

# FULLERPHONE

Transmitter-Receiver

MK IV

(Complete Voice and Telegraphy Communication Sets)

## TO PREPARE FOR OPERATION:

Remove corks from the batteries and fill them with clean fresh tap water. Allow the batteries to remain uncorked for four to eight hours in order to obtain full charge on the battery. Then cork. Now that the batteries are fully charged, connect as directed on the inside of the battery case cover: With the terminals towards the back and the right sides of the case.

## TO TEST:

Pull out knob marked "Pull On" . . . Plug in Phones . . . Short circuit terminals L1 and L2 . . . Operate telegraph key. Signal tone should be heard in the earphones. If no tone is heard, adjust the buzzer. This adjustment is preset at the factory and need only be done in case the buzzer contacts have been vibrated loose during shipment.

## TO ADJUST BUZZER:

With L1 and L2 shorted and switch "ON", unlock and unscrew the buzzer and chopper knobs slightly . . . Press key, and while listening to the earphones, advance chopper until a click is heard . . . Then with key depressed, advance buzzer until a loud buzz is heard in the headset. Adjust both for the loudest signal . . . Lock both adjustments in place.

## TO OPERATE:

Connect L1 of 1st set to L2 of 2nd set and L2 of 1st set to L1 of 2nd set using two lines or to one line and a good ground connection such as a water pipe or a buried copper wire. Plug in the earphones . . . Pull out the "Pull On" knob.

## FOR CODE OPERATION

Place lower switch in the neutral or center position. The set can now be used for signaling or code operation by pressing the telegraph key.

## FOR VOICE OPERATION

Place the lower switch in position "A". Now hold the throat microphone firmly against the top portion of the throat and speak distinctly.

## IMPORTANT:

Under normal usage, the batteries used in this set will recharge automatically when the set is sitting idle. To conserve batteries, push in the "ON" switch when the unit is not being used. If the batteries should become discharged by being short-circuited for long periods of time, they may be recharged using a conventional battery charger. Replace the water in the batteries when they become dry. These batteries will operate constantly many months in this set before they become discharged.

## RANGE:

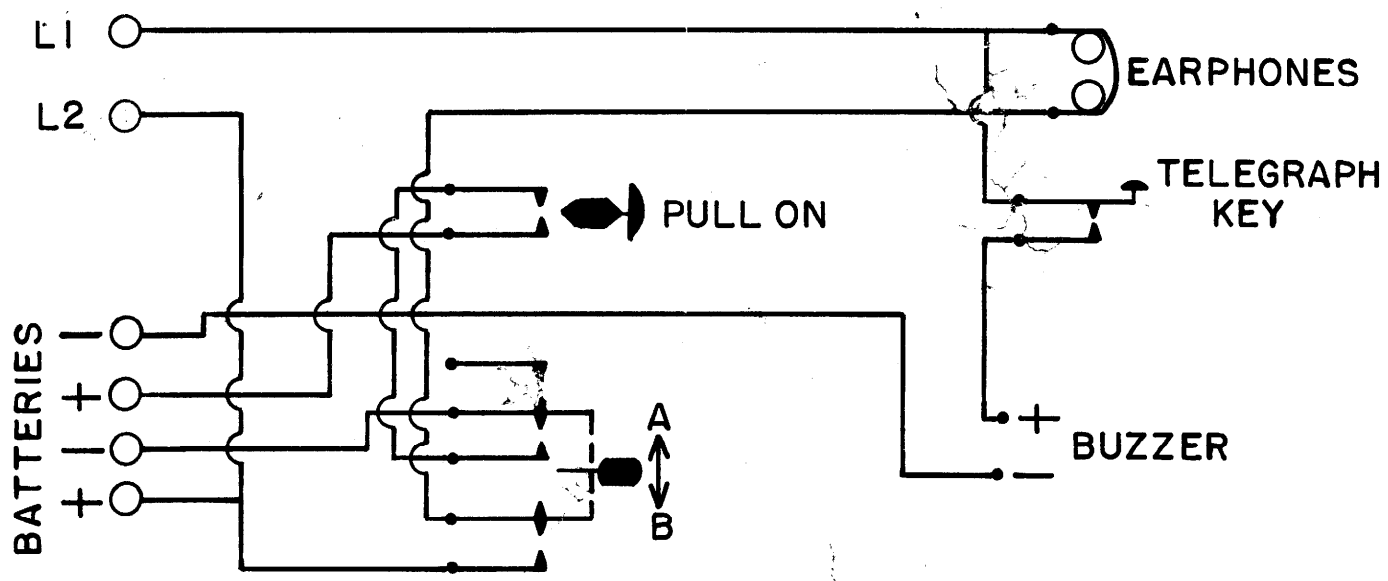
Using field telephone wire, the range of this unit is in excess of one mile. Using good low resistance copper wire, ranges of over five miles are easily possible. Fence wires and old telephone lines can be used with excellent results.

## SIGNALING:

To use the units for intercom signaling, leave the earphones unplugged. The buzzer will be heard for 20 to 30 feet. If more volume is desired: Connect a doorbell or other loud buzzer to terminals L1 and L2 of the unit to be signaled. At the signaling unit, connect one side of a push button such as a door bell button to L1. Connect the other side of the switch to one side of a door bell transformer or other 6 Volt to 12 Volt source. Connect the other side of this low voltage source to L2.

Because of oxidation common to all types of electrical contacts, it is recommended that if loss of communication should occur, all moving contacts should be cleaned with a point file or Emory paper. This includes key and switch contact as well as buzzer contacts. Buzzer contacts may be reached by removing the top bakelite plate of the buzzer. This phenomenon is natural with all types of electrical equipment and is nothing out of the ordinary.

# FULLERPHONE CIRCUIT DIAGRAM



## INTERNATIONAL MORSE CODE

### ALPHABET

Meaning	Symbol	Meaning	Symbol	Meaning	Symbol
A	.-	H	....	Q	---.-
ä	..-.	I	..	R	.-.-.
à	---..	J	.-.-.-	S	...-
B	....	K	-.--	T	---
C	---.	L	.-..	U	..-
CH	----	M	--	ü	..-.
D	---.	N	-.-	V	...-
E	.	ñ	-.-.-	W	-.--
e	....	O	---	X	..--
F	...-	ö	---.	Y	---.-
G	---	P	.-.-.	Z	---..

### NUMERALS

Meaning	Symbol
1	.-.-.-
2	..-.-
3	...--
4	....-
5	.....
6	-----
7	-----
8	-----
9	-----
0	-----

### PUNCTUATION

Meaning	Sign	Symbol
Period (full stop) (.) and decimal point	AA A	.-. .-.
Bar indicating fraction (/)	XE	-----