

### **1.3. Description of the Block instrument:**

#### **a) The 'Train Going To dial':**

The indications of this dial refer to trains leaving the station and the dial serves as a visual indicator of the conditions of the block section in advance. These indications are electrically controlled by the Station Master at the block station immediately in advance and the indications can be altered only by him. The indications of the 'Train going to' dial correspond with those of the 'Train coming from' dial of the corresponding instrument at the station in advance. There are three indications viz;

- (i) 'Line closed' indication appears when there is no train in the block section and permission has not been given for any train to enter it. The needle remains vertical on the white segment of the dial.
- (ii) 'Line clear' indication appears when permission has been obtained for a train to enter the block section. The needle remains deflected to the right on the green segment of the dial.
- (iii) 'Train On Line' indication appears when the block section is occupied by a train or other obstruction and the needle remains deflected to the left on the red segment of the dial.

#### **(b) The ' Train Coming From dial':**

The indications of this dial refer to trains approaching a station and the dial serves as a visual indicator of the conditions of the block section in rear. It is worked entirely by the Station Master of the station at which the instrument is located. The indications of the TCF dial at a station correspond with those of the TGT dial of the corresponding instrument at the station in the rear. These indications are the same as those described against the TGT dial.

#### **(c) The Operating Handle:**

The 'Operating Handle' has three positions viz., 'Train On Line', 'Line closed' and 'Line clear'. The normal or middle position is 'Line closed' with the arrow painted on the operating handle in vertical position. When turned to the right, it assumes the 'Line clear' position and when turned to left, it assumes the 'Train On Line' position.

When the operating handle at 'Y' is turned to the 'Line clear' position, the TCF dial at 'Y' and TGT dial at 'X' will indicate 'Line clear'. Simultaneously the lock on the Last Stop Signal at 'X' will be released.

When the operating handle is turned to the left or 'Train On Line' position, the TCF dial at 'Y' and the TGT dial at 'X' will indicate 'Train On Line'.

The operating handle is free to be turned from 'Line closed' to either 'Line clear' or Train On Line' and also from 'Line clear' to 'Line closed' position. However, when turned to the 'Train On Line' from 'Line Clear' position, the handle gets locked in this position until the train has arrived inside the Last Vehicle Track Circuit and Home signal has been put back to 'ON'.

**(d) Bell plunger:**

The bell plunger is used to give bell signals to the station at the other end of the block section. Each time the plunger is pressed the bell or gong of the corresponding instrument at the other end of the block section will give a single beat. The bell plunger in its normal position locks the 'Operating Handle' in any of its three positions. The plunger should, therefore, be pressed before the handle is turned.

**(e) Bell:**

The bell is intended to receive bell signals from 'Y', the station at the other end of the block section. Each time the bell plunger is pressed at the other station, the bell will respond once.

**(f) Telephone:**

A telephone is provided along with each instrument for communication with the station at the other end of the block section.

**1.4. Indoor Apparatus:**

**a) Electric Lock on the Last Stop Signal:**

An electric lock locks the Last Stop Signal in the normal position and is released only when 'Line clear' has been obtained from the block station in advance.