



SNS COLLEGE OF TECHNOLOGY

Coimbatore-35
An Autonomous Institution

Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A+' Grade
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

DEPARTMENT OF CIVIL ENGINEERING **&**

CIVIL ENGINEERING PLANNING

19CET 205 –HIGHWAY AND RAILWAY ENGINEERING

II YEAR– IV SEM

UNIT- V - SIGNALS, POINTS AND CROSSING

TOPIC 5 : TYPES.- CONTROL SYSTEMS





TYPES OF SIGNALS

OPERATING CHARACTERISTICS :

- ❖ Detonating signals(Fog or audible signals)
- ❖ Hand signals (Visual indication signals)
- ❖ Fixed signals(Visual indication signals) usually semaphore type, fixed at a place . (see next slide)

DETONATING SIGNALS:

- ❖ fixed to rails by means of clips -explode with a loud sound -for safety
- ❖ placed at least 400 to 500 m ahead of signals





TYPES OF SIGNALS

Hand signals:

- ❖ During day time -by flags fixed to a wooden handle.
- ❖ During night time - by lamps movable glass slides green- Proceed red – Stop
- ❖ And yellow- Proceed cautiously.



DANGER-STOP



CAUTION-MOVE SLOWLY



CLEAR-PROCEED.



TYPES OF SIGNALS



OPERATING CHARACTERISTICS:

- ❖ **Detonating signals** (Fog or audible signals)
- ❖ **Hand signals** (Visual indication signals)
- ❖ **Fixed signals** (Visual indication signals)

FUNCTIONAL CHARACTERISTICS:

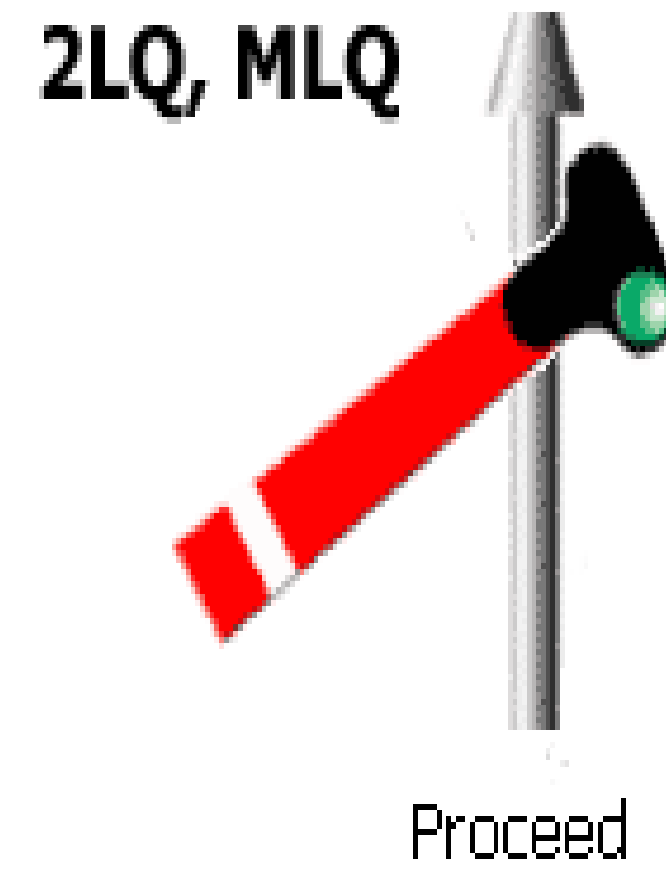
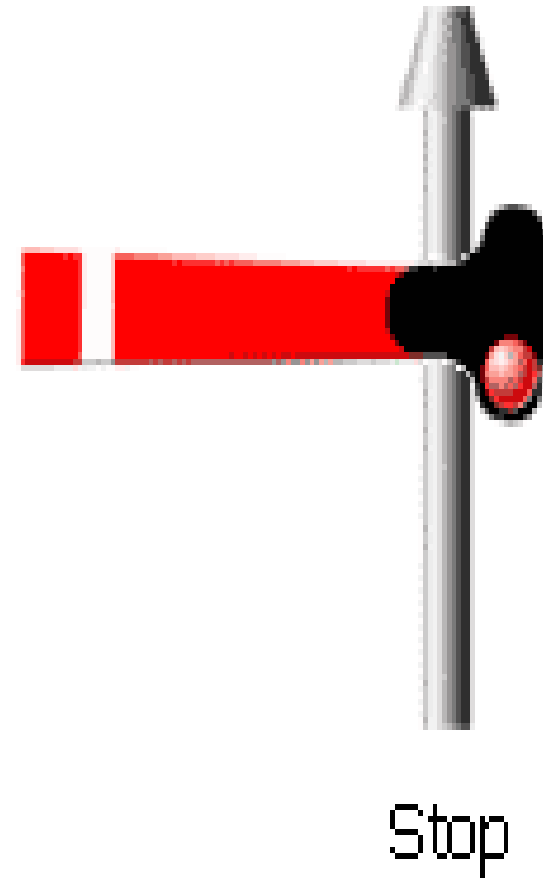
- ❖ **Stop or Semaphore signals Warner signals**
- ❖ **Shunting signals**
- ❖ **Colored light signals.**



TYPES OF SIGNALS

FUNCTIONAL CHARACTERISTICS:

- ❖ Stop or Semaphore signals

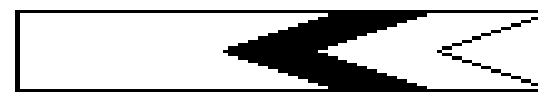
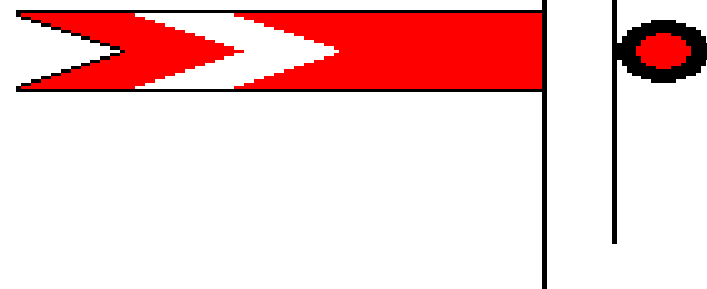




TYPES OF SIGNALS

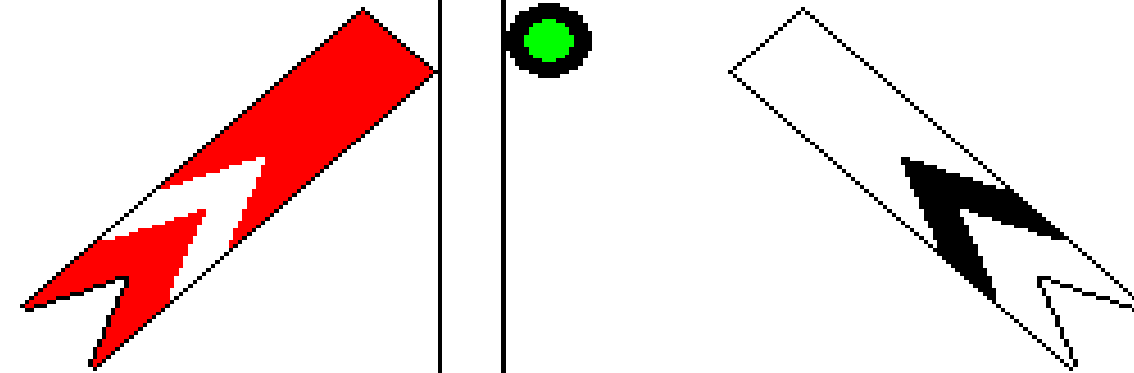
❖ Warner signals Routing signals

Semaphore Warner Signal on a post by itself ('on').



Rear of arm

Semaphore Warner Signal on a post by itself ('off').



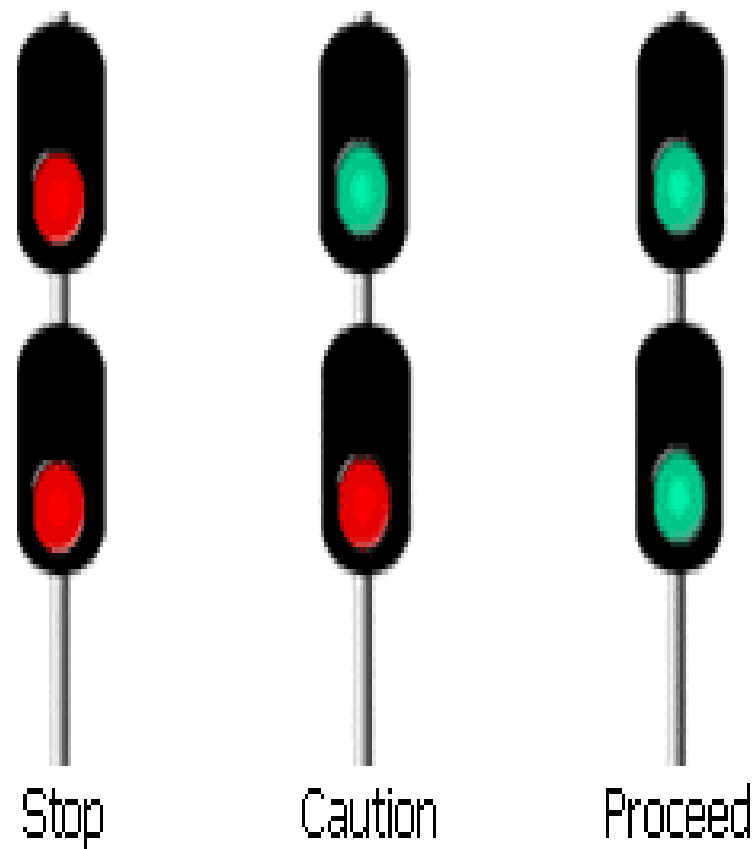
Rear of arm



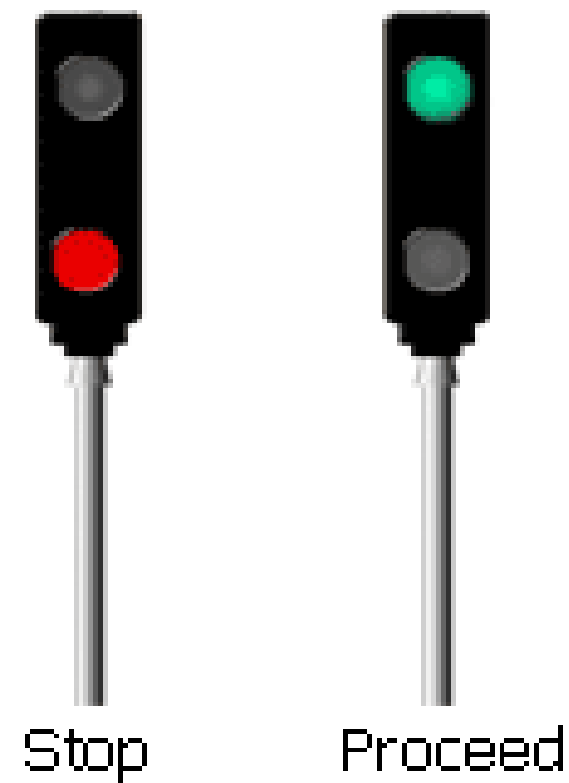
TYPES OF SIGNALS

Color-light:

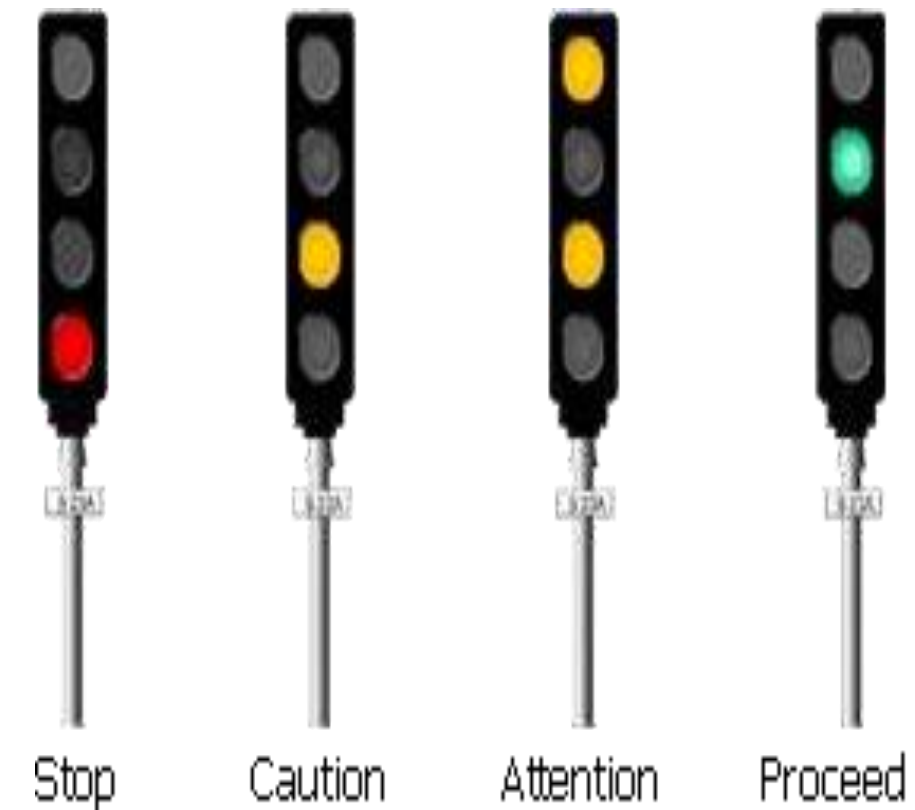
- ❖ The stop signal may have two (green above red), three (green-yellow-red), or four lamps (yellow-green-yellow-red).
- ❖ Aspects are as shown below. Miscellaneous signals



2CL
Stop+Warner



2CL



MACL



References



- <https://nptel.ac.in/courses/105/101/105101006/>
- <https://nptel.ac.in/courses/105/106/105106151/>

Thank You