

The URD-301A is a variable amplitude self-oscillating resonant driver capable of driving ESI's line of fixed frequency scanners. The scanner is driven with a square wave at its resonant frequency. The amplitude of the scanner oscillation can be varied from 20% to 100% of rated angle. The driver maintains the operating frequency and scan angle of the scanner by closing the loop around the pickup coil on the scanner.

Installation

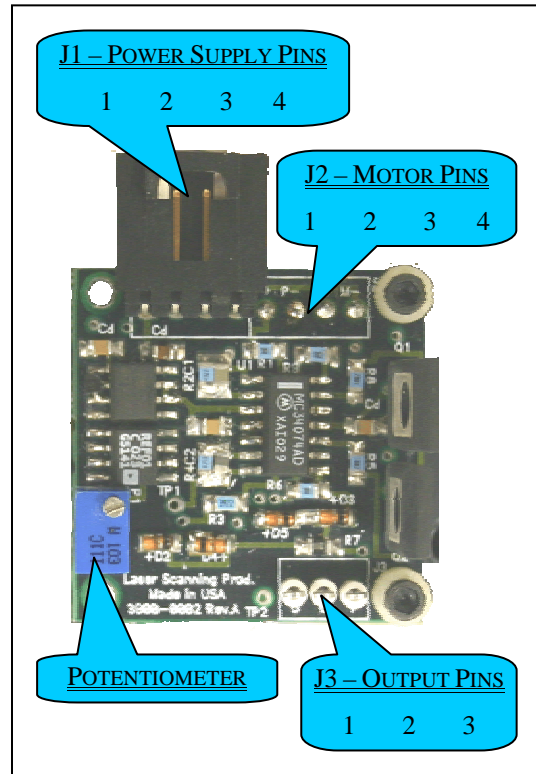
- 1 Mount the scanner firmly on the operating platform.
- 2 Turn power supply off. Connect the power supply cable to J1 on the drive board.
- 3 Turn on power supply.
- 4 Turn potentiometer slowly to adjust amplitude up or down to desired angle.

Power Supply

- 1 ±15 volts capable of sourcing 400 mA maximum current.
- 2 Ripple on the power supply must be less than ±0.25 volts. The drive board has on board ±12 volt regulators.
- 3 Minimize power supply lead length.
- 4 Minimize (<50 millisecond) delay between turn on of the positive and negative side of the supply.

Notes

- 1 The driver is capable of driving the scanner past its rated angle. DO NOT overdrive the scanner. Doing so overstresses the scanner spring thereby reducing its reliability considerable.
- 2 Jumper J1 has separate pins for power ground and signal ground. The driver is shipped from the factory with the two pins shorted. If necessary the power loop can be isolated from the signal loop by disconnecting the shorting wire under the board.
- 3 The bottom right hand mounting hole is plated through. If necessary the user may short J3 pin 2 and the pad provided next to the mounting hole to tie the signal ground of the board to the chassis through this mounting hole.



J1 - Power Supply	
Pin #	Pin Description
1	+15 VDC
2	Signal Ground
3	-15 VDC
4	Power Ground

J2 - Motor		
Pin #	Pin Description	Color Code
1	+Pick Up	Green
2	-Pick Up	White
3	+Motor	Red
4	-Motor	Black

J3 - Output	
Pin #	Pin Description
1	Drive
2	Signal Ground
3	Pick Up

PSD (Optional)		
Pin #	Pin Description	Color Code
1	+15 VDC	Red
2	Ground	Black
3	-15 VDC	White
4	EEPROM	Violet
5	PSD	Brown
6	PSD+	Orange
7	Shield	Green