



### 1.0 GENERAL DESCRIPTION

- 1.1 The unit shall be an easily identifiable, vandal resistant communications endpoint Public Address System for use with Blue Alert MNS (Mass Notification System) or other audio or paging systems, model PAS WM-180 from Code Blue Corporation, no substitutions. This device shall provide a wall- or pole-mounted option for areas requiring audio coverage for emergency notifications or general announcements.

### 2.0 CONSTRUCTION

- 2.1 The sheet metal enclosure shall be 16 gauge carbon steel painted. The dimensions shall be 15.12" H x 15" W x 10.4" D and weigh approximately 35 lbs, with four .44" mounting holes on the back surface. It also has three 1.12" conduit holes, one located on the back and two on the bottom.
- 2.2 The three-speaker unit is made from Acrylonitrile Butadiene Styrene (ABS). It is approximately 11.45" T x 14.05" W x 7" D. It mounts to the enclosure with six security screws.
- 2.3 The enclosure top cap shall be 16 gauge carbon steel painted. The dimensions shall be 1.55" T x 15.25" W x 9.72" D and has one .88" hole for the attachment of an optional beacon/strobe.
- 2.4 The unit shall be mounted using four 0.375" x 3" lag bolts and 3" lag bolt anchors included with the unit. The lag bolts shall pass through four openings in the back plate and be inaccessible without removing the speaker array.

### 3.0 ELECTRICAL

- 3.1 All electrical components shall have a modular plug for easy service and replacement. All electrical wiring shall be concealed within the bollard and not be visible from the outside of the unit.
- 3.2 All electrical components shall be equipped with a fuse for protection from transient voltage conditions.
- 3.3 The unit shall require 1 ampere at 24V AC standard.
- 3.4 The installer shall follow all NEC and local electrical codes when installing the unit power systems.

### 4.0 COMMUNICATIONS

- 4.1 The unit shall have three options for communication:

Code Blue® • 259 Hedcor Street • Holland, MI 49423 USA • 800.205.7186 • [www.codeblue.com](http://www.codeblue.com)

Specifications are subject to change without prior notice. Latest information available at [www.codeblue.com](http://www.codeblue.com).  
Code Blue is a registered trademark of Code Blue Corporation.



## Architectural & Engineering Specifications

- 4.1.1 IP Control: The unit shall be equipped with an IP5000 communications device for VoIP communications configurations.
- 4.1.2 Analog Control: The unit shall be equipped with an IA4100 communications device for analog communications configurations.
- 4.1.3 No Control: The unit shall not be equipped with a communication device and will require connection to a local IP5000 or IA4100 or standard 600 Ohm line level audio input.
- 4.2 The unit shall be equipped with a PAS assembly for mass notification capabilities:
  - 4.2.1 The PAS assembly shall be equipped with an amplifier with the following specifications:

<u>Parameters</u>	<u>Symbols</u>	<u>Test Condition/ Comment</u>	<u>Min</u>	<u>Typ</u>	<u>Max</u>	<u>Unit</u>
<b>Load Resistance:</b>	RL		2.5	-	-	Ohms
<b>Max Output Power:</b>	Pmax	f=20Hz-20kHz (1% THD)	-	160	-	W
<b>Output Power:</b>	Po	f=20Hz-20kHz (0.1% THD)	-	150	-	W
<b>Sensitivity:</b>	Vsen	Input Signal to Po	-	3.5	-	Vrms
<b>Gain:</b>	A		16.5	17	17.5	dB
<b>Distortion:</b>	THD+N	10Hz < f < 20kHz, 100mW < Pout < Po	-	0.03	0.08	%
<b>Frequency Response:</b>	f	20Hz-20kHz	-	+/- 0.5	-	dB
<b>Noise Floor:</b>	VNF	Input Shorted, A-weighted	-	25	35	uV
<b>Max Current:</b>	Imax		18	20	25	A
<b>Small Signal Bandwidth:</b>	BW sm	Output power: 1 watt	-	90k	-	Hz
<b>Signal to Noise:</b>	SNR		117	-	-	dB

- 4.2.2 The PAS assembly shall be equipped with a 180-degree speaker array with the following specifications:

<u>Parameters</u>	<u>Unit</u>
<b>Impedance:</b>	5.3 Ohms
<b>Frequency Range:</b>	450 Hz to 7000 Hz

Code Blue® • 259 Hedcor Street • Holland, MI 49423 USA • 800.205.7186 • [www.codeblue.com](http://www.codeblue.com)  
 Specifications are subject to change without prior notice. Latest information available at [www.codeblue.com](http://www.codeblue.com).  
 Code Blue is a registered trademark of Code Blue Corporation.



## Architectural & Engineering Specifications

---

**Power Capacity:** 210 Watts Continuous Program

---

4.2.3 The amplifier shall have the following additional features:

- Patented One-Cycle Sound™ Control
- Synchronized Switching Frequencies
- Output Feedback
- Remote Disable
- Silent Turn-On
- Full Protection:
  - Over Current Speaker Short
  - Over Current Short to Chassis Ground
  - Over Temperature Protection
  - Power Supply Under Voltage Lockout
- Monitor Outputs:
  - Output Current Monitor
  - Temperature Monitor
  - Protect and Power On
- Internal and remote volume adjustment

4.2.4 IP Control and Analog Control Units:

4.2.4.1 The amplifier and speaker shall not be powered on during non-active states.

4.2.5 No Control Units:

4.2.5.1 The amplifier and speaker shall not be powered on during non-active states when connected to a local IP5000 or IA4100.

4.2.5.2 The amplifier shall be powered on continuously when not connected to a Code Blue system, however, on-off can be controlled via NC relay.

4.2.6 IP Control, Analog Control and No Control units connected to a local IP5000 or IA4100:

4.2.6.1 The amplifier shall be monitored for the following fault conditions:

- Speaker Array Open
- Speaker Array Short
- Excessive Clipping
- Over Current Protection
- High Temperature



## Architectural & Engineering Specifications

- 4.3 EIA/TIA, ANSI, CSA and BICSI cabling or similar standards shall be adhered to for proper operation of Code Blue communication devices connected to copper or fiber infrastructure.

### 5.0 FINISH

- 5.1 Four-coat paint process, with zinc-rich primer for corrosion resistance and baked-on polyurethane enamel for maximum gloss and shine.
- 5.1.1 Optional clear coating process available to provide additional environmental protection.
- 5.2 Substrate preparation shall be as required to comply with applicable ASTM impact and adhesion standards: D2794 Direct and Reverse Impact, D523 Gloss @ 60 Degrees, D3359B Cross hatch Adhesion, D1654 Corrosion Creep, D714 Scribe Blisters and D714 Field Blisters.
- 5.3 The finish shall be available in 12 standard colors: Safety Blue, Safety Red, Safety Yellow, Midnight Blue, Gloss White, Gloss Black, Medium Bronze, Dark Bronze, British Racing Green, Cardinal Red, Bright Silver and Tiger Orange. Custom colors shall be available.
- 5.4 Minimum coverage thickness of 2.0 mils.

### 6.0 GENERAL OPTIONS

- Beacon/Strobe assembly

### 7.0 WARRANTY

- 7.1 The PAS WM-180 shall be warrantied against any defects, under normal use, for a period of 2 years.

### 8.0 MANUFACTURER

- 8.1 The Manufacturer shall be Code Blue Corporation. 800-205-7186, 259 Hedcor Street, Holland, Michigan 49423. [www.codeblue.com](http://www.codeblue.com). THERE ARE NO EQUIVALENTS.