



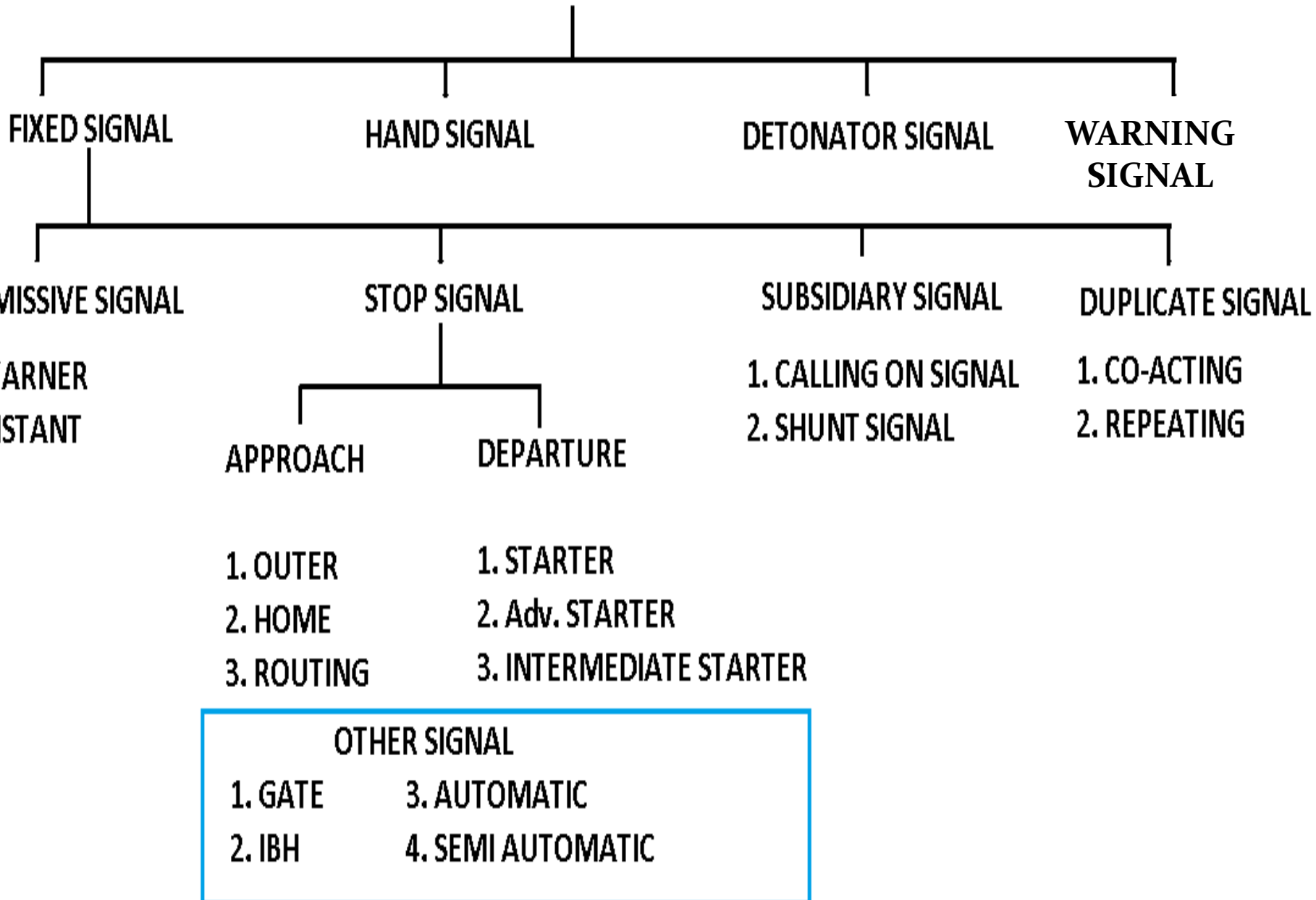
क्षेत्रीय रेल प्रशिक्षण संस्थान, भुली  
**ZONAL RAILWAY TRAINING INSTITUTE, BHULI**



# Signal

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**ZRTI / Bhuli**

# SIGNAL



# **SIGNAL**

## **TYPES OF SIGNALS :-**

- 1. FIXED SIGNAL,**
- 2. HAND SIGNAL,**
- 3. DETONATING SIGNAL &**
- 4. WARNING SIGNAL.**

# **SIGNAL**

## **TYPES OF FIXED SIGNALS :-**

- 1. PERMISSIVE SIGNAL**
- 2. STOP SIGNAL**
- 3. SUBSIDIARY SIGNAL &**
- 4. DUPLICATE SIGNAL**

# **SIGNAL**

## **TYPES OF PERMISSIVE SIGNAL :-**

- 1. WARNER SIGNAL.**
- 2. DISTANT SIGNAL.**

# SIGNAL

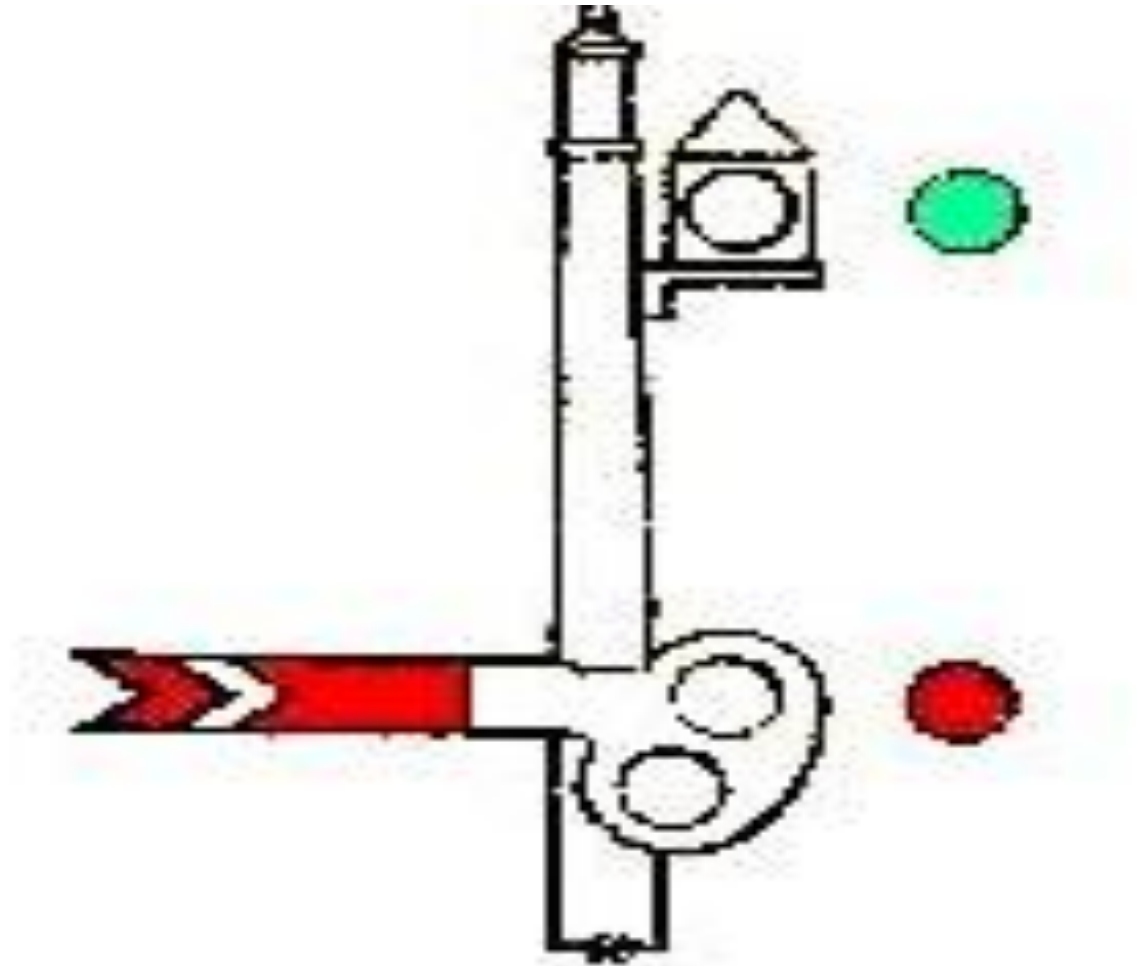
## ARM TYPE WARNER SIGNAL

Aspect :

**Proceed with caution**

Indication :

**Proceed with caution and be prepared to stop at the next Stop signal.**

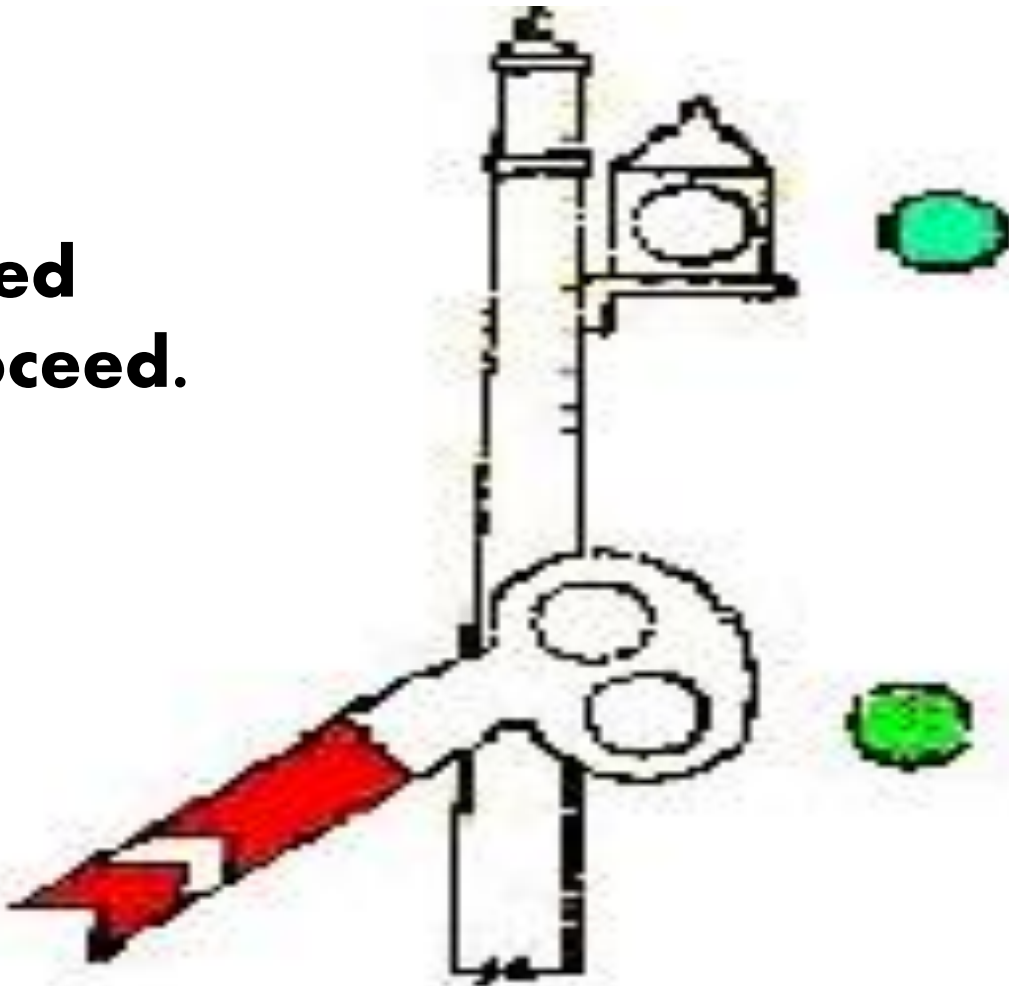


ON POSITION

# SIGNAL

## ARM TYPE WARNER SIGNAL

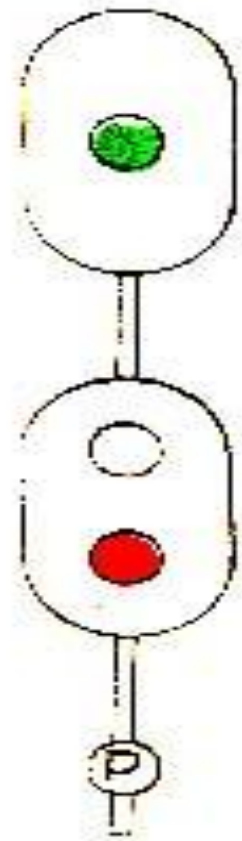
Aspect : Proceed  
Indication : Proceed.



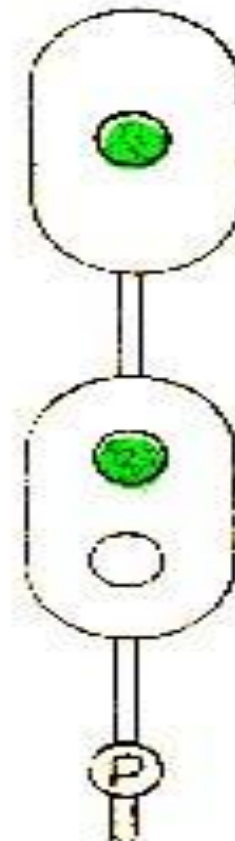
OFF  
POSITION

# SIGNAL

## COLOUR LIGHT TYPE WARNER SIGNAL



ON POSITION



OFF POSITION

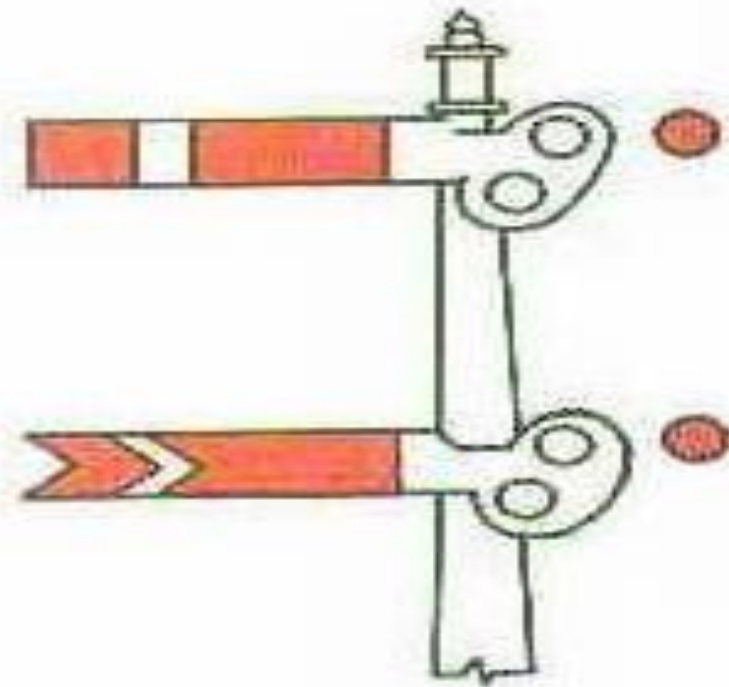


# SIGNAL

## WARNER BELOW A STOP SIGNAL

Aspect : Stop

Indication : Stop dead



Warner 'ON' Position

Outer 'ON' Position

# SIGNAL

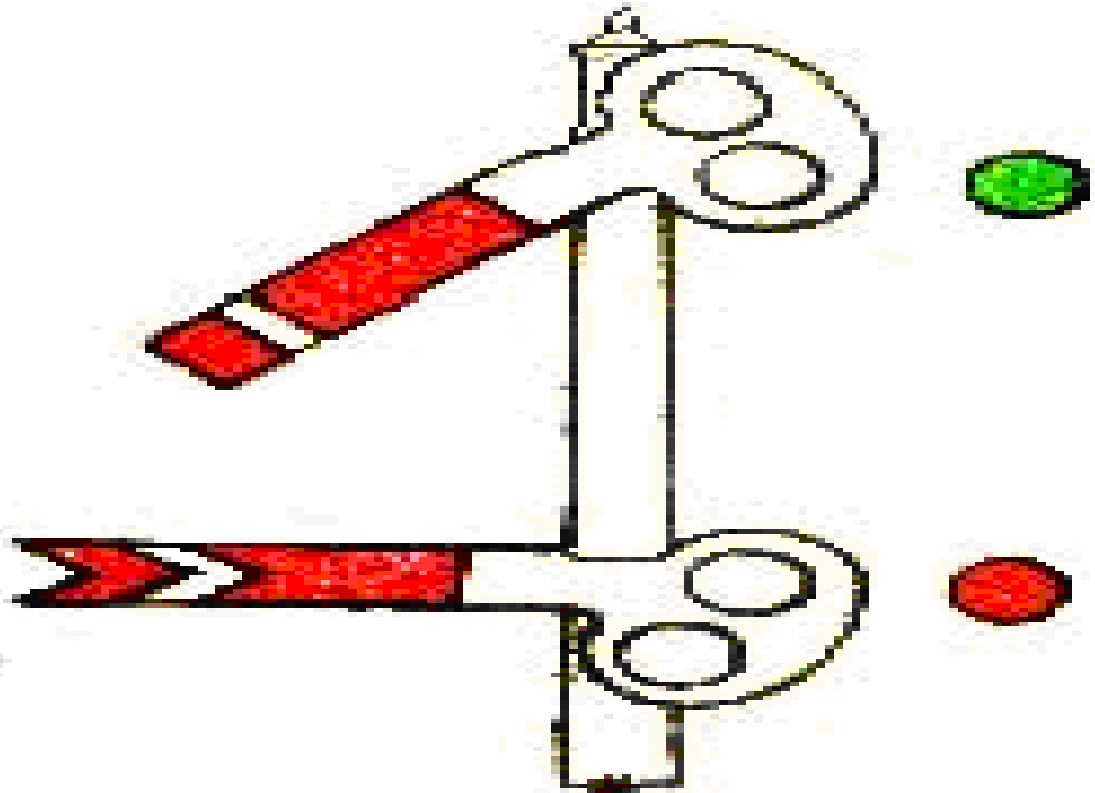
## WARNER BELOW A STOP SIGNAL

### Aspect :

Proceed with caution

### Indication :

Proceed with caution and be prepared to stop at the next Stop signal.



Warner 'ON' Position

Outer 'OFF' Position

# SIGNAL

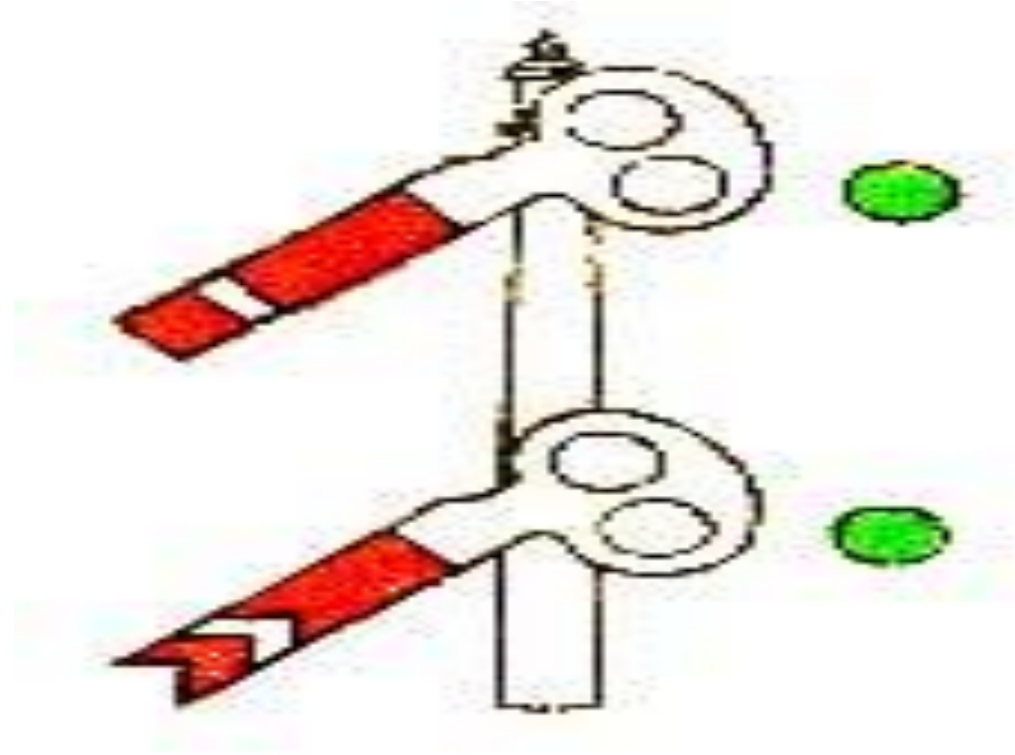
## WARNER BELOW A STOP SIGNAL

Aspect :

**Proceed**

Indication :

**Proceed.**



Warner 'OFF' Position

Outer 'OFF' Position

# SIGNAL

## WARNER BELOW A STOP SIGNAL IN COLOUR LIGHT



Warner 'ON' Position  
Outer 'ON' Position



Warner 'ON' Position  
Outer 'OFF' Position



Warner 'OFF' Position  
Outer 'OFF' Position

# **SIGNAL**

## **WARNER SIGNAL**

- 1. It shall be provided below the FSS or LSS or on a post by it self 1.5m to 2m below fixed green light.**
- 2. Semaphore Warner has a fish tailed arm and painted red with white bar.**
- 3. Provision of Warner is compulsory at class 'A' and class "C" in TAS.**

# **SIGNAL**

## **WARNER SIGNAL**

4. **At class 'B' station it is provided when the speed of the run through trains exceeds 50kmph.**
4. **In color light area 'P' marker will be provided if it is independently placed on a post by it self.**
4. **In 'ON' position, the aspect is 'Proceed with Caution' and indicates 'proceed and be prepared to stop at the next stop signal'. In 'OFF' position the aspect is 'Proceed' and indicates 'Proceed'**

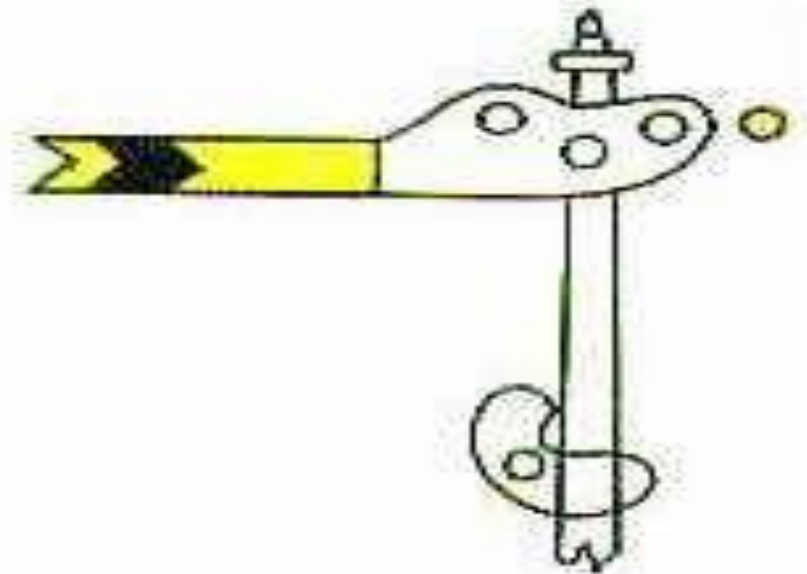
# SIGNAL

## ARM TYPE DISTANT SIGNAL

Aspect : **Caution**

Indication :

**Proceed and be prepared to stop at the next stop signal**



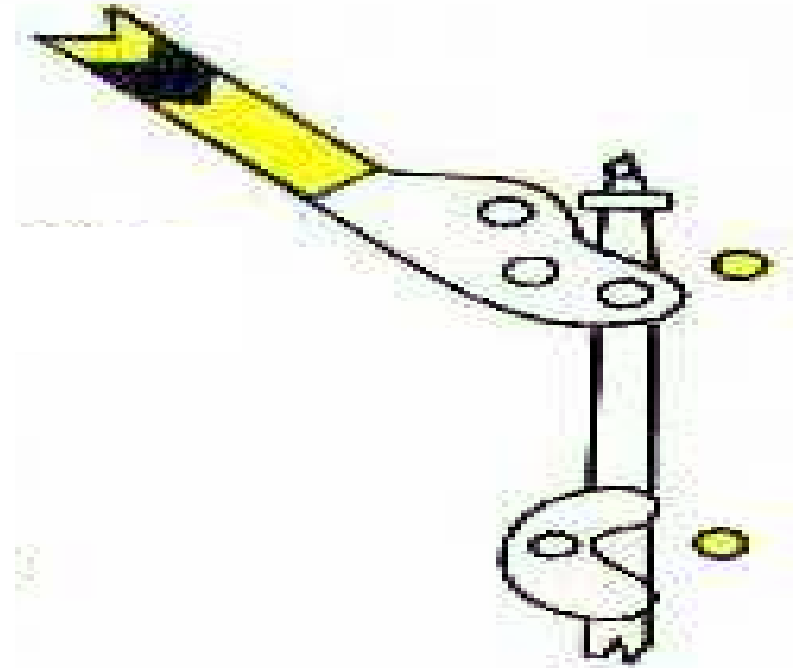
'ON' position

# SIGNAL

## ARM TYPE DISTANT SIGNAL

Aspect : **Attention**

Indication : **Proceed  
and be prepared to  
pass next signal at  
restricted speed.**



'OFF' position

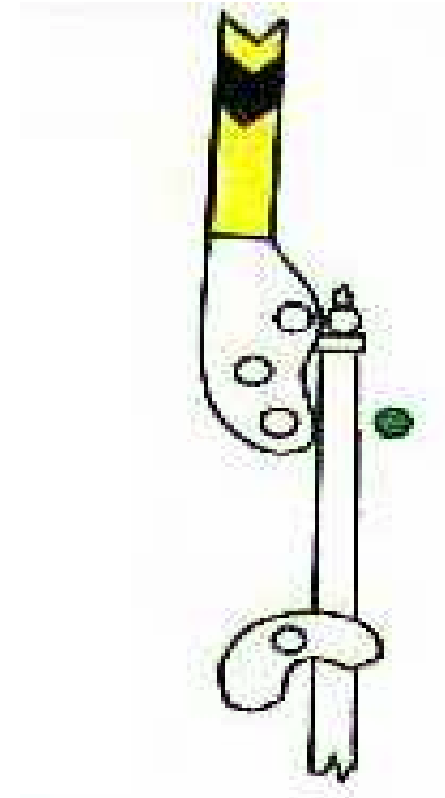


# SIGNAL

## ARM TYPE DISTANT SIGNAL

Aspect : Proceed

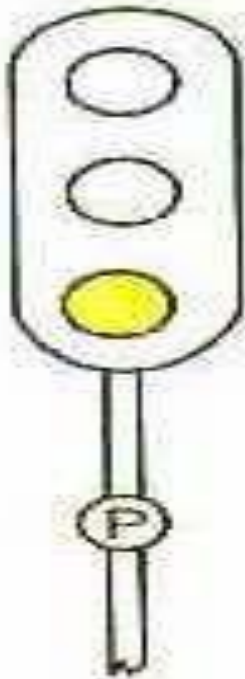
Indication : Proceed



'OFF' position

# SIGNAL

## COLOUR LIGHT TYPE DISTANT SIGNAL



'ON' position



'OFF' position

# SIGNAL

## DISTANT SIGNAL IN HIGH SPEED SECTION AT 2000M

Aspect : Attention

Indication : Proceed  
and be prepared to  
pass next signal at  
restricted speed



# SIGNAL

## DISTANT SIGNAL IN HIGH SPEED SECTION AT 2000M

Aspect : **Proceed**  
Indication : **Proceed**



# **SIGNAL**

## **DISTANT SIGNAL**

- 1. It shall be located at an adequate distance (1000m) in rear of the stop signal it pre-warns.**
- 2. In semaphore territory, it has a fish tailed end and painted yellow with a black bar.**
- 3. In color light signalling, it is equipped with a 'P' marker.**
- 4. It is capable of showing Caution, Attention and Proceed aspects.**

# **SIGNAL**

## **DISTANT SIGNAL**

- 5. Under approved special instructions a color light Distant signal may be combined with LSS of the station in rear or Gate signal [‘P’ marker is dispensed with and normal aspect is stop and shows red light in ‘ON’]**
- 6. Where necessary two Distant signals may be provided in the same direction where the sectional speed is more than 110 kmph. In this case Distant is capable of showing Attention and Proceed aspects only.**

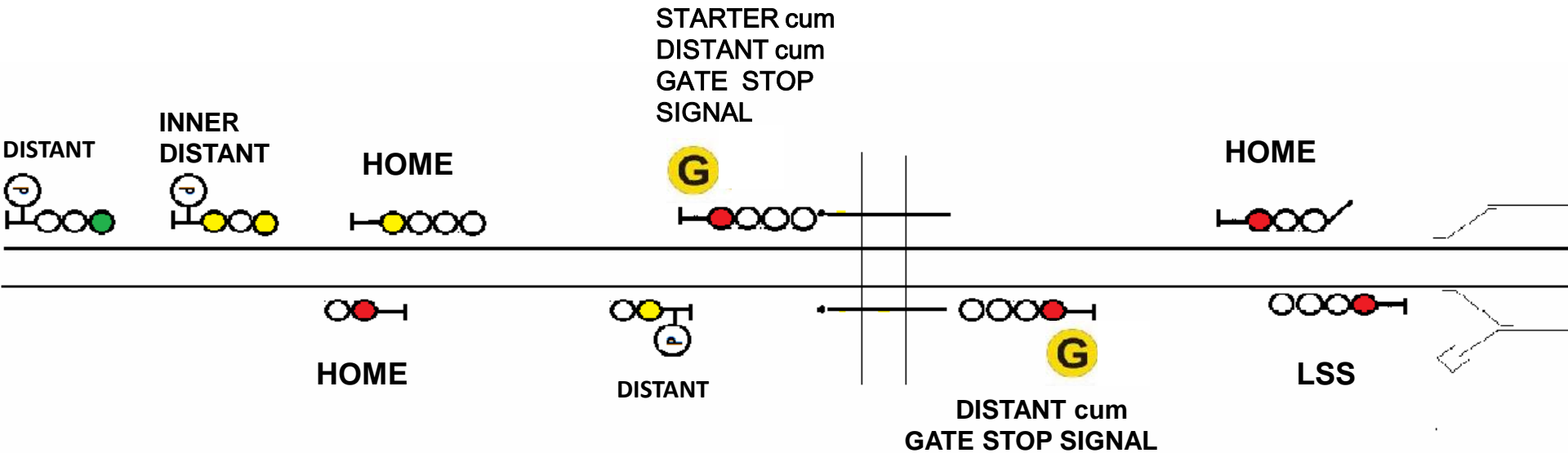
# **SIGNAL**

## **DISTANT SIGNAL**

- 7. Distant in double distant area is placed at 2000M from FSS identified by 'P' mark board.**
  
- 8. Whenever Double Distant signal is provided Signal Warning Board is dispensed**

# SIGNAL

## COMBINED SIGNAL

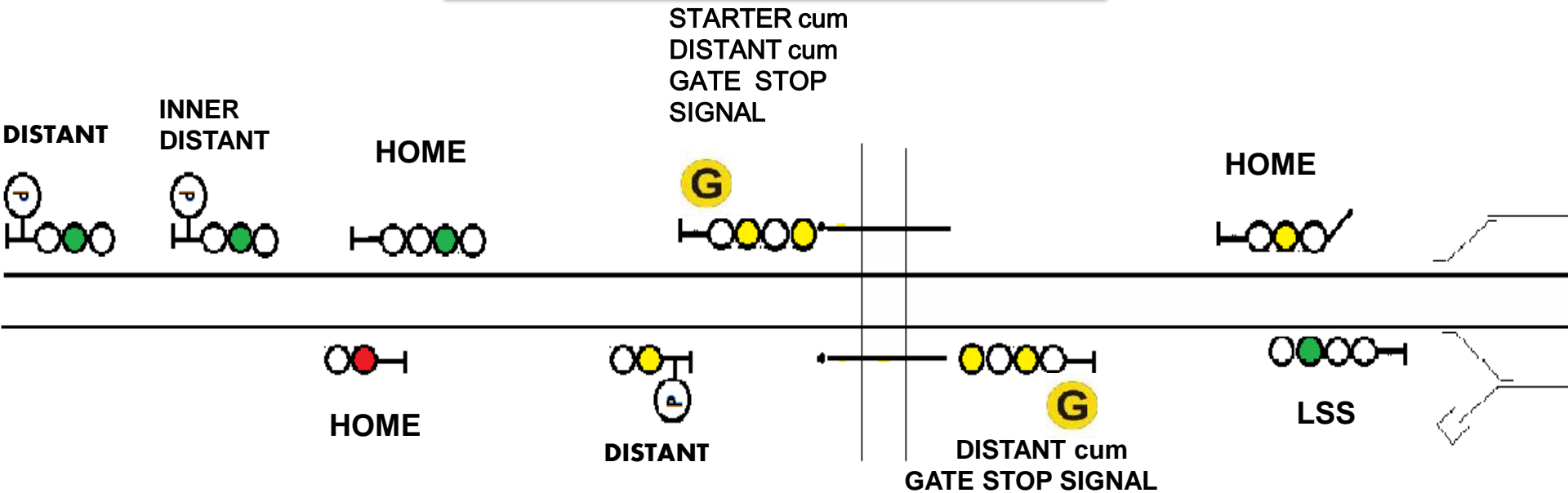


## L/C GATE IN OPEN CONDITION



# SIGNAL

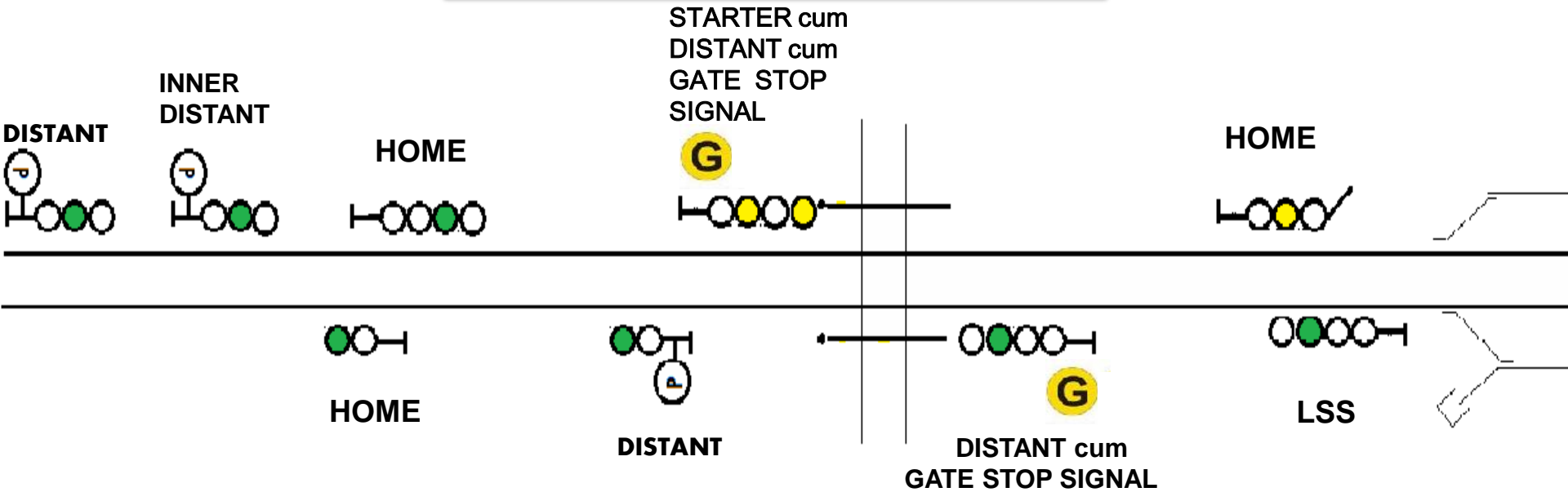
## COMBINED SIGNAL



## L/C GATE IN OPEN CONDITION

# SIGNAL

## COMBINED SIGNAL



## L/C GATE IN CLOSED CONDITION

# **SIGNAL**

## **STOP SIGNAL**

### **APPROACH SIGNAL**

- 1. OUTER**
- 2. HOME**
- 3. ROUTING**

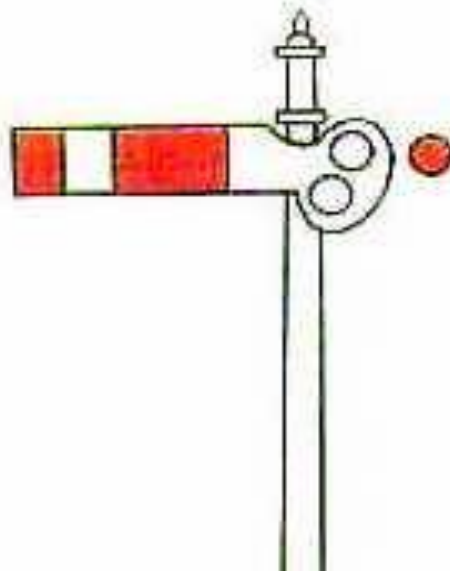
### **DEPARTURE SIGNAL**

- 1. STARTER**
- 2. ADV. STARTER**
- 3. INTERMEDIATE STARTER**

# SIGNAL

## TWO ASPECT ARM TYPE STOP SIGNAL

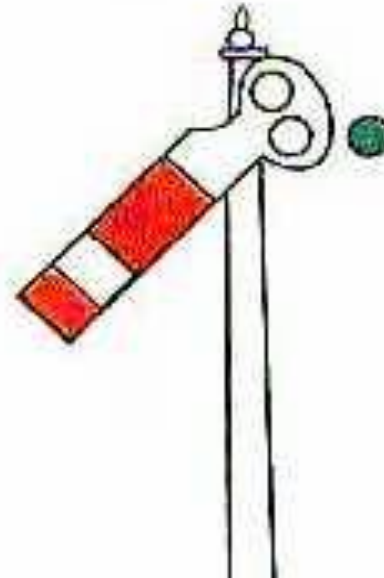
'ON' position



**Aspect :** Stop

**Indication :** Stop dead

'OFF' position



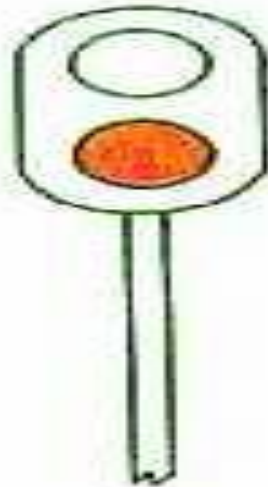
**Proceed**

**Proceed**

# SIGNAL

## TWO ASPECT COLOUR TYPE STOP SIGNAL

'ON' position



**Aspect :** Stop

**Indication :** Stop dead

'OFF' position



**Proceed**

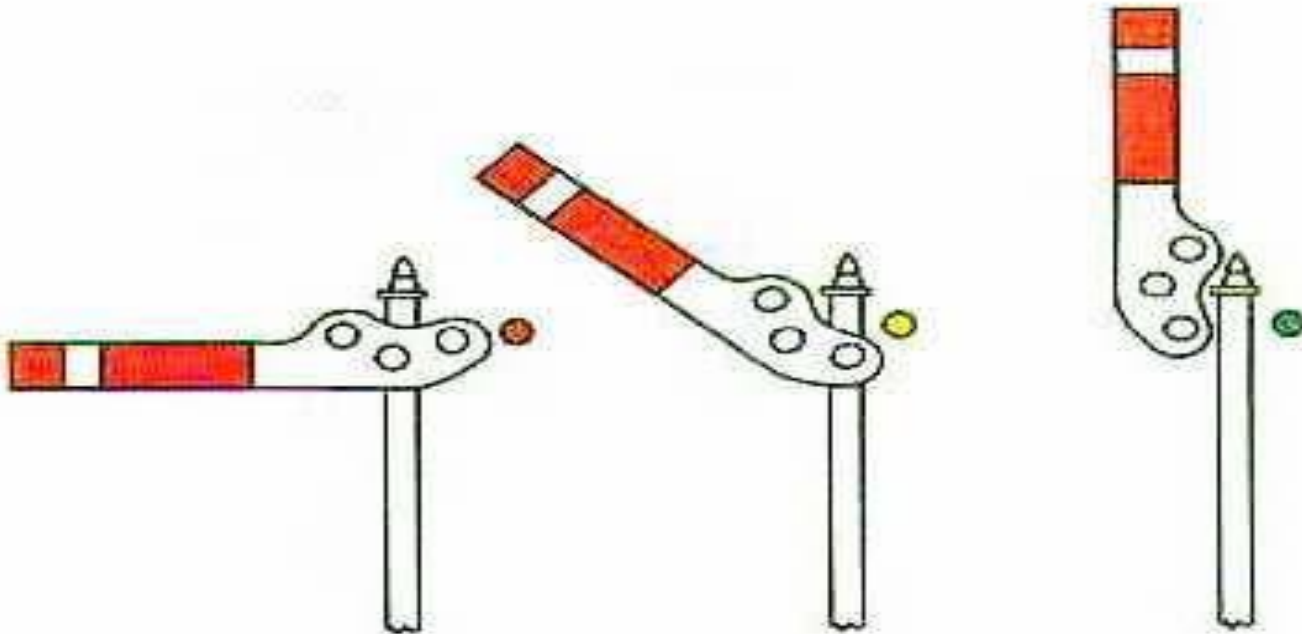
**Proceed**

# SIGNAL

## MULTIPLE ASPECT ARM TYPE STOP SIGNAL

'ON' position

'OFF' position



**Aspect :**

**Stop**

**Caution**

**Proceed**

**Indication :**

**Stop dead.**

**Proceed and be prepared  
to stop at the next stop  
signal.**

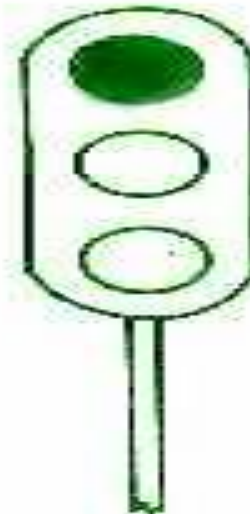
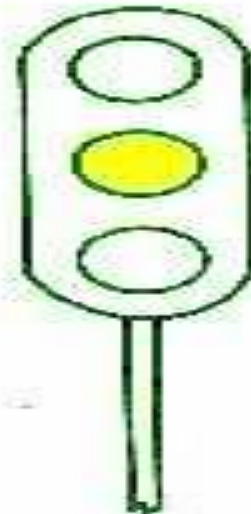
**Proceed**

# SIGNAL

## MULTIPLE ASPECT COLOUR TYPE STOP SIGNAL

'ON' position

'OFF' position



**Aspect :**

**Stop**

**Caution**

**Proceed**

**Indication :**

**Stop dead.**

**Proceed and be prepared  
to stop at the next stop  
signal.**

**Proceed**

# **SIGNAL**

## **RECEPTION SIGNALS**

### **1) OUTER SIGNAL :**

- a. This is provided only at class B station in two aspect signalling.**
- b. It shall be the First Stop Signal [FSS] of the station where provided.**
- c. On double line it shall be provided at a distance of not less than 400 meters from Home signal.**



# **SIGNAL**

## **RECEPTION SIGNALS**

- d. On single line it shall be located at a distance of NLT 400 m from advanced starter or Shunting limit board or 580m from outer most facing point when advanced starter or SLB is not provided.**
- e. Where Home signal is provided, Outer signal cannot be taken off unless Home is taken off.**
- f. When Home signal becomes defective, Outer is treated as defective and dealt accordingly.**
- g. Outer shall not be taken off for shunting purposes.**

# **SIGNAL**

## **RECEPTION SIGNALS**

### **2. HOME SIGNAL:-**

- a. Home signal is normally provided at all block stations.**
- b. At class 'A' station and class 'B' stations in MAS, Home signal is the first stop signal.**
- c. At class 'C' station it is the FSS and LSS.**
- d. At class 'B' station in TAS the Home signal is located close to the points.**

# **SIGNAL**

## **RECEPTION SIGNALS**

- e. In MAS at class 'B' station the Home signal is located at a distance of NLT 180M from station section(Outermost facing point/ BSLB) on double line and 180M from advanced starter or shunting limit board on single line or 400M from outer most facing points where Advanced starter or SLB is not provided.**
  
- f. Home signal shall not be taken off for shunting purposes.**

# **SIGNAL**

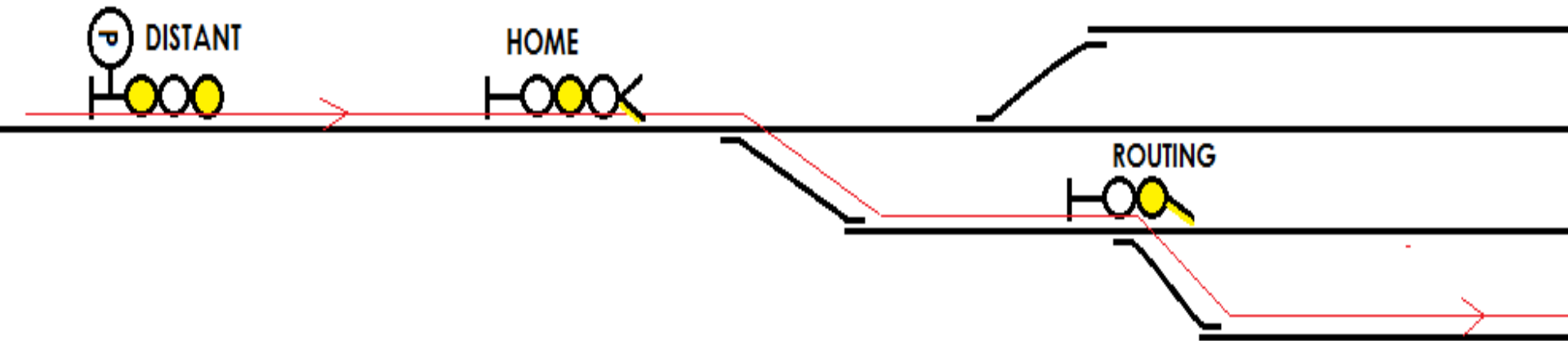
## **RECEPTION SIGNALS**

### **3. ROUTING SIGNAL :**

**Routing signal is provided to indicate to the Loco Pilot which of the two or more routes is set in his favour when the Home signal, due to its position, is inconvenient for this purpose.**

# SIGNAL

## FUNCTION OF ROUTING SIGNAL



# **SIGNAL**

## **RECEPTION SIGNALS**

- a. These are provided to give information regarding which of the two or more lines is set for Loco Pilots.**
- b. Route indicators are treated as stop signals.**
- c. If the route indicator in the reception signal is not in working order, the relevant stop signal shall be treated as defective.**

# **SIGNAL**

## **DEPARTURE SIGNALS**

### **1. STARTER SIGNAL**

- a. When a train leaving a station is guided by only one Starting signal, it becomes the LSS of the station and called the starter.**
- b. Where Starters are provided for individual lines, they shall be fixed so as to protect the first facing point or the fouling mark.**
- c. Provision of starter is compulsory at class 'B' station on Double line and at a class 'A' station.**

# **SIGNAL**

## **DEPARTURE SIGNALS**

- d. At a station if a single starter is provided for a group of two or more lines, it is called Common Starter.**
- e. If a bracketed or a single arm with a route indicator is provided at diverging lines it is called as routing starter.**
- f. When advanced starter is provided, Starters (free) can be taken off for shunting purpose.**



# **SIGNAL**

## **DEPARTURE SIGNALS**

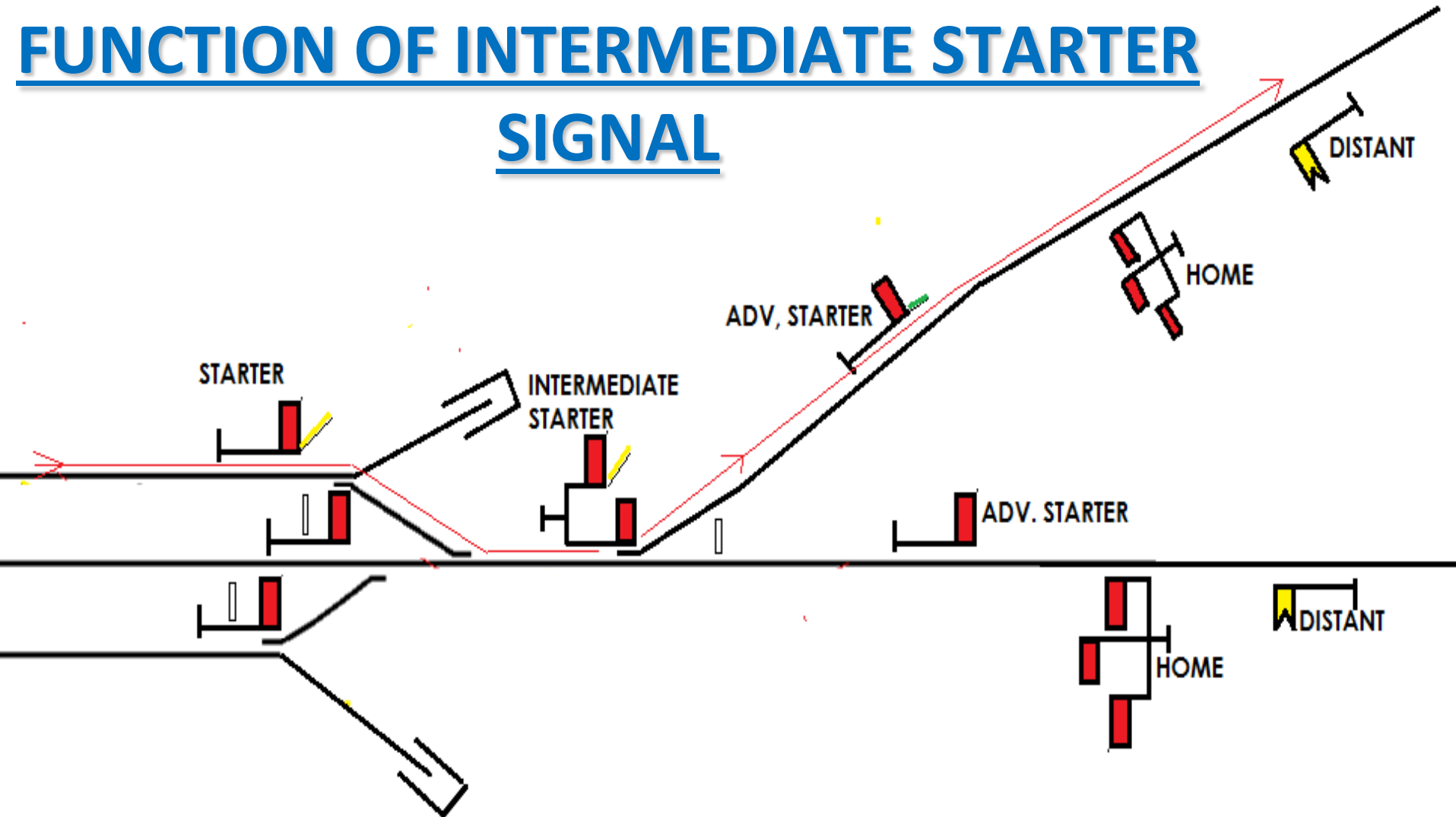
### **2. INTERMEDIATE STARTER**

**If a starter is provided between first starter and adv starter at a converging junction protecting the points it is called as intermediate starter.**

# SIGNAL

## FUNCTION OF INTERMEDIATE STARTER

### SIGNAL



# **SIGNAL**

## **DEPARTURE SIGNALS**

### **3. ADVANCED STARTER**

- a. When a train leaving a station is guided by more than one Starter signal, the outer most signal is the LSS of the station and is called the Advanced Starter.**
- b. It shall be fixed at the limit beyond which no train may pass, unless Loco Pilot is given the ATP.**
- c. Normally it shall be placed outside all connections.**

# **SIGNAL**

## **DEPARTURE SIGNALS**

- d. At class 'B' station it demarcates the station section and the Block section.**
- e. On single line token less sections and on double line, taking off Advanced Starter is normal ATP.**
- f. While taking off departure signals, normally the Advanced Starter shall be taken off first and then the starter /starters**

# **SIGNAL**

## **DEPARTURE SIGNALS**

- g. On a double line section it shall be placed at a distance of 180m from Starter in TAS and 120m in MAS.**
- h. On a single line section, it shall be placed from the trailing points at a distance of 180 m on TAS and 120m on MAS.**
- i. It shall not be taken off for shunting purposes.**

# **SIGNAL**

## **RECEPTION SIGNALS**

### **METHODS OF ROUTE INDICATION:**

- 1. Bracketed signal.**
- 2. Placing of more than one signal on the same post.**
- 3. Single arm signal or colour light signal with route indicators.**

# **SIGNAL**

## **RECEPTION SIGNALS**

### **SIGNALS ON BRACKET POST OR SIGNAL BRIDGE OR GANTRY –**

**Where signals are placed on a bracket post or signal bridge or a gantry, these shall be –**

- a) So grouped that the respective signals are easily distinguishable for each running line and are placed as nearly as possible over the running lines to which they refer.**
- b) So placed that the signal referring to the main line is higher than the signal or signals referring to the other running line or lines, and**
- c) So arranged that the extreme left hand signal refers to the extreme left hand line and the second signal from the left refers to the next line from the left and so on.**

# **SIGNAL**

## **RECEPTION SIGNALS**

### **STENCIL TYPE ROUTE INDICATORS:**

- a) This indicating apparatus is placed on the same post below or above the stop signal.**
  
- b) When the signal is taken OFF the number of description of the line for which signal is cleared, will appear on the indicator in the form of an illuminated number or alphabet**



# SIGNAL

## ROUTING SIGNAL WITH 'DRI'



*Red or yellow or double yellow or Main green lit as the case may be with junction indicator blank. indicator lit.*

***Indicates - NO DIVERSION***



*3 to 5 white lights lit. Main signal yellow lit with left hand junction indicator lit*

***indicates – LEFT HAND DIVERSION.***

# SIGNAL

## ROUTING SIGNAL WITH 'DRI'

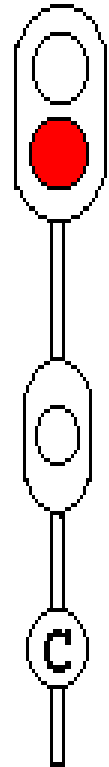
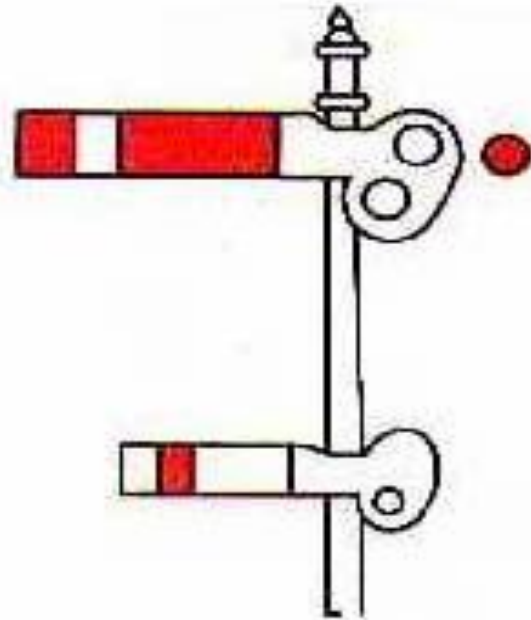


*3 to 5 white lights lit.  
Main signal yellow lit  
with right hand junction  
indicator lit  
indicates – RIGHT HAND  
DIVERSION.*

# SIGNAL

## CALLING – ON SIGNAL IN 2A

**Driver shall obey the aspect of the Stop Signal.**



'ON' position

# SIGNAL

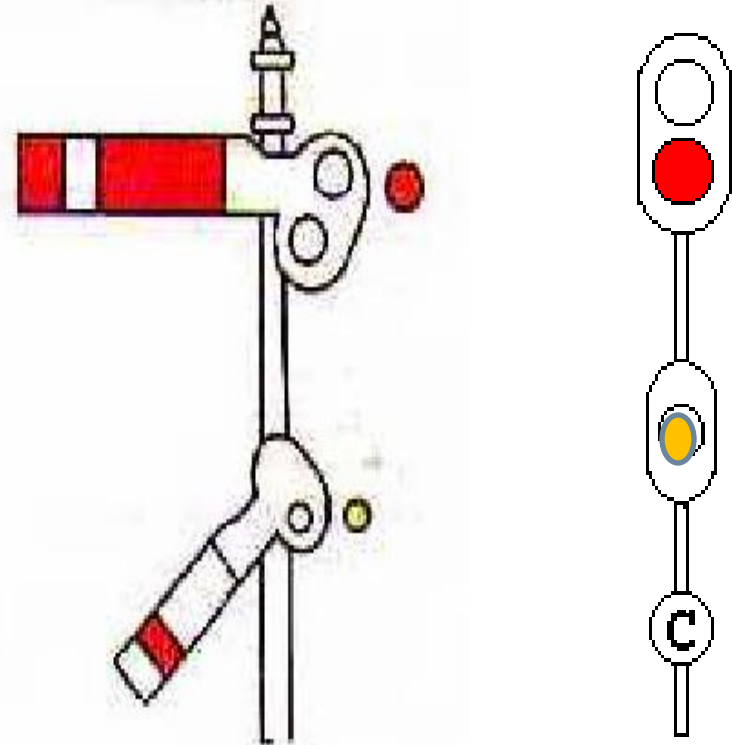
## CALLING – ON SIGNAL IN 2A

### Aspect :

**Proceed slow**

### Indication :

**Stop and then draw ahead with caution and be prepared to stop short of any obstruction.**

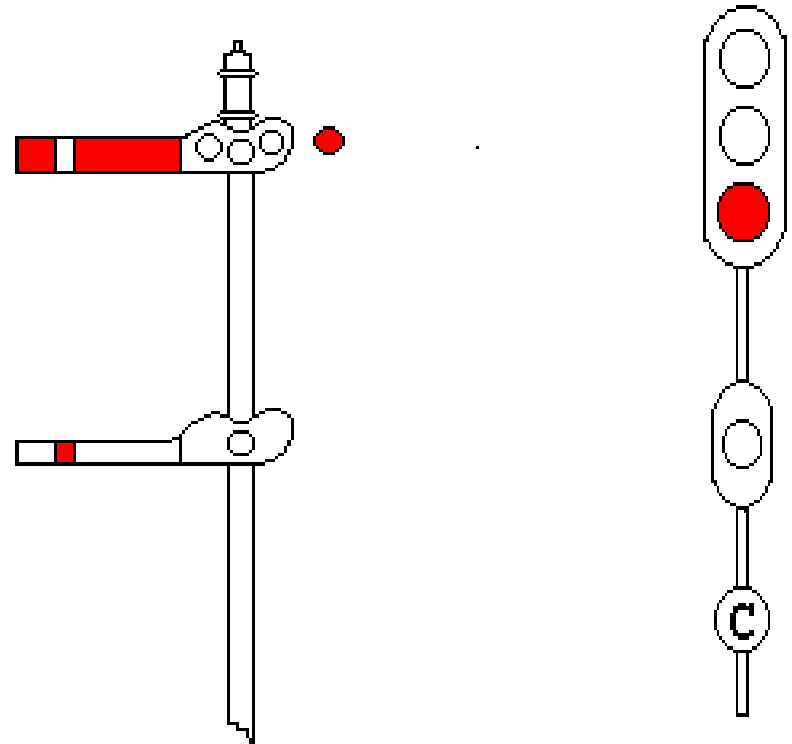


'OFF' position

# SIGNAL

## CALLING – ON SIGNAL IN MULTIPLE ASPECT

**Driver shall obey the aspect of the Stop Signal.**



'ON' position

# SIGNAL

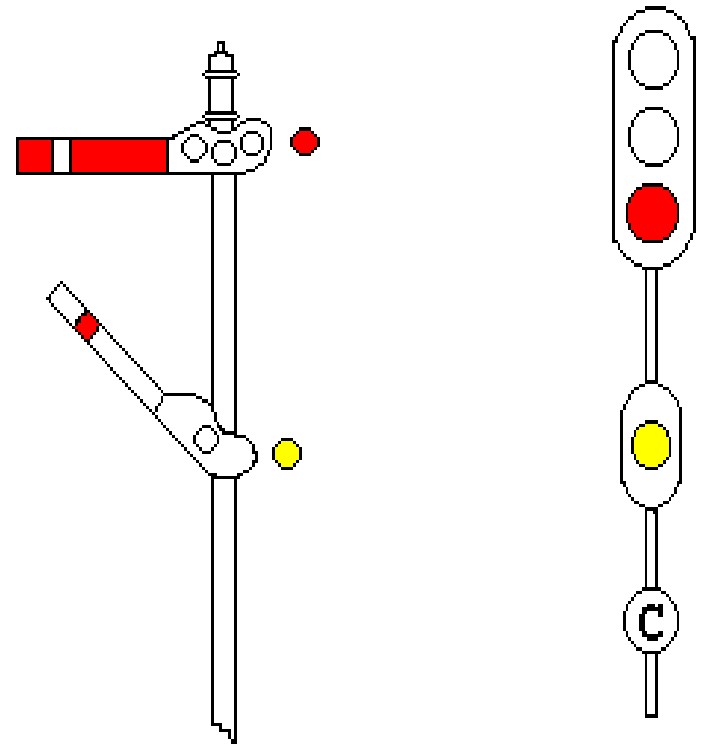
## CALLING – ON SIGNAL IN MULTIPLE ASPECT

### Aspect :

**Proceed slow**

### Indication :

**Stop and then draw ahead with caution and be prepared to stop short of any obstruction.**



'OFF' position

# **SIGNAL**

## **CALLING ON SIGNAL :**

- i. It is a subsidiary signal always provided below stop signals.**
- ii. Under approved special instructions it can be provided below any stop signal except LSS.**
- iii. Calling- on signal may be taken off whenever the stop signal placed above becomes defective or whenever train is to be received on obstructed line or for shunting purpose.**

# **SIGNAL**

## **CALLING ON SIGNAL :**

- iv. It shall be a short square ended semaphore arm painted white colour with red bar or in colour light signalling territory identified by a 'C' marker.**
- v. It has no independent aspect in 'ON' position.**
- vi. A calling on signal shall show no light in 'ON' position.**
- vii. In 'OFF' position it will show a miniature yellow light**



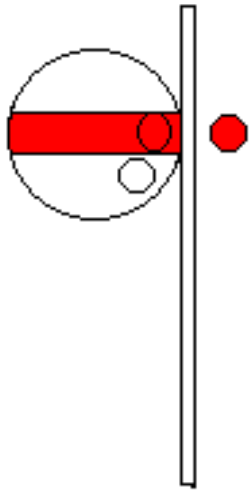
# **SIGNAL**

## **CALLING ON SIGNAL :**

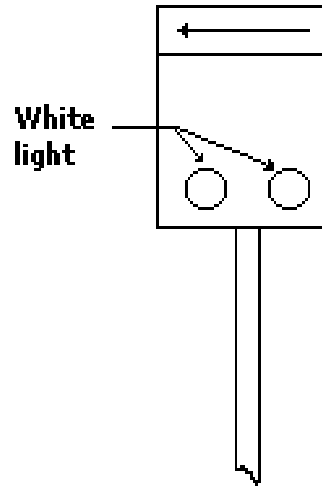
- viii. 'OFF' position aspect is 'Proceed Slow' and indicates the Loco Pilot to 'stop and then draw ahead with caution and be prepared to stop short of any obstruction'.**
  
- ix. It shall not be taken off until the train has been brought to a stop at the signal.**

# SIGNAL

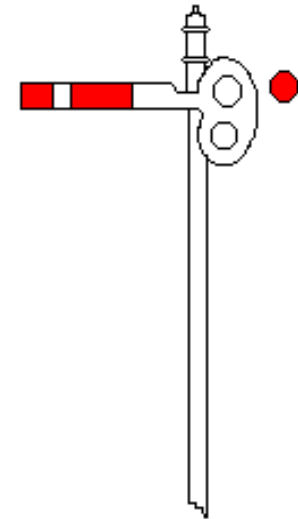
## SHUNT SIGNAL



DISC TYPE



POSITION LIGHT TYPE



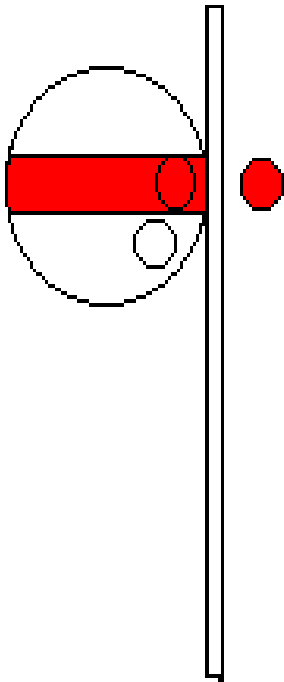
MINIATURE  
ARM TYPE

[under special instruction]

# SIGNAL

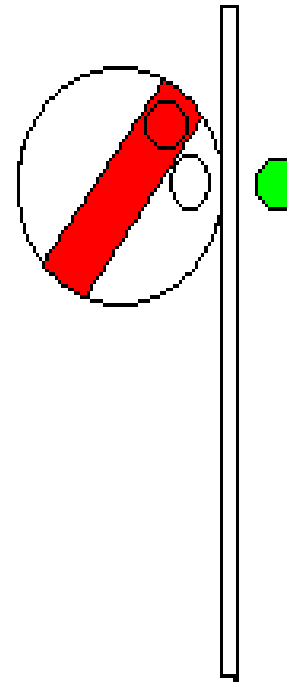
## Disc type Shunt signal in Two-Aspect

'ON' position



Aspect: Stop  
Indication: Stop dead

'OFF' position

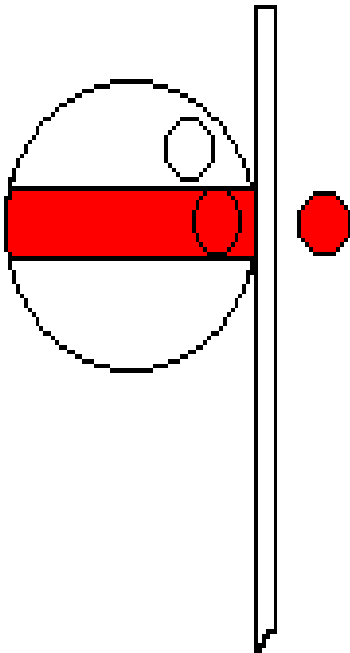


Proceed slow  
Proceed with caution for Shunting.

# SIGNAL

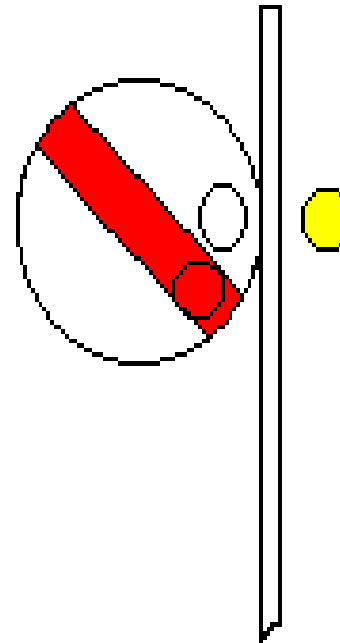
## Disc type Shunt signal in -MultipleAspect

'ON' position



Aspect: Stop  
Indication: Stop dead

'OFF' position

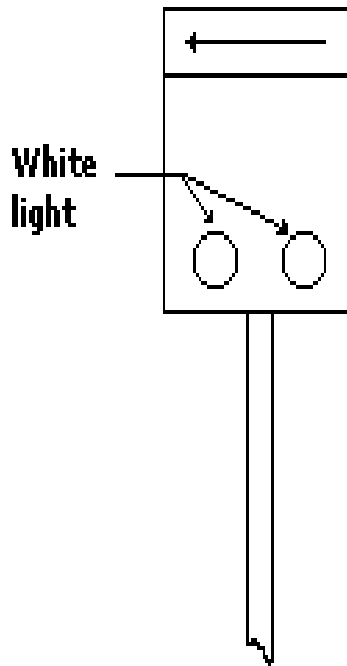


Proceed slow  
Proceed with caution for Shunting.

# SIGNAL

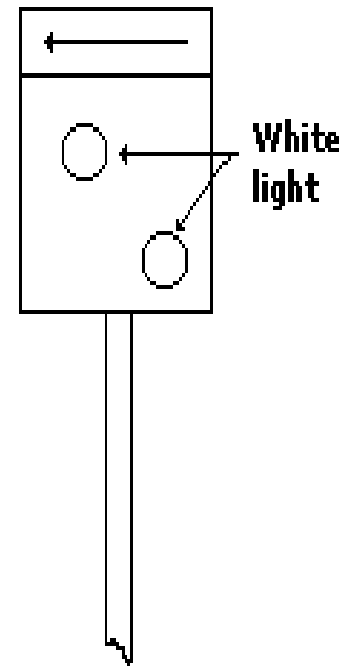
## Position light type Shunt signal in TACL & MACL

'ON' position



Aspect: Stop  
Indication: Stop dead

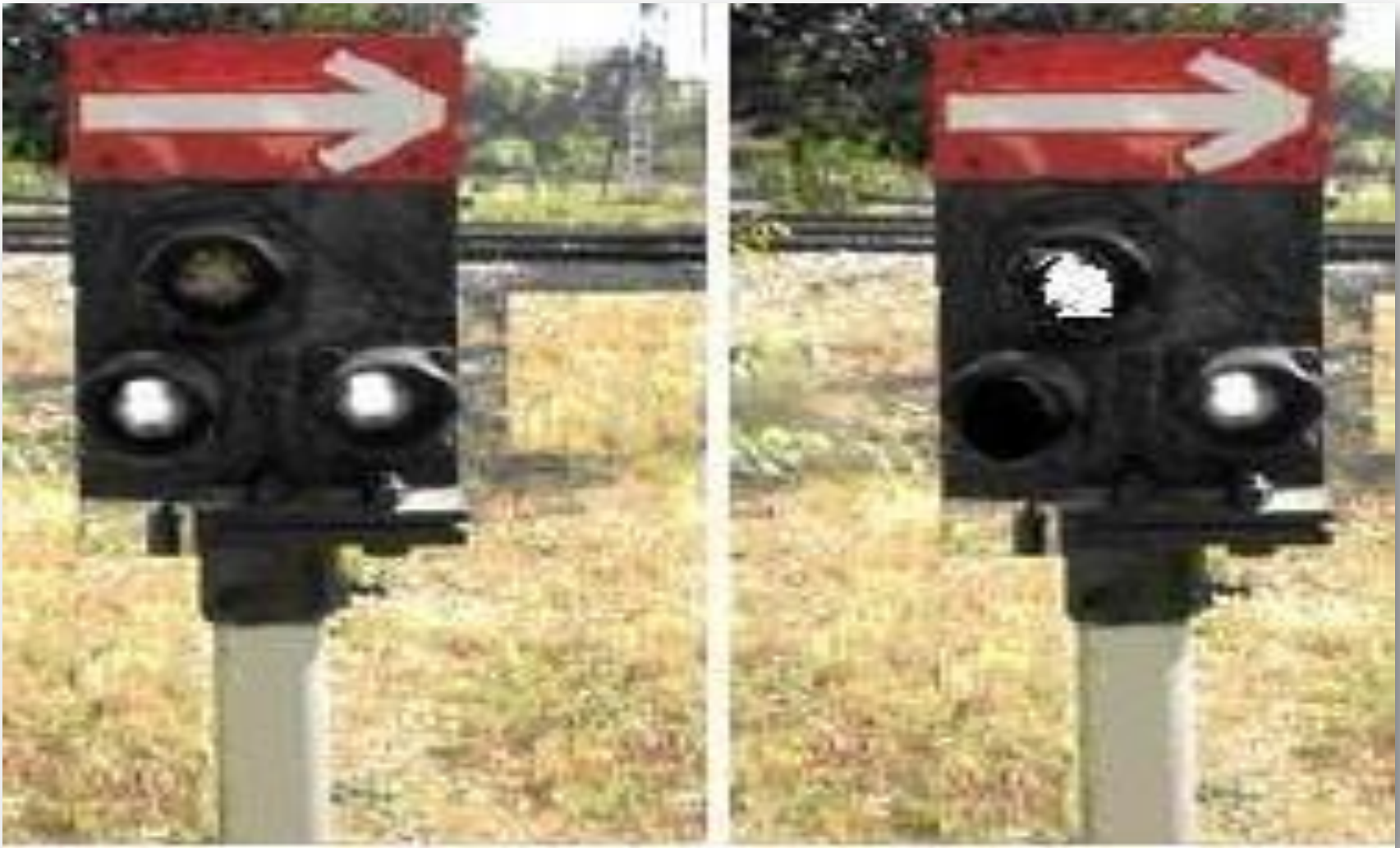
'OFF' position



Proceed slow  
Proceed with caution for Shunting.

# SIGNAL

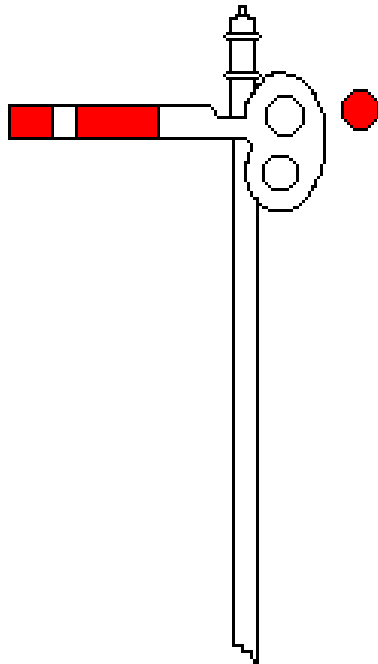
## Position light type Shunt signal



# SIGNAL

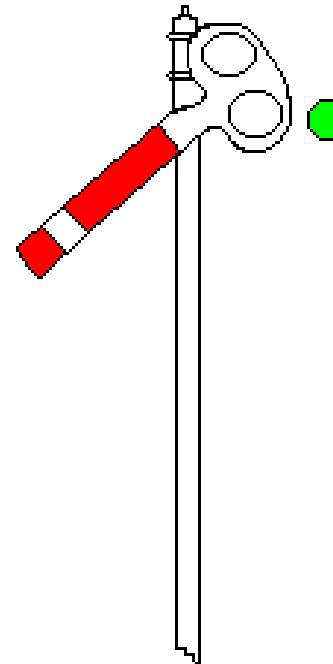
## Arm type Shunt signal in Two-Aspect

'ON' position



Aspect: Stop  
Indication: Stop dead

'OFF' position

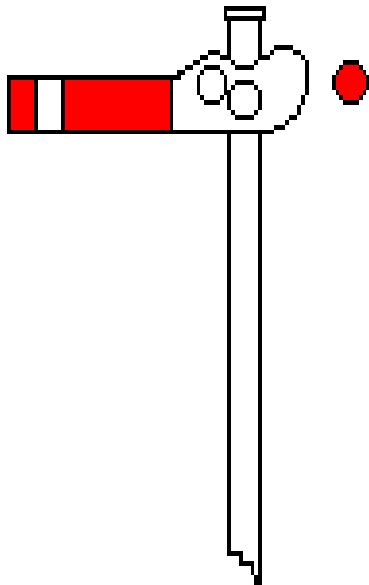


Proceed slow  
Proceed with caution for Shunting.

# SIGNAL

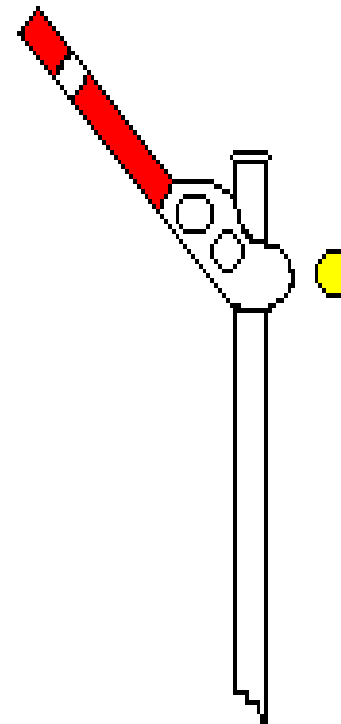
## Arm type Shunt signal in –Multiple Aspect

'ON' position



Aspect: Stop  
Indication: Stop dead

'OFF' position



Proceed slow  
Proceed with caution for Shunting.



# SIGNAL

## SHUNT SIGNAL BELOW A STOP SIGNAL

**DISC TYPE  
SHUNT SIGNAL  
BELOW A STOP  
SIGNAL**



# SIGNAL

## SHUNT SIGNAL BELOW A STOP SIGNAL

**Position light type shunt signal below a stop signal**



# **SIGNAL**

## **SHUNT SIGNAL**

- a. A shunt signal is a subsidiary signal provided to control shunting movements.**
- b. A shunt signal may be placed on a post by itself or below any stop signal except FSS.**
- c. When shunt signal is placed below stop signal, it shall show no light in 'ON' position.**

# **SIGNAL**

## **SHUNT SIGNAL**

- d. In case the shunt signal becomes defective, the authority to pass defective shunt signal is T/806 and proceed hand signals. [Setting and locking of points over the route shall be ensured].**
  
- e. 'ON' Position the Aspect is STOP and indicates stop dead, 'OFF' position Aspect (Proceed slow) & indicates proceed with caution for shunting.**

# **SIGNAL**

## **DUPLICATE SIGNAL**

- 1. CO-ACTING SIGNAL**
- 2. REPEATING SIGNAL**

# **SIGNAL**

## **CO-ACTING SIGNAL**



# **SIGNAL**

## **CO-ACTING SIGNAL**

- 1) Co-acting signals are duplicate signals fixed below ordinary signals and are provided where, in consequence of the height of the signal post, or of there being an over-bridge or other obstacle, the main arm or light is not in view of the Driver during the whole time that he is approaching it.**
- 2) Co-acting signals shall be fitted at such height that either the main arm or light, or the Co-acting arm or light, is always visible.**

# **SIGNAL**

## **REPEATING SIGNAL**

- **A signal placed in rear of a fixed signal for the purpose of repeating to the Driver of an approaching train the aspects of the fixed signal in advance is called a Repeating signal.**



# **SIGNAL**

## **REPEATING SIGNAL**

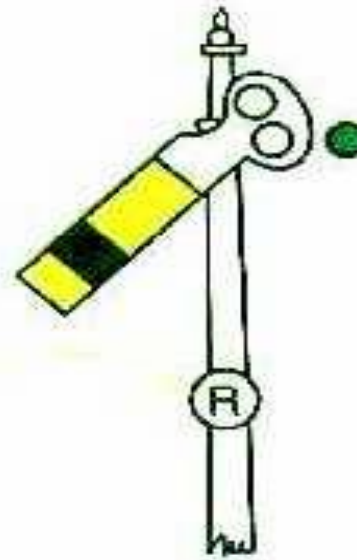
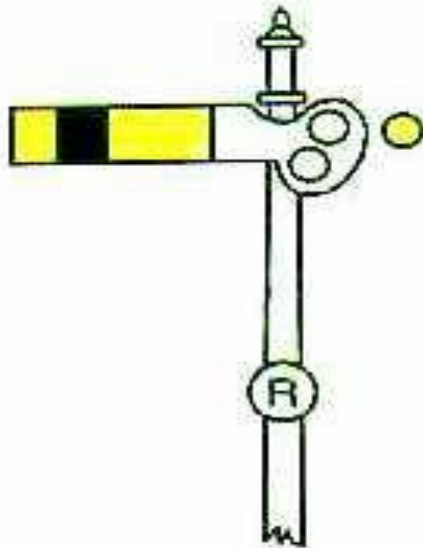
- 1. ARM TYPE**
- 2. COLOUR LIGHT TYPE**
- 3. BANNER TYPE**

# SIGNAL

## SEMAPHORE ARM TYPE REPEATING SIGNAL IN TWO-ASPECT

'ON' position

'OFF' position



**Aspect :**

**Signal 'On'**

**Signal 'Off'**

**Indication :** Signal which it repeats is at 'On'      Signal which it repeats is 'Off'.

# SIGNAL

## COLOUR LIGHT TYPE REPEATING SIGNAL IN TWO-ASPECT

'ON' position

'OFF' position



**Aspect :**

**Signal 'On'**

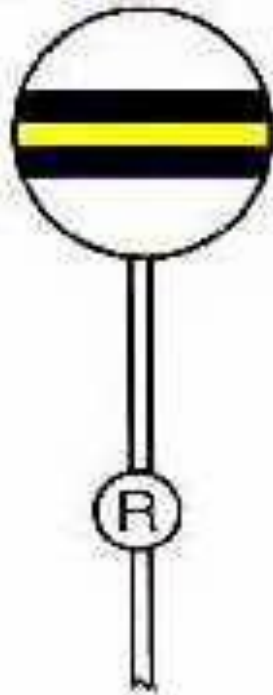
**Signal 'Off'**

**Indication :** Signal which it repeats is at 'On'      Signal which it repeats is 'Off'.

# SIGNAL

## COLOUR LIGHT TYPE REPEATING SIGNAL IN TWO-ASPECT

'ON' position



'OFF' position



**Aspect :**

**Signal 'On'**

**Signal 'Off'**

**Indication :** Signal which it repeats is at 'On'      Signal which it repeats is 'Off'.

# **SIGNAL**

## **PLACING OF MORE THAN ONE SIGNAL ON THE SAME POST –**

- 1) Not more than one signal referring to trains moving in the same direction, whether on the same line or on separate lines, shall be placed on the same post, except -**
  - a) as prescribed in these rules for Calling-on, Shunt, Co-acting and Warner signals, or**
  - a) under approved special instructions.**

# **SIGNAL**

- 2) **Where under approved special instructions more than one signal is placed on the same post, the topmost signal shall apply to the extreme left hand diverging line and the second signal from the top shall apply to the next line from the left and so on.**
  
- 3) **Provided that in exceptional cases where two Home signals are placed on the same post, under approved special instructions the top signal shall apply to the main line and the lower signal shall apply to the other lines**

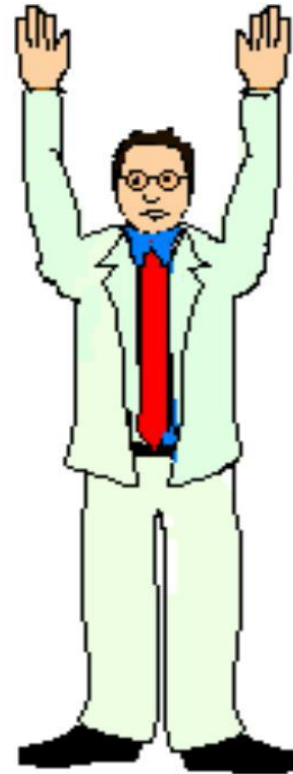
# SIGNAL

## STOP HAND SIGNAL

DAY TIME



**By showing  
a red flag**



**by raising  
both arms  
with hands  
above the head**

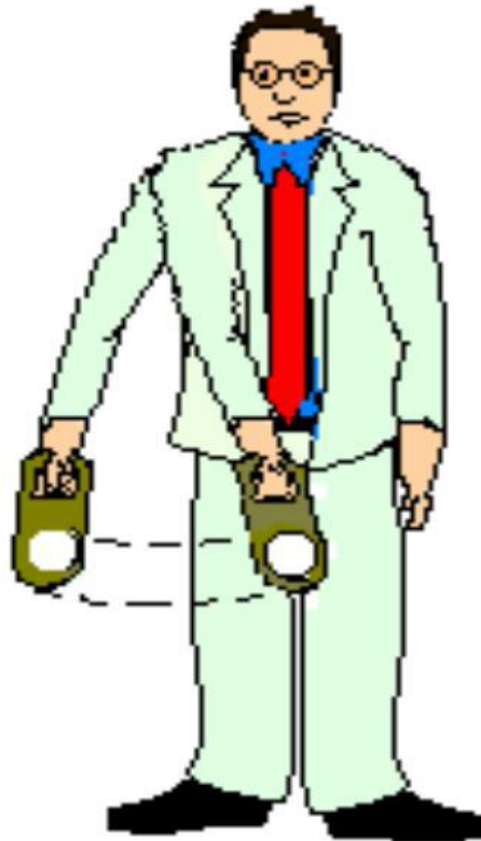
**Indication : Stop dead**

# SIGNAL

## STOP HAND SIGNAL

### NIGHT TIME

**By showing  
a red light**



**by violently  
waving  
a white light  
horizontally  
across the  
body**

**Indication : Stop dead**



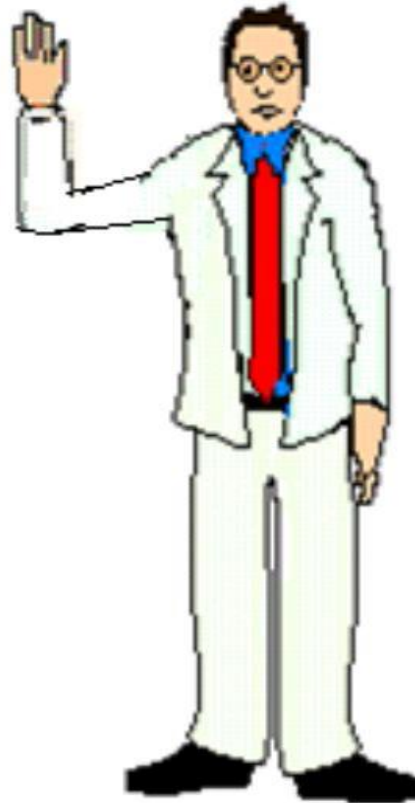
# SIGNAL

## PROCEED HAND SIGNAL

### DAY TIME



**By holding  
a green flag**



**By holding  
one arm steadily**

**Indication:**

**Proceed**

# SIGNAL

## PROCEED HAND SIGNAL

NIGHT TIME



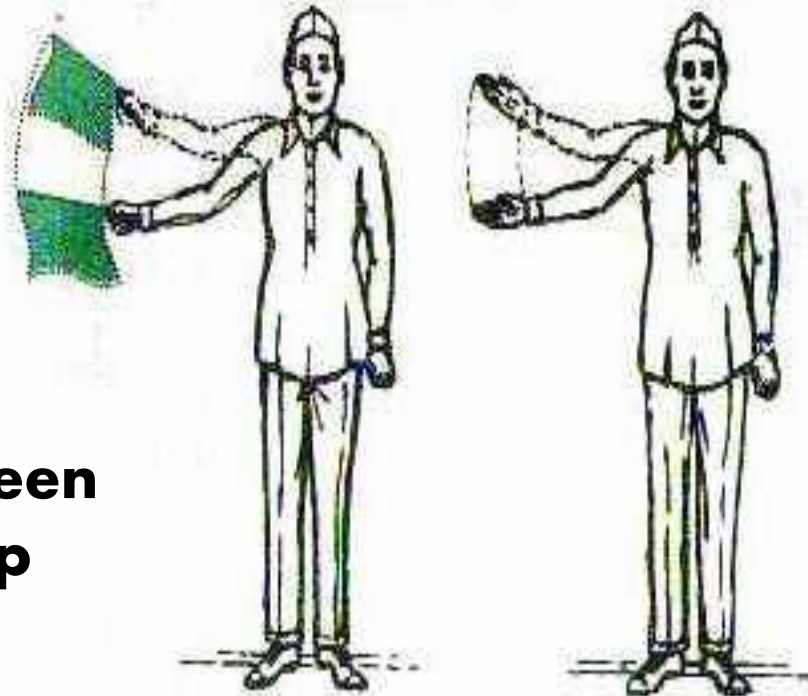
**By holding  
a green light**

**Indication: Proceed**

# SIGNAL

## PROCEED WITH CAUTION HAND SIGNAL

### DAY TIME



**By waving a green flag vertically up and down**

**By waving one Arm in a similar Manner**

**Indication :** Proceed slowly, reduce speed, further if the signal is given at a progressively slower rate.

# SIGNAL

## PROCEED WITH CAUTION HAND SIGNAL

### NIGHT TIME



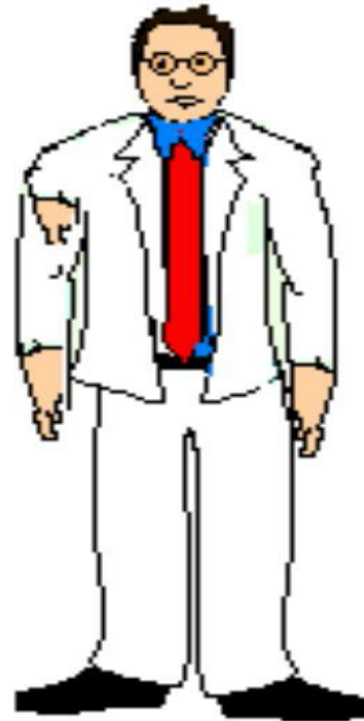
**By waving a green light vertically up and down**

**Indication :** Proceed slowly, reduce speed further if the signal is given at a progressively slower rate.

# SIGNAL

## HAND SIGNALS FOR SHUNTING

### DAY TIME

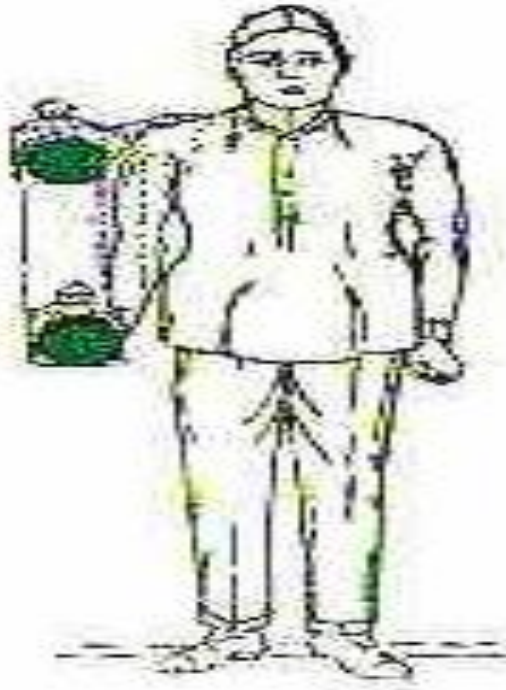


**Indication : Move away from the person signalling.**

# SIGNAL

## HAND SIGNALS FOR SHUNTING

### NIGHT TIME



**Indication :** Move away from the person signalling.

# SIGNAL

## HAND SIGNALS FOR SHUNTING

### DAY TIME



**Indication :** Move towards the person signalling.

# SIGNAL

## HAND SIGNALS FOR SHUNTING

### NIGHT TIME



**Indication :** Move towards the person signalling.



# SIGNAL

## HAND SIGNALS FOR SHUNTING

### DAY TIME



**Indication : Move slowly for coupling**

# SIGNAL

## HAND SIGNALS FOR SHUNTING

### NIGHT TIME



**Indication :** Move slowly for coupling

# **SIGNAL**

## **OTHER STOP SIGNAL**

- 1. AUTOMATIC STOP SIGNAL**
- 2. SEMI AUTOMATIC STOP SIGNAL**
- 3. GATE STOP SIGNAL**
- 4. IBH / IBP**

# SIGNAL

## AUTOMATIC STOP SIGNAL



# **SIGNAL**

## **AUTOMATIC STOP SIGNAL**

- 1) **It is stop signal found only in automatic signaling territories.**
- 2) **"A" is written on a white circular disk provided on the signal post for identification of this signal.**
- 3) **The normal aspect of these signals are PROCEED (GREEN).**
- 4) **These signals are automatically controlled by the passage of train.**
- 5) **These signals are found in those sections where no gates or points are found**

# **SIGNAL**

## **AUTOMATIC STOP SIGNAL**

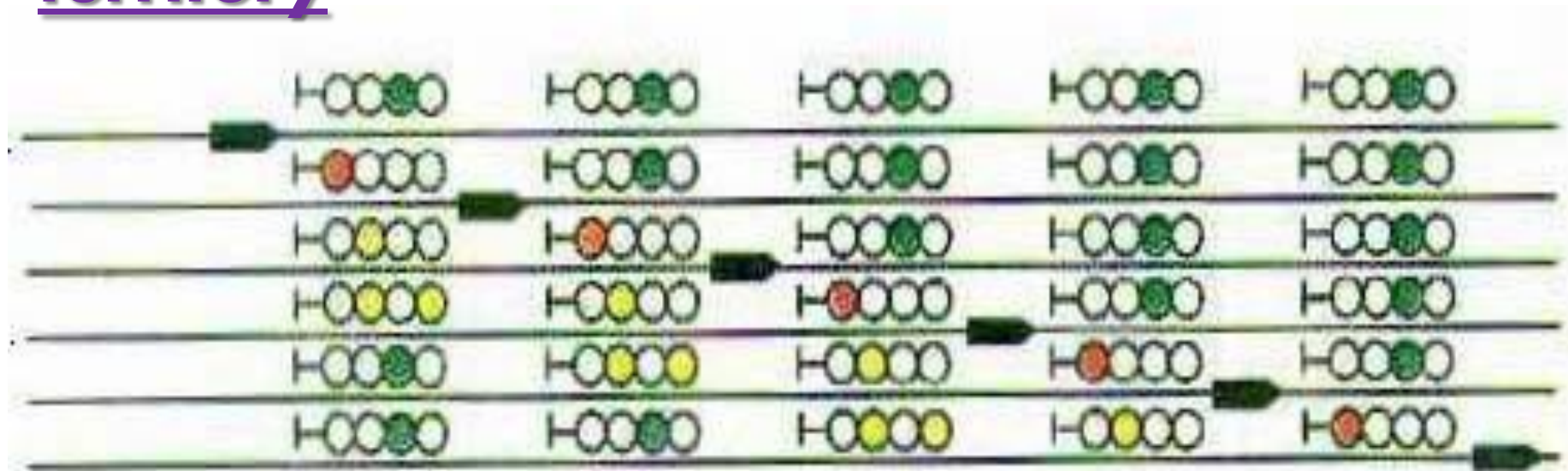
- 6. The Loco Pilot can pass these signals at their ON position by stopping one minute by day and two minutes by night at the signal.**
- 7. When the Loco Pilot passes these signals at their OFF position, they automatically turn ON position and shall not return to their OFF position until the line is clear from any obstructions not only up to the next stop signal but also for an adequate distance (120 mts) beyond the it.**



# SIGNAL

## AUTOMATIC STOP SIGNAL

Automatic change of sequence of aspects behind the train in four aspect signalling territory





# SIGNAL

## SEMI AUTOMATIC STOP SIGNAL



# **SIGNAL**

## **SEMI AUTOMATIC STOP SIGNAL**

- 1) **A Semi-Automatic Stop Signal is capable of being operated either as an Automatic or as a Manual stop signal as per the requirement.**
  
- 2) **An illuminated white "A" marker is provided on the signal post for its identification.**

# **SIGNAL**

## **SEMI AUTOMATIC STOP SIGNAL**

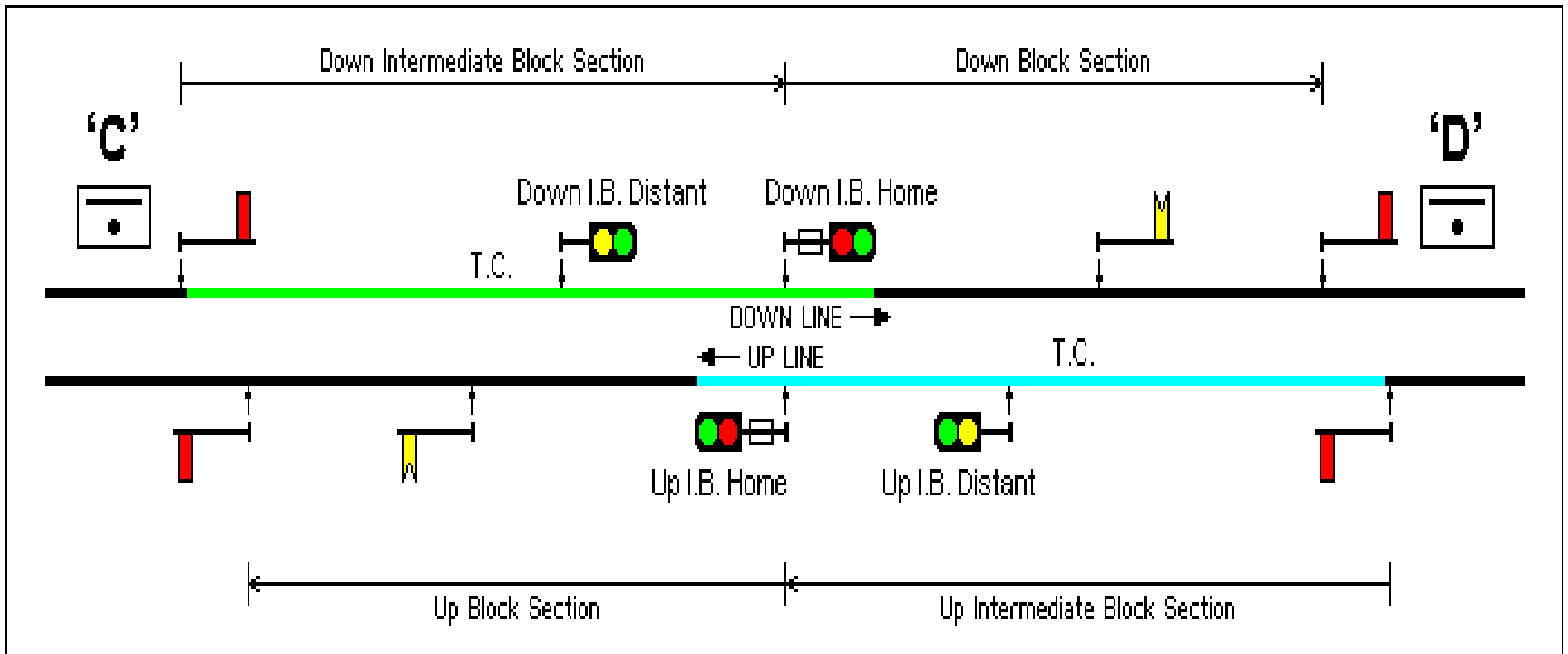
- 4) **When “A” marker is illuminated on the signal post, the signal works as an Automatic Stop Signal. At this time the Loco Pilot can pass this signal at its ON position as an Automatic Stop Signal by halting at the signal by one minute in the day and two minutes by night.**

# **SIGNAL**

## **SEMI AUTOMATIC STOP SIGNAL**

- 5) **When the “A” marker is extinguished, it works as a manually operated stop signal. At this situation the Loco Pilot cannot pass this signal at its ON position without proper authority.**
  
- 6) **These signals are generally provided at those automatic sections where gates and points are found.**

# SIGNAL IBH/IBP



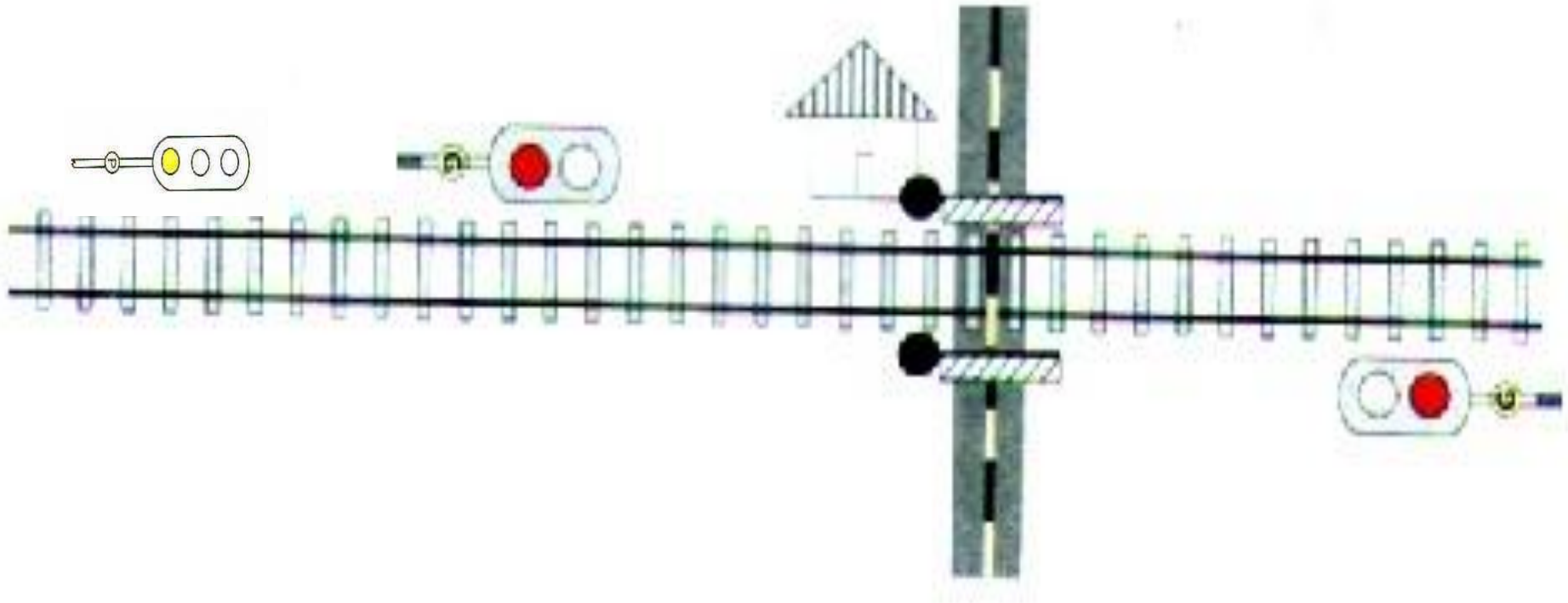
# **SIGNAL**

## **IBH/IBP**

- 1) **Intermediate block signalling means an arrangement of signals on double line in which a long block section is split into two portions each constituting a separate block section by providing intermediate block post.**
- 2) **The Intermediate block post is class 'C' station on double line remotely controlled from the block station in rear.**
- 3) **It is provided to increase section capacity, to reduce the detentions, to reduce the staff, to secure economy and efficiency in the operation**

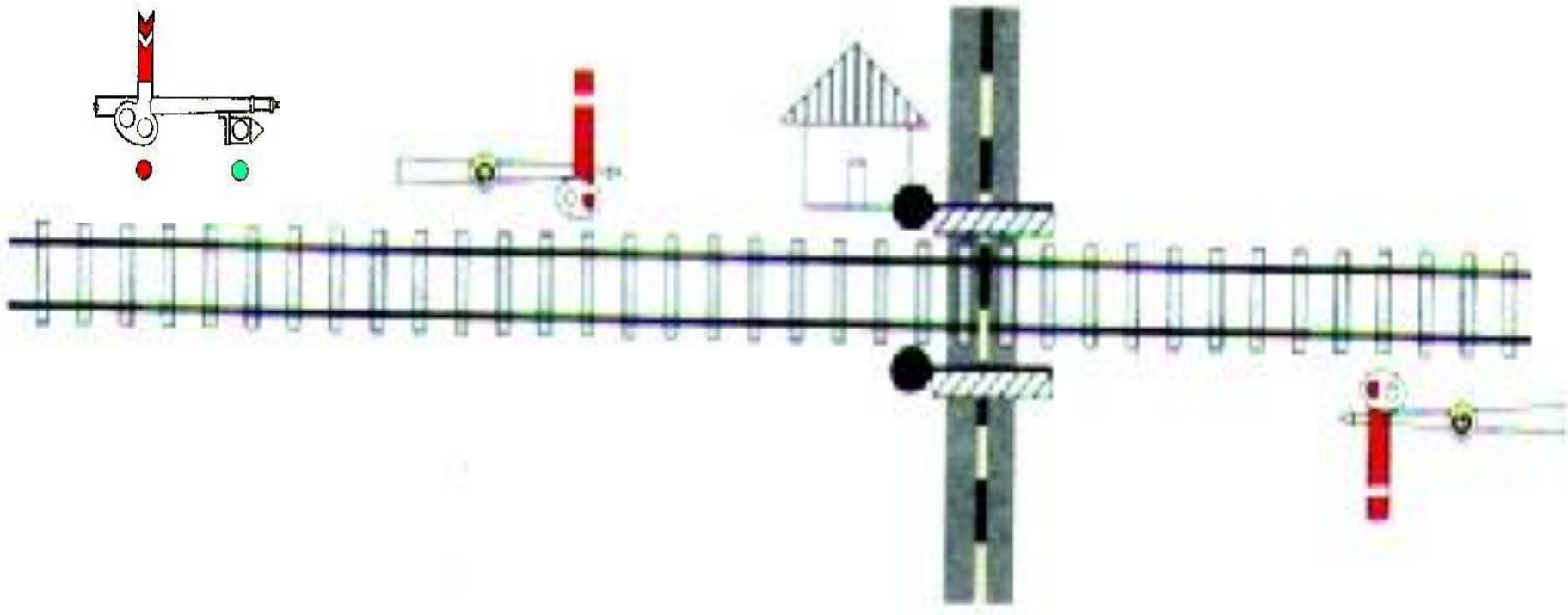
# SIGNAL

## COLOUR LIGHT GATE STOP SIGNAL WITH "G" MARKER



# SIGNAL

## ARM TYPE GATE STOP SIGNAL WITH "G" MARKER





# **SIGNAL**

## **GATE SIGNAL**

- 1. Every Interlocked level crossing gate which is normally kept open for road traffic is provided with a signal [Gate].**
- 2. This signal shall show stop aspect in both up and down directions when the gate is open for the passage of traffic.**
- 3. When LC Gate is interlocked with station signals, there is no need to provide separate Gate signal.**

# **SIGNAL**

## **GATE SIGNAL**

4. **'G' marker shall be provided on LC Gate signal except those controlling the entry into rail-cum road bridge or where there is bridge between gate signal and the gate.**
5. **In MAS in rear of Gate signal a distant signal shall be provided.**
6. **When a level crossing is located between the Home signal and the distant signal on MAS, the Gate cum Distant signal shall be located at a distance of NLT 180m in rear of Gate. This signal shall be provided with a 'G' marker and normal Aspect is Stop.**

# **SIGNAL**

## **GATE SIGNAL**

7. **Gate signal in Automatic signalling territory: Automatic signals interlocked with level crossing gates are distinguished by the provision of 'G' marker. When the gate is in open condition, the gate signal exhibits danger aspect with extinguished 'A' marker. When the gate is in closed condition, it works as automatic stop signal with illuminated 'A' marker.**
8. **"W/L" Board normally provided at 600 Mts before the Gate & "RW/L" boards, wherever provided are provided at 250 Mts before the un-manned LC Gate**

# **SIGNAL**

## **PASSING GATE SIGNAL IS AT 'ON'**

1. **Loco Pilot shall give continuous whistle and stop the train at signal at ON.**
2. **If the gate signal is provided with 'G' marker.**
  - a) *Wait for 1 minute by day and 2 minute by night, if still signal is at ON, he may draw ahead cautiously up to the gate.*
  - b) *He can pass the gate on hand signals of gateman.*

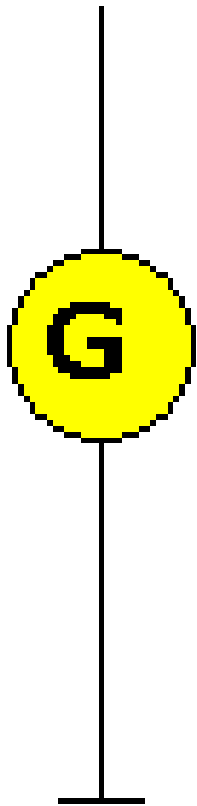
# SIGNAL

## PASSING GATE SIGNAL IS AT 'ON'

- c) If the gateman is available and not showing proceed hand signal, LP shall wait until hand signaled by the gateman.
- d) If gateman is not available, Loco Pilot can pass the gate on hand signals of crew of the train, who will do so after ensuring the gate is closed and locked.
- e) After passing the gate cautiously stop and after re opening the gate by crew start the train.
- f) If gatemen is not found stop the train out of course at next station and report the matter to SM.

# SIGNAL

## MARKER

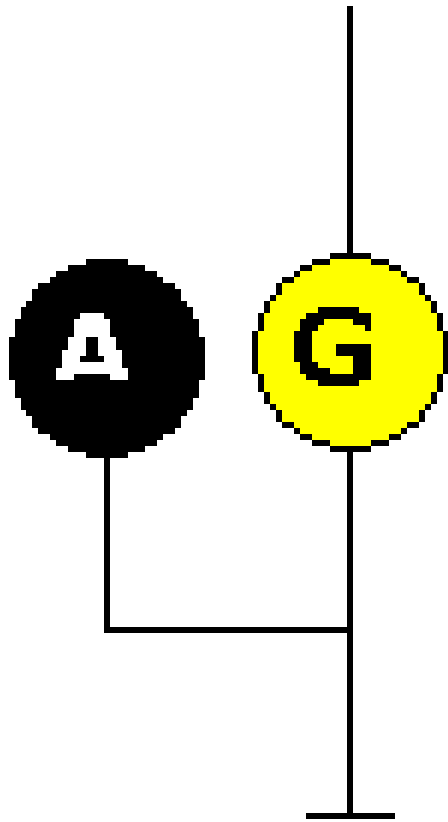


Gate Stop  
signal

Letter 'G' in  
black on yellow  
circular disc

# SIGNAL

## MARKER

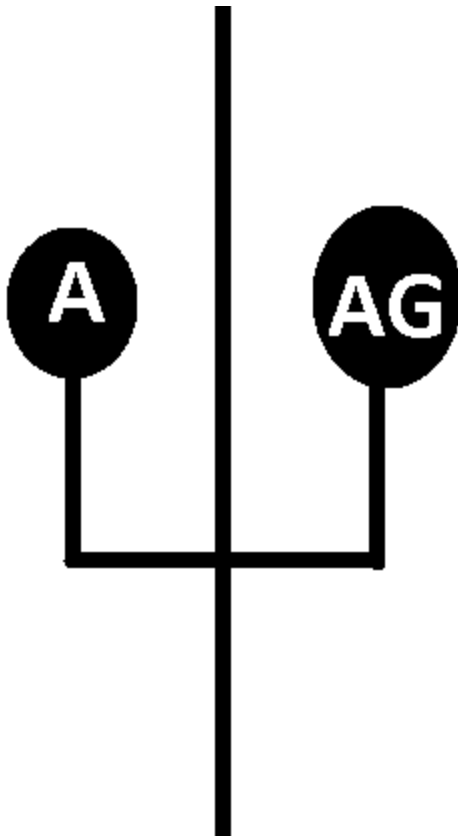


Gate Stop  
signal in  
Automatic  
Block  
territory

Letter 'G' in  
black on yellow  
circular disc  
and white  
illuminated  
letter 'A'  
against black  
background

# SIGNAL

## MARKER



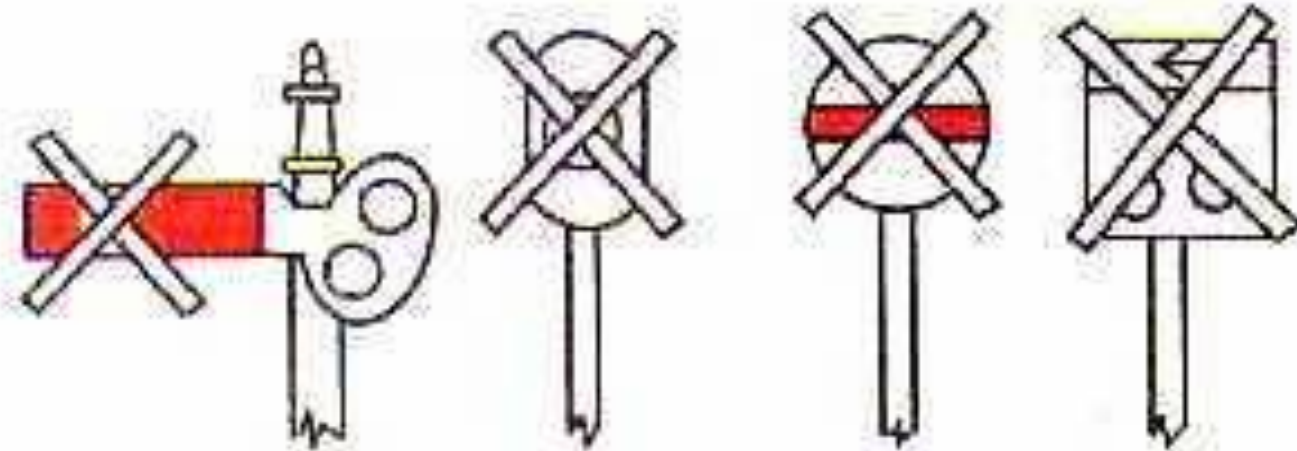
- (a) Letter 'A' shall be lit only when the gates are closed and locked against road traffic and points are Correctly set and locked for the route.*
- (b) Letter 'AG' shall be lit only when the gates are either open to road traffic or have failed but points are correctly set and locked for the route.*
- (c) Neither marker shall be lit when the points are not correctly set and locked for the route or have failed.*



# SIGNAL

## SIGNALS OUT OF USE

(1) When a fixed signal is not in use, it shall be distinguished by two crossed bars, each bar being not less than 1 metre long and 10 centimetres wide, as illustrated below :



# **SIGNAL**

## **SIGNALS OUT OF USE**

- 2) **A Semaphore or Disc signal when not in use shall be kept fixed in the 'On' position.**
  
- 3) **Signals not in use shall not be lit.**



Thank You!

**D.K.SINGH**

**TRANSPORTATION INSTRUCTOR**

**ZRTI/BHULI**