Welcome

Congratulations on purchasing a Lightspeed Aviation Tango wireless headset. Your headset is a premium product that will provide many years of comfortable high performance for your flying endeavors.

If this is your first Lightspeed Aviation headset—welcome to the Lightspeed family! We look forward to building a lasting community with our customers founded on products and service that are best in class. To support your passion for flying we invite you to visit LightspeedAviation.com where you'll find useful insights about our other products and aviation.

Thank you for choosing a Lightspeed Aviation headset.

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Introduction

Your Tango headset package includes (clockwise, from top left on the following page):

- Carrying case
- User Guide and Quick Start Guide with warranty information
- Tango ANR headset
- Tango panel interface
- Two Micro-USB charging cables
- Two Lightspeed rechargeable batteries (one with panel power version)
- Color chips for multiple headsets
- Dual USB wall charger
- Audio device cable with 3.5mm connector
- Steel clip
Getting Started

Fitting your headset

Fitting your headset properly is the key to comfortable use and superior Active Noise Reduction (ANR) capabilities. To gain peak performance from the ANR feature it’s necessary to have a solid seal around your entire ear combined with a symmetrical fit on your head.

The following tips will assist in achieving the proper fit.

A. Fit your ears entirely within the ear cups providing a solid seal.

B. Rest the headband lightly on top of your head with the right and left sliders extended to equal lengths.

C. Position the microphone 1/8 inch from your mouth, with the gain adjustment cap facing away from you (visible when you remove the mic muff).

Note: The microphone will not transmit unless the panel interface is plugged into an intercom and the system is turned on.
**Battery installation**

The Tango headset requires two rechargeable lithium ion batteries, except the panel powered version, which requires only one (batteries included).

A. Open the headset battery compartment door by pressing down on the battery door release. Align the contacts on the battery with the contacts in the compartment and close the battery compartment door.

B. To access the panel interface battery compartment door, open the jacket, then open the battery compartment on the back of the panel interface. Align the contacts on the battery with the contacts in the compartment, and close the battery compartment door.

C. The LED flashes green when charged batteries are in use and the power is on.

The batteries will last approximately 12 hours when fully charged. The power LED will flash red and an audible tone will play briefly when there are 3 hours of battery life remaining. If this happens during flight, the headset will continue to operate. Recharge batteries as soon as possible at any indication of low batteries. *(Note: The LED will continue to flash red and the audible tone will play after increasingly short intervals as the battery drains to zero.)* Because lithium ion batteries — unlike Ni Cad batteries — do not develop a “memory” and do not need to be fully discharged before recharging, we recommend that you charge your batteries before each flight. Heavy Bluetooth usage can significantly reduce battery life.

The headset and panel interface include Auto Shutoff™ to preserve battery life. Learn more about this feature on page 12.
The panel interface (front and side)

A. Auxiliary input: Use the supplied cable to connect a wired auxiliary audio source or phone. Also use this connection for FlightLink recording functions. See “FlightLink” section on page 18.

B. Power button: Press button once to turn the panel interface on; press and hold to turn it off.

C. Power indicator LED: Flashes GREEN when power is supplied and batteries are strong. Flashes RED when there are approximately 3 hours of battery life remaining.

D. Bluetooth indicator LED: Flashes BLUE when Bluetooth mode is on and RED when Bluetooth is being turned off. In pairing mode, flashes alternating RED and BLUE.
E. Bluetooth button: Turns the Bluetooth function on and off and controls Bluetooth-connected devices, including cell phones and music players.

F. Charging LED: RED/AMBER indicates charging in progress. GREEN indicates charging complete.

G. USB charging port: Plug in USB cable to charge the battery. **Note:** You can charge the battery while using the panel interface.

H. Channel identification color chip

I. Backup cable: In the event that you lose power in the headset or the panel interface, pull the backup cable from the panel interface and plug it into the headset.

**Note:** Plugging the backup cable into the headset will turn off the ANR. The headset will run in passive mode.
The panel interface (back)

A. Channel select switch: Changes the channel of the boom microphone link. Changing the factory setting is only necessary when using multiple Tango headsets in the same aircraft. See “Multiple Headsets” on page 14.

B. Link button: This button is used to establish the wireless link between the headset and panel interface. The system is shipped with the link already established and this button is only needed when a new headset/panel interface connection needs to be established. See “Multiple Headsets” on page 14.

C. Link LED: Blinking RED indicates not linked. Solid RED indicates link established.
D. Battery compartment: Open this compartment to access the panel interface battery.

E. Stereo/mono select switch: Select the correct position based on your intercom. If you only hear the intercom in one ear, select the opposite position for mono operation.

F. Lower cable: Adjust the length of the lower cable to fit your application by winding or unwinding cable around the post.
Getting Started

The headset

A. Battery door release: Push down on this button to open the battery compartment door.

B. Power indicator LED: Flashes **GREEN** when power is supplied and batteries are strong. Flashes **RED** when batteries are low.

C. Power button: Press button once to turn the headset on; press and hold to turn it off.

D. USB charging port: Plug in USB cable to charge the battery.

E. Charging LED: **RED/AMBER** indicates charging in progress. **GREEN** indicates charging complete.

F. Channel select switch: Changes the channel of the boom microphone link. Changing the factory setting is only necessary when using multiple Tango headsets in the same aircraft. See “Multiple Headset” on page 14.
H. Volume control: Adjust volume by tapping the upper part of the volume control to increase the volume and the lower part to decrease the volume. To cover a range of situations and preferences, we have engineered a wide volume range, with a larger number of detents than you may find in less expensive audio products. If you are not hearing a volume change as you tap the volume control, pause briefly between taps.

I. ComPriority™ button: Lowers the volume of music and other audio from auxiliary devices during radio communications.

J. Link button: This button is used to establish the wireless link between the headset and panel interface. The system is shipped with the link already established and this button is only needed when a new headset/panel interface connection needs to be established. See “Multiple Headsets” on page 14.
Using Your Tango Headset

**Turning the system ON and OFF**

ON: Press the power button on panel interface once. The **GREEN** power LED flashes when power is supplied. Lightspeed Link will automatically connect to the headset when the system is powered on. Press the power button on the headset once. The **GREEN** power LED flashes when power is supplied. Active Noise Reduction (ANR) is engaged when you turn on the headset.

OFF: Press and hold the power button on the headset until the **GREEN** power LED turns off. Press and hold the power button on the panel interface until the **GREEN** power LED turns off.

**Auto Shutoff™**

Under quiet conditions Tango will automatically shut off approximately five minutes after the headset is removed from your head. The panel interface will shut off five minutes after it has been unplugged from the intercom or intercom power is turned off. Auto Shutoff can be disabled on either device by holding the power switch for that device for 3 seconds when turning the system on. The power LED will double blink to indicate that Auto Shutoff has been disabled.

**Note:** The panel-powered version (LEMO) of the panel interface runs solely on aircraft power and turns off immediately when aircraft power is turned off or when it is disconnected from the aircraft.
Using Your Tango Headset

Matching stereo/mono setting to an audio panel

The stereo/mono switch setting should match the signal from your audio panel. Incorrect settings result in communications being heard in only one ear. The stereo/mono switch does not affect auxiliary devices, so you can enjoy auxiliary audio in stereo regardless of how the stereo/mono switch is set.

ComPriority™

ComPriority lowers the volume of music and other audio from auxiliary devices during radio communications. Its button is next to the volume control on the headset. An audible tone will notify the user that ComPriority has been enabled or disabled.

Wired auxiliary devices

To connect a music player or cell phone to Tango’s auxiliary input jack, use the cord provided.

IMPORTANT: To use a cell phone via the auxiliary input jack, the headset must be connected to the intercom.

To adjust the volume on a device connected to Tango’s auxiliary input jack, use the controls on the device itself.
Multiple Headsets

Up to 6 Tango headsets can be used simultaneously in an aircraft.

When more than one headset is used in an aircraft, the Channel Select switch will need to be changed such that each headset/panel interface system is set to its own channel (i.e. first headset and panel interface set to channel 1, second headset and panel interface set to channel 2, etc.).
We have provided 6 sets of color chips with each headset. These allow you to color code the headset and panel interface that go together.

To change the color chip on the headset, pull the color chip out from the back. To change the color chip on the panel interface, gently pry it out with a fingernail or screwdriver.
Bluetooth Devices

Connecting Bluetooth devices for the first time
Before using a Bluetooth cell phone or other Bluetooth-capable device for the first time with Tango it must be “paired” or electronically connected.

To pair a Bluetooth cell phone with Tango:
1. Turn on the panel interface and verify the GREEN LED is flashing. Make sure Bluetooth mode is turned off. BLUE or RED flashes from the Bluetooth LED should not be present. See “Bluetooth Mode—ON and OFF” on page 17.

2. Press and hold the panel interface Bluetooth button for about five to ten seconds or until the Bluetooth LED continually flashes RED and BLUE. This lasts about two minutes. If this step takes longer and the Bluetooth LED is no longer alternating RED and BLUE, start over from step one.

3. With Tango in pairing mode, follow the menu prompts on your Bluetooth device directing it to look for Bluetooth devices.

4. Select Lightspeed-V### (numbers may vary) on your Bluetooth device from the list of found devices.

5. If asked to enter a password or PIN, enter 0000.

Your Bluetooth device should now be paired and ready for use with Tango.
Bluetooth mode—ON and OFF

ON: With Tango turned ON, press and hold the Bluetooth button until you hear a tone and the Bluetooth indicator LED flashes three **BLUE** pulses. For first time pairing see instructions on page 16.

OFF: Press and hold Tango’s Bluetooth button for about three seconds until a high tone is emitted and the Bluetooth indicator LED flashes three **RED** pulses.

**Note:** The Bluetooth feature must be turned ON for Bluetooth connected devices to correctly function.

When you turn on the Tango Bluetooth mode, it will connect to the most recently paired device. Most Bluetooth devices connect to Tango automatically. If that doesn’t happen it may be necessary to use the device’s menu of found devices to manually connect to Lightspeed-V### (numbers may vary).

Bluetooth cell phone features

Depending on the Bluetooth profile of the phone, you can use Tango’s Bluetooth button to perform several functions. Some typical functions are:

- Press and hold the Bluetooth button for two seconds to redial the last number called.
- Press the Bluetooth button once for voice dialing (if supported by your phone).
- Press the Bluetooth button once to answer the phone when it rings.
- Press the Bluetooth button once to disconnect from a call.
FlightLink is the first in-flight cockpit recording application for the iPad® and iPhone®. The free app works seamlessly with all new Lightspeed headsets to capture and retrieve all incoming and outgoing communications.

**Features**

- Record all activity over the intercom
- Immediate replay of ATC calls
- Store high resolution or compressed files in your library
- Draw notes, codes, or diagrams on the convenient iPad® scratchpad for reference

**How to activate**

Download the FlightLink app from the App Store.

Connect the provided auxiliary cable between your iOS device (iPhone® or iPad®) and your Tango panel interface auxiliary input.

Tap the icon on your iPad® or iPhone® to begin using the app.

**Toggling between apps**

Press your device’s Home button and select another app. Your recording will continue uninterrupted as you switch between different applications. A red bar at the top of the screen indicates FlightLink is recording.
Why do I hear radio communications in only one ear?

Tango’s stereo/mono switch is probably set to Stereo while your audio panel is transmitting a mono signal. To fix this, change Tango’s stereo/mono switch to Mono. This setting does not affect music or audio from auxiliary devices; you can hear stereo sound on auxiliary devices even when the stereo/mono switch is set to Mono.

Why doesn’t my Bluetooth device accept Tango’s 0000 passcode?

Your headset may not be in pairing mode. Some devices prompt for a pass code without checking for pairing mode. When the device cannot pair with the headset, it rejects the passcode. To enter pairing mode, you must start with Bluetooth mode turned fully OFF. See “Connecting Bluetooth cell phones for the first time” on page 16.

When pairing Tango with my Bluetooth device, why does my device indicate it cannot connect?

The headset may not be in pairing mode. To enter pairing mode, you must start with Bluetooth mode turned fully OFF. See “Connecting Bluetooth cell phones for the first time” on page 16.

How can I reduce static noise during cell phone calls?

To reduce RF interference during phone calls, keep cell phones at least 12 inches from the Tango controller and headset when making calls.
When flying what causes a warbling noise in the ear cup?

If your ear is not entirely inside the cup, with a tight seal, air can seep in and cause the ANR to compensate for uneven internal cup pressure.

My Bluetooth audio is dropping out, how can I fix this?

Try moving the Bluetooth source (phone or other) to a location closer to the panel interface. Also, if your panel interface is inside a pocket or box, try placing it on the outside and use the included hook for mounting it on the outside of a pocket.

Where is my product serial number?

The serial number (a small, white, bar-code sticker with numbers) can be found on the outside of the outer box, and on the headset behind the battery access door in the battery compartment.
Start with an excellent fit. See “Fitting your headset” on page 4.

Set Tango’s stereo/mono switch to match the signal from your audio panel. See “Matching Tango’s stereo/mono setting to your audio panel signal” on page 12.

Keep cell phones at least 12 inches from the Tango panel interface and headset when making call to reduce static noise during phone calls.

To conserve battery life, turn OFF Bluetooth mode when not in use.

Lightspeed Link has been optimized for wireless aviation performance. However, there is still a slight delay (latency) in the wireless path. To minimize the sound of the echo, try placing the microphone closer to your mouth. Slightly increasing the level of your intercom either with the headset volume control or directly on the intercom.

Lightspeed recommends replacement of the soft goods on your headset (ear seals, head pads and mic muff) every 18 months to ensure peak ANR performance and comfort. These are wear items and are not covered by the Lightspeed warranty and are available for purchase on our website at LightspeedAviation.com/Accessories.
Batteries and Compliance

**Note:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.

Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This device complies with FCC RF radiation exposure limits for general population.

**Caution:** Any changes or modifications to this system will void the user’s authority to operate the equipment.

Lightspeed Aviation declares that this product complies with essential requirements and other relevant provisions of Directive 1999/5/EC.

A copy of the Declaration of Conformity is available on request from Lightspeed Aviation:

6135 Jean Road
Lake Oswego, OR 97035
1-800-332-2421
sales@lightspeedaviation.com

**Battery instructions:**

- Only use genuine Lightspeed rechargeable batteries designed for this product.
- Avoid prolonged exposure to extreme heat.
- If the system is to be stored for more than a month, it is better to store them in a discharged state (not fully charged).
- The batteries will take approximately two hours to fully charge from a discharged state. After 60 minutes the batteries will be at 75% capacity.
Connectors
Connector Dual general aviation connectors with .250-inch commercial stereo headphone plug and .206-inch MIL-SPEC microphone plug

General
Battery power supply: 3.7V Lithium Ion battery
Headset Weight (with battery): 18 oz.

Headphone
Transducer: 40mm moving coil
Frequency response: 20 Hz-20 kHz
Nominal impedance when wired with backup cable
@ 1 kHz:
Mono: 180 ohms
Stereo: 250 ohms

Microphone
Transducer principle: Noise-canceling electret
Frequency response: 200 Hz-6000 Hz
Maximum SPL: 114 dB
Terminating impedance: 220–2200 ohms
Operating voltage: 8V–16V DC

ANR
Maximum SPL: Greater than 120 dB at 100 Hz
Limited Warranty For New Aviation Headsets Sold By Lightspeed Aviation, Inc. (Including 2-Year Limited Warranty for batteries)

Lightspeed Aviation, Inc. ("LSA") warrants that the new aviation headset sold by LSA ("New Headset") is free from all material defects in workmanship and materials. With respect to the New Headset but excluding all batteries provided with the New Headset ("Batteries"), all warranties provided by LSA and all implied warranties imposed by law are limited to a 5-year period, beginning on the purchase date shown on the New Headset’s sales receipt. With respect to the Batteries, all warranties provided by LSA and all implied warranties imposed by law are limited to a 2-year period, beginning on the purchase date shown on the New Headset’s sales receipt. "Warranty Period" means 5 years for the New Headset (excluding Batteries) and 2 years for the Batteries. This Limited Warranty ("Limited Warranty") is provided solely for the benefit of the initial purchaser of the New Headset ("Purchaser"), and it excludes all 3rd parties, including distributors, dealers, retailers, subsequent owners, and other users of the New Headset. This Limited Warranty is not assignable and remains in full force and effect during the Warranty Period, but only if the New Headset: (a) has been properly maintained; (b) has not been abused or misused; and (c) has not been repaired, altered, or modified without LSA’s approval. This Limited Warranty specifically excludes all taxes, shipping costs, and problems relating to any: (1) repair, alteration, or modification not approved by LSA; (2) abuse or failure to properly maintain the New Headset; (3) faulty workmanship by any person, except LSA or its approved agent; (4) operation of the New Headset, except as specified in its operating manual; (5) ordinary wear and tear; or (6) finish and appearance item. For each claim made under this Limited Warranty ("Claim"), Purchaser must, within 10 days of discovering a New Headset problem indicating a breach of this Limited Warranty, deliver to LSA a written notice that explains in detail the New Headset’s specific defect, that shows proof of Purchaser’s purchase of the New Headset before the end of the Warranty Period, and that shows proof that this Limited Warranty applies to the New Headset. LSA or its agent may investigate any Claim. For each Claim, LSA may, in its sole discretion, choose any of the following exclusive remedies: (i) repair or replace the New Headset or any part thereof, without charge to Purchaser, but first Purchaser must return the New Headset to LSA’s authorized repair facility, pre-paying all shipping charges, and Purchaser must accept the same as repaired or replaced at the facility’s location (i.e., FOB the facility) within 10 days of the date of LSA’s completion notice sent to Purchaser, or else LSA will deem the New Headset abandoned, in which case LSA may keep, sell, or otherwise discard it; or (ii) refund the New Headset’s purchase price to Purchaser. Without paying any amount to Purchaser, LSA may keep, sell, or otherwise discard all replaced New Headsets and parts thereof and all New Headsets where LSA has refunded the purchase price to Purchaser. In repairing or replacing any New Headset, LSA may, in its sole discretion, use new, used, or reconditioned parts or provide a refurbished used headset as a replacement. In connection therewith, LSA warrants that all new, used, or reconditioned parts or refurbished used headsets will be free from all material defects in workmanship and materials during the Warranty Period and for a period of up to 90 days thereafter, but only to the extent that such event occurs during the final 90 days of the Warranty Period. LSA may, in its sole discretion, (i) establish separate, additional, non-warranty repair and replacement programs for any new or used headset ("Non-Warranty Service Programs"), (ii) the Non-Warranty Service Programs may cover any time period, before or after any Warranty Period has expired, and (iii) charge any amount and impose any term with respect to any Non-Warranty Service Program. For Non-Warranty Service Programs, LSA warrants that all new, used, reconditioned, or refurbished parts and headsets used to repair or replace any headset will be free from all material defects in workmanship and materials, but only for a limited period of 90 days thereafter. Purchaser acknowledges that used or reconditioned parts may be used to repair any new or used headset, and that a refurbished used headset may be provided as a replacement for any new or used headset. LSA may hire a 3rd party to repair or replace any new or used headset. “Including” means “including, but not limited to.”

THE TERMS IN THIS DOCUMENT ARE THE ONLY TERMS THAT GOVERN LSA’S WARRANTY OBLIGATIONS FOR ANY NEW OR USED HEADSET OR PART THEREOF. NO ORAL OR OTHER WRITTEN TERM APPLIES. THIS DOCUMENT PROVIDES THE EXCLUSIVE REMEDY FOR ALL CLAIMS AGAINST LSA WITH RESPECT TO ANY NEW OR USED HEADSET OR PART THEREOF. NOTWITHSTANDING ANY PROVISION TO THE CONTRARY IN THIS LIMITED WARRANTY, LSA RESERVES THE RIGHT TO MODIFY, AT ANY TIME AND FROM TIME TO TIME IN ITS SOLE DISCRETION, ANY AND ALL TERMS IN THIS LIMITED WARRANTY. EACH SUCH MODIFICATION IS DEEMED EFFECTIVE UPON PUBLICATION ON LSA’S WEBSITE OR OTHERWISE.
TO THE EXTENT ALLOWED BY LAW: LSA DISCLAIMS AND PROVIDES THIS LIMITED WARRANTY IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. LSA IS NOT LIABLE FOR CONSEQUENTIAL, INCIDENTAL, PUNITIVE, INDIRECT, SPECIAL, LOST PROFITS, OR SIMILAR DAMAGES CLAIMED UNDER ANY STATUTE OR LEGAL OR EQUITABLE THEORY. LSA'S TOTAL LIABILITY FOR ALL CONTRACT, TORT (INCLUDING NEGLIGENCE), STATUTORY, OR OTHER CLAIMS ARISING FROM OR RELATING TO THIS LIMITED WARRANTY OR ANY HEADSET OR PART THEREOF IS LIMITED TO $1,000. SOME STATES DO NOT ALLOW THE LIMITATION OF CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS MIGHT NOT APPLY TO PURCHASER. THIS LIMITED WARRANTY GIVES PURCHASER SPECIFIC LEGAL RIGHTS, AND PURCHASER MIGHT HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE.


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