

AUTOMATIC LAP CONTROLLER

Highlights

- Monitors crystal blank frequencies during lapping
- Automatically terminates lapping once "target frequency" is reached
- Alternately controls 2 lap machines
- Monitoring is unaffected by varying lapping conditions
- 1- 95MHz frequency range
- Up to 20 lapping profiles can be stored for easy setup
- Adapts to most 2-way / 4-way lap and pin lap machines



Additional Features

- ▣ Display of frequency "Spread" useful as a process control monitor
- ▣ Target anticipator signal can be used for slow down, slurry feed control, alarm etc.
- ▣ Safeguards automatically stop lapping process upon loss of monitor signals
- ▣ TTL input/output provides a system interface for automated control
- ▣ Can be used for monitoring piezoelectric materials other than quartz crystal
- ▣ Simple operation, user simply enters target frequency and presses start

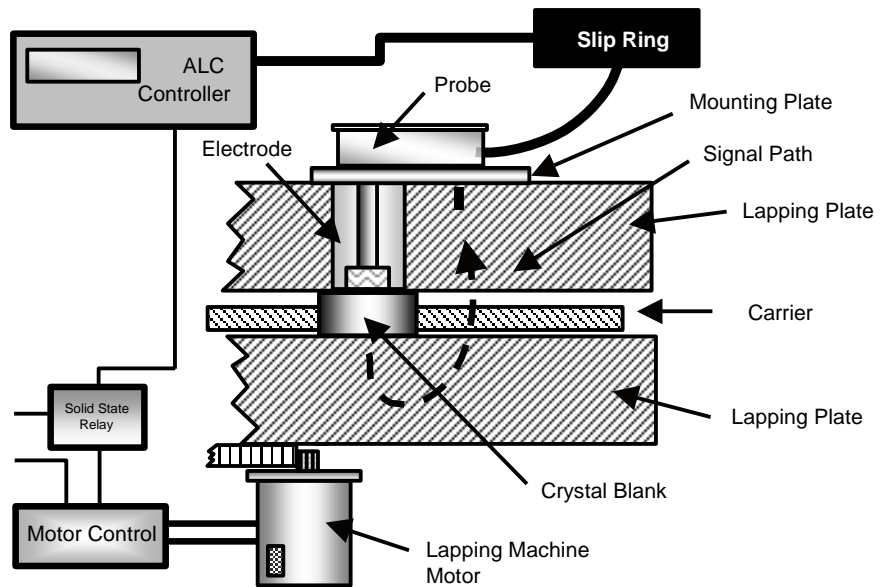
System Description

The Model ALC-2120 is a microprocessor based automatic lap controller. The ALC-2120 system controls the lapping and polishing of piezoelectric materials by monitoring their resonant frequencies during lapping, then terminates the process after the target frequency has been achieved. Up to twenty, user programmable lapping profiles can be stored for quick setup. The ALC-2120 controller injects a sweep frequency signal through an electrode mounted in one lapping plate. As crystals pass the electrode, the ALC-2120 observes the resonant responses and automatically stops the lap at target frequency. The ALC-2120 has evolved from a generation of Transat controllers which have earned a reputation for performance and reliability. This system can alternately control 2 lap machines. When target frequency is reached on one, monitoring automatically switches to the other. The frequency "Spread" display indicates out of process conditions. Automatic signal loss detection deactivates the system to a safe "off" condition. Probe and cabling options provide flexibility for either 2-way or 4-way lapping configurations.

Specifications

Frequency Range.....	1-95MHz
Repeatability.....	+/- .1%
Display type.....	5 digit, Frequency & 3 digit, Spread, LCD display
Lap control.....	1 or 2 laps
Enclosure type.....	NEMA 1
Power requirements.....	100/115/215/230VAC, 15W, 50/60Hz.
Dimensions (LxWxH).....	29cm x 29cm x 12cm
Weight.....	4.5 Kg.

Typical Installation



Ordering Information

ALC-2120 controller.....Part# 00013756
 Refer to the "ALC Accessories" data sheet for ordering and selection criteria of the probes, electrodes, mounting plates and slip rings.