Code Blue®

CIRCLE-OF-SAFETY PRODUCT SPECIFICATION

1.0 GENERAL

1.1 The system shall be described as a Circle-of-Safety (COS) Personal Alarm System consisting of a network of transmitters, receivers, emergency phones and strobe lights with a central PC computer to annunciate and log all calls. The proprietary software is designed to alert authorized personnel the location and identity of the individual in distress.

1.2 The system shall consist of ten basic components.

1.2.1 Pendant transmitters (Model COS-KT1)

1.2.2 Super heterodyne receivers (Model: COS-RCVR30)

1.2.3 Remote Processor Units (Model: COS-PC500)

1.2.4 Emergency Phone Unit (Various models)

1.2.5 Blue Strobe (Various models)

1.2.6 Network Polling Station (Model: NPS-8)

1.2.7 Personal Computer at dispatch area (PC not provided)

1.2.8 Proprietary Application Software (Model: COS-SW2000)

1.2.9 PC Interface Module (Model: COS-CSM)

1.2.10 Antenna Assembly (Model: COS-ANT1 or COS-ANT2)

1.3 The system shall permit users to remotely trigger designated Code Blue Emergency Telephones and strobes from up to 200 feet away by uniquely coded transmitter pendants.

1.3.1 Detailed description of the Code Blue Emergency Telephone Unit (ETU) system shall be described in a separate specification. (See _____).

1.4 The system shall use a minimum 80-bit encrypted radio-frequency data transmission to provide a high level of reliability and performance.

1.5 A personal pendant activation condition shall cause:

1.5.1 The signal transmitted by the emergency pendant to be received by the COS receiver module, which is within 200 feet of the triggered pendant. The data received by the receiver module shall be sent to the Code Blue Operator database for validation.

1.5.2 When the pendant credentials have been validated by the system database, the system shall immediately trigger the blue light beacon associated with the receiver module. The blue beacon shall be triggered within two seconds of an alarm call to

provide visual feedback and confirmation to the person in distress their call has been received.

1.5.3 The system shall simultaneously trigger the Code Blue 3100 telephone to initiate an emergency call to the dispatch. All system sequences by the Code Blue CB__shall be as normal.

1.5.4 The personal pendant activation shall immediately trigger the Code Blue Operator alarm screen to pop-up on the dispatch PC and initiate an audible alarm through the PC's speaker.

1.5.5 The alarm screen shall easily identify the user and location of user within 200 feet of the receiver module.

1.5.6 The operator shall silence the incoming alarm call by acknowledging the incoming call.

1.6 All alarm calls initiated by the emergency pendant can only be silenced by the Code Blue Operator system on the PC.

1.6.7 All alarm calls initiated by the Code Blue Emergency Phone Units shall be independently de-activated by the dispatch.

1.7 The COS system shall be modular in design to facilitate system expansion and easy maintenance. All system modules shall be easily replaceable without any custom hardware or firmware. All modules shall be field adjustable to ambient conditions without the need for custom or special firmware from the factory.

1.8 The COS system shall comply with all federal regulatory requirements including FCC Rules and regulations.

1.9 To ensure signal reception, receiver modules shall be mounted using sound engineering judgment and using the manufacturer's installation manual.

1.10 The system shall be capable to accommodate over 300 million users with a coverage area that could have up to 64 receiver modules.

1.11 The COS system shall operate on its dedicated CAT5 (Category 5) wiring from each Emergency Phone unit to the NPS (Network Polling Station).

1.12 The COS shall use an Ethernet connection from the NPS to the PC Interface module connected to the dispatcher's personal computer. Using an Ethernet connection the dispatcher's PC may be positioned up to 6.25 miles from the NPS, which may be positioned in the institution's telco room.

1.13 The system shall be capable to operate on any version of PC operating software of Microsoft Windows®.

1.14 Each pendant transmitter shall operate on frequency bands in the radio range of 300-450 MHz reserved for security applications. The COS shall require no special agency (FCC) radio license to operate.

2.0 The COS system shall be capable to operate EPUs from a minimum distance of 6,000 feet from the NPS.PRODUCTS

2.1 Pendant Transmitters shall:

2.1.1 Operate on a customer-replaceable 12 volt alkaline battery to provide long-term reliable transmissions. The pendant transmitter design shall provide a battery life span of 4 years including the yearly testing requirements.

2.1.2 Use a miniature plastic housing with an exterior dimension of 2.25" x 1.5" x 0.5" to easily attach to a existing key ring.

2.1.3 Be capable of a minimum of 64 million different user identification codes. The codes on pendant credentials shall differentiate the specific transmitter to each assigned user.

2.1.4 Transmit a minimum of 5 redundant data packs and incorporate CRC (cyclic redundancy calculation) to ensure a successful transmission.

2.1.5 Use complex coding for the radio-frequency data transmissions to provide the highest degree of error detection and system security.

2.1.6 Use SAW (Surface Acoustic Wave) filters.

2.1.7 Prevent false or accidental alarms by requiring the user to press and hold the transmitter button for at least 1.5 seconds.

2.2 Receivers shall:

2.2.1 Be of the super-heterodyne type to provide exceptional radio-frequency reception with minimal noise.

2.2.2 Incorporate an integrated tuned antenna for maximum reception.

2.2.3 Be easily integrated into all of Code Blue Emergency Telephone Units vandal-resistant stainless steel/steel housing.

2.2.4 Provide a RF activity LED indicator which activates within the pendant operating bandwidth for field maintenance and servicing. The LED shall blink whenever the receiver receives a radio-frequency signal at the same bandwidth as the emergency pendant.

2.2.5 Operate on safe low 12 VDC voltages with a nominal 30mA during stand-by.

2.3 Remote Processor Units shall:

2.3.1 Operate on safe low 12VDC voltages with a nominal 400 mA during stand-by.

2.3.2 Be easily integrated into all of Code Blue Emergency Telephone Units vandal-resistant stainless steel housing.

2.3.3 Provide visual indicators for easy field maintenance and servicing. LED indicators shall include a) data package authenticity b) network packet received indicator c) network packet transmitted indicator and d) relay driver indicator.

2.4 Emergency Phone Units shall:

2.4.1 Be available in various models and sizes to meet all of the institutions landscape and structures.

2.4.2 Refer to Code Blue Specification _____ for detailed ETU specifications.

2.5 Blue Strobe shall:

2.5.1 Use a minimum 1,000,000 candlepower and have a flash rate of no less than 60 flashes per minute.

2.5.2 Be covered by a deep blue polycarbonate prismatic refractor whose color and pattern in the strobe refractor distribute its light in a horizontal pattern thus making the flash brighter and more visible as the distance of the viewer from it increases.

2.5.3 Have a life cycle of no less than 1,000,000 flashes before lamp replacement is required.

2.5.4 Be weather-resistant.

2.6 Network Polling Station shall:

2.6.1 Accommodate up to 64 two-wire analog data channels from remote EPUs positioned through the facility.

2.6.2 Use an Ethernet connection to incorporate the central dispatch PC.

2.6.3 Be mounted to a 19” rack for easy maintenance and operation.

2.7 Central Computer dispatch shall:

2.7.1 Require a PC computer consisting of at least the following minimum requirements – Intel® Pentium® 4 or AMD Athlon™ XP, 40GB hard drive, 256MB RAM, CAN-BUS network card, sound card, floppy drive and Microsoft® Windows® 2000.

2.7.2 Require the following peripherals – keyboard, mouse, speakers, monitor, UPS (APC Back-UPS CS 500 is recommended), as well as suitable space allotted in the campus dispatch area.

2.8 Proprietary application software referred as the Code Blue Operator shall:

2.8.1 Be written and designed to require little or no computer literacy on the part of the operator.

2.8.2 Allow the operator to perform all functions necessary to dispatch aid and monitor the system integrity.

2.8.3 Provide a Graphic User Interface (GUI) at all times and provide on-screen interface with a mouse.

2.8.4 Let the operator provide quick one button GUI actions to acknowledge and respond to incoming alarm calls.

2.8.5 Provide automatic time stamped audit reports with pendant Ids, system status and action taken.

2.8.6 Provide access codes to limit menus screen to authorized personnel only.

2.8.7 Supervise all the remote processor units from the system data ETU polling list. Any remote processor unit that does not report back to the central dispatch shall trigger a pop-up error screen to notify the operator. All remote processor units that are not able to communicate to the Central Computer dispatch shall provide a trouble indication

within 5 seconds.

2.9 PC Interface module shall:

2.9.1 Be able to be plugged into a PC card slot or remotely via a USB interconnect cable.

2.10 Antenna assembly shall:

2.10.1 Be tuned to the center frequency of the pendant transmitter to maximize the reception of the radio-frequency signal.

2.10.2 Be available in various types to mechanically mount to any of the Code Blue Emergency Phone units.

2.10.3 Provide omni-directional coverage.

3.0 WARRANTY

3.1 The system shall have a two-year warranty for all products manufactured by Active Control Technology Inc. (ACT)

3.2 Any peripheral part or module not manufactured by ACT shall be covered by its own manufacturer's warranty.