

# Search, Track & Guidance/Gunnery Radar STGR

**EL/M-2221**



## General

### The Ultimate Fire Control Radar

Whenever the hard kill of sea skimmers calls for uncompromising accuracy under adverse multipath, ECM and/or bad weather conditions, ELTA's STGR is the ultimate Fire Control Radar to accomplish the task.

The STGR is an extremely accurate, monopulse, dual-band (X & Ka) Pulse Doppler radar.

The STGR is capable of tracking highly maneuverable targets after fast automatic acquisition, guiding missiles and directing guns against air and surface targets.

ELTA developed the STGR as part of the BARAK-1 Point Defense Missile System for Israeli Navy missile boats.

## Features

- Fast target acquisition
- High accuracy at all elevations
- Superb multipath effect elimination
- Sophisticated Kalman filtering
- High anti-clutter and ECCM capabilities
- Extensive Built In Test (BIT)
- Lightweight radar that suits a variety of installations
- State-of-the-art technologies:
  - Composite material antennae
  - Advanced programmable signal processing
  - Powerful data processing

## Typical Performance

- Missile acquisition at 15 Km
- Fighter aircraft acquisition at 30 Km
- Surface target acquisition up to radar horizon
- Effective Surface-to-Air missile guidance up to 10 Km
- Effective surface gunnery up to 20 Km, gun dependent
- Effective air gunnery up to 4 Km, gun dependent

# Search, Track & Guidance/Gunnery Radar - STGR

## System Configurations and Tasks

X-band (EL/M-2221X) configuration for:

- Automatic gun fire control against air targets
- Automatic splash spotting against surface targets
- Search modes as backup for a search radar

X/Ka-band configuration for all the above tasks, plus:

- Extremely accurate tracking and gunnery against sea skimming missiles
- Surface-to-Air Missile (SAM) guidance in single or salvo firing
- Surface-to-Surface Missile (SSM) guidance

Each configuration includes TV or TV+IR package

## Specifications

Frequency:	X/Ka-Band
Transmitter type:	TWT
Antenna type:	cassegrain
Vertical coverage:	-30° ÷ 85°
Scan rate (in search):	12 or 20 RPM

	X	X/Ka
Power consumption :	22 KVA	30 KVA
Total weight above deck:	660 Kg	765 Kg
Total weight below deck:*	760 Kg	760 Kg

\* Not including the illuminating transmitter



Radar System Units Below Deck

## Operational Capabilities

- Surface-to-Air Missile (SAM) guidance in single or salvo firing
- Surface-to-Surface Missile (SSM) guidance
- Automatic gun fire control against air targets
- Automatic splash spotting against surface targets
- Search modes as backup for a search radar
- Target illumination for SAM missiles (option)
- Easy to integrate with any gun or missile system



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INTELLIGENCE,  
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EARLY WARNING  
& CONTROL

DEFENCE  
& SELF-PROTECTION

TARGET ACQUISITION  
& FIRE CONTROL