

# ***Disguised Antennas***



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Disguised antennas allow a public security organization to use a vehicle's existing AM/FM antennas for both conventional radio receiver functions as well as allowing a two-way radio to communicate over the same antenna. This allows a covert vehicle to avoid the need for a long mobile antenna, and disguise the fact that it is equipped with a two-way radio communication device. Comprod supplies either the Original Equipment Manufacturers (OEM) antennas, or adjustable universal mounted antennas, based on customer needs. A broadcast coupler is optionally available, to allow the two-way radio transmit and receive frequencies to be shared with the vehicle's AM/FM radio. The coupler prevents the transmit radio from damaging the AM/FM radio. When multi-band operation is required, Comprod provides the required Cross-band couplers, in order to support multiple frequency band operation on a single antenna.

Comprod has a long experience in supplying disguised antennas and associated couplers to some of the leading Public Safety and private security organizations across North America, for national, state, regional and municipal agencies. Our disguised antennas and filters are reliable and high quality to meet the needs of Mission-Critical communications. The antennas provide high-performance two-way communications in VHF (low and high band), UHF, dual, and 800-900 MHz mobile bands. Once installed, they will be indistinguishable from the original AM/FM broadcast antenna on the covert or undercover vehicle.



We supply disguised antennas using an OEM antenna combined with a tuning circuit integrated with the coaxial cable. Each antenna assembly is individually calibrated to ensure the best performance in a disguised appearance, which will be completely undetectable from the original vehicle’s appearance.

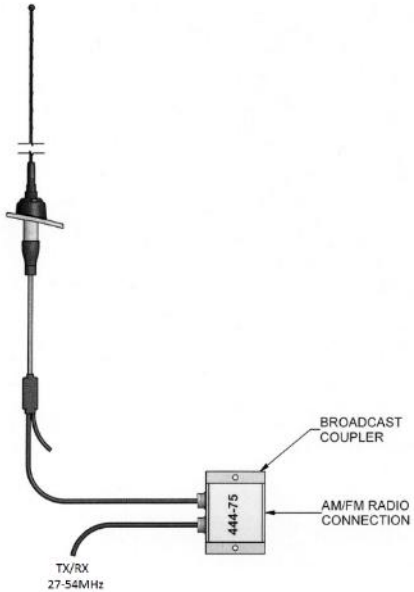
There is an optional broadcast coupler to deliver an antenna that can offer both two-way radio communication in addition to AM/FM receiver functions. The antenna may also be modified to provide multi-band two-way communication.

We are capable of meeting customers' special requirements:

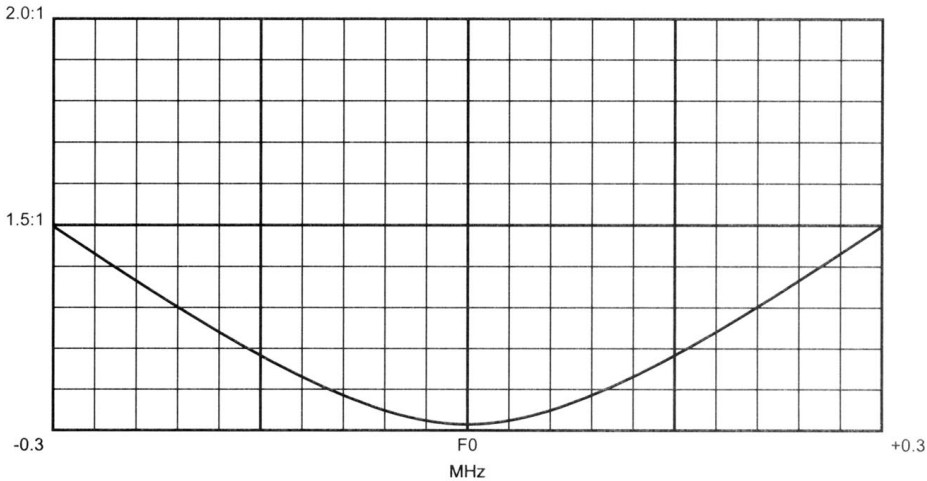
- Two or three separate frequency segments in a given mobile band.
- Cross-channel operation in two mobile bands with one antenna.
- Alternative antennas to an OEM version will be recommended, where required (e.g. Euro-style, or universal mount traditional whip).

Technical Specifications	
Nominal Gain	Unity
Bandwidth 1.5:1 VSWR, MHz	0.60
Power Rating, Watts	150
Radiator	Per OEM antenna
Length, in	Per OEM antenna
Feed Line	17 ft. RG58/U
Connector Options (Customer Specified)	UHF / Mini-UHF / BNC / TNC
Broadcast Coupler (optional)	Model 444-75

If the antenna is not required to provide AM/FM Radio service, the Broadcast Coupler can be omitted.



Typical VSWR vs Frequency curve



We supply disguised antennas using an OEM antenna combined with a tuning circuit integrated with the coaxial cable. Each antenna assembly is individually calibrated to ensure the best performance in a disguised appearance, which will be completely undetectable from the original vehicle’s appearance.

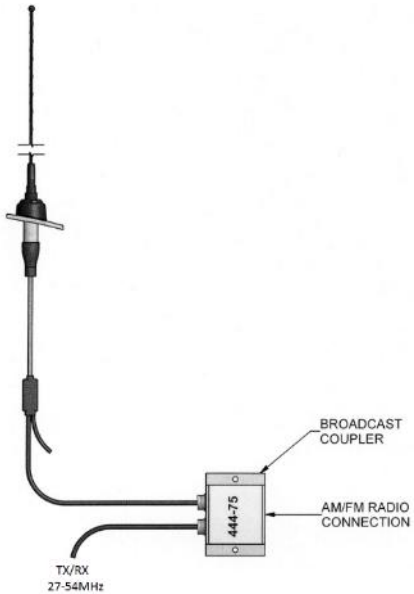
There is an optional broadcast coupler to deliver an antenna that can offer both two-way radio communication in addition to AM/FM receiver functions. The antenna may also be modified to provide multi-band two-way communication.

We are capable of meeting customers' special requirements:

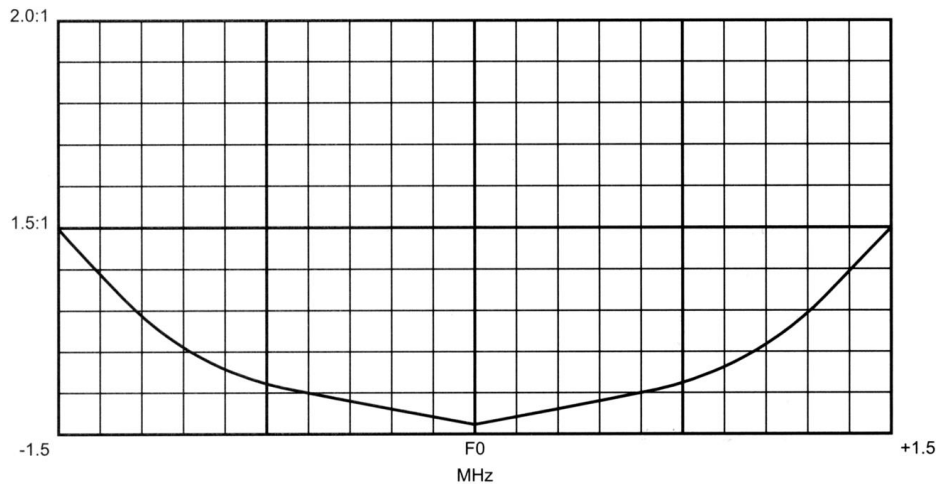
- Two or three separate frequency segments in a given mobile band.
- Cross-channel operation in two mobile bands with one antenna.
- Alternative antennas to an OEM version will be recommended, where required (e.g. Euro-style, or universal mount traditional whip).

Technical Specifications	
Nominal Gain	Unity
Bandwidth 1.5:1 VSWR, MHz	3.0
Power Rating, Watts	150
Radiator	Per OEM antenna
Length, in	Per OEM antenna
Feed Line	17 ft. RG58/U
Connector Options (Customer Specified)	UHF / Mini-UHF / BNC / TNC
Broadcast Coupler (optional)	Model 444-75

If the antenna is not required to provide AM/FM Radio service, the Broadcast Coupler can be omitted.



Typical VSWR vs Frequency curve



**Model F-33390**

We supply disguised antennas using a standard antenna combined with a tuning circuit integrated with the coaxial cable. Each antenna assembly is individually calibrated to ensure the best performance in a disguised appearance, which will be completely undetectable from the original vehicle's appearance.

There is an optional broadcast coupler to deliver an antenna that can offer both two-way radio communication in addition to AM/FM receiver functions. The antenna may also be modified to provide multi-band two-way communication.

We are capable of meeting customers' special requirements:

- Two or three separate frequency segments in a given mobile band.
- Cross-channel operation in two mobile bands with one antenna.
- Alternative antennas to an OEM version will be recommended, where required (e.g. Euro-style, or universal mount traditional whip).

Technical Specifications	F-33390
Nominal Gain	Unity
Bandwidth 1.5:1 VSWR, MHz	138-150
Power Rating, Watts	50
Radiator	Fiberglass
Length, in	13.5
Feed Line	17 ft.
Connector Options (Customer Specified)	Mini-UHF
Broadcast Coupler (optional)	Model 444-75

If the antenna is not required to provide AM/FM Radio service, the Broadcast Coupler can be omitted.





We supply disguised antennas using a standard antenna combined with a tuning circuit integrated with the coaxial cable. Each antenna assembly is individually calibrated to ensure the best performance in a disguised appearance, which will be completely undetectable from the original vehicle’s appearance.

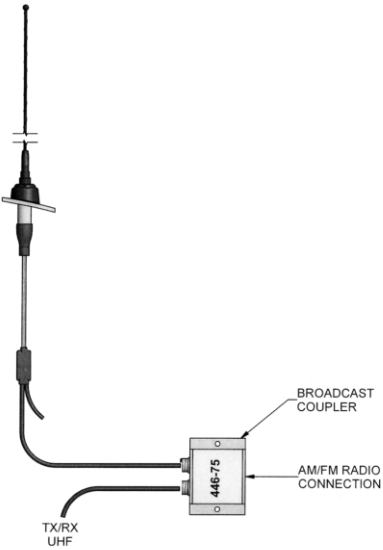
There is an optional broadcast coupler to deliver an antenna that can offer both two-way radio communication in addition to AM/FM receiver functions. The antenna may also be modified to provide multi-band two-way communication.

We are capable of meeting customers' special requirements:

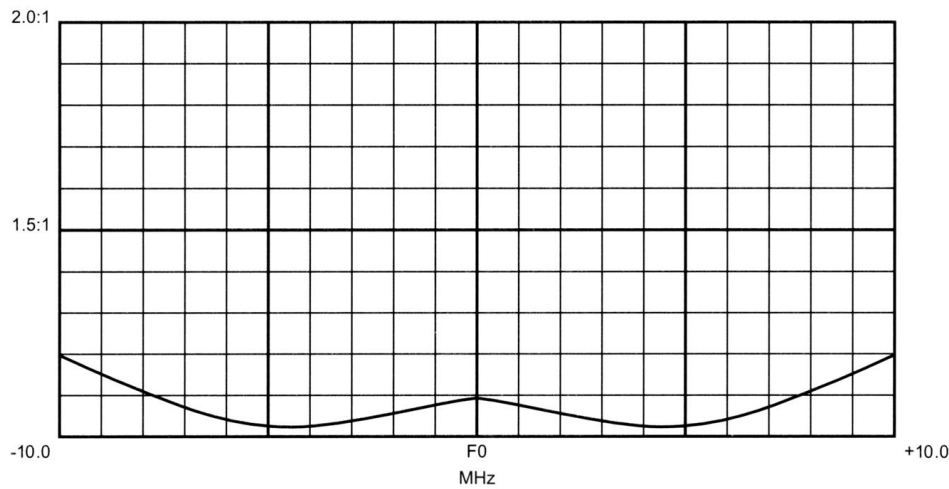
- Two or three separate frequency segments in a given mobile band.
- Cross-channel operation in two mobile bands with one antenna.
- Alternative antennas to an OEM version will be recommended, where required (e.g. Euro-style, or universal mount traditional whip).

Technical Specifications	
Nominal Gain	Unity
Bandwidth 1.5:1 VSWR, MHz	10-20
Power Rating, Watts	150
Radiator	Per OEM antenna
Length, in	Per OEM antenna
Feed Line	17 ft. RG-8X
Connector Options (Customer Specified)	UHF / Mini-UHF / BNC / TNC
Broadcast Coupler (optional)	Model 446-75

If the antenna is not required to provide AM/FM Radio service, the Broadcast Coupler can be omitted.



Typical VSWR vs Frequency curve



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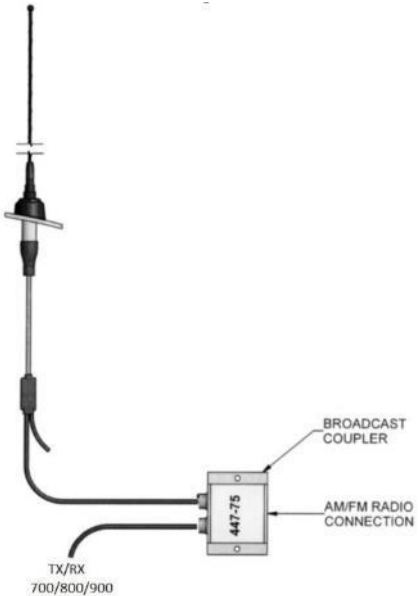
There is an optional broadcast coupler to deliver an antenna that can offer both two-way radio communication in addition to AM/FM receiver functions. The antenna may also be modified to provide multi-band two-way communication.

We are capable of meeting customers' special requirements:

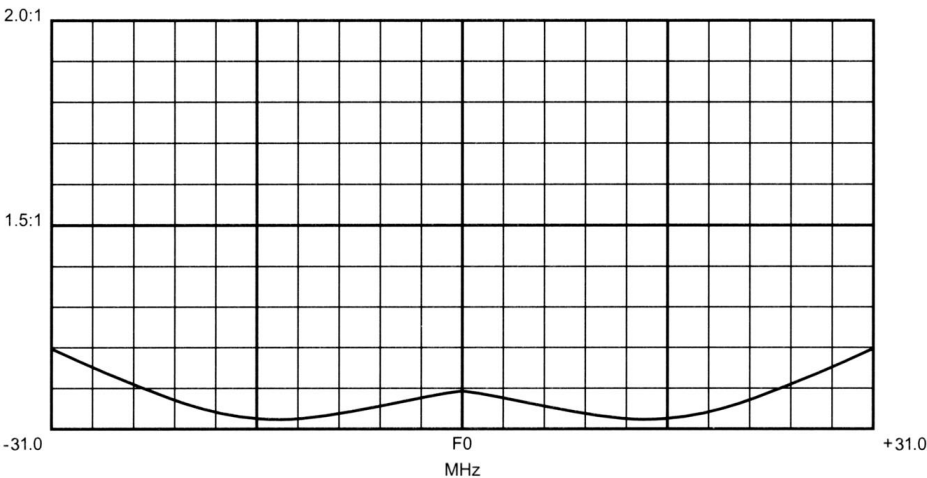
- Two or three separate frequency segments in a given mobile band.
- Cross-channel operation in two mobile bands with one antenna.
- Alternative antennas to an OEM version will be recommended, where required (e.g. Euro-style, or universal mount traditional whip).

Technical Specifications	
Nominal Gain	Unity
Bandwidth 1.5:1 VSWR, MHz	62
Power Rating, Watts	75
Radiator	Per OEM antenna
Length, in	Per OEM antenna
Feed Line	20 ft. LMR-195
Connector Options (Customer Specified)	UHF / Mini-UHF / BNC / TNC
Broadcast Coupler (optional)	Model 447-75

If the antenna is not required to provide AM/FM Radio service, the Broadcast Coupler can be omitted.



Typical VSWR vs Frequency curve



DUAL BAND ANTENNAS

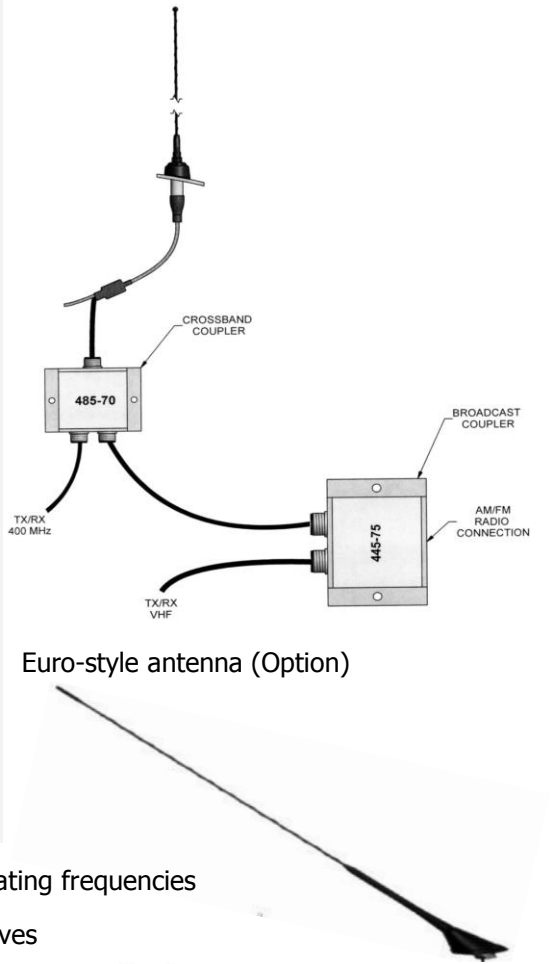
We supply disguised antennas using a standard antenna combined with a tuning circuit integrated with the coaxial cable. Each antenna assembly is individually calibrated to ensure the best performance in a disguised appearance, which will be completely undetectable from the original vehicle's appearance.

There is an optional broadcast coupler to deliver an antenna that can offer both two-way radio communication in addition to AM/FM receiver functions. The antenna may also be modified to provide multi-band two-way communication.

We are capable of meeting customers' special requirements:

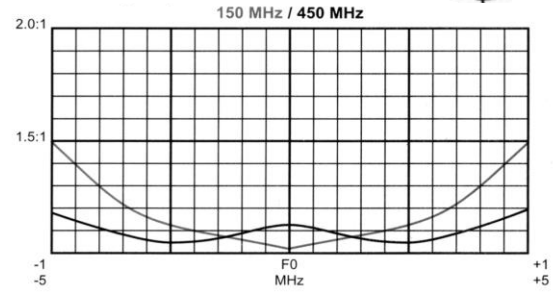
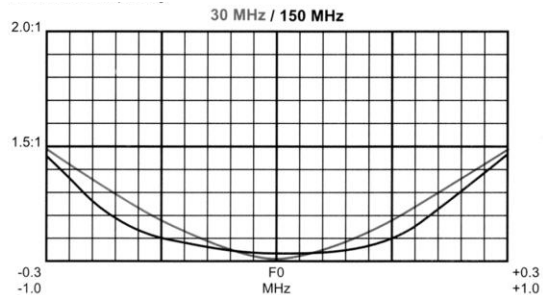
- Two or three separate frequency segments in a given mobile band.
- Cross-channel operation in two mobile bands with one antenna.
- Alternative antennas to an OEM version will be recommended, where required (e.g. Euro-style, or universal mount traditional whip).

Technical Specifications	
Frequency Range, MHz	30-50 and 150-174 150-174 and 406-512 150-174 and 764-960
Nominal Gain	Unity
Bandwidth 1.5:1 VSWR, MHz	30-50MHz: 0.6, 150-174MHz: 2 406-512MHz: 10, 764-960MHz: 63
VSWR	< 1.5:1
Pattern	Omnidirectional
Power Rating, Watts	30-512 MHz: 150, 764-960MHz: 75
Appearance	OEM antenna / Universal
Mounting	Front / Rear Fender
Finish	Black / Chrome
Connector Options (Customer	UHF / Mini-UHF / BNC / TNC
Cable	VHF: 17' RG-58/U UHF: 17' RG-8X 764-960MHz: 5' LMR-240



When ordering, specify Year, Make and Model of the vehicle and both operating frequencies

Typical VSWR vs Frequency curves





**Model F-33404**

We supply disguised antennas using a standard antenna combined with a tuning circuit integrated with the coaxial cable. Each antenna assembly is individually calibrated to ensure the best performance in a disguised appearance, which will be completely undetectable from the original vehicle's appearance.

There is an optional broadcast coupler to deliver an antenna that can offer both two-way radio communication in addition to AM/FM receiver functions. The antenna may also be modified to provide multi-band two-way communication.

We are capable of meeting customers' special requirements:

- Two or three separate frequency segments in a given mobile band.
- Cross-channel operation in two mobile bands with one antenna.
- Alternative antennas to an OEM version will be recommended, where required (e.g. Euro-style, or universal mount traditional whip).

Technical Specifications	F-33404
Nominal Gain	Unity
Bandwidth 1.5:1 VSWR, MHz	138-150, 764-776
Power Rating, Watts	50
Radiator	Fiberglass
Length, in	13.5
Vertical Height, in	13
Feed Line	15 ft.
Connector Options (Customer Specified)	Mini-UHF
Broadcast Coupler (optional)	Model 445-75

If the antenna is not required to provide AM/FM Radio service, the Broadcast Coupler can be omitted.



We are the leader in the design of RF filtering and coupling devices. The following are the specifications for couplers and tuners required as part of a Disguised Antenna solution.

Broadcast couplers - allow AM-FM broadcast receiver operation along with normal two-way mobile radio operation.

Crossband couplers - allow mobile radios on two different bands to operate with a single disguised antenna.

Antenna tuners - provide impedance matching and partly retuning the existing antenna to new frequencies.

### Broadcast Coupler Specifications

Model Number	Frequency Range	Insertion Loss		Max Power	Minimum Isolation
444-75	27-54 MHz	0.15 dB	1.5 dB	150 Watts	35 dB
445-75	138-174 MHz	0.15 dB	1.5 dB	150 Watts	35 dB
446-75	406-512 MHz	0.15 dB	1.5 dB	150 Watts	35 dB
447-75	764-960 MHz	0.20 dB	0.5 dB	50 Watts	40 dB

### Crossband Coupler Specifications

Model Number	Frequency Range		Max Power	Insertion Loss	Minimum Isolation	Connectors	Size (H x W x L) In (mm)
	Low Pass	High Pass					
485-75	138-174 MHz	406-512 MHz	100	0.4 dB	40 dB	UHF Female	1.6 x 3.5 x 3 (41 x 89 x 76)
486-75	30-50 MHz	138-174 MHz		0.3 dB	35 dB		
487-75	138-174 MHz	764-960 MHz		0.3 dB	35 dB		

Crossband Coupler



### Antenna Tuner Specifications

Model Number	Frequency Range	Max Power	Impedance	
			Input 1	Input 2
461-75	144-174 MHz	150 Watts	50 Ohms	10-700 Ohms
462-75	406-512 MHz	150 Watts	50 Ohms	10-700 Ohms