

AY-VOICE PARTS LIST

All fixed resistors are 1/4-watt, 5% values.

R1	4.7 Ω *
R2	220 Ω
R3–R13	330 Ω
R14	470 Ω
R15–R33	1k
R34–R39	4.7k
R40–R53	10k
R54	10k trimmer
R55–R58	10k potentiometer
R59–R61	20k
R62	22k
R63–R69	100k
R70–R72	200k

All capacitors are 16V or better.

C1–C3	0.047 μ F mylar
C4–C9	0.1 μ F disc
C10–C12	2.2 μ F electrolytic
C13–C15	10 μ F electrolytic

Semiconductors

D1	1N4148 diode
D2–D12	LED
Q1–Q11	2N3904 NPN transistor
X1	16 MHz ceramic resonator
IC1	Picaxe 28X2 microcontroller
IC2	AY-3-8910 sound generator
IC3	6N138 opto-isolator
IC4	TL074 quad op-amp
LCD1	2-by-16 LCD display

Other components

J1	3.5mm phone jack, n.o.
J2–J17	1/4" phone jack, n.o.
J18–J20	1/4" phone jack, n.c.
J21	5-pin DIN jack
S1–S6	momentary SPST switch

Miscellaneous: printed circuit board, IC sockets, front panel, knobs, wire, etc.

* This value depends on the backlight LED in your LCD. Check the data sheet.