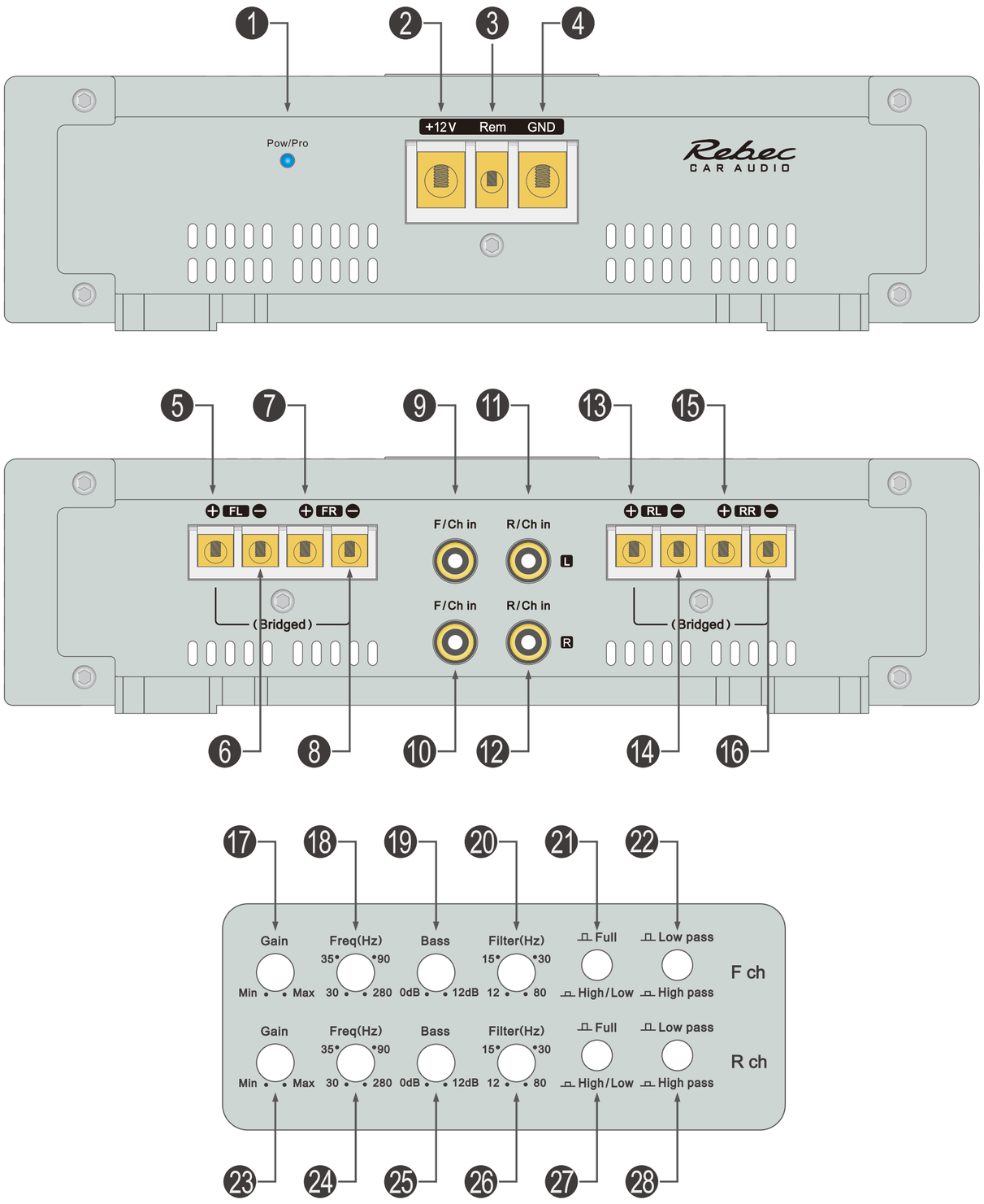
ES4 Technical Parameters

Specifications	
Number of Channels	4CH
Working Mode	AB
Power at 13.8 Volt （@1KHz）	Power
Front / Power Out,4ohm	2CH X 150 watts
Rear / Power Out,4ohm	2CH X 150 watts
Mono.Power Out, 4ohm (Rear)	1 x 560 watts (Bridged)
Signal to Noise Ratio,A-Weighted	>90dB (Bass Boost:0dB)
THD+N@1W	<0.08%
Damping Factor	>170
Separation	>93dB
Frequency Response	10Hz-35KHz,±0.5dB
Input Impedance,Low level-Front	>10Kohm
Input Impedance,Low level-Rear	>10Kohm
Input Sensitivity	
Front Channel (RCA)	300mv-∞
Rear Channel (RCA)	300mv-∞
Pre amp Configuration on Front Channel:	
Filter Lowpass	12Hz-80Hz
Filter Highpass	30Hz-280Hz
Grand bass adjustable gain@ 40Hz	No
Grand bass adjustable gain@ 55Hz	0dB — +12dB
Pre amp Configuration on Rear Channel:	
Filter Lowpass	12Hz-80Hz
Filter Bandpass	No
Filter Highpass	30Hz-280Hz
Filter Highpass (SUB)	No
Grand bass adjustable gain@ 55Hz	0dB — +12dB
Phase shift 0-180 degrees contiously	No
Power Consumption	
Idle Current	2.0A
Maximum Current	120A
Fuse	30A x 4
Weight	7.5Kg
Dimensions(mm)	438 L X 240 W X 63 H

Description: The parameters of the outer packing box are the lower reference values. It is suggested that the parameters of the manual be used as reference values.

Functional description of front and rear panel of ES4

ES4 Front & Rear Panel Layout



Function description

1— Working indicator

2— Operating voltage terminal

3— Control voltage terminal

4— Ground wiring terminal

5— Front sound field left channel positive terminal

6— Negative terminal of left channel in front sound field

7— Front sound field right channel positive terminal

8— Negative terminal of right channel in front sound field

9— Front sound field L input jack

10— Front sound field R input jack

11— Rear sound field L input jack

12— Rear sound field R input jack

13— Positive terminal of left channel in rear sound field

14— Negative terminal of left channel in rear sound field

15— Positive terminal of right channel in aftersound field

16— Negative terminal of right channel in aftersound field

17— Front Acoustic Field Gain Adjustment Knob

18— Front Sound Field High and Low Pass Frequency Adjustment Knob

19— Front Sound Bass Compensation Adjustment Knob

20— Frequency Adjustment Knob of Infrasound Filter in Front Sound Field

21— Full-Frequency and High-Low-Pass Setting Button for Front Sound Field

22— Front sound field high-pass and low-pass setting buttons

23— Back Acoustic Field Gain Adjustment Knob

24— High and Low Pass Frequency Adjustment Knob for Back Sound Field

25— Bass Compensation Adjustment Knob for Back Sound Field

26— Frequency Adjustment Knob of Infrasound Filter in Back Sound Field

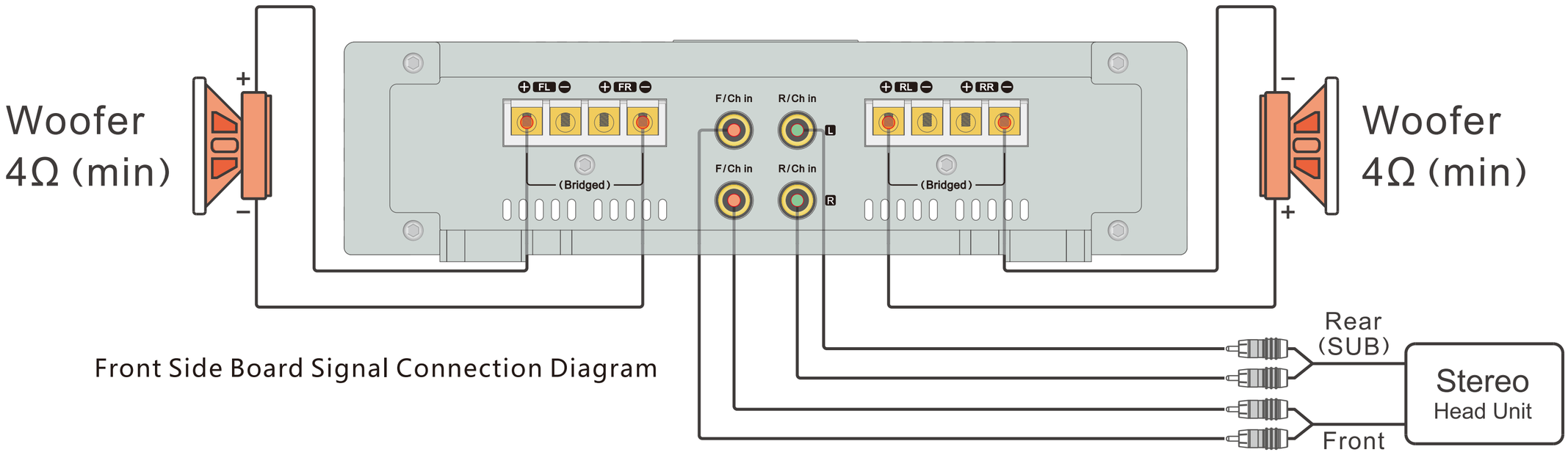
27— Full-Frequency and High-Low-Pass Switching Button for Back Sound Field

28— High-pass and Low-pass Switching Buttons for Back Sound Field

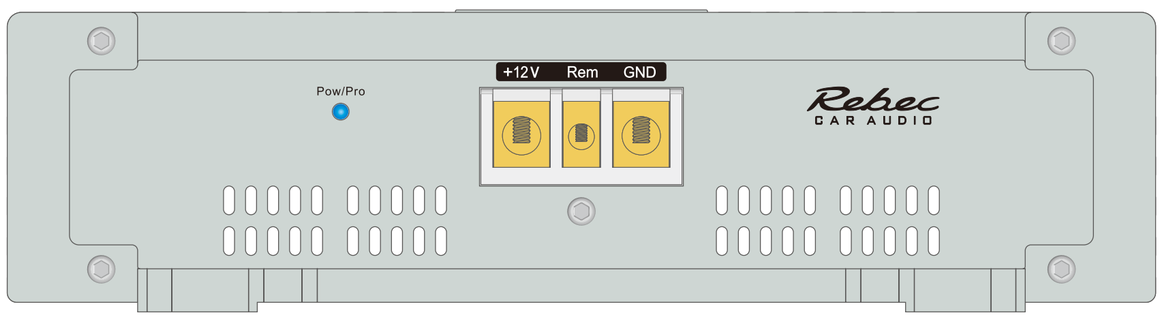
Guidelines for the Use of ES4

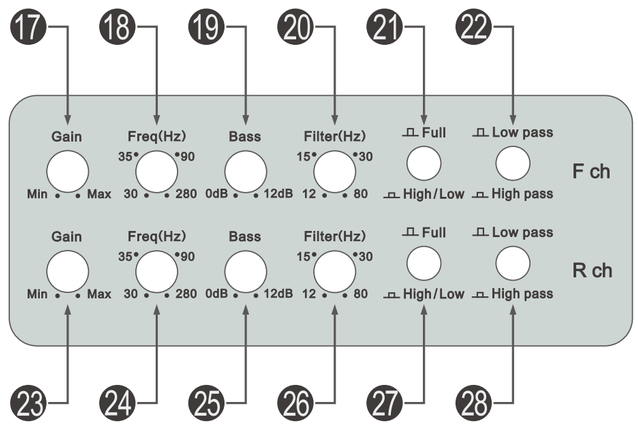
ES4 Conjunction demonstration

2 Channel Mode



Front Side Board Signal Connection Diagram





Basic debugging steps of the system

This connection is a pure ultra-bass connection. A four-way power amplifier pushes two bass. The sound field should be adjusted according to the four-channel mode.

First, check whether the polarity of the power supply line is correct. After confirming the correctness, connect the horn line and the RCA signal line respectively according to the "Front Side Board Signal Connection Diagram" above, adjust the driving position and sit in the driving position correctly. Before debugging, first confirm whether the whole system is active frequency division or passive frequency division. If it is active frequency division, please pop up the function buttons 21 and 27 separately, in full frequency state. All function debugging is done by the host. At this time, the power amplifier is in the best mode. If it is passive frequency division, it will press the function buttons 21 and 27 separately, in high-pass or low-pass mode.

Step 1: Without turning on the power supply control switch (REM), first press the function switch 21 of the "F/CH" channel in the high/low state, then bounce the function switch 22 in the low pass state, then adjust the frequency point of "Freq (Hz)" to about 85Hz, the bass is rotated to the minimum, the infrasound filter to the minimum 12Hz, and finally increase the power amplifier. Gain is set at the minimum state, i.e. turning counterclockwise to the bottom. At this time, bass compensation and infrasound do not work.

Step 2: It is to first press the function switch 27 of the "R/CH" channel in the high/low state, then bounce the function switch 28 in the low pass state, and then adjust the frequency point of "Freq (Hz)" to about 85Hz: bass is rotated to the minimum, infrasound filter to the minimum of 12Hz; finally, Gain of the power amplifier is set at the minimum. Minimum state, i.e. counterclockwise to the bottom. The bass compensation and infrasound at this time are both. It doesn't work.

Step 3: Turn on the CD mainframe power supply and put it on the tuned CD record, and set the volume value to about 90% to 95% of the total volume. Then gradually increase the gain of the amplifier "F/CH" channel until the bass speaker in the front sound field (F/CH) just stops overloading distortion (beat edge distortion), and then slightly adjust back (to the direction of volume reduction) to just sound. Stop until the overload distortion occurs; at this time, the front sound field of the amplifier and the level matching of the host are basically adjusted.

Step 4: Reduce the host's volume to just the right volume to listen to, and then increase the Gain of the R/CH after the amplifier until the volume of the rear sound field can be sensed to match the volume of the front sound field (F/CH). (Specific subjective auditory judgment is that the volume of the back sound field can not affect the sound field positioning of the front sound field, that is to say, the direction of the stage can still be sensed from the instrument. The front of the table is the best. Note: The volume of the rear acoustic field (R/CH) should not be too large, which will affect the location of the front acoustic field.

Step 5: At this time, the main voice of the CD is unchanged, only the volume appliances and frequency knobs of the Ultra-Bass Power Amplifier can be tuned to connect the front and back sound fields to achieve the balance of the whole system. So far, the debugging of the two-channel system has been basically adjusted. The rest is the modification of sound and effect.

Modification of sound and effect

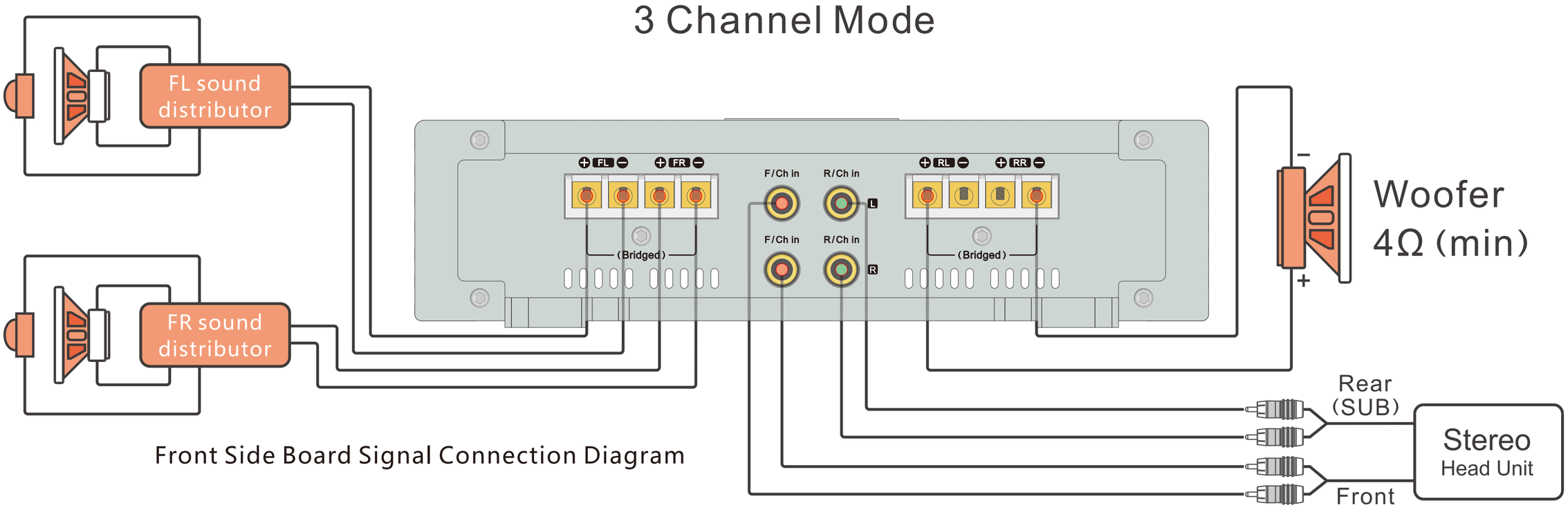
According to the above guidelines, after the preliminary adjustment of the system is completed, the sound effect at this time is seldom in the best state. Therefore, the later modification adjustment (fine adjustment) is very important. It should be pointed out that in order to accomplish the task of decoration and adjustment well, the operator must have certain listening experience to do so. For example, when the bass is adjusted according to the above steps, it feels slightly underpowered or underpowered. It can be improved by adjusting the bass boost (BASS) volume of the ultra-bass. By adjusting the volume of the ultra-bass, it can make the bass thicker.

However, everything has both good and bad sides. If the Ultrasound is raised too much, it will lead to bass lag. At this time, we can also improve the sound quality of the whole system by adjusting the infrasound filter to remove too many Ultrasound frequencies.

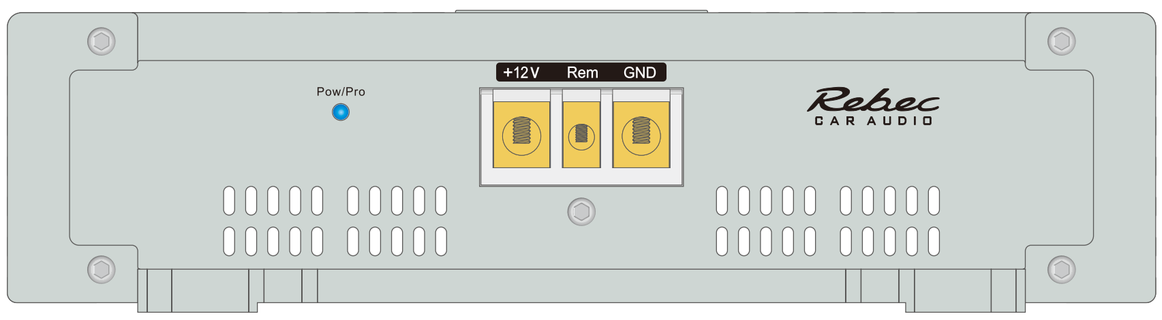
Guidelines for the Use of ES4

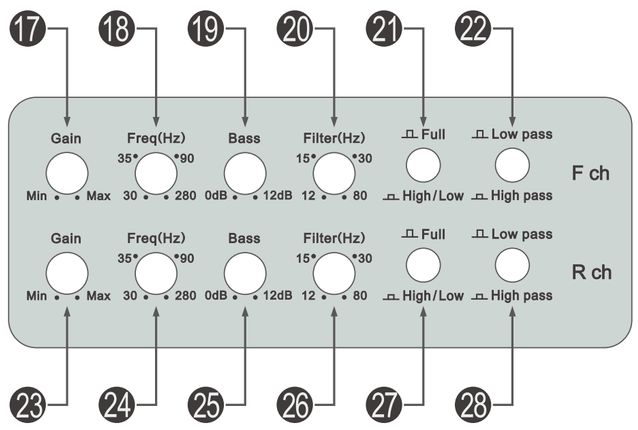
ES4 Conjunction demonstration

3 Channel Mode



Front Side Board Signal Connection Diagram





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At this time, the power amplifier is in the best mode. If it is passive frequency division, it will press the function buttons 21 and 27, respectively, in high-pass or low-pass mode.

Step 1: The first step is to press the function switch 21 of the "F/CH" channel in the high/low state without turning on the power supply control switch (REM).Then the function switch 22 is bounced up in the low pass state, and the frequency point of "Freq (Hz)" is set to about 85Hz, and the bass compensation (Bass) is rotated to it.At the minimum, the infrasound filter rotates to the minimum of 12 Hz. Finally, the Gain of the power amplifier is set to the minimum state, i.e. the counterclockwise turn to the bottom. Bass complement at this timeNeither compensation nor infrasound worked.

Step 2: Similarly, without booting, first press the function switch 27 of the "R/CH" channel in the high/low state, and then turn on the function.Guan 28 bounces in low pass state, and then adjusts the frequency point of Freq (Hz) to about 85Hz: bass rotation to minimum, infrasound filtering The filter rotates to a minimum of 12 Hz; finally, the Gain of the amplifier is set to a minimum state, i.e. the counter-clockwise turn to the bottom. The bass compensation and infrasound at this time are both It doesn't work.

Step 3: Turn on the power of the CD host and put it on the tuned CD record, and set the volume value to about 90% to 95% of the total volume value, then gradually tune it.Gain in the "F/CH" channel of the high power amplifier until the mid-bass speaker in the front sound field (F/CH) is heard and the overload distortion (beat-edge distortion) stops.Then slightly adjust back and forth to stop when the overload distortion can not be heard; at this time, the front sound field of the amplifier and the level matching of the host are basically adjusted.

Step 4: Reduce the host volume to just the right volume to listen to, and then increase the Gain of the R/CH field after the amplifier until you feel the ultra-bass.The volume matches the volume of the front sound field (F/CH). (Specific subjective auditory judgement is that the mixed bass can be sensed coming from the front of the instrument panel.Best). So far, the debugging of the three-channel system has been basically adjusted.

Modification of sound and effect

According to the above guidelines, after the preliminary adjustment of the system has been completed, it is necessary to carry out later modification and adjustment (fine adjustment) work to make the system play to its fullest potential.Good condition. ES4 has an infrasound filter (Filte) function that filters out unwanted bass signals at very low frequencies, thereby improving the power supply. Utilization rate. Usually the frequency of Filte is set in the range of 12 Hz to 80 Hz, because the frequency below 35 Hz is not significant in the automotive acoustic environment. Therefore, it is necessary to set up an infrasound filter function in the bass power amplifier for the "ultra-bass" system in the automotive environment. One If the infrasound filter is properly set, it can make the bass dynamic of the system larger and the energy more concentrated. As for how many Hertz is the appropriate turning frequency, it depends on it.The configuration of the system and the listening experience of the operators are depended on. In addition, ES4 also has a bass function, which can be lowered by adjusting its lift.The sound is thicker. However, everything has both good and bad sides, bass function is no exception. Too much bass compensation will destroy the whole bass range. The sense of balance and the dynamic range of compressed bass, more importantly, will put forward higher requirements for the equipment of the ultra-bass system. Therefore, the bass compensation should be moderate.As for how to adjust, it depends on the operator's listening experience.

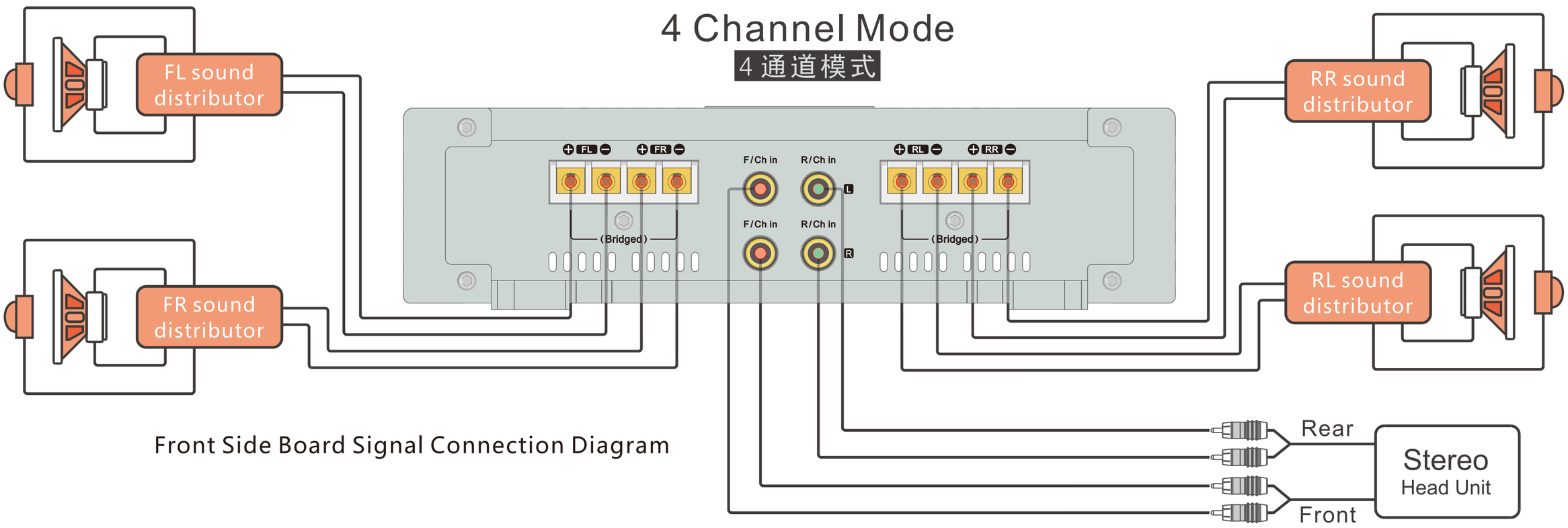
Guidelines for the Use of ES4

ES4 Conjunction demonstration

ES4 连接示范

4 Channel Mode

4 通道模式



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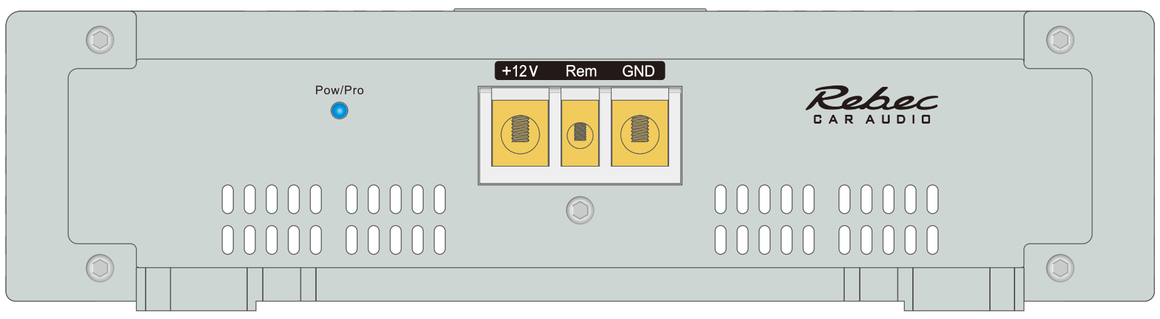

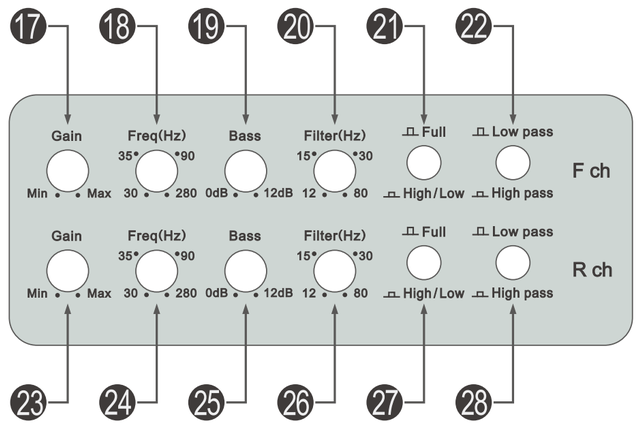

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