

## Grid CONVERTER



This Grid Converter is state-of-the-art positioning equipment made using Elena's multi-GNSS processor, which utilizes NavIC, GPS, and GLONASS to provide one-meter accuracy without any external support. It follows Elena's integrated approach.

This equipment serves as a bridge between three reference systems used by the Indian Army, such as the ESM India grid system, the new DSM grid system, and the latitude-longitude (Lat-Long) system. It accurately provides all these reference numbers for the same point in various formats and can convert the reference from one system to another accurately.

### NECESSITY

The Grid Reference in Military Maps is the system used to align all our units to a single grid, and it is essential for operations. Currently, the Indian Army is transitioning from the old ESM to the DSM. Both use different Grid Reference System. Hence the shift from one to the other requires changes in the Grid References in Army documents, such as Operation Orders, Area of Responsibility, etc. This transition is expected to take up to 10 years. Additionally, many systems in the Army use the Lat-Long system.

### Problem

This issue is particularly critical for the Artillery, as they have Shakthi Equipment that uses Lat-Long, ESM, and DSM military maps. They must also support units using ESM and DSM. This concern was presented to the COAS through the DGMO by Arty Dte.

### Solution

The DGMO tasked the ADG Mil Svy to suggest a solution. Based on this, representatives of ADG Mil Svy demonstrated a proof of concept device that could show Lat-Long, ESM GR, and DSM GR simultaneously over several points in Delhi. The COAS directed that this be developed into a full device to be used by Arty units.

## DEVELOPMENT

Elena Geo Tech was contacted by ADG Mil Svy and Arty Dte to develop this equipment. As a result, the product has been developed into a full-fledged military device by Elena and is being sold through GeM. The development took about 12 months, mainly due to the need to develop the correct algorithm to ensure accurate conversion across the entire country and regions beyond our borders, up to 6 mapsheets. Field trials of the device have been carried out by four different formations/units and the TTW, School of Arty.

## FEATURES

- Displays current location in ESM GR, DSM GR, and Lat-Long formats.
- Converts Lat-Long to ESM GR and DSM GR.
- Converts ESM GR to DSM GR and Lat-Long.
- Converts DSM GR to ESM GR and Lat-Long.
- Provides atomic-clock-based accurate timing.
- Displays mapsheet reference numbers in ESM and DSM formats.
- Rugged: Confirms to Military Standards.
- LCD view panel for clear daylight visibility.
- Small built-in Torch light for night use.
- IP67 rated.
- Battery: Normal Operations - 60 hours.
- Kill button to delete all data securely.
- Rubber covering for easy holding with a gloved hand.
- Highly secure. The parameters for grid conversion are uploaded into the device by ADG Mil Svy representative, through a window-based easy-to-use software.
- Supports display of 6, 8, and 10-digit GR in both ESM and DSM formats.
- Supplied with a waterproof pouch for additional protection.

## ADVANTAGES

- Accurate marking of own and enemy elements on a common grid.
- Auto compensation for different zones to ensure accuracy.
- Accurate navigation.
- Assist target management.
- Assist firepower coordination.

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