# M.I.L. PAC 316

### **Relocatable Rapid Deployment Microwave Link**



**I.L. PAC 316** is a fully portable microwave T/R Link which provides high probability of detection and low false alarm rate in the outdoor environment. State-of-the-art circuitry, a precise detection pattern, extended battery life and unmatched ease of setup with tampered external controls make M.I.L. PAC 316 ideal for protection of VIP's, critical mobile assets such as trucks or aircraft, and other temporary high security requirements. M.I.L. PAC 316 can be used at gates, portals or roadway crossings or to establish a full perimeter of volumetric detection.

With a range of 800 feet (244 m), M.I.L. PAC 316 operates at K-band frequency (24.162 GHz). Antenna beamwidth is 3.5 degrees in both the horizontal and vertical planes with very low side lobes, allowing M.I.L. PAC 316 to operate at very long ranges and within very narrow corridors. Because K-band frequency is 2.5 times higher than X-band, the multipath signal generated by an intruder is also 2.5 times higher and detection of slow-moving intruders is correspondingly better.

The narrow band receiver design increases detection probability by alarming on partial or complete beam interruption, increase or decrease in signal level or jamming by other transmitters. Its Automatic Gain Control (AGC) circuit permits the receiver to compensate for varying site conditions or changes in the weather.

Operating at K-Band, which is much less crowded than X-band, M.I.L. PAC 316 is inherently less susceptible to outside interference from airport landing systems, aircraft radar, and other microwave intrusion systems. Six field-selectable crystal controlled modulation channels with narrow band filtering allow several M.I.L. PAC 316's to be used together without mutual interference.

M.I.L. PAC 316 is mounted on heavy duty light weight adjustable tripods which can be secured with sandbags or waterbags or staked into the ground to withstand severe wind-loading. The link is quickly aligned with external controls. It is powered via a rear panel military style connector with the MPO2 Monitor Pac supplied with each link.

Alarm transmission and annunciation are accomplished through the use of a small wireless radio alarm transmitter and receiver at distances up to one mile.

#### Outdoor T/R Link for Temporary or Mobile Site Protection

#### Features:

- Long Range Outdoor Volumetric Detection to 800 Feet (244 m)
- K-Band Multipath Detection for Resistance to Aircraft/Airport Radar Interference
- Heavy Duty Light Weight Tripod for Quick Set-Up.
- External Sensitivity Controls
- Resistant to Rain, Fog,
  Wind, Dust, Falling Snow or
  Temperature Extremes
- 135 hour Battery Life
- Self-Contained Alignment Circuits and LED Troubleshooting Indicators
- Optional RM83 Performance Monitor for Ease of Alignment and Testing
- CE and FCC Certified





## M.I.L. PAC 316

## **Relocatable Rapid Deployment Microwave Link**

#### **Typical Horizontal Pattern**



#### Pattern

The detection pattern width is field adjustable from approximately 2 to 22 feet (0.6 to 6.7 m). Pattern height varies in conjunction with pattern width. The pattern width adjustment allows easy adaptation to fit various site requirements.

#### **Dimensions**



#### **Specifications:**

Equipment Supplied Microwave Transmitter, Receiver, BP02 Battery Pac with 12 VDC Rechargeable Battery, MP02 Monitor Pac with 12 VDC Rechargeable Battery, Radio Alarm Transmitter (27 MHz) and Antenna Assembly, (2) Interconnecting Cable Assemblies (20 ft/6.1 m each). (2) MT10 Tripods and (2) Fitted Carrying Cases.

Frequency 24.162 GHz (USA) conforms to CE EN300 440 and F.C.C. Part 15. F.C.C. Identifier CA6316.

**Output Power** +20 dBm peak EIRP consistent with CE EN300 440 and FCC Part 15. Square wave modulated.

**Range** 100 ft to 800 ft (30.5 m to 244 m)

Target Velocity 0.1 ft/sec to 50 ft/sec (30 mm/sec to 15 m/sec).

Target Size 77 pound (35 kg) human walking, running, hands and knees crawling or jumping. Prone crawling or rolling 77 pound (35 kg) human, or simulated with a 30 cm diameter metal sphere, detected at maximum range of 400 feet (122 m) with flat terrain.

Probability of Detection 0.99 minimum.

Automatic Range Adjustment Link automatically adjusts to slow changes in path loss due to rain, snow, etc. AGC range -60 dB.

Modulation Channels Six switch selectable.

False Alarm Rate 1/unit/year based on threshold to noise ratio.

**Operating Environment** -40°F to +150°F (-40°C to +66°C). 0-100% relative humidity.

DC Input 11.0 VDC to 14.5 VDC at 130 mA (Tx), 58 mA (Rx).

Battery Life 135 hours operation (Tx) and 275 hours (Rx) to a discharge of 11 VDC at 0°C from single charge of 4 x 5.0 AH dry cell batteries.

Self Supervision Alarm on Failure.

Mounting Locking ball swivel mount. 20° adjustment in any direction. Tripod center post rotates 360°.

Performance Monitor External MS connector for connection to RM83 Performance Monitor at microwave receiver.

Weight 116 lbs (52.6 kg) - Equipment only

**Shipping Weight** 124 lbs (56.2 kg) – Equipment, cases

#### How to Order

Specify M.I.L. PAC 316. Order optional accessories by model number and description. Contact Factory for recommendations on Radio Alarm Receivers or other optional radios.

Specifications subject to change without notice.

#### Accessories:

**RP01** Portable 16 Channel RF Alarm Receiver LN-XR1 Single Channel Radio Receiver LN-XR4 Four Channel Radio Receiver **RM83** Performance Monitor



#### Southwest Microwave, Inc.

www.southwestmicrowave.com 9055 South McKemy Street - Tempe, Arizona 85284-2946 USA • Telephone 480-783-0201 • FAX 480-783-0401 European Offices: Southwest Microwave Ltd. • Suite 1, Deer Park Business Centre • Woollas Hill, Eckington, Pershore, Worcestershire • WR10 3DN, UK • TEL: +44 (0) 1386 75 15 11 • FAX: +44 (0) 1386 75 07 05