

Attn: T. Mitchell, 5555 N. Beach St., Fort Worth, TX 76137-2794

United States of America
FEDERAL COMMUNICATIONS COMMISSION
EXPERIMENTAL
SPECIAL TEMPORARY AUTHORIZATION

EXPERIMENTAL
(Nature of Service)

K F 2 X G R
(Call Sign)

XD FX
(Class of station)

S-0261-EX-91
(File number)

NAME MOTOROLA, INC

Vicinity of Fort Worth, TX
(Location of station)

Special Temporary Authority is hereby granted to operate the radio transmitting apparatus described below:

Frequency MHz	Authorized Power (watts)	Emission Designator
1980	56.4 DBM (ERP)	3M50A7W
1870	57.4 DBM (ERP)	3M50A7W

This special temporary authorization is granted upon the express condition that it may be terminated by the Commission at any time without advance notice or hearing if in its discretion the need for such action arises. Nothing contained herein shall be construed as a finding by the Commission that the authority herein granted is or will be in the public interest beyond the express terms hereof.

This special temporary authorization shall not vest in the grantee any right to operate the station nor any right in the use of the frequencies designated in the authorization beyond the term hereof, nor in any other manner than authorized herein. Neither the authorization nor the right granted hereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934. This authorization is subject to the right of use of control by the Government of the United States conferred by Section 706 of the Communications Act of 1934.

This authorization effective September 16, 1991 and
will expire 3:00 A.M. EST. March 16, 1991.

FEDERAL
COMMUNICATIONS
COMMISSION

21 Wabn TA # 5/17/91
Ext of S-0181-EX-91 ✓
FCC/MELLON JUL 22 1991

MR. Frank Wright
Federal Communications Commission
2025 M Street N.W.

July 19, 1991

* (S-0261-EX-91)

Dear Frank,

I applied for and received an STA for the use of a microwave link in April, 1991. It is associated with Experimental Station Call Sign KF2XGR, File number 1745-EX-PL-90. We ran into difficulties with the property that we intended to use and therefore need to ask for a modification of that STA.

The applicant is still Motorola, Inc. 5555 N. Beach Street, Fort Worth, Texas. The STA will provide voice and data communication between our lab at 5555 N. Beach and another site, which has been changed to 2200 S. Riverside Drive, Fort Worth, Texas. The co-ordinates of the main site are 32 degrees 50 minutes 39 seconds N. and 97 degrees 17 minutes 37 seconds West. Those of the remote site will be 32 degrees 43 minutes 22 seconds North and 97 degrees 18 minutes 15 seconds West.

The frequency of the main site to the remote path will also change, from 1950 MHz to 1980 MHz.

Attached is a path summary indicating that these frequencies will not result in interference on this path.

I make this application as an authorized employee of Motorola, and I thank you for your time and effort in helping us along on this.

Sincerely,

Terrence E. Mitchell

Terrence E. Mitchell

JEFA International, Inc.
 Multipath Reliability Predictions &
 Interference Case Summary
 prepared for:
MOTOROLA, INC.

System: FORT WORTH
 Path: MOTOROLA R&D - S RIVERSIDE DRIVE

Date: 07/01/91
 JEFA Job#: 710

	RECEIVING STATION	RECEIVE FREQUENCY (MHz) & POL	FADE MARGINS (dB)			NON-DIVERSITY PREDICTED ONE-WAY TIME BELOW BER=10 ⁻⁶
			TFM	DFM	CFM	
SITE A:	MOTOROLA R&D	1870.00 V	49.5	47.0	44.8	<50 SECONDS/YEAR
SITE B:	S RIVERSIDE DRIVE	1980.00 V	49.5	47.0	44.2	<50 SECONDS/YEAR

CASE NUMBER	INTERFERING PATH	INTERFERING FREQ & POL (MHz)	OWNER CODE	FREQ SEP (MHz)	IPL (dBm)	MARGIN TO OBJ (dB)	DIST (MI)	NOTES
		CASES INTO MOTOROLA R&D			COMP MARGIN:		7.7 dB	
5	WHC731-WHC732	1865.00 V	S18545	5.00	-73.7	7.7	33.49	

		CASES INTO S RIVERSIDE DR			COMP MARGIN:		2.0 dB	
216	WHK667 - WHJ753	1980.00 H	S97500	0.00	-113.5	2.0	12.53	

NOTES: 1. THIS CASE MAY BE BLOCKED

PATH PARAMETERS USED IN CALCULATIONS

AVERAGE ANNUAL TEMP =	65 DEGREES FAHRENHEIT
CALCULATED STANDARD DEVIATION =	20.0 FEET [20=SMOOTHEST 50=NORMAL 140=ROUGHEST]
MID BAND FREQUENCY =	1.9 GIGAHERTZ
PATH LENGTH =	8.39 MILES
ESTIMATED HUMIDITY FACTOR =	1.0 2.0=COASTAL 1.0=AVERAGE 0.5=DRY
CALCULATED CLIMATE FACTOR "c" =	3.3 WHICH WAS USED FOR THE ABOVE PREDICTIONS
CHARTED CLIMATE FACTOR "c" =	4 USED AS A REFERENCE ONLY

THESE OUTAGE PREDICTIONS DO NOT REPRESENT A GUARANTEE OF PERFORMANCE. LOCAL VARIATIONS IN PROPAGATION CONDITIONS AND FUTURE DEGRADATION OF THE RADIO FREQUENCY ENVIRONMENT CAN GREATLY AFFECT ACTUAL PATH / SYSTEM PERFORMANCE.

JEFA INTERNATIONAL, INC.
1116 DOBIE DRIVE
PLANO, TX 75074
(214) 424-5680

MICROWAVE PATH DATA

COMPANY: MOTOROLA, INC.
SYSTEM: MOTOROLA R&D - S RIVERSIDE DRIVE

PAGE: 1 OF 1
DATE: 07/01/91

STATION NAME	MOTOROLA R&D TX	S RIVERSIDE TX
PATH STATUS	PROPOSED OR PRIOR COORDINATED	
CALL SIGN		
LATITUDE (D-M-S)	32 50 39.0	32 43 22.0
LONGITUDE (D-M-S)	97 17 37.0	97 18 15.0
GROUND ELEV (FT-AMSL)	658	615
PATH AZIMUTH (DEG)	184.204	4.198
PATH DISTANCE (MILES)	8.387	
(KM)	13.498	
ANTENNA		
PRIMARY TX	MARK ANTENNA PROD P-18A96G	MARK ANTENNA PROD P-18A96G
FCC CODE		
GAIN	31.4	31.4
C/L	87	65
PRIMARY RX		
FCC CODE		
GAIN (dBi)	SAME AS TRANSMITTER	
C/L (FT-AGL)		
DIVERSITY		
FCC CODE		
GAIN (dBi)		
C/L (FT-AGL)		
EQUIPMENT	MOTOROLA MICROWAVE BNB866DR2L-2	MOTOROLA MICROWAVE BNB866DR2L-2
FCC CODE		
EMISSION	3500A9Y	3500A9Y
LOADING	96 CH DIG	96 CH DIG
STABILITY (%)	0.001000	0.001000
POWER (DBM)	29.0	29.0
RECEIVED LEVEL (DBM)	-35.9	-35.9
EIRP (DBM)	56.4	57.4
FIXED LOSSES (DB)	4.0	3.0
FREE SPACE LOSS (DB)	120.7	
TRANSMIT FREQUENCIES (MHZ)	* 1980.000V	* 1870.000V

* FREQUENCIES ARE UNPAIRED ACCORDING TO FCC RULES & REGULATIONS DUE TO POTENTIAL INTERFERENCE CONSIDERATIONS, ALTHOUGH ADEQUATE FREQUENCY SEPARATIONS HAVE BEEN MAINTAINED

FEDERAL COMMUNICATIONS COMMISSION
FEE PROCESSING FORM

FOR
FCC
USE
ONLY

FCC/MELLON JUL 22 1991

07-23-91 8320345 001

Please read instructions on back of this form before completing it. Section I MUST be completed. If you are applying for concurrent actions which require you to list more than one Fee Type Code, you must also complete Section II. This form must accompany all payments. Only one Fee Processing Form may be submitted per application or filing. Please type or print legibly. All required blocks must be completed or application/filing will be returned without action.

SECTION I

APPLICANT NAME (Last, first, middle initial)

Motorola, Inc.

MAILING ADDRESS (Line 1) (Maximum 35 characters - refer to Instruction (2) on reverse of form)

5555 N Beach

MAILING ADDRESS (Line 2) (if required) (Maximum 35 characters)

CITY

Fort Worth

STATE OR COUNTRY (if foreign address)

Texas

ZIP CODE

76137

CALL SIGN OR OTHER FCC IDENTIFIER (if applicable)

KF2XBR

Enter in Column (A) the correct Fee Type Code for the service you are applying for. Fee Type Codes may be found in FCC Fee Filing Guides. Enter in Column (B) the Fee Multiple, if applicable. Enter in Column (C) the result obtained from multiplying the value of the Fee Type Code in Column (A) by the number entered in Column (B), if any.

(A)

(B)

(C)

(1)

FEE TYPE CODE

E A E

FEE MULTIPLE
(if required)

1

FEE DUE FOR FEE TYPE
CODE IN COLUMN (A)

\$ 35.00

FOR FCC USE ONLY

SECTION II

— To be used only when you are requesting concurrent actions which result in a requirement to list more than one Fee Type Code.

(A)

FEE TYPE CODE

(B)

FEE MULTIPLE
(if required)

(C)

FEE DUE FOR FEE TYPE
CODE IN COLUMN (A)

FOR FCC USE ONLY

(2)

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(3)

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(4)

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(5)

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ADD ALL AMOUNTS SHOWN IN COLUMN C, LINES (1) THROUGH (5), AND ENTER THE TOTAL HERE. THIS AMOUNT SHOULD EQUAL YOUR ENCLOSED REMITTANCE.

TOTAL AMOUNT REMITTED
WITH THIS APPLICATION
OR FILING

\$	<i>35.00</i>
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FOR FCC USE ONLY

35.00