



Futurecom Systems Group, ULC

DVRS  
RF Safety Booklet (Canada)

## Document Revisions

Rev	Date	By	Notes & References
R3	September 06, 2017	AJK/SN	Added APX 8500
R4	March 5, 2019	AJK/SN	Updated bystander safe distance rules
R5	January 14, 2020	AJK/SN	Added APX 4500, APX2500 configuration for DVR VHF
R6	February 5, 2020	AJK/SN	Added APX 45000, APX2500 configuration for DVR 700
R7	February 11, 2020	AJK/SN	Added APX 4500, APX2500 configuration for DVR 800
R8	April 9, 2021	JP	Added DVR-LX; cleaned up details of mobiles to be clearer; added in new mobiles APX6500/APX6500Li/APX5500/APX4500/APX2500/APX1500 configuration for DVR VHF, UHF, 700, and 800. Minimum lateral distances
R9	February 23, 2022	JP	Added approved configurations for APX6500 BN UHF R2 (450-520MHz) for DVRS VHF, UHF3 (470-512MHz), 700 and 800
R10	September 9, 2022	JP	Added approved configurations for APX6500 BN 8/900MHz for DVRS VHF, UHF1, UHF2, UHF3, 700 and 800. Added approved configurations for APX6500 BN UHF R2 (450-520MHz) for DVRS UHF 1, UHF 2
R11	February 6, 2023	KS	Updated logo
R12	March 19, 2024	<b>EB</b>	Updated Part Numbers

# Product Safety and RF Energy Exposure Booklet for Digital Vehicular Repeater Systems (DVRS)

## **ATTENTION!**

Before using this equipment, please read this booklet which contains important operating instructions for safe usage, RF energy control and compliance with exposure limits.

## RF Exposure

### **NOTE:**

This equipment has been tested and found to comply with the limits for Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the installation manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

### **ATTENTION!**

Changes or modifications not expressly approved by Futurecom Systems Group, ULC could void the User's authority to operate the equipment.

**USA Users:** Do not use the DVRS in the frequency band 406.0 – 406.1MHz. This frequency band is reserved for distress beacons.

### **ATTENTION!**

This radio is intended for use in occupational / controlled conditions, where users have full knowledge of their exposure and can exercise control over their exposure to meet FCC limits. This radio device is NOT authorized for general population, consumer, or any other use.

It is the responsibility of the Repeater Operator to ensure that Maximum Permissible Exposure (MPE) limits are always observed during repeater transmissions. If this vehicular repeater is used in combination with a separate mobile radio transmitter, the Repeater operator must ensure at all times that no person comes within the MPE distance from the vehicle body to ensure compliance with the FCC/ISED RF energy exposure limits for the general population.

The minimum lateral distance between all possible personnel and the body of the DVRS equipped vehicle must be as specified in Table 1 (Stand-alone DVR/DVR-LX) and Table 2 (DVR/DVR-LX interfaced to a Mobile Radio i.e., DVRS).

Failure to observe the MPE distance exclusion area around the antenna may expose persons within this area to RF energy above the FCC/ISED exposure limit for bystanders (general population).

Stand Alone DVR/DVR-LX (20W) (up to 50% DVR/DVR-LX Tx duty cycle)	Minimum Lateral Distance from Antenna
VHF	101 cm (39.76 inches)
UHF 380-512MHz	93 cm (36.61 inches)
700MHz	105 cm (41.33 inches)
800MHz	109 cm (42.91 inches)

**Table 1 Minimum Lateral Distance - Stand Alone DVR/DVR-LX**

### **NOTE:**

50% Tx duty cycle is defined as Push To Talk (PTT), 50% Talk - 50% Listen.

Mobile Radio Rated Power (up to 50% Tx duty cycle)	Minimum Lateral Distance from Vehicle Body
DVRS with <7 Watt <b>XTL</b> Mobile Radio	20 cm (7.9 inches)
DVRS with 7 to 15 Watt <b>XTL</b> Mobile Radio	30 cm (11.8 inches)
DVRS with 16 to 39 Watt <b>XTL</b> Mobile Radio	60 cm (23.6 inches)
DVRS with 40 to 100 Watt <b>XTL</b> Mobile Radio	90 cm (35.4 inches)
DVRS with up to 100 Watt <b>APX</b> Mobile Radio	90 cm (35.4 inches)

**Table 2 Minimum Lateral Distance – DVRS (DVR/DVR-LX interfaced to a Mobile Radio)**

### **IMPORTANT**

The maximum allowed gain of the  $\lambda/4$  omni-directional antenna for the P25 DVR/DVR-LX Repeater is Unity (0dBd).

### ***RF Exposure Label***



The RF Exposure Label should be affixed in the vehicle beside the mobile radio control head. The label should be in the direct view of the Repeater operator. The label is supplied with the P25 DVR/DVR-LX Repeater.

### ***FCC Label***

This device complies with Part 15 of the FCC Rules.  
 Operation is subject to the following two conditions:  
 1) This device may not cause harmful interference, and  
 2) This device must accept any interference received,  
 including interference that may cause undesired  
 operation.

# Installation Requirements for Compliance with Radio Frequency (RF) Energy Exposure Safety Standards

## **ATTENTION!**

**To ensure compliance with RF Energy Safety Standards:**

- Install only Futurecom / Motorola approved antennas and accessories and set conducted power into the DVR/DVR-LX and Mobile antennas equal to or lower than the approved power levels – refer to **Table 3** (Stand Alone DVR/DVR-LX) or **Tables 4-7** (DVR/DVR-LX interfaced to APX Mobile Radios).
- Ensure the antenna installation is consistent with the DVR/DVR-LX Antenna Installation instructions described in this document as well as with the Mobile Radio Antenna Installation Instructions published in the applicable Motorola Installation Manual.
- Ensure the **Product & RF Safety Booklets 8F083X03(FCC) or 8F083X05(ISED)** enclosed with the Mobile Radio and the DVR/DVR-LX are available to the end user upon completion of the installation.

ANTENNA				STAND ALONE DVR/DVR-LX MODEL					
#	Kit #	Freq. Range [MHz]	Type	700 MHz (20W) (up to 50% Tx duty cycle)	800 MHz (20W) (up to 50% Tx duty cycle)	403-430 (20W) (up to 50% Tx duty cycle)	450-470 (20W) (up to 50% Tx duty cycle)	470-512 (20W) (up to 50% Tx duty cycle)	VHF (20W) (up to 50% Tx duty cycle)
1	HAF4016	764-870	¼ wave	20W	20W				
2	HAE6012A	380-433	¼ wave			20W			
3	HAE4003A	450-470	¼ wave				20W		
4	HAE4004	470-512	¼ wave					20W	
5	HAD4006	136-144	¼ wave						20W
6	HAD4007	144-150.8	¼ wave						20W
7	HAD4008	150.8-162	¼ wave						20W
8	HAD4009	162-174	¼ wave						20W

**Table 3 Approved Stand-Alone DVR/DVR-LX Combinations**

## **NOTE:**

1. Mobile RF conducted antenna power in the tables below denotes up to 50% Tx duty cycle.
2. DVR/DVR-LX RF conducted antenna power in the tables below denotes up to 50% Tx duty cycle.
3. AN and BN models for mobile radios refer to the last two digits of the Model number on the label affixed to the mobile product.

DVR: 7V083X06  
 DVR-LX: 7V093X06  
 IC:2098B-DVRS800

Freq Range: 806-825, 851-870MHz, Trunk Mounted Antenna: HAF4016A, 1/4 wave, 0dBd

Maximum conducted power delivered to antenna: DVR/DVR-LX (W) / Mobile (W)

Mobile	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna
APX6500/ APX7500 VHF (136-174MHz) IC: 109U-92FT3824	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd					
Max Power: DVR/DVR-LX / Mobile	10W / 60W	10W / 60W	10W / 60W					
APX6500/ APX7500 700/800MHz IC: 109U-92FT5858	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd				
Max Power: DVR/DVR-LX / Mobile	10W / 42W	10W / 42W	10W / 42W	10W / 42W				
APX6500/ APX7500 VHF (136-174MHz) IC: 109U-92FT3821	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd					
Max Power: DVR/DVR-LX / Mobile	10W / 120W	10W / 120W	10W / 120W					
APX6500/ APX7500 UHF R1 (380-470MHz) IC: 109U-92FT4894	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd				
Max Power: DVR/DVR-LX / Mobile	10W / 48W	10W / 48W	10W / 48W	10W / 48W				
APX6500/ APX7500 UHF R1 (380-470MHz) IC: 109U-92FT4897	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd				
Max Power: DVR/DVR-LX / Mobile	10W / 120W	10W / 120W	10W / 120W	10W / 120W				
APX6500/ APX7500 UHF R2 (450-520MHz) IC: 109U-92FT4896	HAE6015A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE4004A, 1/4 wave, 0dBd				
Max Power: DVR/DVR-LX / Mobile	10W / 54W	10W / 54W	10W / 54W	10W / 54W				
APX7500 7/800 MHz 35W - VHF 50W IC: 109U-92FT7037	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	
Max Power: DVR/DVR-LX / Mobile	10W / 42W	10W / 42W	10W / 42W	10W / 42W	10W / 60W	10W / 60W	10W / 60W	
APX7500 VHF 100W - 7/800 MHz 35W IC: 109U-92FT7035	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd	
Max Power: DVR/DVR-LX / Mobile	10W / 120W	10W / 120W	10W / 120W	10W / 42W	10W / 42W	10W / 42W	10W / 42W	
APX7500 UHF R1 40W - 7/800 MHz 35W IC: 109U-92FT7043	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd
Max Power: DVR/DVR-LX / Mobile	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 42W	10W / 42W	10W / 42W	10W / 42W
APX7500 UHF R1 100W - 7/800 MHz 35W IC: 109U-92FT7048	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd
Max Power: DVR/DVR-LX / Mobile	10W / 120W	10W / 120W	10W / 120W	10W / 120W	10W / 42W	10W / 42W	10W / 42W	10W / 42W
APX7500 UHF R2 45W 7/800 MHz 35W IC: 109U-92FT7044	HAE6015A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE4004A, 1/4 wave, 0dBd	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd
Max Power: DVR/DVR-LX / Mobile	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 42W	10W / 42W	10W / 42W	10W / 42W
APX7500 VHF 50W - UHF R1 40W IC: 109U-92FT4895	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	
Max Power: DVR/DVR-LX / Mobile	10W / 60W	10W / 60W	10W / 60W	10W / 48W	10W / 48W	10W / 48W	10W / 48W	
APX7500 VHF 100W - UHF R1 100W IC: 109U-92FT4898	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	
Max Power: DVR/DVR-LX / Mobile	10W / 120W	10W / 120W	10W / 120W	10W / 120W	10W / 120W	10W / 120W	10W / 120W	
APX7500 VHF 50W - UHF R2 45W IC: 109U-92FT7047	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAE6015A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE4004A, 1/4 wave, 0dBd	
Max Power: DVR/DVR-LX / Mobile	10W / 60W	10W / 60W	10W / 60W	10W / 54W	10W / 54W	10W / 54W	10W / 54W	
APX6500 UHF R1 40W - UHF R2 45W IC: 109U-92FT4904	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE6015A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE4004A, 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 54W	10W / 54W	10W / 54W	10W / 54W

NOTE: IF YOUR MOBILE IS APX6500 AND MODEL "AN" PLEASE ENSURE THE FCC ID ALIGNS WITH THE NUMBERS UNDER MOBILE. THE APX6500 HAS GONE THROUGH A REDESIGN AND THE NEWER MODEL "BN" HAS A DIFFERENT FCC ID WHICH STARTS AT TABLE 7 AND FORWARD

Table 4A Approved 800 DVRS Configurations – APX6500 / APX7500 (“AN” Model Only FOR APX6500)

DVR: 7V083X05  
 DVR-LX: 7V093X05  
 IC:2098B-DVRS700

Freq Range: 764-776, 794-806MHz, Trunk Mounted Antenna: HAF4016A, 1/4 wave, 0dBd

Maximum conducted power delivered to antenna: DVR/DVR-LX (W) / Mobile (W)

Roof Mounted Roof Mounted Roof Mounted Roof Mounted Roof Mounted Roof Mounted Roof Mounted Roof Mounted

Mobile	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna
APX6500/ APX7500 VHF (136-174MHz) IC: 109U-92FT3824	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd					
Max Power: DVR/DVR-LX / Mobile	5W / 60W	5W / 60W	5W / 60W					
APX6500/ APX7500 700/800MHz IC: 109U-92FT5858	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd				
Max Power: DVR/DVR-LX / Mobile	5W / 42W	5W / 42W	5W / 42W	5W / 42W				
APX6500/ APX7500 VHF (136-174MHz) IC: 109U-92FT3821	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd					
Max Power: DVR/DVR-LX / Mobile	5W / 120W	5W / 120W	5W / 120W					
APX6500/ APX7500 UHF R1 (380-470MHz) IC: 109U-92FT4894	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd				
Max Power: DVR/DVR-LX / Mobile	5W / 48W	5W / 48W	5W / 48W	5W / 48W				
APX6500/ APX7500 UHF R1 (380-470MHz) IC: 109U-92FT4897	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd				
Max Power: DVR/DVR-LX / Mobile	5W / 120W	5W / 120W	5W / 120W	5W / 120W				
APX6500/ APX7500 UHF R2 (450-520MHz) IC: 109U-92FT4896	HAE6015A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE4004A, 1/4 wave, 0dBd				
Max Power: DVR/DVR-LX / Mobile	5W / 54W	5W / 54W	5W / 54W	5W / 54W				
APX7500 7/800 MHz 35W - VHF 50W IC: 109U-92FT7037	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	
Max Power: DVR/DVR-LX / Mobile	5W / 42W	5W / 42W	5W / 42W	5W / 42W	5W / 60W	5W / 60W	5W / 60W	
APX7500 VHF 100W - 7/800 MHz 35W IC: 109U-92FT7035	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd	
Max Power: DVR/DVR-LX / Mobile	5W / 120W	5W / 120W	5W / 120W	5W / 42W	5W / 42W	5W / 42W	5W / 42W	
APX7500 UHF R1 40W - 7/800 MHz 35W IC: 109U-92FT7043	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd
Max Power: DVR/DVR-LX / Mobile	5W / 48W	5W / 48W	5W / 48W	5W / 48W	5W / 42W	5W / 42W	5W / 42W	5W / 42W
APX7500 UHF R1 100W - 7/800 MHz 35W IC: 109U-92FT7048	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd
Max Power: DVR/DVR-LX / Mobile	5W / 120W	5W / 120W	5W / 120W	5W / 120W	5W / 42W	5W / 42W	5W / 42W	5W / 42W
APX7500 UHF R2 45W 7/800 MHz 35W IC: 109U-92FT7044	HAE6015A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE4004A, 1/4 wave, 0dBd	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd
Max Power: DVR/DVR-LX / Mobile	5W / 54W	5W / 54W	5W / 54W	5W / 54W	5W / 42W	5W / 42W	5W / 42W	5W / 42W
APX7500 VHF 50W - UHF R1 40W IC: 109U-92FT4895	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	
Max Power: DVR/DVR-LX / Mobile	5W / 60W	5W / 60W	5W / 60W	5W / 48W	5W / 48W	5W / 48W	5W / 48W	
APX7500 VHF 100W - UHF R1 100W IC: 109U-92FT4898	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	
Max Power: DVR/DVR-LX / Mobile	5W / 120W	5W / 120W	5W / 120W	5W / 120W	5W / 120W	5W / 120W	5W / 120W	
APX7500 VHF 50W - UHF R2 45W IC: 109U-92FT7047	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAE6015A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE4004A, 1/4 wave, 0dBd	
Max Power: DVR/DVR-LX / Mobile	5W / 60W	5W / 60W	5W / 60W	5W / 54W	5W / 54W	5W / 54W	5W / 54W	
APX6500 UHF R1 40W - UHF R2 45W IC: 109U-92FT4904	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE6015A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE4004A, 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	5W / 48W	5W / 48W	5W / 48W	5W / 48W	5W / 54W	5W / 54W	5W / 54W	5W / 54W

NOTE: IF YOUR MOBILE IS APX6500 AND MODEL "AN" PLEASE ENSURE THE FCC ID ALIGNS WITH THE NUMBERS UNDER MOBILE. THE APX6500 HAS GONE THROUGH A REDESIGN AND THE NEWER MODEL "BN" HAS A DIFFERENT FCC ID WHICH STARTS AT TABLE 7 AND FORWARD

Table 4B Approved 700 DVRS Configurations – APX6500 / APX7500 (“AN” Model Only FOR APX6500)



DVR: 7V083X07 Freq Range: 380-430MHz, Trunk Mounted Antenna: HAE6012A, 1/4 wave, 0dBd

DVR-LX: 7V093X07

DVR IC:2098B-DVRSUHF Maximum conducted power delivered to antenna: DVR/DVR-LX (W) / Mobile (W)

Roof Mounted Antenna Roof Mounted Antenna Roof Mounted Antenna Roof Mounted Antenna Roof Mounted Antenna Roof Mounted Antenna Roof Mounted Antenna

Mobile	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna
APX6500/ APX7500 VHF (136-174MHz) IC: 109U-92FT3824	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd					
Max Power: DVR/DVR-LX / Mobile	10W / 60W	10W / 60W	10W / 60W					
APX6500/ APX7500 700/800MHz IC: 109U-92FT5858	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd				
Max Power: DVR/DVR-LX / Mobile	10W / 42W	10W / 42W	10W / 42W	10W / 42W				
APX6500/ APX7500 VHF (136-174MHz) IC: 109U-92FT3821	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd					
Max Power: DVR/DVR-LX / Mobile	10W / 120W	10W / 120W	10W / 120W					
APX6500/ APX7500 UHF R1 (380-470MHz) IC: 109U-92FT4894	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd				
Max Power: DVR/DVR-LX / Mobile	10W / 48W	10W / 48W	10W / 48W	10W / 48W				
APX6500/ APX7500 UHF R1 (380-470MHz) IC: 109U-92FT4897	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd				
Max Power: DVR/DVR-LX / Mobile	10W / 120W	10W / 120W	10W / 120W	10W / 120W				
APX6500/ APX7500 UHF R2 (450-520MHz) IC: 109U-92FT4896	HAE6015A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE4004A, 1/4 wave, 0dBd				
Max Power: DVR/DVR-LX / Mobile	10W / 54W	10W / 54W	10W / 54W	10W / 54W				
APX7500 7/800 MHz 35W - VHF 50W IC: 109U-92FT7037	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	
Max Power: DVR/DVR-LX / Mobile	10W / 42W	10W / 42W	10W / 42W	10W / 42W	10W / 60W	10W / 60W	10W / 60W	
APX7500 VHF 100W - 7/800 MHz 35W IC: 109U-92FT7035	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd	
Max Power: DVR/DVR-LX / Mobile	10W / 120W	10W / 120W	10W / 120W	10W / 42W	10W / 42W	10W / 42W	10W / 42W	
APX7500 UHF R1 40W - 7/800 MHz 35W IC: 109U-92FT7043	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd
Max Power: DVR/DVR-LX / Mobile	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 42W	10W / 42W	10W / 42W	10W / 42W
APX7500 UHF R1 100W - 7/800 MHz 35W IC: 109U-92FT7048	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd
Max Power: DVR/DVR-LX / Mobile	10W / 120W	10W / 120W	10W / 120W	10W / 120W	10W / 42W	10W / 42W	10W / 42W	10W / 42W
APX7500 UHF R2 45W 7/800 MHz 35W IC: 109U-92FT7044	HAE6015A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE4004A, 1/4 wave, 0dBd	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd
Max Power: DVR/DVR-LX / Mobile	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 42W	10W / 42W	10W / 42W	10W / 42W
APX7500 VHF 50W - UHF R1 40W IC: 109U-92FT4895	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	
Max Power: DVR/DVR-LX / Mobile	10W / 60W	10W / 60W	10W / 60W	10W / 48W	10W / 48W	10W / 48W	10W / 48W	
APX7500 VHF 100W - UHF R1 100W IC: 109U-92FT4898	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	
Max Power: DVR/DVR-LX / Mobile	10W / 120W	10W / 120W	10W / 120W	10W / 120W	10W / 120W	10W / 120W	10W / 120W	
APX7500 VHF 50W - UHF R2 45W IC: 109U-92FT7047	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAE6015A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE4004A, 1/4 wave, 0dBd	
Max Power: DVR/DVR-LX / Mobile	10W / 60W	10W / 60W	10W / 60W	10W / 54W	10W / 54W	10W / 54W	10W / 54W	
APX6500 UHF R1 40W - UHF R2 45W IC: 109U-92FT4904	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE6015A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE4004A, 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 54W	10W / 54W	10W / 54W	10W / 54W

NOTE: IF YOUR MOBILE IS APX6500 AND MODEL "AN" PLEASE ENSURE THE FCC ID ALIGNS WITH THE NUMBERS UNDER MOBILE. THE APX6500 HAS GONE THROUGH A REDESIGN AND THE NEWER MODEL "BN" HAS A DIFFERENT FCC ID WHICH STARTS AT TABLE 7 AND FORWARD

Table 4C Approved UHF R1 DVRS Configurations – APX6500 / APX7500 (“AN” Model Only FOR APX6500)

DVR: 7V083X03 Freq Range: 450-470MHz, Trunk Mounted Antenna: HAE4003A, 1/4 wave, 0dBd; HAE6016A,

DVR-LX: 7V093X03 1/4 wave, 0 dBd (HAE6016A offered only with DVR/XTL combination)

DVR IC: 2098B-DVRSUHF Maximum conducted power delivered to antenna: DVR/DVR-LX (W) / Mobile (W)

Roof Mounted Antenna Roof Mounted Antenna Roof Mounted Antenna Roof Mounted Antenna Roof Mounted Antenna Roof Mounted Antenna Roof Mounted Antenna Roof Mounted Antenna

Mobile	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna
APX6500/ APX7500 VHF (136-174MHz) IC: 109U-92FT3824	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd					
Max Power: DVR/DVR-LX / Mobile	10W / 60W	10W / 60W	10W / 60W					
APX6500/ APX7500 700/800MHz IC: 109U-92FT5858	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd				
Max Power: DVR/DVR-LX / Mobile	10W / 42W	10W / 42W	10W / 42W	10W / 42W				
APX6500/ APX7500 VHF (136-174MHz) IC: 109U-92FT3821	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd					
Max Power: DVR/DVR-LX / Mobile	10W / 120W	10W / 120W	10W / 120W					
APX6500/ APX7500 UHF R1 (380-470MHz) IC: 109U-92FT4894	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd				
Max Power: DVR/DVR-LX / Mobile	10W / 48W	10W / 48W	10W / 48W	10W / 48W				
APX6500/ APX7500 UHF R1 (380-470MHz) IC: 109U-92FT4897	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd				
Max Power: DVR/DVR-LX / Mobile	10W / 120W	10W / 120W	10W / 120W	10W / 120W				
APX6500/ APX7500 UHF R2 (450-520MHz) IC: 109U-92FT4896	HAE6015A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE4004A, 1/4 wave, 0dBd				
Max Power: DVR/DVR-LX / Mobile	10W / 54W	10W / 54W	10W / 54W	10W / 54W				
APX7500 7/800 MHz 35W - VHF 50W IC: 109U-92FT7037	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	
Max Power: DVR/DVR-LX / Mobile	10W / 42W	10W / 42W	10W / 42W	10W / 42W	10W / 60W	10W / 60W	10W / 60W	
APX7500 VHF 100W - 7/800 MHz 35W IC: 109U-92FT7035	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd	
Max Power: DVR/DVR-LX / Mobile	10W / 120W	10W / 120W	10W / 120W	10W / 42W	10W / 42W	10W / 42W	10W / 42W	
APX7500 UHF R1 40W - 7/800 MHz 35W IC: 109U-92FT7043	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd
Max Power: DVR/DVR-LX / Mobile	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 42W	10W / 42W	10W / 42W	10W / 42W
APX7500 UHF R1 100W - 7/800 MHz 35W IC: 109U-92FT7048	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd
Max Power: DVR/DVR-LX / Mobile	10W / 120W	10W / 120W	10W / 120W	10W / 120W	10W / 42W	10W / 42W	10W / 42W	10W / 42W
APX7500 UHF R2 45W 7/800 MHz 35W IC: 109U-92FT7044	HAE6015A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE4004A, 1/4 wave, 0dBd	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd
Max Power: DVR/DVR-LX / Mobile	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 42W	10W / 42W	10W / 42W	10W / 42W
APX7500 VHF 50W - UHF R1 40W IC: 109U-92FT4895	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	
Max Power: DVR/DVR-LX / Mobile	10W / 60W	10W / 60W	10W / 60W	10W / 48W	10W / 48W	10W / 48W	10W / 48W	
APX7500 VHF 100W - UHF R1 100W IC: 109U-92FT4898	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	
Max Power: DVR/DVR-LX / Mobile	10W / 120W	10W / 120W	10W / 120W	10W / 120W	10W / 120W	10W / 120W	10W / 120W	
APX7500 VHF 50W - UHF R2 45W IC: 109U-92FT7047	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAE6015A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE4004A, 1/4 wave, 0dBd	
Max Power: DVR/DVR-LX / Mobile	10W / 60W	10W / 60W	10W / 60W	10W / 54W	10W / 54W	10W / 54W	10W / 54W	
APX6500 UHF R1 40W - UHF R2 45W IC: 109U-92FT4904	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE6015A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE4004A, 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 54W	10W / 54W	10W / 54W	10W / 54W

NOTE: IF YOUR MOBILE IS APX6500 AND MODEL "AN" PLEASE ENSURE THE FCC ID ALIGNS WITH THE NUMBERS UNDER MOBILE. THE APX6500 HAS GONE THROUGH A REDESIGN AND THE NEWER MODEL "BN" HAS A DIFFERENT FCC ID WHICH STARTS AT TABLE 7 AND FORWARD

Table 4D Approved UHF R2 DVRS Configurations – APX6500 / APX7500 (“AN” Model Only FOR APX6500)

DVR: 7V083X04 Freq Range: 470-512MHz, Trunk Mounted Antenna: HAE4004A, 1/4 wave, 0dBd; HAE6016A,  
 DVR IC: 2098B-DVRSUHF Maximum conducted power delivered to antenna: DVR (W) / Mobile (W)

Mobile	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna
APX6500/ APX7500 VHF (136-174MHz) IC: 109U-92FT3824	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd					
Max Power: DVR / Mobile	10W / 60W	10W / 60W	10W / 60W					
APX6500/ APX7500 700/800MHz IC: 109U-92FT5858	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd				
Max Power: DVR / Mobile	10W / 42W	10W / 42W	10W / 42W	10W / 42W				
APX6500/ APX7500 VHF (136-174MHz) IC: 109U-92FT3821	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd					
Max Power: DVR / Mobile	10W / 120W	10W / 120W	10W / 120W					
APX6500/ APX7500 UHF R1 (380-470MHz) IC: 109U-92FT4894	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd				
Max Power: DVR / Mobile	10W / 48W	10W / 48W	10W / 48W	10W / 48W				
APX6500/ APX7500 UHF R1 (380-470MHz) IC: 109U-92FT4897	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd				
Max Power: DVR / Mobile	10W / 120W	10W / 120W	10W / 120W	10W / 120W				
APX6500/ APX7500 UHF R2 (450-520MHz) IC: 109U-92FT4896	HAE6015A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE4004A, 1/4 wave, 0dBd				
Max Power: DVR / Mobile	10W / 54W	10W / 54W	10W / 54W	10W / 54W				
APX7500 7/800 MHz 35W - VHF 50W IC: 109U-92FT7037	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	
Max Power: DVR / Mobile	10W / 42W	10W / 42W	10W / 42W	10W / 42W	10W / 60W	10W / 60W	10W / 60W	
APX7500 VHF 100W - 7/800 MHz 35W IC: 109U-92FT7035	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd	
Max Power: DVR / Mobile	10W / 120W	10W / 120W	10W / 120W	10W / 42W	10W / 42W	10W / 42W	10W / 42W	
APX7500 UHF R1 40W - 7/800 MHz 35W IC: 109U-92FT7043	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd
Max Power: DVR / Mobile	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 42W	10W / 42W	10W / 42W	10W / 42W
APX7500 UHF R1 100W - 7/800 MHz 35W IC: 109U-92FT7048	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd
Max Power: DVR / Mobile	10W / 120W	10W / 120W	10W / 120W	10W / 120W	10W / 42W	10W / 42W	10W / 42W	10W / 42W
APX7500 UHF R2 45W 7/800 MHz 35W IC: 109U-92FT7044	HAE6015A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE4004A, 1/4 wave, 0dBd	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd
Max Power: DVR / Mobile	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 42W	10W / 42W	10W / 42W	10W / 42W
APX7500 VHF 50W - UHF R1 40W IC: 109U-92FT4895	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	
Max Power: DVR / Mobile	10W / 60W	10W / 60W	10W / 60W	10W / 48W	10W / 48W	10W / 48W	10W / 48W	
APX7500 VHF 100W - UHF R1 100W IC: 109U-92FT4898	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	
Max Power: DVR / Mobile	10W / 120W	10W / 120W	10W / 120W	10W / 120W	10W / 120W	10W / 120W	10W / 120W	
APX7500 VHF 50W - UHF R2 45W IC: 109U-92FT7047	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAE6015A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE4004A, 1/4 wave, 0dBd	
Max Power: DVR / Mobile	10W / 60W	10W / 60W	10W / 60W	10W / 54W	10W / 54W	10W / 54W	10W / 54W	
APX6500 UHF R1 40W - UHF R2 45W IC: 109U-92FT4904	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE6015A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE4004A, 1/4 wave, 0dBd
Max Power: DVR / Mobile	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 54W	10W / 54W	10W / 54W	10W / 54W

NOTE: IF YOUR MOBILE IS APX6500 AND MODEL "AN" PLEASE ENSURE THE FCC ID ALIGNS WITH THE NUMBERS UNDER MOBILE. THE APX6500 HAS GONE THROUGH A REDESIGN AND THE NEWER MODEL "BN" HAS A DIFFERENT FCC ID WHICH STARTS AT TABLE 7 AND FORWARD

Table 4E Approved UHF R3 DVRS Configurations – APX6500 / APX7500 (“AN” Model Only FOR APX6500)

DVR: 7V083X01 Freq Range: 136-174MHz, Trunk Mounted Antenna: HAD4006A, 1/4 wave, 0dBd, HAD4007A,  
 DVR-LX: 7V093X01 1/4 wave, 0dBd, HAD4008A, 1/4 wave, 0dBd, HAD4009A, 1/4 wave, 0dBd  
 DVR IC:2098B-DVRSVHF Maximum conducted power delivered to antenna: DVR/DVR-LX (W) / Mobile (W)

Roof Mounted Antenna Roof Mounted Antenna Roof Mounted Antenna Roof Mounted Antenna Roof Mounted Antenna Roof Mounted Antenna Roof Mounted Antenna Roof Mounted Antenna

Mobile	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna
APX6500/ APX7500 VHF (136-174MHz) IC: 109U-92FT3824	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd					
Max Power: DVR/DVR-LX / Mobile	6W / 60W	6W / 60W	6W / 60W					
APX6500/ APX7500 700/800MHz IC: 109U-92FT5858	HAF4013A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd					
Max Power: DVR/DVR-LX / Mobile	6W / 42W	6W / 42W	6W / 42W					
APX6500/ APX7500 VHF (136-174MHz) IC: 109U-92FT3821	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd					
Max Power: DVR/DVR-LX / Mobile	6W / 120W	6W / 120W	6W / 120W					
APX6500/ APX7500 UHF R1 (380-470MHz) IC: 109U-92FT4894	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd				
Max Power: DVR/DVR-LX / Mobile	6W / 48W	6W / 48W	6W / 48W	6W / 48W				
APX6500/ APX7500 UHF R1 (380-470MHz) IC: 109U-92FT4897	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd				
Max Power: DVR/DVR-LX / Mobile	6W / 120W	6W / 120W	6W / 120W	6W / 120W				
APX6500/ APX7500 UHF R2 (450-520MHz) IC: 109U-92FT4896	HAE6015A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE4004A, 1/4 wave, 0dBd				
Max Power: DVR/DVR-LX / Mobile	6W / 54W	6W / 54W	6W / 54W	6W / 54W				
APX7500 7/800 MHz 35W - VHF 50W IC: 109U-92FT7037	HAF4013A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd		
Max Power: DVR/DVR-LX / Mobile	6W / 42W	6W / 42W	6W / 42W	6W / 60W	6W / 60W	6W / 60W		
APX7500 VHF 100W - 7/800 MHz 35W IC: 109U-92FT7035	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAF4013A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd		
Max Power: DVR/DVR-LX / Mobile	6W / 120W	6W / 120W	6W / 120W	6W / 42W	6W / 42W	6W / 42W		
APX7500 UHF R1 40W - 7/800 MHz 35W IC: 109U-92FT7043	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAF4013A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd	
Max Power: DVR/DVR-LX / Mobile	6W / 48W	6W / 48W	6W / 48W	6W / 48W	6W / 42W	6W / 42W	6W / 42W	
APX7500 UHF R1 100W - 7/800 MHz 35W IC: 109U-92FT7048	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAF4013A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd	
Max Power: DVR/DVR-LX / Mobile	6W / 120W	6W / 120W	6W / 120W	6W / 120W	6W / 42W	6W / 42W	6W / 42W	
APX7500 UHF R2 45W 7/800 MHz 35W IC: 109U-92FT7044	HAE6015A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE4004A, 1/4 wave, 0dBd	HAF4013A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd	
Max Power: DVR/DVR-LX / Mobile	6W / 54W	6W / 54W	6W / 54W	6W / 54W	6W / 42W	6W / 42W	6W / 42W	
APX7500 VHF 50W - UHF R1 40W IC: 109U-92FT4895	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	
Max Power: DVR/DVR-LX / Mobile	6W / 60W	6W / 60W	6W / 60W	6W / 48W	6W / 48W	6W / 48W	6W / 48W	
APX7500 VHF 100W - UHF R1 100W IC: 109U-92FT4898	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	
Max Power: DVR/DVR-LX / Mobile	6W / 120W	6W / 120W	6W / 120W	6W / 120W	6W / 120W	6W / 120W	6W / 120W	
APX7500 VHF 50W - UHF R2 45W IC: 109U-92FT7047	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAE6015A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE4004A, 1/4 wave, 0dBd	
Max Power: DVR/DVR-LX / Mobile	6W / 60W	6W / 60W	6W / 60W	6W / 54W	6W / 54W	6W / 54W	6W / 54W	
APX6500 UHF R1 40W - UHF R2 45W IC: 109U-92FT4904	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE6015A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE4004A, 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	6W / 48W	6W / 48W	6W / 48W	6W / 48W	6W / 54W	6W / 54W	6W / 54W	6W / 54W

NOTE: IF YOUR MOBILE IS APX6500 AND MODEL "AN" PLEASE ENSURE THE FCC ID ALIGNS WITH THE NUMBERS UNDER MOBILE. THE APX6500 HAS GONE THROUGH A REDESIGN AND THE NEWER MODEL "BN" HAS A DIFFERENT FCC ID WHICH STARTS AT TABLE 7 AND FORWARD

Table 4F Approved VHF DVRS Configurations – APX6500 / APX7500 (“AN” Model Only FOR APX6500)

DVR: 7V083X06 Freq Range: 806-825, 851-870MHz, Trunk Mounted Antenna: HAF4016A, 1/4 wave, 0dBc  
 DVR-LX: 7V093X06  
 DVR IC:2098B-DVRS800 Maximum conducted power delivered to antenna: DVR/DVR-LX (W) / Mobile (W)

Mobile	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna
APX8500 VHF (136-174MHz) IC: 109U-92FT7089	AN000131A01, 1/4 wave, 0dBd	HAD4006A, 1/4 wave, 0dBd	HAD4007A, 1/4 wave, 0dBd	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4016A, 1/2 wave, 0dBd	HAD4017A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAD4022A, 5/8 wave, 3dBd	RAD4010ARB, 1/2 wave, 3dBd				
Max Power: DVR/DVR-LX / Mobile	10W / 60W	10W / 60W	10W / 60W	10W / 60W	10W / 60W	10W / 60W	10W / 60W	10W / 60W	10W / 60W	10W / 60W				
APX8500 UHF (380-470MHz) IC: 109U-92FT7089	AN000131A01, 1/4 wave, 0dBd	HAE6010A, 1/2 wave, 3.5dBd	HAE6011A, 5/8 wave, 5dBd	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE6031A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE6015A, 1/2 wave, 2dBd	HAE6016A, 1/4 wave, 0dBd	RAE4014ARB, 1/4 wave, 5dBd			
Max Power: DVR/DVR-LX / Mobile	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 54W			
APX8500 UHF (450-520MHz) IC: 109U-92FT7089	AN000131A01, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE6031A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE6015A, 1/2 wave, 2dBd	HAE6016A, 1/4 wave, 0dBd	RAE4014ARB, 5/8 wave, 5dBd	HAE4004A, 1/4 wave, 0dBd	HAE4012A, 1/2 wave, 3.5dBd	HAE4013A, 1/2 wave, 3.5dBd	RAE4015ARM, 5/8 wave, 5dBd	RAE4016ARB, 5/8 wave, 5dBd	
Max Power: DVR/DVR-LX / Mobile	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 54W	
APX8500 7/800MHz IC: 109U-92FT7089	AN000131A01, 1/4 wave, 0dBd	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd									
Max Power: DVR/DVR-LX / Mobile	10W / 42W	10W / 42W	10W / 42W	10W / 42W	10W / 42W									

Table 5A Approved 800 DVRS Configurations – APX8500 MP

DVR: 7V083X05 Freq Range: 764-776, 794-806MHz, Trunk Mounted Antenna: HAF4016A, 1/4 wave, 0dBc  
 DVR-LX: 7V093X05  
 IC:2098B-DVRS700 Maximum conducted power delivered to antenna: DVR/DVR-LX (W) / Mobile (W)

Mobile	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna
APX8500 VHF (136-174MHz) IC: 109U-92FT7089	AN000131A01, 1/4 wave, 0dBd	HAD4006A, 1/4 wave, 0dBd	HAD4007A, 1/4 wave, 0dBd	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4016A, 1/4 wave, 0dBd	HAD4017A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAD4022A, 5/8 wave, 3dBd	RAD4010ARB, 1/2 wave, 3dBd				
Max Power: DVR/DVR-LX / Mobile	5W / 60W	5W / 60W	5W / 60W	5W / 60W	5W / 60W	5W / 60W	5W / 60W	5W / 60W	5W / 60W	5W / 60W				
APX8500 UHF (380-470MHz) IC: 109U-92FT7089	AN000131A01, 1/4 wave, 0dBd	HAE6010A, 1/2 wave, 3.5dBd	HAE6011A, 5/8 wave, 5dBd	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE6031A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE6015A, 1/2 wave, 2dBd	HAE6016A, 1/4 wave, 0dBd	RAE4014ARB, 5/8 wave, 5dBd			
Max Power: DVR/DVR-LX / Mobile	5W / 54W	5W / 54W	5W / 54W	5W / 54W	5W / 54W	5W / 54W	5W / 54W	5W / 54W	5W / 54W	5W / 54W	5W / 54W			
APX8500 UHF (450-520MHz) IC: 109U-92FT7089	AN000131A01, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE6031A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE6015A, 1/2 wave, 2dBd	HAE6016A, 1/4 wave, 0dBd	RAE4014ARB, 5/8 wave, 5dBd	HAE4004A, 1/4 wave, 0dBd	HAE4012A, 1/2 wave, 3.5dBd	HAE4013A, 1/2 wave, 3.5dBd	RAE4015ARM, 5/8 wave, 5dBd	RAE4016ARB, 5/8 wave, 5dBd	
Max Power: DVR/DVR-LX / Mobile	5W / 54W	5W / 54W	5W / 54W	5W / 54W	5W / 54W	5W / 54W	5W / 54W	5W / 54W	5W / 54W	5W / 54W	5W / 54W	5W / 54W	5W / 54W	
APX8500 7/800MHz IC: 109U-92FT7089	AN000131A01, 1/4 wave, 0dBd	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd									
Max Power: DVR/DVR-LX / Mobile	5W / 42W	5W / 42W	5W / 42W	5W / 42W	5W / 42W									

Table 5B Approved 700 DVRS Configurations – APX8500 MP

DVR: 7V083X07  
 DVR-LX: 7V093X07  
 IC:2098B-DVRSUHF

Freq Range: 380-430MHz, Trunk Mounted Antenna: HAE6012A, 1/4 wave, 0dBd

Maximum conducted power delivered to antenna: DVR/DVR-LX (W) / Mobile (W)

Mobile	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna
APX8500 VHF (136-174MHz) IC: 109U-92FT7089 Max Power: DVR/DVR-LX / Mobile	AN000131A01, 1/4 wave, 0dBd							
APX8500 UHF (380-470MHz) IC: 109U-92FT7089 Max Power: DVR/DVR-LX / Mobile	AN000131A01, 1/4 wave, 0dBd							
APX8500 UHF (450-520MHz) IC: 109U-92FT7089 Max Power: DVR/DVR-LX / Mobile	AN000131A01, 1/4 wave, 0dBd							
APX8500 7/800MHz IC: 109U-92FT7089 Max Power: DVR/DVR-LX / Mobile	AN000131A01, 1/4 wave, 0dBd							

**Table 5C Approved UHF R1 DVRS Configurations – APX8500 MP**

DVR: 7V083X03  
 DVR-LX: 7V093X03  
 IC:2098B-DVRSUHF

Freq Range: 450-470MHz, Trunk Mounted Antenna: HAE4003A, 1/4 wave, 0dBd; HAE6016A, 1/4 wave, 0 dBd (HAE6016A offered only with DVR/ XTL combination)

Maximum conducted power delivered to antenna: DVR/DVR-LX (W) / Mobile (W)

Mobile	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna	Antenna
APX8500 VHF (136-174MHz) IC: 109U-92FT7089 Max Power: DVR/DVR-LX / Mobile	AN000131A01, 1/4 wave, 0dBd							
APX8500 UHF (380-470MHz) IC: 109U-92FT7089 Max Power: DVR/DVR-LX / Mobile	AN000131A01, 1/4 wave, 0dBd							
APX8500 UHF (450-520MHz) IC: 109U-92FT7089 Max Power: DVR/DVR-LX / Mobile	AN000131A01, 1/4 wave, 0dBd							
APX8500 7/800MHz IC: 109U-92FT7089 Max Power: DVR/DVR-LX / Mobile	AN000131A01, 1/4 wave, 0dBd							

**Table 5D Approved UHF R2 DVRS Configurations – APX8500 MP**

DVR: 7V083X04  
IC:2098B-DVRSUHF

Freq Range: 470-512MHz, Trunk Mounted Antenna: HAE4004A, 1/4 wave, 0dBd; HAE6016A,  
Maximum conducted power delivered to antenna: DVR (W) / Mobile (W)

Roof Mounted Antenna    Roof Mounted Antenna    Roof Mounted Antenna    Roof Mounted Antenna    Roof Mounted Antenna    Roof Mounted Antenna    Roof Mounted Antenna    Roof Mounted Antenna

Mobile	Antenna
APX8500 VHF (136-174MHz) IC: 109U-92FT7089	AN000131A01, 1/4 wave, 0dBd
Max Power: DVR / Mobile	10W / 60W
APX8500 UHF (380-470MHz) IC: 109U-92FT7089	AN000131A01, 1/4 wave, 0dBd
Max Power: DVR / Mobile	10W / 54W
APX8500 UHF (450-520MHz) IC: 109U-92FT7089	AN000131A01, 1/4 wave, 0dBd
Max Power: DVR / Mobile	10W / 54W
APX8500 7/800MHz IC: 109U-92FT7089	AN000131A01, 1/4 wave, 0dBd
Max Power: DVR / Mobile	10W / 42W

**Table 5E Approved UHF R3 DVRS Configurations – APX8500 MP**

DVR: 7V083X01  
DVR-LX: 7V093X01  
IC:2098B-DVRSVHF

Freq Range: 136-174MHz, Trunk Mounted Antenna: HAD4006A, 1/4 wave, 0dBd, HAD4007A,  
1/4 wave, 0dBd, HAD4008A, 1/4 wave, 0dBd, HAD4009A, 1/4 wave, 0dBd  
Maximum conducted power delivered to antenna: DVR/DVR-LX (W) / Mobile (W)

Roof Mounted Antenna    Roof Mounted Antenna    Roof Mounted Antenna    Roof Mounted Antenna    Roof Mounted Antenna    Roof Mounted Antenna    Roof Mounted Antenna    Roof Mounted Antenna

Mobile	Antenna
APX8500 VHF (136-174MHz) IC: 109U-92FT7089	AN000131A01, 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	6W / 60W
APX8500 UHF (380-470MHz) IC: 109U-92FT7089	AN000131A01, 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	6W / 54W
APX8500 UHF (450-520MHz) IC: 109U-92FT7089	AN000131A01, 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	6W / 54W
APX8500 7/800MHz IC: 109U-92FT7089	AN000131A01, 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	6W / 42W

**Table 5F Approved VHF DVRS Configurations – APX8500 MP**

DVR: 7V083X01  
 DVR-LX: 7V093X01  
 IC:2098B-DVRVHF

Freq Range: 136-174 MHz, Trunk Mounted Antenna: HAD4006A, 4007A,4008A,4009A, 1/4 wave, 0dBd

Maximum conducted power delivered to antenna: DVR/DVR-LX (W) / Mobile (W)

**Roof Mounted**

Mobile	Antenna
APX2500/ APX4500 VHF (136-162MHz) ISED: 109U-92FT3826	HAD40016A, 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	6W / 60W
APX2500/ APX4500 VHF (146-174 MHz) ISED: 109U-92FT3826	HAD4017A, 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	6W / 60W
APX2500/ APX4500 VHF (136-174 MHz) ISED: 109U-92FT3826	HAD4021A, 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	6W / 60W
APX2500/ APX4500 VHF (136-144 MHz) ISED: 109U-92FT3826	HAD4006A, 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	6W / 60W
APX2500/ APX4500 VHF (144-150.8 MHz) ISED: 109U-92FT3826	HAD4007A 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	6W / 60W
APX2500/ APX4500 VHF (150.8-162 MHz) ISED: 109U-92FT3826	HAD4008A, 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	6W / 60W
APX2500/APX4500 VHF (162-174 MHz) ISED: 109U-92FT3826	HAD4009A, 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	6W / 60W
APX2500/APX4500 VHF (132-174 MHz) ISED: 109U-92FT3826	*HAD4022A 5/8 wave, 3dBd
Max Power: DVR/DVR-LX / Mobile	6W / 60W
APX2500/APX4500 VHF (136-174 MHz) ISED: 109U-92FT3826	*RAD4010ARB 1/2 wave,3dBd
Max Power: DVR/DVR-LX / Mobile	6W / 60W

NOTE: IF YOUR MOBILE IS APX2500/APX4500 AND MODEL "AN" PLEASE ENSURE THE FCC ID ALIGNS WITH THE NUMBERS UNDER MOBILE. THE APX2500/APX4500 HAS GONE THROUGH A REDESIGN AND THE NEWER MODEL "BN" HAS A DIFFERENT FCC ID WHICH STARTS AT TABLE 7 AND FORWARD

\*Antenna length trimmed to frequency

**Table 6A Approved VHF DVRS Configuration APX 2500 and APX 4500 ("AN" Model Only)**



DVR: 7V083X05  
 DVR-LX: 7V093X05  
 IC:2098B-DVRS700

Freq Range: 764-806 MHz, Trunk Mounted Antenna: HAF4016A, 1/4 wave, 0dBd

Maximum conducted power delivered to antenna: DVR/DVR-LX (W) / Mobile (W)

**Roof Mounted**

Mobile	Antenna
APX2500/ APX4500 VHF (136-162MHz) ISED: 109U-92FT3826	HAD40016A, 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	5W / 60W
APX2500/ APX4500 VHF (146-174 MHz) ISED: 109U-92FT3826	HAD4017A, 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	5W / 60W
APX2500/ APX4500 VHF (136-174 MHz) ISED: 109U-92FT3826	HAD4021A, 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	5W / 60W
APX2500/ APX4500 VHF (136-144 MHz) ISED: 109U-92FT3826	HAD4006A, 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	5W / 60W
APX2500/ APX4500 VHF (144-150.8 MHz) ISED: 109U-92FT3826	HAD4007A 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	5W / 60W
APX2500/ APX4500 VHF (150.8-162 MHz) ISED: 109U-92FT3826	HAD4008A, 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	5W / 60W
APX2500/APX4500 VHF (162-174 MHz) ISED: 109U-92FT3826	HAD4009A, 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	5W / 60W
APX2500/APX4500 VHF (132-174 MHz) ISED: 109U-92FT3826	*HAD4022A 5/8 wave, 3dBd
Max Power: DVR/DVR-LX / Mobile	5W / 60W
APX2500/APX4500 VHF (136-174 MHz) ISED: 109U-92FT3826	*RAD4010ARB 1/2 wave, 3dBd
Max Power: DVR/DVR-LX / Mobile	5W / 60W

NOTE: IF YOUR MOBILE IS APX2500/APX4500 AND MODEL "AN" PLEASE ENSURE THE FCC ID ALIGNS WITH THE NUMBERS UNDER MOBILE. THE APX2500/APX4500 HAS GONE THROUGH A REDESIGN AND THE NEWER MODEL "BN" HAS A DIFFERENT FCC ID WHICH STARTS AT TABLE 7 AND FORWARD

\*Antenna length trimmed to frequency

**Table 6B Approved 700 DVRS Configuration APX 2500 and APX 4500 ("AN" Model Only)**

DVR: 7V083X06  
 DVR-LX: 7V093X06  
 IC:2098B-DVRS800

Freq Range: 806-869 MHz, Trunk Mounted Antenna: HAF4016A, 1/4 wave, 0dBd

Maximum conducted power delivered to antenna: DVR/DVR-LX (W) / Mobile (W)

**Roof Mounted**

Mobile	Antenna
APX2500/ APX4500 VHF (136-162MHz) ISED: 109U-92FT3826	HAD40016A, 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	10W / 60W
APX2500/ APX4500 VHF (146-174 MHz) ISED: 109U-92FT3826	HAD4017A, 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	10W / 60W
APX2500/ APX4500 VHF (136-174 MHz) ISED: 109U-92FT3826	HAD4021A, 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	10W / 60W
APX2500/ APX4500 VHF (136-144 MHz) ISED: 109U-92FT3826	HAD4006A, 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	10W / 60W
APX2500/ APX4500 VHF (144-150.8 MHz) ISED: 109U-92FT3826	HAD4007A 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	10W / 60W
APX2500/ APX4500 VHF (150.8-162 MHz) ISED: 109U-92FT3826	HAD4008A, 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	10W / 60W
APX2500/APX4500 VHF (162-174 MHz) ISED: 109U-92FT3826	HAD4009A, 1/4 wave, 0dBd
Max Power: DVR/DVR-LX / Mobile	10W / 60W
APX2500/APX4500 VHF (132-174 MHz) ISED: 109U-92FT3826	*HAD4022A 5/8 wave, 3dBd
Max Power: DVR/DVR-LX / Mobile	10W / 60W
APX2500/APX4500 VHF (136-174 MHz) ISED: 109U-92FT3826	*RAD4010ARB 1/2 wave,3dBd
Max Power: DVR/DVR-LX / Mobile	10W / 60W

NOTE: IF YOUR MOBILE IS APX2500/APX4500 AND MODEL "AN" PLEASE ENSURE THE FCC ID ALIGNS WITH THE NUMBERS UNDER MOBILE. THE APX2500/APX4500 HAS GONE THROUGH A REDESIGN AND THE NEWER MODEL "BN" HAS A DIFFERENT FCC ID WHICH STARTS AT TABLE 7 AND FORWARD

\*Antenna length trimmed to frequency

**Table 6C Approved 800 DVRS Configuration APX 2500 and APX 4500 ("AN" Model Only)**

DVR: 7V083X06  
 (DQPM/DVR8000P)  
 DVR-LX: 7V093X06  
 FCC ID: LO6-  
 DVRS800

Freq Range: 806-825, 851-870MHz, Trunk Mounted Antenna: HAF4016A, 1/4 wave, 0dBd

Maximum conducted power delivered to antenna: DVR/DVR-LX (W) / Mobile (W)

Mobile	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna
*APX6500 VHF (136-174MHz) FCC ID: AZ492FT7130	HAD4006 A, 1/4 wave, 0dBd	HAD4007A, 1/4 wave, 0dBd	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4016A, 1/4 wave, 0dBd	HAD4017A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAD4022A, 5/8 wave, 3dBd	RAD4010ARB, 1/2 wave, 3dBd	
Max Power: DVR/DVR-LX / Mobile	10W / 60W	10W / 60W	10W / 60W	10W / 60W	10W / 60W	10W / 60W	10W / 60W	10W / 60W	10W / 60W	
*APX6500 UHF R1 (380-470MHz) FCC ID: AZ492FT7129	HAE6010 A, 1/2 wave, 3.5dBd	HAE6011A, 5/8 wave, 5dBd	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE6031A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE6015A, 1/2 wave, 2dBd	HAE6016A, 1/4 wave, 0dBd	RAE4014ARB, 5/8 wave, 5dBd
Max Power: DVR/DVR-LX / Mobile	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 48W
*APX6500 UHF R2 (450-520MHz) FCC ID: AZ492FT4967	HAE4003 A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE6013A, 1/2 wave, 2dBd	HAE6016A, 1/4 wave, 0dBd	HAE6031A, 1/2 wave, 2dBd	RAE4014A RB, 5/8 wave, 5dBd	RAE40416 ARB, 5/8 wave, 5dBd			
Max Power: DVR/DVR-LX / Mobile	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 54W			
*APX6500 7/800MHz FCC ID: AZ492FT7124	HAF4013 A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd						
Max Power: DVR/DVR-LX / Mobile	10W / 42W	10W / 42W	10W / 42W	10W / 42W						
*APX6500 8/900MHz FCC ID: AZ492FT7141	HAF4013 A, 1/4 wave, 3dBd	HAF4036A, 1/4 wave, 0dBd	HAF4037A, 1/2 wave, 0.9dBd							
Max Power: DVR / Mobile	10W / 42W	10W / 42W	10W / 42W							

Table 7A Approved 800 DVRS Configuration \*APX6500/APX6500Li/APX5500/APX4500/APX2500/APX1500 (“BN” Model Only)  
 \*All models noted are identical electrically. Only difference is software features

DVR: 7V083X05  
(DQPM/DVR7000P)  
DVR-LX:  
7V093X05

Freq Range: 764-776, 794-806MHz, Trunk Mounted Antenna: HAF4016A, 1/4 wave, 0dBd

FCC ID: LO6-  
DVR5700

Maximum conducted power delivered to antenna: DVR/DVR-LX (W) / Mobile (W)

Mobile	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna
*APX6500 VHF (136-174MHz) FCC ID: AZ492FT7130	HAD4006A, 1/4 wave, 0dBd	HAD4007A, 1/4 wave, 0dBd	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4016A, 1/4 wave, 0dBd	HAD4017A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAD4022A, 5/8 wave, 3dBd	RAD4010ARB, 1/2 wave, 3dBd	
Max Power: DVR/DVR-LX / Mobile	5W / 60W	5W / 60W	5W / 60W	5W / 60W	5W / 60W	5W / 60W	5W / 60W	5W / 60W	5W / 60W	
*APX6500 UHF R1 (380-470MHz) FCC ID: AZ492FT7129	HAE6010A, 1/2 wave, 3.5dBd	HAE6011A, 5/8 wave, 5dBd	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE6031A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE6015A, 1/2 wave, 2dBd	HAE6016A, 1/4 wave, 0dBd	RAE4014ARB, 5/8 wave, 5dBd
Max Power: DVR/DVR-LX / Mobile	5W / 48W	5W / 48W	5W / 48W	5W / 48W	5W / 48W	5W / 48W	5W / 48W	5W / 48W	5W / 48W	5W / 48W
*APX6500 UHF R2 (450-520MHz) FCC ID: AZ492FT4967	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE6013A, 1/2 wave, 2dBd	HAE6016A, 1/4 wave, 0dBd	HAE6031A, 1/2 wave, 2dBd	RAE4014ARB, 5/8 wave, 5dBd	RAE4016ARB, 5/8 wave, 5dBd			
Max Power: DVR/DVR-LX / Mobile	5W / 54W	5W / 54W	5W / 54W	5W / 54W	5W / 54W	5W / 54W	5W / 54W			
*APX6500 7/800MHz FCC ID: AZ492FT7124	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd						
Max Power: DVR/DVR-LX / Mobile	5W / 42W	5W / 42W	5W / 42W	5W / 42W						
*APX6500 8/900MHz FCC ID: AZ492FT7141	HAF4013A, 1/4 wave, 3dBd	HAF4036A, 1/4 wave, 0dBd	HAF4037A, 1/2 wave, 0.9dBd							
Max Power: DVR / Mobile	5W / 42W	5W / 42W	5W / 42W							

Table 7B Approved 700 DVRS Configuration \*APX6500/APX6500Li/APX5500/APX4500/APX2500/APX1500 (“BN” Model Only)  
\*All models noted are identical electrically. Only difference is software features

DVR: 7V083X07  
(DQPM DV4000P)  
DVR-LX:  
7V093X07

Freq Range: 380-430MHz, Trunk Mounted Antenna: HAE6012A, 1/4 wave, 0dBd

FCC ID: LO6-  
DVRSUHF

Maximum conducted power delivered to antenna: DVR/DVR-LX (W) / Mobile (W)

Mobile	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna
*APX6500 VHF (136-174MHz) FCC ID: AZ492FT7130	HAD4006A, 1/4 wave, 0dBd	HAD4007A, 1/4 wave, 0dBd	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4016A, 1/4 wave, 0dBd	HAD4017A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAD4022A, 5/8 wave, 3dBd	RAD4010ARB, 1/2 wave, 3dBd	
Max Power: DVR/DVR-LX / Mobile	10W / 60W	10W / 60W	10W / 60W	10W / 60W	10W / 60W	10W / 60W	10W / 60W	10W / 60W	10W / 60W	
*APX6500 UHF R1 (380-470MHz) FCC ID: AZ492FT7129	HAE6010A, 1/2 wave, 3.5dBd	HAE6011A, 5/8 wave, 5dBd	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE6031A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE6015A, 1/2 wave, 2dBd	HAE6016A, 1/4 wave, 0dBd	RAE4014ARB, 5/8 wave, 5dBd
Max Power: DVR/DVR-LX / Mobile	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 48W
*APX6500 UHF R2 (450-520MHz) FCC ID: AZ492FT4967	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE6013A, 1/2 wave, 2dBd	HAE6016A, 1/4 wave, 0dBd	HAE6031A, 1/2 wave, 2dBd	RAE4014ARB, 5/8 wave, 5dBd	RAE40416ARB, 5/8 wave, 5dBd			
Max Power: DVR / Mobile	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 54W			
*APX6500 7/800MHz FCC ID: AZ492FT7124	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd						
Max Power: DVR/DVR-LX / Mobile	10W / 42W	10W / 42W	10W / 42W	10W / 42W						
*APX6500 8/900MHz FCC ID: AZ492FT7141	HAF4013A, 1/4 wave, 3dBd	HAF4036A, 1/4 wave, 0dBd	HAF4037A, 1/2 wave, 0.9dBd							
Max Power: DVR / Mobile	10W / 42W	10W / 42W	10W / 42W							

Table 7C Approved UHF1 DVRS Configuration \*APX6500/APX6500Li/APX5500/APX4500/APX2500/APX1500 (“BN” Model Only)  
\*All models noted are identical electrically. Only difference is software features

DVR: 7V083X03  
(DQPM DVRS5000P)  
DVR-LX:  
7V093X03

Freq Range: 450-470MHz, Trunk Mounted Antenna: HAE4003A, 1/4 wave, 0dBd

FCC ID: LO6-  
DVRSUHF

Maximum conducted power delivered to antenna: DVR/DVR-LX (W) / Mobile (W)

Mobile	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna
*APX6500 VHF (136-174MHz) FCC ID: AZ492FT7130	HAD4006A, 1/4 wave, 0dBd	HAD4007A, 1/4 wave, 0dBd	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4016A, 1/4 wave, 0dBd	HAD4017A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAD4022A, 5/8 wave, 3dBd	RAD4010ARB, 1/2 wave, 3dBd	
Max Power: DVR/DVR-LX / Mobile	10W / 60W	10W / 60W	10W / 60W	10W / 60W	10W / 60W	10W / 60W	10W / 60W	10W / 60W	10W / 60W	
*APX6500 UHF R1 (380-470MHz) FCC ID: AZ492FT7129	HAE6010A, 1/2 wave, 3.5dBd	HAE6011A, 5/8 wave, 5dBd	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE6031A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE6015A, 1/2 wave, 2dBd	HAE6016A, 1/4 wave, 0dBd	RAE4014ARB, 5/8 wave, 5dBd
Max Power: DVR/DVR-LX / Mobile	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 48W
*APX6500 UHF R2 (450-520MHz) FCC ID: AZ492FT4967	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE6013A, 1/2 wave, 2dBd	HAE6016A, 1/4 wave, 0dBd	HAE6031A, 1/2 wave, 2dBd	RAE4014ARB, 5/8 wave, 5dBd	RAE40416ARB, 5/8 wave, 5dBd			
Max Power: DVR / Mobile	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 54W			
*APX6500 7/800MHz FCC ID: AZ492FT7124	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd						
Max Power: DVR/DVR-LX / Mobile	10W / 42W	10W / 42W	10W / 42W	10W / 42W						
*APX6500 8/900MHz FCC ID: AZ492FT7141	HAF4013A, 1/4 wave, 3dBd	HAF4036A, 1/4 wave, 0dBd	HAF4037A, 1/2 wave, 0.9dBd							
Max Power: DVR / Mobile	10W / 42W	10W / 42W	10W / 42W							

Table 7D Approved UHF2 DVRS Configuration \*APX6500/APX6500Li/APX5500/APX4500/APX2500/APX1500 (“BN” Model Only)

\*All models noted are identical electrically. Only difference is software features

DVR: 7V083X04  
(DQPM DVR6000P )  
Freq Range: 470-512MHz, Trunk Mounted Antenna: HAE4004A, 1/4 wave, 0dBd

FCC ID: LO6-DVRSUHF  
Maximum conducted power delivered to antenna: DVR (W) / Mobile (W)

Mobile	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna
*APX6500 VHF (136-174MHz) FCC ID: AZ492FT7130	HAD4006A, 1/4 wave, 0dBd	HAD4007A, 1/4 wave, 0dBd	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4016A, 1/4 wave, 0dBd	HAD4017A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAD4022A, 5/8 wave, 3dBd	RAD4010ARB, 1/2 wave, 3dBd	
Max Power: DVR / Mobile	10W / 60W	10W / 60W	10W / 60W	10W / 60W	10W / 60W	10W / 60W	10W / 60W	10W / 60W	10W / 60W	
*APX6500 UHF R1 (380-470MHz) FCC ID: AZ492FT7129	HAE6010A, 1/2 wave, 3.5dBd	HAE6011A, 5/8 wave, 5dBd	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE6031A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE6015A, 1/2 wave, 2dBd	HAE6016A, 1/4 wave, 0dBd	RAE4014ARB, 5/8 wave, 5dBd
Max Power: DVR / Mobile	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 48W	10W / 48W
*APX6500 UHF R2 (450-520MHz) FCC ID: AZ492FT4967	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE6013A, 1/2 wave, 2dBd	HAE6016A, 1/4 wave, 0dBd	HAE6031A, 1/2 wave, 2dBd	RAE4014ARB, 5/8 wave, 5dBd	RAE40416ARB, 5/8 wave, 5dBd			
Max Power: DVR / Mobile	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 54W	10W / 54W			
*APX6500 7/800MHz FCC ID: AZ492FT7124	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd						
Max Power: DVR / Mobile	10W / 42W	10W / 42W	10W / 42W	10W / 42W						
*APX6500 8/900MHz FCC ID: AZ492FT7141	HAF4013A, 1/4 wave, 3dBd	HAF4036A, 1/4 wave, 0dBd	HAF4037A, 1/2 wave, 0.9dBd							
Max Power: DVR / Mobile	10W / 42W	10W / 42W	10W / 42W							

**Table 7E Approved UHF3 DVRS Configuration \*APX6500/APX6500Li/APX5500/APX4500/APX2500/APX1500 (“BN” Model Only)**  
\*All models noted are identical electrically. Only difference is software features

DVR: 7V083X01  
(DQPM/DVR3000P)  
DVR-LX:  
7V093X01

Freq Range: 136-174MHz

Trunk Mounted Antenna: HAD4006A, 1/4 wave, 0dBd, HAD4007A, 1/4 wave, 0dBd, HAD4008A, 1/4 wave, 0dBd, HAD4009A, 1/4 wave, 0dBd

FCC ID: LO6-DVRSVHF

Maximum conducted power delivered to antenna: DVR/DVR-LX (W) / Mobile (W)

Mobile	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna	Roof Mounted Antenna
*APX6500 VHF (136-174MHz) FCC ID: AZ492FT7130	HAD4006A, 1/4 wave, 0dBd	HAD4007A, 1/4 wave, 0dBd	HAD4008A, 1/4 wave, 0dBd	HAD4009A, 1/4 wave, 0dBd	HAD4016A, 1/4 wave, 0dBd	HAD4017A, 1/4 wave, 0dBd	HAD4021A, 1/4 wave, 0dBd	HAD4022A, 5/8 wave, 3dBd	RAD4010ARB, 1/2 wave, 3dBd	
Max Power: DVR/DVR-LX / Mobile	6W / 120W	6W / 120W	6W / 120W	6W / 120W	6W / 120W	6W / 120W	6W / 120W	6W / 120W	6W / 120W	
*APX6500 UHF R1 (380-470MHz) FCC ID: AZ492FT7129	HAE6010A, 1/2 wave, 3.5dBd	HAE6011A, 5/8 wave, 5dBd	HAE6012A, 1/4 wave, 0dBd	HAE6013A, 1/2 wave, 2dBd	HAE6031A, 1/2 wave, 2dBd	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE6015A, 1/2 wave, 2dBd	HAE6016A, 1/4 wave, 0dBd	RAE4014ARB, 5/8 wave, 5dBd
Max Power: DVR/DVR-LX / Mobile	6W / 120W	6W / 120W	6W / 120W	6W / 120W	6W / 120W	6W / 120W	6W / 120W	6W / 120W	6W / 120W	6W / 120W
*APX6500 UHF R2 (450-520MHz) FCC ID: AZ492FT4967	HAE4003A, 1/4 wave, 0dBd	HAE4011A, 1/2 wave, 3.5dBd	HAE6013A, 1/2 wave, 2dBd	HAE6016A, 1/4 wave, 0dBd	HAE6031A, 1/2 wave, 2dBd	RAE4014ARB, 5/8 wave, 5dBd	RAE40416ARB, 5/8 wave, 5dBd			
Max Power: DVR/DVR-LX / Mobile	6W / 54W	6W / 54W	6W / 54W	6W / 54W	6W / 54W	6W / 54W	6W / 54W			
*APX6500 7/800MHz FCC ID: AZ492FT7124	HAF4013A, 1/4 wave, 3dBd	HAF4014A, 1/4 wave, 3dBd	HAF4016A, 1/4 wave, 0dBd	HAF4017A, 1/4 wave, 3dBd						
Max Power: DVR/DVR-LX / Mobile	6W / 42W	6W / 42W	6W / 42W	6W / 42W						
*APX6500 8/900MHz FCC ID: AZ492FT7141	HAF4013A, 1/4 wave, 3dBd	HAF4036A, 1/4 wave, 0dBd	HAF4037A, 1/2 wave, 0.9dBd							
Max Power: DVR / Mobile	6W / 42W	6W / 42W	6W / 42W							

Table 7F Approved VHF DVRS Configuration \*APX6500/APX6500Li/APX5500/APX4500/APX2500/APX1500 (“BN” Model Only)

\*All models noted are identical electrically. Only difference is software features



## ***Antenna Installation Instructions***

### **IMPORTANT**

To assure optimum performance and compliance with RF Energy Safety standards, these antenna installation guidelines and instructions are limited to metal-body vehicles with appropriate ground planes and take into account the potential exposure of back seat passengers and bystanders outside the vehicle.

### Selecting an Antenna Site/Location on a Metal Body Vehicle

#### **1. External installation**

Check the requirements of the antenna supplier and install the vehicle antenna external to a metal body vehicle in accordance with those requirements.

#### **2. Roof top**

For optimum performance and compliance with RF Energy Safety standards, mount the mobile radio antenna per Table B.

#### **3. Trunk lid (DVR/DVR-LX only)**

For optimum performance and compliance with RF Energy Safety standards, mount the mobile radio antenna per Table B.

On some vehicles with clearly defined, flat trunk lids, the antennas of some radio models (see restrictions below) can also be mounted on the center area of the trunk lid. For vehicles without clearly defined, flat trunk lids (such as hatchback autos, sports utility vehicles, and pick-up trucks), mount the antenna in the center area of the roof.

#### ***Before installing a DVR/DVR-LX antenna on the trunk lid,***

Be sure that the distance from the antenna location on the trunk lid will be at least 85 cm (33 inches) from the rear seat headrest to ensure compliance with RF Energy Exposure regulations. Do not install the trunk antenna if the distance between the back seat passenger and the trunk mount antenna is less than 85cm.

Ensure that the trunk lid is grounded by connecting grounding straps between the trunk lid and the vehicle chassis.

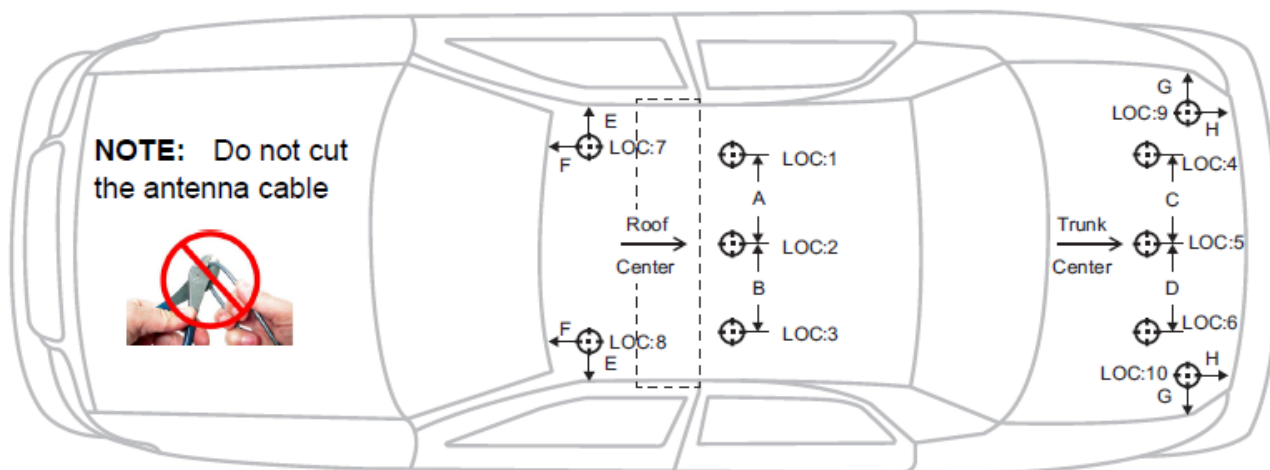
#### **4. Mounting restrictions for certain radio models.**

**NOTE:** Do not cut antenna cables to ensure compliance with RF Energy Exposure regulations

#### **5. Ensure that the antenna cable can be easily routed to the radio. Route the antenna cable as far away as possible from any vehicle electronic control units and associated wiring.**

#### **6. Check the antenna location for any electrical interference.**

**NOTE:** Any two metal pieces rubbing against each other (such as seat springs, shift levers, trunk and hood lids, exhaust pipes, etc.) near the antenna can cause severe receiver interference.



**Fig 1 Multiple Antennas Separation for locations 1-10**

Fig. 1 indicates the separation distances required for the various antennas used with XTL/APX mobile antennas used with the DVR/DVR-LX antenna. Each "cross-hair" symbol represents a possible location (i.e. LOC) of an antenna. The recommendation is to locate them as close to the center of the roof and/or trunk as possible, without interference with a lightbar. This picture is not drawn to scale. For letters A, B, C, and D, **Table A** indicates the EXACT distance for separation of the LMR antennas. For letters E, F, G, and H, **Table B** indicates the maximum distance between the edge of the ground plane and the accessory antenna location.

**NOTE:**

- A minimum of 18-inch (46cm) separation is required between lightbar and any roof mounted antennas, to prevent interference with the lightbar circuitry (see lightbar manufacturer's installation information).

**Table A - Distance between Antenna**

Characters	Distance	Characters	Distance
A	17.7 inches (45cm) (XTL and Non APX8500)	E	8 inches (20cm)
	8 inches (20cm) (APX8500MP)		
B	17.7 inches (45cm) (XTL and Non APX8500)	F	8 inches (20cm)
	8 inches (20cm) (APX8500MP)		
C	8 inches (20cm)	G	8 inches (20cm)
D	8 inches (20cm)	H	8 inches (20cm)

Table B – Antenna Locations for XTL/APX with DVR/DVR-LX

Mobile Products	Antenna Location	
	Mobile	DVR
XTL5000/XTL2500	LOC 2	LOC 5
APX6500/APX7500 ("AN" Model Only)	LOC 1, LOC 3 (Both Single and Dual Bands)	LOC 5
APX8500 MP	Loc 2 (7/800 and All Band)  LOC 1, LOC 3 (VHF and UHF)	LOC 5
APX2500/APX4500 ("AN" Model Only)	LOC 2	LOC 5
APX6500/APX6500Li APX5500/APX4500/APX2500/APX1500 ("BN" Model Only)	LOC 2	LOC 5

### QMA Connection (APX8500 MP Only)

APX8500 is using a quick disconnect connection called QMA. This does not require any tightening.

- Ensure there is sufficient slack in the antenna cable.
- Ensure that the collar of the antenna cable plug does not bind.
- Engage the QMA cable plug onto the jack, listening for a click to ensure proper engagement.
- Gently tug on the cable to ensure that it is engaged.
- To disengage, pull back on the cable plug's collar and pull the cable straight off the jack.

### GPS/GLONASS/Wi-Fi/Antenna Placement (APX8500 MP Only)

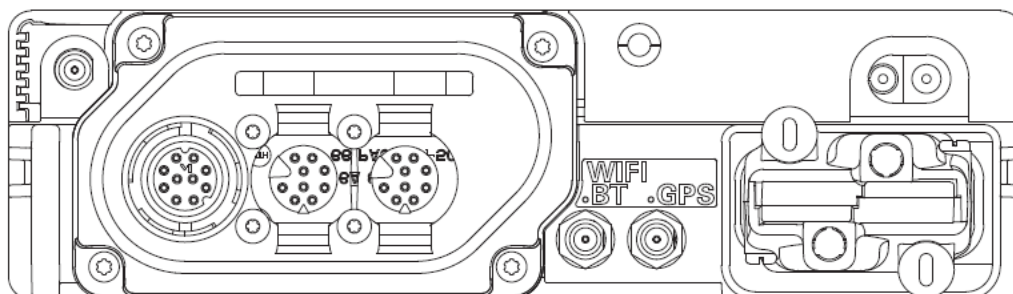


Fig. 2 GPS/GLONASS and Wi-Fi Antenna Connector on the Back of the Mid Power Radio

### ***Mobile Radio / DVR/DVR-LX Antenna separation***

To ensure interference-free performance when both the Mobile Radio and the DVR/DVR-LX are active, the two antennas must be mounted in such way as to provide 30dB minimum antenna isolation.

### ***Fixed DVRS Site Antennas***

Mobile radio equipment is sometimes installed at a fixed location and operated as a control station or as a fixed unit. In such cases the antenna installation must comply with the following requirements in order to assure optimal performance and make sure human exposure to radio frequency electromagnetic energy is within the guidelines set forth in the above standards.

- The antennas must be mounted outside the building.
- Mount the antennas on a tower if possible.
- If the antennas are to be mounted on a building then it must be mounted on the roof.
- As with all fixed site antenna installations, it is the responsibility of the licensee to manage the site in accordance with applicable regulatory requirements and may require additional compliance actions such as site survey measurements, signage, and site access restrictions in order to ensure that exposure limits are not exceeded.

### ***Temporary-Fixed Site***

- Futurecom requires the P25 Transportable DVRS (TDVRS) operator to ensure FCC/ISED Requirements for Radio Frequency Exposure are met.
- It is the responsibility of the Licensee to ensure that the appropriate separation distances between the antennas and bystanders are established and followed to meet the FCC and ISED Maximum Permissible Exposure (MPE) Requirements in any particular Temporary-Fixed location.
- In situations where a site assessment is not practical, it is recommended that the antennas be located **at least 9 feet from bystanders**. This should ensure MPE compliance in any Temporary-Fixed application and is likely to be a much greater separation distance than is necessary in most cases.
- Failure to observe the MPE distance exclusion area around the antenna may expose persons within this area to RF energy above the FCC/ISED exposure limits for bystanders (general population).

## Approved Antennas and Maximum output power (W) for combination DVR/DVR-LX and APX mobiles for Temporary-Fixed Site

### **NOTE:**

APX mobile RF conducted antenna power in the tables below denotes up to 50% Tx duty cycle.  
DVR/DVR-LX RF conducted antenna power in the tables below denotes up to 100% Tx duty cycle.

### DVR/DVR-LX

Band	Antenna	Power (W)
VHF (136-174MHz)	VAD0002A	6
UHF1 (406-430MHz)	VAE0002A	10
UHF2 (450-470MHz)	VAE0002A	10
UHF3 (470-512MHz)	VAE0002A	10
700 (768-806MHz)	VAF0001A	5
800 (806-869MHz)	VAF0001A	10

### APX8500

Band	Antenna	Power (W)
VHF (136-174MHz)	VAD0001A	60
UHF1 (406-470MHz)	VAE0001A	48
UHF2 (450-520MHz)	VAE0001A	54
700/800 (764-870MHz)	VAF0001A	42

### Max Power (W) for combination DVR/DVR-LX and APX

	DVR/APX	APX			
		VHF	UHFR1	UHFR2	700/800MHz
DVR/DVR-LX	VHF	6/60	6/48	6/54	6/42
	UHFR1	10/60	10/48	10/54	10/42
	UHFR2	10/60	10/48	10/54	10/42
	UHFR3	10/60	10/48	10/54	10/42
	700MHz	5/60	5/48	5/54	5/42
	800MHz	10/60	10/48	10/54	10/42