

USHGA RADIO AUTHORIZATION STUDY GUIDE

INTRODUCTION

The Federal Communications Commission on March 16, 2001 granted to the United States Hang Gliding Association, a radio station license in the IB business radio service for an unlimited number of vehicular and portable units in specified quantities. These radios are licensed for use on 151.505, 151.625, 151.925, 151.955, and 158.40 MHz transmitting with a power limit of up to 50 watts. The call sign issued to the USHGA was WPRY 420.

The area of operation is the United States nationwide. The license is issued for ten years and the control point is James A. Zeiset, c/o USHGA, P.O. Box 1330, Colorado Springs, CO 80901, (719) 632-8300.

This has been a major breakthrough in radio communication for the Association. Before this we had been relegated to the Citizens Band Service which most serious pilots found to be inadequate for cross-country retrievals. Limitations were: use by rude operators, linear amplifiers and overall poor reception qualities of an amplitude modulated system. The aircraft service was inadequate because of power limitations (10 watts), limited useable frequencies (123.3 & 123.5), amplitude modulation (subject to static), \$70.00 per radio licensing fees for mobile units, \$35.00 per radio fees for the aircraft unit, the potential for FAA control through required registration numbers and the high cost of aircraft radios. The amateur radio service was inadequate, in spite of two-meter use of frequency modulated emissions (FM) and many useable frequencies, because of their stringent licensing requirements for both pilot and retrieval driver, and expense (\$35.00). This service has emergency communications available through telephone patches and the many amateur radio operators that scan and monitor all channels to police the legality of users.

The Business Radio Service License was issued under the auspices of CFR 47, Part 90, Private Land Mobile Radio Service, Subpart D, Industrial Radio Service, Section 90.75, Business Radio Service. This radio frequency must be used for the business of the USHGA per item 3.1, "Eligibility", on FCC application form 574 and the Articles of Association which were submitted as a part of the application. That eligibility was stated as: "Applicant is in the business of operating competitive cross country events, meets and retrievals. Radios will be used in the conduct of these activities."

FCC REGULATIONS

Management of the system is of vital importance if we are to communicate within the limits of CFR 47. As chairman of the radio communications committee, I and ten or so members have researched the possibility of a radio service that will most adequately fill our needs. The business radio service appears at this time to be the most suitable. Some of the operating criteria are listed below; each member of the association who has a desire to obtain an authorization must be familiar with the following guidelines to qualify:

1. Radios may be used in competitive events, meets, retrievals and other member activity that is for the benefit of the sport of hang gliding per the articles of USHGA.
2. If the control station operates on the same frequency as the mobile station and if the height of the control station antenna does not exceed 20 feet above the ground, or an existing man-made structure (other than an antenna tower), there is no limit on the number of stations which may be authorized.
3. An application for authority to conduct an itinerant operation in the Business Radio Service must be restricted to use of itinerant frequencies or other frequencies not designated for permanent use. Users should be aware, however, that no protection is provided from interference from other itinerant operations.
4. Each transmitter utilized for operation under this part "must be of a type which is included in the Commission's current Radio Equipment List as type accepted for use under this part".

This list includes crystal -controlled or EPROM programmable synthesized radios but does not include user-programmable radios that are type accepted for two meters.

5. Licensees of radio stations in the private land mobile radio services shall be directly responsible for the proper operation and use of each transmitter for which they are licensed. In this connection, licensees exercise such direction and control as necessary to assure that all authorized facilities are employed: a. Only for permissible purposes. b. Only in a permissible manner. c. Only by persons with authority to use and operate such equipment.
6. Licensees shall be bound by the provisions of the Communications Act of 1934, as amended and licensees may not, through written or oral agreements or otherwise, relieve themselves of any duty or obligation imposed upon them, by law, as licensees.
7. Each licensee shall restrict all transmissions to the minimum practicable transmission time and shall employ an efficient operating procedure designed to maximize the utilization of the spectrum.
8. Communications involving the imminent safety-of-life or property are to be afforded priority by all licensees.
9. Licensees shall take reasonable precautions to avoid causing harmful interference. This includes monitoring the transmitting frequency for communications in progress and such other measures as may be necessary to minimize the potential for causing interference.
10. Stations...shall not continuously radiate all unmodulated carrier.
11. The radiations of the transmitter shall be suspended immediately upon detection or notification of a deviation from the technical requirements of the station authorization until such deviation is corrected. This includes spurious transmissions, incorrectly adjusted VOX or stuck push-to-talk.
12. Stations licensed under this part may transmit any communication related directly to the imminent safety-of-life or property communications directly related to the activities which make the licensee eligible for the station license held under this part and communications for testing purposes required for proper station and system maintenance. Each licensee shall keep such tests to a minimum and shall employ every measure to avoid harmful interference.
13. Stations licensed under this part may not broadcast program material or transmit messages for hire.
14. Any station licensed under this part may communicate with any other station licensed under this part, with U.S. Government stations and with foreign stations in connection with mutual activities, provided the Commission has previously approved communication with that foreign station and so has its government.
15. Mobile station transmitters may be installed in vehicles operated by persons other than the licensee ... when necessary for the licensee to meet his requirements in connection with the activities for which he is licensed. The number of units so installed must not exceed the number of mobile units authorized to the licensee. The licensee is responsible for taking any necessary precaution to effectively eliminate the possibility of unauthorized operation of transmitters when not under the control of the licensee.
16. Mobile units licensed in the Industrial Radio Services may be installed in vehicles of persons furnishing under contract to the licensee and for the duration of the contract a facility or service directly related to the activities of the licensee.
17. Mobile stations authorized under this part may be operated aboard aircraft for air-to-mobile, air-to-base and air-to-air subject to the following: A) Operations are limited to aircraft that are regularly flown at altitudes below one mile above the earth's surface. B) Transmitters are to operate with an output power not to exceed 10 watts. C) Operations are secondary to land-based systems.
18. Each station or system shall be identified by the transmission of the assigned call sign during each exchange of transmissions or once each fifteen minutes during periods of continuous operation.
19. Nothing in this section shall be construed as prohibiting the transmission of station or unit identifiers which may be necessary or desirable for system operation provided that they are transmitted in addition to the assigned station call sign.
20. Each transmitter shall be so installed and protected that it is not accessible to or capable of operation by persons other than those duly authorized by and under the control of the licensee. Provisions of this part authorizing certain unlicensed persons to

operate stations shall not be construed to change or diminish in any respect the responsibility of station licensees to maintain control over the stations licensed to them or for the proper functioning and operation of those stations and transmitter units in accordance with the terms of the licenses of those stations.

21. No operator license or permit is required for the operation, maintenance or repair of stations licensed under this part.
22. Any person, with the consent or authorization of the licensee, may employ stations in this service for the purpose of telecommunication.
23. The station licensee shall be responsible for the proper operation of the station at all times and is expected to provide observations, servicing and maintenance as often as may be necessary to ensure proper operation.
24. All stations and records of stations in these services shall be made available for inspection at any reasonable time and any time while the station is in operation upon reasonable request of an authorized representative of the Commission.
25. Any licensee receiving official notice of a violation of the terms of the Communications Act of 1934, as amended shall within 10 days from such receipt send a written answer to the office of the Commission originating the original notice. If an answer cannot be sent, or an acknowledgement made within such period, acknowledgement and answer shall be made at the earliest practicable date with a satisfactory explanation of the delay. The reply shall set forth the steps taken to prevent a recurrence of improper operation.
26. DO NOT use profanity; all transmissions must be in plain language (no coded words or hidden meanings).
27. DO NOT attempt duplex communications as this is a simplex system, meaning your opposite conversant cannot hear you while he is transmitting,
28. DO NOT use VOX capability at large gatherings if there is any possibility of inadvertent transmissions.
29. DO NOT tape your antenna to your control bar as it will damage the quality of your signal.
30. Protect your microphone from wind noise as it will render your transmissions unreadable.

RADIOS IN USHGA COMPETITION

Use of radios in competition is covered in the Competition Rule Book, section 4.5d, and states:

1. Radios may be carried and be accessible if the pilot is authorized or licensed to use his chosen frequency.
2. Information may be transmitted by pilots and drivers to report their position and request ground conditions from launch or goal.
3. Pilots may request and drivers may transmit ground conditions in the interest of safety when they have reason to believe landing is imminent.
4. Pilots are prohibited from transmitting information designed to mislead other competition pilots.
5. Pilots are responsible for their driver's transmissions.

PROGRAM LOGISTICS

The logistics behind complying with the Federal Communications Commission's requirements to maintain responsibility and control per CFR 47, 90.403 (a) will be considerable. in this light we have constructed the following procedures:

- a. The USHGA office will administer and issue on membership cards another special skills sign off called (PA) Portable Authorization and/or (VA) Vehicular Authorization.
- b. This sign-off will be granted by USHGA observers/instructors after the applicant completes a 24-question quiz based on the FCC regulations the USHGA is bound by, listed above.

- c. If the observer/instructor has reason to believe that the applicant will use the authorization(s) responsibly he must sign a statement to that effect at the bottom of the completed test and submit it to the USHGA office, with a **one time \$15.00 records fee per Authorization**, for assignment of a PA and/or VA special skill. The USHGA will then issue a new member card reflecting that information.
- d. The \$15.00 records fee, per authorization, is to justify the paperwork load on the office staff.
- e. This sign off may be revoked by the issuing observer/ instructor, or any director for any series of actions that jeopardize our qualification to maintain the station license. Observers/Instructors will not be permitted to sign themselves off for this authorization.

It is imperative that the USHGA office keep a current list of all Radio Authorization sign offs. Even though we may apply for permission to operate more stations in the system it will always be a finite number that we may not exceed. Write or call Jim Zeiset for further information, if needed, as: 13154 County Road 140, Salida, CO 81201 (719) 539-3900, jimzgreem@aol.com

Dear USHGA Observer/instructor:

You will need the following items to administer the new radio licensing program for the USHGA:

1. USHGA Radio Authorization Study Guide.
2. USHGA Radio Authorization Test Application.
3. USHGA Radio Communications Quiz.

If all applicant misses questions, do not approve any application until they have an understanding of the correct answer.

Please become familiar with the "Logistics" listed of the enclosed study guide. If you have any questions, call me at (719) 539-3900.

Sincerely,



Jim Zeiset
USHGA Director, Region IV
Chairman, Radio Communications

USHGA RADIO COMMUNICATION QUIZ (True/False)

1. The USHGA's business radio service license allows the use of radios to coordinate retrieval activities.
2. Users of the USHGA's authorization are the sole users of the authorized frequencies, and are protected by the FCC from interference from other users.
3. User-programmable radios may not be operated by USHGA members on USHGA frequencies.
4. Once a USHGA member has obtained a PA sign off, he may use the radio services in any manner he wishes.
5. USHGA members with the PA sign off are bound by certain communication laws, and cannot relieve themselves of their responsibilities to these laws.
6. USHGA members with PA sign offs are required to restrict the length of their transmissions to the minimum
7. Communications involving imminent life or death Situations have no priority over general transmission.
8. Listening oil the channel is required prior to transmitting.
9. Users may transmit a carrier with no modulation.
10. If your radio does not work properly (can't receive, stuck push-to-talk, garbled transmission) you are required to cease use of the transmitter.
11. Transmission of any of the following communications are allowed: related to imminent safety, related to hang gliding activities, and testing of the transmitter.
12. Stations licensed under this part can broadcast messages for hire or program material.
13. Any station licensed under this part may communicate with any other station licensed Linder this part, including U.S. Government stations.
14. The USHGA may apply for permission to operate more than one unit on a single license.
15. A licensee is responsible for the operation of mobile Units covered under his license.
16. An approved radio may be operated aboard an aircraft for air-to-mobile, air-to-base, and air-to-air if that aircraft is regularly flown below one mile AGL and power output is not more than 10 watts.
17. It is not necessary for each station or system to transmit the assigned call sign during each exchange of transmissions.
18. In addition to the assigned station call sign, an operator may use a station or unit identifier (personal call sign).
19. You are not allowed to authorize your ground crew to use one of your radios, even if they have been briefed on proper usage and proper procedures in accordance with the terms of our license.
20. An operator's license is required for operation of a radio using these frequencies.
21. A station licensee may allow anyone to use his station for telecommunication.
22. The station licensee, in addition to being responsible for proper station operation, is responsible for periodic maintenance and servicing.
23. You must make your station available for inspection to all authorized representative of the FCC.
24. If you hold a USHGA Radio Authorization you may Use secret codes for communication.

(05/01)

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|---------------|---------------|
| 1 True False | 13 True False |
| 2 True False | 14 True False |
| 3 True False | 15 True False |
| 4 True False | 16 True False |
| 5 True False | 17 True False |
| 6 True False | 18 True False |
| 7 True False | 19 True False |
| 8 True False | 20 True False |
| 9 True False | 21 True False |
| 10 True False | 22 True False |
| 11 True False | 23 True False |
| 12 True False | 24 True False |

RADIO AUTHORIZATION REQUEST FORM

Pilot Section

I, _____, hereby accept the policy in the USHGA
(Please clearly print name above)
Radio Study Guide on revocation of these radio use privileges.

I need a Portable Authorization (hand-held).

I need a Vehicular Authorization (permanent hard-wired, vehicle-installed radio).

Signature: _____ Date: _____ USHGA # _____

Address: _____

City: _____ State: _____ Zip: _____

Email: _____ Phone: _____

**PLEASE REMEMBER TO INCLUDE THE \$15.00 PROCESSING
FEE FOR EACH AUTHORIZATION REQUESTED.**

* Make checks or money orders payable to: USHGA

* **Credit Card:** We accept Visa, MC, and American Express

CC #: _____ Exp Date: _____

Signature: _____ Date: _____

You must have either an USHGA Observer or Instructor complete the section below.

USHGA Observer/Instructor Section

I, _____, as a USHGA Observer/Instructor believe
(Please clearly print name above)
that the above-mentioned pilot will use this authorization responsibly.

USHGA Observer/Instructor Signature USHGA # Region Date