VoiceBox v2

1. Overview

The **VoiceBox** is a versatile audio announcement unit designed for integration into industrial, automotive, and public information systems. It receives predefined voice codes via RS232/TTL communication and plays corresponding stored audio messages. With OTA (Over-the-Air) update support, rugged construction, and multiple language capability, the **VoiceBox** is built for reliable performance in demanding environments

2. Features

- RS232/TTL Mode-Selectable Serial Communication Interface
- Playback support for up to 160 pre-recorded audio messages
- Up to 6 different languages (Customizable)
- Onboard flash storage for audio files
- SD card Support for audio file writing/reading
- Integrated 10W Speaker with Audio amplifier
- Integrated Mic for Two Way Calling
- GSM-based Voice & SMS communication
- Customizable Control button (SOS, Call etc.)
- Remote configuration capability.
- Wide operating voltage range: 7–40 V DC
- OTA firmware, audio file update[1]

3. Applications

- Industrial:
  a. Safety alerts, process status messages
  b. Fire Alarms, smoke detectors and other announcement systems
- Automation: Process guidance and control prompts
- Logistics: Fleet and asset management announcements
- Security: Access control and intrusion alerts
- Assistive Technology: Voice guidance systems
- Public Information: Kiosk and announcement systems
- Automotive: ADAS and driver assistance voice prompts
- Remote Monitoring and Control
- Hospital safety announcements.
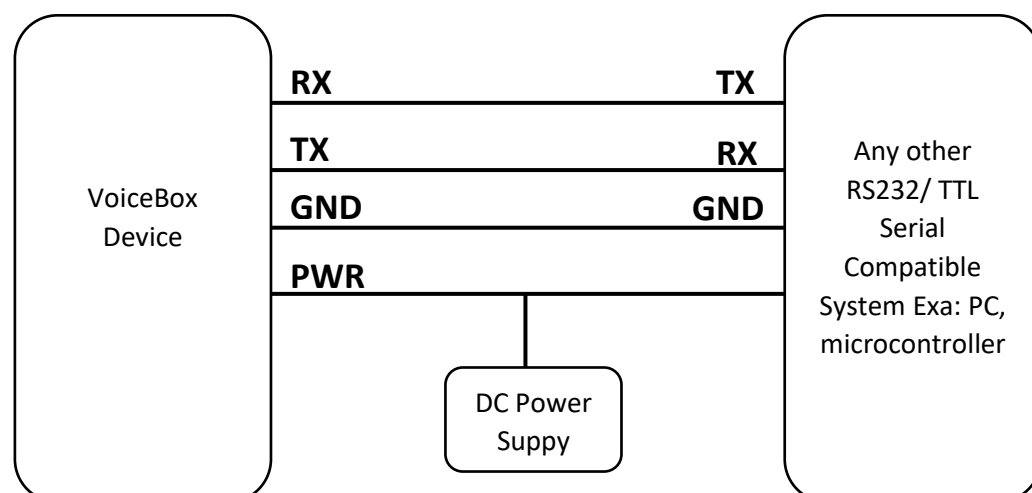
4. Technical Specifications

SN	Parameter	Specification
1	Input Power Supply	7-40 V DC (Min Current 500mA - Max Current 2 Amp.)
2	Communication	Selectable between RS232 Serial or TTL UART with configurable baud rate
3	Audio Capacity	160 audio files
4	Total Audio Storage	2000 seconds
5	File Size Limit	96 KB per Audio (customizable)
6	Audio Format	8-bit mono WAV, 8 kHz
7	Playback Control	Triggered by predefined voice codes[1]
8	Sim Slot Type	Nano SIM Slot (Nano) with Mechanical Lock
9	SMS command & Alerts	Supports SMS command for configurations. Supports various SMS alerts for setting change
10	Audio Output	3-inch, 4 Ω, 10W speaker with integrated amplifier
11	Terminals	Clamp Cage Screw Terminal
12	Enclosure	ABS plastic, black
13	Dimensions	95 X 90 X 80 mm
14	Mounting	Bottom mounting with Base Plate/ Panel Mounting with Socket and screw
15	Weight	200 g

5. Configuration & Testing

5.1. Pin Description

SN	Pin Name	Description
1	PWR+	+7–40 V DC supply
2	PWR-	Ground
3	TX	Data Transmitter Pin
4	RX	Data Receiver Pin

5.2. Connection

5.3. Device Images

Front View

Back View

5.4. Setup Procedure

- Connect VOICE_BOX to a PC via RS232/TTL
- Open any serial terminal (default baud rate: 57,600 bps).
- Send command sequence to play messages:
  ~VOICE100, ~VOICE101, ~VOICE102, ~VOICE103
- Messages will play in sequence
- Change numeric codes to select different messages or languages
- To upload new audio files:
  ~WRITExxx

6. Maintenance & Care

Periodically clean the device to prevent dust accumulation.

Avoid prolonged exposure to corrosive or high-humidity environments.

7. Warranty & Support

Warranty: 1-year limited warranty from date of purchase.

Support Email: contact@siltech.in

Address: SilTech Industries, Bengaluru, Karnataka, India

8. Compliance

RoHS Compliant

Abbreviations:

(1) Under Development.
(2) Can be configured as per user requirement