

APPLICATION FOR NEW OR MODIFIED RADIO STATION AUTHORIZATION UNDER PART 5 OF FCC RULES
EXPERIMENTAL RADIO SERVICES (OTHER THAN BROADCAST)

1. Applicant's Name and Post Office address
(Give street, city, state, and ZIP Code, see Instruction No. 4)

McDonnell Douglas Radio Services Corporation
Attn: G. D. Foot, W140, 302, 3E
325 J. S. McDonnell Blvd.
Hazelwood, MO 63042

DO NOT WRITE IN THIS BLOCK

File No.

00721-EX-PL-88

MAY 31 1988

2.(a) Class of station applied for

Fixed Ground Station

2.(b) Nature of Service

Experimental

3.(a) Application for (check only one box)

☒ New Station ☐ Modification of existing authorization

3.(b) For Modification indicate below

File No.

Call Sign

4. Application for modification indicate change in (check all that apply)

☐ Frequency ☐ Emission ☐ Power ☐ Location
☐ Other particulars (describe below or in attached Exhibit No. _____)

5. Particulars of Operation see instructions below)

Frequency (State Whether kHz or MHz (A))	POWER			EMISSION (E)	MODULATING SIGNAL (F)	NECESSARY BANDWIDTH (kHz) (G)
	(B)	(C)	(D)			
155 MHZ	20W	83W	Peak	25000 PON	*see below	25000
170 MHZ	20W	83W	Peak	25000 PON		25000
200 MHZ	20W	83W	Peak	25000 PON		25000
220 MHZ	20W	83W	Peak	25000 PON		25000
500 MHZ	20W	83W	Peak	25000 PON		25000

(A) List each frequency or frequency band separately. (If more space is required, attach as Exhibit No. _____).

(B) Insert maximum R.F. output power at the transmitter terminals. Specify units.

(C) Insert maximum effective radiated power from the antenna (If pulsed emission specify peak power).

(D) Insert "MEAN" or "PEAK" (See definitions in Part 5).

(E) List each type of emission separately for each frequency. (See Section 2.201 FCC Rules.)

(F) Insert the following information for each type of emission:

for A1, insert maximum speed of keying in bauds

for A2, insert maximum audio modulating frequency and maximum speed of keying in bauds

for A3, insert maximum audio modulating frequency

for F1, insert mark and space frequencies, maximum speed of keying in bauds

for F2, insert maximum audio modulating frequency, frequency deviation of carrier, maximum speed of keying in bauds

for F3, insert maximum audio modulating frequency and frequency deviation of carrier

for P0, insert pulse duration and repetition rate

for other emissions describe in detail in space provided below.

(G) Describe how the necessary bandwidth was determined in space provided below.

* 5(E) 100n sec Pulse duration and 3.25 MHZ repetition rate

(G) Bandwidth = 1/Pulse width min. = 1/40n sec = 25000KHZ

6(a). Proposed location of transmitter and transmitting antenna (Check only one box)

☒ FIXED BASE☐ MOBILE☐ BASE & MOBILE

(b) If permanently located at a fixed location, give below

State	County	City or Town
Missouri	St. Charles	(Near) St. Charles

Number and street (or other indication of location)

Adjacent to - St. Charles county airport

Geographical coordinates exact to the nearest second

North Latitude	West Longitude
38° 55' 36"	90° 25' 18"

(c) If mobile, describe the exact area of operation

Geographical coordinates of the approximate center of proposed area of operation (mobile applications)

North Latitude	West Longitude

Place an "X" in the appropriate column

YES	NO
	X

7. Is a directional antenna (other than radar) used?

If "YES", give the following information:

(a) Width of beam in degrees at the half-power point. _____

(b) Orientation in horizontal plane _____

(c) Orientation in vertical plane _____

8. Is this authorization to be used for fulfilling the requirements of a government contract with an agency of the United States Government?

If "Yes", attach FCC Form 440-A, Supplemental Information for Applications in the Experimental Radio Service Involving Government Contract, in triplicate to this application.

	X
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9. Is this authorization to be used for the exclusive purpose of developing radio equipment for export to be employed by stations under the jurisdiction of a foreign government?

If "Yes", attach as EXHIBIT No. _____, the following information:

(a) The contract number and the name of the foreign government concerned.

(b) The daily hours of operation and the estimated date of the beginning and end of the specific time period for which the authorization is required.

	X
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10. Is this authorization to be used for providing communications essential to a research project. (The radio communication is not the objective of the research project).

If "Yes", attach as EXHIBIT No. _____, a narrative statement providing the following information

(a) A description of the nature of the research project being conducted.

(b) A showing that the communications facilities requested are necessary for the research project involved.

(c) A showing that existing communications facilities are inadequate.

	X
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11. If all the answers to Items 8, 9, and 10 are "No", attach as EXHIBIT NO. _____, a narrative statement describing in detail the following:

(a) The complete program of research and experimentation proposed including description of equipment and theory of operation.

(b) The specific objectives sought to be accomplished.

(c) How the program of experimentation has a reasonable promise of contribution to the development, extension, expansion, or utilization of the radio art, or is along lines not already investigated.

12. (a) Give an estimate of the length of time that will be required to complete the program of experimentation proposed in this application

5 years

(b) If less than 2 years, give the length of time in months that the authorization requested in this application will be required.

13. List below transmitting equipment to be installed (if experimental, so state):

MANUFACTURER

TYPE

NO. OF UNITS

Hewlett Packard

8341B Synthesized Sweep Oscillator

1

Scientific-Atlantic

1787 Pulse Modulator

1

14. State provisions that will be made for measurement and periodic checking of the station's technical characteristics (power, frequency, bandwidths) to insure compliance with terms of license.
Periodic measurements will be made to determine that the proposed equipment is operating within the terms of its authorization. Calibrated laboratory instruments will be used to make these measurements.

Place an "X" in the appropriate column

15. Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building?

If "Yes", give the following (See Instruction 9):

(a) Overall height above ground to tip of antenna is _____ meters.

(b) Elevation of ground at antenna site above mean sea level is _____ meters.

(c) Distance to nearest aircraft landing area is _____ kilometers.

(d) List any natural formations or existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft and thereby minimize the aeronautical hazard of the antenna.

(e) Submit as EXHIBIT No. _____, a vertical profile sketch of total structure (including supporting building, if any, giving heights in meters above ground for all significant features. Clearly indicate existing portion, noting particulars of aviation obstruction lighting already available.

16. Does this application propose a developmental program of experimentation which requires the submission of a petition? (See Instructions 10 and 11)

If "Yes", attach the petition as EXHIBIT No. _____.

17. Applicant is (check only one box)

☐ Individual

☐ Association

☐ Partnership

☒ Corporation

☐ Other (describe below)

18. Is applicant a foreign government or a representative of a foreign government?

19. Has applicant or any party to this application had any FCC station license or permit revoked or had any application for permit, license or renewal denied by this Commission?

If "Yes", attach as EXHIBIT No. _____, a statement giving call sign of license or permit revoked and relate circumstances.

Place "X" in the appropriate column.

YES NO

20. Will applicant be owner and operator of station?

X

If "No", explain applicant's relation to station.

See exhibit II

21. Will applicant have absolute control of station, both as to physical operation and service conducted?

X

If "No", explain circumstances and give name of person who will have control of station.

22. Will the transmitter be operated with licensed operator on duty at a remote control point?

X

If "Yes", the following information must be provided. (If there is to be a licensed operator on duty at the transmitter, data required by this item may be omitted.)

(a) Location of remote control point. (If more than one remote control point is involved, attach as EXHIBIT No. _____, a statement giving location of each remote control point, plan of operation, etc.)

State	County
City or Town	Street & No.

(b) By what means will the transmitter be rendered inaccessible?

(c) Can transmitter be placed in an inoperative condition from the remote control point?

(d) Describe below the equipment to be used to enable the operator at the control point to determine when there is a deviation from the terms of the station license or when operation is not in accordance with the Commission's Rules governing the class of station involved.

23. Give name, title, and telephone number (include area code) of person who can best handle inquiries pertaining to this application.

David Pollmann
Engineer Electronics
(314) 232-2839

24. List below all exhibits in numerical sequence and the item number of form requiring the exhibit identified.

EXHIBITS AND ITEM NO. OF FORM					
Exhibit Number	Item No. of Form	Exhibit Number	Item No. of Form	Exhibit Number	Item No. of Form
I	11				
II	20				
III	Environmental Statement				

25. CERTIFICATION

ATTENTION: Read this certification carefully before signing this application.

THE APPLICANT CERTIFIES THAT:

- (a) Copies of the FCC Rules Parts 2 and 5 are on hand; and
- (b) Adequate financial appropriations have been made to carry on the program of experimentation which will be conducted by qualified personnel; and
- (c) All operations will be on an experimental basis in accordance with Part 5 and other applicable rules, and will be conducted in such a manner and at such a time as to preclude harmful interference to any authorized station; and
- (d) Grant of the authorization requested herein will not be construed as a finding on the part of the Commission
 - (1) that the frequencies and other technical parameters specified in the authorization are the best suited for the proposed program of experimentation, and
 - (2) that the applicant will be authorized to operate on any basis other than experimental, and
 - (3) that the Commission is obligated by the results of the experimental program to make provision in its rules including its table of frequency allocations for applicant's type of operation on a regularly licensed basis.

APPLICANT CERTIFIES FURTHER THAT:

- (e) All the statements in the application and attached exhibits are true, complete and correct to the best of the applicant's knowledge; and
- (f) The applicant is willing to finance and conduct the experimental program with full knowledge and understanding of the above limitations; and
- (g) The applicant waives any claim to the use of any particular frequency or of the ether as against the regulatory power of the USA.

Signed and dated this 26th day of May, 1988.

Name of Applicant McDonnell Douglas Radio Services Corporation
correspond with name given on page 1)

By GORDON D. FOOTE
(print)

Gordon D. Foote
(signature)

Title Vice President

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND IMPRISONMENT. U. S. CODE, TITLE 18, SECTION 1001.

Check Appropriate Classification

- ☐ Individual Applicant
- ☐ Member of Applicant Partnership
- ☒ Officer of Applicant Corporation or Association
- ☐ Authorized Employee

NOTIFICATION TO INDIVIDUALS UNDER PRIVACY ACT OF 1974

Information requested through this form are authorized by the Communications Act of 1934, as amended, and specifically by Section 308 therein. The information will be used by Federal Communications Commission staff to determine eligibility for issuing authorizations in the use of the frequency spectrum and to effect the provisions of regulatory responsibilities rendered the Commission by the Act. Information requested by this form will be available to the public unless otherwise requested pursuant to Section 0.459 of FCC Rules and Regulations.

THE FOREGOING NOTICE IS REQUIRED BY THE PRIVACY ACT OF 1974, P.L. 93-579, DECEMBER 31, 1974, 5 U.S.C. 552a(e)(3).