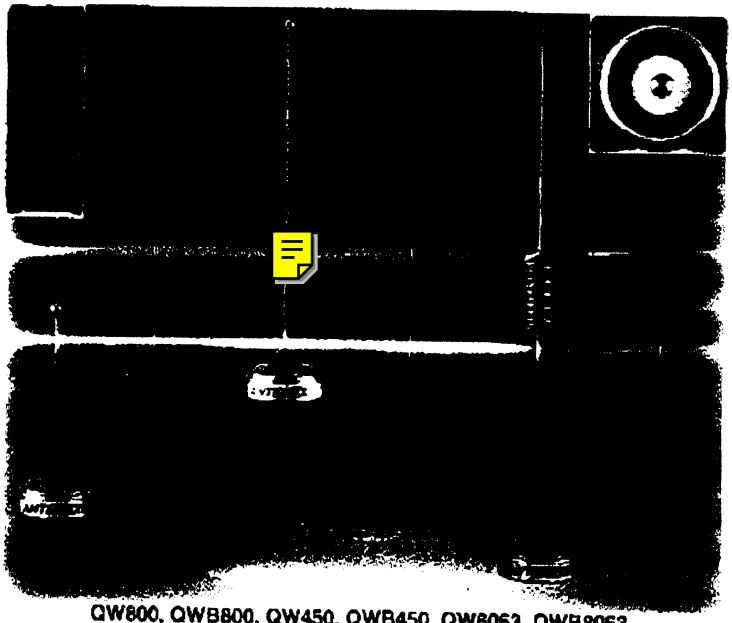
QUAR[redacted]AS

Our most inexpensive mobiles receive our most detailed attention, with a brass button contact and new heavy duty specially formulated Stand-Up™ grommet. Whatever your mobile communications need, you can be sure that ANTENEX® has a solution for you.

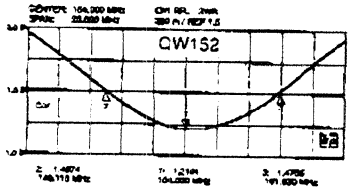


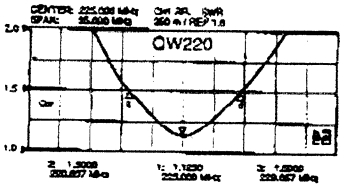
QW800, QWB800, QW450, QWB450, QW8063, QWB8063
Inset: Stand-up™ Gromet, Inset: Brass Contact

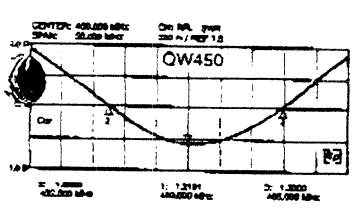
Technical Data - Product Features & Information

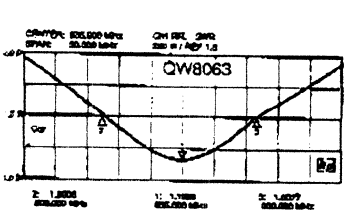
- **Gain:** *Unity for 1/4 wave antennas and 3 dB for open coil flexible models.*
- **Frequency Range:** *See model.*
- **VSWR:** *<2.0:1*
- **Maximum Power:** *200 watts*
- **Bandwidth @2.0:1:** *QW152 - 18 MHz; QW450 - 80 MHz; QW800 - 150 MHz; QW8253 - 40 MHz*
- **Impedance:** *50 ohms*
- **Tuning:** *Mid-band is standard. Custom tuning is available.*
- **Mounting Base:** *Brite or black chrome plated brass locking nut.*
- **Radiator:** *Type 302 stainless steel. Electropolished or black chrome plate on open coil collinears. Brite drawn finish or black chrome plate on quarterwaves*
- **Contact:** *Brass button*
- **Mounts to:** *3/4" hole. 3/8" hole, Magnetic & Mini-Trunk mounts*

VSWR









ANTENEX ELEX

Ordering Guide - Clear, Easy & S

QWB8253 = Chrome L[illegible]cking Nut Style, Black, 825-896 MHz, 3 dB

QW	Antenna Style	QW = Chrome locking nut style Antennas 3 = Full length Quarterwave
8	Finish	Blank = Chrome Finish B = Black Finish
825	Frequency	Frequency component of part number in bold below:
3	Gain	Blank = Unity 3 = 3 dB

FT (118-970)	27-54	136-144	144-[illegible]
152-162	162-174	220-225	406-430
430-450	450-470	470-490	490-512
806-866	806-896	825-896	896-970

Model	Frequency	Radiator	User	<$300	$300-$1000	≥$100
UNITY GAIN MODELS						
Stainless Models						
Q27S	27-54 Mhz	102" 1/4 Wave	97.65	46.87	44.92	42.9
QW***	Customer Sp[illegible]cified	1/4 Wave	11.25	5.40	5.18	4.9
QW136	136-144 MHz	1/4 Wave	6.25	3.00	2.88	2.7
QW144	144-152 MHz	1/4 Wave	6.25	3.00	2.88	2.7
QW152	152-162 MHz	1/4 Wave	6.25	3.00	2.88	2.7
QW162	162-174 MHz	1/4 Wave	6.25	3.00	2.88	2.7
QW220	220-225 MHz	1/4 Wave	6.25	3.00	2.88	2.7
QW406	406-430 MHz	1/4 Wave	6.25	3.00	2.88	2.7
QW430	430-450 MHz	1/4 Wave	6.25	3.00	2.88	2.7
QW450	450-470 MHz	1/4 Wave	6.25	3.00	2.88	2.7
QW470	470-490 MHz	1/4 Wave	6.25	3.00	2.88	2.7
QW490	490-512 MHz	1/4 Wave	6.25	3.00	2.88	2.7
QW800	806-896 MHz	1/4 Wave	6.25	3.00	2.88	2.7
QW900	896-970 MHz	1/4 Wave	6.25	3.00	2.88	2.7
QWFT120	Field Tunable	1/4 Wave	7.50	3.60	3.45	3.3
Black Models						
QWB[illegible]	Customer Sp[illegible]cified	1/4 Wave	17.45	8.38	8.03	7.68
QWB136	136-144 MHz	1/4 Wave	12.45	5.50	5.27	5.04
QWB144	144-152 MHz	1/4 Wave	12.45	5.50	5.27	5.04
QWB152	152-162 MHz	1/4 Wave	12.45	5.50	5.27	5.04
QWB162	162-174 MHz	1/4 Wave	12.45	5.50	5.27	5.04
QWB220	220-225 MHz	1/4 Wave	12.45	5.50	5.27	5.04
QWB406	406-430 MHz	1/4 Wave	12.45	5.50	5.27	5.04
QWB430	430-450 MHz	1/4 Wave	12.45	5.50	5.27	5.04
QWB450	450-470 MHz	1/4 Wave	12.45	5.50	5.27	5.04
QWB470	470-490 MHz	1/4 Wave	12.45	5.50	5.27	5.04
QWB490	490-512 MHz	1/4 Wave	12.45	5.50	5.27	5.04
QWB800	806-896 MHz	1/4 Wave	12.45	5.50	5.27	5.04
QWB900	896-970 MHz	1/4 Wave	12.45	5.50	5.27	5.04
QWFTB120	Field Tunable	1/4 Wave	13.70	6.58	6.30	6.03
3 dB GAIN MODELS						
Stainless Models						
QW8063	806-866 MHz	Open Coil Flexible	11.46	5.50	5.27	5.04
QW8253	825-896 MHz	Open Coil Flexible	11.46	5.50	5.27	5.04
QW8963	896-970 MHz	Open Coil Flexible	11.46	5.50	5.27	5.04
Black Models						
QWB8063	806-866 MHz	Open Coil Flexible	18.75	9.00	8.63	8.25
QWB8253	825-896 MHz	Open Coil Flexible	18.75	9.00	8.63	8.25
QWB8963	896-970 MHz	Open Coil Flexible	18.75	9.00	8.63	8.25

See pages 32-35 for mounting options!

Vertical Field Patterns

PER[illegible]

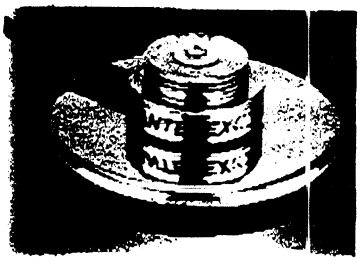
Our [illegible]

- Clear, Easy & Sensible!

= Mount, w/Rubber Boot, 12' of RG58A/U, PL259 Crimp Installed

Hole Size	G = Magnetic Mount Style	
B	Finish	Blank = Chrome B = Black
R	Rubber Boot	Blank = No Rubber Boot R = Rubber Boot
8	Cable Style	8 = RG58A/U 8X = RG8X "low loss" F = Antenex Teflon® Coax Cable 8U = RG58U D = Teflex™
P	Connector Style	Blank = No connector PS = PL259 solder PST = PL259 solder Teflon® P = PL259 crimp M = Mini UHF crimp (*for RG58, RG58A/U, Teflex™, & Teflon® only) B = BNC crimp N = N crimp NS = N solder T = TNC crimp SM = SMA crimp*
I	Installation Option	Blank = Loose connector I = Installed connector (Add $1.00 for crimp, $1.50 for solder.)
BLANK	Cable Length	Blank = 12 ft is standard on magnetic mounts. *** = User defined length.

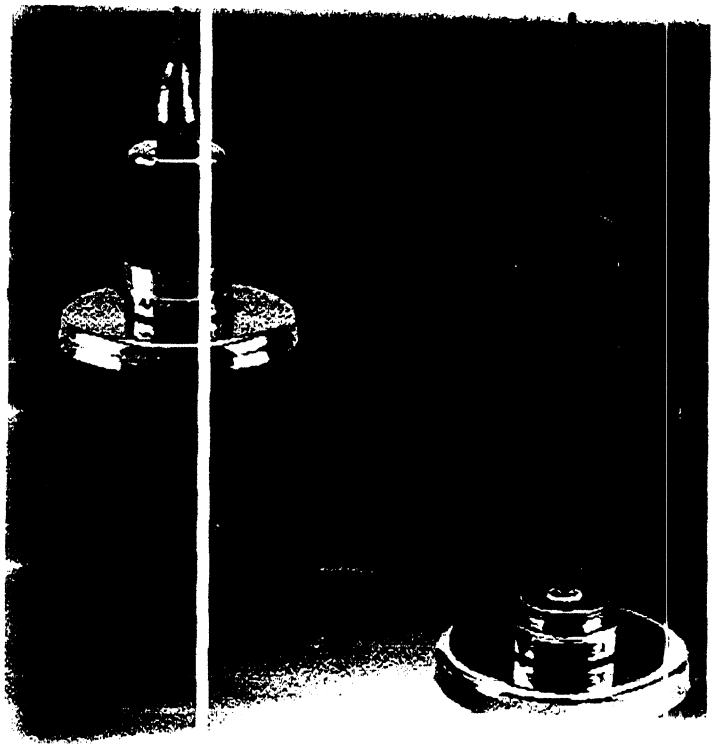
Our magnetic [illegible]mounts are the ideal way to [illegible]temporarily install antennas [illegible]n a vehicle. Corrosion resista[illegible]nt materials, a complete weat[illegible]er seal, and a strong magnet ensure that your mount will [illegible]continue to perform for ye[illegible]ars. This product may be c[illegible]pened in the field for servici[illegible]g or cable replacement. All [illegible]magnetic mounts ship standard with a protect[illegible] mylar sole. We pr[illegible]vide, as an option or for replacement, a protect[illegible] rubber boot (mod[illegible]el GRO) which also helps to protect the m[illegible]ount surface.



"I like the A[illegible]NTENEX® mounts because of the quality and e[illegible]ase of installation" Jim, Communica-tions Specia[illegible]sts.

Model	Description	User	<=$300	$300-$1000	>$1000
3/4" STYLE MAGNETIC MOUNTS					
Chrome Models with 12' of RG58A/U Stranded Center Cable					
G8	No Connector	29.58	14.20	13.61	13.02
G8B	BNC Crimp	32.08	15.40	14.76	14.12
G8M	Mini UHF crimp	32.08	15.40	14.76	14.12
G8N	N Crimp	37.58	18.04	17.29	16.54
G8NS	N Solder	39.08	18.76	17.98	17.20
G8P	UHF (PL259) Crimp	32.08	15.40	14.76	14.12
G8PI	UHF (PL259) Crimp, Installed	34.08	16.36	15.69	15.00
G8PS	UHF (PL259) Solder	32.39	15.55	14.90	14.25
G8PST	UHF (PL259) Teflon Solder	34.08	16.36	15.68	15.00
G8T	TNC Crimp	32.08	15.40	14.76	14.12
Chrome Models with 12' of RG58U Solid Center Conductor Cable					
G8U	No Connector	36.00	17.28	16.56	15.84
G8UB	BNC Crimp	38.50	18.48	17.71	16.94
G8UM	Mini UHF Crimp	38.50	18.48	17.71	16.94
G8UN	N Crimp	44.00	21.12	20.24	19.36
G8UNS	N Solder	45.50	21.84	20.93	20.02
G8UP	UHF (PL259) Crimp	38.50	18.48	17.71	16.94
G8UPST	UHF (PL259) Teflon Solder	40.50	19.44	18.63	17.82
G8UT	TNC Crimp	38.50	18.48	17.71	16.94
Chrome Models with 12' of Antenex RG8X Low Loss Cable					
G8X	No Connector	37.00	17.76	17.02	16.28
G8XB	BNC Crimp	40.75	19.56	18.75	17.93
G8XM	Mini UHF Crimp	40.75	19.56	18.75	17.93
G8XN	N Crimp	45.00	21.60	20.70	19.80
G8XNS	N Solder	47.00	22.56	21.62	20.68
G8XP	UHF (PL259) Solder	40.75	19.56	18.75	17.93
G8XPST	UHF (PL259) Teflon Solder	41.50	19.92	19.09	18.26
G8XT	TNC Crimp	40.75	19.56	18.75	17.93
Chrome Models with 12' of Teflex™ Cable					
GD	No Connector	35.42	17.00	16.29	15.58
GDB	BNC Crimp	37.92	18.20	17.44	16.68
GDM	Mini UHF Crimp	37.92	18.20	17.44	16.68
GDN	N Crimp	43.42	20.84	19.97	19.10
GDNS	N Solder	44.92	21.56	20.66	19.76
GDPI	UHF (PL259) Crimp, Installed	39.92	19.16	18.36	17.56
GDPST	UHF (PL259) Teflon® Solder	39.92	19.16	18.26	17.56
GDT	TNC Crimp	37.92	18.20	17.44	16.68
Chrome Models with 12' of Teflon® Cable					
GF	No Connector	48.96	23.50	22.52	21.54
GFB	BNC Crimp	51.46	24.70	23.67	22.64
GFM	Mini UHF Crimp	51.46	24.70	23.67	22.64
GFN	N Crimp	56.96	27.34	26.20	25.06
GFNS	N Solder	58.46	28.06	26.89	25.72
GFPI	UHF (PL259) Crimp, Installed	53.46	25.66	24.59	23.52
GFPST	UHF (PL259) Teflon® Solder	53.46	25.66	24.59	23.52
GFT	TNC Crimp	53.46	25.66	24.59	23.52
GRO Rubber Boot add:		3.13	1.50	1.44	1.38
For Black on all models add:		4.00	1.92	1.84	1.76

Call for pricing on custom cable and connector options



Top: G8 wit[illegible] optional B1443 GB8 with optional BB1443
Bottom: GB8, G8

Technical D[illegible]ata - Product Feat[illegible]es & [illegible]

- *3/4" magnetic mo[illegible]nts are made with brass, ceramic, & steel mate[illegible]rials.*
- *Cable connection [illegible]s triple reinforced to eliminate cable pull out.*
- *Magnet is rated a[illegible] 90 lbs. pull strength. GM mag is rated at 55 lbs., mi[illegible] mag for po[illegible]ntennas is rated at 15 lbs. Very adequate for high speed pursuit ve[illegible]icles*
- *100% continuity a[illegible]nd resistance tested*
- *Small high perfon[illegible]ance contact is standard. Large contact is ava[illegible]ilable upon request.*
- *Protective rubber [illegible]oot is available.*
- *Cable is field rep[illegible]#ceable.*

SPECIFICATION FOR APPROVAL
(DUAL BAND ANTENNA)

FMA02A-3AI5

AND FMA02A-5AI5

axiom GPS INC.
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DUAL BAND ANTENNA SPECIFICATION

Registration No.
axiom DAUL-001-3

Registration Date
Apr. 25, 2001

SPECIFICATION FOR APPROVAL
(DUAL BAND ANTENNA)

MODEL No. : FMA02A – 3AI5

CUSTOMER : AXIOM NAVIGATION

APPROVED SIGNATURE			
	PREPARED BY	TESTED BY	APPROVED BY
Axiom Navigation (DATE :)			
Axiom GPS Inc. (DATE : Apr.25,01)			
VERSION NO. 0			

MiraeAsset Venture Tower 4F., 996-1, Dachi-Dong,
Gangnam-Gu, Seoul, Korea 135-280
Tel. : +82-2-567-2955
Fax : +82-2-567-2991

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*. REVISION RECORD

Rev. No	Revision description	Reason	Date	Remark

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*. CONTENTS

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1. GENERAL SPECIFICATION

1-1. Environmental Conditions	
Operating Temperature	-30 ℃ to +80 ℃
Storage Temperature	-40 ℃ to +90 ℃
Relativity Humidity	0% to 95% Rh
1-2. Electrical Specification	
Input Voltage	3.0V ± 10%
Power Consumption	20mA Maximum
Output Connector	SMA
Cable	1.5D-2V (RG-174) 5M

2. ANTENNA ELEMENT

2-1. GPS ANTENNA

Center Frequency	1575.42 MHz (L1 BAND)
Polarization	RHCP
Gain	+4dBi.
VSWR	2.0:1 Maximum
Impedance	50Ω
Pattern	Hemispherical
2-2. 900 MHz Antenna	
Frequency	885 to 945 MHz (Center: 915 MHz)
Polarization	Vertical
Gain	Unity
VSWR	2.0:1 Maximum
Impedance	50Ω
Pattern	Omni-directional

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3. LNA (Low Noise Amplifier) FOR GPS ANTENNA

Gain	25dB ±2.0dB
Noise Figure	2.0dB Maximum (25℃)
Voltage	DC 3V (±10%)
Current	20mA Maximum
Band Att.	20dB (Min.) @fo±50 MHz

4. MECHANICAL SPECIFICATION

4-1. GPS ANTENNA	
Connector	Straight SMA, Male, Gold plated
Cable	1.5D-2V (RG-174), 5m Gray color with label 'GPS'
Case	ABS

Case Color	*Black*
Mounting	*Magnetic Mour*
Dimension	*Elliption Φ50x6 mm*
Height	*20mm*
4-2. 900 MHz Antenna	
Connector	*Straight SMA, M ale, Silver plated*
Cable	*RG-174(1.5D-2), 5m Black color*
Dimension	*Φ10.5mm*
Height	*70mm*

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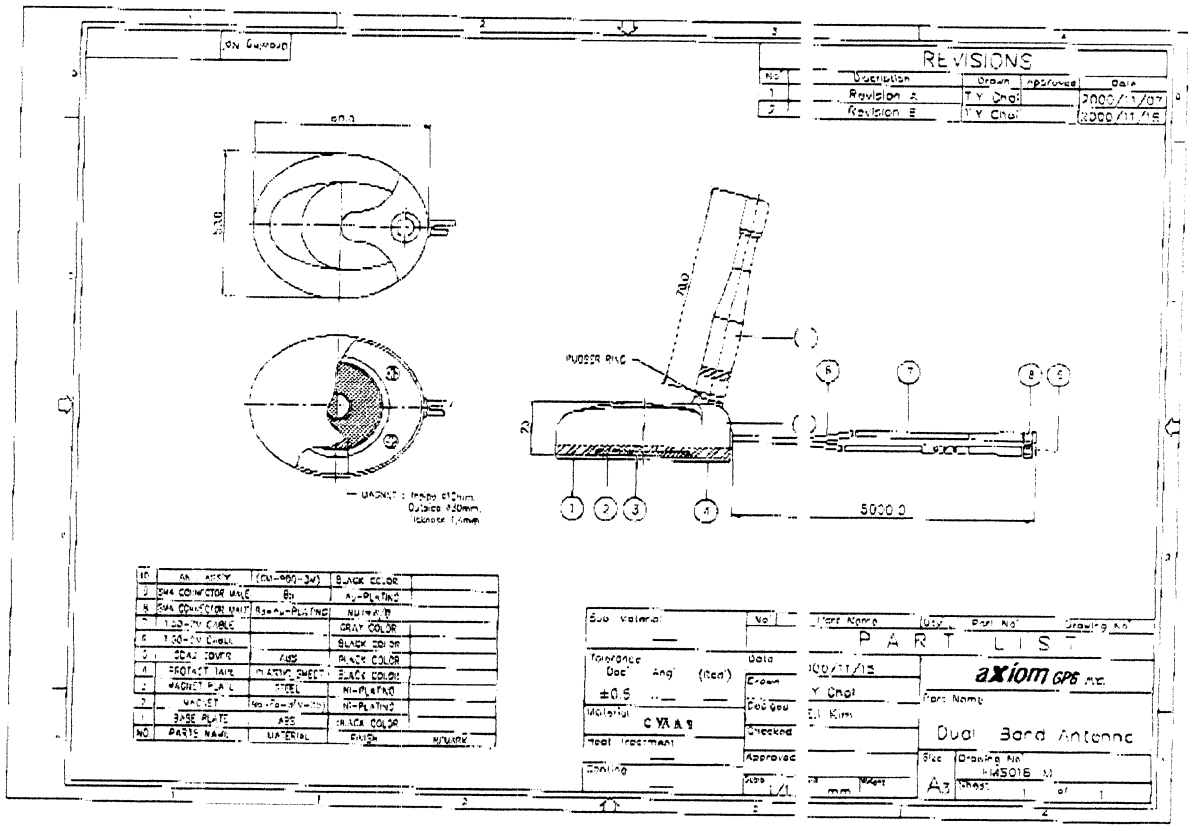
5. APPLICATION

FMS & Data Communication

6. OUTLINE DRAWING



NO	PARTS NAME	MATERIAL	FINISH	REMARK
10	AN. ASSY	(CN-990-3M)	BLACK COLOR	
9	SMA CONNECTOR MALE	Brs	Au-PLATING	
8	SMA CONNECTOR MALE	Brs+Au-PLATING	Au-PLATING	
7	1.5D-2V CABLE		GRAY COLOR	
6	1.5D-2V CABLE		BLACK COLOR	
5	SCALE SPACER	ABS	BLACK COLOR	
4	PROTECT TAPE	PLASTIC SHEET	BLACK COLOR	
3	MAGNET PLATE	STEEL	NI-PLATING	
2	MAGNET	Nd-Fe-B	NI-PLATING	
1	BASE PLATE	ABS	BLACK COLOR	

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7. PART NUMBER

F M A 0 2 A - 3 A I 5

Dual Base Antenna for FMS2000

Power
- 3 = 3.3 Volt
- 5 = 5 Volt (standard)

RF Connector
- N = No Connector
- X = MCX, right angle
- S = MCX, straight (Standard)
- A = SMA, straight
- B = SMB, straight
- C = SMC, straight

Frequency
- I = ISM Band : 902 to 928MHz (Standard)
- A = AMPS : 849 to 894MHz
- M = MicroBurst : 824 to 894MHz

Cable Length
- 5 = 5m
- 6 = 6feet (standard)
- 11 = 11feet

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