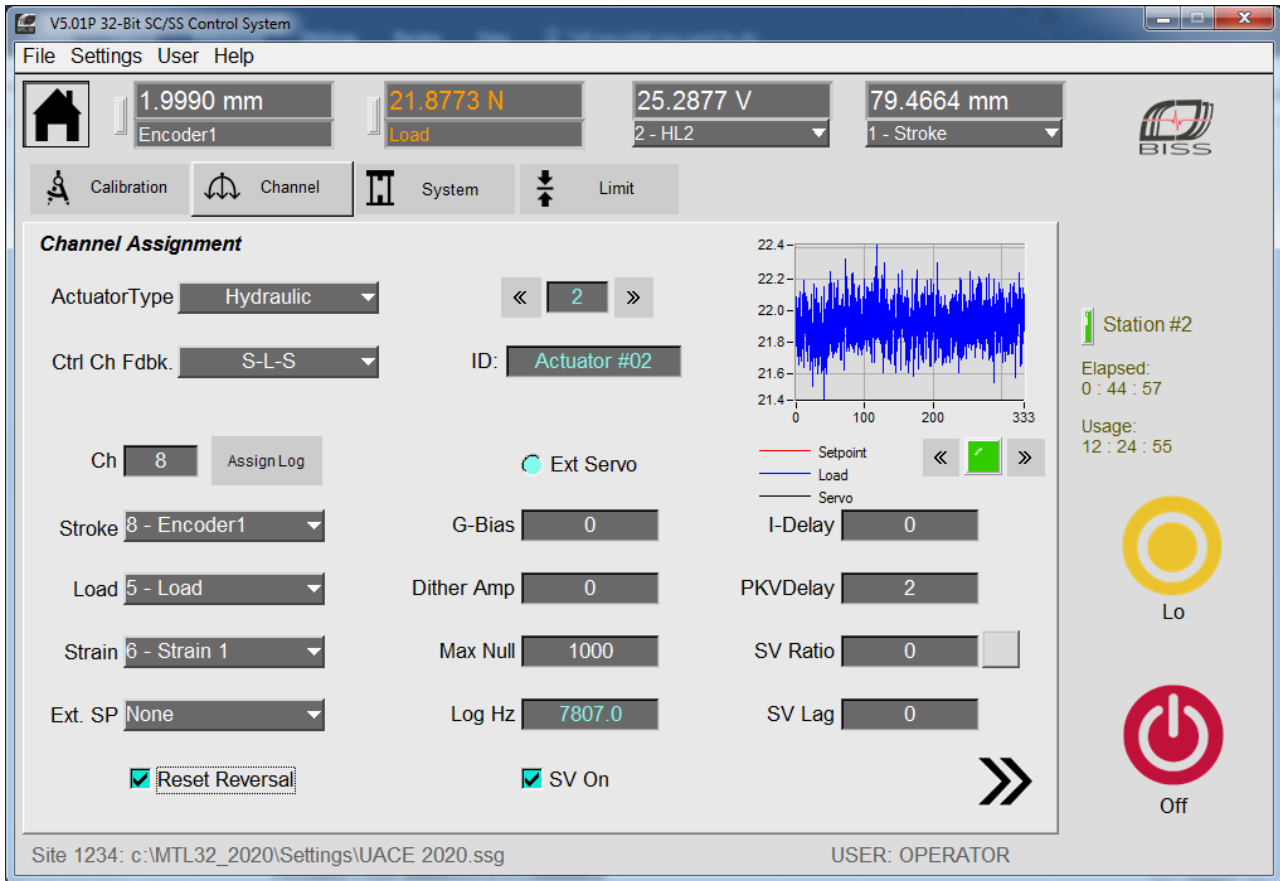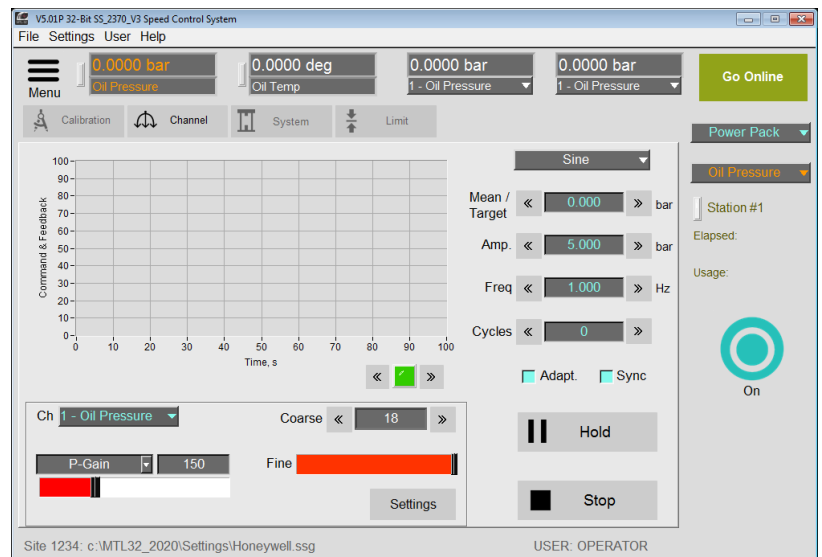# MTL 32 Basic Software

MTL32 basic controller software is a unified platform on which single-station single-actuator, single-station multi-actuator, multi-station single-actuator or multi-station multi-actuator test systems can be run.

The same software is used for any system using 2370 Series 32-bit controllers. It allows multiple custom applications (instances) to get connected through the Global Data Sharing (GDS) concept.

Compatible Applications

- Tension, compression, flexural
- Low cycle, High cycle fatigue
- Fracture mechanics
- Multi actuator structural testing
- Earthquake simulation
- Flight simulation
- Elastomer testing
- Biomédical testing
- Creep, Stress Relaxation
- Stress Rupture Testing

Technical features

- 1-16 Control Channels
- 1-16 Stations
- 1-128 DAQ Channels
- Auto calibration for wide range of transducers: Load, Strain Bridge, Encoders etc
- Two-point calibration for wide range of transducers: LVDT, Hi-level etc
- Up to 24 kHz Loop Update rates. Optionally up to 32kHz
- Up to 24kHz data acquisition rates from all channels
- Master clock for Sampling ADC data is up to 12.5MHz
- Default control modes: Stroke, Load, Strain and other derived channels
- Software filters: Butterworth, Chebyshev, and Elliptic on logged data
- Live display of all control & feedback channels
- Easy downloadable firmware
- Advanced PID algorithm for control channel tuning
- Fast adaptive control for auto gain setting
- Generates standard waveform: sine, ramp, triangle, square
- Supports arbitrary / random waveform generation and spectrum loading through custom application
- Supports trapezoid, haversine & haversquare through Test builder application
- Supports Intellimount feature through Programmable Logic Interface application
- Selectable system units between SI, Metric and English.
- Change waveform parameters frequency, amplitude etc…while online
- Hi \ Lo Limit-Interlocks on all control and feedback channels
- Error Limit-Interlock on each control channel
- Interfacing external servo signals
- Servo-tuning panel with display of set point and feedback signal, command and error signal
- Safety parameters viz., E-Stop, Power failure, Power pack fault / Drive fault

Note: Specification are subject to change without prior notice