

# CGS10 KEYBOARD/TRANSPOSER (TAT)

## SMD/SMT COMPONENTS

QTY	VALUE	DESCRIPTION	SILKSCREEN LOCATION	PART #	VENDOR	
1	330R	330R 1/4 Watt 1% Metal Film Resistor	330r	660-RK73H2ATTD3300F	Mouser	
2	1K	1K 1/4 Watt 1% Metal Film Resistor	1k	660-RK73H2ATTD1001F	Mouser	
1	1K5	1K5 1/4 Watt 1% Metal Film Resistor	1k5	660-RK73H2ATTD1501F	Mouser	
1	22K	22K 1/4 Watt 1% Metal Film Resistor	22k	660-RK73H2ATTD2202F	Mouser	
1	47K	47K 1/4 Watt 1% Metal Film Resistor	47k	660-RK73H2ATTD4702F	Mouser	
10	100K	100K 1/4 Watt 1% Metal Film Resistor	100k	660-RK73H2ATTD1003F	Mouser	
5	200K	200K 1/4 Watt 1% Metal Film Resistor	200k	660-RK73H2ATTD2003F	Mouser	
2	1M	1M 1/4 Watt 1% Metal Film Resistor	1M	660-RK73H2ATTD1004F	Mouser	
2	TL072	TL072 Dual JFET Op Amp	TL072	595-TL072CDR	Mouser	

## THROUGH-HOLE COMPONENTS

QTY	VALUE	DESCRIPTION	SILKSCREEN LOCATION	PART #	VENDOR	
2	47pF	47pF 5% MLCC Ceramic Capacitor 50V or Greater (Lead Spacing: 5mm)	47pf	810-FA28C0G1H47000	Mouser	
2	100nF (MLCC)	100nF MLCC Ceramic Capacitor 50V or Greater (Lead Spacing: 5mm)	100n	810-FG28X7R1H104KNT0	Mouser	
1	100nF (Polyester Film)	100nF Polyester Film Capacitor 63V or Greater (Lead Spacing: 5mm)	100n polyester	667-ECQ-E2104KB	Mouser	
1	2.2uF (Electrolytic)	2.2uF Electrolytic Capacitor 50V or Greater (Lead Spacing: 2mm)	2u2	647-UST1H2R2MDD	Mouser	<b>NOTE: If using a capacitor taller than this one, mount it on back of PCB -or- bend 90 degrees downward so the front panel will fit</b>
2	10uF (Electrolytic)	10uF Electrolytic Capacitor 50V or Greater (Lead Spacing: 2mm)	10uF	647-UST1H100MDD1TP	Mouser	<b>NOTE: If using a capacitor taller than this one, mount it on back of PCB -or- bend 90 degrees downward so the front panel will fit</b>
2	Ferrite Bead	Ferrite Bead 1A or Greater (Axial Lead)	bead	81-BL01RN1A1D2B	Mouser	
1	BC547A	BC547A NPN Transistor - TO-92 (Kinked Lead)	BC547	512-BC547ATA	Mouser	
2	100K	100K 25-Turn 3296W Cermet Trimmer	SPAN / TUNE 100k trims	3296W-1-104LF -or- A-587	Mouser -or- Tayda	<b>NOTE: These <u>MUST</u> be mounted on back of PCB so the front panel will fit</b>
1	B100K	B100K Linear Potentiometer - ALPHA 9mm Plastic	tune 100k	A-1851	Tayda	
2	3.5mm Jack	PJ-3001F 3.5mm Jack (Thonkiconn)	cv-out / gate-out / Add CV in	A-2563	Tayda	
1	2x5 Pin Power Header	2x5 Pin Keyed Power Header	(outline is on back of the PCB)	710-61201021621	Mouser	<b>NOTE: This <u>MUST</u> be mounted on back of PCB</b>
2	9mm Nylon/Plastic Threaded Standoff	Nylon/Plastic recommended to prevent short-circuits on the PCB	(empty hole x2)		-	
2	Nylon/Plastic Nut	Nylon/Plastic recommended to prevent short-circuits on the PCB (Use plastic washers if using metal nuts)	(empty hole x2)		-	
1	74C922	74C922 - Matrix Keyboard Scanner DIP-18 IC	74C922	<b>Special Order! (I bought mine from gowin_electronic)</b>	<a href="https://www.ebay.com/str/gowinelectronic">https://www.ebay.com/str/gowinelectronic</a>	Also available at much higher prices from Jameco Electronics or Amazon
1	18-pin IC Socket	DIP-18 Machine Tooled IC Socket (Or Use Two Regular DIP Sockets To Make One DIP-18)	74C922	575-199318	Mouser	
16	Switch	Tact Switch 6mm x 6mm x 13mm SPDT (SPNO)	C+ / C# / D+ / D# / G# / E+ / +	BLACK - Tayda: A-5156 BLACK - Mouser: 642-MJTP1230D RED - Mouser: 642-ADTS66RV BROWN - Mouser: 506-FSM14JLH	(Multiple Vendors)	

## NOTES

- 1) When purchasing components from mouser.com, it's usually cost effective to order a quantity of 10 or more for discount pricing
- 2) The two 100K 25-Turn Cermet Trimmers (silkscreened on the PCB as **SPAN** and **TUNE 100k trims**) **MUST** be mounted on back of PCB so the panel will fit
- 3) The 2x5 pin power header **MUST** be mounted on back of PCB so the panel will fit
- 4) Some of the tall through-hole components need to be mounted on the back of the PCB **-or-** bend them 90 degrees downward far enough for the front panel to fit
- 5) As a good practice, it is highly recommended to socket the Matrix Keyboard Scanner IC in the event it needs to be replaced someday. This also prevents accidentally soldering the IC backwards!