



MOTOROLA – 700 MHz EMERGENCY BACK-UP SYSTEM Broward County, Florida

Purpose:

Motorola is committed to place temporarily into operation a 700 MHz back-up system in accordance with the FCC rules stated in Title 47 Part 90, Subpart R, Section 90.545: TV/DTV Interference protection criteria.

The purpose of this system is to support Broward County in the upcoming OAS (Organization of American States) conference during June 4-7 2005. Dozens of high-level diplomats and foreign officials are expected to attend. The back-up system is needed to support and ensure the security and reliability of the communication systems for a network of local, state, and federal law enforcement agencies during this event (A minimum of 500 users are expected). The intentional operation of this system is to be on standby unless needed in the event of system jamming or an emergency event. This system is not intended to cover the entire Broward County, it is designed to be contained and only serve the Broward County Convention Center area.

System Design:

With the reduced coverage requirement and the TV interference in mind, Motorola will install the equipment in a transportable trailer that will be parked outside the Broward County Convention Center. This transportable trailer is designed with an antenna mast with a height of 60 ft and low power equipment of 8.7 watts maximum ERP to make sure that the back-up system does not come into the vicinity of the 700/800 MHz TV stations.

The local TV stations in the vicinity of the proposed site are:

Distances calculated per Section 73.208 (FM) and Section 73.611 (TV)

WPPB-TV CH 63 (764-770 MHz)

26° 07' 11" N; 080° 10' 38.7" W

Distance to the proposed site: 3.72 miles

CH 63 frequency band ranges from 764 – 770. The antenna used for the station is directional pointing north toward Boca Raton. The video and audio of this TV channel transmit on frequencies 765.25 and 769.75 respectively. The Motorola back-up system transmits on six frequencies that range from 764.281 – 766.781. The maximum ERP of this system is 8.7 watts and the antenna used in this demo system is positioned at a low height of 60ft and a low gain of 2.5 dB. Taking into consideration that the antenna for WPPB-TV is directional, our low power ERP, and the fact that our system was designed to contain coverage within the Broward County Convention Center area we should not impact the audio quality of WPPB-TV.



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Since Broward Education Communications Network (BECON) operates WPPB-TV on CH 63 documentation was sent to the Chief Engineer requesting the TV station's consent to operate on the requested frequencies. After contacting WPPB-TV we were able to confirm that the antenna's used for the TV station are directional. They reviewed documentation explaining the design and operational use of the system and agreed to grant us consent to operate on the requested frequencies.

WAMI-TV CH 69 (800-806 MHz)

25° 59' 09" N; 080° 11' 37" W

Distance to the proposed site: 8.96 miles

CH 69 frequency band ranges from 800 to 806. The video and audio of this TV channel transmits on frequencies 801.25 and 805.75 respectively. Our portables (3 watts) will transmit on frequencies that range from 794.28 – 796.28. Motorola portables will be transmitting on CH 68 frequencies. This frequency separation and low power portables should not cause interference with WAMI-TV CH 69. (See System Information and Frequency Diagram on pages 3 & 4). In addition the design of this system contains coverage with-in the Broward County Convention Center area (5 mile radius). Our coverage will not reach the site of this station.

Due to frequency separation, our low power (8.7 watts ERP), and the fact that our coverage print will not reach this site we do not expect any interference with WAMI-TV.

Motorola acknowledges the FCC regulations governing the licensing and use of frequencies in the 764-776 and 794-806 MHz bands and commits to operating in accordance with the applicable laws during this week period (June 4 – 7, 2005). Motorola has designed this emergency back-up system with reduced coverage and TV interference in mind. We have also attained clearance from the Society of Broadcast Engineers and consent from local TV station WPPB-TV. Motorola will also be working closely with the local TV station to make sure any issue is quickly corrected or the system will immediately be shut down.

Contact Information:

If you have any questions or concerns please feel free to contact the following persons listed below.

Erika Balser, PM	954-723-5906
Janelle Viña, SE	954-723-8184
Mauricio Correa, SE	954-723-8951



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Motorola 700 MHz “Demo” System Information:

Site: Broward County Convention Center

Address: 1950 Eisenhower Blvd
Ft. Lauderdale, FL 33316

Coordinates: 26-05-57.9 N 80-07-23.9 W
Elevation: 60 ft.

ERP: 8.7 watts maximum.
Occupied bandwidth: 8.7 KHz per station

Total # of channels: six (6)

Frequencies:

CH	12.5 KHz CH #'s	TX	12.5 KHz CH #'s	RX
1	45-46	764.28125	1005-1006	794.28125
2	125-126	764.78125	1085-1086	794.78125
3	205-206	765.28125	1165-1166	795.28125
4	285-286	765.78125	1245-1246	795.78125
5	365-366	766.28125	1325-1326	796.28125
6	445-446	766.78125	1405-1406	796.78125

NOTE:

Equipment allocated for this system requires a minimum of 30MHz spacing between transmit and receive frequencies.

Subscribers:

Motorola XTS 5000 Portable
Power output: 3 watts
Location: Subscribers not to roam beyond a 3 mile radius from Broward Convention Center.

Motorola XTL 5000 control stations
Power output: 25 watts
Location: Broward County Convention Center. HAAT: 20 ft.

Mobile Units: None.

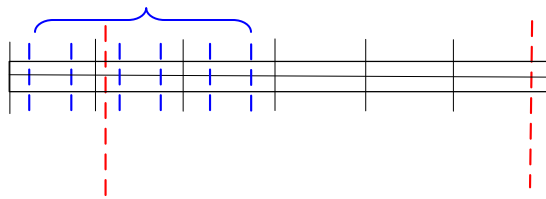
This shows that the Motorola emergency back-up system complies with Sec.90.545 item b, Maximum ERP and HATT.



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Frequency Diagram:

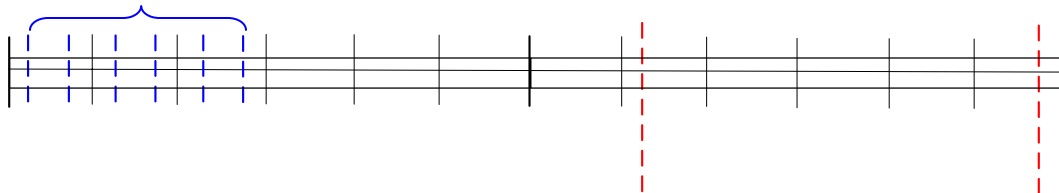
The diagram below is included to clarify the frequencies involved in this project.



:LEGEND:

- - - - - Transmit location of
TV Audio / Video
- - - - - Transmit location of
Motorola Stations /
Portables

*Note: Requested frequencies were approved by CH 63 due to our low ERP, Low antenna height, and contained coverage.



WPPB-TV

63

Motorola Base Station TX
Motorola Portables RX
764.28 – 766.78