

## **System Description**

### **Access Point**

The Access Point (AMP 2024AP) is a Direct Sequence Spread Spectrum device operating at 2 Mbps according to IEEE 802.11 protocol. The RF Modulation used is QPSK (2 Mbps) or BPSK (1Mbps). The device has Ethernet connection (RJ45) according to 802.3 wired Ethernet protocol. The output power from the device is typically 50mw., with reverse SMA connector.

A short length of stress relief cable is used to connect the Access point to a D.C. injector which provided +12v DC through the RF cable to the Tower Top Amplifier. (AMP 2425-275) The RF Cable connects to the Amplifier which is bolted on the mount using u bolts. A Lightning arrestor is mounted at the output of the Bi directional Amplifier.

The 10 d B OMNI antenna is connected to the lightning arrestor.

Additional Antennas that can be used are AOM-5, AOM-8, INET-ANT-15, and Flat "wall mount" APN-7.
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## **AOM – 10**

### **OMNIDIRECTIONAL ANTENNA**

The **AOM-10** is a vertically polarized omnidirectional antenna consisting of a centre fed collinear array of dipoles enclosed in a tubular radome. The antenna was designed for operation under severe weather conditions (icing, salt air, acid rain, etc.) and is at DC ground for lightning protection.

### **ELECTRICAL SPECIFICATIONS**

**Frequency Range:** 2400 – 2483 MHz

**Gain:** 10 dBi

**VSWR:** 1.5:1 maximum

**Polarization:** Vertical

**Power Cross-Polarization Discrimination:** 20 dB minimum

**Rating:** 25 watts

**Electrical Downtilt:** Factory adjusted to 0, 2 or 4 degrees

**E-Plane Beamwidth (-3dB):** 8 degrees

**Impedance:** 50 ohms nominal

**Termination:** Type N female

### **MECHANICAL SPECIFICATIONS**

**Overall Length:** 48 in. (1219 mm)

**Radome Diameter:** 2.25 in. (57.2 mm)

**Weight Including Clamps:** 15 lb. (6.8 kg)

**Rated Wind Velocity:** 125 mph (200 km/hr)

**Horizontal Thrust at Rated Wind:** 29.3 lb. (13.3 kg)

**Mounting:** Mounts to a 1.75 – 4.0 in. O.D. (44.5-102 mm) pipe using the two TMC-103 clamps supplied

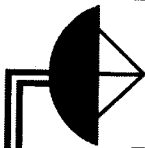
### **MATERIALS**

**Radiating Elements:** Copper

**Radome:** Gray fiberglass

**Base:** Irridited aluminum

**Clamps:** Hot dip galvanized steel



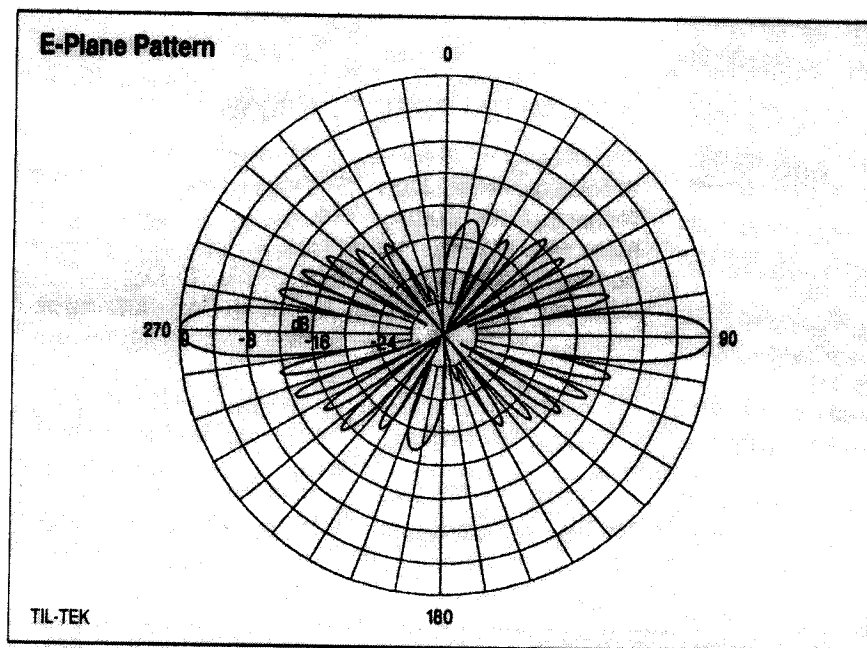
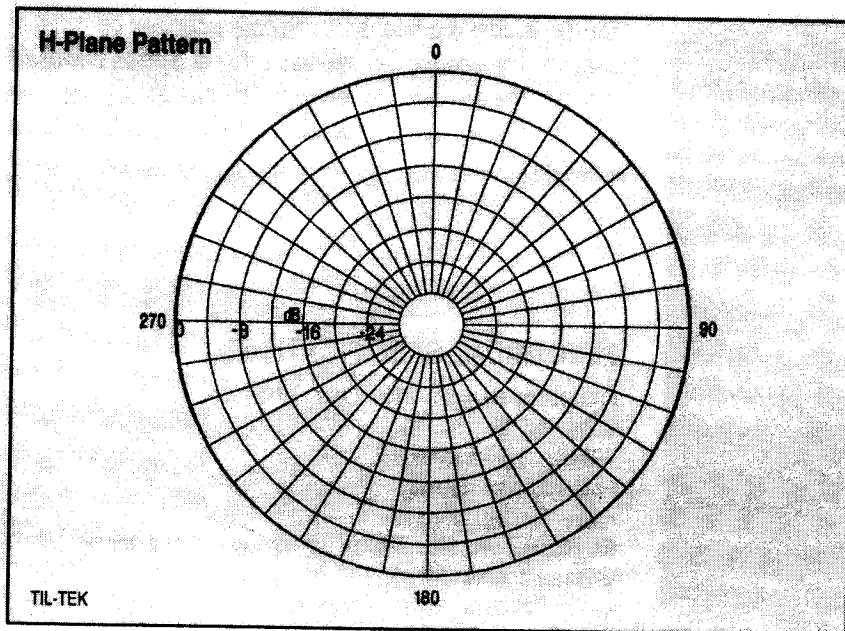
# **AmpWave™**

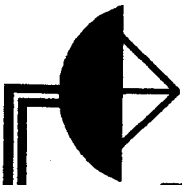
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## Antenna Test Pattern 10dB Omni





# AmpWave™

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## High Speed Wireless Internet ACCESS

An Amplidyne Inc. product

59 La Grange Street  
Raritan, NJ 08869

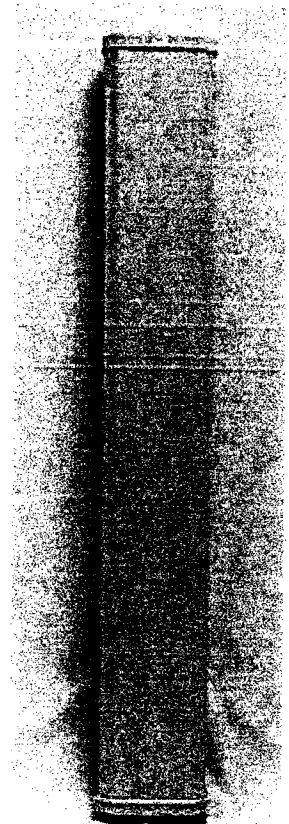
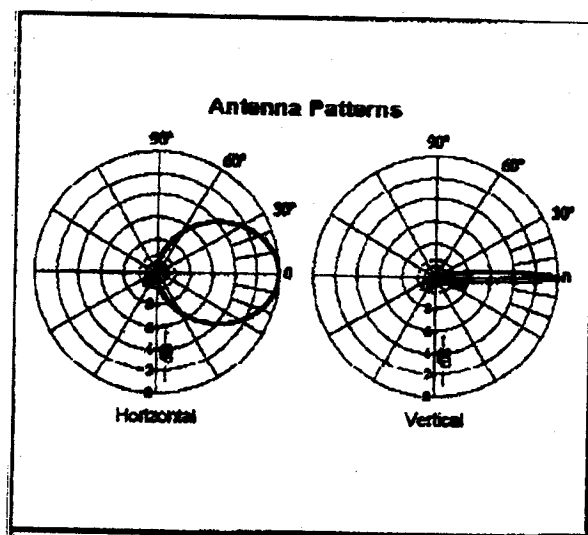
### Panel Sector

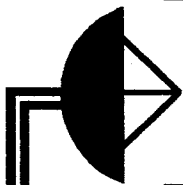
The ST16 is a versatile sector antenna designed for use with the AmpDNet Primary Unit. Its sturdy construction of passivated aluminum, brass and UV resistant PVC, along with its 90-degree horizontal beam width, allow it to be used in many applications.

#### AST16

<u>GAIN</u>	<u>HORIZONTAL BEAM WIDTH</u>	<u>VERTICAL BEAM WIDTH</u>	<u>DIMENSIONS</u>	<u>CONNECTOR TYPE</u>	<u>WEIGHT</u>	<u>POLARIZATION</u>
16.1 dBi	90 Degrees	7 Degrees	42 x 6.1 x 2.8"	Type N female	6.2 lbs.	Vertical

MOUNTING: Mounts on a 1.25 to 4.25 inch OD mast





# **AmpWave<sup>TM</sup>**

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Raritan, NJ 08869

### **Panel Sector**

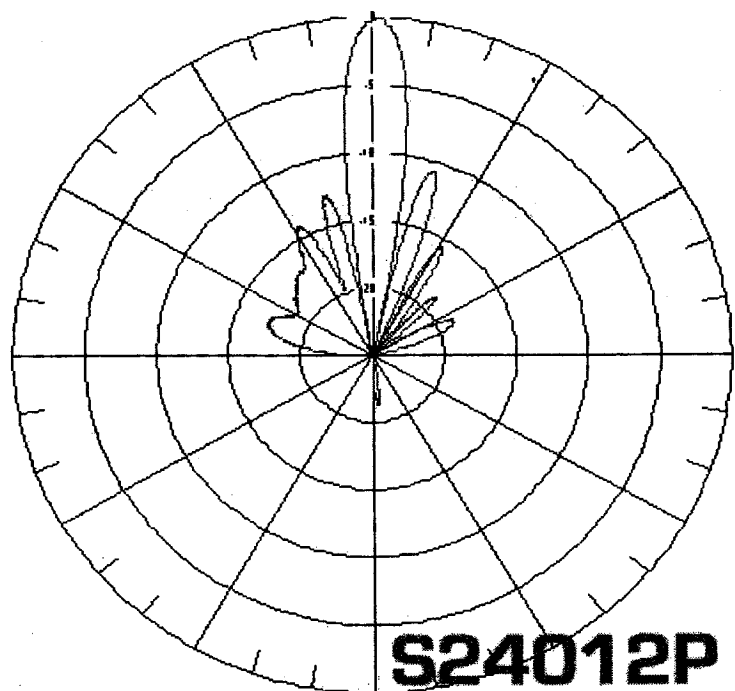
These linearly polarized, weatherized patch antennas are suitable for both indoor and outdoor applications. Specifically designed for spread spectrum systems they are appropriate for use with the AmpDNet Primary Unit.

#### **AST12**

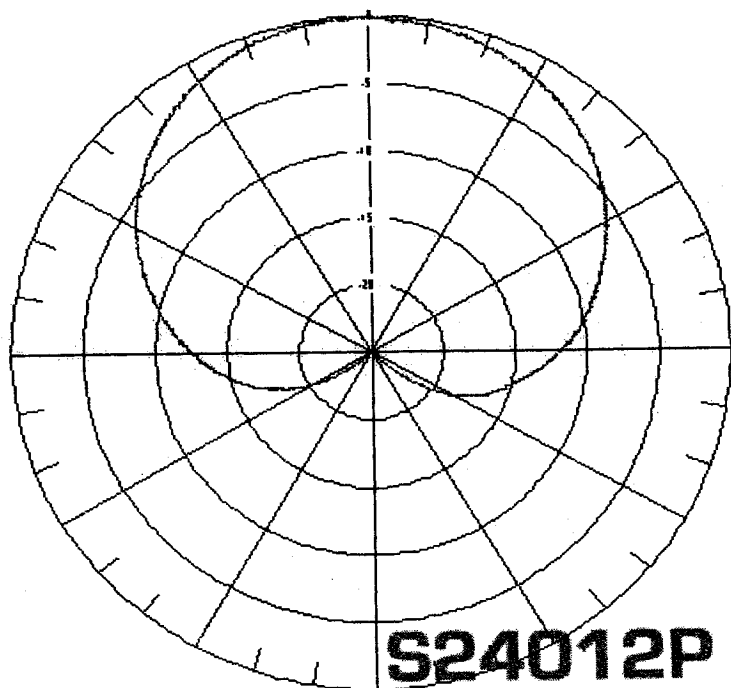
<u>GAIN</u>	<u>HORIZONTAL BEAM WIDTH</u>	<u>VERTICAL BEAM WIDTH</u>	<u>DIMENSIONS</u>	<u>CONNECTOR TYPE</u>	<u>WEIGHT</u>	<u>POLARIZATION</u>
12.5 dBi	90 Degrees	10 Degrees	26 x 3 x 1"	Type N female	1.0 lbs.	Horizontal & Vertical

**MOUNTING:** Mounts directly to a wall or can be pole mounted with optional hardware





**S24012P**  
2450 MHz/E-plane



**S24012P**  
2450 MHz/H-plane



# AMPLIDYNE , INC.

*Your Total Amplifier Resource*

59 LaGRANGE STREET, RARITAN, NJ 08869  
Phone: (908) 253-6870 Fax: (908) 253-6875

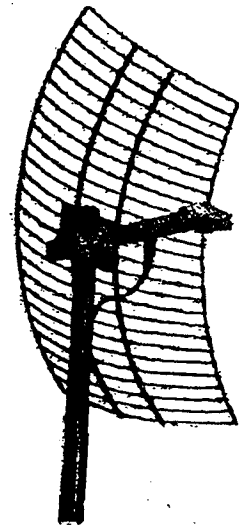
## Directional Antenna Systems 2300 to 2500 MHz Operation

### Features

- 50  $\Omega$  Passive Feed Dipole
- Optimized for 2.4 to 2.5 GHz Performance
- Type N Female Connector
- 15, 19 or 24 dBi Antenna and Waterproof
- Rugged, Lightweight and Waterproof
- Choice of Quikclamp Bracket or Heavy Duty Bracket

### Applications

- 2.4 GHz ISM Band Applications
- Point to Point Repeaters
- Wireless Bridges
- Campus Connections
- In-Building Data Links



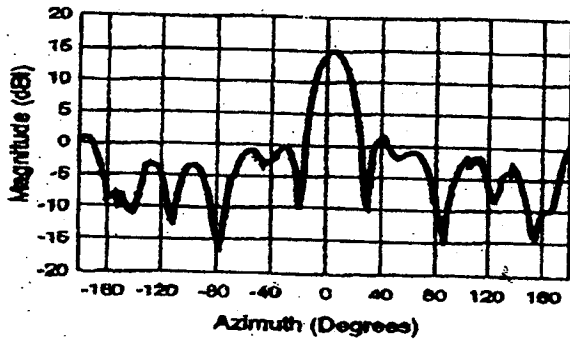
### 19 dBi Antenna System

### Description

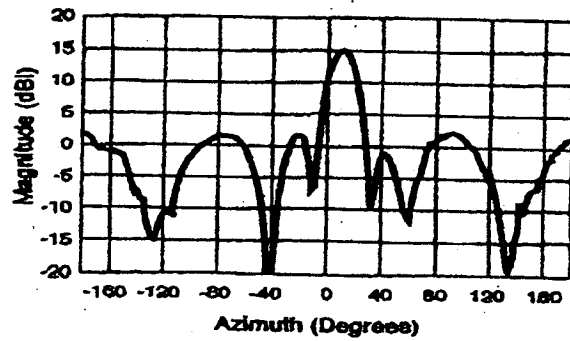
The directional antenna systems offered by Amplidyne Inc. incorporate parabolic grid type antenna reflectors with the PMPF-1, 50 ohm passive feed dipole with integrated type N female connector. The antenna reflectors and PMPF-1 can be bought separately for maximum system flexibility. Installation is simple with the Amplidyne Inc. Wireless Quikclamp pole mount system for up to 1.5" diameter poles, which eliminates three handed installations. Adjustable tilt Quikclamp brackets are available for the 15 and 19dBi reflectors. The Quikclamp racket for 24dBi is a fixed position type bracket. Amplidyne Inc. also offers a new Heavy Duty bracket for poles up to 2.4" (60mm) diameter. This bracket is a U-bolt type bracket and offers adjustable tilt for 15, 19 and 24 dBi reflectors. All mounts are fully galvanized or anodized steel for corrosion protection and each reflector assembly comes complete with corrosion resistant hardware and complete assembly instructions.

# Integrated Antenna Patterns at 2.45 GHz

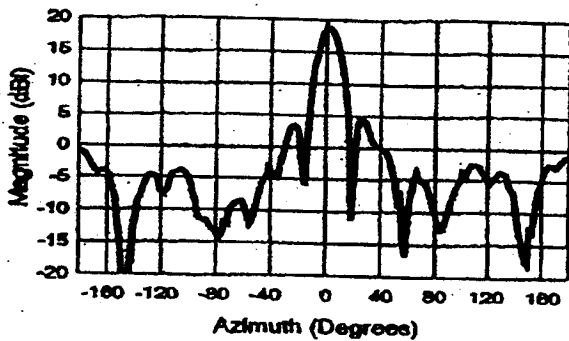
APG15  
(Horizontal)



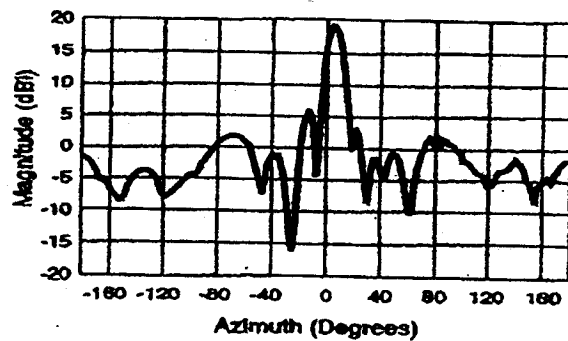
APG15  
(Vertical)



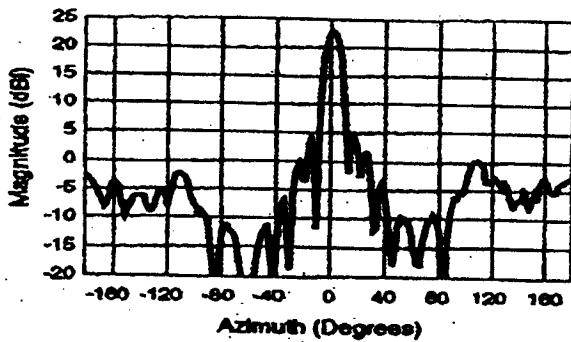
APG19  
(Horizontal)



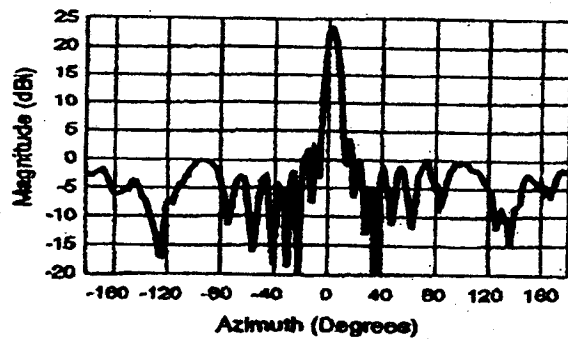
APG19  
(Vertical)



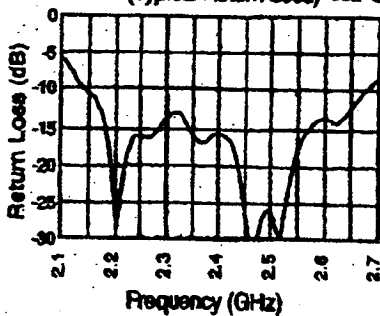
APG24  
(Horizontal)



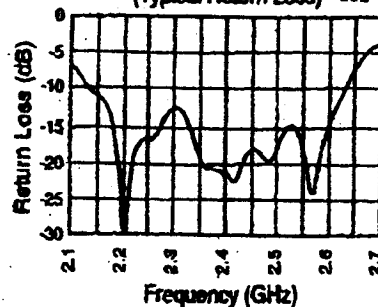
APG24  
(Vertical)



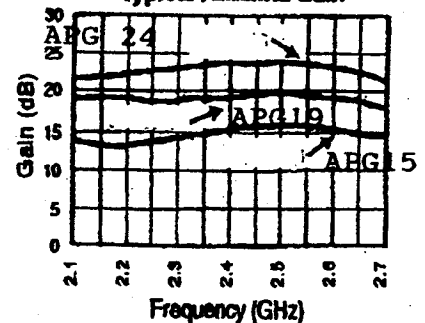
(Typical Return Loss) APG15&19



(Typical Return Loss) APG24



Typical Antenna Gain



### **The System...**

#### **APG Passive Feed Dipole:**

- Integrated Type N Female Connector
- Waterproof Sealed Plastic Housing
- No rear cable connection problems
- Easily installs onto any APG

#### **APG Antenna Reflector:**

- 15, 19 or 24 dBi Gain
- Powder Coated Painted Finish (color: light gray)
- Rugged, Wire Welded Construction
- Quikclamp bracket fits 1.5" (38mm) dia. pole
- Heavy Duty bracket fits up to 2.4" (60mm) dia. pole

### **Notes:**

- Mounting brackets are disassembled from the antenna reflectors so the reflectors stack compactly, which saves volume in both shipping and warehouse storage.
- A complete antenna system includes one APG and one antenna reflector assembly. Our standard packaging is a 2-system pack, 5-system pack or 10-system pack. Bulk packaging is available on request.
- All shipments F.O.B. Amplidyne Inc. 59 LaGrange Street, Raritan, NJ 08869