

DESCRIPTION OF THE GENERIC CALLBOX FAMILY

These callboxes are designed for use in a large consumer store. They are positioned in areas where customers might need assistance. When a button is pressed, a short RF transmission occurs which identifies which button of which callbox was pressed. The receiver (separately certified) selects the message associated with that button, and plays it over the intercom ("Assistance requested in the spark plug department"). If the callbox RESET button is not pressed within a set period of time, the message may be repeated (no RF transmission). These callboxes are sold to stores which value customer service.

Each microprocessor-controlled callbox is a self-contained, low-transmit-power unit with integral lifetime battery (estimated lifetime is 7 to 10 years under normal use). It is installed in a nonconductive plastic enclosure with a customer-specific graphic overlay. The GENCLBX Family is comprised of the CB511, CB514, CB440, and the CB475. All members of this family use the same circuit board. The only differences concern the number of buttons on the keypad, and the shape of the plastic enclosure.

The CB511 has one button for activation, and one button for Reset. It is a stand-alone unit.

The CB514 has four activation buttons, and one button for Reset. It is a stand-alone unit, and uses the same plastic enclosure as the CB511.

The CB440 has one button for activation, and one button for Reset. It is a stand-alone unit. The plastic enclosure is curved outward on the front, like the top of a Volkswagen.

The CB475 has one button for activation, and one button for Reset. It uses the same plastic enclosure as the CB511, except for the plastic back, which has an additional short half-circular piece of plastic to make it look like it is attached to a large plastic sign (about 6" x 28", "Need Help?").

All units of this family work the same. When a SET button is pressed, the μ P (which was in "Sleep" mode with the oscillator stopped) starts up, reads the button press, then transmits the appropriate 20-bit word, repeated 9 times (about 1.2 seconds of transmit time). The LED for the triggered channel continues to blink until the RESET button is pressed (resulting in a RESET transmission) or until the internal timer has expired (about 7 minutes, with no RESET transmission). The μ P is then set back to the "Sleep" mode. The word coding consists of 8 "address" bits as a system address, 8 "ID" bits as a point or channel ID, and 4 "status" bits to indicate battery, etc. (presently unused).

If multiple SET buttons on the same unit are pressed, they will each transmit a SET message. The LEDs are controlled such that only one LED will be on at any time, resulting in a 25% duty cycle for each LED. Pressing RESET sends a RESET transmission for all the active/blinking channels. An individual channel may be RESET

by pressing and holding the associated button for about 1 second or until its LED stops blinking.

Programming is done via the SET and RESET buttons as described in the Installation instructions.

Modes may be changed by factory personnel by adding a jumper on J3. Then the mode may be selected per the Programming Instructions in the Technical Service Notes.

These units operate at a nominal frequency of 303.825 MHz using an RFM TX5003 hybrid transmitter module, and a permanently attached wire antenna.

The Generic Callbox Family has the capability to recognize an external contact closure. This is implemented with the wires that have been attached to the test articles. Not all delivered units have the wires.