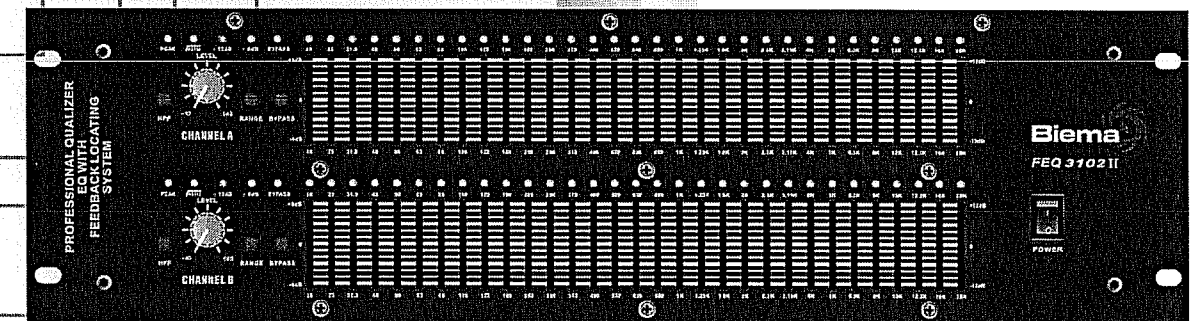
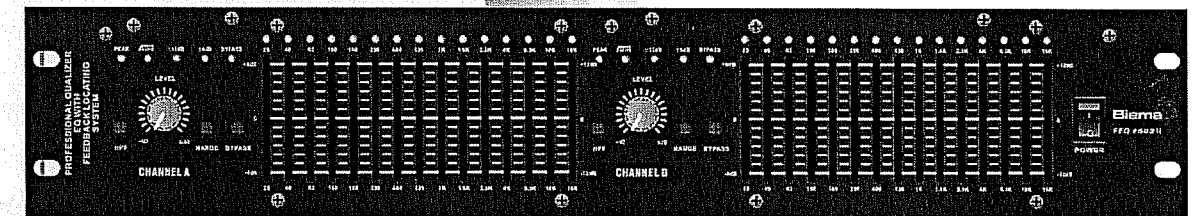


OWNER'S MANUAL

GRAPHIC EQUALIZER WITH FEEDBACK DISPLAY

FEQ-1502 II

FEQ-3102 II





FEQ-1502 II 2x15 BAND GRAPHIC

FEQ-3102 II 2x31 BAND GRAPHIC

EQUALIZER WITH FEEDBACK DISPLAY

OWNER'S MANUAL

The information furnished in this manual does not include all of the details of design, production, or variations of the equipment. Not does it cover every possible situation that may arise during installation, operation or maintenance. If you need special assistance beyond the scope of this manual, please contact our Technical Support Group.

CAUTION

**RISK OF ELECTRIC SHOCK
DO NOT OPEN**

TO PREVENT ELECTRIC SHOCK DO NOT REMOVE COVER OR BACK. NO USER SERVICEABLE PARTS INSIDE REFERS SERVICING TO QUALIFIED SERVICE PERSONNEL.

MAGNETIC FIELD

CAUTION! Do not locate sensitive high-gain equipment such as preamplifiers or tape decks directly above or below the unit. Because this amplifier has a high power density, it has a strong magnetic field, which can induce hum into unshielded devices that are located nearby. The field is strongest just above and below the unit. If an equipment rack is used, we recommend locating the amplifier(s) in the bottom of the rack and the preamplifier or other sensitive equipment at the top.

WATCH FOR THESE SYMBOLS:



The lightning bolt triangle is used to alert the user to risk of electric shock



The exclamation point triangle is used to alert the user to important operating or maintenance instructions.



WARNING

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE!

I. Safety precaution

Attention: Don't open the cover (or rear panel) in order to avoid danger of electrical shock. There is no parts can be used inside. Should maintain, please look for eligible technician.

Caution: Don't exposure the unit in rainy or wet place in order to avoid fire or electric shock.

▲ Appearing this symbol offer that enclosure is existing dangerous voltage without insulation. The power pressure is enough to occur electrical shock.

▲ Appearing this symbol offer you a important information as attachment, please refer its instruction.

Detailed safety precaution:

Read the whole safety and operation instruction carefully before using the unit.

Protective instruction:

Keeping the manual properly so as to reference during using.

Noted caution:

Taking care of all the caution in the manual.

Operation depending on instruction:

Be sure to follow with the operation and user's instruction.

Water and moisture:

The unit isn't allowed to use close to wet place(such as bathroom, lodge, kitchen, and wet storehouse or swimming pool, etc.).

Vent:

Installing location of the unit should not influence proper ventilation. For example, it's not allowed to put it



FEQ-1502 II 2x15 BAND GRAPHIC

FEQ-3102 II 2x31 BAND GRAPHIC

EQUALIZER WITH FEEDBACK DISPLAY

VI. Technical data & Introduction:

MODEL:	FEQ1502 II
Frequency response	20Hz-20KHz± 1.0dB
THD total harmonic distortion	<0.05%(20Hz-20KHz +3dB)
S/N ratio	>90dB
Equalizer control	15band(2/3 octave)
Central frequency	25, 40, 63, 100, 160, 250, 400, 630, 1K, 1.6K, 2.5K, 4K, 6.3K, 10K, 16KHz
Variable zone	± 12dB/± 6dB
Peak LED	-3dB before clipping
Feedback threshold LED	≥ -22dB
High pass filter	-12dB/octave(40Hz)
Power supply	240V/50-60Hz
Power consumption	10W
Dimensions(WxDxH)mm Interior/Exterior	482X228X88/512X280X117
N.W/G.W	4.5kg / 5.5kg

MODEL:	FEQ3102 II
Frequency response	20Hz-20KHz ± 0.5dB@0dB
THD total harmonic distortion	≤0.1% 20Hz~20KHz @0dB
Input impedance active balance	20K ohms
Output impedance active balance	100 ohms
Maximum input level	≥16dB
Maximum output level	≥15dB
Variable zone	± 6dB/± 12dB
Equalizer control	31band(1/3 octave)
Central frequency	20、25、31.5、40、50、63、80、100、125、160、200、250、315、400、500、630、800、1K、1.25K、1.6K、2K、2.5K、3.15K、4K、5K、6.3K、8K、10K、12.5K、16K、20KHz
S/N ratio	≥90dB
Input plus adjustment	-∞ ~0dB
Peak sensitivity	Lit earlier 3 dB than clip point
Feedback threshold LED	≥-22dB
High pass filter	40Hz 12dB/octave
Power supply	240V/50-60Hz
Power consumption	15W
Dimensions(WxDxH)mm Interior/Exterior	482x225x132/(512x280x160)
N.W/G.W	5.3kg /6.5kg



FEQ-1502 II 2x15 BAND GRAPHIC

FEQ-3102 II 2x31 BAND GRAPHIC

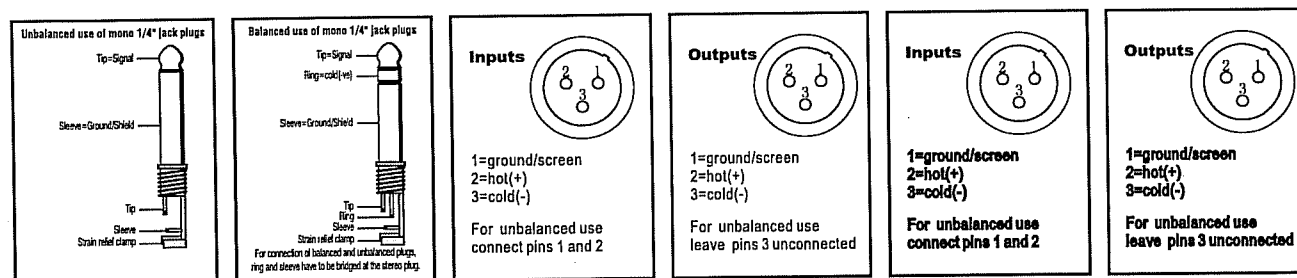
EQUALIZER WITH FEEDBACK DISPLAY

15. **INPUT socket:** Input socket can choose 1/4" socket or XLR input socket to meet the connection of its balance or unbalance.

IV. Operation instruction

1. **Connection signal source:** Use 1/4" directly inlet or XLR input signal from input jack to avoid AC interfering sound, signal cable should use shielded cables.
 - Firstly, switch off the cable. Be sure power of equalizer is off before connecting cable to avoid any damage of the unit.
 - Don't connect the expanded signal into the source. Unless you own a special decreasing Equipment.
2. **Output connection:** Use 1/4" direct socket or XLR from input to output signal to post stage equipment(crosstalk, amplifier, etc.), in order to reduce ac interfering sound, output cable should be shielded one.
3. **Power on:** Firstly turn on the power of input equipment as music instrument, CD etc or pre stage signal treating equipment as mixer, then the post stage power source after opening the equalizer.
4. **Using schematic equalizer:** Schematic equalizer have two actions- sound supplement and feedback control.
 - In most of condition, we'd like to use equalizer to supplement sound, for example, sound will become high-pitched in smooth environment, so it need to reduce high frequency. In small nominal room, lower frequency is easier to occur resonance, then its needed to reduce lower frequency. In most of condition, nice equalizing effects is obtained by reducing surplus but other lifting short parts.
 - Schematic equalizer can control feedback sound in limited scope, suitable MIC place may avoid feedback whistling. But it's very difficult to control in a small room, so use the reduction of frequency is available to avoid the sound.
 - Please set increment knob in suitable position during operation(increment has a optimum range where noise and distortion is minimum, the best range of increment knob at FEQ3102II is between 0dB to middle scale, this is not really mean you have no choice in other position, just consider the best result in this range so that to adjust post stage equipment easily). Then you can adjust the status of HPF to make each equalizing holder to perfectly result. Attention to be taken not to keep peak light lit during adjustment, its output signal is not allowed to exceed the input sensitivity for post stage amplifier setting. Otherwise, post stage amplifier will appear distortion due to overloading.

V. Index of jack connection



FEQ-1502 II 2x15 BAND GRAPHIC

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EQUALIZER WITH FEEDBACK DISPLAY

in bed, sofa, thick blanket or similar surface, or in storing device (e.g, cupboard or cabinet without wind) which is resisting wind to pass through.

Heat:

Location of the unit should far away from thermal resource as heater, heating device, stove or other device with producing heat (including power amplifier).

Power supply:

The unit only can be selected those power supply what it has been regulated in the manual.

Ground:

Taking countermeasure to keep the unit ground or pole method is not invalid.

Protection of power cord:

Don't distribute the power cord under this unit or furniture, or between objects. Taken more care of soft cord and in/outlet, and terminal of the unit.

Clean:

The unit should be cleaned by factory recommended method.

Stopping using time:

The power cord and outlet should plug out if the unit is not used for a long period.

Emerged by foreign objects and liquid:

Liquid cup or vessel should be taken away above the unit to prevent foreign objects or liquid split in.

Damage for required service:

The unit should be repaired by eligible technician as it caused damage as below condition:

- Soft cable or outlet damaged.
- Foreign objects fall or liquids spilt into the unit.
- The unit dipped into water.
- The unit works abnormal or performance is changed clearly.
- Enclosure is broken by the unit fallen down.

Maintenance:

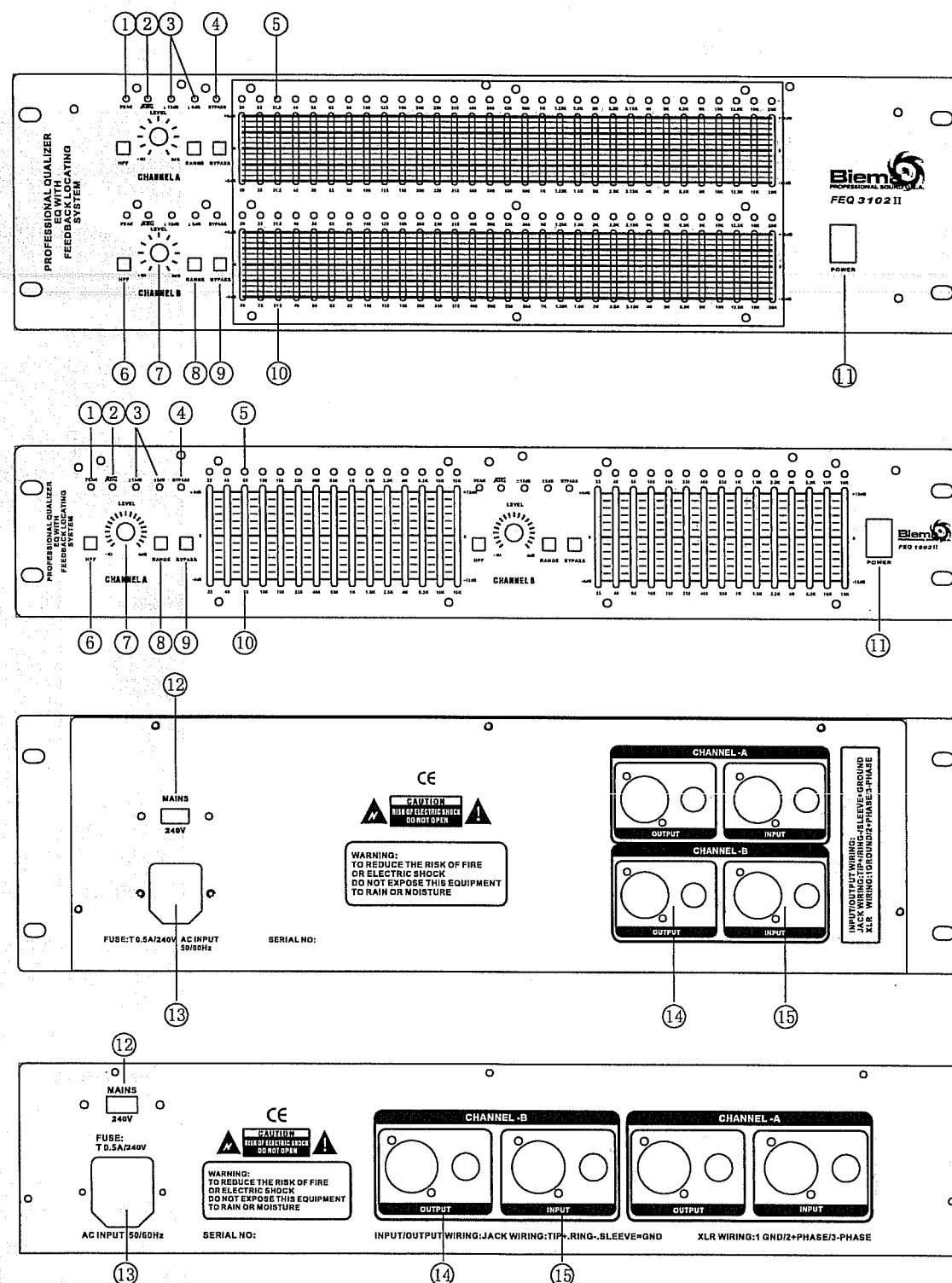
User couldn't try to repair out of the instruction. All of the other repairing should be performed by proper service person.

II. Feature

FEQ-3102 II and FEQ1502 II is a series of schematic equalizer. Its simple front panels and status indicator makes more humanness operation. The reasonable circuit designation keep you comfortable within a nice tonality treatment.

- Absolutely supplement is suitable for application of stadium and hall.
- Perfect circuit design for room equalizing and feedback display.
- Selective $\pm 6\text{dB}$ or $\pm 12\text{dB}$ for increasing or reducing.
- Additional HPF to restrain low frequency noise, for example, feet kicking sound, air-conditioning sound, etc.

III. Function instruction



- Constant 0 value.
- Integrated power supply internally, 240V power can be selective.
- High accurately potentiometer controlling.
- Lower noise amplifier makes sound perfectly.

Front panel

1. **PEAK indicator(red):** The light will be lit when the output signal is less 3dB than clip level. That means the output signal is too high, you are required to decrease its output to lower its increment.
2. **HPF indicator(red):** Light lit shows the high pass filter in operation. Signal below 40Hz will reduce depending on 12dB/OCT.
3. **Range indicator:** Related light lit shows max lifting and lowering of band is $\pm 12\text{dB}$ or $\pm 6\text{dB}$.
4. **BYPASS indicator(red):** Bypass status display. The output signal won't be controlled by all bands of potentiometer.
5. **Feedback indicator(red):** When the unit pass through without input signal, all feedback indicator of crosstalk will be lit in dark. When there is input signals, the indicator with feedback will be lit. If there's no feedback, then it will be off. You can adjust it in the equalizer to eliminate feedback.
6. **HPF switch:** Press the switch, then internal HPF is ready to work.
7. **Level control:** Adjustable button can control signal level increment, the scope is $-\infty \sim 0\text{dB}$.
8. **RANGE switch:** The switch controls all crosstalk max and min $\pm 6\text{dB}$ or $\pm 12\text{dB}$, related RANGE light will lit when pressing or pulling out.
9. **BYPASS switch:** Equalizer will be located at bypass status after pressing down the switch. The equalizer will be in controlling status when the switch pulled out.
10. **Feedback adjuster:** Each potentiometer can be lifted up/down all frequency. Equalizer output is smoothly when all potentiometer is located in central position. When a certain mark in potentiometer is exceeded central position, the crosstalk will be controlled by equalizing.
11. **POWER switch:** switch on/off power. When the button is in the place " I ", the equipment is in work. When the button is in the place " O ", the equipment is out of work.

Rear panel

12. **Selective switch:** Power can choose AC 240V, turn the switch to meet with local electricity network for its voltage before connecting power on.
13. **Power socket:** Input power can choose AC 240V/50Hz, fuse size 240V/0.5A, . Be sure the size of fuse and set voltage of the switch should be conformed with local electricity network before connecting power on.
14. **OUTPUT socket:** Output can select 1/4" socket or XLR output socket so that it can suitable for connection in balance or unbalance.