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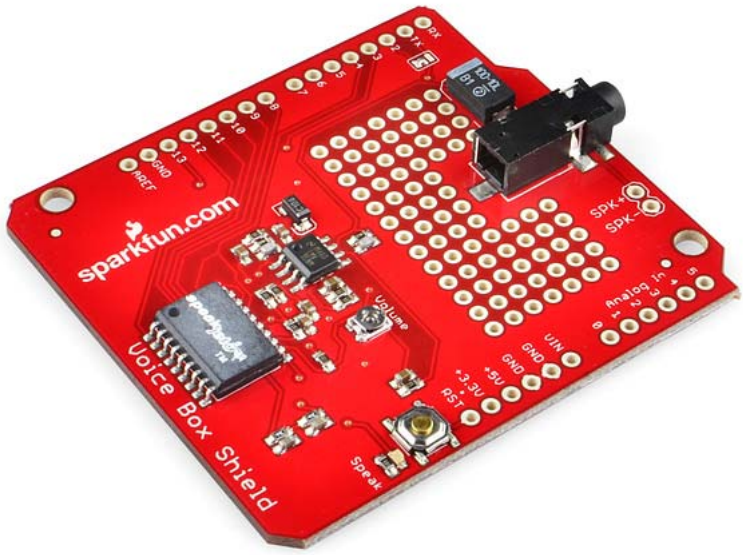
SparkFun VoiceBox Shield

DEV-10661 ROHS✔



Description: The SparkFun VoiceBox Shield can be mounted on top of your Arduino board to give it access to all of the capabilities of the SpeakJet voice and sound synthesizer. The Voice Box Shield uses the SpeakJet chip to convert serial commands into a great robot-sounding voice.

Populated on the VoiceBox Shield are the SpeakJet IC, a two stage audio amplifier with a potentiometer to set the gain and a standard 3.5mm audio output jack. Simply connect a speaker to the output jack and get your Arduino-bot talking with very minimal work!

You can control the SpeakJet through either its serial line, or the eight event input lines which are connected to digital pins 5-12. A 3-way jumper allows you to connect either the software (D2) or hardware (D1) TX pin of the Arduino to the SpeakJet's serial input.

Also included on the shield are a grid of 0.1" pitch through-holes for prototyping as well as the Arduino's reset button. Headers are not included, we recommend the 6 and 8-pin stackable headers.

Documents:

- Schematic
- Eagle Files
- VoiceBox Shield Tutorial
- Listen to the SpeakJet! (YouTube)
- Talking Wireless Server Tutorial
- SpeakJet User's Guide
- SpeakJet Dictionary
- Tutorial on adding the TTS256 text to speech IC to the shield
- Listen in MP3 Format as the VoiceBox Shield introduces itself
- GitHub

Recommended Products

SPARKFUN RECOMMENDED
Arduino Uno - R3
DEV-11021
$24.95
★★★★½ 85

SPARKFUN RECOMMENDED
Arduino Uno - R3 SMD
DEV-11224
$29.95
★★★★½ 17

SPARKFUN RECOMMENDED
SparkFun Music Instrument Shield
DEV-10587
$29.95
★★★★½ 4

SPARKFUN RECOMMENDED
Arduino Pro 328 - 5V/16MHz
DEV-10915
$14.95
★★★★½ 3

COMMENTS 9 REVIEWS 0

Customer Comments

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RCModelReviews / about 5 years ago / ★ 2

I tried a SpeakJet for a project but it's really bad. The old speech synth chips of the 1980s were *much* better (from memory).

In the end I had to go for pre-recorded words/phrases and an MP3 player in order that people could actually recognize what was being said with sufficient accuracy because the SpeakJet is just so very, very bad.

> Member #584941 / about 2 years ago / ★ 1
>
> I have that sc01 maybe a handful do you think I could use it on the voicebox shield?
>
> Quazar / about 5 years ago * / ★ 1
>
> Completely agree! I've still got an SC-01A kicking around in my junkbox somehwere… For those interested in some history, have a look at this.
>
> > Member #461652 / about 3 years ago / ★ 1
> >
> > I have a speech synthesis box with a built-in amp sitting in my basement. I'd use it…but I can't get anything on the RS-232 port nor can I find docs. :(
> >
> > I think my box is from the same era…I forget who made it.

Quazar / about 5 years ago / ★ 2

I'm kinda surprised that you didn't add a 14th row of holes for the TTS256. The layout isn't very cramped and this could have easily been done without having to reroute anything.

Better yet, pre-route wires to the right pads and silk-screen the footprint of the TTS256 in the proto area to make it even easier.

Given that the tutorial to work around this oversight is linked right from the product page, this is clearly a very common request/mod.

TLR / about 2 years ago * / ★ 1

Maybe I'm missing something here, but I'm using a proto shield on top of the VoiceBox shield, and when I try to run 5v power to the proto board through the VoiceBox shield (from my Arduino UNO) I get a high-pitched pulsing sound. If I run the power from an external power source, I have no issues. I'm basically just powering an infrared motion sensor. Could the sensor be drawing too much power through the VoiceBox Shield?

The sensor I'm using is the "Infrared Proximity Sensor Long Range - Sharp GP2Y0A02YK0F"

Taper / about 3 years ago / ★ 1

Just got this running and wanted to point out two things about the example code that could cause problems –

1) There's no delay between the SpeakJet's reset and when it starts in on the first message. Since it's set up to say "Ready" on reset, this makes the demo sound not quite like "All your base are belong to us"; add some pareidolia and I was hearing "Every your base are belong to us".

2) The strings created to pass to the SpeakJet are not null-terminated. This will give the SoftSerial.print call problems finding the end of each string; in practice, the string of phonemes is read, the .print() keeps looking for a \0, and continues straight on to the next string, the robot noises. It finds a null after that (because it's the last global variable declared) and thus plays the robot noises twice. You can not count on just happening to have a null after an unterminated string, though – for

instance, if the next allocated byte after an unterminated string had the value decimal 16, SpeakJet would interpret that as a Wait command – and all voicing would freeze, and it could be very hard to debug. So remember to add a 0 to the end of strings.

Otherwise, I'm enjoying the little thing. Now to decide on an application…

h4nd / about 3 years ago / ★ 1

Voice output voltmeter / multimeter?

Member #401698 / about 4 years ago / ★ 1

please bring back the shield with the DIP speakjet, i cant solder the TTS256 to the speakjet now.