# TextSpeak™

*… speech generation that's as simple as it sounds !*

## The world's first AAC speech generator in a 4″x 5″ package

<span style="color:red">**Unlimited vocabulary**</span>

<span style="color:red">**Talks as you type**</span>

<span style="color:red">**No PC required!**</span>

- **Wirelessly connects** to keyboards and generates **unlimited vocabulary** speech

- Full size keyboard included. Expands to support most standard and special needs keyboards

- A **perfect on-the-go AAC solution**. Instant on, no setup, low cost and simple to use.

- Works with telephones

- Light & portable. AC and Battery powered

- Available in Male and Female voices

- Intelligent text generating speaker and keyboard combo put speech anywhere, right at your fingertips

- Great for students who need unlimited vocabulary

- **Works without a computer**

- Benefits patients with both temporary and long term needs

- **Works right out of the box**

- 30 programmable phrases

**Perfect for classrooms**

**Assists in out-patient care**

**A low cost temporary aid**

**Completely portable**

**Durable and flexible**

Incorporates advanced Digital Acoustics® technology, created and built by TextSpeak Design Group, U.S.A

**Size and Weight**

TS-04 Speech Generating Speaker

- L: 5.3 inches  W: 4.0 inches H: 1.5 inches  W: 10 oz

TS-04 Wireless Keyboard

- L: 13 inches  W: 7 inches H: 1.2 inches  W: 1 lb 2 oz

**Power and Battery**

Speaker Operation
- 9 Volt AC Adaptor
- Battery 9V Alkaline MN1604 or Equiv
- Battery Life (est)   100 Hours based on 10 minutes/hour use

Keyboard Operation
- Auto Power On/Off
- Battery  2 AAA Alkaline
- Battery Life  (est)  6-12 months

**Keyboard Access**

- Wireless QWERTY full size, compact style keyboard, 10 foot range

**What's In The Box?**

- One TextSpeak TS-04 Speech Generating Speaker
- One TextSpeak Wireless Keyboard
- Power transformer for DC Operation
- Batteries
- Instruction manual
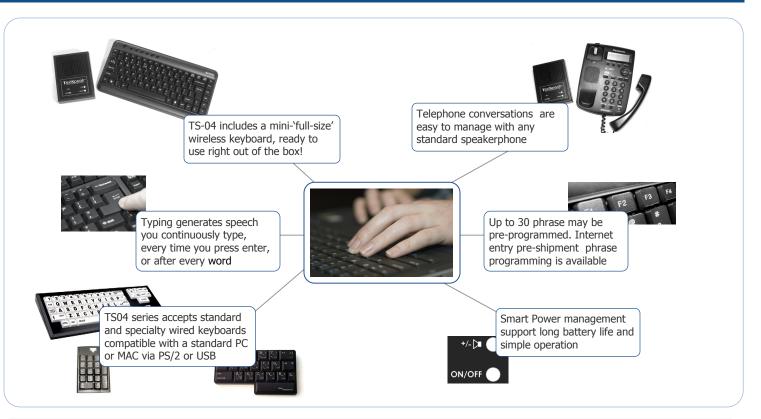
**Technical – How the TS-04 Works**

- Unlimited Phoneme Based Word creation
- Real time conversion for continuous text generation
- English dictionary modeled for male and female speech

- 24 mHz Flash Based DSP Processor with integrated Codec
- 2KB Flash hold 30 Item Index of 60 characters each for phrase storage
- Sleep mode power use 125 mW

The TS-04 Speaker performs text-to-speech synthesis based on concatenative samples. The units for sampling can vary from whole words down to phoneme markers. A corpus of pre-recorded words is stored in onboard Flash Memory using patented multilevel storage (MLS) memory and a mapping of the various sub-word parts is held in a lookup table. The speech creation concatenates speech elements to produce words. Speech may be generated in real time, with unlimited vocabulary. Speed and volume generation are keyboard controlled after power-up.

The system process flow includes Data reception, text normalization,  phoneme mapping, MLS, memory and audio D/A conversion.

TS-04 Keyboard/Speaker Radio links utilize 2.4 GHZ Channel Hopping transceivers. External keyboards are interfaced via auto-detecting PS/2 or USB keyboard connectors.

## OPERATION AND FEATURE SUMMARY

TS-04 includes a mini-'full-size' wireless keyboard, ready to use right out of the box!

Telephone conversations  are easy to manage with any standard speakerphone

Typing generates speech you continuously type, every time you press enter, or after every word

Up to 30 phrase may be pre-programmed. Internet entry pre-shipment  phrase programming is available

TS04 series accepts standard and specialty wired keyboards compatible with a standard PC or MAC via PS/2 or USB

Smart Power management support long battery life and simple operation

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ON/OFF