

J. J. [unclear]

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Notified in A.C.Is. for the week ending 25th October, 1939

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G.S. Publications

165

SIGNAL TRAINING

VOLUME III

Pamphlet No. 21

FULLERPHONES, MARK IV

1939

By Command of the Army Council,

H. G. [unclear]

THE WAR OFFICE,
25th October, 1939.



LONDON

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Diagrams.

- Fig. 1. Circuit diagram.
 " 2. Twin line, or single line and earth return, Fullerphone circuit.
 " 3. Simple series superposed circuit—two Fullerphones in series with two telephones.

CONTENTS—*continued.***Diagrams—*continued.***

- Fig. 4. Series Fullerphone superposed on twin line telephone circuit, or single line and earth telephone circuit.
 „ 5. Phantom to earth Fullerphone circuit superposed on a twin line.
 „ 6. Phantom Fullerphone circuit superposed on two twin lines.
 „ 7. Development of phantom pair arrangement—one Fullerphone phantom to earth circuit and one phantom telephone circuit superposed on two twin lines.
 „ 8. Intermediate Fullerphone circuit superposed on a twin line and earth.
 „ 9. Intermediate Fullerphone circuit superposed on two twin lines.

Photographs.

- Plate I.—Fullerphones, Mk. IV.—Front view, in case.
 „ II.—Fullerphones, Mk. IV.—Withdrawn from case, buzzer removed.
 „ III.—Fullerphones, Mk. IV.—Internal view, from above.
 „ IV.—Fullerphones, Mk. IV.—Buzzer F, Mk. II.
 „ V.—Fullerphones, Mk. IV.—Buzzer F, Mk. II, partly dismantled.

SIGNAL TRAINING, VOL. III

Pamphlet No. 21

FULLERPHONES, MARK IV

1939

1. General Description

1. *Purpose and facilities.*—The Fullerphone Mk. IV is a portable D.C. telegraph instrument of high sensitivity. It is suitable for use in forward areas as its signals are practically immune from interception.

The instrument can be superposed on existing telephone systems when telegraph communication is required between points served by such systems.

The Fullerphone Mk. IV is commonly worked over one of the following circuits:—

- i. A twin line or a single line and an earth return circuit.
- ii. A simple series superposed circuit.
- iii. A superposed series or a superposed phantom circuit.

2. *Weight and dimensions.*

TABLE I.—WEIGHT AND DIMENSIONS

Weight complete (1)	Length (2)	Width (3)	Depth (4)
14 lb.	12 ins.	6 $\frac{7}{8}$ ins.	7 ins.

3. *Range of working.*—Since the instrument is essentially direct current operated and uses morse signalling only, range is only limited by the leakage and resistance of the line and by interference from stray earth currents. The instrument will produce a readable signal with a current of only 0.5 micro-ampere flowing, so that very high resistance lines may be used in emergency conditions. Actually under normal conditions a