

RADAR SYSTEM SAFETY INSERT
TO BE INSERTED IN THE FRONT OF ALL
1 MEGAWATT RADAR OPERATIONS & MAINTENANCE MANUALS, TAB SAFETY

RADAR SYSTEM SAFETY

To be inserted with other Radar Safety (i.e., shock hazard, etc.).

RADIATION HAZARD – A RADIATION HAZARD EXISTS WITHIN CERTAIN RANGES AND BOUNDRIES WITHIN THE RADAR ANTENNA'S RADIATION PATTERN. BARON SERVICES PERFORMED A RADAR SITE SURVEY FOR YOUR RADAR INSTALLATION. THE SITE SURVEY INDICATED POTENTIAL HAZARD ZONES FOR PERSONS IN THE VICINITY OF THE RADAR ANTENNA AND SHOULD REMAIN ON FILE WITH YOUR COMPANY. IF YOU ARE UNABLE TO LOCATE THE SITE SURVEY LETTER, PLEASE CONSULT THE FACTORY FOR ANOTHER COPY. THE RADAR SITE SURVEY DEPICTED ANY AREAS OF POTENTIAL CONCERN FOR CONTROLLED OR UNCONTROLLED ACCESS TO THE RADAR SITE AND RECOMMENDED SIGNS/FENCING TO PRECLUDE INADVERTENT ENTRY.

RADAR ON-AXIS (Main Lobe) ANTENNA EMISSIONS EMANATE FROM THE RADAR ANTENNA IN A 14FT DIAMETER CIRCLE THAT INCREASES IN DIAMETER WITH RADIAL RANGE AND COVERS AN ANGULAR SECTOR OF 1 DEGREE. IN A TYPICAL CONFIGURATION, THIS AXIS IS +0.5 DEGREES ABOVE THE HORIZON. THE FIRST SIDE LOBE EXTENDS AN ADDITIONAL +1 DEGREE FROM THE MAIN LOBE.

The following calculations were made in accordance with: FCC - OET Bulletin 65, Supplement B (Edition 97-01). We recommend that our customers maintain a copy of this bulletin on file for engineering reference.

Maximum Permissible Exposure Distances

Mode	On/Off Axis	Controlled Access	Uncontrolled Access
Rotating	Mainlobe	28.6 feet	64.1 feet
Fixed	Mainlobe	571.6 feet	1278 feet
Rotating	Sidelobe	1.6 feet	3.6 feet
Fixed	Sidelobe	32.1 feet	71.9 feet

*Highlighted distance are normal operating conditions.
Sector figures based on a 90 degree sector scan mode.*

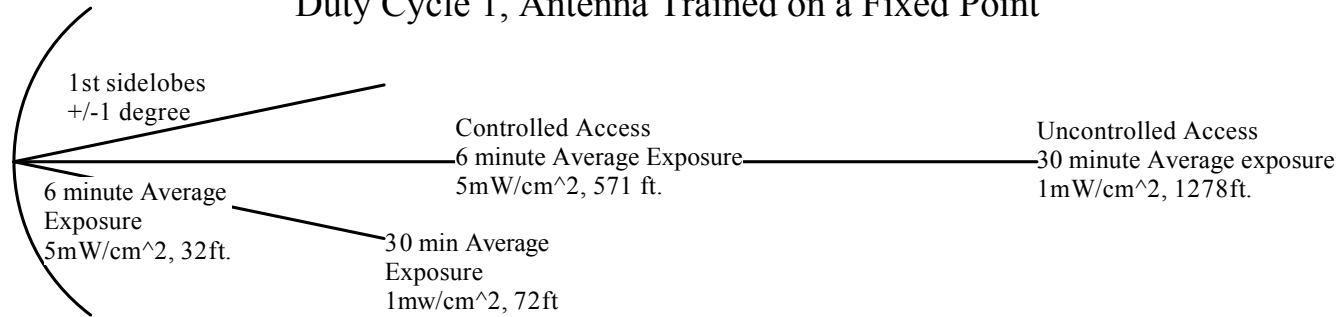
"Controlled Access" personnel shall not remain within the radiation pattern of the radar while the radar is operating in excess of 6 minutes within the distances set forth above in accordance with FCC Guidelines for controlled access.

"Uncontrolled Access" The area within the radiation pattern shall not be accessible to the public or untrained personnel and shall have appropriated fencing or signage as required to prevent access and warn the public.

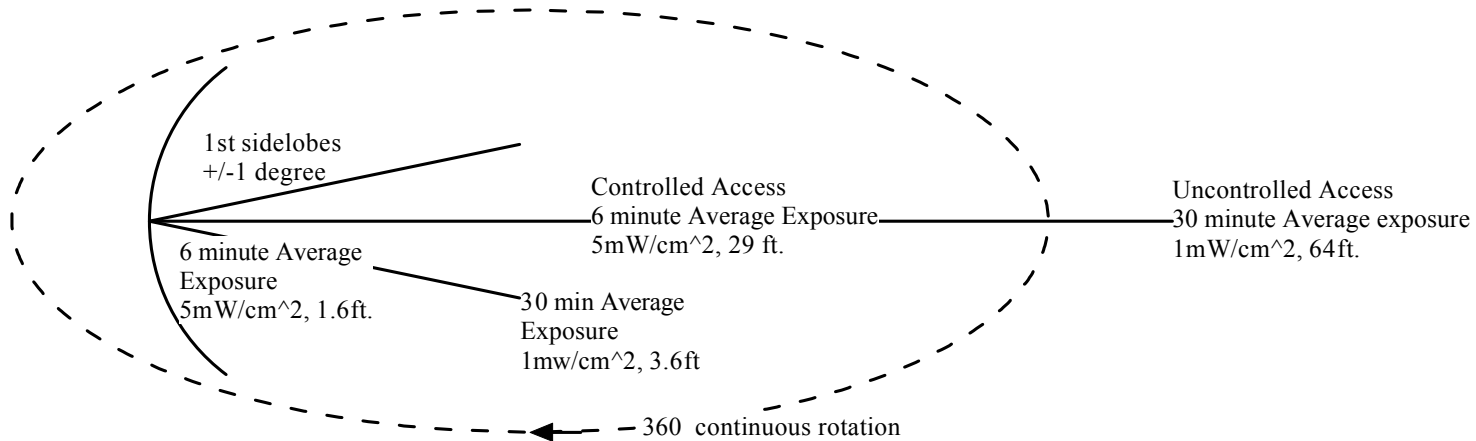
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**Pictorial Representation of Radhaz for Non-Rotating and Rotating Antenna
with 1 degree beam width and 1Megawatt Transmitter, including losses**

Antenna Fixed Non-Rotating 1 degree Pencil Beam
Duty Cycle 1, Antenna Trained on a Fixed Point

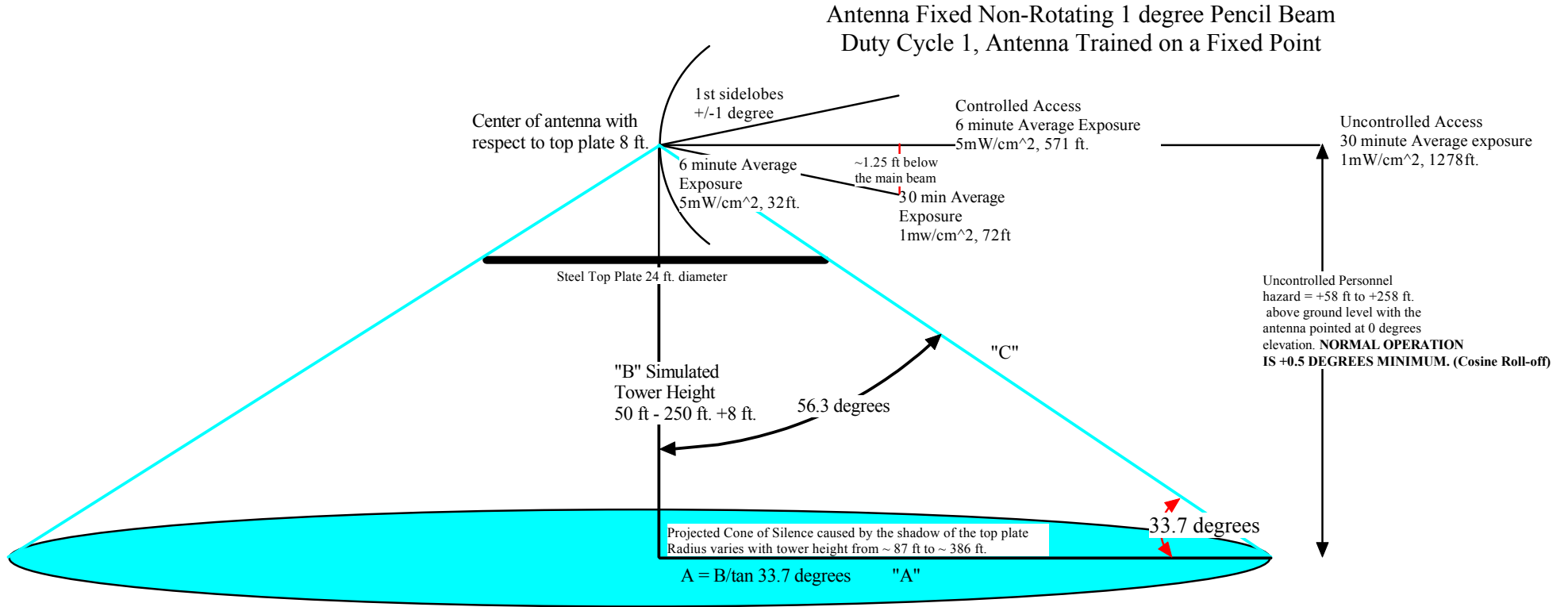


Antenna Rotating 360 degrees with 1 degree Pencil Beam
Duty Cycle 1 degree/360 degrees or .0027777



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Pictorial Representation of Cone of Silence below the Antenna and height of uncontrolled access, worst case, with 1 degree beam width and 1Megawatt Transmitter, including losses



Not to Scale

OPERATION

RF Safety Features.

The radar has a number of hardware and software features to protect personnel and the general public from radiation exceeding maximum permissible exposure limits.

These features include:

- The radar will cease to radiate if rotation stops for more than a preset number of seconds.
- The radar elevation is set to ensure it does not radiate at buildings or terrain.
- Blank no-radiate sectors may be established using hardware or software stops for your system.

WARNING: Do not alter or disable any of these features as this will alter RF Safety for your installation.

Sector Scan Mode: In sector scan mode the MPE distances will be greater than in standard 360 degree rotation, but less than the MPE calculation for stationary antenna non-scanning operation.

MAINTENANCE

1. Before accessing any point on or within the radome, ensure that the radar is not radiating and that appropriate "tag-out" or other procedures are in place to prevent inadvertant operation.

Note: The radome access door is equipped with an interlock that will automatically cut-power to the antenna if the access door is opened. Do not attempt to override this switch.

2. IF MAINTENANCE MUST BE PERFORMED WITH ANTENNA STOPPED AND TRANSMITTER RADIATING, ENSURE THAT THE ANTENNA IS POSITIONED IN AZIMUTH AND ELEVATION AS TO NOT POSE ANY RADIATION HAZARDS TO PERSONNEL ON THE GROUND OR ANY ADJACENT STRUCTURES. MAINTENANCE PERSONNEL MUST STAY BEHIND THE PARABOLIC REFLECTOR WHEN MAINTENANCE REQUIREMENTS DICTATE WORK ON THE ANTENNA/PEDESTAL AREA DURING TRANSMITTER OPERATION.

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Fencing & Signs. As part of the site survey and installation, specific signs and restricted areas were established. For example, access to the tower and radome is be restricted and appropriate RF warning signs should be posted. Untrained personnel should not be allowed in an area where such signs are posted.

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