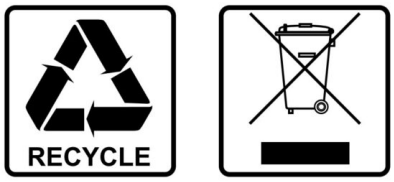
JB SYSTEMS LIVE-16 Mixer Recording Audio Bluetooth Instruction Manual

LIVE-16

Operation Manual
Other languages can be downloaded from:
WWW.JB-SYSTEMS.EU

CE Version: 1.0



DISPOSAL OF THE DEVICE
Dispose of the unit and used batteries in an environment friendly manner according to your country regulations.

OPERATION MANUAL
Thank you for buying this JB Systems® product. To take full advantage of all possibilities, please read these operating instructions very carefully.

Contents

FEATURES

- Versatile PA mixer with excellent value for money!
- 16 inputs over 14 channels:
  - 12 mic/mono line (combo)
  - 1 mic/mono/stereo line
  - 1 mic/mono/stereo line /USB/player
- Extra CD/tape input with level control + analog recording output
- Integrated Bluetooth receiver
- The USB connector is Bidirectional and can be used for stereo recording or playback via PC/Mac
- Internal WMA, WAV, FLAC, APE and MP3 media player for USB memory sticks
- The media player can also be used as a stereo recorder
- Internal DSP-effect unit with 99 effects variations
- Each channel has:
  - Gain adjustment
  - 3-band EQ
  - 2 pre-fader aux sends
  - 1 post-fader aux/FX send
  - Pan adjustment
  - Level fader
  - Peak indicator
  - Mute switch
  - PFL switch
  - Main out routing switch

    - Group out routing switch
- Individual LOW CUT and 48V Phantom power switches on all the mono MIC/LINE channels
- Handy 7 band graphic equalizer for the main output (with IN/Bypass switch)
- Group 1/2 outputs (jack) with separate level control. Group 1/2 can also be routed directly to the main outputs
- Balanced Main output (XLR).
- Headphones output with level control

BEFORE USE

- Before you start using this unit, please check if there's no transportation damage. Should there be any, do not use the device and consult your dealer first.
- Important: This device left our factory in perfect condition and well packaged. It is absolutely necessary for the user to strictly follow the safety instructions and warnings in this user manual. Any damage caused by mishandling is not subject to warranty. The dealer will not accept responsibility for any resulting defects or problems caused by disregarding this user manual.
- Keep this booklet in a safe place for future consultation. If you sell the fixture, be sure to add this user manual.
- To protect the environment, please try to recycle the packing material as much as possible.

Check the contents:
Check if the carton contains the following items:

- Mixer
- IEC Power cable
- Operating instructions

SAFETY INSTRUCTIONS:

CAUTION: To reduce the risk of electric shock, do not remove the top cover. No user-serviceable parts inside. Refer servicing to qualified service personnel only.

The lightning flash with arrowhead symbol within the equilateral triangle is intended to alert the use or the presence of un-insulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

The exclamation point within the equilateral triangle is intended to alert the user to the presence of important operation and maintenance (servicing) instructions in the literature accompanying this appliance.

This symbol means: indoor use only

This symbol means: Read instructions

- To prevent fire or shock hazard, do not expose this appliance to rain or moisture.
- To avoid condensation to be formed inside, allow the unit to adapt to the surrounding temperatures when

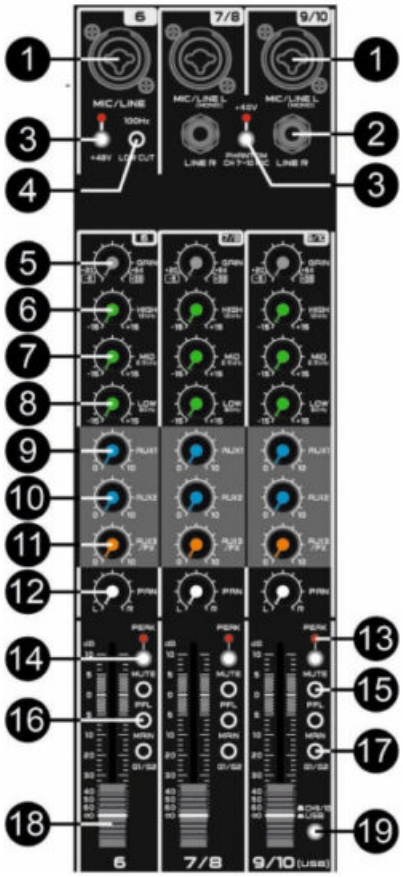
bringing it into a warm room after transport. Condense sometimes prevents the unit from working at full performance or may even cause damages.

- This unit is for indoor use only.
- Don’t place metal objects or spill liquid inside the unit. No objects filled with liquids, such as vases, shall be placed on this appliance. Electric shock or malfunction may result. If a foreign object enters the unit, immediately disconnect the mains power.
- No naked flame sources, such as lighted candles, should be placed on the appliance.
- Don’t cover any ventilation openings as this may result in overheating.
- Prevent use in dusty environments and clean the unit regularly.
- Keep the unit away from children.
- Inexperienced persons should not operate this device.
- Maximum safe ambient temperature is 40°C. Don’t use this unit at higher ambient temperatures.
- Minimum distances around the apparatus for sufficient ventilation is 5cm.
- Always unplug the unit when it is not used for a longer time or before you start servicing.
- The electrical installation should be carried out by qualified personal only, according to the regulations for electrical and mechanical safety in your country.
- Check that the available voltage is not higher than the one stated on the rear panel of the unit.
- The socket inlet shall remain operable for disconnection from the mains.
- The power cord should always be in perfect condition. Switch the unit immediately off when the power cord is squashed or damaged. It must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- Never let the power-cord come into contact with other cables!
- When the power switch is in OFF position, this unit is not completely disconnected from the mains!
- In order to prevent electric shock, do not open the cover. Apart from the mains fuse there are no user serviceable parts inside.
- Never repair a fuse or bypass the fuse holder. Always replace a damaged fuse with a fuse of the same type and electrical specifications !
- In the event of serious operating problems, stop using the appliance and contact your dealer immediately.
- Please use the original packing when the device is to be transported.
- Due to safety reasons it is prohibited to make unauthorized modifications to the unit.

INSTALLATION GUIDELINES:

- Install the unit in a well-ventilated location where it will not be exposed to high temperatures or humidity.
- Placing and using the unit for long periods near heat-generating sources such as amplifiers, spotlights, etc. will affect its performance and may even damage the unit.
- When installed in a booth or flight case, please make sure to have good ventilation to improve heat evacuation of the unit.
- To avoid condensation to be formed inside, allow the unit to adapt to the surrounding temperatures when bringing it into a warm room after transport. Condense sometimes prevents the unit from working at full performance.

CONNECTORS, CONTROLS AND FUNCTIONS



1. [MIC/LINE] combo input: This input accepts balanced XLR connectors for microphones as well as unbalanced Jack connectors for LINE signals
2. [LINE R] jack input: when you want to use this channel for a stereo line signal, you can plug the jack of the left channel in the combo input (1) and plug the jack of the right channel in this LINE R input, located just below the combo input.
3. PHANTOM Power switch: This switch toggles the phantom power on or off. Set this switch on when using one or more condenser microphones that need to receive external power from the mixer.
   When this switch is on, the mixer supplies DC +48V power to pins 2 and 3 of the XLR-type MIC INPUTS. All the mono channels have an individual phantom power switch, except for channels 7/8 and 9/10 where the switch activates the phantom power on the combo inputs of both channels.
   • Be sure to leave this switch off ▬ if you do not need phantom power
   • When tuning the switch on ▬, be sure that only condenser MICs are connected to the XLR input
   WARNING: Devices other than condenser MICs may be damaged if connected to the phantom power supply. However, the switch may be left on without problem when connecting balanced dynamic microphones.
   To avoid damage to speakers, be sure to turn off the amplifiers (or powered speakers) before turning this switch on or off. We also recommend that you turn all out controls (MAIN master fader, AUX send, etc.) to minimum settings before operating the switch, to avoid risk of loud noises that could cause hearing loss or device damage.
4. [LOW CUT] filter button: this button can be used to cut frequencies below 80Hz. This can be useful to decrease popping of microphones or to avoid low feedback from acoustic instruments. If you use subwoofers, activating this filter removes the input source from the subwoofers. It helps to create a cleaner mix.
5. [GAIN] control knob: According to the level of the input signal, use this knob to adjust the input signal to an appropriate level. The level status can be checked by using the PFL button and the VU-meters:
   • Switch off the pfl buttons (16) on all channels

• Now only switch ON the PFL button (16) of the channel you want to check

• Play the music or instrument at the level you will always do during the performance.

• Check the level on the VU-meter and adjust the gain knob (5) till you reach the desired input level.

This setting is very important: if the level is too low, you might not be able to reach a sound level that is high enough on your outputs and you will generate extra unwanted noise. If the level is too high you will generate distortion that will result in a very bad sound, it can even destroy your speakers !

That's why we have also added some [PEAK] LED's (13). The LED's can flash from time to time, what means the level is OK. If you see the LED is ON for longer periods, it means you have to turn down the GAIN level for this channel !

6. [HIGH]: This knob adjusts the channel's high frequency band. Setting the knob to the "0" position produces a flat frequency response .Turning the knob to the right boosts the corresponding frequency band ,while turning to the left cuts the band.
7. [MID]: This knob adjusts the level of the channel's medium frequency band. Setting the knob to the "0" position produces a flat frequency response .Turning the knob to the right boosts the corresponding frequency band ,while turning to the left cuts the band.
8. [LOW]: This knob adjusts the channel's low frequency band. Setting the knob to the "0" position produces a flat frequency response .Turning the knob to the right boosts the corresponding frequency band ,while turning to the left cuts the band.
9. [AUX1] knob: This knob controls the level of your channel signal that is sent to the AUX3 output (25). This signal is Pre-Fader, what means the level is not influenced by the position of the channel fader. It is mainly used to send an audio signal to stage monitors
10. [AUX2] knob: This knob controls the level of your channel signal that is sent to the AUX3 output (25). This signal is Pre-Fader, what means the level is not influenced by the position of the channel fader. It is mainly used to send an audio signal to stage monitors
11. [AUX3/FX SEND] knob: This knob controls the level of your channel signal that is sent to the internal effect module and/or to the AUX3 output (26), for example to run an external effect engine. This signal is Post-Fader, what means the level is influenced by the position of the channel fader.
12. [PAN] knob: This control pans the channel signal across the MAIN L/R and the G1/2 group busses, thus determining the perceived position of the sound from that channel in the output stereo sound field. If a PAN control is set all the way to the left, for example, the sound from that channel will be heard from the left speaker system only. If it is set all the way to the right, the sound will be heard from the right speaker system only. Intermediate settings will cause the sound to appear at corresponding locations in the stereo sound field
13. [PEAK] LED indicator: This LED indicator shows the level of the signal input of the channel. The peak indicator lights up when the input signal reaches 5dB below the channel's clipping point. This indicator shows the level of the Post-EQ/ pre-fader signal. If the PEAK indicator lights more than briefly on high- level transients, you should use the red GAIN control knob to decrease the input sensitivity of the channel. If this does not work, reduce the output level of the connected source.
14. [MUTE] knob: With this knob you can quickly mute the channel output without that you have the modify the position of the channel fader.
15. [PFL] knob: Press this knob to activate the PFL mode for this channel (pré-fader-listening). The sound of only this or these channels that have the mode switched on will be sent to the headphones output (22), so you can listen to a specific channel or instrument of your mix. The knob can also be used to set precisely the level of the input GAIN (5). (Check the description of the [GAIN] button 5. above for more information)
16. [MAIN] knob: Select this function if you want to send the audio signal of this channel to the [MAIN] busses.

17. [G1/G2] knob: Select this function if you want to send the audio signal of this channel to the [G1/G2] group busses. They can be used to send the audio signal to a separate sound system, subwoofers, or can be used as a real subgroup so you have control over a specific group of channels. The level of this group will be controlled by the [G1/G2] fader (43). The signal can then be reinjected to the [MAIN] output. Subgroups make it easier to mix complex setups. You can for example make a mix of all the backing vocals. Send this mix to the [G1/G2] busses, then reinject the group into the [MAIN] output by using the [TO MAIN] switch (41). You can now control the level of your backing vocals with the [G1/G2] fader (43) without that you have to move every separate backing vocal fader (and keep the correct balance)
18. Channel Fader: This is the channel's main level control. It determines the level of the signal that is sent from the channel to the master mixing and post fader effect busses (AUX3 and internal effect module). It is the settings of the input channel faders that determine the mix, or the balance of sound levels between the instruments or other sources connected to the inputs. When a channel is not being used, its fader should be set at the minimum position to prevent the addition of unwanted noise to the main program signal. You can also mute the channel with the [MUTE] knob (15)
19. [CH9/10 or USB] switch: with this switch you can select the audio source for channels 9/10
    -  = signal from the input connectors (1 & 2) of channel 9/10
    -  = signal from the internal player (29): USB Stick (30) / computer (30) / Bluetooth receiver
20. [TAPE] input: extra unbalanced line input. The level can be set with the [CD/TAPE] button (39).
21. [REC] output: unbalanced line output that can be used for analogue recordings.
22. [PHONES] output: connect your headphones here. The output level can be controlled with the [PHONES] knob (38)
23. [MAIN OUT]: Use the balanced XLR-connectors to connect this mixer to any amplifier or active speakers.
24. [RETURN] input: When you use an external effect generator or other gear, you can send the signal to that unit by using the [AUX3] (26) output. The processed signal can be reinjected in the mixer via this [RETURN] input. If this function is not used, you can also use this input to send an extra audio source into the mix. Its level can be controlled via the RETURN knob (40)
25. [AUX1, AUX2] output: these outputs are mainly used to run stage monitors. The signal is pre-fader, meaning it is not influenced by the position of the channel faders. The general level for this output can be controlled by the individual AUX buttons (37)
26. [AUX3] output: this output is mainly used to run an external effect processor. The signal is post-fader, meaning it is also influenced by the position of the channel faders. The general level for this output can be controlled by the individual AUX3 button (37)
27. [G1 & G2] outputs: when the G1/G2 switches are activated on some channels, the audio signal of these channels will be sent to these G1 and G2 outputs. The position of the [PAN] button (12) of each channel has an influence on these individual audio signals: When a [PAN] button is set totally to the left, the audio signal will only be sent to G1. When it's set totally to the right, it will only be sent to G2. When the [PAN] button is set in the middle position, the audio signal will be sent to G1 and G2
28. DISPLAY: shows you all the information about the status of the internal player and the effect program that has been selected.
29. Internal player: by pressing the [MODE] button shortly you can scroll through the different working modes:
    • [NO]: when you are in the internal player mode and no USB stick is connected to the unit, the display will show [NO] • [USB]: when an USB stick is connected to the unit, the display will show [USB] shortly. The music on the stick will start playing automatically. The 3 other buttons of the internal player are now active:

o Play/Pause/REC button: can be used to start or pause the playback of a song

o Back/- button:

▪ press it shortly to go to the previous song on the USB device.

▪ press it longer to decrease the playback volume

o Forward/+ button:

▪ press it shortly to go to the next song on the USB device.

▪ press it longer to increase the playback volume (max = 30)

o Loop mode: it is possible to select a loop for 1 song or for ALL songs. Press the [MODE] button for a while and one of these options will appear. To go to the other option, press the [MODE] button again for a longer period (no short pressing)

▪ [ONE]: only one song will be played in a loop.

▪ [ALL]: all the songs on the USB device will be played over and over again

• [bt]: Bluetooth is active and ready to receive music from your smartphone, tablet or other Bluetooth device. If your device has already been connected to the mixer before, the connection will be made automatically.

o Play/Pause/REC button: can be used to start or pause the playback of a song

o Back/- button:

▪ press it shortly to go to the previous song on the Bluetooth device.

▪ press it longer to decrease the playback volume

o Forward/+ button:

▪ press it shortly to go to the next song on the Bluetooth device.

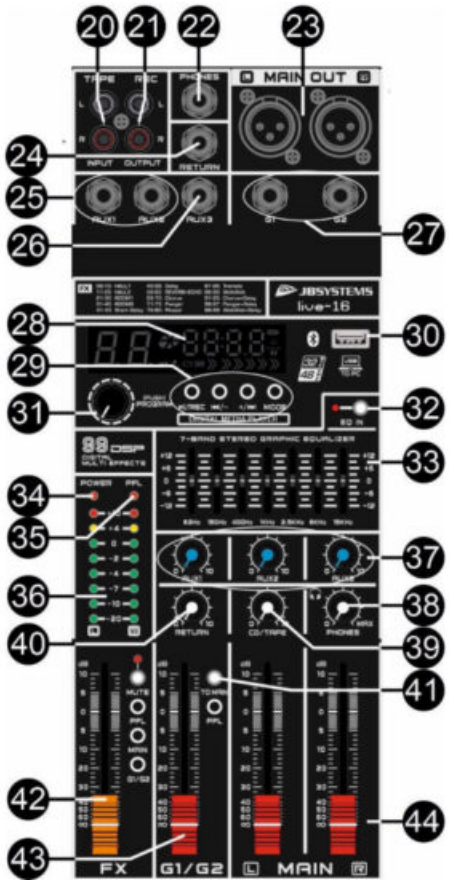
▪ press it longer to increase the playback volume (max = 30)

• [rEC]: when an USB stick is connected to the unit, you can now record the sound of your MAIN output to your USB stick. The recording level is influenced by the level of the MAIN output (faders). Press the REC button for a couple of seconds to start recording.

• [PC]: your computer is connected to the mixer. All the audio from your computer will now be sent to the mixer (from audio files, video files, etc.).

IMPORTANT: When you connect the mixer for the first time to your computer, please wait until the automatic installation is finished.

o Play/Pause/REC button: can be used to start or pause the playback of the music source on your computer (audio file, video file, etc.)



o Back/- button:

▪ press it shortly to go to the previous file when a playlist is selected in your computer (audio or video)

▪ press it longer to decrease the playback volume of your computer

o Forward/+ button:

▪ press it shortly to go to the previous file when a playlist is selected in your computer (audio or video).

▪ press it longer to increase the playback volume of your computer

IMPORTANT REMARK: we strongly advise you to don't lower the playback volume with the [BACK/-] button if it is not really necessary, especially when you are playing music from an USB device. If you put it on "zero" and forget you did this (or another user works with the mixer) there will be no sound available when you try to play a song of the USB device or Bluetooth device ! 😊

30. USB connector: can be used to connect a storage device (USB stick) or a computer

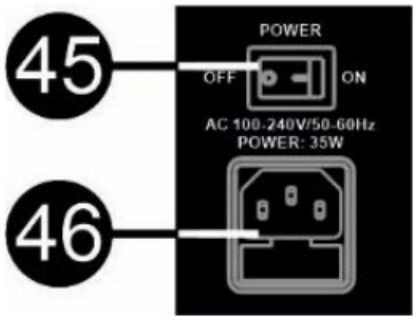
• USB stick: for the recording of the main mix or for the playback of WMA, WAV, FLAC, APE and MP3 files

• PC: use a USB-A / USB-A cable to connect a computer. This port is bidirectional, so you can playback music from your computer or use the computer to record the main mix output

31. [PROGRAM] knob: turn the knob to choose one of the build-in effects. Once the number of the desired effect appears on the display, you have to press the knob to activate the effect

00-10 HALL 01	46-55 DELAY	81-85 TREMOLO
11-20 HALL 02	56-65 REVERB + ECHO	86-90 WAHWAH
21-30 ROOM 01	66-70 CHORUS	91-95 CHORUS + DELAY
31-40 ROOM 02	71-75 FLANGER	96-97 FLANGER + DELAY
41-45 SHORT DELAY	76-80 PHASER	98-99 WAHWAH + DELAY

32. [EQ IN] button: to activate/deactivate the 7-Band Equalizer (33)
33. 7-BAND EQUALIZER: this equalizer can help you finetuning the sound of your MAIN output (23). You can switch it ON/OFF with the [EQ IN] switch (32)
34. [POWER] Led: is lit when the power is switched on
35. [PFL] Led: is lit when one or several PFL buttons are active
36. L & R level meters: When no PFL button is activated (PFL LED (35) is not lit) these meters show the level of the MAIN outputs. When a PFL button (15) is activated, you can see the pré-fader signal level of this channel on the VU meters. (be sure the PFL button of only 1 channel is active).
37. [AUX] send knobs: used to control the output level of each AUX output. (25 & 26)
38. [PHONES] knob: adjusts the output level of the headphones output (22)
39. [CD/TAPE] knob: adjusts the output level of the [TAPE] output (20)
40. [RETURN] knob: adjusts the input level of the [RETURN] input (24)
41. [TO MAIN] button: this button can be used to route the G1/G2 busses to the MAIN output busses (44 & 23)
42. [FX LEVEL] fader: Adjust the level of the signal coming from the internal digital effect processor to the MAIN outputs (44 & 23)
43. [G1/G2] subgroup fader: Adjust the G1/G2 group output level that is sent to the G1 & G2 outputs (27). When the [TO MAIN] switch (41) is active, the signal will also be sent to the MAIN outputs (44 & 23)
44. [MAIN] faders: Adjusts the final output level of the MAIN outputs (23)
45. [POWER] SWITCH: Used to turn the power of the mixer on and off. The red POWER led (34) on the front of the unit is lit when the mixer is switched on.
46. [AC INPUT / FUSE]: Use the supplied AC cord to connect the unit to AC mains.
    Make sure voltage and frequency stated on the unit comply with your local AC supply. The fuse can be accessed by the small drawer at the AC inlet. To change the fuse, unplug the AC cord first, pull out the fuse drawer and replace the fuse ONLY with a fuse of SAME voltage and rating. If the fuse blows again after replacement, hand over the unit to qualified service personnel.



CLEANING THE MIXER:
Clean by wiping with a polished cloth slightly dipped with water. Avoid getting water inside the unit. Do not use volatile liquids such as benzene or thinner which will damage the unit.

SPECIFICATIONS

This device carries the prescribed CE marking. It was tested for this purpose in a specialized CE lab and fully complies with all currently valid European and national standards.
The corresponding CE conformity declarations can be found on the product page of this product on our website.

Power Supply: AC 100-240V (50-60Hz)

Power Consumption: 35W
Frequency response: 20-20.000Hz (± 1dB+4dBµ@1KHz)
THD: <0.5%
Media Player Formats: WMA, WAV, FLAC, APE, MP3
Channel tone controls:
High: +15dB / -15dB @ 12kHz
Mid: +15dB / -15dB @ 2.5kHz
Low:+15dB / -15dB @ 80Hz
Dimensions: 630(W) x 380(D) x 115(H) mm
Weight: 6,5kg

The information is subject to change without prior notice
You can download the latest version of this user manual on our website: **www.jb-systems.eu**

MAILING LIST
Subscribe today to our mailing list for the latest product news!
www.jb-systems.eu

't Hofveld 2C ~ B1702 Groot-Bijgaarden ~ Belgium

Documents / Resources

	**JB SYSTEMS LIVE-16 Mixer Recording Audio Bluetooth** [pdf] Instruction Manual LIVE-16 Mixer Recording Audio Bluetooth, LIVE-16, Mixer Recording Audio Bluetooth, Recording Audio Bluetooth, Audio Bluetooth, Bluetooth

References

- **User Manual**