IMPORTANT SAFETY INSTRUCTION

**CAUTION**
RISK OF ELECTRIC SHOCK
DO NOT OPEN

TO REDUCE THE RISK OF ELECTRIC SHOCK
PLEASE DO NOT REMOVE THE COVER OR
THE BACK PANEL OF THIS EQUIPMENT.
THERE ARE NO PARTS NEEDED BY USER
INSIDE THE EQUIPMENT. FOR SERVICE,
PLEASE CONTACT QUALIFIED SERVICE
CENTERS.

---

**WARNING**
To reduce the risk of electric shock
and fire, do not expose this equipment
to moisture or rain.

---

Dispose of this product should
not be placed in municipal waste
and should be separate collection.

---

11. Move this Equipment only with a cart,
stand, tripod, or bracket,
specified by the
manufacturer, or
sold with the
Equipment. When
a cart is used, use
care when
moving the cart /
equipment
combination to
avoid possible
injury from tip-over.

---

12. Permanent hearing loss may be caused by
exposure to extremely high noise levels.
The US. Government's Occupational Safety
and Health Administration (OSHA) has
specified the permissible exposure to noise
level. These are shown in the following chart:

<table>
<thead>
<tr>
<th>HOURS X DAY</th>
<th>SPL</th>
<th>EXAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,5</td>
<td>102</td>
<td>Classic music concert</td>
</tr>
<tr>
<td>1</td>
<td>105</td>
<td></td>
</tr>
<tr>
<td>0,5</td>
<td>110</td>
<td></td>
</tr>
<tr>
<td>0,25 or less</td>
<td>115</td>
<td>Rock concert</td>
</tr>
</tbody>
</table>

According to OSHA, an exposure to high SPL in
excess of these limits may result in the loss of
heat. To avoid the potential damage of heat, it is
recommended that Personnel exposed to
equipment capable of generating high SPL use
hearing protection while such equipment is
under operation.

The apparatus shall be connected to a mains
socket outlet with a protective earthing
connection.

The mains plug or an appliance coupler is used
as the disconnect device, the disconnect device
shall remain readily operable.

---

- This symbol, wherever used, alerts you to the
  presence of un-insulated and dangerous voltages
  within the product enclosure. These are voltages that
  may be sufficient to constitute the risk of electric
  shock or death.
- This symbol, wherever used, alerts you to important
  operating and maintenance instructions. Please
  read.
- Protective Ground Terminal
- AC mains (Alternating Current)
- Hazardous Live Terminal
- ON: Denotes the product is turned on.
- OFF: Denotes the product is turned off.

---

- 1. Read this Manual carefully before operation.
- 2. Keep this Manual in a safe place.
- 3. Be aware of all warnings reported
  with this symbol.
- 4. Keep this Equipment away from water and
  moisture.
- 5. Clean it only with dry cloth. Do not use
  solvent or other chemicals.
- 6. Do not damp or cover any cooling opening.
  Install the equipment only in accordance with
  the Manufacturer's instructions.
- 7. Power Cords are designed for your safety. Do
  not remove Ground connections! If the plug
does not fit your AC outlet, seek advice from
  a qualified electrician. Protect the power
cord and plug from any physical stress to
  avoid risk of electric shock. Do not place
  heavy objects on the power cord. This could
  cause electric shock or fire.
- 8. Unplug this equipment when unused for long
  periods of time or during a storm.
- 9. Refer all service to qualified service personnel
  only. Do not perform any servicing other than
  those instructions contained within the
- 10. To prevent fire and damage to the product,
    use only the recommended fuse type as
    indicated in this manual. Do not short-circuit
    the fuse holder. Before replacing the fuse,
    make sure that the product is OFF and
    disconnected from the AC outlet.
Thank you for purchasing the LTO L-6 6-channel mixing console with 24-bit digital multi-effect. It is just one of the many Alto products that a talented, multinational Team of Audio Engineers and Musicians have developed with their great passion for music. Your L-6 is a remarkable compact mixing desk that does not find many equals in the market today. With 2 microphone and 2 stereo Line-level inputs for small live performances, small studio recording and general PA applications, your L-6 also includes a 24-Bit digital multi-effect with 16 Factory Presets and separate level for digital reverb. There is a three bands EQ on all input channels and separate Main Mix and Control Room outputs for Multizone operation with different volume settings. Use it for small GIGs and RECORDING. Your L-6 also is a flexible tool for your Multi-media presentations. Enjoy your L-6 and make sure to read this Manual carefully before operation!

2. FEATURES

- 2 MIC input channels with gold plated XLR and balanced LINE input
- 2 stereo input channels with balanced TRS jacks
- Ultra-low noise discrete MIC pre-amps with +48V Phantom power
- Extremely high headroom offering extra dynamic range
- Balanced inputs for optimal signal integrity
- Warm, natural 3-band EQ on each channel
- Built-in 24 bits digital effects processor
- Peak LED on each channel
- AUX send for internal/external effects or stage monitoring
- Main output, Control room and headphone outputs
- 2-Track inputs assignable to main mix, control room/headphone outputs
- Highly accurate 6-segment bar graph meters
3. QUICK START

This is the fastest way to get something out from your L-6, if you have a keyboard and a microphone.

a. With the Main switch in OFF position, connect the supplied AC Adapter to your L-6 first and then into the AC outlet, making sure that the available voltage is the same with your L-6.

b. Before turning on the L-6, you shall connect it to a power amplifier and speakers. Turning off the mixer BEFORE the power amplifier.

c. Plug the microphone into Channel 1 MIC IN.

d. Turn down AUX and LEVEL controls on the input channel.

e. Put the EQ controls on center position.

f. Turn on your L-6.

g. With LEVEL control on "0" position, sing or speak in to the microphone with normal volume and adjust the TRIM control so that the PEAK LED only blink occasionally.

h. If you like, you can adjust the equalization at this stage.

i. Turn up MAIN MIX LEVEL until you get a comfortable volume.

j. Connect your stereo keyboard into CH 3/4 and repeat the same sequence.

Here you are. It is your first mix with your L-6.

Once you have finished your working session you shall turn the mixer off AFTER the power amplifier. Before disconnecting the AC Adapter always turn-off your L-6. Do not use solvents to clean your L-6. A dry and clean cloth will be OK.
Your L-6 is equipped with 2 low-noise microphone preamplifiers with optional phantom power, 60 dB of Gain and 115 dB of S/N ratio. You can connect almost any type of microphone. Dynamic microphones do not need phantom power. Use phantom power only with condenser microphones but make sure that the phantom power button is disengaged before connecting the microphone. Phantom power will not damage your dynamic microphones but it may damage tube or ribbon microphones so make sure to read the microphone instructions manual before engaging phantom power. Use switch (24) to activate/deactivate phantom power. These two channels are also equipped with 1/4" TRS balanced/unbalanced LINE-IN plugs to connect line-level instruments such as keyboards, drum machines and effect devices.

**NOTE:** Never try to connect a line-level signal to the XLR MIC input when the phantom power is engaged or you may seriously damage your equipment.

**STEREO LINE INPUTS (3 to 6)**

These are channels 3/4, and 5/6. They are organised in stereo pair and provided with 1/4" TRS phone sockets. If you connect only the left jack, the input will operate in mono mode, that is the mono signal will appear on both input channels. You can use these inputs with a stereo keyboard, drum machine, etc.

**TRIM**

This control is provided with 2 different indication rings: one is for the MIC and the other for the LINE input. When you use a Microphone, you shall read the MIC ring (0~60 dB); when you use a line level instrument, you shall read the LINE ring (+15~-45 dB). For optimum operation, you shall set this control in a way that the PEAK LED will light up only occasionally in order to avoid distortion on the input channel.
4. AUX SEND
This 1/4" phone socket is used to send out the signal from the AUX bus of the input channels into external devices such as effect units and/or stage monitors. The AUX SEND is wired post-fader to control the signal of the internal multi-effects unit. You can also connect an external effect unit. In such case, the internal effect unit will be automatically disconnected. If you want to wire the AUX circuit as pre-fader, read Chapter 6. of this Manual. In the pre-fader mode, the AUX bus can send the signal to a stage monitor.

5. STEREO AUX RETURNS
You can use these stereo 1/4" phone sockets to return the stereo signal of an effect unit to the Main Mix. Alternatively you can use them as an extra auxiliary input and using the AUX RETURN level control as volume control. The signal will be sent directly to MAIN MIX control.

6. CTRL ROOM OUTPUT
These 1/4" phone sockets will be used to send the signal to a pair of powered Studio Monitor speakers or to a second set of PA.

7. MAIN MIX OUTPUTS
This stereo output is controlled by the Main Mix Level on the Master section and will send the audio signal to an amplifier or to a pair of active speakers. The output level can be varied from $-\infty$ to $+15$ dB.

8. TAPE IN
Use the Tape input to connect a CD Player, Tape, DAT, iPod or any other line-level source. You can send this signal either to CONTROL ROOM OUTPUT and/or to the MAIN MIX OUTPUT using the relative 2TK TO select buttons.

9. TAPE OUT
These RCA jacks will route the main mix signal into a tape or DAT recorder.

10. PHONES
This socket will be used to send the signal to a pair of headphones.

CHANNEL STRIP

11. LEVEL
This knob controls the channel's level from $-\infty$ to $+15$ dB.

12. PEAK LED
This red LED will let you know about the status of the signals processed into your L-6. Connect a microphone or an instrument to your L-6 and sing/play at normal volume. Set the level control of that channel so that the PEAK LED lights-up only occasionally. If this LED is always on, you are experiencing a lot of distortion and you should turn the TRIM control down or reduce the EQ boosting. If this led never lights up, turn the TRIM control up again.
4. CONTROL ELEMENTS

13 PAN/BAL

This is the PANORAMA control, or balance control. You can adjust the stereo image of the signal via this control. Keep this control in center position and your signal will be positioned in the middle of stage. Turn this control fully counter clockwise and the signal will be present only on the left speaker and vice-versa. Of course a large number of intermediate positions is available.

14 AUX

This control is used to adjust the level of the signal sent to AUX SENDS output (if nothing is connected to AUX SEND socket, the signal will be sent to the resident digital multi-effect), and such adjustment doesn’t affect the main mix output signal at all. AUX is configured as POST fader, however, it can also be configured as PRE fader through internal modification. (For more detail, please refer to chapter 6)

15 HI

If you turn this control up, you will boost all the frequencies above 12 kHz (shelving filter). You will add transparency to vocals and guitar and also make cymbals crisper. Turn the control down to cut all frequencies above 12 kHz. In such way, you can reduce sibilances of human voice or reduce the hiss of a Tape player.

16 MID

This is a peaking filter and it will boost/cuts frequencies with their center at 2.5 kHz. This control will affect especially upper male and lower female vocal ranges and also the harmonics of most musical instruments.
17. LOW

If you turn this control up, you will boost all frequencies below 80 Hz. You will give more punch to bass drums and bass guitar; and you will make the male vocalist more "macho". Turn it down and you will cut all the frequencies below 80 Hz. In this way you can avoid low-frequency vibrations and resonance thus preserving the life of your woofers.

MASTER SECTION

18. MAIN MIX LEVEL

This knob controls the level of the signal sent to MAIN OUTPUTS and TAPE OUT. Also AUX RETURNS signals will be sent to this control.

19. PHONES/CONTROL ROOM LEVEL

This knob controls the signal sent to CONTROL ROOM OUTPUT & PHONES OUTPUT.

20. OUTPUT LEVEL METERS

These consist of two column of 6 LEDs each ranging from -30 dB to +18 dB (CLIP). The 0 LED corresponds to a level output of 0 dBu. The CLIP LEDs come to life when the output reaches +18 dBu. Set the MAIN MIX level control so that the CLIP LEDs only flashes occasionally. In general, you get a good mix level when the Meter LEDs operate in the range 0 to +10. If you exceed +10, you will get distortion. If even -30 LEDs are sleeping your signal-to-noise ratio will suffer.
4. CONTROL ELEMENTS

21 AUX RETURNS (DFX)
This knob controls the level of effects received from the STEREO AUX RETURN sockets. Such signals will be routed directly into the MAIN MIX. If you have no need to connect an external multi-effect, you can use the AUX RETURN inputs as additional instrument inputs and use this control as Volume control.

22 2TK TO CTRL ROOM
If you push down the 2TK TO CONTROL ROOM button, the 2 TRACK IN signal will be routed into the Control Room output and the level will be adjusted by the Control Room knob nearby the Main MIX LEVEL knob.

23 2TK TO MIX
If you push down the 2TK TO MIX button, the 2 TRACK IN signal will be routed into the MAIN output and will be adjusted by the MAIN MIX LEVEL knob.

24 PHANTOM PWR Switch
This button will apply +48 Volt Phantom Power only to the 2 XLR MIC input sockets. When condenser microphones are not used, please make sure that the Phantom Power is disengaged.

25 PHANTOM LED
This LED indicates when the PHANTOM POWER is engaged.

26 POWER LED
This LED indicates when your L-6 is switched-on.

24-BIT DIGITAL MULTIEFFECT
DSP SECTION
Your L-6 includes a quite unique and innovative digital multi-effects with 24-bit resolution and high dynamic range. Unlike other multi-effects where all the presets are available in a sequence and vice a single control, L-6 multi-effect unit is organized with a 16 presets control and relative Level control for vibrato and modulation controls such as chorus and flanger. You can add reverb at any time with a separate Level control or you can just use the reverb keeping the FX level control turned down.

27 PRESETS
Adjust this control to select the desired effect. There are a total of 16 Factory presets available including pitch-variations, Vibratos, Flanger, Chorus, etc.
28 FX LEVEL
This control is used to adjust the output level of FX signal, which can be varied from 0 dB to 10 dB.

29 REVERB LEVEL
This control is used to adjust the output level of the REVERB signal, which can be varied from 0 dB to 10 dB. The digital reverb is independent from the other 16 Factory Presets so you can add reverb in any amount over chorus, flanger, etc or just use reverb turning down the FX LEVEL control.

30 PEAK LED
This LED lights up when the input signal is too strong.

REAR PANEL

31 POWER SWITCH
This switch is used to turn the main power ON and OFF.

32 AC INPUT
This connector is used to connect the supplied AC Adapter.
Ok, you have got to this point and you are now in the position to successfully operate your L-6. However, we advise you to read carefully the following section to be the real master of your own mix. Not paying attention enough to the input signal level, to the routing of the signal and the assignment of the signal will result in unwanted distortion, a corrupted signal or no sound at all. So you should follow this procedure for every single channel:

1. Turn down all Input and Output Gain Controls.
2. Connect phantom powered microphones before switching on the +48 Volt phantom power switch.
3. Set the output level of your L-6 or the connected power amplifier at no more than 75%.
4. Now, set the CONTROL ROOM/PHONE level at no more than 50%.
5. Position HI, MID and LOW EQ controls on middle position.
6. Position panoramic (PAN/BAL) control on center position.
7. With a pair of headphones or studio monitor speakers connected apply a Line Level input signal so that the PEAK LED does not light up.
8. While speaking into the microphone (or playing the instrument), adjust the channel level control so that the PEAK LED will blink occasionally, in this way you will maintain good headroom and ideal dynamic range.
9. Now repeat the same sequence for all input channels. The Main LED Meter could move up into the red section. In this case, you can adjust the overall output level through the MAIN MIX control.

Audio Connections
You can connect unbalanced equipment to balanced inputs and outputs. Simply follow these schematics.
5. INSTALLATION AND CONNECTION

![Diagram of 3-pin XLR Male Plug and 3-pin XLR Line Socket](image)

6. APPENDIX

PREFADER AND POSTFADER CONSIDERATIONS

Interesting consideration! Where are the faders in your L-6?? Actually a fader is usually regarded as a slider, that is a linear potentiometer. All potentiometers in your L-6 are of rotary type but we keep the pre-fader/post-fader description that is quite industry standard and easily understandable. When your L-6 leaves the Alto Factory, the AUX bus of all input channels is wired post-fader. In this way, the Aux bus can be used for the internal or external multi-effect.

If you want to use the L-6 Aux bus for powered stage monitors, you should disconnect the above-indicated POST route track and solder the PRE route track like in this drawing. In this way, the signal is routed to the AUX SENDS output before the Channel Level control.

![Diagram for Aux bus configuration](image)

AUX

(PRE)

POST

Before

Disconnect the POST route

Solder the PRE route

AUX

(PRE)

POST

After
### 7. PRESET LIST

<table>
<thead>
<tr>
<th>NO.</th>
<th>Preset</th>
<th>Description</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>VibraFlange</td>
<td>Slight pitch variation with Flanger effect.</td>
<td>Mode Level: 90%</td>
</tr>
<tr>
<td>2</td>
<td>Funky</td>
<td>Large pitch variable with heavy Flanger effect.</td>
<td>Mode Level: 68%</td>
</tr>
<tr>
<td>3</td>
<td>Rockabilly</td>
<td>Simulate a stage space with slight Flanger effect.</td>
<td>Rate: 0.1 Hz</td>
</tr>
<tr>
<td>4</td>
<td>Big stage</td>
<td>Simulate a stage space of the sound.</td>
<td>Decay time: 5.4s</td>
</tr>
<tr>
<td>5</td>
<td>Vibrato 4</td>
<td>Slight variation of pitch resulting from the free oscillation of the vocal cords.</td>
<td>Rate: 4.8 Hz</td>
</tr>
<tr>
<td>6</td>
<td>Vibrato 3</td>
<td>Slight variation of pitch resulting from the free oscillation of the vocal cords.</td>
<td>Rate: 3.8 Hz</td>
</tr>
<tr>
<td>7</td>
<td>Vibrato 2</td>
<td>Slight variation of pitch resulting from the free oscillation of the vocal cords.</td>
<td>Rate: 3.0 Hz</td>
</tr>
<tr>
<td>8</td>
<td>Vibrato 1</td>
<td>Slight variation of pitch resulting from the free oscillation of the vocal cords.</td>
<td>Rate: 2.0 Hz</td>
</tr>
<tr>
<td>9</td>
<td>Flanger 4</td>
<td>Simulate to play with another person carrying out same the notes on the same instrument.</td>
<td>Rate: 4.9 Hz</td>
</tr>
<tr>
<td>10</td>
<td>Flanger 3</td>
<td>Simulate to play with another person carrying out same the notes on the same instrument.</td>
<td>Rate: 3.21 Hz</td>
</tr>
<tr>
<td>11</td>
<td>Flanger 2</td>
<td>Simulate to play with another person carrying out same the notes on the same instrument.</td>
<td>Rate: 0.9 Hz</td>
</tr>
<tr>
<td>12</td>
<td>Flanger 1</td>
<td>Simulate to play with another person carrying out same the notes on the same instrument.</td>
<td>Rate: 0.56 Hz</td>
</tr>
<tr>
<td>13</td>
<td>CHORUS 4</td>
<td>Recreate the illusion of more than one instrument from a single instrument sound.</td>
<td>Rate: 3.6 Hz</td>
</tr>
<tr>
<td>14</td>
<td>CHORUS 3</td>
<td>Recreate the illusion of more than one instrument from a single instrument sound.</td>
<td>Rate: 1.79 Hz</td>
</tr>
<tr>
<td>15</td>
<td>CHORUS 2</td>
<td>Recreate the illusion of more than one instrument from a single instrument sound.</td>
<td>Rate: 0.82 Hz</td>
</tr>
<tr>
<td>16</td>
<td>CHORUS 1</td>
<td>Recreate the illusion of more than one instrument from a single instrument sound.</td>
<td>Rate: 0.39 Hz</td>
</tr>
</tbody>
</table>
## 9. Technical Specification

### Mono Input Channels
- **Microphone Input:** Electronically balanced, discrete input configuration
- **Frequency Response:** 10 Hz to 55 kHz, +/- 3 dB
- **Distortion (THD & N):** 0.005% at +4 dBu, 1 kHz
- **Gain Range:** 0 dB to 60 dB (MIC)
- **SNR (Signal to Noise Ratio):** 115 dB
- **Line Input:** Electronically balanced
- **Frequency Response:** 10 Hz to 55 kHz, +/- 3 dB
- **Distortion (THD & N):** 0.005% at +4 dBu, 1 kHz
- **Sensitivity Range:** +15 dBu to +/-45 dBu

### Stereo Input Channels
- **Line Input:** Balanced
- **Frequency Response:** 10 Hz to 55 kHz, +/- 3 dB
- **Distortion (THD & N):** 0.005% at +4 dBu, 1 kHz

### Impedances
- **Microphone Input:** 1.4 kOhm
- **All Other Inputs:** 10 kOhm or greater
- **Tape Out:** 1 kOhm
- **All Other Outputs:** 120 Ohm

### Equalization
- **Hi Shelving:** +/- 15 dB @12 kHz
- **Mid Bell:** +/- 15 dB @ 2.5 kHz
- **Low Shelving:** +/- 15 dB @ 80 Hz

### DSP Section
- **A/D and D/A Converters:** 24-bit
- **DSP Resolution:** 24-bit
- **Type of Effects:** Vibraflange, Funky, Rockabilly, Bigstage, Vibrato 1-4, Flanger 1-4, Chorus 1-4
- **Presets:** 16
- **Controls:** 16-position PRESET Selector, FX level, REVERB level, CLIP LED

### Main Mix Section
- **Noise (Bus Noise):** Fader 0 dB, channels muted: -100 dB (ref.: +4 dBu)
  - Fader 0 dB, all input channels assigned and set to
  - **UNITY Gain:** -90 dB (ref.: +4 dBu)
- **Max Output:** +22 dBu unbalanced, 1/4" jacks
- **AUX Returns Gain Range:** -∞ to +15 dB
- **AUX Sends Max Out:** +22 dBu

### Power Supply (AC/DC Adaptor)
- **Main Voltage:** USA / Canada 100-120 V~, 60 Hz
- **Europe:** 210-230 V~, 50 Hz
- **U.K. / Australia:** 240 V~, 50 Hz
- **Power Consumption:** 15 Watts

### Physical
- **Dimension (W x D x H):** 185 mm x 230 mm x 35/55 mm
- **Net Weight:** 1.4 kg (3.09 lb)
- **Shipping Weight:** 2.7 kg (5.95 lb)
1. WARRANTY REGISTRATION CARD
To obtain Warranty Service, the buyer should first fill out and return the enclosed Warranty Registration Card within 10 days of the Purchase Date. All the information presented in this Warranty Registration Card gives the manufacturer a better understanding of the sales status, so as to provide a more effective and efficient after-sales warranty service. Please fill out all the information carefully and genuinely, miswriting or absence of this card will void your warranty service.

2. RETURN NOTICE
2.1 In case of return for any warranty service, please make sure that the product is well packed in its original shipping carton, and it can protect your unit from any other extra damage.
2.2 Please provide a copy of your sales receipt or other proof of purchase with the returned machine, and give detail information about your return address and contact telephone number.
2.3 A brief description of the defect will be appreciated.
2.4 Please prepay all the costs involved in the return shipping, handling and insurance.

3. TERMS AND CONDITIONS
3.1 ▲LTO warrants that this product will be free from any defects in materials and/or workmanship for a period of 1 year from the purchase date if you have completed the Warranty Registration Card in time.
3.2 The warranty service is only available to the original consumer, who purchased this product directly from the retail dealer, and it can not be transferred.
3.3 During the warranty service, ▲LTO may repair or replace this product at its own option at no charge to you for parts or for labor in accordance with the right side of this limited warranty.
3.4 This warranty does not apply to the damages to this product that occurred as the following conditions:
• Instead of operating in accordance with the user's manual thoroughly, any abuse or misuse of this product.
• Normal tear and wear:
• The product has been altered or modified in any way.
• Damage which may have been caused either directly or indirectly by another product / force / etc.
• Abnormal service or repairing by anyone other than the qualified personnel or technician.
And in such cases, all the expenses will be charged to the buyer.
3.5 In no event shall ▲LTO be liable for any incidental or consequential damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitation may not apply to you.
3.6 This warranty gives you the specific rights, and these rights are compatible with the state laws, you may also have other statutory rights that may vary from state to state.