

TM 11-5810-256-OP-3

**DEPARTMENT OF THE ARMY
TECHNICAL MANUAL**

**Operating Procedures for
Communications Security Equipment
TSEC/KY-57 in Wheeled Vehicles**

**Headquarters, Department of the Army,
Washington, DC
27 December 1978**

Reporting of Errors

You can improve this manual by recommending improvements using DA Form 2028 (Recommended Changes to Publications and Blank Forms). Mail the form direct to Commander, US Army Communications Security Logistics Activity, ATTN: SELCL-NMP-MM, Fort Huachuca, Arizona 85613. A reply will be forwarded direct to you.

1. Purpose

These operating procedures provide the VINSON net subscriber basic instructions for operating the TSEC/KY-57 in wheeled vehicles. They are a condensed version of the TSEC/KY-57 operating instructions contained in TM 11-5810-256-12.

2. Operating Instructions

a. *Installation procedures.* Insure that your radio and TSEC/KY-57 have been installed according to the directions contained in TM 11-5810-312-12.

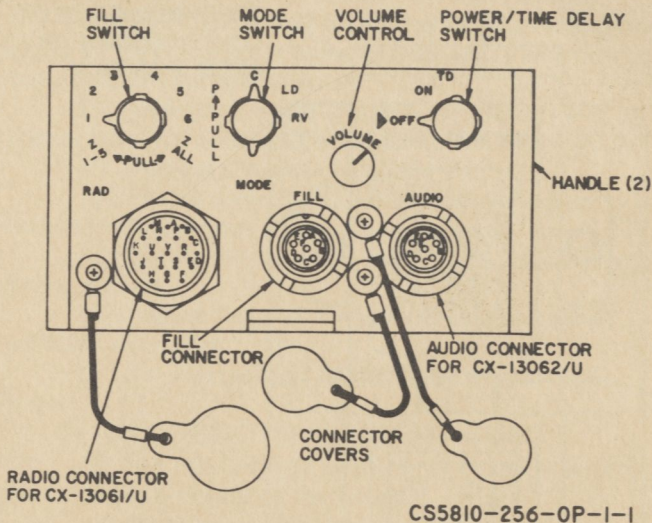


Figure 1. TSEC/KY-57, front panel.

b. Loading (keying) procedures:

(1) Using VINSÓN fill device KOI-18/TSEC:

(a) Set TSEC/KY-57 MODE to C; POWER to ON.

Alarm should be heard on handset.

(b) Press and release handset PTT to clear alarm.

(c) Connect KOI-18/TSEC to TSEC/KY-57 with fill cable.

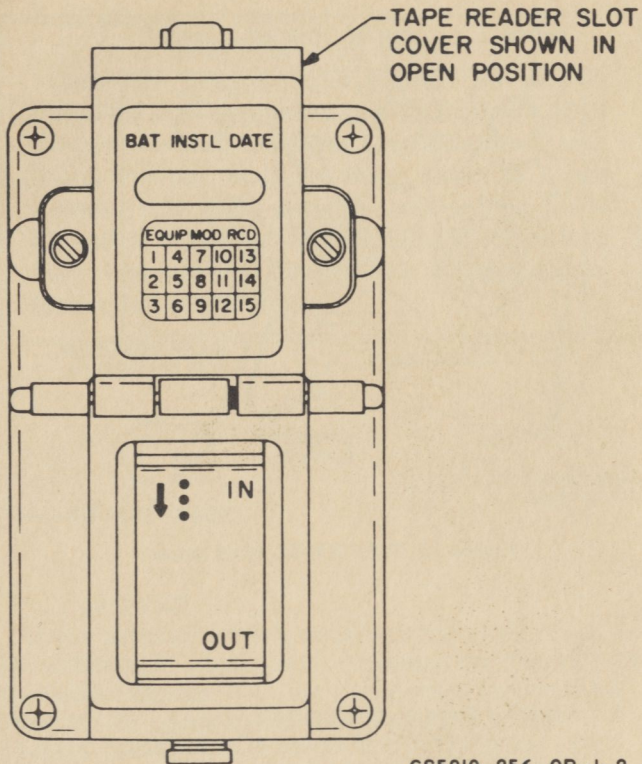


Figure 2. KOI-18/TSEC, top view.

(d) Set TSEC/KY-57 MODE to LD; FILL selector to slot to be filled. (Constant tone indicates slot is empty; beep indicates variable in slot.)

(e) Insert tape leader into KOI-18/TSEC IN slot; line up tape feed holes with white dots on KOI-18/TSEC.

(f) Press and release handset PTT.

(g) Pull tape through KOI-18/TSEC. Beep over handset indicates good parity.

(h) Identify the variable loaded on the TSEC/KY-57 writing surface.

(i) Repeat steps (d) through (h) until all desired variables are loaded.

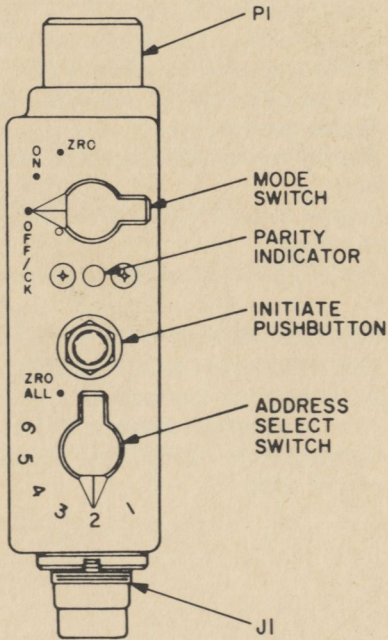
(j) Set TSEC/KY-57 MODE to C; disconnect fill cable.

(2) Using VINSON fill device KYK-13/TSEC:

(a) Set TSEC/KY-57 MODE to C; POWER to ON. Alarm should be heard on the handset.

(b) Press and release handset PTT to clear alarm.

(c) Connect KYK-13/TSEC to TSEC/KY-57, directly or with fill cable.



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Figure 3. KYK-13/TSEC, front panel.

CAUTION

When connecting the KYK-13/TSEC to the TSEC/KY-57 the MODE switch of the KYK-13/TSEC should be set to OFF/CK.

(d) Set TSEC/KY-57 MODE to LD.

(e) Set TSEC/KY-57 FILL selector to slot to be filled. (Constant tone indicates slot is empty; beep indicates variable in slot.)

(f) Set KYK-13/TSEC MODE to ON; FILL selector to slot containing variable to be transferred.

(g) Press and release handset PTT. One beep can be heard in handset on the press and one on the release. The KYK-13/TSEC indicator will flash.

CAUTION

Do not press KYK-13/TSEC initiate button.

(h) Identify loaded variable on TSEC/KY-57 writing surface.

(i) Repeat (d) through (h) until all desired variables are loaded.

(j) Set KYK-13/TSEC MODE to OFF/CK.

(k) Set TSEC/KY-57 MODE to C; disconnect KYK-13/TSEC from TSEC/KY-57.

c. Secure voice procedures:

(1) On your radio: Apply power; adjust volume to desired noise level; set frequency controls to desired operating frequency; set speaker switch to OFF; if squelch operations are desired, activate squelch controls.

(2) Set TSEC/KY-57 MODE to C; FILL selector to slot containing desired cryptonetvariable (CNV); POWER to ON. Set VOLUME switch fully clockwise. Alarm should be heard on handset.

(3) Clear alarm by pressing and releasing handset PTT.

(4) Your radio and COMSEC device are ready for secure voice operations.

d. Clear voice operations:

(1) Set TSEC/KY-57 MODE to P (plain text).

(2) Operate equipment as in *c* above.

NOTE

During secure voice (cipher text) operations, adjust VOLUME on the TSEC/KY-57; during clear voice (plain text) operations, adjust VOLUME on the radio. If the TSEC/KY-57 is turned OFF or removed, the system is in plain text. The handset should remain on the J-3513 J5 connector.

e. Zeroizing procedures:

(1) To zeroize storage positions 1-5, pull TSEC/KY-57 FILL selector switch out and turn to Z 1-5.

(2) To zeroize all storage positions, pull TSEC/KY-57 FILL selector switch out and turn to Z ALL.

NOTE

You will be instructed by either your Net Controller or Commander as to when to zeroize your equipment.

f. Automatic remote keying (AK) procedures. You will be contacted by the Net Controller via secure communications and told to stand by for an AK transmission. You will take no action unless so instructed by the Net Controller.

g. Manual remote keying (MK) procedures. You will be contacted by the Net Controller via secure communications and told to stand by to receive a new CNV via MK. You will then take the following actions:

(1) Upon instructions from the Net Controller, set TSEC/KY-57 FILL selector to slot 6, confirm and stand by for further instructions.

(2) Upon instructions from the Net Controller, set TSEC/KY-57 MODE to RV (receive variable), confirm and stand by for further instructions.

(3) Upon instructions from the Net Controller, set the TSEC/KY-57 FILL selector to storage position selected to receive the new CNV (may be unused or may contain the variable being replaced), confirm and stand by.

(4) Upon instructions from the Net Controller:

(a) Listen for a beep on your handset.

(b) Wait a second.

(c) Set the TSEC/KY-57 MODE to C.

(d) Confirm.

(5) If the MK operation was successful, the Net Controller will now contact you via the new CNV.

(6) If the MK operation was not successful, the Net Controller will contact you via clear voice (plain text) transmission, instruct you to set your TSEC/KY-57 FILL selector to slot 6 and stand by while the MK operation is repeated.

h. Fill battery changing procedures:

- (1) Set TSEC/KY-57 POWER to ON.
- (2) Unscrew two screws securing battery cover plate.
- (3) Remove old battery.
- (4) Matching polarity (+ to +, - to -) of new battery and equipment, insert new battery into battery cavity.
- (5) Indicate on TSEC/KY-57 date new battery is inserted.
- (6) Replace battery cover plate and secure.

By Order of the Secretary of the Army:

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Chief of Staff

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Brigadier General, United States Army
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