

George Town Interference Tests

General Observations

(1) Overall signal quality in George Town:

Despite the relocation of the Heaven 97 and Gospel 88.7 transmitters to Newlands, the signal quality of the FM radio stations continues to be poor in the vicinity of the GKF Industrial Park. The data collected on 3 September 2009, following the relocation of the Heaven 97 and Gospel 88.7 transmitters to Newlands, indicates that the signal quality rating is 2.74, which is a marginal improvement on the 2.73 rating observed in October 2008. As indicated in the Methodology section, this is equivalent to a "Signal is audible, but quality is poor" rating. Whilst some of the interference has been eliminated, some of the FM radio stations are not audible in the immediate vicinity of the CayRock 96.5 transmitter when using certain types of radio receivers.

(2) Differences between receivers:

The quality of the signals is at its best when measured with the car radio (2.99 average rating), followed by the boombox (2.85 average rating) and the clock radio (2.21 average rating). The signal quality on the car radio and boombox improved has marginally since October 2008 (improvements of 0.02 and 0.11, respectively) and is generally considered satisfactory. However, the signal quality on the clock radio has decreased by 0.10 since October 2008. This reduction appears to be due to the weak signals Heaven 97 and Gospel 88.7 (likely due to their relatively distant location in Newlands and low transmitting power) in comparison to the strong CayRock 96.5 signal in the GKF Industrial Park.

(3) Differences between locations:

Among all the sites where testing was conducted, the GKF Industrial Park/Rankin's Plaza was the location with the worst signal quality. Generally speaking, the signal quality at each location appears to be inversely related to the distance between this location and the Gospel/Cayrock/Heaven transmitters.

(4) Differences between radio stations:

Prior to the relocation of the Heaven 97 and Gospel 88.7 transmitters to Newlands, Radio Cayman 89.9 and Vibe 98.9 were the radio stations with the worst signal quality (with average ratings of 1.94 and 2.11, respectively). Following the relocation, the Vibe 98.9 signal improved to 2.56 and the Radio Cayman signal improved to 2.83. Heaven 97 is now the radio station most impacted by the interference in George Town (average rating of 2.00), followed by Vibe 98.9 (average rating of 2.11) and Spin 94.9 (average rating of 2.39).

Methodology

(1) General Approach:

ICTA Staff (David Laliberté) tested the quality of the signal of each for-profit licensed FM radio station in the Cayman Islands. This testing was conducted in three phases. Phase 1 was conducted with Heaven 97 at 2 KW power and phase 2 was performed with Heaven 97 at 1 KW power. Phase three was conducted after the Heaven 97 and Gospel 88.7 transmitters had relocated to a new facility in Newlands. During each phase, the quality of the radio signals was assessed in six separate sites in George Town using three separate FM radio receivers. The same sites and FM receivers were used for both phases.

ICTA Staff applied the following rating scale to assess the signal quality of each radio station:

0	Signal is not audible.
1	Signal is barely audible.
2	Signal is audible, but quality is poor.
3	Signal is audible and quality is acceptable or better.

(2) Dates:

Phase 1 was conducted on 26 September 2008 and phase 2 was conducted on 2 October 2008. Phase 3 was conducted on 3 September 2009. The test results were compiled and analyzed on 2 October 2008 and 3 September 2009.

(3) Locations:

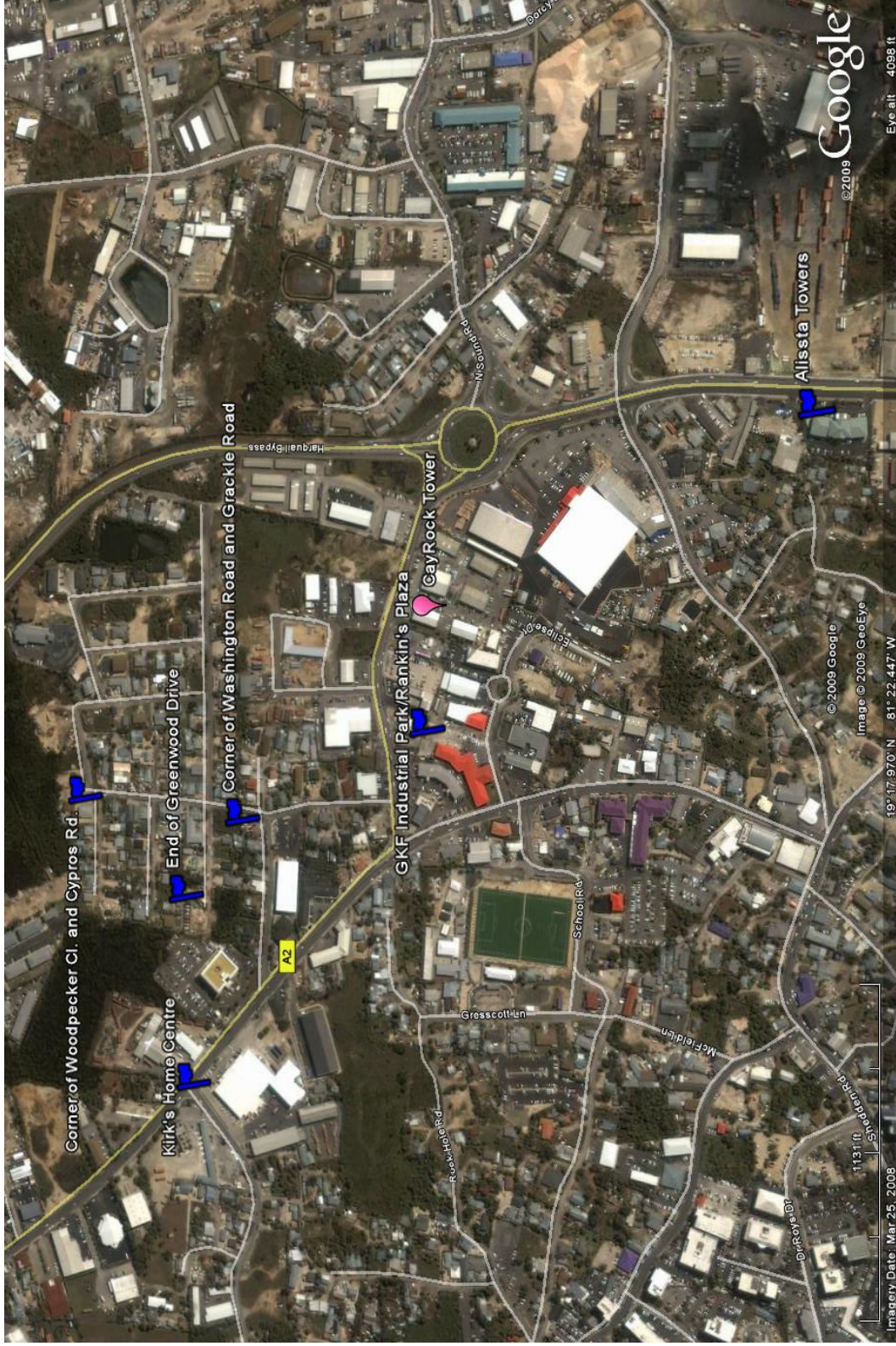
The testing was conducted in six separate locations in the George Town area. These locations are:

- GKF Industrial Park/Rankin's Plaza (114 yards from WestStar tower)
 - Corner of Washington Road and Grackle Road (352 yards from WestStar tower)
 - End of Greenwood Drive (467 yards from WestStar tower)
 - Alissta Towers (516 yards from tower)
 - Corner of Woodpecker Close and Cypros Road (536 yards from WestStar tower)
 - Kirk's Home Centre (647 yards from WestStar tower)
- A map showing these six sites and the location of the Heaven 97, Gospel 88 and Cayrock 96.5 transmitters (WestStar and Island Electronics towers) is provided in the following tab (below).

(4) Equipment:

The testing was performed by tuning three separate FM radio receivers (or attempting to do so) to the signal of FM radio stations. The three FM radio receivers consisted of an in-dash car sound system manufactured by Chrysler (standard on 2005 Chrysler Pacifica), an inexpensive alarm clock manufactured by GPX and a relatively inexpensive boombox manufactured by Sony. These FM radio receivers were connected to the car battery via a Portawattz power converter. Photographs of this equipment is provided in a separate tab.

Transmitter and Testing Locations



Testing Equipment



GKF Industrial Park/Rankin's Plaza (139 yards from CayRock tower)

	Heaven 97 at 2KW (26 September 2008)			Heaven 97 at 1 KW (2 October 2008)			Heaven/Gospel in Newlands (3 September 2009)		
	Clock Radio	Boombox	Car Radio	Clock Radio	Boombox	Car Radio	Clock Radio	Boombox	Car Radio
Gospel 88.7	3	3	3	3	3	3	2	3	3
Radio Cayman 89.9	0	0	3	0	0	3	1	3	3
Spin 94.9	0	1	3	0	3	3	0	3	3
CayRock 96.5	3	3	3	3	3	3	3	3	3
Heaven 97.7	1	3	3	3	3	3	0	3	3
Vibe 98.9	0	0	3	0	0	3	0	3	3
Z99 99.9	2	3	3	1	3	3	0	3	3
Rooster 101.9	3	3	3	3	3	3	3	3	3
Hot 104.1	0	3	3	0	3	3	3	3	3
Breeze 105.3	0	3	3	0	3	3	3	3	3
Kiss 106.1	0	3	3	0	3	3	2	3	3
X-107 107.1	3	3	3	3	3	3	2	3	3
Averages:	1.25	2.33	3.00	1.33	2.50	3.00	1.58	3.00	3.00
		2.19			2.28			2.53	

Corner of Washington Road and Grackle Road (350 yards from CayRock tower)

	Heaven 97 at 2KW (26 September 2008)			Heaven 97 at 1 KW (2 October 2008)			Heaven/Gospel in Newlands (3 September 2009)		
	Clock Radio	Boombox	Car Radio	Clock Radio	Boombox	Car Radio	Clock Radio	Boombox	Car Radio
Gospel 88.7	3	3	3	3	3	3	2	3	3
Radio Cayman 89.9	0	1	3	0	3	1	3	3	3
Spin 94.9	0	3	3	0	3	3	1	3	3
CayRock 96.5	3	3	3	3	3	3	3	3	3
Heaven 97.7	3	3	3	3	3	3	0	3	3
Vibe 98.9	0	0	3	0	3	3	2	3	3
Z99 99.9	2	3	3	2	3	3	2	3	3
Rooster 101.9	3	3	3	3	3	3	3	3	3
Hot 104.1	3	3	3	3	3	3	3	3	3
Breeze 105.3	3	3	3	3	3	3	3	3	3
Kiss 106.1	3	3	3	3	3	3	2	3	3
X-107 107.1	3	3	3	3	3	3	3	3	3
Averages:	2.17	2.58	3.00	2.17	3.00	2.83	2.25	3.00	3.00
		2.58			2.67			2.75	

End of Greenwood Drive (471 yards from CayRock tower)

	Heaven 97 at 2KW (26 September 2008)			Heaven 97 at 1 KW (2 October 2008)			Heaven/Gospel in Newlands (3 September 2009)		
	Clock Radio	Boombox	Car Radio	Clock Radio	Boombox	Car Radio	Clock Radio	Boombox	Car Radio
Gospel 88.7	3	3	3	3	3	3	2	3	3
Radio Cayman 89.9	0	3	3	0	3	3	3	3	3
Spin 94.9	1	3	3	0	1	3	0	3	3
CayRock 96.5	3	3	3	3	3	3	3	3	3
Heaven 97.7	3	3	3	3	3	3	0	3	3
Vibe 98.9	1	3	3	1	3	3	1	3	3
Z99 99.9	1	3	3	3	3	3	2	3	3
Rooster 101.9	3	3	3	3	3	3	3	3	3
Hot 104.1	1	3	3	3	3	3	3	3	3
Breeze 105.3	2	3	3	3	3	3	3	3	3
Kiss 106.1	3	3	3	3	3	3	2	3	3
X-107 107.1	3	3	3	3	3	3	3	3	3
Averages:	2.00	3.00	3.00	2.33	2.83	3.00	2.08	3.00	3.00
		2.67			2.72			2.69	

Alissta Towers (520 yards from CayRock tower)

	Heaven 97 at 2KW (26 September 2008)			Heaven 97 at 1 KW (2 October 2008)			Heaven/Gospel in Newlands (3 September 2009)		
	Clock Radio	Boombox	Car Radio	Clock Radio	Boombox	Car Radio	Clock Radio	Boombox	Car Radio
Gospel 88.7	3	3	3	3	3	3	3	3	3
Radio Cayman 89.9	1	2	3	3	3	3	3	3	3
Spin 94.9	2	3	3	3	3	3	3	3	3
CayRock 96.5	3	3	3	3	3	3	3	3	3
Heaven 97.7	3	3	3	3	3	3	0	3	3
Vibe 98.9	0	0	3	2	2	3	2	3	3
Z99 99.9	3	3	3	3	3	3	2	3	3
Rooster 101.9	3	3	3	3	3	3	3	3	3
Hot 104.1	3	3	3	3	3	3	3	3	3
Breeze 105.3	3	3	3	3	3	3	3	3	3
Kiss 106.1	3	3	3	3	3	3	3	3	3
X-107 107.1	3	3	3	3	3	3	3	3	3
Averages:	2.50	2.67	3.00	2.92	2.92	3.00	2.58	3.00	3.00
		2.72			2.94			2.86	

Corner of Woodpecker Close and Cypros Road (522 yards from CayRock tower)

	Heaven 97 at 2KW (26 September 2008)			Heaven 97 at 1 KW (2 October 2008)			Heaven/Gospel in Newlands (3 September 2009)		
	Clock Radio	Boombox	Car Radio	Clock Radio	Boombox	Car Radio	Clock Radio	Boombox	Car Radio
Gospel 88.7	3	3	3	3	3	3	2	3	3
Radio Cayman 89.9	0	1	3	0	3	3	3	3	3
Spin 94.9	0	1	3	3	3	3	2	3	3
CayRock 96.5	3	3	3	3	3	3	3	3	3
Heaven 97.7	3	3	3	3	3	3	0	3	3
Vibe 98.9	0	1	3	2	3	3	3	3	3
Z99 99.9	3	3	3	3	3	3	3	3	3
Rooster 101.9	2	3	3	3	3	3	3	3	3
Hot 104.1	2	3	3	3	3	3	3	3	3
Breeze 105.3	3	3	3	3	3	3	3	3	3
Kiss 106.1	2	3	3	3	3	3	3	3	3
X-107 107.1	3	3	3	3	3	3	3	3	3
Averages:	2.00	2.50	3.00	2.67	3.00	3.00	2.58	3.00	3.00
		2.50			2.89			2.86	

Kirk's Home Centre (655 yards from CayRock tower)

	Heaven 97 at 2KW (26 September 2008)			Heaven 97 at 1 KW (2 October 2008)			Heaven/Gospel in Newlands (3 September 2009)		
	Clock Radio	Boombox	Car Radio	Clock Radio	Boombox	Car Radio	Clock Radio	Boombox	Car Radio
Gospel 88.7	3	3	3	3	3	3	2	2	2
Radio Cayman 89.9	0	3	3	1	3	3	2	3	3
Spin 94.9	1	3	3	3	3	3	3	3	3
CayRock 96.5	3	3	3	3	3	3	3	3	3
Heaven 97.7	3	3	3	3	3	3	0	3	3
Vibe 98.9	1	3	3	1	3	3	2	3	3
Z99 99.9	2	3	3	3	3	3	2	3	3
Rooster 101.9	3	3	3	3	3	3	3	3	3
Hot 104.1	3	3	3	3	3	3	3	3	3
Breeze 105.3	3	3	3	3	3	3	3	3	3
Kiss 106.1	3	3	3	3	3	3	3	3	3
X-107 107.1	3	3	3	3	3	3	3	3	3
Averages:	2.33	3.00	3.00	2.67	3.00	3.00	2.42	2.92	2.92
		2.78			2.89			2.75	

Summary

	Heaven 97 at 2KW (26 September 2008)		Heaven 97 at 1 KW (2 October 2008)		Heaven/Gospel in Newlands (3 September 2009)	
	Clock Radio	Boombox	Clock Radio	Boombox	Clock Radio	Boombox
All stations, locations & receivers:	2.04	2.68 2.57	2.35	2.88 2.73	2.25	2.99 2.74
	Heaven 97 at 2KW (26 September 2008)		Heaven 97 at 1 KW (2 October 2008)		Heaven/Gospel in Newlands (3 September 2009)	
	All locations and receivers		All locations and receivers		All locations and receivers	
Gospel 88.7	3.00	3.00	3.00	3.00	2.61	2.61
Radio Cayman 89.9	1.61	1.94	1.94	1.94	2.83	2.83
Spin 94.9	2.00	2.39	2.39	2.39	2.50	2.50
CayRock 96.5	3.00	3.00	3.00	3.00	3.00	3.00
Heaven 97.7	2.89	3.00	3.00	3.00	2.00	2.00
Vibe 98.9	1.50	2.11	2.11	2.11	2.56	2.56
Z99 99.9	2.72	2.83	2.83	2.83	2.61	2.61
Rooster 101.9	2.94	3.00	3.00	3.00	3.00	3.00
Hot 104.1	2.67	2.83	2.83	2.83	3.00	3.00
Breeze 105.3	2.78	2.83	2.83	2.83	3.00	3.00
Kliss 106.1	2.78	2.83	2.83	2.83	2.83	2.83
X-107 107.1	3.00	3.00	3.00	3.00	2.94	2.94
	Heaven 97 at 2KW (26 September 2008)		Heaven 97 at 1 KW (2 October 2008)		Heaven/Gospel in Newlands (3 September 2009)	
	All locations and receivers		All locations and receivers		All locations and receivers	
Vibe 98.9	0.33	1.17 1.50	1.00	2.33 2.11	1.67	3.00 2.56