

TELEMETERING STANDARDS COORDINATION COMMITTEE



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State of C-band Standards

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Bally's

Las Vegas, NV

Current Standards

- The primary standards relating to the RF link for telemetry are:
 - IRIG 106-11 Telemetry Standards
 - CCSDS 401.0-B-21 Radio Frequency and Modulation Systems – Part 1: Earth Stations and Spacecraft
- Additional related standards are:
 - IRIG 118-02 volume 2: Test Methods for Telemetry RF Subsystems
 - IRIG 119-06 Telemetry Applications Handbook
 - IRIG 120-08 Telemetry (TM) Systems Radio Frequency (RF) Handbook
- The regulations are contained in the National Telecommunications and Information Administration's (NTIA) Manual of Regulations and Procedures for Federal Radio Frequency Management

IRIG (RCC) 106-11

- IRIG 106-11 Telemetry Standards, Part 1 is the primary source
 - Allocations of the telemetry bands are provided in this document
 - June 2011 release of this document added the Lower C-Band, Middle C-Band and upper C-Band assignments
- Recommendations are made for downconverting C-Band frequencies
 - Use high side Local Oscillator frequency of 5500 MHz
 - Applies to the lower and middle C-Bands
 - No recommendation made for downconversion of the Upper C-Band (5925-6700 MHz)
- The standard does not contain recommended center frequencies or channel spacing in the C-Band

Standards

- IRIG 118-02 volume 2: Test Methods for Telemetry RF Subsystems
 - These test methods are independent of the frequency band used
 - None of the examples given in the test methods show the new C-Band frequencies

- IRIG 119-06 Telemetry Applications Handbook
 - Section on Telemetry and GPS compatibility does not address the new C-Band telemetry frequencies
 - Glossary includes the L-Band and S-Band, but does not include C-Band

- IRIG 120-08 Telemetry (TM) Systems Radio Frequency (RF) Handbook
 - Defines the current telemetry frequency bands as L Band, Lower S Band and upper S-Band
 - The new C-Band frequencies are not addressed in this handbook

- CCSDS 401.0-B-21 Radio Frequency and Modulation Systems – Part 1: Earth Stations and Spacecraft discusses operation in the S-Band but has no information or guidance on operation in the C-Band