

# Architect and Engineering Specification

## Model 226-003 S.M.A.R.T. Tough Telephone

The Telephone shall operate on a standard analog telephone line, with a minimum line current of 20 mA. It shall be powered solely from the telephone line and not require a battery or external power source. A call shall be initiated by lifting the handset and using the keypad to dial. A receiver volume control shall be provided on the front panel. The telephone shall be tone dialing only.

The telephone shall be capable of being monitored and configured by the GAI-Tronics Telephone Management Application (TMA) software, operating on a remote computer. The computer shall connect to the telephone through the public or local network using a voice grade phone line modem. To establish connection, the telephone shall call the computer at a preset time or the computer shall call (poll) the telephone. The telephone shall be capable of reporting the following information to the TMA computer:

- Call Log** – A report of the call activity since the last call log report. The type of call, date, start time, number dialed and duration of each call shall be reported.
- Stuck Contact** – A mechanical malfunction of a keypad switch being stuck in the closed (pressed) position.
- Handset Cord Integrity** – An open circuit on the handset cord.
- Phone Line Interrupt** – A loss of phone line power causing the phone to be inoperable. The event shall be reported to the TMA computer during its scheduled maintenance call when the line power is restored.
- Microprocessor Self Test** –Phone detects corruption in its operating memory during the diagnostic self-testing.

Any user-initiated call shall override an in-process maintenance call to the TMA computer. The maintenance call shall be terminated and the telephone shall process the user call. The telephone shall contain a microprocessor and non-volatile memory for storage of its parameters. The telephone shall be remotely programmed from the TMA computer. The following telephone operating parameters shall be programmable via the TMA Application software:

- Call time-out** - Limits the time a call can be in-progress (1-270 minutes).
- Mute Before Dial** - Disables the microphone until the call is connected (ON or OFF), maintenance access only.
- Maintenance Call-in** –The time of day the phone will automatically call the monitoring computer (if programmed for this operation).
- Solid state switch** –Remote activation of peripheral devices

The telephone housing shall be vandal resistant, weatherproof and rated to NEMA 3R and shall withstand corrosive environments. The housing shall be constructed of cast aluminum with a minimum of 0.25” uniform wall thickness. The door shall have a spring return that self-latches when released from a 90 degree open position. The door hinge shall not be exposed when the in the closed position. A stainless steel panel (containing the handset, volume control button, and keypad) shall be removable from the rear section of the housing to access the telephone electronics. The panel shall be secured to the housing with tamper-resistant hardware. The housing shall be oval shaped 13.5”H x 9.7”W x 6.1” D and painted with gray epoxy paint. The telephone phone shall weigh approximately 18 pounds.

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The handset shall be “G” style with a hearing aid compatible receiver and noise canceling microphone. The handset shall be secured to the front panel with a 15” armored cord containing an internal lanyard cable having minimum pull strength of 800 lbs. The handset cradle shall be heavy-duty, chrome plated with a non-movable, magnetic type hook-switch. The keypad shall be Braille encoded, chrome plated and completely sealed. The telephone shall contain a front panel ringer with REN of 1.5 or less and shall provide a minimum ring volume of 70 dB with the door closed, measured at 2 feet on axis. The telephone shall be supplied with a 7’ modular cable (RJ11C type) for connection to the incoming phone line. The telephone shall include provisions direct, hard-wired line connection via screw terminals. The telephone shall have a minimum operating temperature range of  $-20^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$  and relative humidity to 95% non-condensing.

The telephone and software shall be designed and developed by the manufacturer.

Telephone manufacturer shall be ISO 9001 Certified.

Telephone shall be registered under FCC regulations, 47 CFR, part 68 and comply with UL/CSA 60950.

Telephone shall be manufactured by **GAI-Tronics Corporation as Model 226-003.**