

## DIRECTORS and their USES.

### 1. GENERAL

Directors will measure

- (a) Horizontal angles (C to 180 degs R and L)
- (b) Vertical angles to about 10 degs Elev or Depression.

### 2. TYPES in use in Field Artillery Brigades

- (a) No 4
- (b) No 6

### 3. ESSENTIAL PARTS

Directors consist of

- (a) Stand
- (b) Director Sight (D S), i.e. that portion of the instrument which on being rotated does not record an angle.
- (c) Reading Plate (R P), i.e. that portion of the instrument which on being rotated records angles.
- (d) Magnetic compass
- (e) Angle of sight measurer—either xgraticules or a movable bubble.
- (f) Levelling bubbles
- (g) Clamps to
  - i clamp R P to D S
  - ii " D S to Stand.

### 4. POINTS IN USING.

- (a) Set up level with legs well splayed.
- (b) Visualize your work
- (c) Every director when swung to zero should be pointing to the target.
- (d) Commence work with compass needle clamped and the clamps, 3(g) above, loose.
- (e) Check all lays after clamping.

### 5. USES? PARTICULAR.

- (a) To give an angle to a second instrument by which that instrument can be aligned parallel to the line 1st Director-Target.
  - i Clamp R P at Zero
  - ii Lay in reqd line by means of D S
  - iii Clamp D S ; unclamp R P
  - iv Lay on second instrument.
  - v Clamp R P and read angle.
  - vi Send supplement of that angle to the 2nd instrument. (~~In The~~ ~~xxxxxxx~~ supplement of an angle is the difference between it and 180 degrees, & in Artillery is of the opposite sign.
- (b) To receive a line represented by ~~angle~~ ~~from~~ another instrument.
  - i Clamp R P at angle given.
  - ii Lay on 1st Director by means of D S
  - iii Clamp D S ; unclamp R P
  - iv Swing to zero and clamp R P. The director is now layed in the required line.
- (c) To give an angle from magnetic north to another instrument by which that instrument can be aligned parallel to the line 1st Director - Target.
  - i Clamp R P at zero.
  - ii Lay in required line by means of D S.
  - iii Clamp D S ; unclamp R P.
  - iv Unclamp Compass needle and swing R P until needle comes to rest pointing to zero on the compass scale.
  - v Clamp R P and Compass needle.
  - vi Read the angle registered and forward it to the 2nd instrument as .... degrees Right (or Left) of Mag North.
- (d) To receive a line represented by ~~xxxxxxx~~ an angle from ~~xxxxxxx~~ magnetic north.
  - i Clamp R P at angle ordered.
  - ii Unclamp compass needle.
  - iii Swing D S until compass needle comes to rest pointing to zero on compass scale.
  - iv Clamp D S and Compass needle.
  - v Unclamp R P and swing to zero. Director is now layed in the required line.

5 Contd

- (c) To give a line to another instrument by means of an angle from an aiming point.
- i With your director layed in the required line Clamp D S.  
(R P must of course be reading zero. Para 4(c) )
  - ii Unclamp R P and swing onto selected aiming point.
  - iii Clamp R P and read angle. This is the required angle.
- (f) To pick up a line represented by an angle from an aiming point.
- i Clamp R P at the angle given.
  - ii By means of D S lay on A P.
  - iii Clamp D S ; unclamp R P.
  - iv swing R P to zero. The Director is now in the required line.

(g) N O T E

When using directors to lay out lines of fire, and when the directors are some distance apart, certain calculations and adjustments to angles are made before passing the angle (a) (c) or (e) above to the 2nd instrument. This is done to ensure that the line from the second instrument passes through a definite point in the ~~required~~ required line from the first director and not parallel to that line. This is however separate from the use of , and does not affect the working of the director.

- (h) To measure an angle of sight.
- i ~~Check~~ level of instrument.
  - ii Lay for line on the required point.
  - iii With the No 6 Director read A S by means of graticules.
  - iv With the No 4 Director, lay for elevation by means of elev screw; level bubble on side of director by means of micrometer heads and read Angle of sight registered.

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L E S B