

# Alternate Soundings

## Dynax 2

"Dynamic Sound shaper"



**Thank you for purchasing the Al.So Dynax 2**  
**The following is an overview of its functions and a guide for use.**

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All repairs are made in Factory, packaging, shipment and insurances in charge of the owner.

Al.So may exchange new or rebuilt parts for defective parts. Please contact us for an RMA number prior to any shipment. No product will be accepted for warranty service without a pre-issued RMA number.

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#### **Al.So's ROHS and CE Compliance**

With respect to Article 2.1 and 3 of the RoHS Directive, the Dynax falls under category 9.

Equipments in this category are completely exempt from requirements of the RoHS Directive. Nevertheless, the Dynax is compliant with the RoHS Directive. The unit is compliant to CE rules. Power supply is compliant to CEI/EN 61558-2-6

#### **IMPORTANT**

**Operating the unit before the unit is totally warm may cause the Dynax not to work at its full potential. Plug the unit in well ahead of the time you will need it. One hour is a good start. Warming of the meter section can take one hour. You may have to use a screwdriver to perform a more accurate metering calibration after warming time. The temperature rise is no cause for concern, but allowing for some airflow is always a benefit from a long-term reliability standpoint.**

**It is strongly recommended that the Dynax be left powered-on for fixed installations. Front panel legend markings reflect approximate values, which may vary from unit to unit due to components tolerances, environmental conditions, normal ageing, etc.**

**THIS UNIT CONTAINS NO USER-SERVICEABLE PARTS.**

**Warning : risk of electric shock if cover is removed.**

**Opening the lid void your warranty.**

**In the event of unit operational failure, contact Al.So service and technical support or your local authorized dealer. Please be prepared to describe in detail the exact problem that the unit is experiencing, including : failure conditions, system signal flow, exact failure manifestation, events and actions leading to the failure, etc. Be able to quickly provide contact information and the unit's serial number.**

**It is highly recommended that customers do not attempt to troubleshoot their own units or have them serviced at unauthorized repair centers. Opening the case of the unit will void the Al.So warranty. These measures also act to protect Al.So's intellectual property so that Al.So may continue to design high-end professional audio peripherals.**

**In any case, always refer to this manual or contact your local authorized dealer. The dealers list is available at: [www.alsoaudio.com](http://www.alsoaudio.com)**

This Analog Dynamic Processor is manufactured in France, Europe.

This original machine has been designed by Olivier Bolling in July 2003 and the first mono version machines produced in June 2006.

## PRESENTATION

Dynax 2 is a dynamic processor designed for mixing, tracking and audio mastering.

The unit use a very low distortion circuit allowing to act directly on the signal shape without adding “built in/native” distortion.

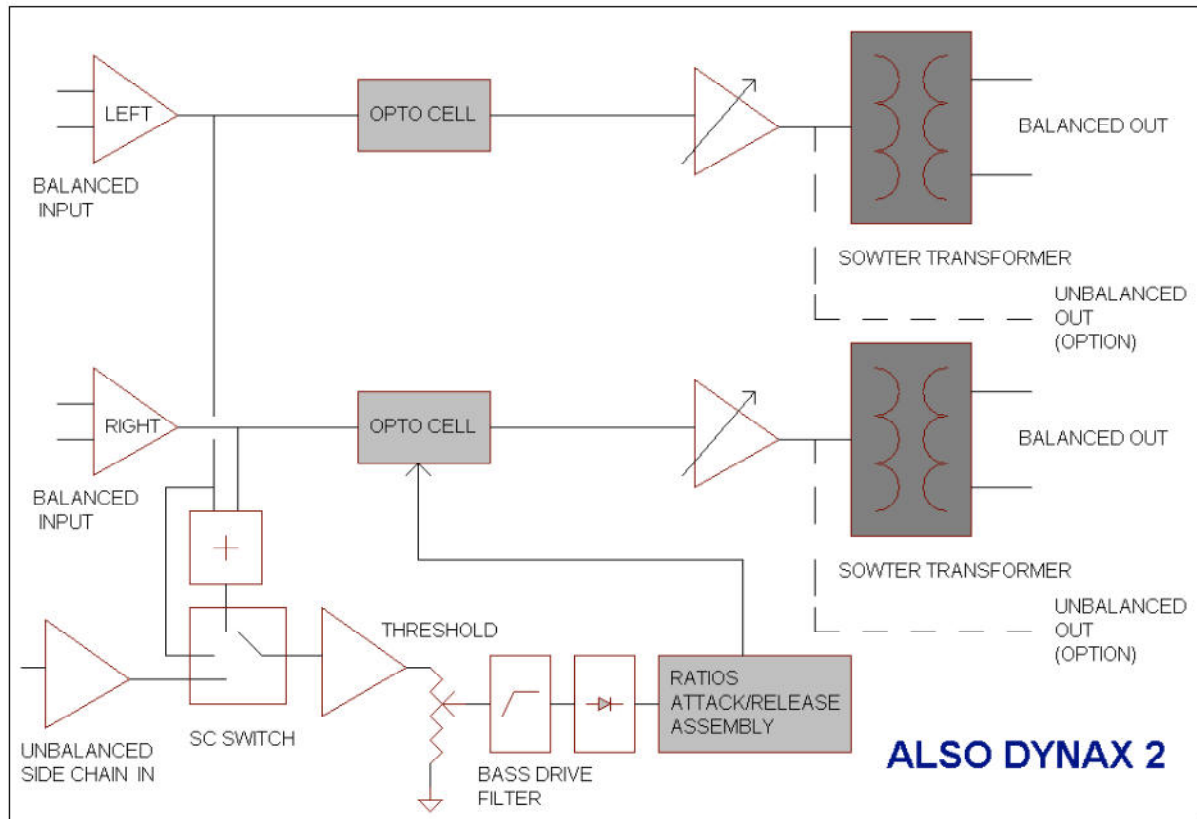
The Dynax2 aims at both compressing and limiting musical material from the most transparent to the most harsh and powerful way.

The Dynax signal flow only uses high end selected components including the followings :

- DC servo input stages
- Optical gain reduction unit
- Hi end audio output transformers from SOWTER company ( UK).

The unit also have fully balanced inputs and outputs. *Some units have no output transformers and are electronically balanced (option).*

BYPASS is a real hardware Bypass (relaying input to output ), allowing you to compare the original to the processed signal.



## Supplies

The unit must always be grounded .This is an important point regarding safety !

Unit could operate on 115VAC or 230 VAC. Please, always verify the 110/230V switch position on rear panel! If necessary, please contact an authorized technician in order to be sure of this setting before connecting to mains.

Don’ t panic anyway, generally if the unit is set at 230V on 110V mains, it won’ t get no damaged. And if set at +110V with 230V mains, normally the fuse makes its job!

Fuses are 200mA Slow Blow for 230V operation and could be kept for 110 V.

## Connections

The unit have fully balanced inputs and outputs (Pin 2 = hot).

External side chain input is unbalanced on a 6.35” Jack connector.

Input Left could be used as mono input in case of processing mono signal (in this case, use SC control Left or Ext.).



## OVERVIEW

AlSo Dynax 2 is an optical compressor / limiter with mono commands. Both L/R channels are controlled by unique controls. This simplifies use and promotes signal processing precision. In consequence, the final stereo image obtained will be much more accurate.

## CONSTRUCTION QUALITY

Dynax 2 comes with a steel chassis (Epoxy painting) with an brushed anodized Aluminum front panel of 10mm thick to guarantee strength and mechanical reliability in long term.

Dynax 2 like all AlSo products is extremely robust and entirely hand made in France with high quality components. Our products are made with reliability and low maintenance in mind.

The front panel inscriptions are high quality screen printed offering long term resistance guarantee.



## FRONT PANEL CONTROLS

The Dynax 2 front panel commands are studied to be very intuitive and quickly taken in hand.

**POWER** Powers up the device from the front panel. Dynax 2 operates and is compatible with 230V/50Hz or 110V/60Hz according to the voltage selector on the rear panel.

**BYPASS** This function is a real hardware bypass. When in Bypass mode (upper position), the meter is dimmed shows gain reduction or input levels. This let you prepare a "off- line" gain reduction. When the meter is fully lighted, the sound is processed. Please, note that if DYNAX 2 is not powered, the machine is in Bypass mode.

**VU meter** Dynax 2's back-lighted Vu meter has an original and proprietary design (10mm thick Plexiglas). It mirrors with accuracy the signal level (especially the gain reduction that it displays visually). Its specific design offers various information:



- **When Bypassed** The VU has a dimmed blue color and displays the L/R channel input level depending the VU switch. In Bypass mode the original signal can be monitored and be quickly compared to the processed signal via the Bypass switch.
- **When Active** The "VU" meter has a bright blue color and displays the L/R channel output level or gain reduction depending the "VU" switch.
- **Lit in Red** The VU goes red when peak occurs. This is very handy and unique to the Dynax 2 as the red meter informs immediately any peak even when the unit is placed at distance.

**GR** Displays the gain reduction level in both active & Bypass mode. Over modulation cleverly turns the blue light of the meter to a strong red light. Turning to Red light allows you to see over levels at output stage even when you're metering GR.

**VU Calibration** is made through 2 small holes below the VU switch with a small flat screwdriver. The left one is dedicated to the calibration in COMPRESSION, LIMITER & BRICHWALL modes and the right one in ANTIDYNA mode.

At power up, the VU needle is not in his right position. This is normal behavior, the unit shall warm. The needle should be positioned on the orange dot when the unit is warm.

If not, you could perform meter "0" position. Place the machine in your rack and allow 3 hours warming.

**Limiting position (RATIO):** no signal, VU selector on GR, adjust the left screw you can find left above the GR/VU selector. Position at +1dB.

**ANTIDYNA position (RATIO):** no signal, VU selector on GR, adjust the right screw you can find left above the GR/VU selector. Position at +1dB.





**Side Chain (SC)** This 3 position switch let select which signal will drive the compression:

- LEFT : the Left input signal will drive the compression for both channels
- STEREO : a real mono summing (from the inputs) of both L & R drives the compression. The perfect stereo mode.
- Ext : the compression is driven by the rear panel unbalanced mono jack input. Perfect for De-essing, De-popping ...etc.



**Bass drive** The bass drive setting consists in a high-pass filter into the side-chain path that gives the user the power to act on the side-chain signal command only. No filtering on audio path. With this command, it is possible for example, to avoid the low bass string from a bass guitar to always trigger compression! 300, 200 and 100 are the HPF amount that drives the compression. Full is for full audio bandwidth (filtering is deactivated). Note: the filter does not alter the signal other than for compression.



**ATTACK** Sets the attack time of the compression. 1 being the shortest attack time.

**RELEASE** Sets the release time of the compression. 1 being the shortest.



**RATIOS** 4 ratios are available:

COMPRESSOR about 4:1

LIMITER: about 10 :1

BRICKWALL: Infinite:1

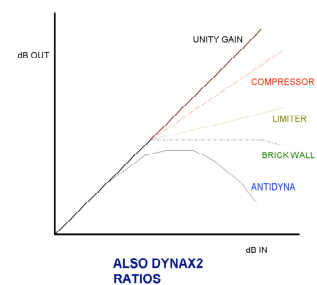
ANTIDYNA: a proprietary and creative ratio, offering compression, limiting and over-compression. With short ATTACK/RELEASE settings, the high and low level signals become low and the mid level signals become the loudest. Try it for parallel compression of Drums, you'll love it!

The below diagram show the compression curves of different RATIOS with fastest Attack & Release settings. Dynax 2 is a progressive knee dynamic processor.



### Some basics settings

- For Mastering: in Compressor or Limiter mode, set the Bass Drive at 200 Hz, set the Attack to: 5, set the Release to: 6, turn the Compression pot in order to achieve 2 or 3 dB of gain reduction.
- For Electric bass: Select BRICKWALL mode, Bass drive set to 200 or 300 Hz, Attack: 4, Release: 2 or 7
- For Snare: LIMITER mode, Bass drive set to Full, ATTACK set to 3; RELEASE set to 5, Compression in order to achieve 3 to 10 dB.
- Snare ( fast mode) BRICKWALL mode, Bass drive: Full, ATTACK set to 300 Hz, RELEASE set to 11. Perform at least a 12 dB of gain reduction (and try harder) try carefully different ATTACK & RELEASE settings.
- ANTIDYNA: start with compression at maximum, ATTACK & RELEASE set to fastest. Change Compression level in order to get a good pumping effect. Try other time constants settings.  
Note ANTIDYNA can be performed only if you provide it with high level signals.



### Warning !

Because of the over-compression curve in the ANTIDYNA mode, we had to compensate the loss of level (up to about 40dB of gain reduction) by a special setting that applies a gain of +10dB at the output stage. This permits you to compare different ratios while processing and achieve high output levels.

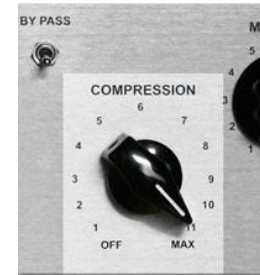
**Remember this particular point and take care about your ears and monitors !**



**BYPASS:** With this switch, the original non processed signal can be quickly compared to the processed one (TRUE BYPASS).



**COMPRESSION** Sets the compression efficiency. The more you turn it clockwise, the more you compress and decrease the Threshold.



**MAKE UP** Sets both L/R channels output gain after processing

**Warning ! The output gain stage is based on a microphone preamplifier design, using selected Op-Amp and transformer. Meaning you have a lot of gain. Unity is performed at around 3 when in Limiter mode. You can set both L and R output levels.**



**ST BAL** Fine calibration (with a flat screwdriver) of the L/R channels output level.

**SENSITIVITY** The Dynax 2 rear panel hosts a sensitivity switch. The standard position is engaged. If you need less sensitivity (i.e. for high level mastering), this switch should be at "Off" position (disengaged).

#### TECHNICAL SPECIFICATIONS

Sometimes (we can say usually), there is a lot of difference between what manufacturers affirm and what we can measure at our labs. In addition, we claim that we are creating musical instruments and that the relationship between measurement and listening is not so crystal clear! So, the only way to know if a gear suits your taste and does the job you expect is to test it by yourself.

For sure DYNAX technical specifications are the good ones, regarding distortion, noise, dynamic range and bandwidth!

- Stereo Optical Compressor with 4 compression ratios including the proprietary ANTIDYNA
- Extremely large time constant ranges
- Bass Drive or compression Side-chain filters 100Hz, 200Hz & 300Hz Side-chain Input
- Control through an external input signal, left channel signal or the stereo signal (sum of I/R channels)
- Hardware Bypass by relay, let compare the original and the processed signal in an absolute way
- Bandwidth: 10Hz / 30 kHz at +/- 0,1dB
- Bandwidth 10Hz / 65 kHz at +/- 1 dB
- Bandwidth with a gain reduction of 10dB: 40Hz / 40 kHz at +/- 1dB
- Harmonic distortion of 3rd order at 1 kHz, +4dBu: 0,005%
- Harmonic distortion of 3rd order at 1 kHz, +4dBu, with a gain reduction of 10dB 0,02% (time constants median settings)
- 100% hand built with high-end selected components
- Designed by Olivier Bolling
- Compatible with 110/230 Volts 50/60Hz.

**Note: if the unit is shut down or disconnected from the main power, the signal passes then by the Bypass relays. A very secure characteristic while live recording situations.**

**Use your ears!**

**Music is the only way.**