

# Antenna Authority, Inc.

DF Antennas Our Specialty!

[www.AntennaAuthorityInc.com](http://www.AntennaAuthorityInc.com)

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## Product Code --- TPAS-100 Two Port Amplifier Splitter

Description: Protected Amp with two output ports. This device can perform either function – SPLIT at the ICOM or 'Reverse Split at the dash radio.

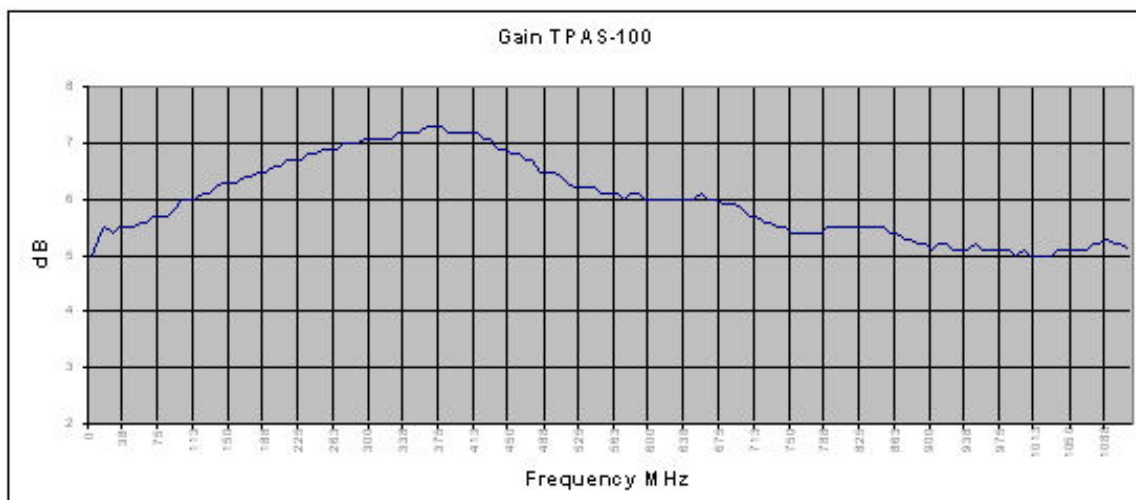
### Electrical Specifications

Frequency Coverage: 300 KHz - 1.10 GHz  
Power: Voltage: 12 VDC  
Current 60 MA  
Gain: 5 to 7 dB  
Impedance: 50 ohms  
VSWR 1.8:1  
Connectors BNC  
Power Absorption 1 watt 50% duty cycle

### Mechanical Specifications

Dimensions: Height: 0.8" -Width: 2"  
Length: 3" Weight: 5 OZ  
Environments: Operating: -40°C to +60°C  
Storage: -40°C to +70°C  
Humidity: 95%  
Material: Aluminum, FR-4

### Typical Gain Curve



### As Icom RF Splitter



### As Stico RF Combiner



# TPAS-100 Two Port Splitter

The TPAS-100 is intended to be used with FCC type MADF systems which have two issues as installed.

One: The RF multicoupler used at the dash radio antenna - although it has good gain and noise performance for use with the monitoring receivers and scanners, it has a low frequency cut off of 30 MHz. Therefore no RF signal from the Stico antenna gets through to the vehicle's radio for the AM band.

Two: The radio used for the DF system is the Icom R-8500 which has a separate input for HF frequencies below 30 MHz. To be able to DF below 30 MHz you need to provide RF signal to this separate port.

## **A TPAS-100 can be used to solve either these problems.**

It has a RF protected input so that static and RF over load will not destroy the down stream systems. It provides good noise performance and some gain with good isolation between both of the equal outputs so that they will not be interfered with by the tuning of the receiver or other items served by the multicoupler. These same characteristics also make it a good amp/splitter for the two band inputs of the Icom R-8500 radio.

As an RF input Limiter it will protect the receivers and multicouplers from being destroyed by too much input power or static charge buildup on the antenna.

As an Icom splitter it makes DF'ing possible below 30 MHz.

The TPAS-100 system will protect the receiving systems on a continuous basis with a 50% duty cycle on the transmitter by meeting the following conditions. The transmitting and receiving (DF) antennas should not be placed closer than the following spacing:

For a 5 watt transmitter the minimum spacing should be 1 feet

For a 25 watt transmitter the minimum spacing should be 3 feet

For a 40 watt transmitter the minimum spacing should be 5 feet

RF over voltage protection  
Stable rugged construction  
Compact light weight  
Works in harsh conditions

Specifications subject to change without notice  
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One year warranty