

**Information and Instructions**

**Technical Data Schedule for the Paging, Rural,  
Air-ground (General Aviation), and  
Offshore Radiotelephone Services (Part 22)**

Form FCC 601, Schedule J, is a supplementary schedule for use with the FCC Application for Radio Service Authorization: Wireless Telecommunications Bureau and/or Public Safety and Homeland Security Bureau, FCC 601 Main Form. This schedule is used to apply for an authorization to operate a radio station in the Paging, Rural, Air-ground (General Aviation), and Offshore Radiotelephone Services, as defined in 47 CFR, Part 22. 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 mobile transmit location or each temporary fixed station location using FCC 601, Schedule D, Schedule for Station Locations and Antenna Structures. Mobile and temporary fixed station locations only apply to Rural Radio (CR), Offshore (CO), and BETRS (CB) radio services. It is recommended that you complete Schedule D prior to completing Schedule J.

**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 717-338-2824) for assistance.

**Schedule J  
Instructions**

**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 1 and 2, complete only the items that have changed for the control point. If you are deleting a control point, only Items 1 and 2 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 1** 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 2** If the control point has been previously licensed under this call sign to the Applicant by the FCC, enter its 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 is 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 new control point, which will appear on the Authorization.

**Item 3** Enter the street address, city or town, county/borough/parish or equivalent entity, 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 4** Enter the telephone number, including area code, where a person responsible for operation of the station or systems can be reached.

## Antenna Information

This section must be completed only when antenna information is 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 5, 6, and 7, complete only the items that have changed for the antenna. If you are deleting an antenna, only Items 5, 6, and 7 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 5 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 6 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 7 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 and A3). A single location can have multiple antennas. Antenna numbers need only be unique within each location. The FCC will assign an official number to the new antenna, which will appear on the Authorization.

**Note:** Location number (Item 6) and antenna number (Item 7) are used to associate information in the Antenna Information Section with information in the following sections: Frequency Information, Radial Data for Antennas, and Points of Communication for Transmitters. To do this, enter the necessary technical information into the Antenna Information Section using the appropriate location number and antenna number. Then, enter the necessary technical information in each of the related sections for that antenna, using the same location number/antenna number pair. Each antenna specified in the Frequency Information, Radial Data for Antennas, and Points of Communication for Transmitters Sections must have corresponding data in the Antenna Information Section.

Item 8 Enter the actual height above ground level to the tip of the antenna. Enter this item in meters, rounded to the nearest tenth.

Item 9 Enter the average radiation center height above average terrain (AAT) of the eight cardinal radials. Enter this item in meters, rounded to the nearest tenth. See the rules for your radio service for instructions on calculating AAT.

Item 10 Enter the beamwidth of the main lobe of a directional antenna used with a fixed station. Complete this item for fixed stations only. Enter '360' for an omni-directional antenna.

Item 11 Enter the ratio (decibels) of the power required at the input of 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 12 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.

## Frequency Information

This section must be completed only when frequencies are to be added, modified, or deleted. If you are adding a new frequency, 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 16. If you are modifying attributes of an existing frequency, in addition to Items 13 and 14, complete only the items that have changed for the frequency. If you are deleting a frequency, only Items 13 through 17 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.

Enter frequency information for each antenna specified in the Antenna Information Section. For multiple frequency lines, repeat the location number/antenna number combination for each frequency. For example:

| <u>Location</u> | <u>Antenna</u> | <u>Frequency (MHz)</u> |
|-----------------|----------------|------------------------|
| F1              | A1             | XXX.XXXX               |
| F1              | A1             | YYY.YYYY               |
| F1              | A1             | ZZZ.ZZZZ               |
| F1              | A2             | AAA.AAAA               |
| F1              | A2             | BBBBB.BBBB             |
| F2              | A1             | CCCCC.CCCC             |
| F2              | A1             | DDDDD.DDDD             |

**Item 13** 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 14** For each antenna, enter its corresponding location number, as entered in Item 6 of the Antenna Information Section of this Schedule.

**Item 15** For each antenna, enter its corresponding antenna number, as entered in Item 7 of the Antenna Information Section of this Schedule.

**Note:** Each location number (Item 14) and antenna number (Item 15) pair specified in the Frequency Information Section must have corresponding data in the Antenna Information Section.

**Item 16** To add frequencies on an antenna at a location, enter in the column labeled 'New', the specific center frequencies in Megahertz (MHz), of the channels on which the transmitters are proposed to operate.

To modify a frequency on an antenna at a location, you must complete Items 13-15 and enter the existing center frequency in the column labeled 'Existing' and enter the proposed new center frequency in the column labeled 'New'.

**Item 17** Enter the appropriate station class code from the following table. Definitions for most of these items are listed in the Commission's rules.

|                      |      |
|----------------------|------|
| Air-ground Signaling | FBSI |
| Auxiliary Test       | FXTS |
| Base                 | FBBS |
| Central Office       | FXCO |
| Control              | FXCT |
| Dispatch             | FXDI |
| Fixed Relay          | FXRX |
| Fixed Subscriber     | FXSB |
| Ground               | FBGS |
| Inter-Office         | FXIO |
| Mobile Subscriber    | MLSB |
| Repeater             | FXRP |
| Standby              | FBST |
| Temporary Fixed      | FX5  |

**Item 18** This item reports the maximum effective radiated power (ERP) in any direction on the specified channel. The answer must be stated in watts.

**Item 19** Enter the actual transmitter output power in watts.

**Item 20** Complete this item only if the filing requests authority to use an emission type that is not already authorized in the FCC rules for use by all stations in the pertinent radio service.

### **Radial Data for Antennas**

This section must be completed only when radial data for antennas is to be added, modified, or deleted. If you are adding new radial data, complete all items for each radial data block to be added. If you are modifying existing radial data, complete all items for the radial data block to be modified. If you are deleting radial data, only Items 21 through 24 are required. Radial data that is 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 21** Indicate the action the filer wants the FCC on the radial data of the specified antenna. Enter 'A' for Add, 'M' for Modify, or 'D' for Delete.

**Items 22-24** Enter the location number, antenna number, and channel center frequency, as specified in the Antenna Information and Frequency Information Sections.

**Note:** Each location number, antenna number, and channel center frequency specified in the Radial Data for Antennas Section must have corresponding data in the Antenna Information and Frequency Information Sections.

**Item 25** Enter the height of the antenna center of radiation above the average terrain elevation (RCHAAT) along each of the eight cardinal radials. Enter this item in meters, rounded to the nearest tenth.

**Item 26** Enter the effective radiated power (ERP) for each of the eight cardinal radials. See the Commission's Rules for your radio service for instructions on calculating RCHAAT.

### **Points of Communication for Transmitters**

These items describe fixed points of communication for: (1) stations in the Rural Radiotelephone Services serving individually licensed subscribers; (2) point to point transmitters; and (3) point-to-multipoint transmitters operating on channels that are assigned only to stations that communicate with four or more points. These items should not be completed by filers for any other purpose. In the Rural Radiotelephone Services (radio service code CR) only those stations operating under station class code FXCT (fixed control station) may complete this section.

This section must be completed only when points of communication are to be added, modified, or deleted. If you are adding new points of communication, complete all items for each point of communication to be added. If you are modifying existing points of communication, complete all items for the point of communication to be modified. If you are deleting points of communication, only Items 27 through 30 are required. Points of communication 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 27** This item indicates the action the filer wants the FCC to take on the specified point of communication. Enter 'A' for Add, 'M' for Modify, or 'D' for Delete.

**Item 28** Enter the corresponding transmit location number, as entered in Item 14 of this schedule.

**Item 29** Enter the corresponding transmitting antenna number, as entered in Item 15 of this schedule.

**Item 30** Enter the corresponding transmitting channel center frequency, as entered in Item 16 of this schedule.

**Item 31** Enter the name of the city or town of the point of communication.

**Item 32** Enter the state of the point of communication. Refer to FCC 601 Main Form Instructions, Appendix II, for a list of valid state, jurisdiction, and area abbreviations.

**Item 33** Enter in Megahertz (MHz), the center frequencies of the point of communication.

**Items 34 and 35** Enter the geographic coordinates of the location, referenced to the North American Datum of 1983 (NAD83). This information can be determined in many ways, including a GPS receiver, a 7.5 minute topographical quadrangle map of the area, or you may consult the city or county/borough/parish surveyor in your area. Topographical maps may be purchased from the U.S. Geological Survey, Washington, DC 20242 or from its office in Denver, Colorado 80225.

**Note:** Location coordinates (latitude and longitude) for sites in the Continental United States, Puerto Rico, the U.S. Virgin Islands, Alaska, Hawaii, American Samoa, and Guam must be referenced to the North American Datum of 1983 (NAD83). Coordinates for sites in the Northern Mariana Islands, Wake Island, and Midway Island should be referenced to the applicable local datums. If the source from which you obtain the coordinates still utilizes an older datum (*i.e.*, NAD27, PRD40) you must convert to NAD83. Conversion routines are available through the internet at <http://wireless.fcc.gov/uls/utilities/nadcon.html>.

Enter the latitude using the format *DD-MM-SS*, where the degrees (*DD*) term can have a value in the range of 0 to 72, minutes (*MM*) can range from 0 to 59, and seconds (*SS*) can range from 0 to 59.9. If desired, seconds may be expressed to the nearest tenth of a second (in which case, use the format *DD-MM-SS.S*). In the lower right corner, specify the direction as either N for North or S for South.

Enter the longitude using the format *DDD-MM-SS*, where the degrees (*DDD*) term can have a value in the range of 64 to 180, minutes (*MM*) can range from 0 to 59, and seconds (*SS*) can range from 0 to 59.9. If desired, seconds may be expressed to the nearest tenth of a second (in which case, use the format *DDD-MM-SS.S*). In the lower right corner, specify the direction as either E for East or W for West.

Item 36 Enter the subscriber call sign of the point of communication.

## Technical Data Schedule for the Paging, Rural, Air-ground (General Aviation), and Offshore Radiotelephone Services (Part 22)

**Control Points**

| 1)<br>Action<br>A/M/D | 2)<br>Control Point<br>Number | 3)<br>Location<br>Street Address, City or Town, County/Borough/Parish, State | 4)<br>Telephone<br>Number |
|-----------------------|-------------------------------|------------------------------------------------------------------------------|---------------------------|
|                       |                               |                                                                              |                           |
|                       |                               |                                                                              |                           |

**Antenna Information**

| 5)<br>Action<br>A/M/D | 6)<br>Location<br>Number | 7)<br>Antenna<br>Number | 8)<br>Height to Tip AGL<br>(meters) | 9)<br>Height of Center of<br>Radiation AAT<br>(meters) | 10)<br>Beamwidth of Main<br>Lobe<br>(degrees) | 11)<br>Gain<br>(dB) | 12)<br>Azimuth<br>(degrees) |
|-----------------------|--------------------------|-------------------------|-------------------------------------|--------------------------------------------------------|-----------------------------------------------|---------------------|-----------------------------|
|                       |                          |                         |                                     |                                                        |                                               |                     |                             |
|                       |                          |                         |                                     |                                                        |                                               |                     |                             |
|                       |                          |                         |                                     |                                                        |                                               |                     |                             |
|                       |                          |                         |                                     |                                                        |                                               |                     |                             |
|                       |                          |                         |                                     |                                                        |                                               |                     |                             |
|                       |                          |                         |                                     |                                                        |                                               |                     |                             |
|                       |                          |                         |                                     |                                                        |                                               |                     |                             |
|                       |                          |                         |                                     |                                                        |                                               |                     |                             |

**Frequency Information**

| 13)<br>Action<br>A/M/D | 14)<br>Location<br>Number | 15)<br>Antenna<br>Number | 16)<br>Channel Center Frequency (MHz) |     | 17)<br>Station<br>Class | 18)<br>Maximum<br>Transmitting<br>ERP (watts) | 19)<br>Transmitter Output<br>Power (watts) | 20)<br>Nonstandard<br>Emission<br>Designator |
|------------------------|---------------------------|--------------------------|---------------------------------------|-----|-------------------------|-----------------------------------------------|--------------------------------------------|----------------------------------------------|
|                        |                           |                          | 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 |                         |                                               |                                            |                                              |

**Radial Data for Antennas**

|                        |                           |                          |                           |                           | 0° | 45° | 90° | 135° | 180° | 225° | 270° | 315° |
|------------------------|---------------------------|--------------------------|---------------------------|---------------------------|----|-----|-----|------|------|------|------|------|
| 21)<br>Action<br>A/M/D | 22)<br>Location<br>Number | 23)<br>Antenna<br>Number | 24)<br>Frequency<br>(MHz) | 25)<br>RCHAAT<br>(meters) |    |     |     |      |      |      |      |      |
|                        |                           |                          |                           | 26)<br>ERP<br>(watts)     |    |     |     |      |      |      |      |      |

|                        |                           |                          |                           |                           | 0° | 45° | 90° | 135° | 180° | 225° | 270° | 315° |
|------------------------|---------------------------|--------------------------|---------------------------|---------------------------|----|-----|-----|------|------|------|------|------|
| 21)<br>Action<br>A/M/D | 22)<br>Location<br>Number | 23)<br>Antenna<br>Number | 24)<br>Frequency<br>(MHz) | 25)<br>RCHAAT<br>(meters) |    |     |     |      |      |      |      |      |
|                        |                           |                          |                           | 26)<br>ERP<br>(watts)     |    |     |     |      |      |      |      |      |

|                        |                           |                          |                           |                           | 0° | 45° | 90° | 135° | 180° | 225° | 270° | 315° |
|------------------------|---------------------------|--------------------------|---------------------------|---------------------------|----|-----|-----|------|------|------|------|------|
| 21)<br>Action<br>A/M/D | 22)<br>Location<br>Number | 23)<br>Antenna<br>Number | 24)<br>Frequency<br>(MHz) | 25)<br>RCHAAT<br>(meters) |    |     |     |      |      |      |      |      |
|                        |                           |                          |                           | 26)<br>ERP<br>(watts)     |    |     |     |      |      |      |      |      |

|                        |                           |                          |                           |                           | 0° | 45° | 90° | 135° | 180° | 225° | 270° | 315° |
|------------------------|---------------------------|--------------------------|---------------------------|---------------------------|----|-----|-----|------|------|------|------|------|
| 21)<br>Action<br>A/M/D | 22)<br>Location<br>Number | 23)<br>Antenna<br>Number | 24)<br>Frequency<br>(MHz) | 25)<br>RCHAAT<br>(meters) |    |     |     |      |      |      |      |      |
|                        |                           |                          |                           | 26)<br>ERP<br>(watts)     |    |     |     |      |      |      |      |      |

|                        |                           |                          |                           |                           | 0° | 45° | 90° | 135° | 180° | 225° | 270° | 315° |
|------------------------|---------------------------|--------------------------|---------------------------|---------------------------|----|-----|-----|------|------|------|------|------|
| 21)<br>Action<br>A/M/D | 22)<br>Location<br>Number | 23)<br>Antenna<br>Number | 24)<br>Frequency<br>(MHz) | 25)<br>RCHAAT<br>(meters) |    |     |     |      |      |      |      |      |
|                        |                           |                          |                           | 26)<br>ERP<br>(watts)     |    |     |     |      |      |      |      |      |

