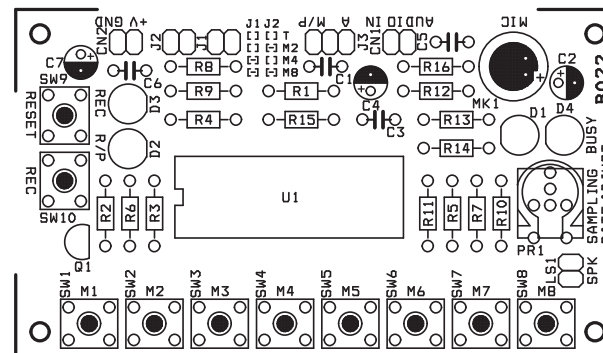
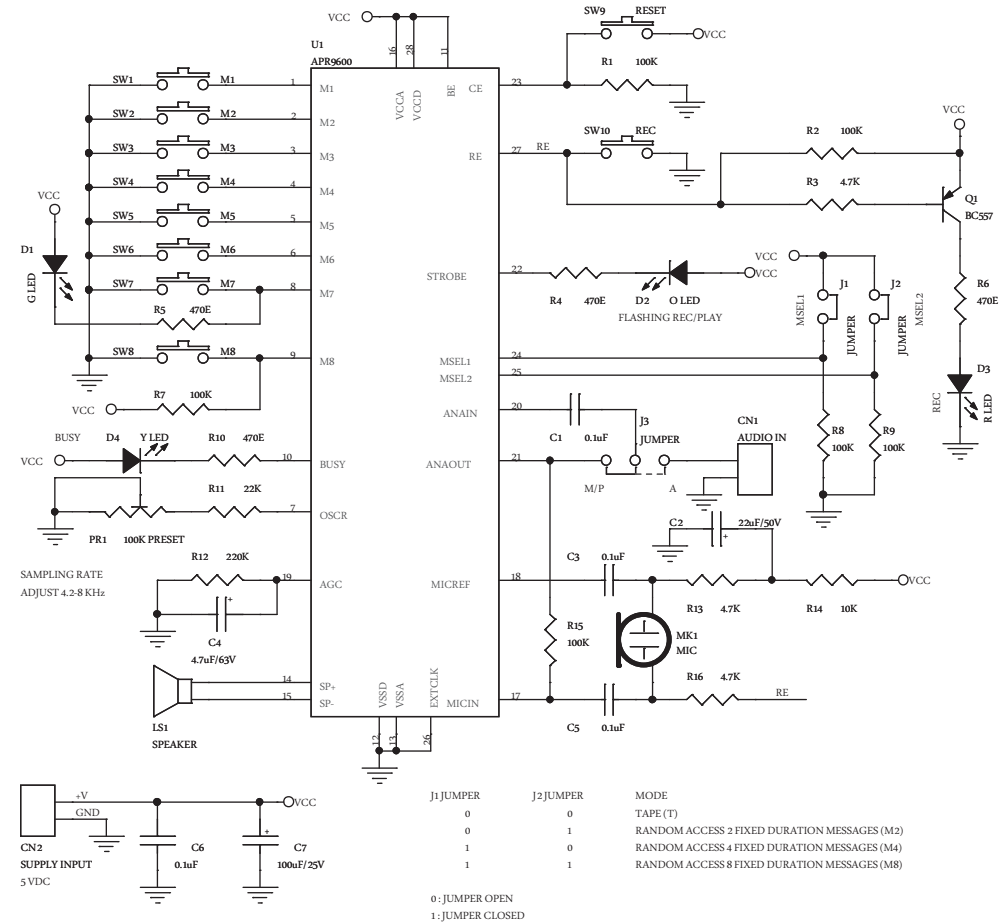


VOICE MODULE 60 SEC *B022*

Voice Module 60 Sec kit will playback and record upto 60 seconds of voice message. This kit is an excellent choice to add voice to your project.

- Upto 60 Seconds of non volatile voice storage
- Upto eight segments record and play option available
- Easy and clear, jumper selectable mode option
- Preset for adjusting sampling rate
- Tactile switches for Record, Play function trigger
- Easy jumper selection for selecting recording source
- Onboard microphone for recording message directly onto the chip
- Audio output available to drive a speaker
- Direct speaker connection via berg connector
- LED to display Record/Playback of messages
- Berg connector for power supply input
- Four mounting holes of 3.2 mm each
- PCB dimensions 54 mm x 94 mm

SR.	QTY.	REF.	DESCRIPTION
1	1	CN1	2 PIN BERG CONNECTOR
2	1	CN2	2 PIN BERG CONNECTOR
3	4	C1,C3,C5,C6	0.1uF
4	1	C2	22uF/50V
5	1	C4	4.7uF/63V
6	1	C7	100uF/25V
7	1	D1	GREEN LED
8	1	D2	ORANGE LED
9	1	D3	RED LED
10	1	D4	YELLOW LED
11	2	J1,J2	2 PIN JUMPER WITH CLOSER
12	1	J3	3 PIN JUMPER WITH CLOSER
13	1	LS1	2 PIN BERG CONNECTOR
14	1	MK1	ELECTRET CONDENSER MICROPHONE
15	1	PR1	100K PRESET
16	1	Q1	BC557
17	6	R1,R2,R7,R8,R9,R15	100K
18	3	R3,R13,R16	4.7K
19	4	R4,R5,R6,R10	470E
20	1	R11	22K
21	1	R12	220K
22	1	R14	10K
23	8	SW1,SW2,SW3,SW4,SW5,SW6,SW7,SW8	TACT SWITCH
24	1	SW9	TACT SWITCH
25	1	SW10	TACT SWITCH - RED
26	1	U1	APR9600
27	1	SOCKET	28 PIN DIP IC SOCKET



This kit will help you record and play a 60 seconds voice message stored on it. This circuit is based on APR9600 IC from Aplus.

The kit provides four different modes of voice message to be recorded and played, viz i) MOD8 : 60 Seconds is equally dived in 8 equal segments, ii) MOD4 : 60 Seconds is equally divided in four equal segments, iii) MOD2 : 60 Seconds is equally divided in two equal segments and iv) Tape Mode : Entire 60 segment is available in a single shot mode. For MODE selection see MODE selection table.

There are two different ways to record a voice message onto the chip viz. i) CN1 connector on PCB for external audio input or ii) Onboard Microphone. Jumper J3 on the PCB to select audio source. J3-Position A would select the external audio input and J3-Position M/P would select onboard microphone. Onboard preset PR1 will adjust the sampling rate of playback and record option for IC. Important thing to remember is that, if you increase the sampling rate, the duration of message will reduce and vice-versa. For details see resistance values & sampling frequencies table.

Recording a Message:

To record a message, please select the right MODE at Jumper J1 and J2. The MODEs are clearly marked on the PCB and jump or no-jump positions are also marked. Also select the source for recording through CN1 Connector. Keep the sampling rate preset PR1 in the middle position to test a sample of the recorded message. Increasing the sampling rate will decrease the total amount of recording time and vice-versa.

MODES:

MOD8 : This MOD allows you to record a message in 8 equal location available through switches SW1 to SW8 (M1 to M2). To record a message in any on of these location, you need to keep the Record Switch SW10 pressed with one finger and the Segment Switch pressed. A PiP sound will play through the speaker to denote recording start. Recording will end when you release both these keys or when it reaches the end of the segment. Another PiP would sound to denote the end of recording. Switches marked M1 to M8 are available in this mode.

MOD4 : The procedure is the same as described above in MOD8, and the keys available in this mode are M1 to M4.

MOD2 : The procedures is the same as described above in MOD8, and the keys available in this mode are M1 and M2.

TAPE MODE : The procedure is the same as described above in MOD8, and only M1 key is available in this mode.

Playing a Message:

Connect an appropriate speaker (should not lower then 8 Ohms) at LS1, For playing a recorded message you just need to press and release any of the switch available in that particular mode once. The play of message is also indicated by the flashing of LED, D2.

Reset Switch:

Switch SW9 is used to reset the EOM, End of Message marker position to the start of the message in the Tape Mode of operation.

For datasheet of APR9600, please visit the manufacturer's website.

The kit includes all components required for the project accept a speaker, power supply and cabinet. Please check the components supplied to you as per the BOM "Bill of Material" listed in this document. Components legends clearly printed on the PCB.

MODE SELECTION TABLE

J1 JUMPER	J2 JUMPER	MODE
OPEN	OPEN	TAPE MODE (T)
OPEN	CLOSE	MODE 2 (M2)
CLOSE	OPEN	MODE 4 (M4)
CLOSE	CLOSE	MODE 8 (M8)

RESISTANCE VALUES & SAMPLING FREQUENCIES

RESISTANCE	SAMPLING FREQ	DURATION
84 K	4.2 KHz	60 Sec
38 K	6.4 KHz	40 Sec
24 K	8.0 KHz	32 Sec

