

ULTRASONIC FREQUENCY GENERATOR



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1. PRODUCT OVERVIEW:

The predominant element of an ultrasonic system is the ultrasonic generator. It's a source, which provides the electrical energy to the system's ultrasonic transducers. The main function of ultrasonic generator is to receive and convert energy from the power source to the proper frequency, voltage, and amperage as per the application.

In cleaning application, different frequencies and powers deliver varying cleaning intensities. The higher the frequency, the gentler the cleaning action. For varied cleaning applications a generator that produces different frequencies is an ideal cleaning solution.

2. HARDWARE SPECIFICATION:

- Device operating voltage 5V DC
- Multi-frequency generator
- Wide frequency range- 18.8khz- 45.6khz
- Frequency lock/unlock configuration
- Display availability
- Dimension: 72 x 46 x 30 mm
- Weight: 60 gm

3. APPLICATION:

- Ultrasonic cleaner
- Ultrasonic welding machine

4. FREQUENCY SETTING:

4.1 19khz selection

- Frequency range-18.8khz- 26.6khz

T-lock	Q1	Q2	F-lock
x	1	1	Off

4.2 28khz selection

- Frequency range-22khz- 33.6khz

T-lock	Q1	Q2	F-lock
x	1	0	Off

4.3 35khz selection

- Frequency range-30khz- 37.6khz

T-lock	Q1	Q2	F-lock
x	0	1	Off

4.4 40khz selection

- Frequency range-35khz- 45.6khz

T-lock	Q1	Q2	F-lock
x	0	0	Off

(*Note: First unlock frequency while selecting frequency. Can easily select frequency by moving potentiometer)

5. SWITCH FUNCTION:

5.1 Power

5.1.1 P+:

- Press P+ for increasing power

5.1.2 P-:

- Press P- for decreasing power

5.2 Swap

- Press swap button for toggling operation of 500ms interval

5.3 Timer

5.3.1 T+:

- Press T+ for increasing time of timer

5.3.2 T-:

- Press T- for decreasing time of timer

5.4 Stop

- Press stop to discard timer

(*Note: These switches are connected with J5 header)

6. OUTPUT FUNCTION:

6.1 Black:

- It is an output pin for frequency output

6.2 Brown:

- It is an output pin for frequency output

6.3 Red:

- It is an input pin, which accepts interrupts.

6.4 Orange:

- It is a 5V input pin.

6.5 Yellow:

- It is an input pin for feedback.

6.6 Green:

- It is a GND pin.

(*Note: These output pins are connected with J9 header)

7. GENERAL SPECIFICATION:

POWER SUPPLY				
Operating Voltage Range	5V DC			
Frequency band	19khz, 28khz, 35khz, 40khz			
	19khz	28khz	35khz	40khz
T-lock	x	x	x	x
Q1	1	1	0	0
Q2	1	0	1	0
F-lock	On/Off	On/Off	On/Off	On/Off
PHYSICAL DIMENSIONS				
Housing	Plastic			
Dimension	72 x 46 x 30 mm			
Weight	60 gm			
ENVIRONMENTAL				
Storage Temperature	-40°C to +85°C			
Operating Temperature	-20°C to +70°C			
Humidity	5% - 95% (non-condensing)			