

**60-Second Non-Volatile Digital Recorder / Player with Repeat Function**

With this advanced digital audio recorder/player, you can record up to 60 seconds of speech or any other audio with the built-in microphone and later play it back anytime.

This unique design is made possible through the ISD25xx series of Integrated Circuits which store voice and audio signals directly, in their analog form, into a 480K Cell Nonvolatile Analog Storage EEPROM requiring neither analog-to-digital nor digital-to-analog converter. Recordings stored in this non-volatile memory cell last up to 100 years and therefore even if the supply voltage is disconnected, the recording will not be lost.

Another unique feature of this circuit is a the message looping mode of operation which continually plays back the recorded message automatically. The circuit also incorporates a built-in audio amplifier so it can be directly connected to a speaker or connected to a power amplifier such as our CK/UK193 for greater output power.

Some applications for this circuit include:

- Doorbell or entrance message. Greet your guests or customers with a welcome message.
- "Watchdog" burglar alarm system. Record the barking of a dog and connect this circuit to a alarm system to deter burglars.
- Toys applications where you need speech or audio effects.
- Talking picture frames for personal or museum use. Add it to the back of a picture frame of a friend or relative to have his or her voice be played back at any time.
- With the looping mode of operation, you can connect the circuit to one of our FM Transmitters in order to build a FM Announcement System or talking sign which is ideal for real estate applications.

**Operating Instructions**

1. Insert four 1.5V "AA" **new** batteries in the battery holder .
2. Connect a 16Ω speaker to the points marked "SPK" (you can also use an 8Ω speaker).

Note that the built in amplifier only provides a 50 mW output power. If you would like additional power, you can connect the circuit to a power amplifier such as our 20W Mono Amplifier (UK193). In this case, use the two points marked "OUT" and "G" as indicated in the wiring diagram.

**Recording a New Message**

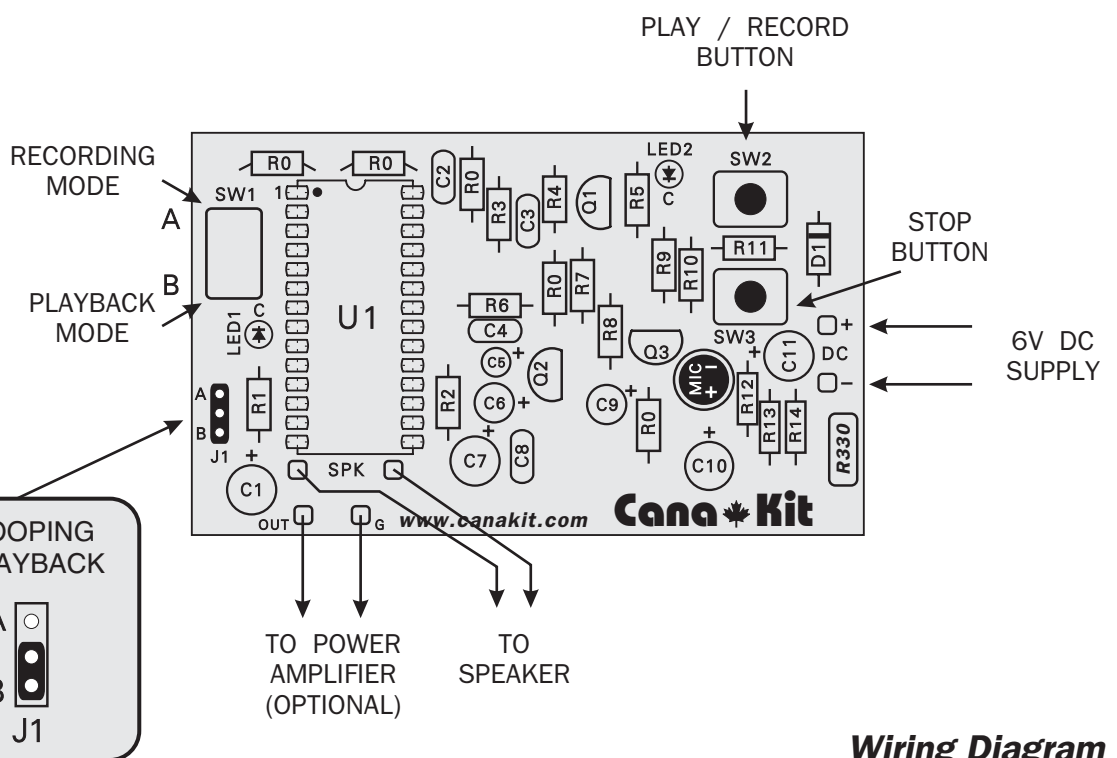
To record a message, first place the slide switch "SW1" on the "A" (record) position. The green LED should now illuminate indicating that you are in the recording mode. To start recording, first **momentarily** press push button switch "SW3". Then press and **hold** push button switch "SW2" and speak into the microphone from about **10 cm** away. Once you are done, release "SW2". When the total recording time has been reached, the red LED will illuminate and recording is stopped. **Note that if you wish to use the looping mode of operation, you should not record until the entire recording time has been filled. You need to leave at least ½ second empty.**

**Playing Back a Message**

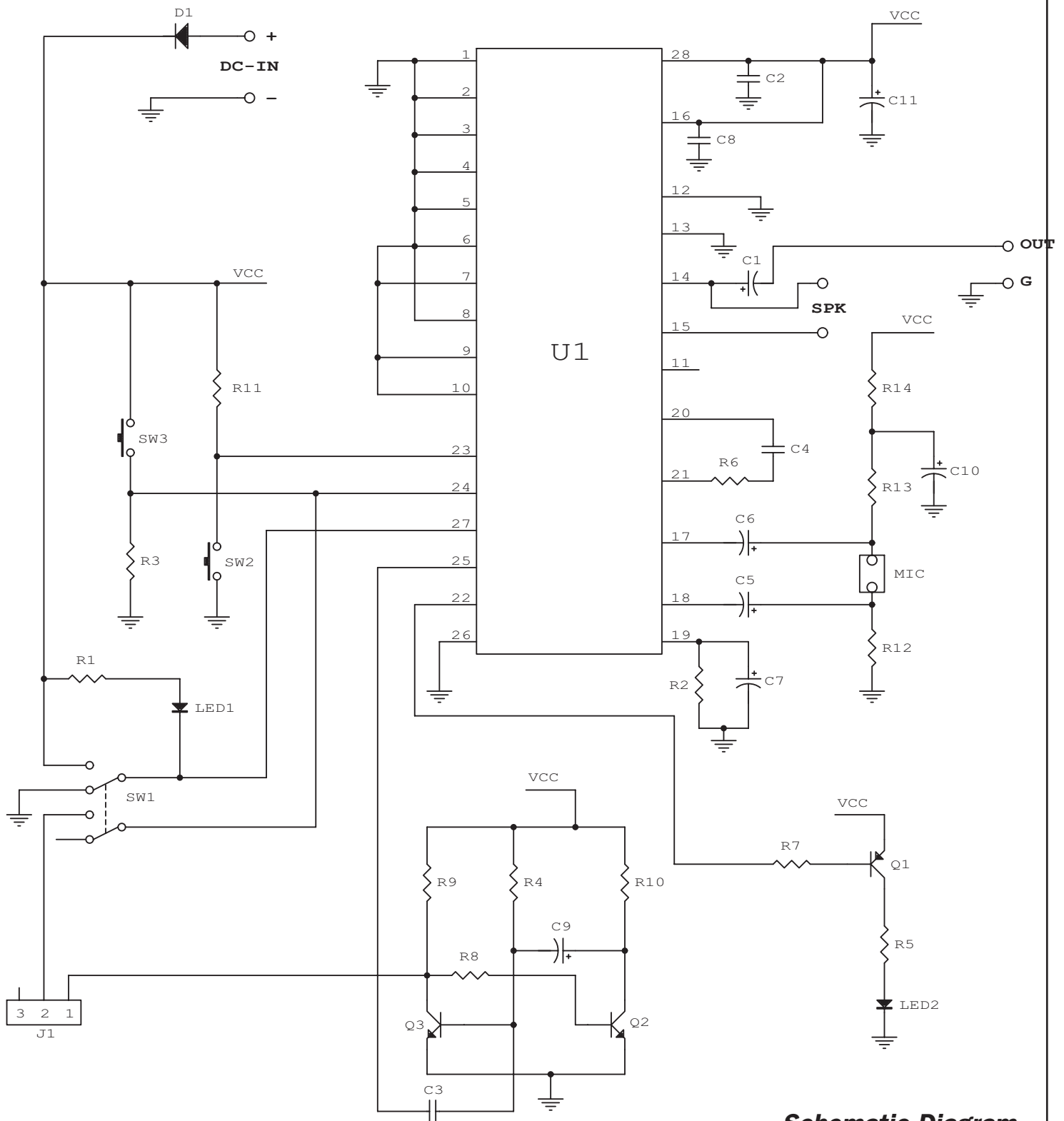
To play back the message recorded, first place the slide switch "SW1" on the "B" (playback) position. You can now press push button switch "SW2" to start playing the message. While the message is being played back, you can press push button switch "SW3" to stop the playback.

**Looping Mode of Operation**

To use the looping mode of operation, set the on-board jumper "J1" to the "B" position. Now the message should be played back continuously as long as the slide switch "SW1" is placed on the "B" (playback) position.



**Wiring Diagram**



**Schematic Diagram**

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