



### 1.0 RESPONSIBLE PARTY

- 1.1 Any and all questions or correspondence regarding this document and specifications herein shall be directed to:

Code Blue Corporation  
92 East 64th Street  
Holland, MI 49423  
616-392-8296  
aespecs@codeblue.com

### 2.0 SCOPE

- 2.1 This document is intended to provide complete and accurate specifications of the PAS1s product offering by Code Blue Corporation for the purpose of inclusion in project specifications, requirements and recommendations required by potential users of Code Blue products and services.
- 2.2 The PAS1s will be referred to as “unit” throughout this document.
- 2.3 Code Blue Corporation will be referred to as “manufacturer” throughout this document.

### 3.0 PRODUCT DESCRIPTION

- 3.1 The unit shall be an easily identifiable, vandal resistant communications device that is Americans with Disabilities Act (ADA) compliant, multi-functional, freestanding, and constructed of heavy steel. The unit shall be aesthetically pleasing and virtually impervious to damage, and shall include a high quality, vandal resistant, hands-free communications device illuminated by a high intensity faceplate light, a powerful strobe light, and a vivid blue beacon that serves to identify the unit from a great distance.

### 4.0 CONSTRUCTION

- 4.1 The unit shall be a cylinder constructed of ASTM A500 seamless carbon steel structural tube, schedule 20, 12.75” OD x 0.25” wall and a height of not less than 9 feet.
- 4.2 Tamper resistant proprietary fasteners manufactured for Code Blue Corporation shall be used. It shall not be possible to acquire the custom designed bit from any source other than Code Blue Corporation. It shall not be possible to enter nor remove any component without this bit. All other types of fasteners shall not be acceptable under any circumstance.
- 4.3 The unit shall have an internal anchor base plate that is MIG welded to the unit two 2” above its base. The base plate shall be fabricated with a minimum of .50” thick A-36 grade steel plate and shall have a 5” diameter center hole for electrical conduit access. The base

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plate shall have four (4) oblong holes on an 8" circular bolt pattern for the attachment to anchor bolts.

- 4.4 The unit shall have an access opening near the base of the unit which provides access for mounting to the anchor bolts and connectivity to electrical facilities. The access opening shall have a cover plate which mounts flush with the unit. This cover plate shall be the same steel and radius as the unit. The cover plate shall fit precisely into the opening and have a weather resistant gasket to prevent water and other elements from entering the unit. The cover plate shall be held in place by two (2) ¼-20 x 1" countersunk proprietary fasteners supplied only by manufacturer.
- 4.5 There shall be two (2) area light openings each 10" high and 17" wide with 153 degrees of arc. The openings shall be cut into the unit 180 degrees apart with the bottom of the openings approximately 14" from the top of the unit. The corners shall be uniformly rounded and the edges of the cuts shall be straight and free of burrs and visual imperfections. The four (4) edges of each opening shall form a square when viewed in elevation from the front or rear of the unit.
- 4.5.1 A heavy cylindrical lens made of clear UV rated polycarbonate shall be inserted into the unit behind the two (2) lens openings and shall be mechanically as well as chemically fastened to the unit interior. The lens shall be fully sealed with weatherproof silicon around its entire edge to render the installed lens water proof, vandal resistant and keep out environmental elements. The lens shall be treated to prevent damage from ultra-violet radiation, aging, cracking, yellowing or breaking.
- 4.6 The unit shall have a PAS assembly which seals the top of the unit and shall consist of a mounting ring, gasket, speaker array, LED beacon/strobe, UV rated polycarbonate dome and required fasteners.
- 4.6.1 The mounting ring shall be made of ASTM A500 carbon steel structural tube. The diameter shall be equal to the unit. There shall be an inner ring welded to the mounting ring that contains three ½"-13 nuts for pinch bolts to fasten to the unit. The mounting ring shall have six .31" diameter through holes to allow for mounting of the speaker array. The mounting ring shall have a weather resistant gasket mounted to the bottom to prevent water and other elements from entering the unit.
- 4.6.2 A six speaker array constructed of ABS plastic shall be attached to the mounting ring utilizing (6) proprietary fasteners.
- 4.6.3 A cylindrical, transparent, UV rated polycarbonate dome that is a minimum of six 6" tall with a 12.5" outer diameter shall be attached to the speaker array with three (3) proprietary fasteners. The dome shall be made of a clear UV rated polycarbonate and shall be sloped to prevent pooling of water.



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- 4.6.4 A Blue LED Beacon/Strobe shall be attached to the PAS assembly with three (3) Phillips head screws below the dome.
- 4.7 A recessed opening shall be cut into the unit at a point beginning 36.6" above the bottom of the unit. The opening shall be 15.1" tall at the forward edge and 12.8" tall at the rear edge creating a 25 degree angle from the horizontal. The upper horizontal edge of the opening shall constitute an arc of 160 degrees in the face of the unit and the sides of the opening shall be parallel and the same length.
- 4.7.1 The opening shall be totally enclosed by a 7 gauge steel plate that shall have a single opening allowing for a communication device. The plate shall be seam welded to the unit so that the plate and the unit appear to be one unit.

## 5.0 MOUNTING

- 5.1 The unit shall be mounted onto four anchor bolts that are set into concrete. Standard ¾" x 24" galvanized steel anchor bolts, nuts and washers shall be used as supplied. The unit shall mount ½" above the concrete to allow air flow within the unit.

## 6.0 ELECTRICAL

- 6.1 All electrical components shall have a modular plug for easy service and replacement. All electrical wiring shall be concealed within the unit and shall not be visible from the outside of the unit.
- 6.2 All electrical components in the unit shall be equipped with a fuse for protection from transient voltage conditions.
- 6.3 The unit shall require 5 ampere at 120v AC.
- 6.4 The installer shall follow all NEC and local electrical codes when installing the unit power systems.

## 7.0 LIGHTS

- 7.1 LED Beacon/Strobe: An LED Beacon/Strobe shall be located in the dome top assembly and have a Lumen rating of no less than 14.5. The LED Beacon/Strobe shall have a factory set flash rate of no less than 60 flashes per minute and be programmable. A deep blue UV rated polycarbonate prismatic refractor shall surround the LED Beacon/Strobe and shall be used to distribute the light in a horizontal pattern for maximum brightness and visibility at a distance.
- 7.1.1 The communication device shall be factory programmed to activate the LED Beacon/Strobe for the duration of a button 1 ("Red Button", "Emergency" or "Push for Help") call. The LED Beacon/Strobe cannot be deactivated at the unit.

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- 7.2 Area Light: A high output LED Area Light shall be mounted within the unit near the top. The LED Area Light shall be protected within the two (2) area light openings by a UV rated polycarbonate lens. A deep blue UV rated polycarbonate prismatic refractor shall surround the LED Area Light and shall be used to distribute the light in a horizontal and vertical pattern for maximum brightness and visibility both surrounding the unit and at a distance.
- 7.2.1 A reflector disk shall be mounted above the LED Area Light to direct the light outward and downward from the unit. This shall create a pool of light around the unit making persons standing at or near the unit visible. The area light shall always be illuminated.
- 7.3 Faceplate Light: A LED Faceplate Light shall be mounted within the unit above the recessed opening which houses the communications device. This fixture will direct light onto the communications device and shall be vandal resistant.

## 8.0 COMMUNICATIONS

- 8.1 The unit shall have a high quality vandal resistant and ADA compliant speakerphone communication device.
- 8.1.1 IP5000 - VoIP: Refer to the IP5000 Architect and Engineering Specification for further information.
- 8.1.2 IA4100 - Analog: Refer to the IA4100 Architect and Engineering Specification for further information.
- 8.2 The unit shall be equipped with a PAS assembly for mass notification capabilities:
- 8.2.1 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)           | -          | 500        | -          | W           |
| <b>Output Power:</b>     | Po             | f=20Hz-20kHz (0.1% THD)         | -          | 400        | -          | W           |
| <b>Sensitivity:</b>      | Vsen           | Input Signal to Po              | -          | 3.5        | -          | Vrms        |
| <b>Gain:</b>             | A              |                                 | 20.5       | 21         | 21.5       | dB          |
| <b>Mute Gain:</b>        | Amute          | Disable Pin pulled low.         | -45        | -          | -          | dB          |
| <b>Distortion:</b>       | THD+N          | 10Hz< f <20kHz, 100mW< Pout< Po |            | 0.03       | 0.05       | %           |

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| <u>Parameters</u>              | <u>Symbols</u>   | <u>Test Condition/ Comment</u> | <u>Min</u> | <u>Typ</u> | <u>Max</u> | <u>Unit</u> |
|--------------------------------|------------------|--------------------------------|------------|------------|------------|-------------|
| <b>Freq. Response:</b>         | f                | 20Hz-20kHz                     | -          | +/-0.5     | -          | dB          |
| <b>Noise Floor:</b>            | VNF              | Input Shorted, A-weighted      | -          | 70         | 80         | uV          |
| <b>Maximum Current:</b>        | I <sub>max</sub> |                                | 23         | 26         | 29         | A           |
| <b>Damping Factor:</b>         | DF               | RL = 4 ohms @ 100 Hz           | -          | 375        | -          | Ohms        |
| <b>Power Bandwidth:</b>        | BW <sub>pw</sub> | Output Power: P <sub>max</sub> | -          | 60k        | -          | Hz          |
| <b>Small Signal Bandwidth:</b> | BW <sub>sm</sub> | Output Power: 1Watt            | -          | 90k        | -          | Hz          |
| <b>Signal to Noise:</b>        | SNR              |                                | 108.5      | -          | -          | dB          |

8.2.2 The PAS assembly shall be equipped with a 360 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            |
| <b>Power Capacity:</b>  | 420 Watts Continuous Program |

8.2.3 The amplifier shall have the following additional features:

- Patented One-Cycle Sound™ Control
- Synchronized Switching Frequencies
- Output Feedback
- THD+N < 0.05%, 0.1W to 500W per channel
- Full range 20 to 20kHz Bandwidth
- Efficiency: Amp > 95%
- Damping Factor > 375 @ 100Hz 4 Ohms
- DC offset < 25mV
- Remote Disable
- Silent Turn-On
- Full Protection:



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- 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
- 8.2.4 The amplifier and speaker shall not be powered on during non active states. The unit will be powered on during use by the IA4100 or IP5000.
- 8.2.5 The amplifier shall be monitored by the IA4100 or IP5000 and report any of the following fault conditions:
- Speaker Array Open
  - Speaker Array Short
  - Excessive Clipping
  - Over Current Protection
  - High Temperature
- 8.2.6 No additional infrastructure cabling or wireless shall be needed for PAS communications.
- 8.3 The unit shall be capable of communicating through an integrated 802.11g, 2.4 GHz IP wireless system. Refer to the IP Wireless Architect and Engineering Specifications.
- 8.4 The unit shall be capable of communicating through an integrated Secure Mesh wireless system operating at 2.4 – 5.9 GHz. Refer to the Secure Mesh Wireless Architect and Engineering Specifications.
- 8.5 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.

## 9.0 FINISH

- 9.1 The unit shall be finished with a highly graffiti and UV resistant coating process.
- 9.2 Substrate preparation shall be as required to comply with applicable ASTM impact and adhesion standards:
- D2794                      Direct and Reverse Impact
  - D523                        Gloss @ 60 Degrees



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- D3359B Cross hatch Adhesion
- D1654 Corrosion Creep
- D714 Scribe Blisters
- D714 Field Blisters

9.3 The polyurethane finish shall be a multi coat system available in 10 standard colors:

- Safety Blue
- Safety Red
- Safety Yellow
- Midnight Blue
- Gloss White
- Gloss Black
- Medium Bronze
- Dark Bronze
- British Racing Green
- Cardinal Red

9.4 Custom colors shall be available as specified by the user and approved by the manufacturer.

9.5 The primer coat and finish coat shall each have a minimum coverage thickness of 2.0 mils.

9.6 No other types of finishes are acceptable.

## 10.0 GRAPHICS

10.1 The graphics shall be a durable Nikkalite engineering grade reflective vinyl for high visibility and legibility.

10.2 Standard 30" length graphics text offering shall be:

- EMERGENCY
- ASSISTANCE
- SECURITY
- COURTESY
- POLICE

10.3 Standard graphics color offering shall be:

- Reflective White
- Reflective Blue
- Reflective Black
- Reflective Green
- Reflective Red

- Reflective Yellow

10.4 Custom graphics text, length and color shall be available by the manufacturer.

## 11.0 GENERAL OPTIONS

11.1 The following optional equipment shall be available for the unit by the manufacturer. Please refer to the associated Architect and Engineering Specification:

- Active Vent Solar Powered Fan
- Overhead Camera Mount
- PAS 1/5 Mass Notification System

## 12.0 WARRANTY

12.1 The unit shall be warranted for a period of two (2) years. Reference manufacturer's warranty for further details.

## 13.0 MANUFACTURER

13.1 The manufacturer shall be Code Blue Corporation of Holland, Michigan. There are no known equivalents.

13.2 Code Blue Corporation manufactures its products according to the most recent revision of our product specifications and shall not be held responsible for obsolete or outdated specifications. For the latest revision please refer to [www.codeblue.com](http://www.codeblue.com) or contact Code Blue Corporation directly.