

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

<p>1. Applicant's Name and Post Office Address (Street address, city, state, and ZIP Code).</p> <p><b>BNR Inc. P. O. Box 833871 Richardson, Texas 75083-3871</b></p>	<p><b>DO NOT WRITE IN THIS BLOCK</b></p> <p>File No. <u>4474 Ex-MR-94</u></p>
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<p>2(a). Application for (check only one box)</p> <p><input type="checkbox"/> New Station    <input checked="" type="checkbox"/> Modification of existing authorization</p>	<p>2(b). For Modification indicate below:</p> <p>File No: <u>4398-EX-ML-94</u>      Call Sign: <u>K12XAG</u></p>
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3. Application for modification indicate whether change is in addition or replacement of (check all that apply)

FREQUENCY     EMISSION       POWER       LOCATION

OTHER PARTICULARS (describe below or in attached EXHIBIT NO. Exhibits #1-#15)

4. Particulars of Operation ( see instruction below)

Frequency (state whether kHz or MHz) (A)	POWER			EMISSION (E)	MODULATING SIGNAL (F)	NECESSARY BANDWIDTH (kHz) (G)
	(B)	(C)	(D)			
		See Exhibit #1				

- (A) List each frequency or frequency band separately. (If more space is required, attach as EXHIBIT No. #1 \_\_\_\_\_)
- (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 2201 of FCC Rules).
- (F) Insert as appropriate for the type of modulation:
  - (1) the maximum speed of keying in bauds
  - (2) maximum audio modulating frequency
  - (3) frequency deviation of carrier
  - (4) pulse duration and repetition rate
 For complex emissions describe in detail in the space provided below.
- (G) Describe how the necessary bandwidth was determined in space provided below.

AP 1/1/95

Proposed location of transmitter and transmitting antenna (check only one box).

FIXED/BASE

MOBILE

BASE AND MOBILE

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

State \_\_\_\_\_ County \_\_\_\_\_ City or Town \_\_\_\_\_

Number and street (or other indication of location)  
Various locations, see Exhibit #1

5(d). If mobile operation, describe the exact area of operation.

In the vicinity of Richardson, Texas, Mountain View, California, Santa Clara, California, and Research Triangle Park, North Carolina

5(c). Enter the geographical coordinates to the nearest second

North Latitude \_\_\_\_\_ West Longitude \_\_\_\_\_  
See Exhibit #1 See Exhibit #1

5(e). Enter geographical coordinates of the approximate center of proposed area of operation (mobile applications)

North Latitude \_\_\_\_\_ West Longitude \_\_\_\_\_  
See Exhibit #1 See Exhibit #1

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

If "YES", give the following information:

Yes  No

(a) Width of beam in degrees at the half-power point Exhibit #11

(b) Orientation in horizontal plane Exhibit #11 (c) Orientation in vertical plane Exhibit #11

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

Yes  No

If "YES", attach as EXHIBIT NO. \_\_\_\_\_, a narrative statement describing the government project, agency and contact number.

8. 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?

Yes  No

If "YES", attach as EXHIBIT NO. \_\_\_\_\_, the following information: Provide the contract number and the name of the foreign government concerned.

9. 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).

Yes  No

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.

10. If all the answers to Items 7, 8, and 9, 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 reasonable promise of contribution to the development, extension, expansion, or utilization of the radio art, or is along lines not already investigated.

11(a). Give an estimate of the length of time that will be required to complete the program of experimentation proposed in this application. more than 2 yrs.

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

12. Would a Commission grant of this application come within Section 1.1307 of the FCC Rules, such that it may have a significant environmental impact?

Yes  No

If you answer "YES", submit an Environmental Assessment required by Section 1.1311.

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

MANUFACTURER	TYPE	No. of UNITS
Northern Telecom	TRX 1900, experimental	< 25
Northern Telecom	Cell Plus Antenna, experimental	6
Northern Telecom	Smart/SAM Antenna, experimental	3
Northern Telecom	B S 1 T, experimental	< 10
Northern Telecom	B S 1 P, BS1U, experimental	< 150
Shaye, Motorola	Shaye Companion, Silverlink 2000	< 500
Oualcomm, AEG	PCS 1900 CDMA, PCS1900 TDMA-US GSM	< 300
Motorola, Nokia, Ericsson, NMC, Orbitel	Assorted GSM Handsets	< 300
Qualcomm	TRX CDMA, experimental	12
Motorola	TRX Basestation, GSM	< 20
Tellniar, Sanyo, Sony, Mitsubishi, Ericsson	Assorted TDMA Handsets	<100
Northern Telecom	P-series Basestations	<50

14. Is the equipment listed in item 13 capable of station identification pursuant to section 5.152?  Yes  No

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?  Yes  No

If "YES", give the following (see instruction 9):

- (a) Overall height above ground to tip of antenna is Exhibit #11 meters.
- (b) Elevation of ground at antenna site above mean sea level is EX #11 meters.
- (c) Distance to nearest aircraft landing area is Exhibit #11 kilometers.
- (d) List any natural formations of existing man-made structures (hill, 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. Exhibit #11 - #13

(e) Submit as EXHIBIT NO. #11-#13, 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. Applicant is (check only one box)  
 Individual  Association  Partnership  Corporation  
 Other (describe below)

17. Is applicant a foreign government or a representative of a foreign government?  Yes  No

18. 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?  Yes  No  
If "YES", attach as EXHIBIT No. \_\_\_\_\_ a statement giving call sign of license or permit revoked and related circumstances.

19. Will applicant be owner and operator of the station?  Yes  No

20. Give name, title, and telephone number (include area code) of person who can best handle inquiries pertaining to this application.  
Paul Shepherd, Senior Manager PCS Systems, 214-684-7962

21. APPLICANT ANTI-DRUG ABUSE CERTIFICATION:  
By checking "YES", the applicant certifies that, in the case of an individual applicant, he or she is not subject to denial of federal benefits, that includes FCC benefits, pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. 862, or, in the case of a non-individual applicant (e.g. corporation, partnership, or other unincorporated association), no party to the applicant is subject to a denial of the federal benefits, that includes FCC benefits, pursuant to that section. For the definition of "party" for these purposes, see 47 CFR 2.3003(b).  Yes  No

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

Exhibit Number	Item No. of Form	Exhibit Number	Item No. of Form	Exhibit Number	Item No. of Form
1	3	8	3	15	3,15
2	3	9	3		
3	3	10	3,10		
4	3	11	3,15		
5	3	12	3,15		
6	3	13	3,15		
7	3	14	3,15		

**CERTIFICATION:**

Attention: Read this certification carefully before signing this application.

**THE APPLICANT CERTIFIES THAT:**

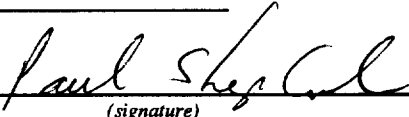
- (a) Copies of FCC Rule Parts 2 and 5 are on hand; and
- (b) Adequate financial appropriations have been made to carry on the program of experimentation which will be conducted by qualified personnel; and
- (c) All operations will be on an experimental basis in accordance with Part 5 and other applicable 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 electromagnetic spectrum as against the regulatory power of the USA.

Signed and dated this 27th day of October, 19 94

Name of Applicant BNR INC.  
(must correspond with name given on page 1)

By Paul Shepherd   
(print) (signature)

Title Senior Manager PCS Systems

Check Appropriate classification:

Individual applicant

Member of applicant partnership

Authorized employee

Office of applicant corporation or association

**WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 16, Section 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).**

NOTIFICATION TO INDIVIDUALS UNDER PRIVACY ACT OF 1974  
AND THE PAPERWORK REDUCTION ACT OF 1980

Information requested through this form is 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 provision 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 47 CFR 0.459 of the FCC Rules and Regulations. Your response is required to obtain this authorization.

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), AND THE PAPERWORK REDUCTION ACT OF 1980, P.L. 96-511. DECEMBER 11, 1980, 44 U.S.C. 3507.