

Information and Instructions

## Technical Data Schedule for the Maritime and Aviation Services (Parts 80 and 87)

Form FCC 601, Schedule G, is a supplementary schedule for use with the FCC Application for Wireless Telecommunications Bureau Radio Service Authorization, FCC 601 Main Form. This schedule is used to apply for an authorization to operate a land station in the Maritime Service or a ground station in the Aviation Service, as defined in 47 CFR, Part 80 or Part 87, respectively. It is also used to amend a pending application or modify an existing license in these services. Additionally, this schedule is used by auction winners that must file site-specific technical data for international coordination or for an environmental assessment of a particular site. The FCC 601 Main Form must be filed in conjunction with this schedule.

You must file technical information for each fixed location, including the antenna structures and/or each hand held/mobile transmit location, temporary fixed station location, or itinerant station, using FCC 601, Schedule D, Schedule for Station Locations and Antenna Structures. It is recommended that you complete Schedule D prior to completing Schedule G.

The following instructions apply when filing Schedule D in tandem with this schedule:

Maritime coast and aviation ground stations may not submit an application that includes both fixed and mobile locations in the same application package (one application package being an FCC 601 Main Form and any associated schedules). Separate application packages must be submitted for fixed and mobile operations.

Schedule D Item 17 This item does not apply to Maritime Coast and Aviation Ground stations.

Schedule D Item 25 Each mobile location can contain only one occurrence of a unit type. For example, if a number of units are entered for 'Hand Held', then all other unit types should be blank. 'Hand Held', 'Mobile', and 'Temporary Fixed' unit types are applicable to any Maritime and Aviation service. 'Aircraft' and 'Itinerant' choices are only applicable to flight test stations.

**IMPORTANT INFORMATION REGARDING LOCATION, ANTENNA, AND CONTROL POINT NUMBERS:** To identify existing locations, antennas, or control points, you must use the location, antenna, and control point numbers assigned by the Universal Licensing System (ULS). These numbers may not be identical to the location, antenna, and control point numbers on your current authorization if that authorization was not issued by the Universal Licensing System. If you are unsure of the location, antenna, or control point number that corresponds to a particular location, antenna, or control point, you can query the ULS for the most up-to-date information regarding your authorization. To query the ULS license database for your call sign, point your web browser to <http://wireless.fcc.gov/uls/> and click on Search - Licenses. Alternatively, you may call (877) 480-3201 (TTY 202-414-1255) and select option #2 for assistance.

# Schedule G Instructions

## Station Class

Item 1 Enter the appropriate station class code from one of the following tables. There are separate tables for Maritime Service and Aviation Service Stations.

For **Maritime Service**, select the station class code from the following table:

<b>MC Service</b>	
Marine Utility.....	FCU
Maritime Receiver Test.....	MRT
Maritime Support-Testing and Training.....	FCA
Private Coast.....	FCL
Public Coast.....	FC
Shore Radar Test.....	MSC
Shore Radiolocation Test.....	RLC

<b>MK Service</b>	
Alaska Private .....	APX
Alaska Public.....	APC

<b>MR Service</b>	
Shore Radionavigation.....	MSR
Shore Radionavigation/RACON.....	RLR

<b>MA Service</b>	
Marine Operational Fixed.....	MFX

**Note:** Where appropriate, follow each code with 1 for Hand Held/Mobile operations or 2 for Temporary operations.

For **Aviation Service**, select the station class code from the following tables:

<b>AF Service</b>	
Aeronautical Advisory .....	(Unicom) FAA
Aeronautical Enroute.....	FA
Aeronautical Fixed .....	AX
Aeronautical Multicom.....	MFL
Aircraft (Flight Test Stations only) .....	FMA (must be followed by 1 for mobile operations)
Airport Control Tower.....	FAC
Automatic Weather Observation .....	FAB
Aviation Support Instructional .....	FAS
Aviation Support Service.....	FLU
Flight Information Services.....	FIS
Flight Information Services with Hand Held/Mobile Operations .	FIS1
Flight Information Services for Temporary Operations.....	FIS2
Flight Test .....	FAT
Remote Communications Outlet .....	RCO
Ground Communications Outlet.....	GCO
Ramp Control.....	RPC

<b>AA Service</b>	
Aeronautical Search and Rescue.....	SAR
Aeronautical Utility Mobile .....	MOU
Operational Fixed.....	AOX

<b>AR Service</b>	
Aeronautical Marker Beacon.....	RLA
Aeronautical Radio Beacon.....	RLB
Differential Global Positioning System (GPS) .....	DGP
ELT Test .....	ELT
Glide Path (Slope).....	RLG
Localizer.....	RLL
Omnidirectional Radio Range .....	RLO
Radar/Radar Test.....	RLD
Radionavigation Land .....	RNV
Radionavigation Land Test .....	RLT

**Note:** Where appropriate, follow each code with 1 for Mobile operations, 2 for Temporary operations, or (for flight test stations only) 3 for Itinerant operations.

**Item 2** This item must be answered 'Y' for Yes for the following station classes:

Aeronautical Advisory  
Aeronautical Enroute/Fixed  
Airport Control Tower Stations, Remote Communications Outlet, and Ground Communications Outlets

For all other station classes, leave this item blank.

**Item 3** This item must be answered by all applicants for public coast and Alaska public fixed stations. Otherwise, leave this item blank.

**Item 4** This item must be answered by applicants for Aeronautical Radionavigation stations (AR Service, if applicable). Provide the FAA assigned station identifier of the Aeronautical Radionavigation station, if known.

**Item 5** This item must be answered by all applicants for Aeronautical Fixed stations (station class code = 'AX'). Provide the call sign of the Aeronautical Enroute station that is associated with the Aeronautical Fixed station for which you are applying. If the Aeronautical Enroute station application has not yet been granted, enter "P" in this item.

### **Control Points**

This section must be completed only when a control point is to be added, modified, or deleted. If you are adding a new control point, complete all items in this section for each control point to be added. If you are modifying an existing control point, in addition to Items 6 and 7, complete only the items that have changed for each control point. If you are deleting a control point, only Items 6 and 7 are required. Control points that are currently licensed under this call sign by the FCC will continue to be shown on the Authorization as is, unless a specific action is requested in this section.

**Item 6** This item indicates the action the filer wants the FCC to take on the specified control point. Enter 'A' for Add, 'M' for Modify, or 'D' for Delete.

**Item 7** Enter the FCC-assigned control point number (see Important Information Regarding Location, Antenna, and Control Point Numbers on page 1 of these instructions). For a new control point, assign a temporary code to represent the control point. The assigned code should begin with C to indicate it as a control point and end with a number to uniquely identify it (e.g., C1, C2, C3, etc.). The FCC will assign an official number to the control point, which will appear on the Authorization.

**Item 8** Enter the street address, city or town, county/borough/parish, and state of the control point. Refer to FCC 601 Main Form Instructions, Appendix II, for a list of valid state, jurisdiction, and area abbreviations.

**Item 9** Enter the telephone number (including area code) where a person responsible for operation of the station or systems could be reached.

### **Antenna Information**

This section must be completed only when antennas are to be added, modified, or deleted. If you are adding a new antenna, complete all items for each antenna to be added. If you are modifying an existing antenna, in addition to Items 10, 11, and 12, complete only the items for the antenna that have changed. If you are deleting an antenna, only Items 10, 11, and 12 are required. Antennas that are currently licensed under this call sign by the FCC will continue to be shown on the Authorization as is, unless a specific action is requested in this section.

**Item 10** This item indicates the action the filer wants the FCC to take on the specified antenna. Enter 'A' for Add, 'M' for Modify, or 'D' for Delete.

**Item 11** For each antenna, enter its corresponding location number, as entered on Schedule D Item 2. If the location has been previously licensed under this call sign by the FCC, enter the FCC-assigned location number (see Important Information Regarding Location, Antenna, and Control Point Numbers on page 1 of these instructions). Otherwise, enter the code assigned on Schedule D to represent the location. Refer to the instructions for Schedule D for more information on assigning location numbers.

**Item 12** If the antenna has been previously licensed under this call sign by the FCC, enter the antenna's FCC-assigned number (see Important Information Regarding Location, Antenna, and Control Point Numbers on page 1 of these instructions). Otherwise, enter a temporary code to represent each antenna. The assigned code should begin with an A to indicate it is an antenna and end with a number to uniquely identify it (e.g., A1, A2, A3, etc.) A single location can have multiple antennas. Antenna numbers need only be unique within each location. The FCC will assign the new antenna an official number, which will appear on the Authorization. If using hand held transmitters, consider all hand held transmitters at a given location to be one antenna.

**Note:** Location number (Item 11) and antenna number (Item 12) are used to associate information in the Antenna Information Section with information in the Frequency Information Section. To do this, enter the necessary information into the Antenna Information Section using the appropriate location number and antenna number. Then, enter the necessary information in the Frequency Information Section for that antenna, using the same location number/antenna number pair. Each antenna specified must have corresponding frequency information.

Item 13 Enter the ratio (decibels) of the power required at the input of a loss-free reference antenna to the power supplied to the input of the given antenna to produce, in a given direction, the same field strength or the same power-flux density at the same distance. This information should be available from the specification sheet included with the antenna at the time of purchase.

Item 14 Enter the angle in the horizontal plane of the transmitting antenna main lobe measured clockwise with respect to True North in degrees, or enter '360' to indicate that the transmitting antenna is omni-directional.

Item 15 Enter the actual height from the ground to the tip of the antenna. Enter this item in meters, rounded to the nearest tenth.

Item 16 Enter the approximate attenuation, including any padding, to the nearest tenth of a dB, between the point at which the power output of the transmitter is measured for type-acceptance/notification approval and the input to the antenna. If this value is less than 1 dB, leave this item blank. For power splits, the power reduction for a particular path will be considered the loss.

Item 17 Enter the Half Power Beamwidth (Aeronautical Enroute HF and Public Coast HF stations only).

Item 18 Enter the Receive Zone (Aeronautical Enroute HF and Public Coast HF stations only).

**Frequency Information**

This section must be completed only when frequencies are to be added, modified, or deleted. If you are adding new frequencies, complete all items for each frequency to be added. If you are modifying a frequency (*i.e.*, changing from one operating frequency to a different operating frequency), enter the existing and new frequencies in the appropriate boxes in Item 22. If you are modifying existing attributes of frequencies, complete all items for each frequency to be modified. In order to modify an Emission Designator (Item 26), complete Items 19 - 22, specifying the appropriate location number, antenna number, and frequency, and list **all** active emission designators now associated with the specified location, antenna, and frequency (complete as many rows as necessary, listing emission designators in Item 26). If you are deleting frequencies, only Items 19 through 22 are required. Frequencies that are currently licensed under this call sign by the FCC will continue to be shown on the Authorization as is, unless a specific action is requested in this section.

**Note:** If station class FAC (for Airport Control Tower) was entered in Item 1, complete Items 19, 20, 21, 22b, 22c, 23, 24, and 26 on page 4 of this schedule. All station classes except FAC complete Items 19, 20, 21, 22a, 23, 24, 25, and 26 on page 3 of this schedule. For multiple frequency lines, repeat the location number/antenna number combination for each frequency. For example:

Location	Antenna	Frequency	Location	Antenna	Frequency (MHz)
F1	A1	XXXXX.XXXX	F1	A2	BBBBB.BBBB
F1	A1	YYYYY.YYYY	F2	A1	CCCCC.CCCC
F1	A2	AAAAA.AAAA	F2	A1	DDDDD.DDDD

Item 19 This item indicates the action the filer wants the FCC to take on the specified antenna. Enter 'A' for Add, 'M' for Modify, or 'D' for Delete.

Item 20 For each antenna structure, enter its corresponding location number, as entered in Item 11 of the Antenna Information Section of this schedule.

Item 21 For each antenna, enter its corresponding antenna number, as entered in Item 12 of the Antenna Information Section of this schedule.

Item 22a (All station classes except Airport Control Tower/FAC) To add frequencies on an antenna at a location, enter the specific frequencies in Megahertz (MHz) in the row labeled 'New' of the column labeled 'Lower' for each location and antenna on which the frequency is to be located. The requested frequencies must be available in the Commission's rules governing the radio service in which you are seeking eligibility. If applying for a single-sideband frequency, show carrier frequency only. If applying for a frequency band, show the lower and upper frequencies in the row labeled 'New' of appropriate columns for each location and antenna on which the frequency is to be located. Use a separate line for each frequency or frequency band. For Aviation Ground Radionavigation (Nav aids), Automatic Weather Observation/Automatic Surface Observation, Remote Communication Outlet, Ground Communications Outlet, or Ramp Control stations: if frequency is not known, you may leave Item 22a blank. Items 23, 24, and 26 **must** be completed.

If multiple frequencies are being added to one location, complete as many lines as necessary, repeating the location number in Item 20 and the antenna number in Item 21 for each frequency added. A separate line needs to be completed for each frequency if there are multiple emissions, multiple antenna tips, etc. To do this, complete as many lines for each frequency as necessary, repeating the location number in Item 20, the antenna number in Item 21, the frequency in the column labeled 'New' of Item 22a, and the remaining technical information for each frequency line, as appropriate.

To modify a frequency or frequency band on an antenna at a location, you must complete Items 19-21 and enter the existing frequency or frequency band in the frequency row of Item 22a labeled 'Existing' and enter the new frequency or frequency band in the frequency row of Item 22a labeled 'New'.

**Item 22b (Station Class Airport Control Tower/FAC only)** To add frequencies on an antenna at a location; enter the specific frequencies in Megahertz (MHz), if known in the column labeled 'New' of Item 22b. The requested frequencies must be available in the Commission's rules governing the radio service in which you are seeking eligibility. Use a separate line for each frequency.

If multiple frequencies are being added to one location, complete as many lines as necessary, repeating the location number in Item 20 and the antenna number in Item 21 for each frequency added. A separate line needs to be completed for each frequency if there are multiple emissions, multiple antenna tips, etc. To do this, complete as many lines as for each frequency as necessary, repeating the location number in Item 20, the antenna number in Item 21, the frequency in the column labeled 'New' of Item 22b, and the remaining technical information for each frequency line, as appropriate.

To modify a frequency on an antenna at a location, you must complete Items 19-21 and enter the existing frequency in the column of Item 22b labeled 'Existing' and enter the new frequency in the frequency column of Item 22b labeled 'New'.

**Item 22c (Station Class FAC only)** Enter one of the following frequency type codes for each requested frequency:

- L**     Local Control
- G**     Ground Control
- E**     Emergency (121.5 MHz) - List this frequency **only** if you wish to transmit on the frequency 121.5 MHz. Do not list the frequency if you intend to **monitor only**. If you wish to be exempt from the monitoring requirement, you must submit your exemption request as an attachment to this form.
- O**     Other - Use this code for ATIS (Automatic Terminal Information Service) and any other frequency not defined above.

If a Local Control, Ground Control, or Other frequency has not yet been reserved by FAA, you may leave Item 22b blank. However, you must complete a line for each requested frequency (Items 19, 20, 21, 22c, 23, 24, 25, 26).

**Item 23** Enter the maximum transmitter output power in watts.

**Item 24** Enter the Proposed Hours of Operation (Public Coast, Public Fixed, and Airport Control Tower stations only). The format of proposed hours of operation is hhmm – hhmm ("hh" is the number of complete hours which have passed since midnight (00 to 24) and "mm" is the number of complete minutes that have passed since the start of the hour (00 to 59)). (i.e., from 9:00am through 5:00pm would be 0900 – 1700)

**Item 25** Enter the Operational Altitude (Aeronautical Enroute VHF stations only).

**Item 26** Enter the emission designator for each station. The new ITU (International Telecommunications Union) emission designators may be used in place of the old designators. The following are samples of the corresponding new ITU designators for the most commonly used emission designators.

**Note:** These are samples only and do not necessarily represent an emission for which you should apply.

	<b>Old</b>	<b>New</b>
Frequency modulated (FM) voice	16F3	16K0F3E
Frequency modulated (FM) voice	13.6F3	13K6F3E
Frequency modulated digitized voice	20F3Y	20K0F1E
Frequency modulated digitized non-voice	20F9Y	20K0F1D
Amplitude modulated single sideband voice	2.8A3J	2K80J3E
Amplitude modulated (AM) voice	6A3	6K00A3E

## **FAA Coordination Information**

**Item 27** This item must be completed if the filer has specified any of the following station classes in Item 1 and is requesting a new or modified station license:

- Aviation Support (121.950 MHz only)
- Airport Control Tower
- Radionavigation Land (all Navigational Aids)
- Radionavigation Land Test (RLT)
- AWOS/ASOS (Automatic Weather Observation/Automatic Surface Observation)
- Remote Communications Outlet
- Ground Communications Outlet
- Ramp Control

Enter the FAA regional office to where the notification was sent and the date that the FAA was notified. The Federal Aviation Administration (FAA) must be notified that this application is being submitted. Notification to the FAA must be made prior to filing of this application. Applications submitted without the required FAA notification will be returned to the applicant without action.

## **Certifications**

Indicate the certifications that pertain to the type of station for which this application is being filed. By signing the Main Form filed in conjunction with this schedule, the applicant certifies that the statements listed in this section are true, complete, correct, and made in good faith.

## **International Registration Information**

As a signatory party to international treaty agreements, the FCC performs certain actions regarding the use of radio. The technical details of your station parameters may be reported to the International Telecommunications Union, Geneva, Switzerland, and to countries that border on or in close proximity to the United States. This information along with data reported by other nations will be used to protect reported stations and aid in resolution of interference disputes between licensees in different countries.

Certain marine coast stations, because of their geographic location, would be best protected by provision of additional information. Specifically, this includes any proposed station which is located in the region north of Line 'A', or in the State of Alaska east of Line 'C'. Refer to the Commission's rules for a detailed explanation of Lines A and C. Appendix I in FCC Form 601 Main Form Instructions contains a list of counties/boroughs, by state, having areas North of Line A and East of Line C.

Unless advised to the contrary, the FCC will make certain assumptions which reflect the typical fixed or temporary fixed VHF marine coast station. Carefully review the list below with respect to your particular situation. If you believe that these assumptions would leave your station insufficiently protected, provide the actual station parameters in Schedule G, Items 32 through 35, using Items 28 through 31 to identify the locations, antennas, and frequencies. If you do not provide the actual data and an interference problem arises involving another country's station, your station will be protected only to the limit of the FCC's assumptions.

### **The following station parameters will be assumed unless otherwise stated:**

**Item 32 Antenna Azimuth of Main Lobe.** The FCC will report each fixed or temporary fixed VHF marine coast station as having an omnidirectional (360) azimuth.

**Item 33 Beamwidth.** Where an omnidirectional antenna is assumed, beamwidth has no relevance, and therefore, no assumed value will be used.

**Item 34 Antenna Polarization.** All stations will be reported as having antennas with vertical polarization.

**Item 35 Antenna Gain.** The antenna gain for all fixed and temporary fixed VHF marine coast stations will be assumed to be 6 dB.







**Frequency Information**

**A) All Station Classes complete except: Airport Control Tower/FAC (See Frequency Information part B).**

19) Action A/M/D	20) Location Number	21) Antenna Number	22a) Frequency (MHz)		23) Maximum Power Output (watts)	24) Proposed Hours of Operation	25) Operational Altitude	26) Emission Designator
			Lower	Upper (if band)				
			Existing (if mod)					
			New					
			Existing (if mod)					
			New					
			Existing (if mod)					
			New					
			Existing (if mod)					
			New					
			Existing (if mod)					
			New					
			Existing (if mod)					
			New					
			Existing (if mod)					
			New					
			Existing (if mod)					
			New					
			Existing (if mod)					
			New					

**FAA Coordination Information**

27) Applicants for a new or modified Aviation Support (121.950 MHz), Control Tower, RCO, Radionavigation Land, Radionavigation Land Test, or AWOS/ASOS must provide the following information:

FAA Regional Office Notified: \_\_\_\_\_

Date Notified: \_\_\_\_\_





## Certifications

### Private Coast station and Marine Utility station certification. Check all that apply.

I certify that I am:

- Seeking authorization in an area having a recognized frequency coordinating committee (Southern California Marine Radio Council, North Pacific Marine Radio Council) and the committee has endorsed the use of the frequency(ies) and location(s) requested.
- Regularly engaged in the operation, docking, direction, construction, repair, servicing or management of one or more commercial transport vessels or U.S. state or local government vessels; or, responsible for the operation, control, maintenance, or development of a harbor, port, or waterway used by commercial transport vessels; or responsible for the operation of bridges, structures, or other installations that are part of, or directly related to, a harbor, port, or waterway when the operation of such facilities requires radio communications with vessels for safety or navigation.
- Engaged in furnishing a ship arrival and departure service; or, a corporation furnishing a nonprofit radio communication service to its parent corporation, a subsidiary of the parent, or its own subsidiary, where the party to be served is eligible for a private coast or marine utility station license; or, a nonprofit corporation or association organized to furnish a maritime mobile service solely to persons who operate one or more commercial transport vessels.
- A person controlling public mooring facilities; or, a yacht club with moorage facilities.
- A person servicing or supplying vessels other than commercial transport vessels; or, a nonprofit organization providing noncommercial communications to vessels other than commercial transport vessels.

### Operational Fixed station certification.

- I certify that I am the licensee of a coast or ground station and no other suitable telecommunications facilities are available to satisfy coast or ground station requirements.

### Maritime Support station certification.

- I certify that I intend to use this authorization to train personnel associated with the maritime service, or to test, demonstrate, or maintain ship or coast radio equipment.

### Aeronautical Fixed station certification.

- I certify that I am the licensee of an associated aeronautical enroute station and that adequate land line facilities are not available to fulfill this communications need.

### Aeronautical Advisory station (Unicom) certification.

- I certify that the station will be located on the property of the airport to be served and, in cases where the airport does not have a control tower, RCO, or FAA flight service station, that I have notified the owner of the airport and all aviation service organizations located at the airport within ten days prior to application.

### Aeronautical Search and Rescue station certification.

- I certify that I am a governmental entity or private organization chartered to perform aeronautical search and rescue functions.

### Flight Test station certification. Check all that apply.

I certify that I am:

- Applying for UHF frequencies and request use of them in support of a contract with the U.S. Government.
- A manufacturer of aircraft or major aircraft components.
- A parent corporation or its subsidiary if either corporation is a manufacturer of aircraft or major aircraft components.
- An educational institution or person primarily engaged in the design, development, modification, and flight test evaluation of aircraft or major aircraft components.

### Aviation support station certification. Check all that apply.

I certify that I am:

- The operator of a flight school.
- An operator of lighter than air aircraft.
- Engaged in soaring or free ballooning.
- The operator of an airport or aviation service organization located on an airport.

### Radiodetermination station certification. Check all that apply.

- The FAA is not prepared to render the service for which I am applying.
- I am engaged in the development, manufacture, or maintenance of aircraft radionavigation equipment.
- I intend to establish the proposed facility at an airport for the use of the public.
- I am engaged in the testing, manufacture, or design of ELTs or I train personnel in the operation and location of ELTs.

### Civil Air Patrol station certification.

- I certify that I represent Wings or the Headquarters of the Civil Air Patrol.

### Aeronautical Enroute/122.825 or 122.875 MHz Certification.

- I certify that this station will provide communications only to aircraft with a maximum capacity of up to 56 passengers or carrying up to 18,000 lbs. of cargo.

### Aeronautical Utility Mobile certification. Check all that apply.

- I certify that I have a need to routinely operate a ground vehicle on the airport movement area.
- I certify that I am the airport owner or operator, or a state or local governmental agency; or I have obtained permission from the airport owner/operator to operate a vehicle on the airport movement area.
- I certify that I have obtained an agreement from the Air Traffic Manager of the airport control tower that approves the requested use of the local control (tower) or RCO frequency.