Thank you for purchasing this Allen & Heath ZED-6.

We recommend that you read all of this user guide to get the best from your mixer and after reading, please keep this safe for future reference.

Included in this package is:

- ZED-6 Mixer
- IEC CS Mains Power Cable. Please check correct mains plug is fitted for your country.
- This User Guide!

1. Get to know your mixer

1.1 MONO INPUT CHANNELS (M)

1. Mic Input Socket uses a standard 3-Pin XLR socket for connecting dynamic or condenser microphones.
2. Line / Inst Input Socket uses a standard 1/4" (6.35mm) Jack socket for connecting balanced or unbalanced signals such as guitars and other instruments.
3. Gain Control adjusts the gain of the input preamplifier to drive the source signal level. Gain ranges from 0dB to 60dB.
4. Instrument activates the Line / Inst input circuit for electro-acoustic and electric guitars, basses and other Direct Input instruments. When activated the Mic Input Socket is disabled.
5. In-cut (Hi-Pass Filter) is used for reducing Low Frequency noise such as handling noise, popping, rumble and proximity effect in microphone signals.
6. HF EQ (High Frequency) equaliser affects treble frequencies in the signal for adding "brightness" and "definition" or for reducing "hisss" and "hissiness".
7. LF EQ (Low Frequency) equaliser affects bass frequencies in the signal to cover "boom" and "sub-bass" frequencies.
8. PAN adjusts signal from a mono input channel between the left and right busses and subsequently the main outputs.
9. MIX rotary fader controls the amount of signal to the left and right busses.
10. Pre-Fades Listen (PFL) switches the channel input signal to the headphones for checking before adding it to Mix. The PFL signal is taken after the EQ but before the Mix control.

The Mix Adjust switch activates and deactivates the output level when the PFL switch is activated.

1.2 STEREO INPUT CHANNELS (ST)

ST1 and ST2 Inputs use standard 1/4" (6.35mm) Jack sockets for balanced or unbalanced line level stereo sources such as professional keyboards, drum machines and other pro audio equipment.

ST1 and ST2 Gain Control adjusts the input level to the channel.

HF and LF EQ are the same for ST1 & ST2 as they are for M1 & M2 and are set at 0dB.

BAL adjusts the relative level between the left and right stereo sources as they are sent to the left and right busses and subsequently the main outputs.

2. Connect mics, instruments and other equipment

2.1 "Zeroing"

It’s good practice to “zero” your mixer and turn down relevant channels before connecting any devices as this prevents potential damage to speakers or other equipment.

Follow these steps to make sure you’re safe and you avoid thumps and bangs when plugging equipment in.

 Speakers should always be switched off last and on first:

1. Make sure the power switch on the rear of the mixer is set to “OFF”.
2. Connect the AC Mains Lead provided to the AC MAINS IN socket on the rear of the mixer.
3. Plug the AC Mains Lead into a standard household mains socket.
4. Turn channel Gain controls all the way down (left).
5. Make sure Instrument, HPF, PFL and 48V switches are not pressed in.
6. Set all channel EQ and PAN controls to the centre position marked “0”.
7. Turn all FX send, AUX send and MIX controls all the way down (left).
8. Lower the MAIN MIX fader to “0”.
9. Turn down the PHONES level.
10. Double check speakers or amplifiers are switched off.
11. Connect speakers, instruments and other equipment, then mixer, THEN speakers.

Speaker or amp volumes should be set according to manufacturer guidelines.

2.2 This mixer is intended for professional use. Always ensure that the Maximum signal level from the source is less than the rated input level of this mixer.

3. Connect mics, instruments and other equipment

3.1 Connecting Microphones

Dynamic or condenser microphones and DI boxes should be connected to the Mic Input Socket using a balanced XLR Microphone cable.

Gain structure is important to get the maximum signal level without undesirable distortion.

HF EQ and LF EQ are the same for ST1 & ST2 as they are for M1 & M2 and are set at 0dB.

Take care when using microphones to ensure that the microphone is placed at an appropriate distance to the sound source.

4. Get the best sound

4.1 Gain Structure

1. Once you’ve connected your instruments and equipment you will need to set input levels before you can mix the signals together.
2. Gain structure is important to get the maximum signal level without undue distortion.
3. Set the input level to a safe listening volume.
4. Press the PFL switch on the corresponding channel.
5. Turn all channel Gain controls all the way down (left).
6. Turn all FX send, AUX send and MIX controls all the way down (left).
7. Lower the MAIN MIX fader to “0”.
8. Turn down the PHONES level.
9. Double check speakers or amplifiers are switched off.
10. Connect speakers, instruments and other equipment, then mixer.

Speaker or amp volumes should be set according to manufacturer guidelines.

4.2 Connect mics, instruments and other equipment

1. Get to know your mixer

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4. Instrument activates the Line / Inst input circuit for electro-acoustic and electric guitars, basses and other Direct Input instruments. When activated the Mic Input Socket is disabled.
5. In-cut (Hi-Pass Filter) is used for reducing Low Frequency noise such as handling noise, popping, rumble and proximity effect in microphone signals.
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1.2 STEREO INPUT CHANNELS (ST)

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HF and LF EQ are the same for ST1 & ST2 as they are for M1 & M2 and are set at 0dB.

BAL adjusts the relative level between the left and right stereo sources as they are sent to the left and right busses and subsequently the main outputs.

2. Connect mics, instruments and other equipment

2.1 "Zeroing"

It’s good practice to “zero” your mixer and turn down relevant channels before connecting any devices as this prevents potential damage to speakers or other equipment.

Follow these steps to make sure you’re safe and you avoid thumps and bangs when plugging equipment in.

 Speakers should always be switched on last and off first:

1. Make sure the power switch on the rear of the mixer is set to "OFF".
2. Connect the AC Mains Lead provided to the AC MAINS IN socket on the rear of the mixer.
3. Turn channel Gain controls all the way down (left).
4. Make sure Instrument, HPF, PFL and 48V switches are not pressed in.
5. Set all channel EQ and PAN controls to the centre position marked “0”.
6. Turn all FX send, AUX send and MIX controls all the way down (left).
7. Lower the MAIN MIX fader to “0”.
8. Turn down the PHONES level.
9. Double check speakers or amplifiers are switched off.
10. Connect speakers, instruments and other equipment, then mixer, THEN speakers.

Speaker or amp volumes should be set according to manufacturer guidelines.

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3. Connect mics, instruments and other equipment

3.1 Connecting Microphones

Dynamic or condenser microphones and DI boxes should be connected to the Mic Input Socket using a balanced XLR Microphone cable.

If you’re using a condenser microphone, it will require 48V Phantom Power to work.

Some active DI boxes may also require phantom power.

Avoid ‘hot plugging’ when connecting any equipment and make sure AUX MASTER and MAIN MIX controls are turned down before 48V is switched on as this may cause loud thumps and bangs.

3.2 Connecting Instruments and Line-Level Equipment

High-Humidity (Hi-Z) instruments such as electro-acoustic guitars, basses and other Direct Input instruments should be connected to Line / Inst inputs on channels M1 & M2 using a jack to jack instrument cable, and do not require an additional DI box or preamp.

The Instrument switch must be activated to match extremely high impedance signals (10MΩ) from instrument pickups.

Line level instruments such as keyboards, synthesizers, drum machines or equipment such as input signals should be connected to the Line / Inst input and subsequently the main outputs.

For channels M3 & M4 the LINE/PAD switch must be activated.

Follow the application examples in Section 7, for connecting devices to relevant input and outputs.

4. Get the best sound

4.1 Gain Structure

1. Once you’ve connected your instruments and equipment you will need to set input levels before you can mix the signals together.
2. Gain structure is important to get the maximum signal level without undue distortion.
3. Setting gain properly helps to optimise signal quality and ensure that the signal to noise ratio remains as low as possible.
4. If you’re using a microphone make sure the mic is placed at an appropriate distance to the sound source. (Close for quiet sources, further away for louder).
5. Press the PFL switch on the corresponding channel. This will allow you to hear the pre-fader input signal and will show the signal level on the LR Meters.
6. Sing, talk or play your instrument at a typical level of loudness.
7. Slowly raise theGain Control on the corresponding channel until you see a good signal level in the LR Meters. Maximum peaks between “5” and “6” on the meters are a good indicator.
8. Connect professional monitoring headphones to the Phones output and turn up the PHONES level to a safe listening volume.
9. If the signal levels unduely distored at a low signal level, enable any pad switch on the microphone, or move the microphone further away from the source and repeat the process.
10. Once you’re happy with the input signal level, you may wish to use low-cut (Hi-pass Filter) and the EQ to enhance intelligibility or to remove unwanted frequencies, and improve the tonal balance of the sound source, so keep the channel PFL switch enabled for now!

Section 4 continued overleaf...
4.2 Shaping Sound

EQ filters audio passing through it and allows you to ‘cut’ (turn down) or ‘boost’ (turn up) selected frequencies. ‘Boosting’ a frequency too much may cause the signal to clip or distort. ‘Cutting’ a frequency will cause a reduction in level.

1. High-cut (Hi-pass Filter) removes unwanted low frequency noise such as rumble, handling noise, thumps and proximity effect and helps maintain clarity in the signal. High-cut affects both Mic and Line/mic inputs. The corner frequency is set at 100Hz.

2. High EQ (High Frequency) affects treble frequencies in the signal. The corner frequency is at 12kHz for adding brightness and definition to guitars or for reducing ‘fat’ in vocals and harshness in symbols.

3. Low EQ (Low Frequency) equalizer affects bass frequencies in the signal. The corner frequency is at 80Hz for adding ‘roundness’ and ‘sub-bass’ to bass guitar or kick drum, or to remove ‘boom’ from toms.

When you're happy with the input signal level and tone you can disable the channel’s PFL switch and think about how to mix all these sounds together.

5. Important Safety Precautions

Water and moisture:
Do not expose the mixer to rain or moisture or use it in damp or wet conditions. Do not place containers of liquids on it which might spill into any openings.

Ventilation:
Do not obstruct the ventilation slots or position the mixer where the air flow required for ventilation is impeded. If the mixer is to be placed in a rack unit or flight case ensure that it is well ventilated.

Heat and vibration:
Do not place the mixer where it is subject to excessive heat or direct sunlight. Keep the mixer away from any equipment which produces excessive heat or vibration.

Servicing:
Switch off equipment and unplug the power cord immediately if it is exposed to moisture, spilled liquid, objects fallen into the openings, if the power cord or plug have become damaged, during lightning storms, or if smoke, odour or abnormal noise is noticed.

Refer servicing to qualified technical personnel only.

Installation:
Install the mixer in accordance with the instructions printed in this User Guide. Do not connect the output of power amplifiers directly to the mixer. Only use audio connectors and plugs for their intended purpose.

Read instructions:
Follow these safety and operating instructions for future reference.

Adhere to all warnings printed here and on the mixer and follow the operating instructions printed in this User Guide.

Do not remove cover:
Never operate the mixer if the cover is not correctly fitted.

Power sources:
Only connect the console to mains power of the type described in this User Guide and marked on the rear panel. Use a power cord with a lead and plug appropriate for your local mains supply as provided with the mixer. If the provided plug does not fit into mains your outlet consult your service agent for assistance.

Power cord routing:
Run the power cord so that it is out of the way and not likely to be walked on, sketched or pinched by items placed upon or against it.

Grounding:
Never remove or tamper with the ground connection or polarity in the power cord.

Additional information

For all additional information such as hardware specification, product information or technical support please go to http://www.allen-heath.com/colour

A limited one year manufacturer’s warranty applies to this product, the conditions of the warranty can be found at http://www.allen-heath.com/legal

For service or support in your local area please go to http://www.allen-heath.com/where-to-buy and search for the country you are in.

Please register this product at http://www.allen-heath.com/register to receive useful information from time to time.

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