

RELEASE NOTICE

July 17, 2019

TO: DSN Document 810-005 Distribution
FROM: DSN Systems Engineering
SUBJECT: Release 48 for DSN Document 810-005

Modules 104K, 203D, 214B for Document 810-005, Deep Space Network (DSN) Telecommunications Link Design Handbook have been revised and are being released. A summary of changes for the affected Modules is as follows:

- **104, Rev. K; 34-m BWG Stations Telecommunications Interfaces**
 - Added S-band on DSS-26, and a new X/X/Ka-band feed on DSS-25, replaced the previous separate X- and Ka-band feeds. DSS-25 is still the only Ka-band uplink antenna.
 - Updated a total of 12 block diagrams for all the BWG antennas, with diagrams for the 4 future antennas to be supplied. DSS-25 and DSS-26 have been updated to show their new capabilities.
 - Added new Table 1, which shows the present and future capabilities of the 12 total BWG antennas (8 operational and 4 future) for each frequency band. This table is easier to read and get an overview of all antennas than was the previous Table 1.
 - Re-wrote the proposed capabilities to indicate the capabilities of the future BWG antennas DSS-56, -53, -23, and -33. DSS-25, -35, -55 will receive 800 W Ka-band uplinks. DSS-26, -36, -56 will receive K-band (26 GHz) downlinks.
- **203, Rev. D; Sequential Ranging**
 - Rewrote “Allocation of Link Power” section, including new models for downlink phase deviation for each of two types of ranging channels.
 - Reorganized “Range Measurement Performance” section, including new curve fit and new interpolation for probability of acquisition.
 - Removed square-wave models.
- **214, Rev. B; Pseudo-Noise and Regenerative Ranging**
 - Rewrote “Allocation of Link Power” section, including new models for downlink phase deviation for each of two types of turn-around ranging channels.
 - Added new equation for chip rate.
 - Added new information on DSS delay.

A copy of the updated modules can be obtained at the following URL:

<https://deepspace.jpl.nasa.gov/dsndocs/810-005/>

Should you want to subscribe, unsubscribe, or have further questions about this document release notice, please contact Christine Chang at 818-354-4264 or send email to Christine.Chang@jpl.nasa.gov

Should you have any technical questions regarding an 810-005 module, please see the contact list at the following URL:

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