# Validation Requirements Fixed White Space Device Registrations

As per CFR Title 47, Part 15, § 15.713 (f) (3), all of the following fields are mandatory for fixed white space device (WSD) registrations. The registration record should not be accepted if any of these fields are invalid or missing.

* FCC identifier (FCC ID) of the device
* Manufacturer's serial number of the device
* Device's geographic coordinates (latitude and longitude (NAD 83) accurate to ±/− 50 m)
* Device's antenna height above ground level (meters)
* Name of the individual or business that owns the device
* Name of a contact person responsible for the device's operation
* Address for the contact person
* E-mail address for the contact person
* Phone number for the contact person

## FCC ID

As per CFR Title 47, Part 15, § 15.713 (j) (3), a white space database must not provide a list of available channels to uncertified white space devices. The list of certified white space devices is obtained from the FCC Equipment Authorization System.

* The FCC ID from the device must match (case insensitive) an entry from the FCC authorized list.
* The device type (i.e., fixed WSD) must also match the authorized type associated with the given FCC ID.
* If the device fails these validation checks, it will not receive a list of available channels, and its registration information will not be propagated to other WSDBA peers.

## Serial number

* Can be any string, but must not be blank.
* If the string is longer than 64 characters, only the first 64 characters are guaranteed to be retained.
* Duplicate FCC ID - serial number pairs should not be allowed within a single database system (no two devices should have the same FCC ID - serial number pair). Duplicates across different database providers is permitted in case a single device is in contact with more than one databases.

## Coordinates

As per FCC guidance (<https://www.fcc.gov/encyclopedia/white-space-database-administration-q-page#10_27_11>), the coordinates of the fixed WSD must be within the United States jurisdictional boundary. This area is defined by the Territorial Sea limits (found at [www.nauticalcharts.noaa.gov/csdl/mbound.htm](http://www.nauticalcharts.noaa.gov/csdl/mbound.htm)), the US-Canadian common border (found at <https://transition.fcc.gov/oet/info/maps/uscabdry/uscabdry.zip>), and the US-Mexico common border (found at <http://www.ibwc.gov/GIS_Maps/downloads/us_mex_boundary.zip>).

* If the device coordinates fall outside of this jurisdictional space, the registration record should not be accepted.
* It is highly recommended that the databases use the same process for checking the validity of locations in this data entry function as that used in validating the location submitted by a device when it submits a request for a list of channels for operation.

## Antenna height

As per CFR Title 47, Part 15, § 15.709 (b) (2), the transmit antenna used with fixed devices may not be more than 30 meters above the ground, and the antenna height above average terrain may not be more than 250 meters.

* If the antenna height above ground is greater than 30 meters, or if the computed height above average terrain at the given coordinates plus antenna height is greater than 250 meters, then the registration should be considered invalid.
* Antenna height is the height of the antenna’s radiation center above ground.

## Name of device owner

* Can be any string, but must not be blank.
* If the string is longer than 64 characters, only the first 64 characters are guaranteed to be retained.
* Database administrators may be requested to cooperate with the FCC staff in examining the validity of names that may not appear valid.

## Name of contact person

* The data entry screen should provide instructions that the name provided in the contact person field should be the party with direct control of operation of the device who can respond to an inquiry about interference or disable or alter the device’s operation in response to a request from the FCC.
* Can be any string, but must not be blank.
* If the string is longer than 64 characters, only the first 64 characters are guaranteed to be retained.
* While it is preferred that this field indicate the name of an actual person, it is recognized that in some cases responsibility for a device is assigned to a staff unit rather than an individual.
* Database administrators may be requested to cooperate with the FCC staff in examining the validity of names that may not appear valid.

## Address of contact person

* Can be any string, but must not be blank.
* If the string is longer than 64 characters, only the first 64 characters are guaranteed to be retained.
* Must show: a) address (street address or P.O. Box), b) city/town, and if U.S., c) if U.S., state or territory that is one of the two character Postal “FIPS” codes (this field may include FIPS codes for U.S. commonwealths, territories and possessions), and 5 or nine digit Zip Code (nine digit codes should to include a “-“), or, if not U.S., d) country.
* Address may appear on the “data download” as a single field or sub-fields (address, city/town, state, and zip code) and the format used internally must exchange with the other databases.

## E-mail address of contact person

* Must contain one or more characters (username), followed by the ‘@’ symbol, followed by one or more additional characters (domain).
* The domain of the e-mail address must be resolvable (e.g., via nslookup or similar).

## Phone number of contact person

* Must be a string of numeric digits and may include spaces and the special characters “-“, “.” “(“ and “)”. May also include an extension after the phone number that indicates “ext” and the numbers and any special characters, such as “#” or “\*”, identifying the extension.
* If the string is longer than 64 characters, only the first 64 characters are guaranteed to be retained.
* Phone numbers with the 555 exchange or beginning with the special service phone numbers (211, 311, 411, 511, 711, 811, or 911) are not acceptable.

## Data retention policy

As per FCC 08-260, Second Report and Order and Memorandum Opinion and Order, paragraph 211, if a device does not check the database for three months, its registration will be removed from the database.

* Any device that fails to contact a white space database for 90 days or more shall be considered inactive and will be removed from the fixed device registration records.
* The originating white space database administrator (the primary contact point and “owner” of a device registration record) is responsible for determining if any of its fixed WSD registration records have become inactive.  If any records become inactive, the originating white space database administrator shall provide “delete” notification (via interoperability protocol) to the peer database administrators so that the corresponding records can be removed accordingly.