SANLAB

SMotion1800

6DOF MOTION SYSTEM SMOTION-1800

1- Description

The SMotion-1800 Motion System is designed for a wide range of simulation, training and motion control applications. Typical application areas are:

- Simulators for cars, trucks, construction machines, aircrafts, helicopters, armed vehicles etc.
- Motion ride for entertainment.
- Suitable for turret test systems.
- Tests for automotive industry(suspension, vibration, harshness tests etc.)

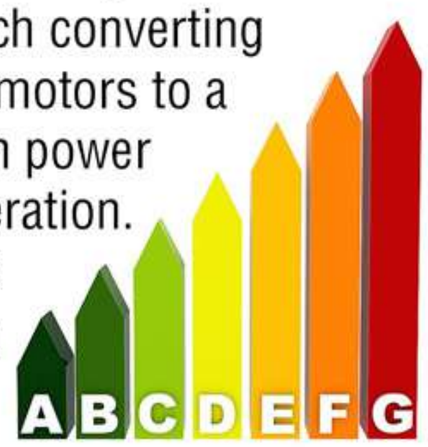
2- System Components

Assembled motion platform including six electromechanical actuators, moving frame, base frame and the necessary attachment interface for ground and simulator cabin fixing.

- Motion control computer with various ethernet based communication interfaces.
- Hard real-time motion control software.
- System electronics with motor drivers and sensorial network.
- Analysis of motion envelope for specific payload geometry desired by the customer.
- Lifetime guaranteed and maintenance free actuators.
- Specially designed backlash free joints, non-back drivable ball bearings.
- Dedicated CPU for motion control with uninterruptable hard real-time structure.
- Robust motion control with accurate disturbance rejection.
- Signal transmission through perfectly shielded industrial cables.
- Emergency switch to remove power from the system and activate brakes.

3- Power Regeneration

Sanlab Motion Systems have Regenerative Power mechanism which converting the kinetic energy of servo motors to a form which can be stored in power network during braking operation. Consumed and regenerated energy can be monitored in GUI instantly.



- Max Power Consumption: 30 kWh

4- User Friendly GUI

- Straight forward and user friendly human-machine interface with multi document interface (MDI) structure.
- Configured to control each axis independently.
- Configurable special effects database including periodic and time-based signals.
- User tunable motion cueing algorithm.
- Position reference signal generation from GUI.
- Motion signal recording loading, filtering and analysing.
- Passive and Active Limitation from GUI and control algorithm.
- Multiple language support.

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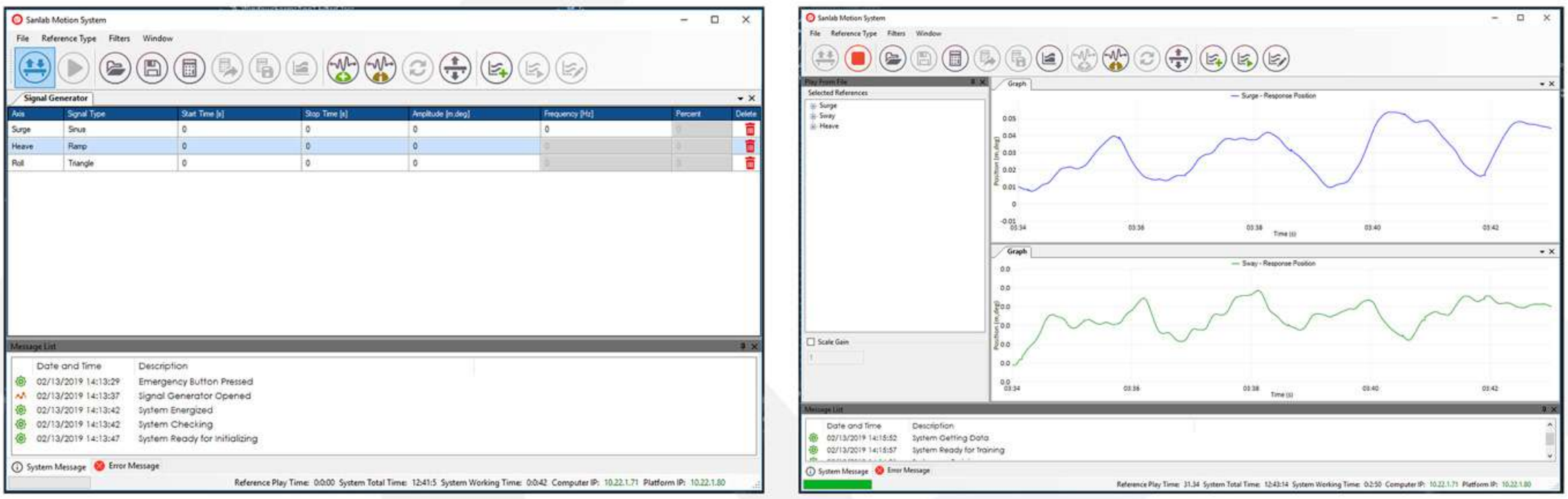

(User Friendly GUI)

6- System Capacity

General Performance	
Payload	1800 kg
Actuator Stroke	600 mm
Settled Height	1.24 m
Neutral Height	1.64 m
Weight	~ 1300 kg
Footprint	2.8 x 3.2 m

Excursions	Positive	Negative
Surge	0.58 m	-0.45m
Sway	0.48 m	-0.48 m
Heave	0.38 m	-0.4 m
Roll	21 deg	-21 deg
Pitch	21 deg	-21 deg
Yaw	25 deg	-25 deg

Velocities	Positive	Negative
Surge	0.7 m/s	0.7 m/s
Sway	0.7 m/s	0.7 m/s
Heave	0.55 m/s	-0.55 m/s
Roll	35 deg/s	-35 deg/s
Pitch	35 deg/s	-35 deg/s
Yaw	40 deg/s	-40 deg/s

Accelerations	Positive	Negative
Surge	6 m/s^2	-6 m/s^2
Sway	6 m/s^2	-6 m/s^2
Heave	9 m/s^2	-9 m/s^2
Roll	300 deg/s^2	-300 deg/s^2
Pitch	300 deg/s^2	-300 deg/s^2
Yaw	400 deg/s^2	-400 deg/s^2

5- Support

- Sanlab offers excellent flexibility, responsiveness and support
- Comprehensive technical support and cost effective maintenance
- Fast dispatching of spare parts to customers from an actively controlled spare part stock
- Onsite support is offered with a fixed daily rate
- Periodic maintenance scheduling traced by Sanlab Simulation support team
- Documentation including “Installation and Operation Manual” and "Troubleshooting"

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