

# DynaLabs

**Model SA-400  
Shaker Amplifier  
Product Manual**

## **Product Support**

If at any time you have questions or problems with the SA-400 Shaker Amplifier, please contact a Dynalabs engineer at:

Phone: +90 312 386 21 89 (9 a.m. to 5 p.m., UTC +3)

e-mail: info@dynamalabs.com.tr

## **Warranty**

Our products are warranted against defective materials and workmanship for one year. Defects arising from user errors are not covered by the warranty.

## **Copyright**

All copyrights of this manual belonging to Dynalabs products are reserved. It cannot be reproduced without written consent.

## **Disclaimer**

Dynalabs Ltd. provides this publication "as is" without warranty of any kind, express or implied, including but not limited to, the implied warranties of merchantability or fitness for a particular purpose. This document is subject to change without notice, and should not be construed as a commitment or representation by Dynalabs Ltd.

This publication may contain inaccuracies or typographical errors. Dynalabs Ltd. will periodically update the material for inclusion in new editions. Changes and improvements to the product described in this manual may be made at any time.

## **Content**

1. Introduction .....	4
2. General Information .....	4
2.1. Unpacking and Inspection .....	4
2.2. System Components .....	4
3. Product Features - Technical Datasheet .....	5
4. Operation and Installation .....	6
4.1. General .....	6
4.2. Amplifier General .....	7
4.3. Amplifier Internal Signal .....	8
4.4. Amplifier External Signal .....	8
4.5. Amplifier Maintenance and Troubleshooting .....	8
5. Declaration of Conformity .....	9

## **1. Introduction**

The SA-400 Class D Power Amplifier is a fully integrated, compact and efficient two-channel audio power conversion solution. It was developed for the control of vibration test systems. It features adjustable gain settings. The integrated sine frequency generator, activated by a switch, offers flexibility in generating signals within a wide frequency range of 0-15 kHz.

## **2. General Information**

### **2.1. Unpacking and Inspection**

Dynalabs products provide adequate protection for undamaged products to be transported. Document the damages that occur indirectly during the transport and contact the customer representative. Check all components of the amplifier. If there is a defect, please contact us.

### **2.2. System Components**

The SA-400 has the following components:

- Amplifier
- Power Cables
- Fuse
- User Manual

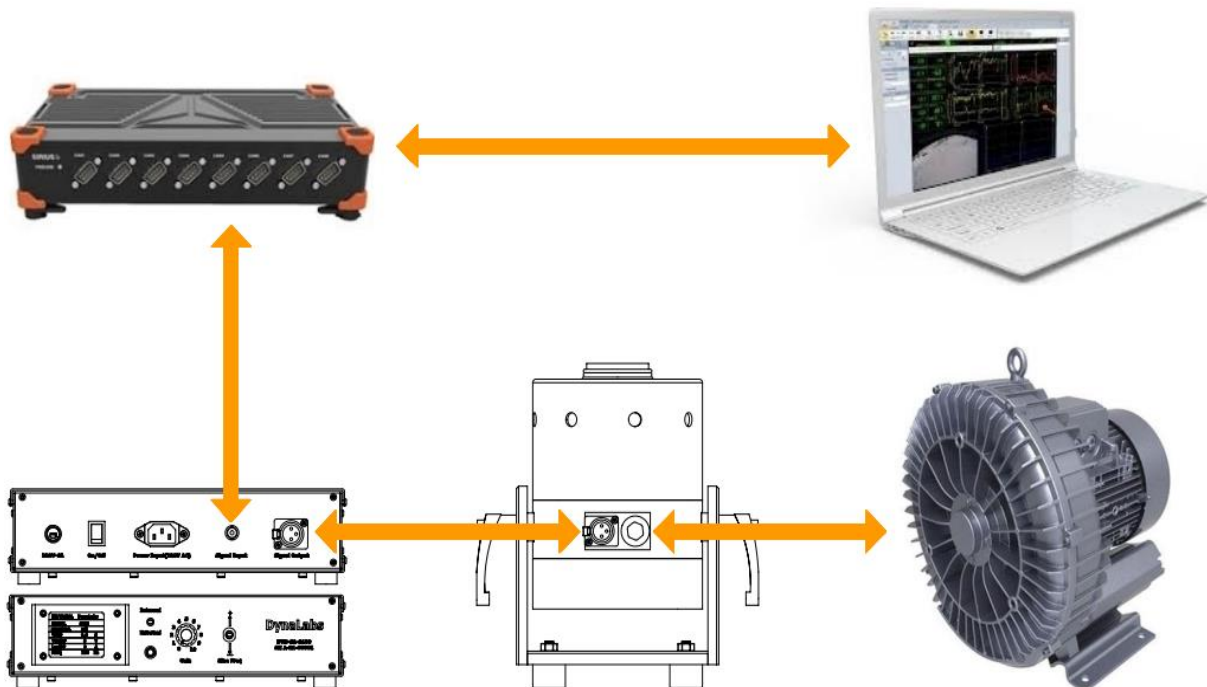
### 3. Product Features - Technical Datasheet

Adjustable gain	Yes
External Signal Input	Yes
Input Protection	Yes
Sine Freq. Generator	Activated by pulling switch up
Sine Frequency Range	0-15 kHz
Operation Voltage	110 V – 220 V
Dimensions W x H x D	337.6 x 85 x 285 mm
Amplifier weight	2.93 kg
External Input Voltage	10 VAC (Peak)
Max Voltage Gain (1 kHz)	32 dB
AC Output	70 V
Frequency response variance	20 Hz – 20 kHz
Current Limiting (Peak output)	30 A

## 4. Operation and Installation

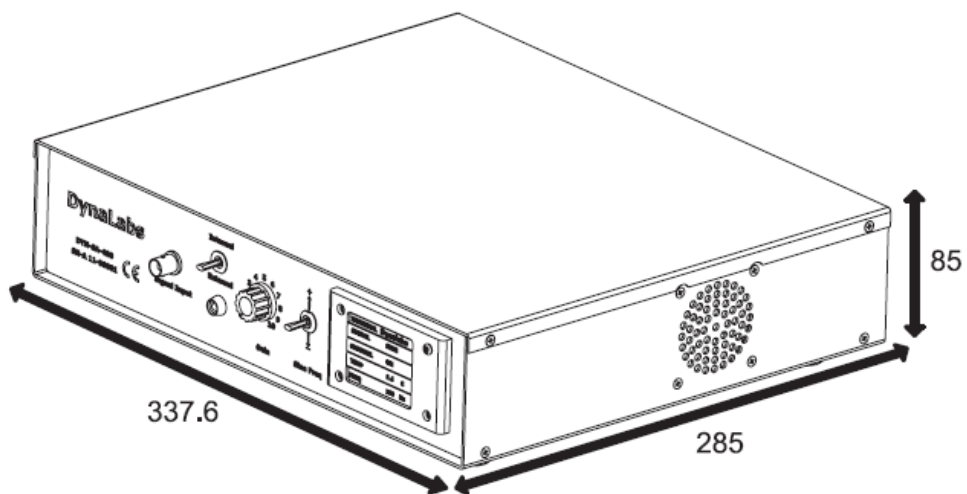
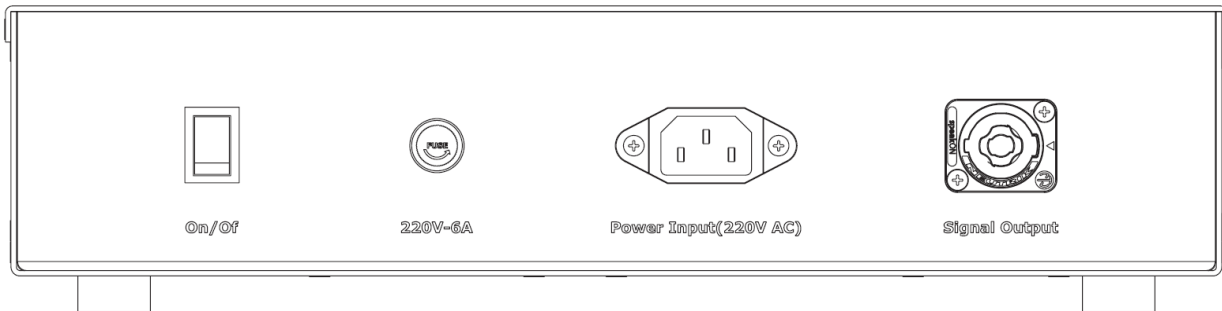
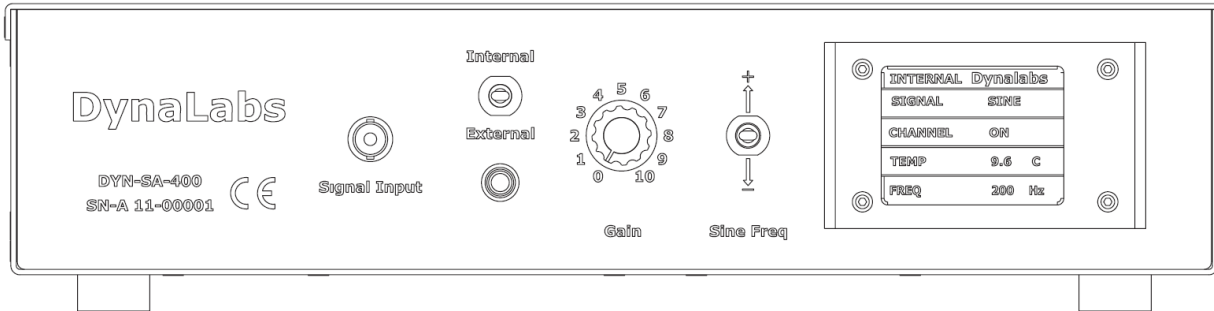
### 4.1. General

Refer to the figure below that shows the shaker connector configuration. Connect the shaker/amplifier cable to the shaker and amplifier. Connect the drive signal cable to the signal generator and connect the power cable of the amplifier. Then turn on the amplifier by pushing the on/off button. To increase gain up, turn the gain knob in clockwise direction. The user must turn off the gain button in order to power down the shaker.



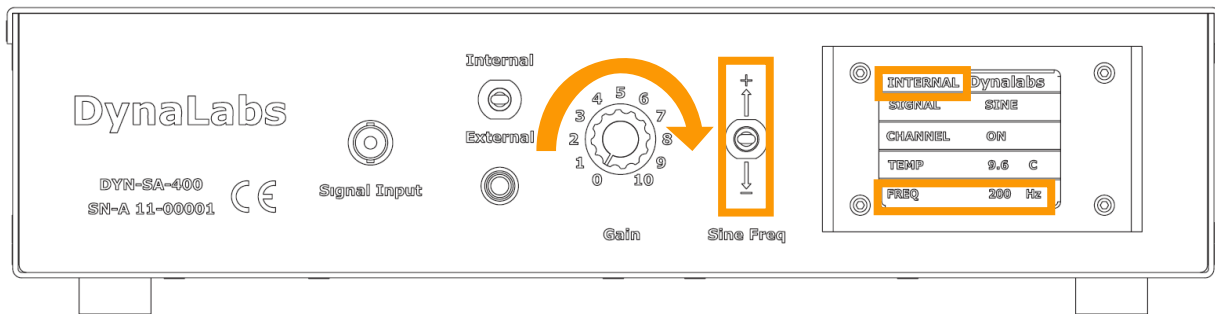
### 4.2. Amplifier General

The dimensional properties of SA-400 are given below. All dimensions are in mm.



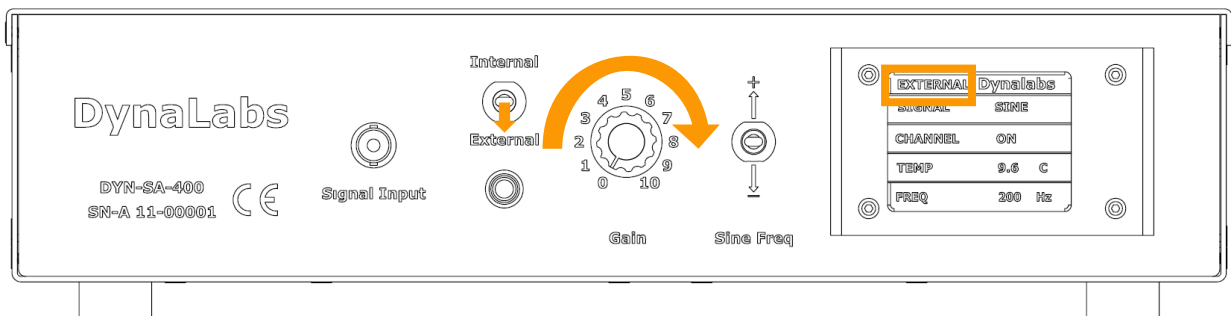
### 4.3. Amplifier Internal Signal

The amplifier can generate sine signal from 1Hz to 15kHz with 1 Hz increments that the user can adjust with the Sine Frequency Generator Switch. Connect DC power source and drive signal to shaker power input. Activated by pulling switch up. Raise or lower the Sine Frequency Generator Switch to the desired Sine frequency. Adjust the Gain of the amplifier by turning the Gain Knob clockwise. The frequency of the generated sine signal will be visible on the LCD Screen.



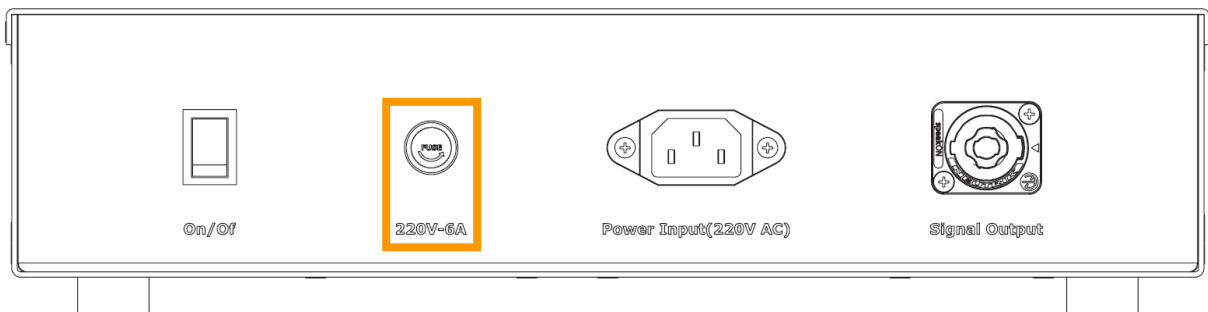
### 4.4. Amplifier External Signal

Start the external signal source. Activated by pulling switch down. Adjust the Gain of the amplifier by turning the Gain Knob clockwise.



### 4.5. Amplifier Maintenance and Troubleshooting

The only user replaceable part is the fuse placed inside the amplifier.





## 5. Declaration of Conformity

**DynaLabs**



*This declaration of conformity is issued under the sole responsibility of the manufacturer. The product(s) are developed, produced and tested according to following EC- directives:*

- 2014/35/EU – Low Voltage Directive (LVD)
- 2006/42/EU – Machinery Safety Directive
- 2015/863/EU – RoHS Directive

*Applied standards:*

- EN 61010-1:2010
- EN ISO 12100:2010
- MIL-STD-810-H-2019 (Test Methods: 501.7 - High Temperature, 502.7 - Low Temperature, 514.8 - Vibration, 516.8 – Shock)

*DYNALABS MÜHENDİSLİK SANAYİ TİCARET LİMİTED ŞİRKETİ declares that above mentioned products meet all the requirements of the above mentioned standards and regulations.*

---

Canan Karadeniz, General Manager  
Ankara, 15.07.2021