

28 AUTOMATIC SEND-RECEIVE (ASR) TELETYPEWRITER SET

OPERATING TESTS

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1. GENERAL

1.01 This section describes the tests to be made to determine if the Automatic Send-Receive (ASR) Set will operate properly. The set provides a means for receiving typewritten page messages and manually originating messages between two or more stations which are similarly equipped.

1.02 The set, in addition, provides facilities for automatic transmission at maximum available line speed through a transmitter distributor, and manual preparation of fully perforated typed tape either at line speed using the LP typing unit as a monitor, or at an unmonitored off-line maximum speed of up to 106 words per minute.

2. KEYBOARD OPERATING TESTS

2.01 The keyboard selector switch determines the mode of operation, which is manipulated by the keyboard control knob located on the left-hand side of the keyboard.

2.02 Turn the main power switch located on the lower right side of keyboard, to its upper position "ON." This conditions the ASR Set for service depending on the LINE-TEST switch and keyboard control knob.

A. K Position

2.03 Turn the keyboard control knob to the K position and LINE-TEST switch to the LINE position. The K mode of operation is confined to sending or receiving messages through the keyboard and typing unit, with transmission monitored by the typing unit.

2.04 With the keyboard control knob in K position, manually depress each character key and determine that the proper character is printed.

2.05 With the keyboard control knob still in the K position, operate the following keys and determine that the proper functions are performed.

(a) Depress the LOC LF (local line feed) key. This should cause the paper to feed from the typing unit at approximately three times the speed obtained when the LINE FEED and REPT (repeat) keys are held depressed.

(b) Depress the REC (keyboard lock) key. This should cause the signal generator to be shunted, and thereby prevents signal generation. This key should remain depressed until released by depressing the SEND key.

(c) Depress the SEND key (keyboard unlock) to remove the shunt from the signal generator.

(d) Depress the BREAK key and hold it depressed about two seconds. This operates the electrical keyboard lock as in (b), making it necessary to depress the SEND key to resume keyboard transmission.

(e) Hold the REPT (repeat) key depressed together with any other key except the local function keys. This should cause repeated transmission of the associated code combination.

(f) Depress the LOC CR (local carriage return) key. The carriage should then return to the left-hand margin.

(g) Depressing the upper-case S key should cause the bell to ring once clearly each time the key is depressed.

(h) Depressing the blank key alternately with any other key except the local function keys should not lock the keyboard. Depressing the blank key twice in succession should operate the keyboard lock, making it necessary to depress the SEND key to resume keyboard transmission.

(i) When depressing the spacebar, located below the bottom row of keys on the keyboard, an electrical signal is initiated for a subsequent mechanical allowance for a space (as between words) in the page-printed message, or a space symbol on tape.

(j) Depressing the FIGS (figure) key conditions equipment on the line for printing symbols indicated on the upper part of the keys, such as, figures, punctuation marks, or other upper-case symbols.

(k) Depressing the LTRS (letters) key conditions equipment on the line for printing characters indicated on the lower part of the keys.

(l) Depressing the TAPE B.SP. key reverses the direction of the tape feed in the perforator for the space required by a single character code. Deletion of a perforated code requires operation of the letters key once for each operation of the backspace key. Except for the tape (T) mode of operation, this deletion is an on-line function.

(m) Operate the LINE-TEST switch to the TEST position. Performing the tests as in 2.04 and 2.05 (a) through (l) should give the same results, except that the operation will be on a local loop. No break in the signal line should occur as the LINE-TEST key is switched. The margin indicator lamp, located at the right of the cabinet dome, is illuminated six characters before the end of a page-printed line.

B. K-T Position

2.06 With the keyboard control knob in the K-T (keyboard-tape) position and the LINE-TEST key (if available) in the LINE posi-

tion, manually depress each key and determine that the correct character has been printed on the page printer and perforated in the tape. If the perforator-transmitter base includes a typing perforator or reperforator, the correct character should also be printed on the tape.

2.07 With the keyboard control knob still in the K-T position, operate the following keys and determine that the proper functions are performed.

(a) Depress the blank and REPT (repeat) keys simultaneously. This causes the tape to feed out without interruption.

(b) Depress the E and REPT keys simultaneously. This should cause the character counter to count without missing. The end-of-line indicator lamp lights when its preset count is reached. Depressing the CAR RET (carriage return) key should cause the indicator of the character counter to return to zero. Depressing the E key again, should cause the counter to count one character.

(c) Depress the keys indicated in 2.05 (b) through (l). The same functions should be performed as indicated in those tests.

(d) The transmitter distributor should be operative. Check the accuracy of transmission by using a prepared tape and monitoring the transmission on the typing unit.

(e) Operate the LINE-TEST key to the TEST position. Performing the tests given in (a) through (d) should give the same results except that operation should be on a local loop.

C. T Position

2.08 With the keyboard control knob in the T position and the LINE-TEST key (if available) in the LINE position, depress the blank and REPT keys simultaneously. This should cause the tape to be fed out of the punch at high speed without interruption until the depressed keys are released.

2.09 Perform the test covered in 2.07 (b). The margin indicator lamp, located at the right of the cabinet dome, should be illuminated six characters before the counted end-of-line position in the T mode of operation. Care should be taken to avoid overtyping the last character.

- 2.10 Operate the LINE-TEST key to the TEST position. Performing the tests covered in 2.08 and 2.09 should give the same results.

Note: The left and right margins of the teletypewriter unit are adjusted at time of installation. The operator should not attempt to make these adjustments.

3. TRANSMITTER-DISTRIBUTOR

- 3.01 Any five-level tape 11/16 inch wide and 10-hole-per-inch feed, chadless or fully perforated, typed or blank, can be fed into the transmitter-distributor. The tape may be fed directly from the typing perforator as the typing is being performed, or it may be fed from a loop of tape previously perforated.

- 3.02 Make certain that the transmitter switch is in the OFF position. Depress the red button to raise the spring loaded tape lid. Place the tape feed perforations on the teeth of the tape feed wheel with the first code to be transmitted directly over the sensing pins. Two code perforations appear above and three below the tape feed perforations. When the tape is placed in the transmitter, the two code perforations should be toward the back of the transmitter. Hold the tape down flat and close the tape lid. The tape feed will be responsive to the transmitter-distributor switch (GREEN) only when the keyboard selector switch is in T or K-T mode with the SEND key depressed. In either of these modes of operation, a leader of tape with feed holes perforated can be fed into transmitting position manually by raising the switch to its upper, freewheeling, position.

- 3.03 To interrupt transmission of a message to insert an addition, correction, or new message, raise the transmitter-distributor switch to its intermediate position to stop transmission and tape feed. Note the exact position of the tape with reference to the index line scored in the tape guides. Release the tape lid. Remove the tape, close tape lid, raise the switch to its proper freewheeling position, and insert the new tape. When the inserted addition, correction, or change has been transmitted, replace the original tape either at the point at which it was removed or at the desired point following a deletion.

- 3.04 Where the typing unit is operated to produce multiple copies, the printing hammer blow should not be heavier than required to produce satisfactory copies. Move the printing spring adjusting bracket to notch "1" for printing one to three copies, to notch "2" for four or five copies, and notch "3" for six or more copies.

4. CABINET LIGHTS

- 4.01 The cabinet lights are controlled by a 3-position switch located inside the top cover to the left of the top right door. With the set connected to power, the power switch in the ON position, and the light switch in the OFF position, all lights should be off; with the light switch in the NORMAL ON position, all lights should be on except the end-of-line indicator lamp; with the light switch in the MAINTENANCE ON position, all lights should be on continuously except for the end-of-line indicator lamp. With the set connected to power, the power switch in OFF position, the light switch in the MAINTENANCE ON position, all lights should be on except for the end-of-line indicator lamp.