

### Model: "STAR D", Part No.: 1524000006

Director General Mines Safety (DGMS) has observed that maximum number of fatal accidents have occurred in open cast mines while reversing of Heavy Earth Moving Machinery (HEMM) especially in dumpers/tippers. Size of the dumpers are so big that it is impossible for the dumper operator to see the back side of the vehicle. Therefore, in order to avoid accident, during reversing, Audio and Visual Alarm is required.



To reduce such accidents DGMS made it compulsory to install Audio Visual Alarm (AVA) in every HEMM. & Surface Transportation Machineries used in Mines. DGMS issued technical circulars time to time. Such as Circular No. - 09 of 2003, Circular No. - 04 of 2008, Circular No.- 01 of 2010, Circular No. 1 of 2012, in these circulars DGMS has clearly mentioned technical specifications and testing parameters for AVA.

We, being a leading manufacturing organization for the safety products used in mines, has developed and manufactured an Audio Visual Alarm, Model: "Star D".

We hold the ISO 9001:2008, Quality Assurance Certificate for our product range

As per DGMS Circular No. - 04 of 2008 our "Star D" AVA was approved by DGMS, Dhanbad. Due to change in DGMS approval policy, all previous approvals withdrawn and technical specification with testing parameter has being issued vide Circular No.- 01 of 2010.

Our Audio Visual Alarm "Star D" has being tested and found satisfactory by the Government Testing Laboratory mentioned in DGMS Circular 1 of 2010.



Location showing the installation of Audio Visual Alarm on the Vehicle

#### TECHNICAL SPECIFICATION:

AUDIO	<b>Two synchronized speakers</b> , having sound of 110 dB output (measured at a distance of 1.2-meter distance). To make the fail-safe two speakers are arranged in such a way that if any fault occurs in one speaker other will work without any interface. (DGMS requirement Two speaker with 110 dB output)
VISUAL	Bright focus type Red LED (25 nos. of 5 mm size) blinks continuously while reversing emitting uniform light of <b>650 Lux</b> . Brightness recorded form distance of 300 mm. (DGMS requirement not less than 300 Lux)
VOLTAGE	Operates ideally on 24 Volt DC. (12 Volt DC. optional)
CURRENT	The maximum Current consumption is 150 mA.
PROTECTION	<b>Tested as per IP 67 &amp; as per DGMS Circular No. 01 of 2010.</b> The electronic circuits and speakers are totally sealed by epoxy resin, so that nothing can enter in it. Our Audio Visual Alarm is 100% Water Proof. It even works after totally immersed in water. It does not have free space to accumulate ingress dust/water into its enclose. (DGMS requirement not less than IP 67)
TIMER	To reduce the noise pollution and also to protect the AVA, timer is provided. Which shut Sound automatically in 2.5 minutes but the light continues to Flash. (as per DGMS requirements).
DIMENSION	Length-184 mm, Height-103 mm and Depth-50 mm.
WEIGHT	900 Gms. approx.
ENCLOSURE	Polycarbonate and M.S. sheet.
COLOR	Black powder coated, (Siemens Gray, Yellow, or as per requirement).
MARKING	Serial number, Batch number, Date of manufacturing on each AVA. (as per DGMS requirements).