

for music lovers

LINEA TEMPO **ANDANTE**



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First of all, we would like to congratulate with you for your choice of our Sinfoni Tempo amplifier. If you are reading this short introduction instead of madly flick across the pages of this handbook looking for features like the weighted noise or the T.I.M., then maybe we have hit the target to unveil a little bit of the philosophy of our laboratories. In fact, you will not find these figures among the characteristics of our products mainly because it is our firm conviction that it is impossible to value such a product only on the basis of plain numbers. It would be like guessing the taste of a dish reading just the list of its ingredients.

Only after a suitable "tasting" you will realize the striking sound properties of our products, and you will appreciate their transparency, their musicality, their depth and all other aspects that probably, as a Sinfoni purchaser, you already know. Try to describe it with cold technical parameters, if you can!

In order to get the utmost from our products, we recommend you to use only high-quality components and cables: with a few adjustment every Sinfoni amplifier will give you unexpected emotions and sensations. We kindly ask you to follow the indications mentioned in this handbook, and we wish you to enjoy Music at best.

Tempo

PREFACE



This amplifier has been developed following the rules of the high current amplifiers. These types of amplifiers are projected to work on reduced and multiple-load impedances. They would seem to have a higher cost if compared with traditional (High Voltage) amplifiers, but it's important to not be misled by the performance as declared at 4Ω . These amplifiers can easily double the output power, both, in stereo and in bridged mode, by halving the impedance load (look at picture 1 for a visual illustration). Ohm's Law, the most known and probably the most important electrical formula says that the current is in inverse relation to the resistance load, so it's easy to imagine how much current must go through the amplifying stage of the unit.

This amplifier follows the philosophy of the Sinfoni sound. To be a high current amplifier means to have a lot of energy resources to drive very difficult loads and everyone knows that the most energy-consuming systems are that ones that make an intense use of midbass and sub frequencies. Therefore we can say that this amplifier can be very useful when working with such systems. This doesn't mean that it only can be used for subwoofers, as shown on the pages of this handbook, in fact this amplifier can be used to drive any kind of system. To facilitate its use with subwoofers this amplifier has among other functionalities phase-shifter for the sub frequency.

It's impossible for the human ear to be aware of frequencies below 20Hz, but despite of this fact amplifiers usually reproduce these very low frequencies, consuming so amounts of precious energy. By simply activating the subsonic filter feature, the amplifier will exclude all frequencies below 25Hz. For that purpose a high pass, 18dB/octave at 25 Hz, filter is used. This feature is also helpful when using smaller woofers that are not able to reproduce lower frequencies.

Very often the placement of a Subwoofer inside a car compartment can be a very complicated issue. The Phase Shifting feature offers a rapid and simple solution to this annoying problem. Switching on the Phase function allows to shift continuously from 0 to 180° the phase of the subwoofer. This means that you can move the wave from the rear to the front of the car by simply using the proper potentiometer on the front panel.

FEATURES SUBSONIC + PHASE SHIFTING



This amplifier is equipped with a built-in Low Pass Cross-Over, very easy to switch on and off by pushing the button on the front panel. Once the cross-over is activated, the cut-off frequency can be regulated, from 40 to 150 Hz, through the proper potentiometer. Multi-amplified system installations are now so much easier to implement.

FEATURES BUILT IN CROSSOVER



In order to allow a simultaneous Stereo-Mono connection, the most car amplifiers make use of the Trimode capability, which offers the possibility to connect a Subwoofer, in bridged mode, to a stereo system. In order to accomplish this, the Right input channel is inversed by 180°. By switching Off the Trimode modus, the rotation of the Right input does not happen, therefore the left and right channels are now in phase with each other, rather than being 180° out of phase with each other.

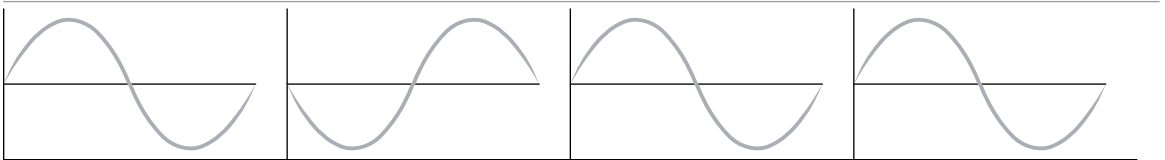
Of course when in Trimode Off the polarity of the Right output connector is inverted. Here follows a graphical illustration of the difference between the two different Trimode statuses. Please notice also how the polarity of the speaker connector changes when Trimode is Off.

FEATURES TRIMODE



SPEAKER OUTPUT POLARITY IN **TRIMODE ON** MODUS

SPEAKER OUTPUT POLARITY IN **TRIMODE OFF** MODUS



LEFT CHANNEL WAVE

RIGHT CHANNEL WAVE ROTATE BY 180°

LEFT CHANNEL WAVE

RIGHT CHANNEL WAVE NOT ROTATE

INPUT SIGNAL WAVE

The most common reason to use a monophonic input is to use the amplifier in a bridged configuration, but as you will discover on this handbook, not the only one. Thanks to this feature, instead of using a Y cable, you can connect only the L input to your source. This will allow you the advantage to have a single input for both channels, since when using a Y cable it's not easy to trim each input level to the same point. A mono input can also be very useful when working with bi-wiring, as example for passive multi-amplification configurations.

FEATURES MONO







The Sinfoni car amplifiers are designed to work with a 12V DC power supply, however the voltage can range from between 11V and 14.5V. Power Supply cables must be of a suitable gauge, keeping in mind that the negative one must be connected to the ground in the nearest point of the car chassis, while the positive one must come directly from the battery. If the distance from the battery to the apparatus is quite long, then it will be necessary to use thicker cables, in order to avoid any performance loss: we suggest your installer to use at least good quality AWG8 Oxygen Free Copper cables. The REM input (remote) must be connected to the remote output of the source, which must provide at least a 60mA current, for every installed Sinfoni unit.

INSTALLATION POWER SUPPLY



GROUND - CAR CHASSIS

SOURCE REMOTE

BATTERY POSITIVE

In the following pages you can find several configuration examples to show possible installations using this amplifier. These are only a few combinations to explain the features of this amplifier and to better illustrate the use of functions like TRIMODE and MONO. Please notice the wiring of the speakers in the different TRIMODE statuses, it is very important to understand the technical differences between TRIMODE ON and TRIMODE OFF, since a wrong wiring can affect the quality of the installation. Only the creativity and the ability of the installer can tell what system is the best solution for your needs, a lot depends on the musical result you want to achieve, and on the acoustic characteristics of your specific vehicle. Therefore we suggest to always cooperate with professional and trusted installers. Some features can work in conjunction with others and some features exclude others; please have a look at the diagram below, taking as starting point the x-over status you can see features that are available and the possible combinations of TRIMODE and MONO.

INSTALLATION ADVICE

MONO BRIDGED	ON	ON	XOVER ON	AVAILABLE	AVAILABLE
	OFF	ON			
MONO DOUBLE COIL	ON	OFF			
	OFF	OFF			
SYSTEM	MONO	TRIMODE		SUBSONIC	PHASE
BRIDGED STEREO MULTI AMPLIFIER	ON	ON	XOVER OFF	AVAILABLE	NOT AVAILABLE
SIMULTANEOUS STEREO-MONO	OFF	ON			
STEREO MULTI AMPLIFIER	ON	OFF			
STEREO SINGLE AMPLIFIER	OFF	OFF			

STEREO MONO SYSTEM SINGLE AMPLIFIER PASSIVE XOVER



SPEAKER OUTPUT POLARITY (+ L -) (- R +) | TRIMODE SWITCH ON | X-OVER SWITCH OFF | MONO SWITCH OFF

BRIDGED STEREO SYSTEM MULTI AMPLIFIER PASSIVE XOVER



SPEAKER OUTPUT POLARITY (+ L -) (- R +) | TRIMODE SWITCH ON | X-OVER SWITCH OFF | MONO SWITCH ON

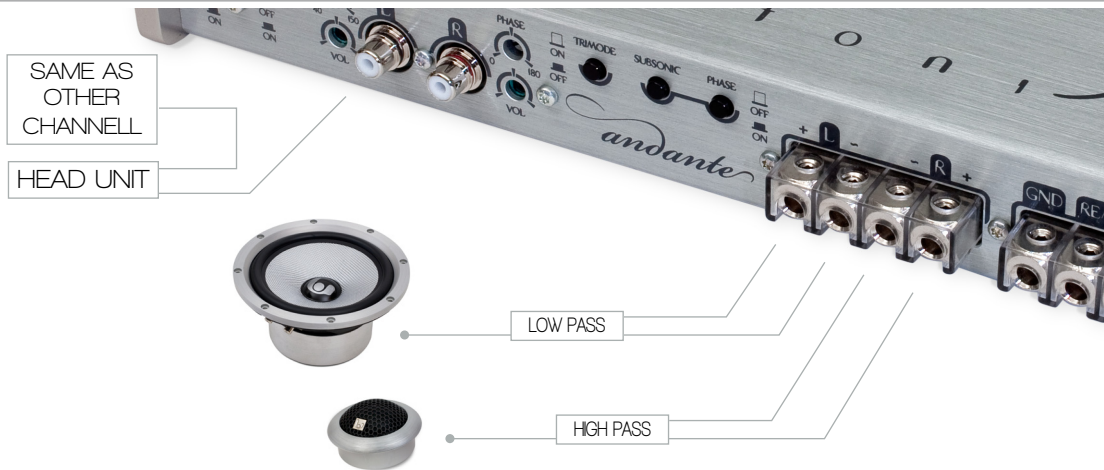
STEREO SYSTEM SINGLE AMPLIFIER



ATTENTION PLEASE: RIGHT SPEAKER OUTPUT POLARITY IS INVERTED

SPEAKER OUTPUT POLARITY (+ L -) (+ R -) | TRIMODE SWITCH OFF | X-OVER SWITCH OFF | MONO SWITCH OFF

BRIDGED STEREO SYSTEM MULTI AMPLIFIER PASSIVE XOVER



ATTENTION PLEASE: RIGHT SPEAKER OUTPUT POLARITY IS INVERTED

SPEAKER OUTPUT POLARITY (+ L -) (+ R -) | TRIMODE SWITCH OFF | X-OVER SWITCH OFF | MONO SWITCH ON

MONO BRIDGED SYSTEM



SPEAKER OUTPUT POLARITY (+ L -) (- R +) | TRIMODE SWITCH ON | X-OVER SWITCH ON | MONO SWITCH ON

MONO DOUBLE COIL SYSTEM

HEAD UNIT



ATTENTION PLEASE: RIGHT SPEAKER OUTPUT POLARITY IS INVERTED

SPEAKER OUTPUT POLARITY (+ L -) (+ R -) | TRIMODE SWITCH OFF | X-OVER SWITCH ON | MONO SWITCH ON

The input load is $48\text{K}\Omega$, and its sensitivity is adjustable from 400mV peak - peak (150mV RMS) to 8V peak - peak (2.8V RMS); therefore it perfectly matches any source, including those that provide a 4V pre out (1.4V RMS). The regulation is achieved rotating the input R and L potentiometers with a common screwdriver. Remember that when in MONO mode you only need to connect the L input to the source.

INSTALLATION LIGHTS AND PROTECTIONS

The LED nearby the power connector shows the presence of Remote signal. The thermal protection prevents the amplifier from exceeding 85°C, in case of over-heating normal operations may continue only after a temperature decrease of 10°C.

Internally, just behind the LED, you can find a fuse (40A) that can be easily reached disassembling just the amplifier's end-cap. In any case, its break is to be considered as an unlikely event, due only to a serious failure, possibly caused by an improper use of the amplifier, or a power surge during connection to the power source.

POWER SUPPLY	9-15 VCC
STANDBY CURRENT	< 1,2 A
INPUT SENSITIVITY	0,4 - 8 V
INPUT IMPEDANCE	48 K Ω
OUTPUT POWER:	
4 Ω @ 12	95 W X2
2 Ω @ 12	165 W X2
1 Ω @ 12	245 W X2
MONO 4 Ω @ 12	295 W X1
MONO 2 Ω @ 12	455 W X1
FREQUENCY RESPONSE	+/- 1dB FROM 10 HZ TO 30 KHZ
SIGNAL / NOISE RATIO	> 90 dB
DIMENSIONS (W/H/D)	315 X 40 X 187 (MM)
WEIGHT	2,8 KG

OPTIONS:

BUILT IN ACTIVE CROSSOVER MODULE CONTINUOUSLY ADJUSTABLE FROM 40 HZ TO 150 HZ LOW PASS 24 dB X OCTAVE MONO
SUBSONIC STEREO HIGH PASS FILTER 18 dB/OCTAVE 25 HZ | TRIMODE OFF FUNCTION
PHASE SHIFTER CONTINUOUSLY FROM 0° TO 180°

CE

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