



## AMOS CARRIER LINE-UP PROCEDURE

<b>SPACECOM CONTACT INFO</b>			
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<b>PREPARATIONS</b>
1. Make all necessary station tests to ensure proper operation of the uplink and downlink chains.
2. Use an RF Spectrum Analyzer on the monitor point of the HPA to observe its Transmit spectrum (look for spurious carriers, IM products or thermal noise above the allowed level).
3. Make an accurate alignment of the antenna pointing and feed polarization.
4. To peak the antenna pointing, the satellite's beacons can be used at the following frequencies: AMOS-3: 11,449.00MHz (LHCP); 11,700.00MHz (RHCP) AMOS-7: ME (V) 11,450.115MHz; ME (H) 11,450.345MHz AMOS-7: CEE (H) 12,250.250MHz; PE (H) 11,450.115MHz; AFR (V) 12,250.250MHz AMOS-17 C-Band: 4,1999.00MHz (H); 4,1992.00MHz (V) AMOS-17 Ku-Band: 12,501.50MHz (H); 12,500.50MHz (V) 11,449.00MHz (H); 11,699.50MHz (V) AMOS-17 Ka-Band: 20,199.50MHz (V); 19,700.50MHz (H)

<b>LINE-UP PROCEDURE</b>		
<b>No</b>	<b>Customer Uplink</b>	<b>AMOS-CSC</b>
1	Monitor with a spectrum analyzer the allocated frequency band on the space segment to ensure the band is free from any interference.	Monitor with a spectrum analyzer the allocated frequency band on the space segment to ensure the band is free from any activated carrier or interference.
2	Contact AMOS-CSC to obtain authorization to begin testing over the satellite.	Confirm the carrier's parameters with the user (Center Frequency, Bandwidth and EIRP) as per the respective transmission order.
3	If relevant, perform XPOL Check per steps 4,5,6.	If relevant, perform XPOL Check per steps 4,5,6 below.
4	Transmit an un-modulated carrier at the XPOL test frequency as assigned by AMOS-CSC.	Allocate a test frequency at the edge of the XPOL transponder for a CW transmission.
5	Adjust transmit U/L power according to AMOS CSC instructions.	Measure the COPOL C/N (RBW = ~1KHz) and instruct the customer to increase U/L power until you reach C/N of ~40dB.
6	Align the polarization until best performance is achieved according to AMOS-CSC.	Instruct the customer to align its polarization while looking for lowest Null. Measure the XPOL C/N and verify that the XPOL isolation is at least 30dB (25dB/18dB).
7	Guided by AMOS-CSC, transmit a CW carrier on the assigned frequency at no more than 20 dB below the allocated transmit level.	Measure the carrier's center frequency and D/L EIRP.
8	Adjust center-frequency as guided by AMOS-CSC.	
9	Modulate the carrier.	Measure and verify the carrier's bandwidth.
10	Adjust U/L EIRP gradually, as guided by AMOS-CSC	Measure the carrier's D/L EIRP and verify levels.
11	Per AMOS-CSC instructions, turn off/on the carrier. User may also be asked to provide a spectrum analyzer plot of the U/L HPA's output.	Monitor the full transponder's band to ensure that transponder's noise level has not changed and/or spurious carriers not observed. Register U/L Power Level and EIRP.
12	The user can measure the received C/N or Eb/N0 performance to verify the expected values.	Assist the user with C/N measurements for various receive levels.
13	Additional testing is optional and may be conducted by the user to verify the performance.	Assist the user with additional testing if required.

