Table 1: Component list

R1	1k2	R24	10k	C10	1u electrolytic 63V
R2	100k	R25	1k2	C11	1u electrolytic 63V
R3	22k	R26	56k	C12	100n mylar 100V
R4	470R	R27	330R	C13	100n mylar 100V
R5	100R	R28	470R	C14	100n mylar 100V
R6	100k	R29	47k	C15	100n mylar 100V
R7	470R	R30	4k7	C16	1n ceramic 63V
R8	22k	R31	22k	C17	1n ceramic 63V
R9	100k	R32	470R	C18	1n ceramic 63V
R10	1M5	R33	56k	C19	10n mylar 100V
R11	22k	R34	56k	C20	220p ceramic 63V
R12	33k				
R13	22k	All resistors are 0.25W 5%		Tolerance of all non electrolytic caps is 10% or better.	
R14	10k				
R15	22k	RV1	4k7 preset		
R16	10k			D1	BZX79 6V8
R17	100k	C1	100p ceramic 63V	D2	1N4148
R18	47k	C2	100n mylar 100V		
R19	150R	C3	100p ceramic 63V	TR1	BC237
R20	150R	C4	22u electrolytic 25V	TR2	BC307
R21	47k	C5	1u electrolytic 63V	TR3	BC307
R22	10k	C6	4n7 mylar 100V		
R23	1k2	C7	1u electrolytic 63V	IC1	TL071
		C8	22u electrolytic 25V	IC2	SL6270
		C9	22u electrolytic 25V	IC3	CA3046

colour codes for each resistor, and identification details for all the other components, so that you do not need to have had any previous experience of construction to end up with a working speech processor.

When you have installed all the parts in the board, examine your handy-work under a good light and resolder any joints that look doubtful. It is a good idea to hold the PCB up to a bright light so that you are looking at the wiring side of the board, the light shining through the board so that the printed tracks are in silhouette. Check for any solder splashes or whiskers that may be shorting out the wiring. If there are any shorts, simply remove them with a hot soldering iron, or if they are small, scrape them away with the

Fig. 3 Printed circuit board.

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