Validation Rules for Earth Station
Form of Notice - Ap4/Annex 2

The validation rules are specified in tabular form. These rules apply to ADD and MOD (merged) transactions. SUP transactions need no validation. A description of the various columns of the table are given below :

Name of column	Description of column
Val. Item No.	This is a unique number (in increasing sequence) that is allocated to each data-item that has been considered for validation. There are gaps in the numbering sequence to allow for additional data-items that may be added in the corresponding tables. The description of each data-item can be found in the document “Description of the SRS database” that is distributed on each SRS-on-CDROM publication. The ‘table name’ and ‘field name’ values provided in the next two columns, along with the ‘Ap4 Ref.’, can be used to locate the description of the data-item in the above-mentioned document.
Table Name	The name of the table in the SRS (or SNS) database containing this data-item is provided here.
Field Name	This column contains the name of the field in the specified table (see Table Name) that contains the value of this data-item.
Ap4 Ref.	The number of the data-item in Annex 2 of Appendix 4 of the Radio Regulations is provided in this column - this is the same number that is on the form of notice for the data-item. Only items with symbols **X** and **+** are presently validated.
Notice Type	This indicates the type of notice for which the specified data-item should be provided. Appendix 1 of the Annex to this document provides an explanation of the various notice types.
Data Format	The format of the data-item is described here. This is the format that is accepted by the Data Capture software SpaceCap and is described in the document “Description of the SRS database” that is distributed with the SRS-on-CDROM. It is provided here as reference.
Validation Rules	The checks that are to be executed on each data-item are specified here. They are sequentially numbered from 1 (the validation rule number) and each validation rule is uniquely identified by its ‘Val. Item No.’ and the validation rule number. Rules with numbers greater than 3 have a letter before the rule (C, D, E, P) indicating the type of validation check, as explained below: C : cross-check validation; the value of this data-item is to be checked against the values of other data-items D : duplicate check; this data-item cannot contain duplicate values as indicated in the validation rule E : extended check; the validation rule specifies a complex validation check on this data-item, involving calculations with other data-items P : dependency check; this data-item may be provided only if other data-items are provided / not provided. At the end of each validation rule, there is a symbol in parentheses; this indicates the severity of the error if the rule fails. The two error levels are : F the error is fatal and the transaction cannot pass validation if any fatal errors exist. W this is a warning to the user to check the flagged data item. A transaction with "warnings" can proceed further in the processing, if the user desires. Reference is made in some of the rules to certain tables in the Preface which is the Preface to the International Frequency list and Space Radiocommunications Stations on CDROM and the Weekly Circular; in some cases, the validation rule contains a check that is described with reference to a table in the Annex of this document. For data-items that are required only for certain Notice Types (see above), a general rule no. 0 (see item 9999, rule 0) is used to indicate that the value should not be provided for other Notice Types as indicated in the error message.

Earth Validation Rules

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
1	notice	ntc_id	all		9(9)	1: mandatory (F) 2: must be numeric value between 76500000 and 399999999 (W) 3: E: the value represented by the last 6 digits must be greater than 500000 - BR internal validation (F) 4: E: check against item 11; 1st digit should be "0" (prior to 2000) or "1" (2000 or after) - BR internal validation (F) 5: E: the 2nd and 3rd digits must be equal to the year portion (last 2 digits) of item 11 - BR internal validation (F) 6.1: E: 4th to 6th digits have to be "520" if item 5 is "RR1060" or "RR1610" or "RS46" or "9.6" - BR internal validation (F) 6.2: E: 4th to 6th digits have to be "500" if item 5 is "RR1488" or "11.2" or "RR1492" or "11.12" - BR internal validation (F)
2	notice	ntc_type	all	A1e1	X(1)	1: mandatory (F) 2: symbol must be "S", "T" or "R" (F) 3: E: if symbol is not "S", "T" or "R", then it must be either "G" or "N" (for satellite networks); if none of these, then validation is stopped (F)
3	notice	adm_ref_id	all		X(20)	1: for administration use, not to be validated
4	notice	d_adm	all		9(8)	1: for administration use, not to be validated 2: must be a valid date

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
5	notice	prov	all		X(12)	1: mandatory (F) 2: the symbol must be one of "RR1488", "RS46", "9.7A", "9.17", "11.2", "11.12", "REVREM", "REVADM" or "REVBR" - if none of these, then validation is stopped (F) 3: C: if this item = "9.7A", then item 2 must be = "S" (F) 4: C: if this item = "RR1492" or "11.12", then item 2 must be = "R" (F)
6	notice	act_code	all		X(1)	1: mandatory (F) 2: the symbol must be "A", "M", "S" or blank (F) 3: C: if this item is "M" or "S", then item 10 must be provided (F) 4: E: if this item = "M" or "S", then items 1000, 1002, 1003 to 1010 and 1011 must be provided
7	notice	adm	all	A1f	X(3)	1: mandatory (F) 2: the symbol must be present in the reference table "rf_adm" containing valid symbols for administrations; this corresponds to table 1A in the Preface (F)
8	notice	ntwk_org	all	A1f	X(3)	1: optional (W) 2: the symbol must be present in the reference table "rf_ntwkorg" containing valid symbols for satellite organizations; this corresponds to table 2 in the Preface (F) 3: E: check with item 7; must be a valid symbol for the notifying administration as indicated in table 2 in the Preface (F)
9	notice	ntf_occurs	all		X(1)	1: conditionally required (W) 2: the symbol must be "F" or "R" or blank (F) 3: C: this item must be provided if item 5 is "RR1488" or "S11.2" or "11.2" (F)
10	notice	tgt_ntc_id	all		9(9)	1: conditionally required (W) 2: must be a numeric value between 57500000 and 399999999 (F) 3: C: if this item contains a value (indicating the BR identification number of the satellite network to be modified or suppressed), then item 6 must be = "M" or "S" (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
11	notice	d_rcv	all		9(8)	1: mandatory - BR internal validation (F) 2: must be a valid date, later than 1 January 1957 (inclusive) and prior to date of validation-run (exclusive) (F)
12	notice	f_int_ext	all		X(1)	1: mandatory (F) 2: the symbol must be one of "I" (internal), "E" (external), "W" (withdrawal by adm) or "Z" (withdrawal by BR) (F)
13	notice	ntf_rsn	all		X(1)	1: mandatory (F) 2: the symbol must be "N" or "D" ; check against item 5 for the corresponding values (F) 3.1: C: if value is "N", item 5 should be one of "RR1488", "RR1492", "11.2", "11.12" (F) 3.2: C: if value is "D", item 5 should be one of "RR1107", "9.7A" or "9.17" (F) 4: E: only Notification filings (N) and earth station Coordination filings (D) are presently validated (F)
14	notice	st_cur	all		X(2)	1: mandatory - BR internal validation (F) 2: symbol must be present in the Status Code Reference Table "rf_status" (F)
15	notice	plan_id	plan		X(5)	1: for space plans; rules to be added
16	notice	ntwk_pack	plan		X(4)	1: for space plans; rules to be added
17	notice	f_mod_type	all		X(1)	1: not validated now; rules to be added
18	notice	f_aa_type	all		X(1)	1: not validated now; rules to be added
19	notice	f_adm_proxi	all	A1f2	X(1)	1: optional (W) 2: the symbol must be "Y" or blank (F)
20	notice	f_aes_char	all	A18a	X(1)	1: conditionally required (W) 2: symbol must be "Y" or blank (F) 3: E: the symbol must be "Y" if the aircraft earth station operates in the aeronautical mobile-satellite service (AMSS) (item 631 = "TJ")in the frequency band 14 - 14.5 GHz (W)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
1000	e_stn	stn_name	all	A1e2	X(30)	1: mandatory (F) 2: symbol must be present in the earth station name reference table "rf_estn" (W) 3: E: if the symbol is not present in the earth station name reference table "rf_estn", then the action-code (item 6) must be "A"; if action-code (item 6) = "M" or "S", then the severity of the error is F (W)
1002	e_stn	ctry	all	A1e3a	X(3)	1: conditionally required (W) 2: symbol must be present in reference table "rf_ctry" corresponding to Table no. 1B of the preface (F) 3.1: C: this item must be provided if item 2 = "S" or "R" - specific or radioastronomy station (F) 3.2: C: this item must not be provided if item 2 = "T" -typical station (F) 4: E: if it is different from the notifying administration (item 7), this symbol must be valid for the administration in item 7, as indicated in Table 1B of the preface (W)
1003	e_stn	long_deg	all	A1e3b	9(3)	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 180 (inclusive) (F) 3: C: this item must be provided if item 2 = "S"or "R"- specific or radioastronomy station (F) 4: C: this item must not be provided if item 2 = "T" - typical station (F) 5: C: check value against item 1004; values of 0W and 180W are not valid but 0E and 180E are valid (W)
1004	e_stn	long_ew	all	A1e3b	X(1)	1: conditionally required (W) 2: symbol must be "E" or "W" (F) 3: C: this item must be provided if item 2 = "S" or "R"- specific or radioastronomy station (F) 4: C: this item must not be provided if item 2 = "T" - typical station (F)
1005	e_stn	long_min	all	A1e3b	9(2)	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 60 (exclusive) (F) 3: C: this item must be provided if item 2 = "S" or "R"- specific or radioastronomy station (F) 4: C: this item must not be provided if item 2 = "T" - typical station (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
1006	e_stn	long_sec	all	A1e3b	9(2)	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 60 (exclusive) (F) 3: C: this item must be provided if item 2 = "S" or "R"- specific or radioastronomy station (F) 4: C: this item must not be provided if item 2 = "T" - typical station (F) 5: E: if item 1003 = 180, then items 1005 and 1006 should be = 0 (F)
1007	e_stn	lat_deg	all	A1e3b	9(2)	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 90 (inclusive) (F) 3: C: this item must be provided if item 2 = "S" or "R"- specific or radioastronomy station (F) 4: C: this item must not be provided if item 2 = "T" - typical station (F)
1008	e_stn	lat_ns	all	A1e3b	X(1)	1: conditionally required (W) 2: symbol must be "N" or "S" (F) 3: C: this item must be provided if item 2 = "S" or "R"- specific or radioastronomy station (F) 4: C: this item must not be provided if item 2 = "T" - typical station (F)
1009	e_stn	lat_min	all	A1e3b	9(2)	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 60 (exclusive) (F) 3: C: this item must be provided if item 2 = "S" or "R"- specific or radioastronomy station (F) 4: C: this item must not be provided if item 2 = "T" - typical station (F)
1010	e_stn	lat_sec	all	A1e3b	9(2)	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 60 (exclusive) (F) 3: C: this item must be provided if item 2 = "S" or "R"- specific or radioastronomy station (F) 4: C: this item must not be provided if item 2 = "T" - typical station (F) 5: E: if item 1007 = 90, then items 1009 and 1010 must be equal to 0 (F) 6: E: items 1003 - 1010 should be checked against the Earth Station reference table; if the earth station - item 1000 - exists in the reference table, the distance between these coordinates and the reference coordinates should not exceed 20 km (distance of 20 km to be confirmed) - BR internal validation, to be done (W) 7: E: if item 1002 is valid, then the geographic coordinates must be within the boundaries of the country specified; this check is done using the IDWM - BR internal validation, to be done (W)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
1011	e_stn	sat_name	axra	A4c1	X(30)	1: mandatory (F) 2: symbol should be present in the satellite name reference table "rf_sat" (F) 3: E: there should be a filing in the database for a satellite network with the same sat_name (item 100/200) value and in the same category (item 13) as this filing ((network N and earth station N) or (network C and earth station D)) - BR internal validation, to be done (W)
1012	e_stn	long_nom	axra	A4c2	S9(3).9(2)	1: conditionally required (W) 2: must be numeric value in degrees between -179.99 (inclusive) and +180.00 (inclusive) (F) 3: E: this item must be provided if item 1011 is a geostationary satellite - as indicated in the reference table "rf_sat" (F) 4: E: this item, along with item 1011, should match the corresponding entry in the reference table "rf_sat" (F) 5: E: if the satellite network filing with the same name (item 1011) is found and it is geostationary, then this item must be equal to the orbital position in that filing (item 101) - BR internal validation, to be done (W)
1013	e_stn	attch_hor	ax97r	A7a	9(2)	1: conditionally required (W) 2: must be a numeric value between 1 (inclusive) and 99 (inclusive) (F) 3: C: if this item is provided, then item 2 must be = "S" - specific station (F)
1014	e_stn	elev_min	ax97r	A7b1	9(2).9	1: conditionally required (W) 2: must be a numeric value between -90 (inclusive) and 90 (inclusive) (F) 3: E: this item must not be provided if item 2 = "T" - typical station or if item 2 = "S" - specific station and the associated space station is non-geostationary (item 1012 is not provided) (F) 4: E: this item must be provided if item 2 = "R" (radio-astronomy) or item 2 = "S" - specific station and the associated space station is geostationary (item 1012 is provided) (F) 5: E: if the associated space station is geostationary (item 1012 is provided) compare this item with the calculated value of elevation angle using AZIMEL program method (using the geographical coordinates and nominal orbital longitude - items 1003-1010, 1012); the difference must be less than 0.1 - BR internal validation, to be done (W)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
1015	e_stn	azm_fr	ax97r	A7c1	9(3).9	1: conditionally required (W) 2: must be a numeric value between 0 (exclusive) and 360 (inclusive) (F) 3: E: this item must not be provided if item 2 = "T" - typical station or if item 2 = "S" - specific station and the associated space station is non-geostationary (item 1012 is not provided) (F) 4: E: this item must be provided if item 2 = "R" (radio-astronomy) or item 2 = "S" - specific station and the associated space station is geostationary (item 1012 is provided) (F)
1016	e_stn	azm_to	ax97r	A7c2	9(3).9	1: conditionally required (W) 2: must be a numeric value between 0 (exclusive) and 360 (inclusive) (F) 3: E: this item must not be provided if item 2 = "T" - typical station or if item 2 = "S" - specific station and the associated space station is non-geostationary (item 1012 is not provided) (F) 4: E: this item must be provided if item 2 = "R" (radio-astronomy) or item 2 = "S" - specific station and the associated space station is geostationary (item 1012 is provided) (F) 5: E: calculate the azimuthal sector by subtracting the "from" value (item 1015) from the "to" value (item 1016); if this value is negative, add 360 to it; the resulting sector must be less than or equal to 180 (W) 6: E: if the associated satellite network filing is found (rule 1011/3), compute the theoretical azimuthal angles using the longitudinal tolerance (items 102,103) and inclination excursion (item 104) of that satellite network using the AZIMEL program method and compare them to items 1015,1016; the difference must be less than 0.1 - BR internal validation, to be done (W)
1017	e_stn	ant_alt	ax97r	A7d	S9(5)	1: conditionally required (W) 2: must be a numeric value between 0 (exclusive) and 10000 (inclusive) (F) 3: C: this item must be provided if item 2 = "S" - specific station (F) 4: C: this item must not be provided if item 2 = "T" - typical station (F)
1018	e_stn	elev_max	ra	A7b2	9(2).9	1: mandatory (F) 2: must be a numeric value between -90 (inclusive) and 90 (inclusive) (F) 3: C: value must be > item 1014 (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
1019	e_stn	lat_dec	all		S9(2).9(4)	1: conditionally required; BR Internal use (W) 2: must be a numeric value between -90 (inclusive) and 90 (inclusive) (F) 3: C: this item must be provided if item 2 = "S" or "R" - specific or radio-astronomy station (F) 4: C: this item must not be provided if item 2 = "T" - typical station (F) 5: E: the value must be derived from the latitude part of the geo coordinates - items 1007..1010 (F)
1020	e_stn	long_dec	all		S9(3).9(4)	1: conditionally required; BR Internal use (W) 2: must be a numeric value between -180 (exclusive) and 180 (inclusive) 3: C: this item must be provided if item 2 = "S" or "R" - specific or radio-astronomy station (F) 4: C: this item must not be provided if item 2 = "T" - typical station (F) 5: E: the value must be derived from the longitude part of the geo coordinates - items 1003..1006 (F)
1021	e_stn	f_pfd_se	axra	A16b	X(1)	1: conditionally required (W) 2: symbol must be "Y" or blank (F) 3: E: the symbol must be "Y" if this earth station operates with a geostationary space station (item 1012 not = null) and has a transmitting beam (item 1030 = "E") with antenna diameter less than 4.5 meters (item 1044 < 4.5) in the Fixed Satellite Service (item 1631 = "TC") in the band 13.75 - 14 GHz (F)
1025	hor_elev	azm	ax97r	A7a	9(3).9	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 360 (exclusive) (F) 3: C: if this item is provided, then item 2 must be = "S" (F) 4: E: this item must be provided if item 1013 is not provided (F) 5: E: this item must not be provided if item 1013 is provided (F) 6: E: the first azm value must be = 0 (F)
1026	hor_elev	elev_ang	ax97r	A7a1	9(2).9	1: conditionally required (W) 2: must be a numeric value between -90 (exclusive) and 90 (inclusive) (F) 3: C: if this item is provided, then item 2 must be = "S" (F) 4: C: this item must not be provided if item 1025 is not provided (F) 5: E: this item must be provided if item 1013 is not provided (F) 6: E: this item must not be provided if item 1013 is provided (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
1027	hor_elev	hor_dist	ax97r	A7a2	9(2).9	1: optional (W) 2: must be a numeric value between 0 (exclusive) and 99.9 (inclusive) (F) 3: C: this item must not be provided if item 1025 is not provided (F)
1030	e_ant	emi_rcp	all	B2	X(1)	1: mandatory (F) 2: the symbol must be "E" (emission) or "R" (reception) (F) 3: E: if this item = "E", then item 5 must NOT be one of "9.7A", "11.12" or "RR1492" - for these provisions, only receiving beam is allowed - (F)
1031	e_ant	beam_name	all	B1a	X(8)	1: mandatory (F) 2: must be a non-blank alphanumeric symbol (F) 3: E: if item 1032 is "M" then the beam-name symbol must be an existing beam in the SNS for the target network; if not, check item 1033 - BR internal validation, to be done (F) 4: E: if the satellite network filing for the associated space station is found as indicated in rule 1011/3, this beam-name (item 1031) must be present in that filing (item 501) with the compatible value for the emi-rcp indicator (items 500 and 1030); if item 500 = "E" then item 1030 must be "R" and vice-versa - BR internal validation, to be done (W)
1032	e_ant	act_code	all		X(1)	1: conditionally required (W) 2: the symbol must be "A", "R", "M", "S" or blank (F) 3: C: if this item is not blank, then item 6 must be "M" (F)
1033	e_ant	beam_old	all	B1	X(8)	1: optional (W) 2: must be a non-blank alphanumeric symbol (F) 3: C: if this item is non-blank, then item 1032 must be "M" or "R" (F) 4: E: this beam-name symbol should be present as an existing beam in the SNS database for the target network - BR internal validation (F)
1034	e_ant	gain	axra	B5a	S9(2).9(1)	1: mandatory (F) 2: must be a numeric value between -6 (inclusive) and 70 (inclusive) (W)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
1035	e_ant	bmwdth	ax97r	B5b	9(3).9(2)	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 999.99 (inclusive) (F) 3: C: if this item is not provided, then item 1036 must be "ND" (F) 4: E: value must be within the range from the minimum allowable to the maximum allowable calculated as per Appendix 6 of the Annex (W)
1037	e_ant	attch_e	all	B5c1	9(2)	1: conditionally required (W) 2: must be a numeric value between 1 (inclusive) and 99 (inclusive) (F) 3: C: if this item is not provided, then item 1045 must be provided (F)
1043	e_ant	attch_crdn	ax97r	A10a	9(2)	1: conditionally required (W) 2: must be a numeric value between 1 (inclusive) and 99 (inclusive) (F) 3: E: this item must be provided if there are frequencies in the frequency bands allocated with equal rights to space and terrestrial services or bi-directional bands - frequency table provided in Appendix 4 (F)
1044	e_ant	ant_diam	ax97r	A7f	9(3).9(2)	1:conditionally required (W) 2: must be a numeric value between 1.2 (inclusive) and 40 (inclusive) (W) 3: E: if there are frequencies for the transmitting antenna (item 1030 = "E") in the band 13.75 - 14 GHz for FSS (item 1631 = "TC"), then this item is mandatory (F) 4: E: value must be > 1.2 meters if associated space station is geostationary (item 1012 not = null); if non-geostationary space station (item 1012 = null), value must be > 4.5 meters; refer No. 5.502 5: E: if grp.f_nfd_lnk = Y and in the band 14.5-14.8 GHz and FSS (item 1631 = "TC"), then this item is mandatory (F) 6: E: if grp.f_nfd_lnk = Y and in the band 14.5-14.8 GHz and FSS (item 1631 = "TC"), then value must be > 6m (W)
1045	e_ant	pattern_id	all	B5c2a	9(4)	1: conditionally required (W) 2: must be a numeric value between 0 (exclusive) and 9999 (inclusive) (F) 3: C: if this item is provided, then item 1037 must not be provided (F) 4: E: value must exist as a primary key in the antenna pattern reference table <ant_type> (F) 5: E: value must be added by BR as a primary key in the antenna pattern reference table <rf_ant_type> (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
1060	e_ant_elev	azm	ax97r	A7e1	9(3).9	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 360 (exclusive) (F) 3: C: this item must be provided if the associated space station is non-geostationary - item 1012 is not provided (F) 4: C: this item must not be provided if the associated space station is geostationary - item 1012 is provided (F)
1061	e_ant_elev	elev_ang	ax97r	A7e2	9(2).9	1: conditionally required (W) 2: must be a numeric value between -90 (inclusive) and 90 (inclusive) (F) 3: C: this item must be provided if the associated space station is non-geostationary - item 1012 is not provided (F) 4: C: this item must not be provided if the associated space station is geostationary - item 1012 is provided (F) 5: C: this item must not be provided if item 1060 is not provided (F)
1600	grp	grp_id	all		9(9)	1: mandatory - BR internal validation (F) 2: must be a numeric value between 1 (inclusive) and 999999999 (inclusive) (F) 3: D: value must be unique in the set of all grp_id values (F)
1601	grp	act_code	all		X(1)	1: conditionally required (F) 2: the symbol must be "A", "M", "R", "S" or blank (F) 3: C: if this item is not blank, then item 1032 must be "M" (F)
1602	grp	page_no	all		9(4)	1: optional (W) 2: must be a numeric value - for BR internal use (W)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
1603	grp	d_inuse	all	A2a	9(8)	1: mandatory for Notification (F) 2: must be a valid date (F) 3.1: E: if item 13 = "N", this date must not be later than the date of receipt (item 11) plus three years (F)
1605	grp	op_agcy	all	A3a	9(3)	1: mandatory (F) 2: must be a numeric value between 0 (inclusive) and 999 (inclusive) (W) 3: E: value should be present in the reference table "rf_op_agcy" corresponding to Table 12A/12B of the Preface; if providing a new value, please enter 0 (zero) and provide the details as an attachment (F) 4: E: value must be added by BR as a primary key in the operating agency reference table <rf_op_agcy> (F)
1606	grp	adm_resp	all	A3b	X(2)	1: mandatory (F) 2 : must be a symbol with 1 or 2 characters (F) 3: E: symbol must be present in the table "rf_admresp" corresponding to Table 12A/12B of the Preface for the operating agency indicated in item 1605 (F)
1610	gpub	seq_no	axra	A13	9(4)	1: mandatory (F) 2: must contain a numeric value between 1 (inclusive) and 9999 (inclusive) (F) 3: D: the value must be unique and ascending for all occurrences for this group - BR Internal data (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
1611	gpub	pub_ref	axra	A13	X(12)	1: mandatory (F) 2: must be a non-blank alphanumeric symbol (F) 3: C: if the symbol is one of "API/A", "AR11/A", "SPA-AA", "RES46/A", "RES33/A", "AP30/A", "RR1042", "RES SPA2-3AA", "SPA-AJ", "RES SPA2-3AJ", "AP30B/A6A" then ntf_rsn (item 13) must be = "D" or "N" (F) 4: C: if the symbol is one of "CR/C", "AR11/C", "AR14/C", "RES46/C", "RES33/C", "AP30/C", then ntf_rsn (item 13) must be = "N" (F)
1612	gpub	pub_no	axra	A13	9(4)	1: mandatory (F) 2: must contain a numeric value between 1 (inclusive) and 99999 (inclusive) (F) 3: E: the special section information consisting of items 1611 and 1612 must be present in the reference table for the corresponding special sections (F)
1620	provn	seq_no	axra	A5/A6	9(4)	1: mandatory (F) 2: must contain a numeric value between 1 (inclusive) and 9999 (inclusive) (F) 3: D: the value must be unique and ascending for all occurrences of a particular value of item 1621 for this group - BR Internal data (F)
1621	provn	coord_prov	axra	A5/A6	X(20)	1: mandatory (F) 2: the symbol must be one of "RR1107", "RR1109", "RR1110", "RR1111", "RR1111A", "RR1130", "RR1528", "RR1142", "RR1143", "RR1144", "RR1610", "RS46#3.1", "NI", "9.17", "9.17A", "9.7A", "9.15", "AP5#6.E.1", "AP5#6.E.2", "AP5#6.E.3", "9.21", "9.33", "9.46", "9.47", "9.48", "9.49", "9.60", "9.65", "11.32A", "11.43D" (F)
1622	provn	agree_st	axra	A5/A6	X(1)	1: conditionally required (W) 2: the symbol must be either "O" or "X" or "V" or "R" (F) 3: C: if this item = "R", then item 13 must be = "D" (F) 4: C: if this item = "X" or "V" or "O" , then item 13 must be = "N" (F) 5: E: if item 9 = "F", then this item must be = "O" (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
1623	provn	adm	axra	A5/A6	X(3)	1: optional (W) 2: the symbol must be present in the reference table "rf_adm" corresponding to table no. 1A in the Preface (but only as an administration) (F) 3: C: if this item = blank, then item 1621 must be one of "RR1109", "RR1110", "RR1111", "RR1111A", "APS5.6E1", "APS5.6E2", "APS5.6E3", "AP5#6.E.1", "AP5#6.E.2" or "AP5#6.E.3"(W) 4: D: there must be no duplicate administration/satellite network organisation pairs (items 1623 / 1624) for the same provision in item 621 (F) 5: E: the coordination/agreement information consisting of items 1621, 1622, 1623 and 1624 must not be duplicated for the group (F)
1624	provn	ntwk_org	axra	A5/A6	X(3)	1: optional (W) 2: symbol must be present in the reference table "rf_ctryorg" corresponding to Table 1B and Table 2 in the Preface (F) 3: E: if provided, then the corresponding symbol of the notifying administration in this table must be the same as item 1623 (this item should be a valid symbol for the administration) (F)
1625	grp	remark	all		X(30)	1: optional: not to be validated
1630	srv_cls	seq_no	all		9(4)	1: mandatory (F) 2: must contain a numeric value between 1 (inclusive) and 9999 (inclusive) (F) 3: D: the value must be unique and ascending for all occurrences for this group - BR Internal data (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
1631	srv_cls	stn_cls	all	C4a	X(2)	1: mandatory (F) 2: the symbol must be one of the following : TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TK, TL, TM, TN, TO, TQ, TR, TT, TU, TW, TX, TY, TZ, RA, UA, UB, UD, UE, UH, UK, UM, UN, UR, UT, UV, UW, UY or VA; corresponding to Table 3 in the Preface (F) 3.1: C: if value = "TD", then item 1030 must be "E" - uplink only (F) 3.2: C: if value = "TR", then item 1030 must be "R" - downlink only (F) 3.3: C: if value = "RA", then item 2 must be= "R" - radioastronomy (F) 4: E: if item 5 = "9.7A", then this item must be = "TC" (F) 5: E: each symbol must be valid for the corresponding class of station symbol of the associated satellite group to which this earth station belongs - this correspondence is given in Appendix 7 of the Annex (F)
1632	srv_cls	nat_srv	axra	C4b	X(2)	1: mandatory (F) 2: the symbol must be one of "CO", "CP", "CR", "CV" or "OT"; corresponding to Table 3 in the Preface (F) 3: D: there must be no duplicate class-of-station / nature-of-service pairs (item 1631 / 1632) for the group (F) 4: E: the symbol must be the same as the nature-of-service - item 632 - associated with the corresponding class-of-station - item 631 - of the associated satellite group found in rule 1631/4 (F)
1635	grp	tgt_grp_id	all		9(9)	1: conditionally required (W) 2: must be a numeric value between 1 (inclusive) and 999999999 (inclusive) (F) 3: C: if this item contains a value (representing the BR identification number of the group to be modified, replaced or suppressed), then item 1601 must be = "M", "R" or "S" (F)
1640	grp	polar_type	ax97r	C6a	X(2)	1: mandatory (F) 2: the symbol must be present in reference table "rf_polar" corresponding to Table 5 of the Preface (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
1641	grp	polar_ang	ax97r	C6b	9(3).9(2)	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 360 (exclusive) (F) 3: C: if this item is not provided, then item 1640 must not be = "L" 4: C: if this item is provided, then item 1640 must be = "L" (F)
1642	grp	bdwdth	all	C3a/C3b	9(9)	1: mandatory (F) 2: must be a numeric value between 1 (inclusive) and 3,000,000 (inclusive) (F) 3: E: value must be less than or equal to the maximum possible value as determined by using the highest assigned frequency notified for the group and Appendix 5 of the Annex (W)
1643	grp	noise_t	all	C5a	9(6)	1: conditionally required (W) 2: must be a numeric value between 30 (inclusive) and 3000 (inclusive) (W) 3: C: this item must be provided if item 1030 = "R" (F) 4: C: this item must not be provided if item 1030 = "R" (F) 5: E: this item should have the same value for all groups within this receiving beam (W) 6: E: the ratio of gain (item 1034) to noise-temp (item 1643) must be > 44 db/K if item 5 = "9.7A" (W)
1644	grp	pwr_max	ax97r	C8g1	S9(2).9(1)	1: optional; used to effect coordination with another administration; not validated
1655	grp	f_no_intfr	all	C2c	X(1)	1: optional (W) 2: symbol must be either "Y" or blank (F)
1658	grp	elev_min	ra	C13c	S9(3).9(2)	1: mandatory (F) 2: must be a numeric value between -90 (inclusive) and 90 (inclusive) (F)
1660	grp	observ_cls	ra	C13a	X(2)	1: mandatory (F) 2: symbol must be one of A or B (F)
1661	grp	reg_op_fr	plan	A11a	9(4)	1: optional (W) 2: must be a numeric value representing hours in UTC format from 0000 (inclusive) to 2359 (inclusive) (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
1662	grp	reg_op_to	plan	A11b	9(4)	1: optional (W) 2: must be a numeric value representing hours in UTC format from 0000 (inclusive) to 2359 (inclusive) (F)
1663	grp	ra_stn_type	ra	C13b	X(1)	1: mandatory (F) 2: symbol must be either "S" or "V" (F)
1668	emiss	seq_no	axra	C7a	9(4)	1: mandatory (F) 2: must contain a numeric value between 1 (inclusive) and 9999 (inclusive) (F) 3: D: the value must be unique and ascending for all occurrences for this group - BR Internal data (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
1669	emiss	design_emi	axra	C7a	X(9)	1: mandatory (F) 2: E: the symbol must contain 9 alphanumeric characters, which are validated in two parts from left to right - the first four characters (necessary bandwidth) and the next five characters (class of emission) (F) 3.1: E: the first character must be numeric, ranging from 1 (inclusive) to 9 (inclusive) or "H" (F) 3.2: E: the next three characters can be numeric (0 to 9 inclusive) or "H", "K", "M" or "G"; however, there must be only one alphabetic character ("H", "K", "M", "G") in the set of the first four characters (F) 3.3: E: the necessary-bandwidth portion of this item (the first four characters) is converted to a frequency value in kilohertz by using the unit specified by the alphabetic character (H - hertz, K - kilohertz, M - megahertz, G - gigahertz) and its position in the four character sequence as an implied decimal point (for eg. 36M0 is 36.0 megahertz or 36000 kilohertz); this value should be less than or equal to the assigned frequency band - item 1642 - (F) 4.1: E: 5th character - must be alphabetic but not one of "E", "I", "O", "S", "T", "U", "Y", "Z" (F) 4.2: E: 6th character - must be one of "0", "1", "2", "3", "7", "8", "9", "X" (F) 4.3: E: 7th character - must be one of "A", "B", "C", "D", "E", "F", "N", "W", "X" (F) 4.4: E: 8th character - must be one of "A", "B", "C", "D", "E", "F", "G", "H", "J", "K", "L", "M", "N", "W", "X" and "-" (F) 4.5: E: 9th character - must be one of "N", "C", "F", "T", "W", "X" and "-" (F) 5: E: items 1671, 1672 and 1673 should be validated against the corresponding values notified for the same transmitting or receiving earth station for the associated satellite under form ApS4/II; if this is a receiving earth station antenna - item 1030 = "R" -, these items should be equal to corresponding items for the transmitting space station under ApS4/II; if this is a transmitting earth station antenna - item 500 = "E" -, item 1671 should be equal to the corresponding item for the receiving space station under ApS4/II (W)
1670	emiss	pep_max	ax97r	C8a1	S9(2).9(1)	1: conditionally required (W) 2: must be a numeric value between -30 (inclusive) and +40 (inclusive) (W) 3: C: if this value is provided, then item 1030 = "E" - transmitting antenna (F) 4: C: if this value is not provided, then item 1030 = "R" - receiving antenna (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
1671	emiss	pwr_ds_max	ax97r	C8b3b	S9(3).9(1)	1: conditionally required (W) 2: must be a numeric value between -99.9 (inclusive) and -10 (inclusive) (W) 3: C: if this value is provided, then item 1030 = "E" - transmitting antenna (F) 4: C: if this value is not provided, then item 1030 = "R" - receiving antenna (F) 5: E: submitted value of power spectral density (pwr_ds_max) should be defined using the method of Recommendation SF.675, i.e. is averaged over the worst averaging bandwidth (W)
1672	emiss	pep_min	ax97r	C8c1	S9(3).9(1)	1: conditionally required (W) 2: must be a numeric value between -20 (inclusive) and +40 (inclusive) (W) 3: C: if this value is provided, then item 1030 = "E" - transmitting antenna (F) 4: C: if this value is not provided, then item 1030 = "R" - receiving antenna OR item 1677 must be provided (F) 5: C: value must be less than or equal to item 1670 (F) 6: E: if the frequencies for the group - item 1753 - are in the band 13.75-14 GHz for FSS - item 1631 = "TC" - then this item is mandatory (F)
1673	emiss	pwr_ds_min	ax97r	C8c3	S9(3).9(1)	1: conditionally required (W) 2: must be a numeric value between -99.9 (inclusive) and -10 (inclusive) (W) 3: C: if this value is provided, then item 1030 = "E" - transmitting antenna (F) 4: C: if this value is not provided, then item 1030 = "R" - receiving antenna OR item 1678 must be provided (F) 5: C: value must be less than or equal to item 1671 (F) 6: E: if the frequencies for the group - item 1723 - are in the band 13.75-14 GHz for FSS - item 1631 = 'TC' - then this item is mandatory (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
1674	emiss	c_to_n	ax97r	C8e1	S9(2).9	1: conditionally required (W) 2: must be a numeric value between -20 (inclusive) and +30 (inclusive) (W) 3: C: if this value is provided, then item 1030 = "R" - receiving antenna (F) 4: C: if this value is not provided, then item 1030 = "E" - transmitting antenna OR item 1679 must be provided (F)
1676	emiss	f_emi_type	ax97r	C8a/C8b	X(1)	1: optional; not to be validated 2: must be a 1-character symbol
1677	emiss	attch_pep	ax97r	C8c2	9(2)	1: conditionally required (W) 2: must be a numeric value between 1 (inclusive) and 99 (inclusive) (F)
1678	emiss	attch_mpd	ax97r	C8c4	9(2)	1: conditionally required (W) 2: must be a numeric value between 1 (inclusive) and 99 (inclusive) (F)
1679	emiss	attch_c2n	ax97r	C8e2	9(2)	1: conditionally required (W) 2: must be a numeric value between 1 (inclusive) and 99 (inclusive) (F)
1750	assgn	seq_no	all	C2a	9(4)	1: mandatory (F) 2: must contain a numeric value between 1 (inclusive) and 9999 (inclusive) (F) 3: D: the value must be unique and ascending for all occurrences for this group - BR Internal data (F)
1751	assgn	freq_sym	all	C2a	X(1)	1: mandatory (F) 2: symbol must be "K", "M" or "G" (F) 3: check this symbol against frequency value in item 1752 (F) 3.1: C: if this item is "K", then the value in item 1752 should be between 5000 (exclusive) and 27500 (inclusive) (F) 3.2: C: if this item is "M", then the value in item 1752 should be between 27.5 (exclusive) and 10500 (inclusive) (F) 3.3: C: if this item is "G", then the value in item 1752 should be between 10.5 (exclusive) and 400 (inclusive) (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
1752	assgn	freq_assgn	all	C2a	9(7).9(6)	1: mandatory (F) 2: must be a numeric value between 10.5 (inclusive) and 27500 (inclusive) (F) 3: E: there must not be any duplicate frequency / symbol pairs in the list of assigned frequencies for the group (F) 4: E: there should be no overlap in the list of assigned frequencies for the group; i.e. for each frequency in the sorted list of assigned frequencies, the lower and upper limits are calculated, using the bandwidth - item 1642 - , as (assigned frequency +/- bandwidth/2); the upper limit of each assigned frequency should be less than or equal to the lower limit of the next assigned frequency in the sorted list (W)
1753	assgn	freq_mhz	all		9(7).9(6)	1: mandatory; for BR Internal use (F) 2: must be a numeric value between 27.5 (inclusive) and 400000 (inclusive) (F) 3: E: the value must be equal to the assigned frequency in megahertz derived from items 1751 and
9999	all	all			none	1: the action-code at a level above (notice, beam or grp) is 'A' and no rows are provided in the specified table (F)

Appendix 1 : Notice Code values

NOTICE CODE	DESCRIPTION
all	all notice types
ax97a	all earth notices except those submitted under 9.7a
ax97r	all earth notices except those submitted under 9.7a and radio-astronomy
axiss	all space notices except for ISS (inter-satellite-service - ES in item 631)
axra	all earth notices except the radio-astronomy notices
earth	all earth notices
opt	optional for notice
ra	radio-astronomy notices only
space	all space notices

Appendix 2 : Values for Maximum Isotropic Gain as a function of Assigned Frequency

Lowest Frequency for this Beam	Minimum Allowable Gain Value	Highest Frequency for this Beam	Maximum Allowable Gain Value
1000 .. 3000 MHz	-6 dB	1000 .. 3000 MHz	25 dB
3400 .. 9000 MHz	17 dB	3400 .. 9000 MHz	30 dB
10.1 .. 30 GHz	19 dB	10.1 .. 30 GHz	45 dB
> 30 GHz	20 dB	> 30 GHz	65 dB

Appendix 3 : Calculation of the two test beamwidths

Calculate the two test beamwidths using the maximum isotropic gain (item 504) as follows: beamwidth $\theta_1 = 65.0 / (D/\lambda)$ where $D/\lambda = 10^{\{(Gmax - 7.7)/20.0\}}$ and G_{max} is the maximum isotropic gain in dB and beamwidth $\theta_2 = \sqrt{(27000/g_{max})}$ where $g_{max} = 10.0^{(Gmax / 10.0)}$.

Appendix 4 : list of frequency bands with bi-directional utilization

Freq. from (MHz)	Freq. To (MHz)	Remarks
28	29.7	AMATEUR-SATELLITE
30.005	30.01	SPACE OPERATION (satellite identification) SPACE RESEARCH
39.986	40.02	Space Research
40.98	41.015	Space Research
144	146	AMATEUR-SATELLITE
149.9	150.05	RADIONAVIGATION-SATELLITE LAND MOBILE-SATELLITE (Earth-to-space) S5.224 B - allocation until 01/01/2015
235	322	Mobile-satellite S5.254
335.4	399.9	Mobile-satellite S5.254
399.9	400.05	RADIONAVIGATION-SATELLITE LAND MOBILE-SATELLITE (Earth-to-space)
400.05	400.15	STANDARD FREQUENCY AND TIME SIGNAL-SATELLITE (400.1)
401	402	SPACE OPERATION (space-to-Earth) Earth Exploration Satellite (Earth-to-space) Meteorological-Satellite (Earth-to-space)
435	438	Amateur-Satellite S5.282
806	890	in Reg. 3 - MOBILE SATELLITE except aeronautical mobile-satellite (R) S5.320 in Reg. 2 - MOBILE SATELLITE serviceS5.317 (except Brazil and USA)
942	960	in Reg. 3 - MOBILE SATELLITE except aeronautical mobile-satellite (R) S5.320
1164	1300	RADIONAVIGATION-SATELLITE (space-to-earth)
1260	1270	Amateur-satellite service S5.282
1525	1535	Earth Exploration-Satellite
1559	1610	RADIONAVIGATION-SATELLITE (space-to-earth) (space-to-space)

1613.8	1626.5	Mobile-Satellite service (space-to-Earth) MOBILE SATELLITE service (Earth-to-space)
1670	1675	METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (Earth-to-space)
1770	1790	METEOROLOGICAL-SATELLITE SERVICE S5.387
2025	2110	SPACE OPERATION (Earth-to-space) (space-to-space) EARTH EXPLORATION-SATELLITE (Earth-to-space) (space-to-space) SPACE RESEARCH (Earth-to-space) (space-to-space)
2200	2290	SPACE OPERATION (Earth-to-space) (space-to-space) EARTH EXPLORATION-SATELLITE (Earth-to-space) (space-to-space) SPACE RESEARCH (Earth-to-space) (space-to-space)
2400	2450	Amateur-satellite service S5.282
2655	2690	FIXED-SATELLITE (Reg. 2) (Earth-to-space and space-to-Earth)
3400	3410	Amateur-satellite (Regions 2 and 3) S5.282
5000	5150	AERONAUTICAL MOBILE-SATELLITE (R) S5.367
5150	5216.5	RADIODETERMINATION-SATELLITE S5.446
5250	5255	Space research
5650	5725	SPACE RESEARCH
5830	5850	FIXED-SATELLITE Service (Reg. 1) (Earth-to-space) Amateur-satellite service (space-to-Earth)
6700	7075	FIXED-SATELLITE (Earth-to-space) (space-to-Earth)
8025	8400	FIXED-SATELLITE (Earth-to-space) EARTH EXPLORATION-SATELLITE (space-to-Earth)
9975	10025	Meteorological-satellite service (weather radars)S5.479
10450	10500	Amateur-satellite service
10700	11700	FIXED-SATELLITE Service (in Reg. 1) (Earth-to-space) and(space-to-Earth)
12500	12750	FIXED-SATELLITE Service (in Reg. 1) (Earth-to-space) and(space-to-Earth)
12750	13250	FIXED-SATELLITE (Earth-to-space) Space research (deep space) (space-to-Earth)
13400	14300	FIXED-SATELLITE (Earth-to-space) Space research
14300	14400	FIXED-SATELLITE (Earth-to-space)
14400	14470	FIXED-SATELLITE (Earth-to-space) Space research (space-to-Earth)
14500	15350	Space research
15430	15630	FIXED-SATELLITE (space-to-Earth) and (Earth-to-space) available for APS4 received after 1/1/99
15450	15650	FIXED-SATELLITE (space-to-Earth) and (Earth-to-space) available for APS4 received before 1/1/99 S5.511D

15630	15650	FIXED-SATELLITE (space-to-Earth) and (Earth-to-space) available for advance information (AP4) received before 22.11.97 and APS4 received after 1/1/99 S5.511D
17300	18400	FIXED-SATELLITE (space-to-Earth) (Earth-to-space)
19300	19700	FIXED-SATELLITE (space-to-Earth) and (Earth-to-space)
22550	23550	INTER-SATELLITE
24000	24050	AMATEUR-SATELLITE
24650	24750	INTER-SATELLITES (in Reg.1) RADIOLOCATION-SATELLITE (Earth-to-space) (in Reg.1)
25250	25500	INTER-SATELLITES Standard frequency and time signal-satellite (Earth-to-space)
25500	27000	Earth Exploration-Satellite (space-to-Earth) Standard-frequency and Time Signal-Satellite (Earth_to_space) (in Reg.1)
27000	27500	FIXED-SATELLITE (Earth-to-space) (in Regions 2 and 3) INTER-SATELLITES (in Regions 2 and 3)
27500	27501	Space-to-Earth (beacon transmissions intended for up-link power control) S5.538 FIXED-SATELLITE (Earth-to-space)
27501	29999	FIXED-SATELLITE (Earth-to-space) and (space-to-Earth) S5.540
29999	30000	Space-to-Earth (beacon transmissions intended for up-link power control) S5.538 FIXED-SATELLITE (Earth-to-space)
30000	31000	FIXED-SATELLITE (Earth-to-space) MOBILE-SATELLITE (Earth-to-space) Standard-frequency and Time Signal-Satellite (space-to-Earth)
31000	31300	Standard-frequency and Time Signal-Satellite (Earth-to-space) Space research
32300	33000	INTER-SATELLITE
34700	35200	Space Research
40000	40500	EARTH EXPLORATION-SATELLITE (Earth-to-space) FIXED-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) SPACE RESEARCH (Earth-to-space) Earth exploration-satellite (space-to-Earth)
43500	47000	MOBILE-SATELLITE RADIONAVIGATION-SATELLITE
47000	47200	AMATEUR-SATELLITE
47500	47900	FIXED-SATELLITE Service (in Reg. 1) (Earth-to-space) and(space-to-Earth)
48200	48540	FIXED-SATELLITE Service (in Reg. 1) (Earth-to-space) and(space-to-Earth)
49440	50200	FIXED-SATELLITE Service (in Reg. 1) (Earth-to-space) and(space-to-Earth)
65000	66000	EARTH EXPLORATION-SATELLITE SPACE RESEARCH
66000	71000	MOBILE-SATELLITE RADIONAVIGATION-SATELLITE
76000	81000	Amateur-satellite Space research (space-to-Earth)
81000	84000	FIXED-SATELLITE (Earth-to-space) MOBILE-SATELLITE (Earth-to-space) SPACE

		RESEARCH (space-to-Earth) AMATEUR-SATELLITE
95000	100000	MOBILE-SATELLITE RADIONAVIGATION-SATELLITE
123000	130000	RADIONAVIGATION-SATELLITE
134000	141000	AMATEUR-SATELLITE
191800	200000	INTER-SATELLITE MOBILE-SATELLITE RADIONAVIGATION-SATELLITE
238000	240000	FIXED-SATELLITE(Space-to-earth) RADIONAVIGATION-SATELLITE
241000	248000	Amateur-satellite
248000	250000	AMATEUR-SATELLITE
252000	265000	MOBILE-SATELLITE RADIONAVIGATION-SATELLITE

Appendix 5 : Values for Assigned Frequency Band as a function of Assigned Frequency

Highest Frequency for this Group	Maximum Allowable Value of Assigned Frequency Band
10.0 MHz	100 000 kHz
30.0 GHz	1 000 000 kHz
> 30.0 GHz	3 000 000 kHz

Appendix 6 : Calculation of minimum and maximum beamwidths

Calculate the two test beamwidths (θ_1, θ_2) as indicated in Appendix 3. The minimum allowable beamwidth θ_{min} = (0.9) (min θ_1, θ_2); if θ_{min} is greater than 360, it is set to 360. The maximum allowable beamwidth θ_{max} = (1.1) (max θ_1, θ_2) . If θ_{max} is greater than 360, it is set to 360.

Appendix 7 : Correspondence between Earth Station Class of Station and Space Station Class of Station

Earth Station Class of Station	Corresponding Space Station Class of Station
TA	EA
TB	EJ
TC	EC
TD	ED
TE	(EI)
TF	EF
TG	EG

TH	EH
TI	EG
TJ	EJ
TK	EK
TL	EF
TM	EM
TN	EN
TO	EO
TQ	EQ
TR	ER
TT	ET
TU	EU
TW	EW
TX	EQ
TY	EU
TZ	EO
UA	EI
UB	EB
UD	ED
UE	EE
UH	EH
UK	EK
UM	EM
UN	EN
UR	ER
UT	ET
UV	EV
UW	EW
UY	EY
VA	EI