

CLASSIFICATION UNCLASSIFIED		PAGE 9
ANTENNA EQUIPMENT CHARACTERISTICS		
1.	☐ a. TRANSMITTING	☒ b. RECEIVING ☐ c. TRANSMITTING AND RECEIVING
2. NOMENCLATURE, MANUFACTURER'S MODEL NO. G-390-SG		3. MANUFACTURER'S NAME MEC
4. FREQUENCY RANGE 4400 – 4500 MHz		5. TYPE E Plane Horn
6. POLARIZATION Vertical		7. SCAN CHARACTERISTICS
8. GAIN		a. TYPE
a. MAIN BEAM 17 dBi		b. VERTICAL SCAN
b. 1ST MAJOR SIDE LOBE AND ANGULAR DISPLACEMENT 3 dB +/- 15 deg		(1) MAX ELEV
9. BEAMWIDTH		(2) MIN ELEV
a. HORIZONTAL 30 deg		(3) SCAN RATE
b. VERTICAL 30 deg		c. HORIZONTAL SCAN
		(1) SECTOR SCANNED
		(2) SCAN RATE
		d. SECTOR BLANKING (<i>x one</i>)
		☐ a. Yes ☐ b. No
10. REMARKS Antenna Freq Ranges L-Band 1700 – 2000 MHz Antenna Gains (1 ft GP) L-Band 4 – 6 dBi		
CLASSIFICATION UNCLASSIFIED		J/F 12 No. Reset Page
Add a new Antenna Page		Remove a Antenna Page

LA390-SG1

Far field

Far field

Excitation

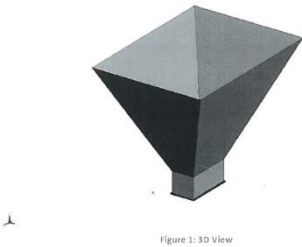


Figure 1: 3D View

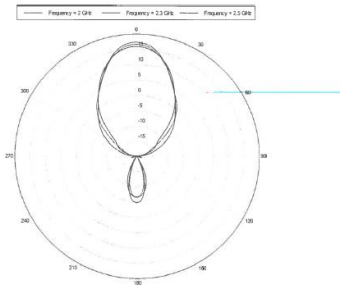


Figure 2: Phi Realised gain ($\Phi = 0^\circ$) - LA390-SG

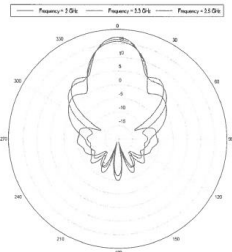


Figure 3: Theta Realised gain ($\Phi = 90^\circ$) - LA390-SG

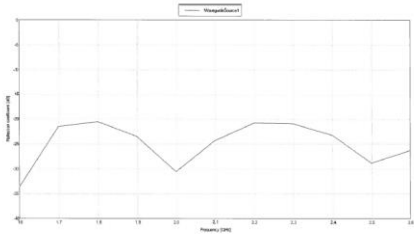


Figure 4: Reflection coefficient Magnitude [dB] - LA390-SG

G390-SG1

Far field

Far field

Excitation

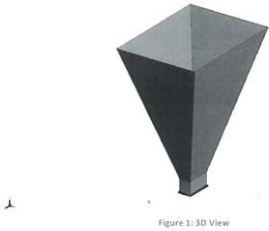


Figure 1: 3D View

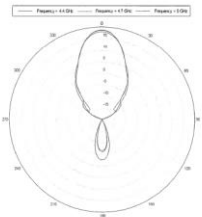


Figure 2: Phi Realised gain ($\Phi = 0^\circ$) - G390-SG

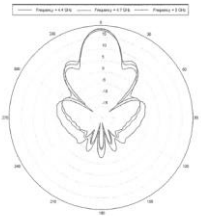


Figure 3: Theta Realised gain ($\Phi = 90^\circ$) - G390-SG

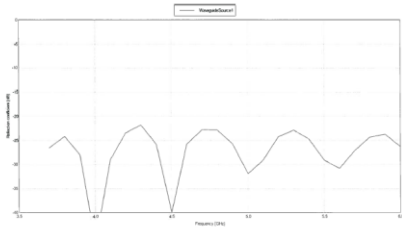


Figure 4: Reflection coefficient Magnitude [dB] - G390-SG



TR1216 | 300-6000 MHz 32 W Rack Mount Power Amplifier

DESCRIPTION

This class AB GaN Rack Mount SSPA is designed for both military and commercial applications. It is capable of supporting any signal type and modulation format, including but not limited to 3-4G telecom, WLAN, OFDM, DVB, and CW/AM/FM. These highly versatile units can be custom-configured with an extensive array of monitoring circuitry, control and communication interfaces, and any combination of RF connectors. Custom RF filtering, switching, and multiple PA blocks can be designed in for any system requirement.



FEATURES

AC, DC or Dual Power Supplies
Forward Power Monitoring
Front or Rear RF/Control Connections

PA and System Redundancy Configurations
High Speed Switching
Forced-Air and Fan-less cooling options available

TX SPECIFICATIONS				
PARAMETER	MIN	TYP	MAX	UNIT
Operating Frequency Range	300		6000	MHz
PSat Power Output (at output connector)		45		dBm
Gain		45		dB
Gain Flatness (Entire operating band)		2.0		dB
Gain Adjustment	25 dB			--
Input Return Loss		-16		dB
AC Supply Voltage	+85		+264	VAC
AC Supply Frequency	47		63	Hz
Switching Time		1.0	2.0	uS

INSTRUCTIONS FOR COMPLETING DD FORM 1494
"APPLICATION FOR EQUIPMENT FREQUENCY ALLOCATION"
ANTENNA EQUIPMENT CHARACTERISTICS PAGE

ITEM 1 - Function. Mark the appropriate block to indicate the type of function the antenna performs. For multi-antenna system, use one page for each antenna.

ITEM 2 - Nomenclature, Manufacturer's Model No. Enter the Government assigned alphanumeric equipment designation. If above is not available, enter the manufacturer's model number, e.g., DS6558, and complete Item 3. If above is not available, enter a short descriptive title, e.g., ATS-6 telemetry antenna.

ITEM 3 - Manufacturer's Name. Enter the manufacturer's name if available. If a manufacturer's model number is listed in Item 2, this item must be completed.

ITEM 4 - Frequency Range. Enter the range of frequencies for which the antenna is designed. Indicate units, e.g., kHz or MHz.

ITEM 5 - Type. Enter the generic name or describe general technical features, e.g., Horizontal Log Periodic, Cassegrain with Polarization Twisting, Whip, Phased Array or Conformal Array.

ITEM 6 - Polarization. Enter the polarization; if circular, indicate whether it is right or left hand.

ITEM 7 - Scan Characteristics.

a. If this antenna scans, enter the type of scanning, e.g., vertical, horizontal, vertical and horizontal.

b. (1) Enter the maximum elevation angle in degrees (positive or negative referenced to the horizontal) that the antenna can scan.

(2) Enter the minimum elevation angle in degrees (positive or negative referenced to the horizontal) that the antenna can scan.

(3) Enter the vertical scan rate in scans per minute.

c. (1) Enter the angular scanning range in scans per minute.

(2) Enter the horizontal scanning rate in scans per minute.

d. Indicate if antenna is capable of sector blanking. If yes, enter details in item 10, "Remarks."

ITEM 8 - Gain.

a. Enter the maximum gain in dBi.

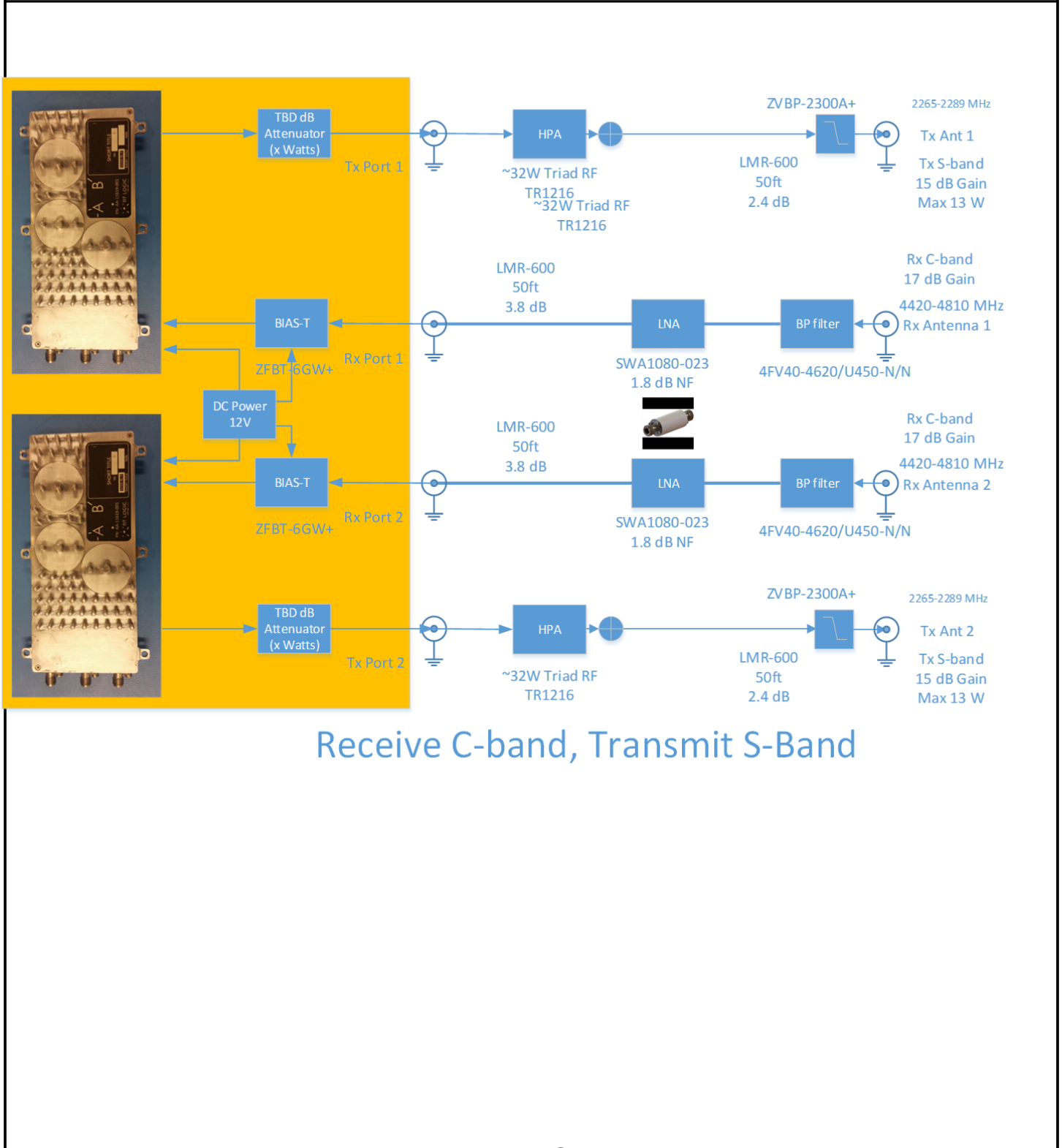
b. Enter the nominal gain of the first major side lobe of the main beam in dBi and the angular displacement from the main beam in degrees.

ITEM 9 - Beamwidth. Enter the 3 dB beamwidth in degrees.

ITEM 10 - Remarks. Use this item to describe any unusual characteristics of the antenna, particularly as they relate to the assessment of electromagnetic compatibility. Use this item to amplify or clarify any of the information provided above.

NTIA GENERAL INFORMATION

Click on the space below to add your line diagram image



Receive C-band, Transmit S-Band

INSTRUCTIONS FOR COMPLETING DD FORM 1494
"APPLICATION FOR EQUIPMENT FREQUENCY ALLOCATION"
NTIA GENERAL INFORMATION PAGE

ITEM 1 - Application Title. Enter the Government nomenclature of the equipment, or the manufacturer's name and model number, and a short descriptive title.

ITEM 2 - System Nomenclature. Enter the nomenclature of the system for which this equipment is a subsystem, e.g., PATRIOT or Global Positioning System.

ITEM 3 - Stage of Allocation. Mark appropriate block.

ITEM 4 - Frequency Requirements.

a. Enter the required frequency bands. For equipment designed to operate only at a single frequency, enter this frequency. Indicate units, e.g., kHz, MHz, or GHz.

b. Enter the emission designators including the necessary bandwidth for each designator, as described in Chapter 9 of the NTIA Manual e.g., 40M0PON.

Enter in Item 18, "Remarks," any other information pertinent to frequency requirements, such as minimum frequency separation for full duplex links or repeaters; or special relationships involving multiple discrete frequencies.

ITEM 5 - Purpose of System, Operational and System Concepts. Enter a summary description of the function of the system or subsystem, e.g., collect and disseminate meteorological data using satellite techniques; transmission of radar data for air traffic control; a remote control of ATC radars; provide for the transmission and reception of digital voice and data by means of LOS or tropo modes of propagation; provide navigational signal from which a broad spectrum of users are able to derive navigation data. Also include information on operational and system concepts. Mark whether the system has a wartime function.

ITEM 6 - Information Transfer Requirements. Enter the required character rate, data rates, circuit quality, reliability, etc.

ITEM 7 - Estimated Initial Cost of the System. This item is for information to show the general size and complexity of the system. It is not intended to be a determining factor in system review. For Stage 2 enter research cost, for Stage 3 enter development cost, for Stage 4 enter unit cost of equipment and expected number of equipments/systems to be procured.

ITEM 8 - Target Date. For the stage review requested, enter the appropriate dates. Funds must not be obligated prior to the approval of this application. If foreign coordination is not required, then approximately one year must be allowed for application approval. If foreign coordination is required, approximately two years must be allowed for application approval.

ITEM 9 - System Relationship and Essentiality. Enter the essentiality and a statement of the relationship between the proposed system and the operational function it is intended to support.

ITEM 10 - Replacement Information. Identify existing system(s) which may be replaced by the proposed system. State any known additional frequency requirements.

ITEM 11 - Related Analysis and/or Test Data. Identify reports that can be made available documenting previous EMC studies, predictions, analyses, or prototype EMC testing that are relevant to the assessment of the system under review.

ITEM 12 - Number of Units. (For mobile systems) - Self explanatory.

ITEM 13 - Geographical Area. Enter geographical location(s) or area(s) of use for this and subsequent stage(s), e.g., Gilfillan Plant, Los Angeles, California, and White Sands Missile Range, New Mexico (Stage 2); US&P (Stage 3); US&P, NATO Countries and Korea (Stage 4). Provide geographical coordinates (degrees, minutes, seconds) if available.

ITEM 14 - Line Diagram. Enter the page number of the line diagram(s). Attach as another page the line diagram showing the links, direction of transmissions, frequency band(s), and associated equipment with J/F 12 numbers.

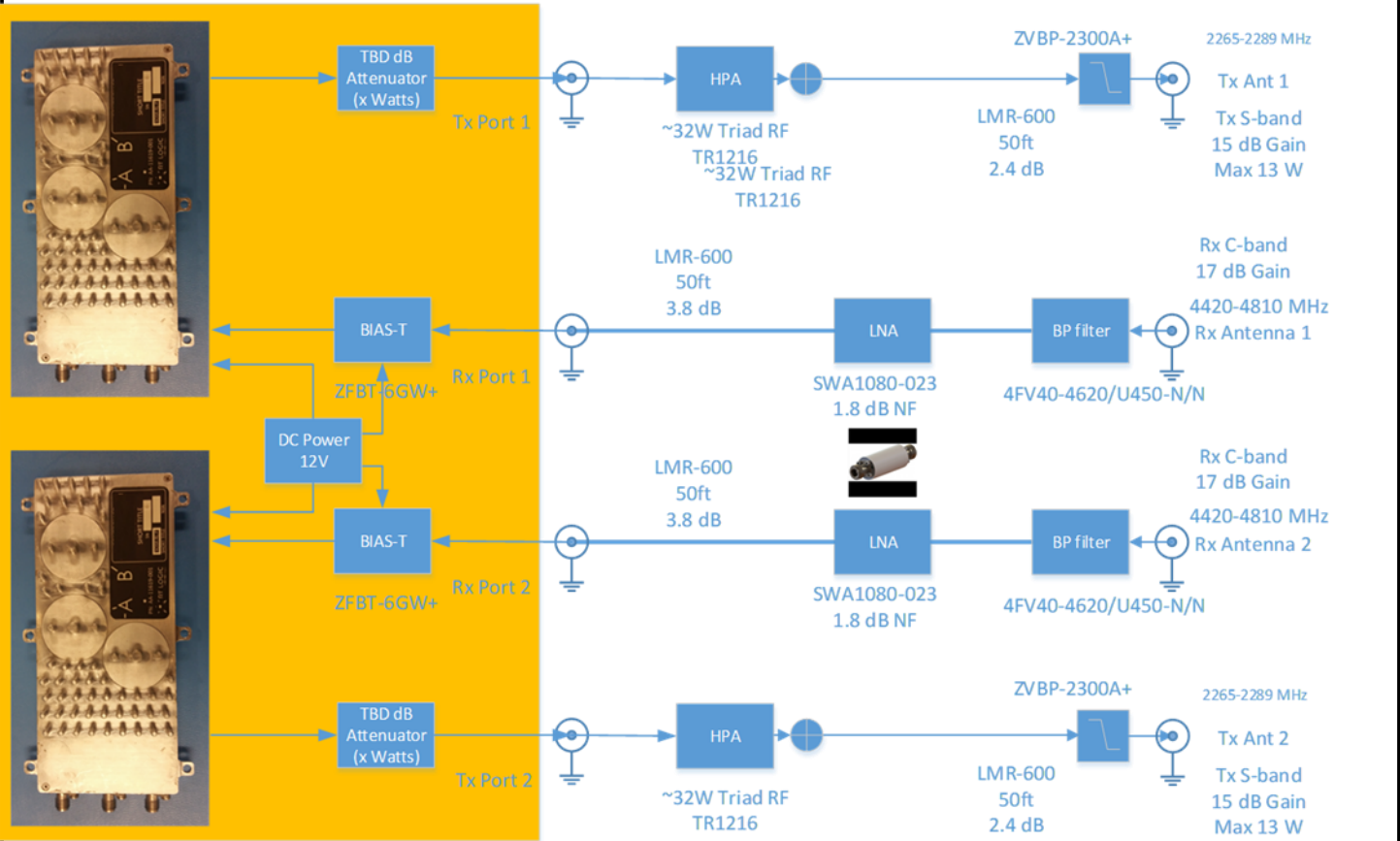
ITEM 15 - Space Systems. Enter the page number of the space system data. Attach as another page the space system data as described in the NTIA Manual, Paragraph 8.3.7. Data Requirement.

ITEM 16 - Type of Service(s) for Stage 4. Enter the appropriate type of service(s) that applies or will apply to the equipment in the operational stage (Stage 4), as described in Chapter 6, Table of Services, Station Classes, and Stations of the NTIA Manual. If the service is not in accordance with the allocation tables full justification must be entered.

ITEM 17 - Station Class(es) for Stage 4. Enter the appropriate station class(es) as described in Chapter 6 of the NTIA Manual.

ITEM 18 - Remarks. Use this item to amplify or clarify any of the information provided above

Click on the space below to add your line diagram image
LINE DIAGRAM



Receive C-band, Transmit S-Band

INSTRUCTIONS FOR COMPLETING DD FORM 1494
"APPLICATION FOR EQUIPMENT FREQUENCY ALLOCATION"
FOREIGN COORDINATION GENERAL INFORMATION PAGE

NOTES

1. For equipment intended to be operated outside the US&P foreign disclosure authority is required to coordinate and obtain radio frequency spectrum support from those countries where this equipment may operate. Action must be initiated to obtain foreign disclosure authority in accordance with Military Department regulations and policies for the release of appropriate data to the proposed host nations.

2. Do not complete this page unless you are preparing a foreign coordination version of the DD Form 1494. A foreign coordination version of this form is treated as a completely separate document from a US coordination version, and in general the information content will be different.

3. Frequency allocation processing for US coordination can be initiated without submitting a foreign coordination version of the DD Form 1494. In any case, submission of the US coordination version should not be delayed simply because a foreign coordination version has not been completed.

HOW TO ASSEMBLE THE APPLICATION FOR FOREIGN SPECTRUM SUPPORT:

1. Foreign Coordination General Information Page(s).
2. Transmitter Equipment Characteristics Page(s).
3. Receiver Equipment Characteristics Page(s).
4. Antenna Equipment Characteristics Page(s).
5. Continuation Page(s).

FOREIGN COORDINATION GENERAL INFORMATION PAGE

ITEM 1 - Application Title. Enter the Government nomenclature of the equipment, or the manufacturer's name and model number, and a short descriptive title.

ITEM 2 - System Nomenclature. Enter the nomenclature of the system for which this equipment is a subsystem, e.g., PATRIOT or Global Positioning System.

ITEM 3 - Stage of Allocation. Mark the appropriate block.

ITEM 4 - Frequency Requirements.

a. Enter the required frequency band(s). For equipment designed to operate only at a single frequency, enter this frequency. Indicate units, e.g., kHz, MHz, or GHz.

b. Enter the emission designator(s) including the necessary bandwidth for each designator, as described in Chapter 9 of the NTIA Manual e.g., 40M0PON.

Enter in Item 13, "Remarks," any other information pertinent to frequency requirements, such as minimum frequency separation or special relationships involving multiple discrete frequencies.

ITEM 5 - Proposed Operating Locations Outside US&P. Enter host nations, locations or areas of use. Provide geographical coordinates (degrees, minutes, seconds) if available.

ITEM 6 - Purpose of System, Operational and System Concepts. Enter a summary description of the function of the system or subsystem, e.g., collect and disseminate meteorological data using satellite techniques; transmission of radar data for air traffic control; a remote control of ATC radars; provide for the transmission and reception of digital voice and data by means of LOS or tropo modes of propagation; provide navigational signal from which a broad spectrum of users are able to derive navigation data. Also include information on operational and system concepts.

ITEM 7 - Information Transfer Requirements. Enter the required character rate, data rates, circuit quality, reliability, etc.

ITEM 8 - Number of Units Operating Simultaneously in the Same Environment. Enter maximum number of these units which will be operating simultaneously in the same environment, during Stage 4 use.

ITEM 9 - Replacement Information. Identify the existing equipment/system(s) and associated frequency assignments to be replaced by the proposed equipment system(s) where applicable.

ITEM 10 - Line Diagram. Enter the page number of the line diagram(s). Attach as another page the line diagram showing the links, direction of transmissions, frequency band(s), and associated equipment.

ITEM 11 - Space System. Enter the page number of the space system data. Attach as another page the space system data as described in the NTIA Manual, Paragraph 8.3.7. Data Requirements.

ITEM 12 - Projected Operational Deployment Date. Self explanatory.

ITEM 13 - Remarks. Use this item to amplify or clarify any of the information provided above