

# WWII Tactical Communications

A Display at the  
Radio Technology Museum  
At InfoAge



U.S. ARMY SIGNAL CORPS ELECTRONICS

# WORLD WAR II COMMUNICATIONS

CAMP EVANS - THE SIGNAL CORPS RADAR LABORATORY - THE WWII LIVING MEMORIAL

# The Signal Corps

The U.S. Army's Information Technology Department Since 1860



THE SIGNAL CORPS OF THE UNITED STATES ARMY.-Drawn by A. R. Waud - Harper's Weekly, June 28, 1862







# FIELD TELEPHONES

- Simple - Secure - Effective
- Minimum System: 2 phones and a pair of wires.
- Range: 11 - 17 miles on W-110-B Field Wire
- Talk Power: 2 flashlight batteries
- Signaling: Hand Generator



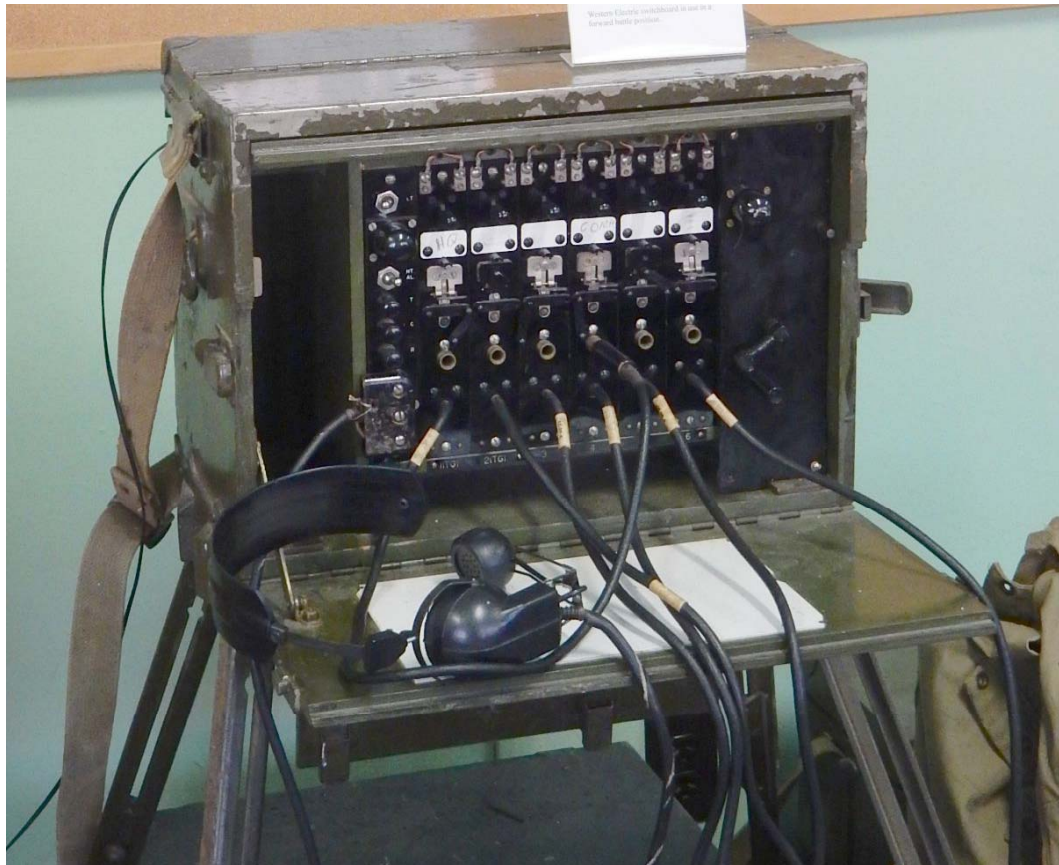
Light-weight “assault wire” may be installed quickly by one man.



SIGNAL CORPS SWITCHBOARD BD-72

Calls are routed by manually inserting patch cords in field switchboards.





## **LINEMAN'S TOOL KIT**

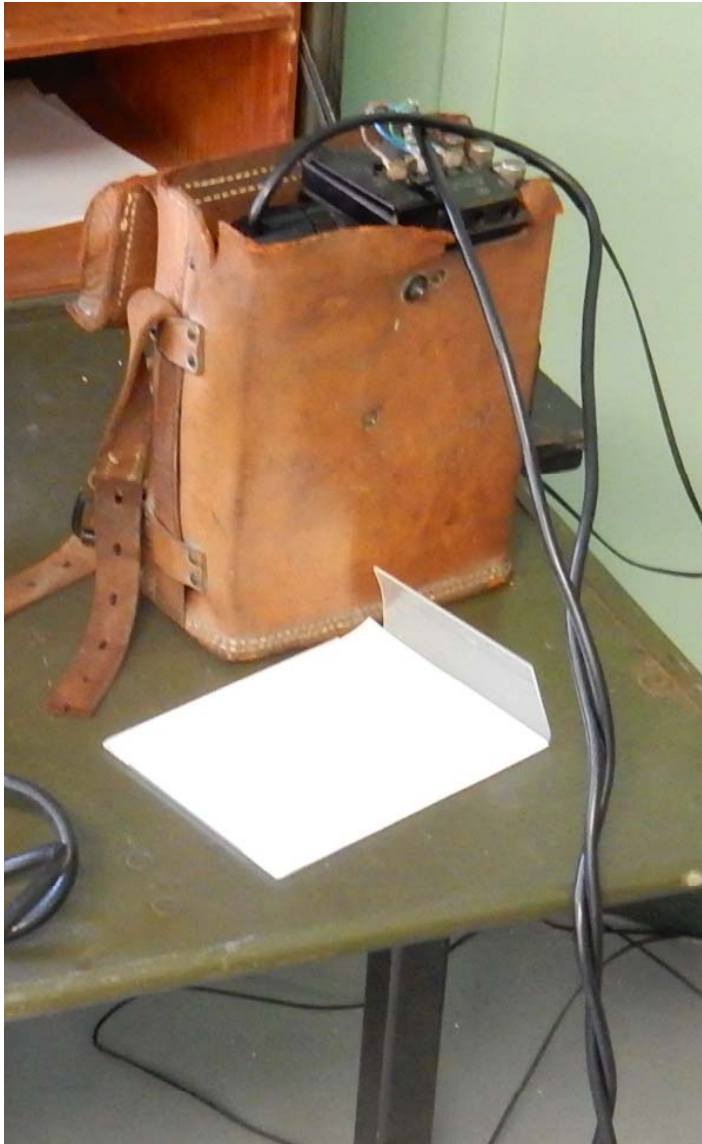
Tool Equipment TE-33



Case, CS-24, containing:

Electrician's Knife, TL-29

Lineman's Pliers. TL-13



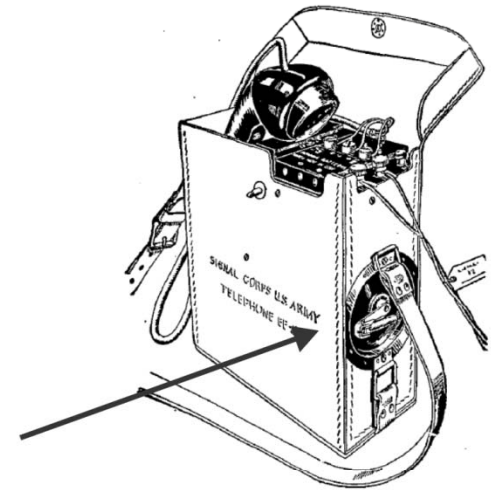
# USING THE EE-8 FIELD PHONE

**TOUCH**



**GENTLY**

Crank the Generator  
to signal the Far End.



Actuate the  
Push-to-Talk Switch

(You'll be able to hear  
yourself talk if the  
phone is working  
properly.)





# SQUAD RADIOS

## The Original Walkie Talkie

- SCR-194 Radio Set (BC-222), 28-52 Mhz (artillery)
- SCR-195 Radio Set (BC-322), 52-65 Mhz (infantry)
- Designed at SCL - Ft. Monmouth
- Early '30's ham-radio technology
- 2 tubes, Super-regenerative Receiver
- 1-mile range
- Requires a skilled operator
- Fragile antenna
- Introduced 1935
- Used to good effect in pre-war maneuvers.
- 20,000 units produced



## SCR-536 (BC-611)

Galvin Corp. (Motorola) – early 1942

- Frequency coverage: 2.0 - 6.0 mc
- Crystal controlled – 1 Channel
- Type of signal: AM , voice
- Type of receiver: superheterodyne
- Power Output: 0.3 watts
- Tubes: 5
- Weight: 5 pounds
- Range: 1 mile +
- 206,000 units produced

## SCR-300 (BC-1000)

The FM Walkie-Talkie

Galvin Corp. (Motorola) – 1943

- Frequency coverage: 40-48 mc
- Tunable w/ crystal reference
- Type of signal: FM , voice
- Power Output: 0.3 watts
- Tubes: 18
- Range: 10 miles w/long (10 ft.) antenna
- Weight: 32-38 pounds
- AN/VRC-3 Mobile version
- 88,000 units produced



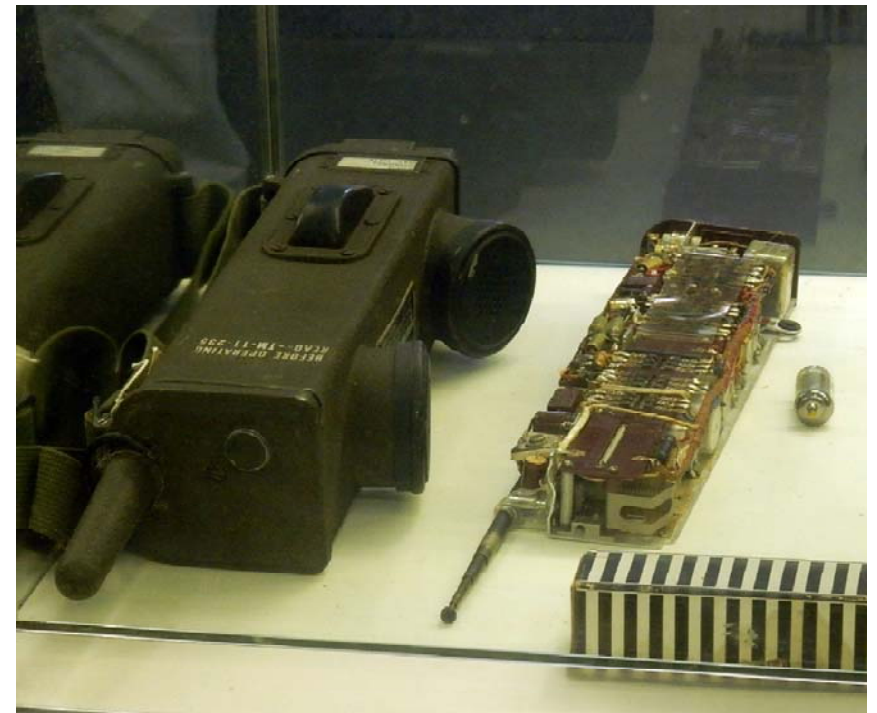
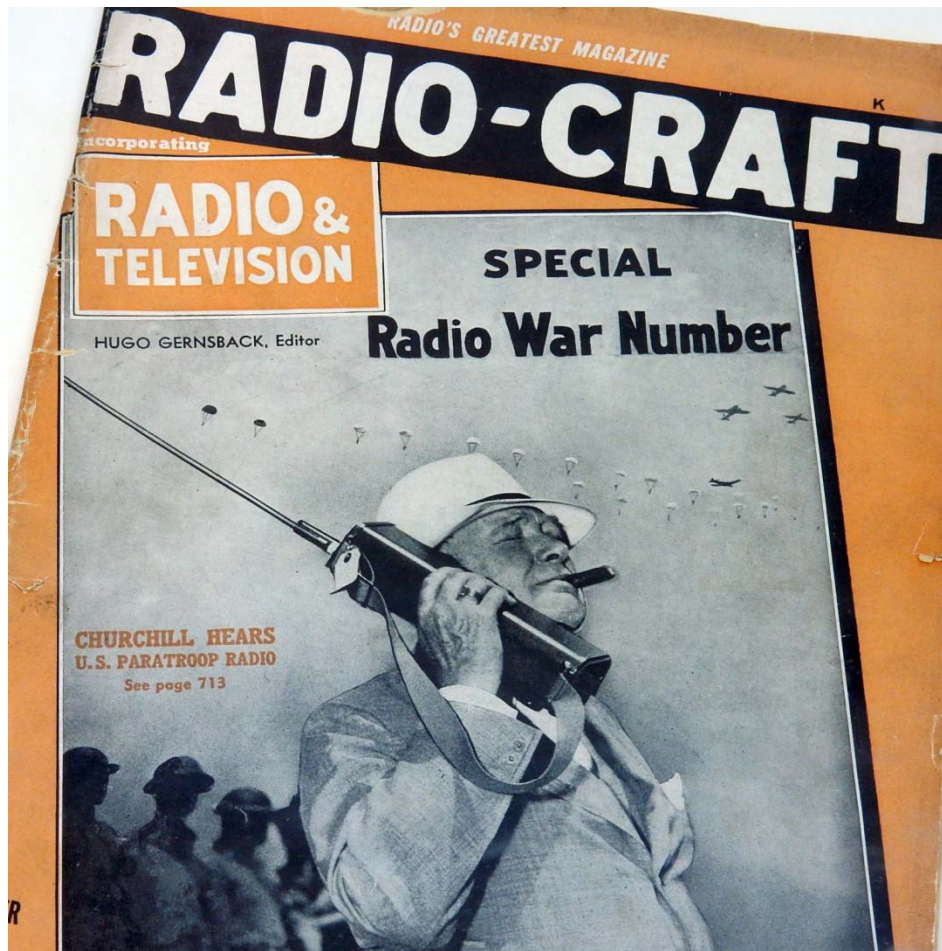
# SCR-195



# SCR-536

## Handie-Talkie

So simple, even the  
Prime Minister can use  
it!





**SCR-300**  
**FM Walkie-Talkie**



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- SCR-288 (BC-474)**



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SCR-694



# MOBILE FM RADIOS

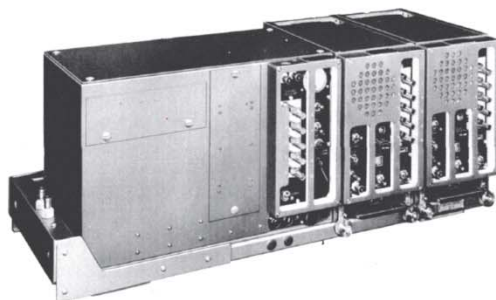


## SCR-298 FM Transmitter and Receiver

- Mobile FM Radio Set, 30-40 Mhz, 35 Watts
- Based on Link 25-XMTR used by CT State Police
- Evaluated in pre-war maneuvers.
- Established the viability of VHF FM

## SCR 293 (TX-RX) – SCR-294 (RX only)

- Link Corp.
- Frequency 20 to 27.9 MHz Crystal Controlled
- Power output : High 25 Watt, Low ½ Watt
- Principal Components:
- Delivered January 1942.
- First FM radios in combat (North Africa late 1942)



## The Tank Sets

- Western Electric Co
- SCR-508/528 - 20.0 to 27.9 MHz (Armor)
- SCR-608/628 – 27.0 to 38.9 MHz (Artillery)
- 10 Channels – Crystal Control
- Range: 10 to 15 miles
- Power output: 30 W
- 100,000 Produced

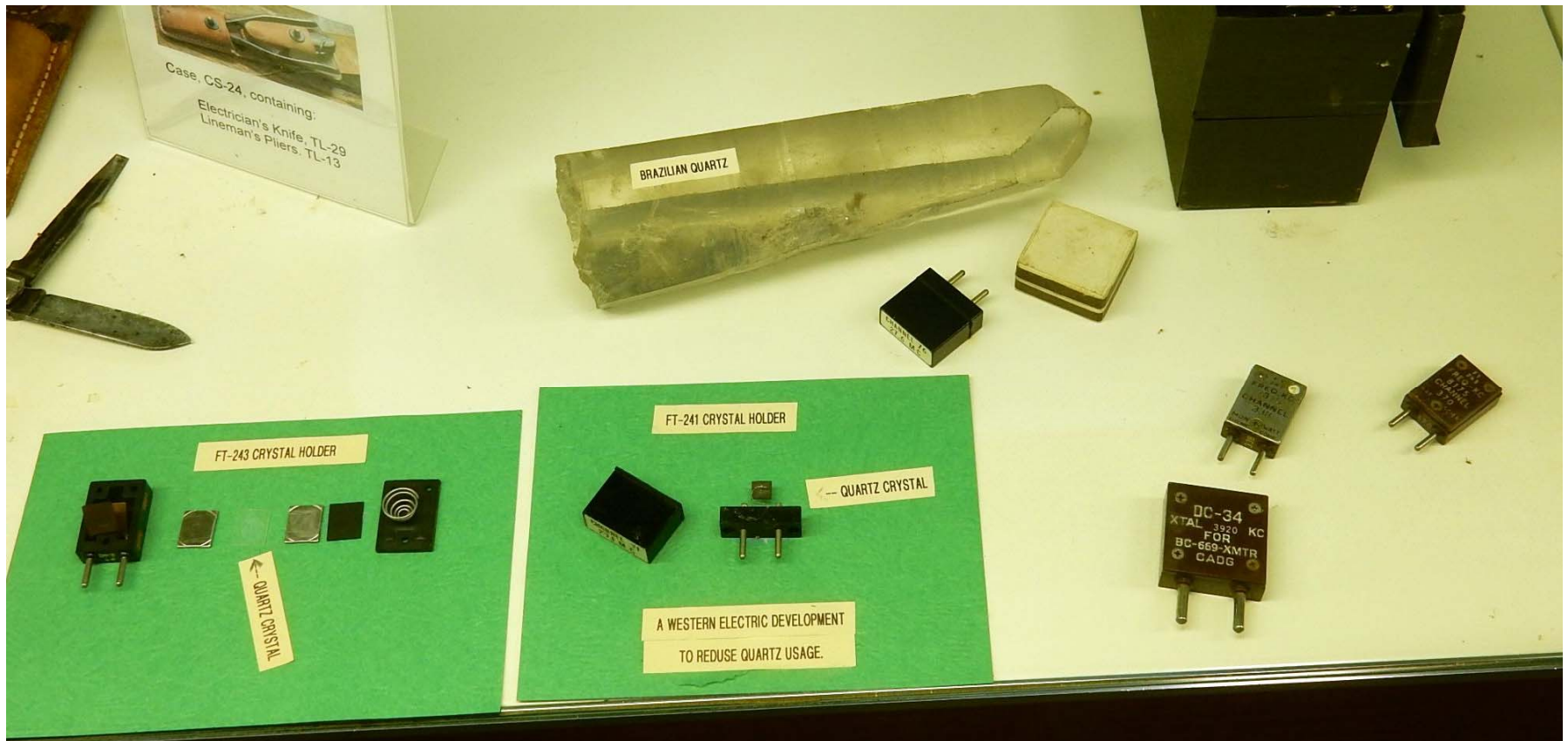
## The Jeep Radios

- SCR 509/510 : 20 to 27.9 MC
- SCR 609/610 : 27 to 39.9 MC
- Developed at SCL, Mfg. Galvin
- Portable & vehicular versions
- Type of signal: FM voice
- Power output: 1 watt
- Range: 5 miles
- 162,000 Produced





# Crystal Frequency Control



# Prison Camp Radio



# Wireless Set 19

