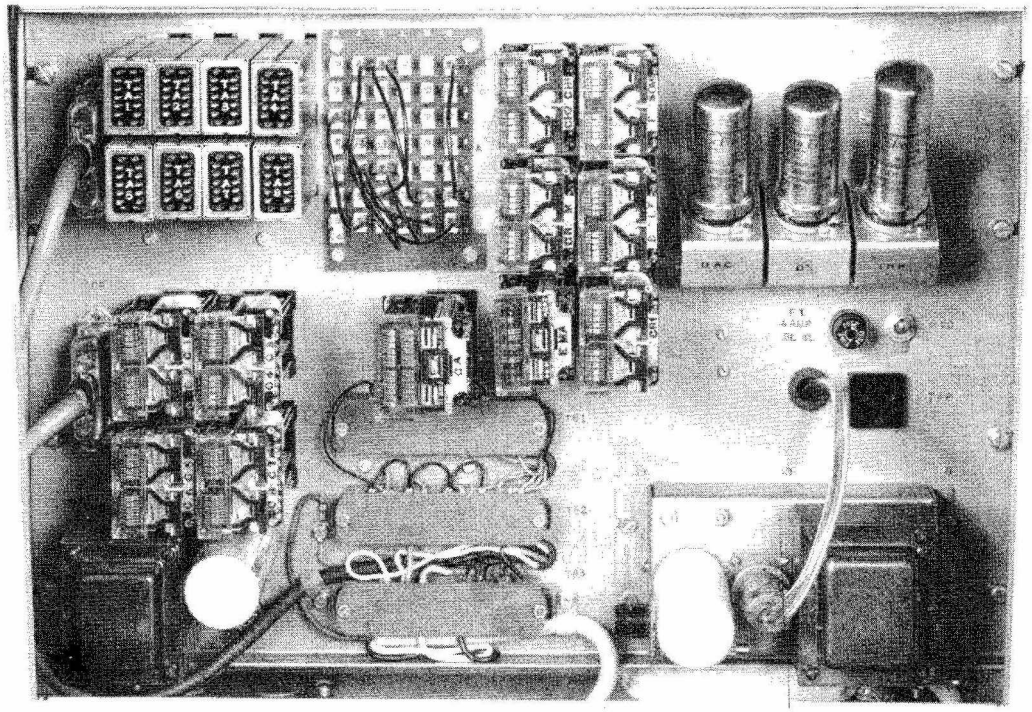

Figure 4 - Logic Panel Assembly TP329325

2.09 Refer to Section 573-130-803TC for parts ordering information and detailed illustrations.

ASSOCIATED LITERATURE

2.10 For detailed circuit description and schematic and actual wiring diagrams of the Manual Message Address Segregator, refer to the Wiring Diagram Package WDP0116 shipped with the equipment. If this is not available it may be ordered separately but may also include some changes that are not applicable to equipment of an earlier date. Similar information may also be obtained from Section 573-114-400TC which will be applicable only as of the date of issue. Changes, even though slight, could cause trouble if this section is used for troubleshooting.

2.11 Installation and Checkout Procedures for the Manual Message Address Segregator are supplied by Section 573-114-200TC.

2.12 Operation is covered in Part 3 of this section. Operation information may also be obtained from the Wiring Diagram Package WDP0116 (8617WD) that is shipped with the equipment.

2.13 Adjustments, lubrication, and additional descriptive information are required for the transmitter distributor set that is included as part of the Manual Message Address Segregator. These are listed in Table A.

2.14 Table A contains the sections which include all information required for installation, operation, and maintenance of the Manual Message Address Segregator and its components.

2.15 For parts ordering information, refer to the following sections:

Segregator	573-130-803TC
Transmitter Distributor. .	573-127-801TC
Motor.	570-220-800TC

TECHNICAL DATA

2.16 The segregator operates only in conjunction with other equipment. It simultaneously supplies local loop current for one to nine separate loops, each with other equipment such as a reperforator or a monitor typing unit. Each reperforator and the monitor typing unit must be capable of operating in a local signal loop as follows:

Loop current and voltage. . . 0.020 amps, (for each of 1 to 9 separate loops) 120 v dc
Code. . . . . 7.00 Unit start-stop
Speed . . . . . 107 wpm (75 baud)
Power input to segregator. .115 v, 60 hertz
Wiring options . . . . . Refer to Section
and coding 573-114-200TC and to WDP0116.

Dimensions
Height. . . . . .32-5/8 inches
Width . . . . . .20-1/2 inches
Depth . . . . . 18-5/16 inches

For information concerning the Transmitter Distributor Set (LXD Type), a component of the segregator, refer to the associated literature listed in Table A.

3. OPERATION

3.01 The following frequently used abbreviations will be encountered in the operation of the segregator:

AUX	-	Auxiliary
CDC	-	Call Directing Code
EMA	-	End Of Multiple Addresses
EOIA	-	End Of Individual Address
REPERF	-	Reperforator
SMD	-	Selector Magnet Driver
SOA	-	Start Of Addresses
SOM	-	Start Of Message
TD	-	Transmitter Distributor

FORMAT

3.02 The multiple addressed message tapes must conform to the following format.

(a) A leader, made up of LETTERS perforations. This simplifies the handling of the tape.

(b) Start-Of-Message sequence of four characters (factory strapped for "C Z C Z").

(c) Start-Of-Addresses sequence of two characters (factory strapped for "F M").

(d) End-Of-Individual-Address sequence (is factory strapped for "CR CR LF"). This is necessary to stop the transmitter before the first CDC is read.

(e) Address codes (CDC) each to be followed by an End-Of-Individual-Address sequence (factory strapped for "CR CR LF").

(f) End-Of-Multiple-Address sequence of two characters (factory strapped for "B T").

(g) Message text, etc.

(h) Trailer, made up of "LETTERS" perforations in the same manner as the leader and for the same reason. In continuous tape operation, the trailer of one message tape can serve as the leader of the following message tape.

STARTING

3.03 Position the MTC toggle switch on the logic panel assembly (inside the table) to its ON position.

3.04 Position the power switch on the transmitter assembly to its ON position (located on the rear of the assembly.

3.05 Depress simultaneously the CLEAR and the RELEASE buttons on the switching control assembly. This will clear all previously stored logic.

OPERATING PROCEDURE

3.06 Examine the multiple addressed message tape to determine the number of reperforators to be operated.

3.07 Set one toggle switch on the switching control assembly to its illuminated position for each reperforator to be operated.

3.08 Set the rotary CONNECT switch to its ALL position.

3.09 Place the leader of the multiple addressed message tape in the transmitter gate.

3.10 Set the STOP-RUN of the transmitter on RUN.

3.11 The transmitter will read the leader and the Start-Of-Message sequence "C Z C Z" and stop. All of the selected reperforators will copy. This feature provides for continuous tape operation.

3.12 Depress the RELEASE button on the switching control assembly. The transmitter will start, read the Start-Of-Addresses sequence "F M", the End-Of-Individual-Address sequence "CR CR LF" that preceeds the CDC and then stop. All selected reperforators will copy.

TABLE A

ASSOCIATED LITERATURE

EQUIPMENT	CONTENTS	SECTION NUMBER
Segregator	Description and Operation	573-114-100TC
Segregator	Installation and Checkout Procedures	573-114-200TC
Segregator	Circuit Description, Schematic and Actual Wiring Diagrams	573-114-400TC
Segregator	Parts	573-130-803TC
Transmitter Distributor Set	Description	573-105-100TC
Transmitter Distributor	Description and Principles of Operation	573-127-101TC
Transmitter Distributor	Adjustments	573-127-703TC
Transmitter Distributor	Lubrication	573-127-704TC
Transmitter Distributor	Disassembly and Reassembly	573-127-705TC
Transmitter Distributor	Parts	573-127-801TC
Transmitter Distributor Base	Description	573-128-101TC
Transmitter Distributor Base	Adjustments	573-128-700TC
Transmitter Distributor Base	Lubrication	573-128-701TC
Transmitter Distributor Base	Parts	573-130-802TC
Motor Unit	Description and Principles of Operation	570-220-100TC
Motor Unit	Adjustments	570-220-700TC
Motor Unit	Lubrication	570-220-701TC
Motor Unit	Parts	570-220-800TC
Standard Maintenance Tools	Part Numbers	570-005-800TC

3.13 Direct the first CDC to the proper reperforator by setting the CONNECT switch on the corresponding number.

3.14 Depress the RELEASE button. The transmitter will start, read the first CDC and the End-Of-Individual-Address following it and stop. Only the "directed to" reperforator will copy.

3.15 Repeat paragraphs 3.13 and 3.14 for the second, third, etc CDCs.

3.16 After all the CDCs have been directed and read, depress the RELEASE button once more. The transmitter will start, read the End-Of-Multiple-Address sequence "B T", the message text, the trailer and will stop on tape-out or a Start-Of-Message sequence. The position of the CONNECT switch will determine which of the reperforators will copy the End-Of-Multiple-Address sequence "B T". All the reperforators will copy the message portion.

3.17 If it is desired to have the End-Of-Multiple-Address sequence "B T" in all tapes, position the CONNECT switch to its ALL position before depressing the RELEASE button in the previous step.

3.18 The message tape processing is now complete.

CLEAR AND RELEASE

3.19 The CLEAR button on the switching control assembly permits clearing of the logic circuits when it is desired to restart a multiple addressed message tape. For guard reasons, the RELEASE button must be pressed simultaneously.

TROUBLESHOOTING REFERENCES

3.20 Troubleshooting may be accomplished by operation of the segregator in accordance with the checkout procedures of Section 573-114-200TC to determine the point of operational failure. The probable causes of the failure can then be determined by reference to the circuit description and schematic wiring diagrams of WDP0116 shipped with the equipment. If WDP0116 is not available, the same information (applicable only as of the date of issue) may be obtained from Section 573-114-400TC. This WDP and section also contain actual wiring (cabling) diagrams which may be useful for replacing damaged circuit elements or wiring. Refer to Table A for a list of associated literature.