

## **REGISTERING C-BAND RECEIVE-ONLY EARTH STATIONS BY OCTOBER 17, 2018 FCC DEADLINE**

The FCC instituted a [freeze](#) on applications for new receive-only earth stations in the conventional C-band (3700-4200 MHz) but allowed existing earth stations to be registered until **Oct. 17, 2018** (extended from the previous July deadline). The steps for registering a receive-only earth station during this window are as follows:

1. Complete FCC Form 312 Main Form and Schedule B online at the FCC's Website.
  - (a) Go to the FCC International Bureau Filing System (IBFS) website: <http://licensing.fcc.gov/myibfs>.
  - (b) Sign in using your company's FRN and associated password. If you don't have an FRN, you can create one by going to the FCC CORES website: <https://apps.fcc.gov/coresWeb/publicHome.do>.
  - (c) Once signed in, go to the drop down menu titled "Start New Application/Action" and select "New Authorization (Form 312, Schedule B & S)" under "Satellite Earth Stations" and click "Go." You will need to provide your company FRN and password again to pre-fill the Form 312 with basic information.
  - (d) When you get to the Form 312 main form screen, fill in the required information using the attached sample "Registration of a New C-band Receive-only Earth Station" as a guide. Under Item 22, check both items "Using U.S. licensed satellites" and "Using non-US licensed satellites." You will then also need to check "Yes" in response to Item 42a and specify "Permitted List" in response to Item 42b. Items 30 through 33 should be answered "N/A." In Item 43, you should specify that you are providing coordinates in WGS84 format, as indicated in the sample. In addition, because the FCC's freeze decision includes a waiver of the requirement to file a coordination report, you should check yes for item 35 and include in item 43 a statement referring to the FCC waiver, as shown in the below, imbedded sample application. Items 36-39 should be answered as appropriate for your company.

### [Application for Earth Station Authorizations](#)

**Important:** Click on "Validate" once you have filled in all information on the Main Form in order to save your inputs. If you have missed any essential inputs, IBFS will flag the missing fields for you during the validation process. Remember to click "Validate" again once you have entered in the missing information.

- (e) Click the button labeled "Form 312 Schedule B" at the bottom of the Form 312. Fill in the Schedule B information, again using the attached sample form as a guide. Provide the street address and phone number for the antenna site. For the site latitude and longitude information requested in Items E11 and E12, you should submit coordinates in WGS84, the system used by GPS-based satellite mapping services such as Google Earth. The FCC now uses Google Earth to confirm the existence and location of earth station facilities. For the coordinate reference system, Item E13, you do not have the option of specifying the WGS84 standard, so check NAD-83 – the statement you included in the main form in response to Item 43 will let the FCC know

that you are actually using WGS84. For the question “Is Frequency Coordination Required?,” (item E18) select “No.” Click on “Validate” to make sure all of your inputs are saved.

- (f) On the Schedule B screen, you will also see a button marked “Points of Communication.” Click on that and select “Permitted List” so that you can receive from all U.S.-licensed and foreign-licensed C-band satellites authorized to serve the U.S. that are within the satellite coordination arc. There is no need to fill in any other field. Remember to click on “Validate” to make sure your inputs are saved. Click on “Previous” to go back to the first Schedule B screen.
- (g) Click on the button marked “Antenna” and fill in the required details using the sample form as a guide. Remember to click on “Validate” to make sure your inputs are saved. Note that the input power and total EIRP fields should be left blank since this is a receive-only earth station. Click also on the “Antenna Gain”, “Frequency”, “Frequency Coord” and “Particulars of Operation” buttons to fill in the required information about your antenna and the receive frequencies you want protected.

When you click the “Frequency Coord” button, you will be asked some information about the eastern and western-most satellite orbital locations the antenna points at. Generally, for C band dishes receiving video or audio programming distribution, the range is 60°W – 143°W. However, if you are receiving from a satellite further east than 60°W, please extend the coordinated arc to include the actual satellites with which you are communicating. You will also need the elevation and azimuth angles associated with the specified orbital arc. These angles can be calculated using an online tool, such as SES’ online antenna pointing calculator (<https://extranet.ses.com/AntennaPointingCalculator/>) or this one: <http://www.satcom.co.uk/article.asp?article=1>. To perform the calculation, on the left-hand side enter the height data from Item E14 and the latitude and longitude from Items E11 and E12, rounding the values to the nearest degree. For the longitude, put a minus sign in front of the value for west longitude. On the right-hand side, leave the satellite latitude as 0. If you are using the 60 – 143°W arc described above, first enter 60 in the satellite longitude box and hit calculate, which will give you the eastern azimuth and elevation angles needed for items E56 and E57. Then replace the satellite longitude value with 143 and hit calculate again to produce the western azimuth and elevation angles needed for items E58 and E59. Screen shots showing these calculations for the data in the sample application are provided in the imbedded pdf file.

#### [Azimuth and Elevation Angle Calculation](#)

Under “Particulars of Operation,” the typical emission designator for digital signals is 36M0G7W. Remember to click on “Validate” to make sure of your inputs are saved.

Multiple receive antennas at a site that are within 1 second in latitude and longitude can be filed as part of a single registration. If all antennas are the same model, just indicate the quantity in

item E29 on the Antenna page. To add antennas of different models, click on the “Add” button at the bottom of the Antenna page.

- (h) When you have finished inputting and validating all the information, click on “Menu.” If you wish to review your application in its entirety, you can click on the HTML link on the right next to your application. Once you have confirmed the information, click on the round button on the left next to your just completed Form 312, then click on “File a Form” at the top. You will be asked to confirm that you want to file the Form. Click to confirm. You will get a confirmation page indicating your filing has been submitted. Return to the Main Menu.

3. Pay the FCC Filing Fee. The required FCC filing fee for receive-only C-band earth station registration is \$435. From the Main Menu, click on Form 159 Menu. Select the application you just filed from the list of filed applications, then click “Continue with Form 159.” This will open a pop-up window. You will need to enter your company FRN and password again (assuming the company is paying the fee). This will lead you to another web page where you can provide credit card details for payment. Follow those instructions to complete payment. Once payment has been made, you should receive email confirmation of payment.

If completing the registration process for all your antennas and/or paying the required FCC filing fee for each site will be unduly burdensome, please let us know, and we can assist in raising these issues with the FCC. We have been told that the FCC is willing to consider requests for fee reductions or waivers on a case-by-case basis. The following individuals can answer questions and provide help with the registration process:

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