

## Summary of Changes

### Summary of Changes and Instructions

#### 1.1 January/May 2011 Revision of the January 2008 Edition of the NTIA Manual

##### Chapter 1

Section 1.3.2, added the National Science Foundation to the Technical Subcommittee list of representatives. (38190/1)

Section 1.3.2, removed the National Science Foundation from the Emergency Planning Subcommittee list of representatives. (38190/1)

##### Chapter 3

Section 3.9.6, Article II, Definition, corrected the third line to read:

"...Telecommunications and **Information** Administration of..."

Section 3.9.8.4b, editorial correction: "...stations and ship stations<sup>2</sup> shall..."

Section 3.9.9.2b, editorial correction deleting the hard return after "land portable stations"

##### Chapter 4

Section 4.1.3, editorial, corrected the date to read "operate until March **42**, 2024" in US228.

Section 4.1.3, editorial correction adding US338 to the 2310-2320 MHz band.

Section 4.1.3, modification due the FCC *Aviation 3<sup>rd</sup> R&O*, Section 2.106 was amended by removing footnote 5.198 from the U.S. Table and from the list of international footnotes and by adding footnote US403. In furtherance of the Commission's new domestic footnote numbering policy, footnote US403 was renumbered in frequency order as US36 in the Federal Register summary.

Section 4.1.3, modification due to the approval of the FCC Report and Order, ET Docket. No. 10-142 and Erratum, the Commission made changes that added co-primary fixed and mobile allocations to the MSS 2 GHz band. Footnotes US380 and NG168 are modified and NG156 is deleted. The allocation table is modified to show the addition of fixed and mobile services in the 2000-2020 and 2180-2200 MHz bands. The allocation table is also modified removing the reference to footnotes US380 and NG156 in the 2000-2020 MHz band and US380 in the 2180-2200 MHz band. (38573/1)

Section 4.1.3, modified footnote G117 and added this footnote in the 17.7-17.8 GHz band. (38564/1)

Section 4.3.3, modification of the Plan for Hydrologic and Meteorological Operations in the Bands 162-174 and 406.1-420 MHz (38245/1)

....

##### e. Wideband Hydrologic Operations.

Existing systems authorized in the 162-174 MHz band may continue using equipment operating with necessary bandwidths equal to, or greater than, 12.5 kHz, using the center frequencies listed in the table above that are spaced 25 kHz apart and in the columns beginning with 169.425, 170.2625, and 171.1000 MHz, ~~until December 31, 2004. After this date all **New such** operations must have **been converted to** narrowband equipment operating with a necessary bandwidth of less than 12.5 kHz. **In addition, existing systems operating in the 406.1-420 MHz band may, until December 31, 2007, continue using equipment operating with necessary bandwidths of 12.5 kHz or greater on the following frequencies: 406.125, 406.175, 409.675, 409.725, 412.625, 412.675, 412.725, and 412.775 MHz. After December 31, 2007, a**~~ All hydrologic systems in the 406.1-420 MHz band must **have transitioned comply with** ~~to~~ the center frequencies listed in the table above, and **new operations to must have** equipment operating with necessary bandwidths of less than 12.5 kHz. New assignments

on frequencies 406.1250 and 406.1750 MHz are to be primarily for paired operations with frequencies 415.1250 and 415.1750 MHz, respectively.

Section 4.3.5, DME/TACAN table, editorial change correcting Channel 81Y Ground Reply Frequency to read 1042 MHz.

Section 4.3.9, modified the Channeling Plan for Assignments in the Band 406.1-420 MHz, removing outdated text. (38430/1)

Section 4.3.17, modification of the Plan for JTIDS TDMA Waveform Systems (38051/1):

....

2. JTIDS/MIDS TDMA Waveform...

....

d. The DOD will ensure that by **January 1, 2020**, all **fielded** JTIDS/MIDS TDMA Waveform ~~Terminals~~**terminals** are capable of remapping frequencies. **MIDS LVT terminals will be retrofitted with the remapping capability and recertified between January 1, 2012 and December 31, 2018. These retrofits will occur during any scheduled system updates/modifications, when the terminals are brought in for maintenance. If necessary, special procedures will be established to ensure that all retrofits are completed no later than January 1, 2020.** Any JTIDS/MIDS TDMA Waveform ~~Terminal~~**terminal**, ~~produced after July 1, 2007 other than the MIDS LVT terminals produced after July 1, 2007~~ will be capable of remapping ~~and the capability will be added to all terminals produced prior to that date during any scheduled system updates/modifications or when the terminals are brought in for maintenance. All fielded JTIDS/MIDS TDMA Waveform Terminals will incorporate the remapping capability by 2020.~~

The remapping implementation will be flexible, but there will not be a requirement to remap more than 14 carrier frequencies. The remapping capability will be utilized as necessary to prevent harmful interference with ATC systems that have been approved by a NTIA Stage 4 Spectrum Certification. ~~The Legacy **legacy** JTIDS Terminals (Class 1, 2, 2M, 2H) for operations prior to 2020 are not required to implement the remapping feature.~~

Chapter 5

Section 5.2.1, modified Table 5.2.1, Table of Frequency Tolerances (38342/1):

....

Frequency Band 10.5 to 30 GHz	Frequency Tolerance
I. Fixed Stations	
A. 21.2 - 23.6 GHz	300
B. 21.8 <del>– 22.075</del> GHz and 23 -23.275 GHz	500 (u)
C. Other than above	50 (n)
II. Mobile (Aeronautical, Land, Maritime) Stations	100
III. Radiodetermination Stations	2500
IV. Space and Earth Stations	50

....

(u) Applies to frequency pairs 21.825 GHz, 23.025 GHz; 21.875, 23.075 GHz; 21.925, 23.125 GHz; ~~and~~, 21.975 GHz, 23.175 GHz, **22.025 GHz, 23.225 GHz, and 22.075 GHz, 23.275 GHz** only.

....

Section 5.3.3, modified the Fixed Services (406.1-420 MHz Band, the 932-935/941-944 MHz Bands, and the 1710 MHz-15.35 GHz Frequency Range) (38342/1)

....

Frequency Band	Maximum beamwidth (3 dB point)	Minimum suppression at angle in degrees from center line of main beam (dB)						
		5-10	10-15	15-20	20-30	30-100	100-140	140-180
<u>21.8 – 22.075 GHz and 23 -23.275 GHz</u>	<u>3.3</u>	<u>18</u>	<u>26</u>	<u>26</u>	<u>33</u>	<u>33</u>	<u>55</u>	<u>55</u>

....

Section 5.3.8 Low Power Transmit (21.8-22.075 and 23.0-23.275 GHz Band Segments) (38342/1)

These standards apply to the following ~~four~~six frequency pairs within the above two band segments:

21.825 GHz	23.025 GHz
21.875 GHz	23.075 GHz
21.925 GHz	23.125 GHz
21.975 GHz	23.175 GHz
<u>22.025 GHz</u>	<u>23.225 GHz</u>
<u>22.075 GHz</u>	<u>23.275 GHz</u>

....

2. Maximum ~~equivalent isotropically effective~~-radiated power (EIRP) shall be 55 dBm.

## Chapter 7

Part 7.11, added a new Army site “Army Test and Evaluation Center, Yuma, AZ” to the list of experimental stations. (38056/1)

Section 7.15.3, modification of the FCC information contained in the Military Communications in Non-Federal Bands Above 25 MHz for Tactical and Training Operations. (38429/1)

Part 7.23, deleted the reference to “6/4” in the last bullet and some editorial corrections were also made. (38525/1)

## Chapter 8

Section 8.2.54 was modified to read (38045/1):

8.2.54 Policy on the Use of the Frequency Bands Between 406.1 and 450 MHz by Range Safety Operations

The following policy is established with respect to use of the bands between 406.1 and 450 MHz by range safety operations (i.e., command destruct/flight termination):

....

b. use of the frequency 416.5 MHz at Pillar Point AFS, CA, Laguna, CA, Point Mugu, CA, and Vandenberg AFB, CA through December 31, 2014. The use of command destruct at the California locations is limited to the Army MDA program and any other use of the frequencies must be requested using the STA process in 8.3.~~34~~32.

Section 8.3.15, added new sites at Goldstone, CA and Vandenberg, AFB, CA to the List of Coordinated Earth stations. (38191/1) (38574/1)

Section 8.3.28 was modified to read (38045/1):

8.3.28 Use of Fixed Devices That Re-Radiate Signals Received From the Global Positioning System

Except as otherwise authorized under Part 7.14, ~~federal~~Federal agencies and departments may, under the following conditions, operate fixed devices that re-radiate signals received from the Global

## Positioning System (GPS).

1. Individual authorization is for indoor use only, and is required for each device at a specific site.

....

8. The use is limited to activity for the purpose of testing RNSS equipment/systems.

9. A "Stop Buzzer" point-of-contact for the authorized device must be identified and available at all times during GPS re-radiation operations ~~of the device under any condition.~~

Section 8.3.29 was modified as follows (38045/1):

8.3.29 Use of Land-Based Mobile Devices That Re-Radiate Signals Received From the Global Positioning System

Except as otherwise authorized under 7.14, ~~federal~~ Federal government agencies and departments may, under the following conditions, operate land-based mobile devices that re-radiate signals received from the Global Positioning System (GPS) at 1575.42 ±12 MHz (L1).

1. Use is restricted to inside armored ground vehicles operating within a ~~federal~~ Federal government controlled range/facility/installation or cordoned zone.

....

9. A "Stop Buzzer" point of contact for the authorized device must be identified and available at all times during GPS re-radiation operations.

~~10. Any airborne use of these devices is not authorized.~~

~~101.~~ These devices operate on a non-interference, unprotected basis.

Section 8.3.30, added a new section as 8.3.30 and renumbered the following sections. (38045/1):

8.3.30 Use Inside of Federal Owned Aircraft Devices That Re-Radiate Signals Received From the Global Positioning System;

....

8.3.~~3031~~ Coordinated Use of Federal Fixed Ultrawideband Systems Not Intended for Operation under Parts 7.8 or 7.9

....

8.3.~~3132~~ Coordination of Special Temporary Authorization Assignments for Federal Agencies

Section 8.3.30, modified paragraph 2 (38569/1):

....

2. Use of the re-radiator is restricted to transmissions inside Federal owned aircraft operating within a Federal controlled range/facility/installation/cordoned zone. All locations using aircraft re-radiators are required to have a frequency assignment. System checks shall only be performed while the aircraft is on the ground at a Federal controlled range/facility/installation/cordoned zone. In addition, operation of the re-radiator while in flight is limited to ~~the controlled range/facility/installation/cordoned zone and can be used only~~ during the final 20 minutes before planned deployment of assets.

## Chapter 9

Section 9.8.2, 29, removed incorrect text in XAD--Transmitter Antenna Dimensions (24 Characters--1 Occurrence)

.... c. EARTH Stations: The following formatting instructions apply to both Earth and Terrestrial stations (including experimental stations) employing Earth station techniques.

(1) Use the entire 24 characters to record the following particulars:

(a) GAIN--Insert in the first two characters a two-digit number representing the gain of the

antenna in the direction of maximum radiation. Insert a zero in the first character if the gain is less than ten. ~~Enter the letter G in character if the gain is less than ten.~~ Enter the letter G in character three. For a negative gain, insert XXG and give the value in the CIRCUIT REMARKS \*EGN field.

Section 9.8.2, 32, deleted the old text and replace with the following (38571/1):

This field will only be used by the computer program Federal Spectrum Management System (FSMS)/Spectrum XXI online to indicate that the GMF record has been processed through the new system. Agencies cannot enter data into this field.

Section 9.8.2, 39.k (1), Editorial correction for examples:

M018 REM07 \*NTS,M018,FCC\_,070326,JKAM,060717-03

and k.(3)(f) *Example:* REM02 \*NTS,M018,FCC\_,070326,J Kam,060717-03

*Editorial Corrections to references:*

(6) ....

(d) and, if needed, the identifying code \*DFI followed by a comma and the function identifier selected from the lists in Parts 1 and 2, below, or a description as noted in subparagraph (8)(jh), below.

(7) The entries should be entered in the following order if more than one identifier is used: \*MFI; \*IFI; \*DFI. See subparagraphs (8)(jh), (ki) and (lj), below, for other specific instructions.

(8) General rules:

(a) Only one occurrence of \*MFI and \*IFI is allowed. Multiple occurrences of \*DFI are allowed.

(b) Only standard functional identifiers (the name or abbreviation shown in bold in Parts 1 and 2, below) will be used in Frequency Authorization Function entries, except for entries in \*DFI as noted in subparagraph (8)(i) and (j), below. The descriptions included inside the parenthesis in the lists in Parts 1 and 2, below, are shown only for information purposes to assist spectrum managers in selecting the correct data entry.

**SPECIAL PROJECTS**--Used in support of communications electronics systems that are generally one-of-a-kind systems (e.g., Special Forces, intelligence, RF propagation systems, ground and avionics communications-electronics weapons systems, etc.). (Note: See subparagraph (8)(ji) above for additional instructions.)

Section 9.8.2, 39.o, General, was modified adding text on how to request a new manufacturer code and a consequential change is made in Part G.5. (38480/1)

....

4. If only a commercial model number is available, also indicate the manufacturer of the equipment. A list of manufacturer names and associated codes is printed in ~~Annex G~~, Part G.5. If the manufacturer's name is not listed, ~~call~~ email the FAS Secretary with the new manufacturer's name and a suggested three letter code. The FAS Secretary will reply to your request with the approved new three letter manufacturer code that will be entered into Part G.5.

Section 9.8.2, added two new identifiers for Application Data Requirements, 39. Circuit Remarks (REM) (40 Characters-30 Occurrences) (38246/1):

....

*u. Frequency Authorization Function (\*MFI, \*IFI, \*DFI)*

....

Part 2 – Agency Specific Function Identifiers with Description

....

NERON (NOAA Environmental Real-Time Observation Network)--RF links are used to establish two-way (simplex) communications to poll data collection platforms (DCP) for MESONET data via base stations and repeater stations as applicable. The DCPS reply by transmitting the hydrometric data.

**NEXRAD**--Used in support of the Next Generation Weather Radar (NEXRAD).

**NOAA WEATHER RADIO**--Used for the dissemination of National Oceanic and Atmospheric Administration weather forecasts, weather warnings, and other critical information to the public.

**NOAA WEATHER RADIO LINK**--A simplex UHF radio link carrying the NWR broadcast from the Weather Forecast/Satellite Office (WFO/WSO) to the VHF transmitter. This radio link is used when a telephone line is unavailable.

Annex A

Part A.1, corrected the address information contained in footnote C019 (38478/1):

**C019**--Subject to prior coordination with Army Frequency Management Office (AFMO) - CONUS, ATTN: CIO G6/SAIS-AOS-A 4214-2350, Stanley Road, Suite 32, Ft. Sam Houston, TX 78234-5032; Telephone 210-221-2050/2820, (DSN 471).

Part A.6, modified footnote S876 (38572/1):

**S876**--This assignment supports the DOC ~~National Polar Orbiting Operational Environmental Satellite System (NPOESS)~~ /NASA Joint Polar Satellite System (JPSS).

Part A.6, added new Special Notes S928 through S930 (38276/1):

**S928**--This assignment supports the FCC authorized AMAZONAS satellites.

**S929**--This assignment supports the FCC authorized JSAT satellites.

**S930**--This assignment supports the FCC authorized APSTAR satellites.

Annex D

Table 3, corrected the Army Frequency Management Office address information (38480/1):

Army Frequency Management Office  
Continental U.S. (AFMO CONUS)  
ATTN: ~~ATTN: CIO G6/SAIS-AOS-ANETC-EST-AC~~  
Building ~~42142350~~, Suite 32  
Ft. Sam Houston, TX 78234-5032  
Telephone: (210) 221-~~20500454/28202050~~  
FAX: (210) 221-2844  
Email: [afmo-conus@conus.army.mil](mailto:afmo-conus@conus.army.mil)

Annex G

Part G.1, editorial correction for the Health and Human Services abbreviation:

Indian Health Services	HISISH
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Part G.1, deleted the Army Bureau code for the National Training Cener and Ft. Irwin (NTC) and added a new code for the Court Services and Offender Supervision (CSOS). (38478/1)

Part G.1, added new Department of Education codes (38523/1):

COOP/COG Activities	COOP
Office of the Inspector General	OIG
Office of Protective Services	OPS

Part G.3, removed text addressing the National Training Center, Ft. Irwing. (38478/1)

Part G.5, editorial changes for the text in this part (38480/1):

This part of Annex G contains those manufacturer codes that will be used in the Circuit Remarks (REM) field of the GMF (see Chapter 9, Section 9.8.2, 39.o, General).

Part G.5, added the following new manufacturer codes (38341/1):

EEC ELECTRONIC ENGINEERING CO

GPS GPS SOURCE INC.

## SUM-7

IMR	IMSAR LLC	AAS	AES CORPORATION
DSI	DELTA-SIGMA INC	MNO	MICROWAVE INNOVATIONS
BEX	BEXT INC	CTW	COMMTECH WIRELESS
SMR	SHINE MICRO RADARPLUS	PSI	PLANNING SYSTEMS
ENT	ENERDYNE TECHNOLOGIES		INCORPORATED
APA	APPLIED RESEARCH ASSOCIATES	LNC	LINEAR CORPORATION
ESC	ESCO	RAV	RAVEON TECHNOLOGIES
SCT	SCIENCE APPLICATIONS INTERNATIONAL CORPORATION (SAIC)	MYR	MARSHALL RADIO TECHNOLOGY
EWR	EWR WEATHER RADAR SYSTEMS	RCT	REMOTE CONTROL TECHNOLOGIES
QUS	QUASONIX SYSTEMS	ALX	AEROFLEX LINTEK CORP
RFS	RADIO FREQUENCY SYSTEMS	ENI	ELECTRONIC NAVIGATION INSTRUMENTS
FRF	4RF COMMUNICATIONS	AMR	AMPLIFIER RESEARCH CORP
FSG	FUTURECOM SYSTEMS GROUP	MGT	MAGNETEK
INC.		AUT	AUDIO-TECHNICA US INC

### Annex J

Part J.5, corrected the Gaussian Minimum Shift Keying (GMSK) formula adding a “-“ sign (38522/1):

$$B_n = \frac{R}{\log_2 S} + 0.5RK$$

$K \leq -0.28$  (99% bandwidth,  $B_n = (1/\log_2 S - 0.14)R$ )

#### 1.1.1 Instructions

**Effected Pages:** Cover Page, Table of Contents, Preface i through iii, 1-11, 1-12, 1-14, 3-47, 3-58, 3-67, 4-40, 4-138, 4-145, 4-162, 4-177, 4-184, 4-191, 4-192, 4-215 through 4-216, 5-7, 5-16, 5-24, 7-14, 7-15, 7-23 through 7-26, 8-45, 8-46, 8-60, 8-61, 8-63, 8-75 through 8-80, 9-35, 9-37, 9-50, 9-51, 9-67, 9-72, A-2, A-20, A-21, D-6, G-1, G-2, G-6, G-17, G-29 through G-38, J-9, the Summary, and the Index.

**Replace Pages:** Cover Page, Table of Contents, Preface i through iv, 1-11 through 1-14, 3-47 through 3-48, 3-57 through 3-58, 3-67 through 3-68, 4-39 through 4-40, 4-137 through 4-138, 4-145 through 4-146, 4-161 through 4-178, 4-183 through 4-184, 4-191 through 4-232, 5-7 through 5-8, 5-15 through 5-16, 5-23 through 5-24, 7-13 through 7-18, 7-23 through 7-30, 8-45 through 8-46, 8-59 through 8-80, 9-35 through 9-38, 9-49 through 9-58, 9-65 through 9-68, 9-71 through 9-94, A-1 through A-2, A-19 through A-22, D-5 through D-6, G-1 through G-12, G-17 through G-18, G-29 through G-38, J-9 through J-10, the Summary, and the Index.

#### 1.2 September 2010 Revision of the January 2008 Edition of the NTIA Manual

The Cover Page and the Table of Contents were updated.

##### Preface

Revised the introduction and added new holders and promulgation letters.

##### Chapter 4

Section 4.1.3 – Modified G117 ”In the bands 7.25-7.75 GHz, 7.9-8.4 GHz, 17.3-~~17.7 GHz, 17.8-~~21.2 GHz, 30-31 GHz, 33-36 GHz, 39.5-41 GHz, 43.5-45.5 GHz and 50.4-51.4 GHz, the Federal fixed-satellite and mobile-satellite services are limited to military systems.” (38046/1)

Section 4.1.3 – FCC Non-Substantive Changes effected the international table (columns 1-3 of § 2.106) reflects Article 5, Section IV of the ITU *Radio Regulations*, Edition of 2008, except for the corrections and updates listed below:

Band (MHz); Table	Action
698-806; Region 2	The primary services are listed in alphabetical order according to the French language followed by the secondary service.
790-862; Region 1	The services are listed in alphabetical order according to the French language.
960-1164, 1300-1350, 9300-9500 & 9500-9800; All Regions	
1452-1492; All Regions	Footnote 5.345 is placed below the allocated services.
2120-2170; Regions 1 & 3	The bands 2120-2160 and 2160-2170 MHz have been merged.
International Footnote	Action (The notation “(FCC)” has been added to the end of these footnote)
5.138A, 5.139, 5.141C, 5.143E	Footnotes relating to the recently concluded 7 MHz Realignment are not shown.
5.208A	Note 1 is not shown.
5.335	“Earth” is capitalized.
5.345, 5.353A, 5.357A, 5.388, 5.388A, 5.396, 5.462A, 5.516B	The cross references to ITU Resolutions 33, 124, 143, 212, 221, 222, 223, and 528 have been updated to reflect the version listed in the <i>Radio Regulations</i> .
5.482	“service” is corrected to read “services” in the last sentence.

## Chapter 5

Section 5.3.3, formatting change to Table 5.3.3 (38021/1)

## Chapter 6

Section 6.1.1, formatting correction to the ASDE title. (38021/1)

## Chapter 7

Section 7.1, second paragraph, third line from the end, capitalized "Federal."

Section 7.5.2, made a minor formatting correction. (38073/1)

Section 7.5.3, major edits were made to this section. (38073/1)

## Chapter 8

Section 8.2.24, editorial change adding (PEP) after the first incident of peak envelope power.

Section 8.2.29, editorial change subparagraph 6.a.1, removing peak envelope power and just showing the abbreviation (PEP).

Section 8.3.15, Addition of contour data for the Navy Blossom Point, MD site. (37993/1)

Section 8.3.15, corrected the table entry for 8400-8500, CA, Goldstone “1165324W”. (37718/1)

Section 8.3.31, Added the following to subparagraph 1:

“of time periods of 30 days or less. Requests for periods slightly longer than 30 days will only be considered on a case-by-case basis by the Frequency Assignment Branch Chief. All other requests need to be submitted as an application for a temporary period (Section 9.6.3) or regular GMF assignment using the operational or experimental station class that is appropriate.”

Also edited subparagraph 4:

4. Agencies may seek an STA for a period of up to 180 days. Data regarding STAs4. STA data is not entered into the Government Master File (GMF). Twenty-four hour/seven days per week stop buzzer contact information will be provided when requested by other agencies or the FCC when interference is anticipated in order to protect their operations. (37853/1)

## Chapter 9

## Section 9.8.2 Application Data Requirements (37929/1)

....

## 29. XAD--Transmitter Antenna Dimensions (24 Characters--1 Occurrence)

...

(4) The following formatting instructions apply:

....

(b) NAME--Starting with the fourth character, insert an abbreviation from the list of approved antenna names and the associated authorized abbreviations listed in the generic name of the antenna, using no more than ten spaces abbreviation from Annex G, G.6. If the name requires more than ten spaces, abbreviate, but use all ten spaces antenna name is not listed, forward the new antenna name, -and-abbreviation, and manufacturer specification sheet to the FAS for inclusion into Annex G, G.6 prior to submitting proposals in accordance with Annex G, G.6.

....

## 38. RAD--Receiver Antenna Dimensions (24 Characters--30 Occurrences)

....

(4) The following formatting instructions apply:

....

(b) NAME--Starting with the fourth character, insert ~~the~~ an abbreviation from the list of approved antenna names and the associated authorized abbreviations listed in generic name of the antenna, using no more than ten spaces abbreviation from Annex G, G.6. If the name requires more than ten spaces, abbreviate, but use all ten spaces. ~~If a reflector is used then enter REFLECTOR as the antenna name~~ antenna name is not listed, an ~~sen~~ forward the new antenna name, -and-abbreviation, and manufacturer specification sheet to the FAS for inclusion into Annex G, G.6 prior to submitting proposals.  
-in accordance with Annex G.

Section 9.8.2, 15.f, corrected to read "...aircraft altitude (\*NTS,M014,0030) (See Section 9.8.2.39k) and  
...."

Section 9.8.2, 21, subparagraph 39, ff. *Paired Frequency (\*PRD) ( )*

....

(4) (Optional) After a comma, insert associated information (e.g., repeater input, repeater output etc.).

Note: The only characters allowed in this portion of the associated information field are alphabetical, blanks and commas.

Section 9.8.2.39f(6), last entry in Examples, should read:

"REM03 \*ART,SW WY,NE UT,NW\_CO" (Delete space between comma and SW and between comma and NE and insert space between NW and CO)

Section 9.8.2.39u(8)(f), in the examples deleted the commas after REM numbers. (38021/1)

Section 9.8.2.39dd(2), next to last line per IRAC Doc 36903/1 corrected to read: "LISTED IN \*CLC or CLS)

## Chapter 10

Section 10.2.7 (b), spelling corrections: b. Responsible Organization Entity and Point-of-Contact: Provide the name of the bureau, program office, or other organization entity responsible for the field-level deployment and management of the system, including a telephone point-of-~~cont~~fact.

Annex A

Part A.6, Added new Special Notes S403, S926 and 927. (37853/1) (37932/1) (38080/1)

Annex G

Part G.1, Added new VA abbreviation for the VA Central Office,"VACO". (38070/1)

Part G.3, The text for the USAF MARS Regions were modified and a new figure was added for Figure 12. (37930/1)

Part G.6, Added new Part G.6 Antenna Abbreviations.

Section G.5 -- delete duplicate entry for "CDW Cardwell Mfg. Co"

Section G.5 -- Per IRAC Doc 37299/1, delete following entries:

~~DRC Dollar, Robert Co.~~

~~Philips Broadcast Equipment Corp.~~

~~DRD Dero Research Development Corp.~~

~~RDS Radio Specialty Co.~~

~~DRG Deskin Research Group~~

~~REA Realtons Electronics, Inc.~~

~~DRP DRS Precision Echo, Inc.~~

~~REB Remecon~~

~~EEC Electronic Engineering Co.~~

~~REC Reach Electronics Corp.~~

~~ELB Electrolab~~

~~RED Redifon, Ltd.~~

~~GAW Gamewell Division of Gulf Western~~

~~REE Reaction Instruments, Inc.~~

~~HSS Hydro Space Systems~~

~~REM Remler Company, Ltd.~~

~~IDE IDC Electronics~~

~~TDA Tridea Electric Corp.~~

~~PHL Philips Gloeilampene Abreiken (Neth) of~~

Section G.5 -- delete duplicate entry for "ICX ICX Technologies"

Section G.5 -- entry for OKI should read "OKI OKI Denki Co." vice "OKI OKI Denki Co. or"

### 1.2.1 Instructions

**Effected Pages:** Cover Page, Table of Contents, Preface i through iii, 1, 4-4 through 4-234, 5-16, 6-3, 7-1, 7-5 through 7-6, 8-17, 8-20, 8-62, 8-65, 9-21, 9-35, 9-42, 9-48, 9-65, 9-80, 9-81, 10-3, A-14, 21, G-10, G-20; G-27, G-30, G-39, the Summary and the Index.

**Replace Pages:** Cover Page, Table of Contents, Preface i through iv, 4-3 through 4-234, 5-15 through 5-16, 6-3 through 6-4, 7-1 through 7-2, 7-5 through 7-6, 8-17 through 8-20, 8-59 through 8-68, 9-21 through 9-22, 9-35 through 9-36, 9-41 through 9-42, 9-47 through 9-48, 9-65 through 9-66, 9-79 through 9-82, 10-3 through 10-4, A-13 through A-16, A-21 through A-22, G-9 through G-10, G-19 through G-22, G-27 through G-28, G-30 through G-40, the Summary and the Index.

### 1.3 January/May 2010 Revisions of the January 2008 Edition of the NTIA Manual

The Cover Page and the Table of Contents were updated.

#### Preface

Revised the introduction and added new holders and promulgation letters.

#### Chapter 1

Section 1.3.2, Article XI, minor edits were made to this section. (37585/1)

## Chapter 4

Section 4.1.3, deleted footnote NG41 and modified footnotes NG155 and NG159. (37607/1)

- Removed references to footnote “NG115” and “Low Power Auxiliary (74H)” from the band 698-806 MHz.
- Removed the reference to footnote “NG41” and “International Fixed (23)” from the bands 3700-4200 and 5925-6425 MHz.
- In the list of Non-Federal Government (NG) Footnotes, removed footnote NG41 and revised footnotes NG115 and NG159.

Section 4.1.3, removed G124 from the 2417-2450 MHz band. (37584/1)

Section 4.1.3, editorial corrections were made to the formulas in footnotes 5.417A and 5.418.

Section 4.1.3, deleted G124 from the list of government footnotes. (37584/1)

Section 4.3.5, corrected the data for 20Y in the ILS column. (37589/1)

Section 4.3.10, the text for this section was deleted. (37588/1)

Section 4.3.19, this new section was added to the manual. (37480/1)

## Chapter 5

Section 5.3.5.1 (2), replaced four tables that has been inadvertently removed from this section.

## Chapter 6

Section 6.1.3, editorial correction replacing a word missing in the following definition: **TY**--Base Earth Station: An earth station in the fixed-satellite service or in some cases in the land mobile-satellite service located at a specified fixed point....

## Chapter 7

Section 7.1, editorial corrections were made to the text in second paragraph. (37417/1)

Section 7.18, the band listed in the first sentence 3600-3700 was changed to read 3600-3650. (37477/1)

## Chapter 8

Section 8.2.37, subparagraph three, made an editorial correction to the formulas adding <sup>2</sup> after the m, (-174 dB(W/m<sup>2</sup>).

Section 8.3.9 was modified adding additional coordination text for the NRQZ Quiet Zone. (37772/1)

Section 8.3.12, subparagraph two, the band 3600-3700 was changed to read 3600-3650. (37477/1)

Section 8.3.15, added data for an Air Force site located at Andrews AFB, MD to the table. (37802/1)

Section 8.3.15, made editorial corrections to coordinate and coordination data in the table. (37751/1)

## Chapter 9

Section 9.8.2, subparagraph 7.c, made changes to the Event Oriented Declassification Dates. (37723/1)

Section 9.8.2, subparagraph 22(d)(6), corrected station class text “station class E2EW or E4EH and special note S385.” (37525/1)

Section 9.8.2, made changes to \*MFI, \*IFI and \*DFI Standard Data Entries in subparagraph 39 u, Part 1 and Part 2. (37526/1)

Section 9.8.2, subparagraph 39u, Part 2, corrected the spelling of sonobuoy. (37678/1)

Section 9.8.2, subparagraph 39u, modified the following items:

Part 1 – General Function Identifiers with Description:

NAVAIDS--Land stations Used to furnish navigational assistance to aircraft and/or ships (e.g. instrument landing systems (ILS), non-directional beacons (NDB), long-rangelong-range navigation (LORAN), racons, etc.).

Part 2 – Agency Specific Identifiers with Description (Extracts)

ATFP--Communications used in supporting fleet Anti-Terrorism Force Protection.

AIRBORNE COMMAND CENTER--Used by airborne command post aircraft in support of the national authority or CINCS Combatant Commands.

CINCCOMBATANT COMMAND/GENERAL OFFICER SUPPORT--Used in support of command and control, and logistics, supporting CINCCombatant Commands/General Officers.

HELO CONTROL--Used to control and coordinate helicopter transit between ships.

HYDRA (Hierarchical Yet Dynamically Reprogrammable Architecture)--Used in support of various shipboard voice communications requirements.

Section 9.8.2, new subparagraph 39gg was added to this section. (37723/1)

## Annex A

Part A.6, modified special notes S717 and S782 and added S920. (37478/1)

Part A.6, added new special notes S921 through S925. (37679/1) (37803/1)

Part A.6, deleted special notes S674, S794, S811, S878, S886 and S905. (37721/1)

## Annex G

Part G.1, added DISA to the Army abbreviations and Centers for Medicare and Medicaid to the HHS abbreviations (37479/1).

Part G.1, added DHS abbreviations for Federal Protective Service and Office of Emergency Communications. (37722/1)

Part G.5, added several new manufacturer codes. (37804/1)

## Annex H

Table 5, made an editorial correction, frequency 8277.5 was corrected to read 8377.5 on page H-10.

## Annex J

In the previous revision many of formulas did not convert properly from Word to PDF. All of this annex has been updated to correct this problem.

The Summary of Changes and the Index were updated.

### 1.3.1 Instructions

**Effected Pages:** Cover Page, Table of Contents, Preface i through iii, 1-17, 4-30, 4-39, 4-41, 4-44, 4-102, 4-103, 4-155 through 4-156, 4-161, 4-163, 4-173, 4-192 through 4-197, 4-210, 4-212, 4-213, 4-216 through 4-226, 5-20, 6-31, 7-1, 7-31, 7-32, 8-37, 8-42 through 8-66, 9-17, 9-30, 9-67, 9-68, 9-69, 9-72, 9-76, 9-81, A-4, A-16, A-17, A-20, A-21, G-1, G-6, G-28 through G-38, H-10, All of Annex J, the Summary and the Index.

**Replace Pages:** Cover Page, Table of Contents, Preface i through iv, 1-17 through 1-18, 4-29 through 4-30; 4-39 through 4-44, 4-101 through 4-164, 4-173 through 4-174, 4-191 through 4-198, 4-209 through 4-226, 5-19 through 5-42, 6-31 through 6-32, 7-1 through 7-2, 7-31 through 7-32, 8-37 through 8-38, 8-

41 through 8-54, 8-57 through 8-66, 9-17 through 9-20, 9-29 through 9-30, 9-67 through 9-76, 9-81 through 9-94, A-3 through A-4, A-15 through A-22, G-1 through G-12, G-27 through G-38, H-9 through H-10, all of Annex J, the Summary and the Index.

#### **1.4 May/September 2009 Revision of the January 2008 Edition of the NTIA Manual**

The Cover Page and the Table of Contents were updated.

##### Preface

The introduction was revised and new holders and promulgation letters were added.

##### Chapter 1

Section 1.3.2, Bylaws, Article V – Substructure, Section 2.d, the text addressing the Military Assignment Group (MAG) was modified and additional text was added. (37322/1)

Section 1.3.2, Section 6, subparagraph 4 was revised under the SSS information. (37006/1)

Section 1.3.2, Section 7 updated the information for the EPS. (36931/1)

##### Chapter 2

Section 2.3.1, editorial corrections were made to this section. (37316/1)

Section 2.3.11 was deleted and marked reserved. (37048/1)

##### Chapter 3

Section 3.3.2, (b), a new subparagraph was added to this section. (37006/1)

##### Chapter 4

Section 4.1.3, the international portion of the allocation table was updated with information from the 2008 version of the ITU Regulations.

Section 4.1.3, updated the text for footnote US345 and added this footnote to the 401-402 MHz band. (37112/1)

Section 4.1.3, added NG186 to the 10.7 GHz band and added NG187 to the 11.7-12.2, 14-14.2, 14.47-14.5, GHz bands. (37319/1)

Section 4.1.3, the text for NG186 and NG187 was added to the footnotes. (37319/1)

Section 4.2.3, the first paragraph of this section was deleted and the last section of “1. Wide-Area” was deleted. (37321/1)

Section 4.2.4, the first paragraph of this section was deleted and the last section of “1. Local-Area” was deleted. (37321/1)

Section 4.3.11, the table for Medical Radiocommunication was updated. (36932/1)

Section 4.3.18, this new section titled “4400-4940 MHz Chanel Plan” was added to Chapter 4.

##### Chapter 5

Section 5.3.5.2, editorial updates were made under “Standards”, in the second sentence the references to TIA documents were updated. Under “Effective Dates” the dates were changed, under “Waviers” in (b) the tables referring to equipment procured prior to Jan 2006 were removed and the headings for the old tables were also deleted. (37108/1)

Editorial corrections were made throughout this chapter to several equations that were corrected to read  $\leq$  instead of  $<$ .

Section 5.5.3, Criteria C, a new subparagraph 4.3 was added addressing systems in the radiolocation service. (37275/1)

Section 5.6.2 was revised adding some additional text. (37275/1)

## Chapter 6

Section 6.1.1, footnote 2 which referenced the term (RR) was removed since it duplicated text in the first paragraph.

Section 6.1.1, the definition for occupied bandwidth was updated. (37107/1)

Secton 6.6, a formating change was made moving the text for Section 6.6 up to page 6-37.

## Chapter 7

Part 7.1, text in this part was modified because of the addition of Section 7.5.9 “Federal Use of Medical Telemetry Devices in Certain Bands”. (37417/1)

Section 7.5.9, new section addressing “Federal Use of Medical Telemetry Devices in Certain Bands”. (37417/1)

Part 7.11, updated the name for the Air Force Research Laboratory/Phillips Research Site. (37103/1)

Part 7.11, updated the office code for the Gulf Area Frequency Coordinator (GAFC) 96CG/~~SCWFSCXF~~. (37389/1)

Part 7.11, corrected a formating error in the last experimental site in Part 7.11.

Part 7.11, removed the CIA experimental station. (37144/1)

Parts 7.18-7.27 revised. Corrections were made to Part 7.19 through the end of Chapter 7. Corrected mistakes in the headings and text of Parts 7.19 and 7.20. These changes also affected other recently approved revisions to Parts 7.24 and 7.26. (36556/1)

Part 7.26, the current text was deleted and this Part was marked reserved. (36556/1)

## Chapter 8

Reformatted text starting on page 8-7 to the end of the chapter.

Section 8.2.41, paragraph 2 was modified due to changes in Chapter 10, the reference to Section 10.8.3A was updated to read 10.8.2A. (37171/1)

Section 8.2.47, new text was added for “Shared Federal/Non-Federal Radio Systems”. (37009/1)

Section 8.2.54, extended the termination date and added the Army MDA to this section.

2. Range safety operations are authorized in the 406.1-420 MHz band but limited to:

a. use of the frequency 416.5 MHz at Jonathan Dickinson Missile Tracking Annex, Jupiter, FL, Wallops Island, VA, and Cape Canaveral AFB, FL for support of the NASA Space Shuttle through ~~September 30~~December 31, 2010~~2014~~; and

b. use of the frequency 416.5 MHz at Pillar Point AFS, CA, Laguna, CA, Point Mugu, CA, and Vandenberg AFB, CA through December 31, ~~2008~~2014. The use of command destruct at the California locations is limited to the Army MDA program and any other use of the frequencies must be requested using the STA process in 8.3.31. (37104/1)

Section 8.2.56, this new section titled ”Aeronautical Use by Mobile Stations of Frequencies in the Bands 162.05-173.2, 173.4-174, and 406.125-420 MHz on an Exceptional Basis” was added to the manual. (37053/1)

Section 8.3.15:

a. an editorial correction was made in the 8025-8400 MHz, AL, Fairbanks was corrected to read AK, Fairbank.

- b. Added transmitter earth stations (20225-2110) for Goldstone (JWST) and Los Alamos and receiving stations (2200-2290) for Goldstone (JWST), Los Alamos, and Albuquerque. (37391/1)
- c. Added a receiving stations (25500-27000) for Goldstone (JWST). (37391/1)
- d. Added transmitter earth station (1761-1842) and receiver earth station (2200-2290) for Ft. Belvoir. (37249/1)
- e. Several corrections were made to the coordination distances and and the coordinates were corrected for two receive stations. (37146/1)

Section 8.3.18, this section was deleted and marked as Reserved. (37321/1)

Section 8.3.31, 7.c., editorial correction, the minimum data elements of paragraph 5." was corrected to read, "...paragraph 6."

## Chapter 9

Part 9.4, 2, c (5) Classified Data Fields, removed \*CLD and added \*CLC/\*CLS (Circuit Remarks \*CLC or \*CLSD). (36970/1)

Section 9.8.1, removed \*PRC from the 9.8.1 table. (36933/1)

Section 9.8.1, removed \*CLD and added \*CLC/\*CLS to the tabled. (36970/1)

Section 9.8.2, 1. SER--Applicant Serial Number (10 Characters-1 Occurrence), subparagraph b and the example in this section were modified. (37051/1)

Section 9.8.2, 39, Circuit Remarks (REM) (40 Characters-30 Occurrences) removed \*CLD and added \*CLC/\*CLS to the tabled. (36970/1)

Section 9.8.2, 39.e (6) updated the text related to the removal of CLD and addition of \*CLC/\*CLS. (36970/1)

Section 9.8.2, 39.f (6) updated the text related to the removal of CLD and addition of \*CLC/\*CLS. (36970/1)

Section 9.8.2, 39.i (6) updated the text related to the removal of CLD and addition of \*CLC/\*CLS. (36970/1)

Section 9.8.2, 39.j (2) corrected the example: \*AGN,FLL=XXX,;FLT=XXX,TSV=XXXXX- [REMARKS].

Section 9.8.2, 39.k (1 and examples) added M013 through M018. (36933/1)

Section 9.8.2, 39.k, added (3) M018 Each entry of Pre-coordination Data. (36933/1)

Section 9.8.2, 39.o (6 and the example) updated the text related to the removal of CLD and addition of \*CLC/\*CLS. (36970/1)

Section 9.8.2, 39.q (h) updated the text related to the removal of CLD and addition of \*CLC/\*CLS.

Section 9.8.2, 39.u, Modified Part 2 – Agency Specific Function Identifiers; the reference in “Other Operations --Used in supporting those functions not covered in one of the categories listed herein. (Note: See subparagraph (8) (k) above for additional instructions.)” (37210/1)

Section 9.8.2.39. cc, the following changes were made:

*cc. Classified Data Fields (\*~~CLD~~CLC or \*CLS).*

(1) These fields isare used to identify those data fields in an assignment that are classified confidential or secret. One or both of these~~This~~ entries shall~~must~~ be included in~~on~~ all classified applications to indicate the classified information.

(2) Enter the field code REMnn followed by a space. Following the space, enter the code \*CL~~D~~ to indicate those data fields that are classified Confidential or \*CLS to indicate those data fields that are classified Secret followed by a comma. Immediately after the comma, enter the mnemonic(s) (and occurrence number of multiple occurring fields) of the classified data field(s). If more than one mnemonic is entered, separate each with a comma. You must enter all classified data fields that are confidential in \*CLC and all classified data fields that are Secret in \*CLS.

(3) Use as many entries of \*CLC or \*CLSD REM lines as necessary to list all classified data fields.

## SUM-16

(4) The entry for Supplementary Details will always be SUP (See paragraph 80, subparagraph j, of this section.).

*Example:* REM09 \*CL~~CD~~,EMS01,PWR01,EMS02,PWR02,SUP  
REM10 \*CLS,XAD01, RAD03, REM11

Section 9.8.2, 39.dd (2) updated the text related to the removal of CLD and addition of \*CLC/\*CLS. (36970/1)

Section 9.8.2, 39.gg, was deleted. (36933/1)

### Chapter 10

A total rewrite was done to this chapter to include the changes for the EL-CID project. (37171/1)

### Annex A

Annex A was revised writing the Notes in a consistent manner. Editorial corrections were also made to this annex. (37271/1)

Part A.6, new special notes S914, S915, S916, and S917 were added to this annex. (36969/1) (37052/1) (37105/1)

Part A.4, Removed footnote M016 and added footnote M018 to this section. (36933/1)

### Annex D

Annex D, updated the office code for the Gulf Area Frequency Coordinator (GAFC) 96CG/~~SCWF~~SCXF in Table 3.

### Annex G

Part G.1, modified the Department of Interior abbreviations. (37248/1)

Part G.1, added new abbreviation for Treasury's Troubled Asset Relief Program (TARP) (37106/1)

Part G.1, modified the abbreviation for Treasury's Alcohol, Tobacco, Firearms and Explosives. (36969/1)

Part G.1, modified the Department of Transportation abbreviations. (36185/1)

Part G.1, modified the NASA abbreviations. (37415/1)

Part G.5, a large number of the manufacture codes were deleted. (37340/1)

### Annex H

Editorial corrections were made on page H-10, Table 5, 8 MHz/Ship column. Channel 3: 8277.5.5 corrected to read 8277.5 and Channel 5: 8378.5.5 corrected to read 8378.5.

Editorial corrections were made on page H-11, Table 5, channel 14, (last column) corrected to read 8383 vice 8423. Also channel 18 (last column) corrected to read 8385 vice 8395.

Formating corrections were made to pages H-16 through H-17.

### Annex J

Annex J, corrected the footnote number references in this annex. (33880/1) (33951/1)

J.3.1, corrected the text in this paragraph. (33880/1) (33951/1)

J.5, corrected the subscript in the symbols in this part. (33880/1) (33951/1)

J.5, Table A, corrected the subscript and superscript numbers in the formulas. (33880/1) (33951/1)

## Annex M

Section M.2.1.E, corrections were made to subparagraph 2. (37109/1)

2. Narrowband (138-150.8, 162-174 and 406.1-420 MHz Bands)

a. Transmitter and Receiver Measurement Methods (referenced from Section 5.3.5.2): ~~As adopted by NTIA, the~~ The measurement methods to be used are as given in the Telecommunications Industries Association standard TIA/EIA-603-~~B-C~~ for narrowband analog ~~emission~~ equipment, and ~~Telecommunications Systems Bulletin TSB-TIA-102.CAAA-A-B~~ for narrowband digital ~~emission~~ equipment. Where these methods are not specified for a particular system type, appropriate test procedures should be applied.

~~b. The present EIA measurement methods were written for analog systems. Some of these methods are not appropriate for digital systems. Appropriate analog-to-digital or digital-to-analog test sets will have to be used.~~

The Summary of Changes and the Index were updated.

#### 1.4.1 Instructions

**Effected Pages:** Cover Page, Table of Contents, Preface i through iii, 1-9, 1-14, 2.4, 2-8, 3-3 through 3-16, 4 3 through 4-216, 5-4, 5-5-, 5-9 through 5-12, 5-17 through 5-40, 5-41, 6-1, 6-11, 6-24, 6-37, 6-38, 7-13, 7-14, 7-18, 7-21, 7-31 through 7-32, 8-7 through the end of this chapter, 9-7 through 9-8, 9-13 through 9-18, 9-43 through 9-44, 9-47 through 9-84, all of Chaper 10, all of Annex A, D-6, G-8, G-10, G-29 through G-50, H-5, H-6, H-10, H-11, H-16, H-17, all of Annex J, M-3, all of the Summary and the Index.

**Replace Pages:** Cover Page, Table of Contents, Preface i through iv, 1-7 through 1-14, 2-3 through 2-4, 2-7 through 2-10, 3-5 through 3-16, 4-3 through 4-216, 5-3 through 5-6, 5-9 through 5-12, 5-17 through 5-40, 6-1 through 6-2, 6-11 through 6-12, 6-23 through 6-24, 6-35 through 6-38, 7-7 through 7-22, 7-29 through 7-32, 8-7 through 8-78, 9-7 through 9-8, 9-13 through 9-18, 9-43 through 9-44, 9-47 through 9-84, all of Chaper 10, all of Annex A, D-5 through D-6, G-7 through G-18, G-27 through G-38, H-9 through H-12, H-15 through H-18, all of Annex J, M-3 through M-4, all of the Summary and the Index.

#### 1.5 January 2009 Revision of the January 2008 Edition of the NTIA Manual

The Cover Page and the Table of Contents were updated.

##### Preface

The introduction was revised and new holders and promulgation letters were added.

##### Chapter 4

Section 4.1.3, the following footnotes were modified:

US216, a formatting correction was made to this footnote.

US229 was modified changing the responsible agency to the Air Force Space Surveillance System (AFSSS). (36531/1)

US323 and US324, editorial corrections were made to these footnotes.

US378, a formatting correction was made to this footnote.

## Chapter 5

Section 5.5.1, editorial, moved Figure 2 text under the diagram on page 5-28.

## Chapter 6

Section 6.1.3, an editorial correction was made to the station definition for VA, Land Earth Station.

## Chapter 7

Part 7.11, removed the Air Force Frank J Seiler Research Laboratory and the Navy's Naval Surface Weapons Center, White Oak, sites for this section. The Air Force Pacific Alaska Range Complex (PARC) was added. (36715/1) (36831/1)

Section 7.17.1, added USPACOM information to the table for the state of Alaska. (36831/1)

## Chapter 8

Section 8.2.24, 5(a) removed an unneeded "and" from the sentence.

Section 8.2.29, 3 removed an unneeded "-" from the word "established" in the second sentence.

Section 8.2.55, added this new section. (36832/1)

Section 8.3.6, revised the text for the use of hydrologic channels. (36608/1)

Section 8.3.15, the following locations were added to the List of Coordinated Earth Station Table:

a. Added transmitter earth stations (1766-1839 MHz) and receiving earth stations (2200-2290 MHz) for Atlanta, GA. (36612/1)

b. Added transmitter earth stations (7145-7190 MHz) and receiving stations (2290-2300 MHz) for Goldstone, CA (DSS-14) (36470/1)

Section 8.3.31, revised the text in this section. (36852/1)

## Chapter 9

Section 9.8.2, minor edits were made to sub-paragraph 34. (36674/1)

## Chapter 10

Section 10.8.7, added new text to the end of paragraph 24, item 21. (36832/1)

Part 10.9, editorial corrections were made to this Part.

## Annex A

Section A.6, special notes S402, S912 and S913 were added to this section. (37009/1) (36715/1)

## Annex M

The outline numbering of Annex M was changed to match the other parts of the manual. (36832/1)

Section M.2.1 subparagraph e (2) was revised updating the reference documents listed in this paragraph. (37039/1) (34136/1)

Section M.2.1, added new subparagraph F, "Wideband and Narrowband Emission Level and Temporal Measurements in the Navstar Global Positioning System Bands." (36832/1)

### 1.5.1 Instructions

**Effectuated Pages:** Cover Page, Table of Contents, Preface i through iii, 4-133, 4-136, 4-142, 4-149, 5-28, 5-29, 6-31, 7-13, 7-18, 7-19, 7-29, 8-45, 8-47, 8-60, 8-62, 8-64, 8-77, 8-78, 9-38, 10-16, 10-23, A-22, M-1, M-3, M-4, the Summary of Changes and the Index.

**Replace Pages:** Cover Page, Table of Contents, Preface i through iv, 4-133 through 4-136, 4-141 through 4-142, 4-149 through 4-150, 5-27 through 5-30, 6-31 through 6-32, 7-13 through 7-14, 7-17 through 7-20, 7-29 through 7-30, 8-45 through 8-52, 8-59 through 8-66, 8-77 through 8-78, 9-37 through 9-38, 10-15 through 10-28, A-21 through A-22, Annex M, the Summary of Changes and the Index.

### 1.6 September 2008 Revision of the January 2008 Edition of the NTIA Manual

The Cover Page and the Table of Contents was updated.

#### Preface

The introduction was revised and new holders and promulgation letters were added to the preface.

#### Chapter 3

Part 3.2 was revised with current ITU information. (36615/1)

#### Chapter 4

Section 4.1.1, updated the information related to the ITU Regulations.

Section 4.1.3, in the list of international footnotes, revised footnotes 5.155, 5.237, 5.339, 5.438, 5.462A, 5.469A, and 5.476A.

In the list of United States (US) footnotes added footnote US1; revised footnotes US7, US11, US81, US90, US93, US99, US116, US117, US201, US216, US217, US222, US229, US230, US247, US251, US252, US259, US262, US265, US267, US273, US285, US290, US294, US299, US301, US307, US308, US309, US310, US311, US315, US316, US323, US324, US334, US335, US337, US338, US342, US344, US346, US348, US351, US353, US354, US355, US359, US360, US362, US366, US368, US378, US381, US388, US396, US397, US399, and US401; and removed footnotes US215, US302, US321, and US387.

In the list of non-Federal Government (NG) added footnotes NG1 and NG30; revised footnotes NG28, NG51, NG53, NG56, NG66, NG112, NG124, NG141, NG143, NG144, NG147, NG149, NG155, NG158, NG159, NG160, NG163, NG167, NG172, NG173, NG175, NG184 and removed footnote NG31.

In the list of Federal Government (G) footnotes revised G2, G6, and G133; removed G31 and G106; and added G127. New footnote G134 was also added to this section. (36557/1)

Section 4.2.2, modified the title and text in this section (removed frequencies 1720 and 1740 MHz).

Section 4.3.5, an editorial correction was made to the DME/TACAN table (pg. 4-171). The Ground Reply frequency 21Y was corrected to read 1108 vice 982 MHz.

#### Chapter 6

Section 6.1.1, Special Terms (General), added a new definition for Adaptive System (36694/1), Cognitive Radio System and Software Defined Radio. (36750/1)

Part 6.2, Corrected the superscript formatting for K = kilo ( $10^3$ ), M = Mega ( $10^6$ ), G = giga ( $10^9$ ), T = tera ( $10^{12}$ ).

Part 6.6 was revised with current ITU information. (36614/1)

#### Chapter 7

Part 7.3, "Use of Frequencies for National Security and Emergency Preparedness (NS/EP)" was completely revised. (36348/2)

Part 7.11, the information for the Air Force Aeronautical Systems Center (AFMC) was revised. (36437/1)

Part 7.11, the Agriculture site was removed and the Air Force Phillips Laboratory site was revised. (36554/1)

Part 7.24, the current text was deleted and replaced with a new Part 7.24 titled "FEDERAL GOVERNMENT AGENCIES AS END USERS OF FCC LICENSED COMMERCIAL SERVICES".

#### Chapter 8

Section 8.1.2, corrected the reference to Public Law 87-975 to read Public Law 87-795 on page 8-3.

Section 8.2.5, added a new section titled "Withholding Funds Pending Availability of Frequency Support". (36665/1)

Section 8.2.49 was deleted and marked as "Reserved".

Section 8.3.15 (Table), added Navy Earth Station data for the Naval Air Warfare Center (NAWC) and John Hopkins University, Applied Physics Laboratory (JHU/APL) Earth Station located at Laurel, MD. (36438/1)

Section 8.3.15 (Table) added contour data for the Air Force Trailblazer Micro-Satellite and PnPSat Earth Station Coordination Contours for Kwajalein, Republic of the Marshall Islands (36555/1) and Commerce Jason-2 DORIS Transmitting Earth Station Coordination Contours for Richmond, FL; Kamuela, HI; Hawaii National Park, HI; Ahua Kilauea, HI; Sandhill Kilauea, HI; Fairbanks, AK; and Guam Seismic Observatory, GUM. (36555/1)

Part 8.4 is a new addition to the manual titled "Cognitive Radio System and Software Defined Radio". (36750/1)

#### Chapter 9

Section 9.8.1, revised the Index of Field Codes Table. (36296/1)

Section 9.8.2, (16), revised Pulse emissions L - Modulated in width or duration and M - Modulated in position or phase. (36440/1)

Section 9.8.2, minor edits were made to sub-paragraphs 24, 25, 33 and 34. (36674/1)

Section 9.8.2, 39.k, editorial correction on page 9-51.

Section 9.8.2, 39.m(6)(a), updated the list of frequencies and the footnotes. (36556/1)

Section 9.8.2, 39.u(2)(a), removed the frequency bands 806.0 - 824.0 MHz, 851.0 - 869.0 MHz, 896.0 - 901.0 MHz, and deleted the footnote, "\*\*\* Limited exclusively to the Specialized Mobile Radio (SMR) service (see 8.2.49)".

#### Annex A

A.6 Special Notes, added new notes S908, S909, S910 and S911. (36609/1) (36469/1)

#### Annex B

Corrected the Power Flux-Density Limits Table on page B-8.

## Annex G

All the Part headings were revised in Annex G. (36611/1)

Part G.1, revised some of the Department of Interior information. (36559/1)

Part G-1 added a new bureau abbreviation under the Department of Commerce. (36469/1)

Part G.1, editorial corrections were made to Navy information on page G-9.

Part G.5, added abbreviations BDW and ICX. (36610/1)

Part G.5, added several new Manufacturer Codes. (36469/1)

## Annex H

Page H-8, updated the ITU references on this page. (36613/1)

Some formatting changes were made throughout Annex H.

### 1.6.1 Instructions

**Effected Pages:** Cover Page, Table of Contents, Preface i through iii, 3-2, 3-3, 3-4, All of Chapter 4, 6-1, 6-4, 6-15, 6-31, 6-35, 6-36, 6-37, 6-38, 7-1, 7-2, 7-3, 7-4, 7-5, 7-14, 7-15, 7-32, 8-3, 8-5, 8-6, 8-43, 8-61, 8-62, 8-66, 8-78, 9-14, 9-23, 9-30, 9-31, 9-38, 9-51, 9-52, 9-63, 9-65, 9-66, 10-3, 10-4, 10-28, A-22, B-8, G-1, G-2, G-8, G-11, G-16, G-28 through G-48, all of Annex H, the Summary of Changes and the Index.

**Replace Pages:** Cover Page, Table of Contents, Preface i through iv, 3-1 through 3-6, All of Chapter 4, 6-1 through 6-4, 6-15 through 6-16, 6-31 through 6-32, 6-35 through 6-38, All of Chapter 7, 8-3 through 8-6, 8-43 through 8-52, 8-61 through 8-66, 8-77 through 8-78, 9-13 through 9-14, 9-23 through 9-24, 9-29 through 9-32, 9-37 through 9-38, 9-51 through 9-52, 9-63 through 9-66, 10-3 through 10-18, 10-27 through 10-28, A-21 through A-22, B-7 through B-8, G-1 through G-12, G-15 through G-16, G-27 through G-50, All of Annex H, the Summary of Changes and the Index.

### 1.7 May 2008 Revision of the January 2008 Edition of the NTIA Manual

The Cover Page and the Table of Contents will be updated.

#### Preface

The introduction was revised and new holders and promulgation letters were added.

#### Chapter 1

Section 1.3, Section 5, the Radio Conference Subcommittee text was revised. (36376/1)

#### Chapter 4

Section 4.1.3, the formatting of footnote **5.138** was corrected.

Section 4.1.3, in US216 “MHz” was added after 468.19688.

Section 4.1.3, in US294 the reference was corrected to read Chapter 8 instead of Chapter 7. (36387/1)

Sections 4.2.3 and 4.2.4, editorial corrections were made to these sections. (36400/1)

Section 4.3.7,(2)(a) was revised correcting the formatting in the fourth sentence.

## Chapter 5

Section 5.3.5.1 was revised correcting the header spacing.

Sections 5.5.2, 5.5.3, and 5.5.5 were revised correcting the formula

$P_t = P_p + 20\log(N \times t) + 10\log(PRR) - PG - 90$ . The text  $N_t$  was changed to  $(N \times t)$ .

## Chapter 6

Section 6.1.1, the Deep Space distances equation was corrected to read  $2 \times 10^6$  kilometers instead of  $2 \times 106$  kilometers.

Sections 6.1.2 and 6.1.3 were revised adding four station classes (E1 through E4) for Earth Exploration-Satellite (active sensor) Space Stations and Space Research (active sensor) Space Stations. (35932/1)

## Chapter 8

Section 8.1.2 was revised correcting Public Law 87-975 to read Public Law 87-795 and a related information footnote was added.

Section 8.2.6 (2), the spelling of “van-mounted” was corrected.

Section 8.2.28 was rewritten to provide current guidance concerning radio frequency electromagnetic field safety and protection. (36361/1)

Table 8.2.36, major revisions were made to this table. (36322/1)

Section 8.3.11, the reference to Note 141 was corrected to read Note S141.

## Chapter 9

Section 9.8.1 was revised adding new field codes TRN and PRD to the Index of Field Codes. (36296/1)

Section 9.8.2, 15, Station Class (STC) and Section 9.8.2, 39, Circuit Remarks (REM) was revised. These changes clarify the use of FL and MO station classes and require the use of altitude on station classes using aircraft. The existing FAA and DOD flight level formats will be used for AAG and MAG bands, while the M014 format will be used for all other bands. (36214/1)

Section 9.8.2, 16 was revised. (36440/1)

Section 9.8.2 (39.b.5), the example’s spacing was corrected.

Section 9.8.2 (39.f.6), the example’s spacing was corrected.

Section 9.8.2, General, added new text “6. For commercial radars the Manufacturer Code is required to be entered for the first occurrence of \*EQT and \*EQR only.” (36165/1)

Section 9.8.2 (79.h-j), the formatting of these paragraphs were modified.

Section 9.10, the abbreviation for Action Number (ACN) was corrected.

## Annex A

Part A.6, a stray mark in the text of S297 was removed.

Part A.6, corrected the references in footnotes S355 and S356. (36400/1)

Part A.6, deleted footnotes S872 and added S401, S905, S906 and S907. (36186/1)

Part A.6, added new footnotes S891 through S899 for FCC satellite systems. (36321/1)

Part A.6, formatting corrected between footnotes S698 and S700.

## Annex D

Table 3 was revised updating the email address for the Army Frequency Management Office Continental U.S. (AFMO CONUS). (36295/1)

## Annex G

Part G.1 was revised updating the U.S. Navy/Marine Corps information.

Part G.1.1, added “NON-GOVERNMENT RECORDS (70/80/90 GHz) NGR”. (36320/1)

## Annex H

Formating corrections were made on pages H-5 and H-6.

### 1.7.1 Instructions

**Effected Pages:** Cover Page, Table of Contents, Preface i through iii, 1-13 through 1-14, 4-75, 4-134, 4-139, 4-149, 4-164, 4-165, 4-178, 5-18, 5-31, 5-33, 5-38, 6-4, 6-21, 6-24, 6-27, 8-2, 8-6, 8-17, 8-51, 9-19 through 9-20, 9-23, 9-45, 9-49 through 9-51, 9-55, 9-85, A-13, A-15, A-12, A-17, A-22, D-5, G-6 through G-12, H-5, H-6, the Summary and the Index.

**Replace Pages:** Cover Page, Table of Contents, Preface i through iv, 1-13 through 1-14, 4-75 through 4-76, 4-133 through 4-134, 4-139 through 4-140, 4-149 through 4-150, 4-163 through 4-166, 4-177 through 4-178, 5-17 through 5-18, 5-31 through 5-38, 6-3 through 6-4, 6-21 through 6-32, 8-1 through 8-2, 8-5 through 8-6, 8-17 through 8-58, 9-19 through 9-24, 9-45 through 9-46, 9-49 through 9-94, A-11 through 18, A-21 through A-22, D-5 through D-6, G-5 through G-12, H-5 through H-6, the Summary, and the Index.

### 1.8 January 2008 Edition of the NTIA Manual

The font was changed from CG Times to Times New Roman throughout the manual, except for the allocation table, which continues to use Arial Narrow.

The terms government and non-Government were revised to read Federal and non-Federal in many places in the NTIA Manual. In areas of the manual that reference text from other documents these changes were not made.

Cover Page, Table of Contents and the Preface, these sections of the manual were updated.

#### Chapter 1

Section 1.3.2 subsection 3, the last sentence in the first paragraph was rewritten.

Section 1.3.2, “ByLaws”, in this section the articles “Conduct of Work” and “Procedure and Voting” were both listed as Article VII. The article “Procedure and Voting” was renumbered as Article VIII and the remaining articles were renumbered.

#### Chapter 3

Section 3.9.9, the text in this section was replaced.

Section 3.9.11, modified the text replacing Treasury with Homeland Security.

Section 3.9.12, modified the text related to CMERAR and other editorial changes.

## Chapter 4

Section 4.1.3, changes were made to the following footnotes:

Deleted US223

Modified G133

Editorial corrections were made to US222, US342 and US362

Sections 4.2.3 and 4.2.4 were previously marked as Reserved, these sections were removed and the following section was renumbered.

Section 4.3.7 was revised.

## Chapter 5

Section 5.2.1, Table 5.2.1 “Table of Frequency Tolerances”, Note (e), changed 1630 kHz to 1610 kHz.

Section 5.6.2, corrected an error in the “Unwanted Emission Mask” formulas.

## Chapter 7

The “Part” and “Section” numbering for all of this chapter was corrected.

Part 7.11, updated the Air Force, Space and Missile Systems Center and NASA information.

Part 7.27, added this new part titled “Use of Electronic Countermeasures/Equipment In Response To Radio-Controlled Improvised Explosive Devices”.

## Chapter 8

Section 8.2.41, added this new section titled “Space Systems Using Necessary Bandwidths Greater Than 5 MHz for Transmissions from Space in the Band 2200-2290 MHz”.

## Chapter 9

Section 9.8.1, added gg to the Table. Index of Field Codes

Section 9.8.2, added subparagraph 39 (U)

Part 1, updated the text for:

MISC (Miscellaneous) and SPECIAL PROJECTS

Added Short Term Incident Response

Part 2, Updated the text for:

OTHER OPERATION

SHIP/SHORE OPERATIONS

CAP was modified to AFAUX/CAP

Added new text for:

WIDEBAND GLOBAL SATCOM

Replaced the definition for CAP and added a definition for AFAUX/CAP

39. Circuit Remarks (REM) (40 Characters-30 Occurrences)

Added gg. Pre-coordination Data (\*PRC)

## Chapter 10

Section 10.8.3A, added this new section to the manual.

## Annex A

Changes were made to the following footnotes.

Added S-Notes 900 – 904

Modified S862 and modified S264 replacing CINCPAC with PACOM

Deleted S846

## Annex G

Part 1, Revised the formatting of the table for “Agency, Bureau, and Other Organizational Abbreviations”.

Part 1, removed the Interstate Commerce Commission and updated the Treasury text.

Part 3, updated the text for the Coast Guard Areas and Districts.

Deleted the CAP text and related figures, renumbered the figures following the deleted figure.

Part 5, added CDS – CubicDefense Systems to the list of abbreviations.

### **1.8.1 Instructions**

The January 2008 Edition replaces in its entirety the May 2003 Edition and all revisions.

**(Last Page in this Section)**