PORTABLE TRAFFIC SIGNALS

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John Thomas, Inc.

• JTI has been in the portable signal business for over 20 years. We manufacture the ADDCO PTS-2000, and rent and sell the signals across the United States and Canada.
• INDOT STANDARD SPECIFICATIONS NOW PROVIDE FOR THE USE OF PORTABLE TRAFFIC SIGNALS.
Portable traffic signals have been in use since the mid-1980’s.

Early Limitations:

• Diesel power
• 120 volt lamps
• Hardwire interconnection
• Matched pairs of trailers
• Fixed-time operation
• Limited traffic activated modes
Portable traffic signals have been in use since the mid-1980’s.

Over time, use of the PTS increased

- Many improvements were made
- Additional manufacturers entered the market
- States adopted use
Common features of modern PTS:

• Meet NEMA TS5 Standard
• Trailer-mounted
• Radio communication between trailers
• Minimum of two 3-section signal heads
  • With visors and back plates
  • Rotate 180 degrees
• One on the mast arm and one on the vertical mast
Portable Traffic signals

One signal head on the mast arm and one on the vertical mast
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- Radio communication between trailers
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- One on the mast arm and one on the vertical mast
- Both signal heads on mast arm
Portable Traffic Signals

Both signal heads on mast arm
Common features of modern PTS:

• 17’ clearance over roadway
• Leveling jacks to provide stability
• Withstand 80mph wind loads
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Solar powered

• Battery powered with solar charging
• 21 days run time without solar power
• Must run in fault mode (red flash) for 24 hours
• Tilt and rotate solar array for optimum performance
• On-board 120 volt charger
Portable Traffic Signals

21 days run time without solar-INDOT test
Quick Set-up

• Signal mast and mast arm are raised into operating position by means of electric or electric-hydraulic actuation

• PTS can be set up and running within 20 minutes
Portable Traffic Signals

Signal Operation

- Meets MUTCD, NEMA TS2 and new NEMA TS5 standards
- Pre-timed or traffic actuated modes
- 8 to 16 phase operation
- Programmable min. & max. green times
- Accommodates long red clearance times
- Yellow change interval accommodates speed of traffic
Vehicle Detection Capabilities

- Loops
- Temporary loops
- Doppler (motion sensors)
- Wireless sensors
- Video detection

Portable Traffic Signals
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Emergency Pre-Emption

- Optical
- Audial
- GPS
Remote Monitoring

- GPS location
- Monitor battery voltage
- Monitor PTS status
- Report low battery or PTS fault mode
- Notify predetermined users by text or email
PTS Uses:

- Work zones with one-lane, two-way traffic
  - One PTS at each end of work zone
  - Additional PTS required for intersecting approaches within the work zone (requires multi-phase operation)
Portable Traffic Signals
PTS Uses:

- Temporary intersection control
  - Three or four approaches
  - Provide turn arrows as required
  - Provide pedestrian signals as required
Portable Traffic Signals
Portable Traffic Signals

PTS Uses:

• Temporary replacement of existing signal
  • Connect to existing cabinet controller
  • Temporary replacement of damaged/missing signal
  • Temporarily replace existing signal during intersection construction
Training and Support

- On-site training
- 24/7 remote technical assistance
- Technicians are IMSA Traffic Signal Field Technician Certified
THANK YOU

QUESTIONS?

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