

CROS System Initial Fit Protocol

Our wireless CROS System takes audio from an ear level microphone and wirelessly transmits it to the opposite ear via Near-Field Magnetic Induction (NFMI) technology, allowing the user to hear sounds that originate on the poor side in the better ear. CROS System is available for Livio® AI 2400 and Livio 2400 in the following styles: RIC 312, BTE 13 and RIC R.

Wireless CROS System is Composed of:

Transmitter

- Worn on the unaidable ear
- Microphone enabled for CROS and BiCROS

Receiver

- Worn on the normal hearing ear or better hearing ear
- Microphone enabled for BiCROS
- CROS-enabled hearing aids will become a Receiver when brought into a fitting session with a Transmitter

NOTE: The Transmitter and Receiver style must match (e.g., RIC 312 on both sides).

Get Started

The Receiver and Transmitter must be paired and programmed together at the initial fit. Receivers can be programmed with or without the Transmitter present after the initial fitting. If a Transmitter is ordered separately, the hearing professional must pair the Transmitter and Receiver as a set within Inspire® X. Streaming from the Transmitter is available during the fitting session.

To Pair:

- 1 Launch **Inspire X 2019.0** or newer.
- 2 On the **Get Started** screen, select **View Programmers**, then choose the appropriate programmer and select **OK**.
- 3 Power off, then power on the hearing aids to connect.
- 4 Select the **check boxes** next to the Receiver and the Transmitter to be programmed. [Fig. 1]
NOTE: Hearing aids that have not yet been paired with Transmitters will not be labeled "Receiver" in Inspire X. A Transmitter cannot be brought into a fitting session alone.

- 5 Select **Read Device Settings** to start a new fitting session. [Fig. 1]

NOTE: Receivers that have been previously fit as hearing aids and are later paired with a Transmitter will retain all of their settings.

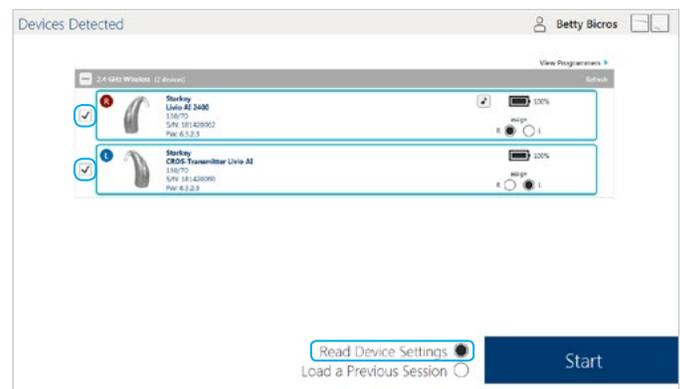


Figure 1



Unpairing

CROS Receivers can be converted back into traditional hearing aids. However, a Transmitter cannot be turned into a traditional hearing aid, and a traditional hearing aid cannot be turned into a Transmitter. To unpair a CROS System and convert the Receiver back to a traditional hearing aid, you must return the hearing aid to manufacturer settings:

- 1 Launch **Inspire X 2019.0** or newer.
- 2 On the **Get Started** screen, select **View Programmers**, then choose the appropriate programmer and select **OK**.
- 3 Power off, then power on the Receiver. Select the **check box** next to the **Receiver** only.
- 4 Click **Tools** from the menu bar.
- 5 Select **Clear Settings and Reset Device**.
- 6 When the dialogue box appears, select **Begin**. [Fig. 2]
NOTE: *This will clear all patient data and settings, including all memory-specific CROS/BiCROS information.*
- 7 When the process is complete, select **OK**. [Fig. 3]



Figure 2

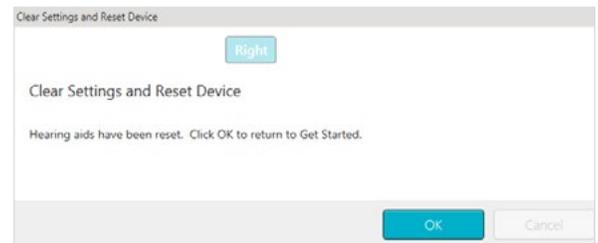


Figure 3

Initial Fit and Auto Path

Initial Fit launches automatically when programming new hearing aids.

- 1 Select the appropriate **Acoustic Options**, then select **OK**.
- 2 Select the appropriate **Experience with Amplification**. [Fig. 4]
Refer to the Experience Manager QuickTIP for additional information.
- 3 Insert CROS System into the patient's ears, reduce all sources of noise, then select **Begin** to run the Auto Path.
NOTE: *If hearing aid programming is conducted prior to the fitting appointment, re-run the Feedback Canceller with the CROS System in the patient's ears.*
- 4 Review the Auto Path results screen. Select **Restart** if Status is Incomplete for any steps, or select **Close** to continue.

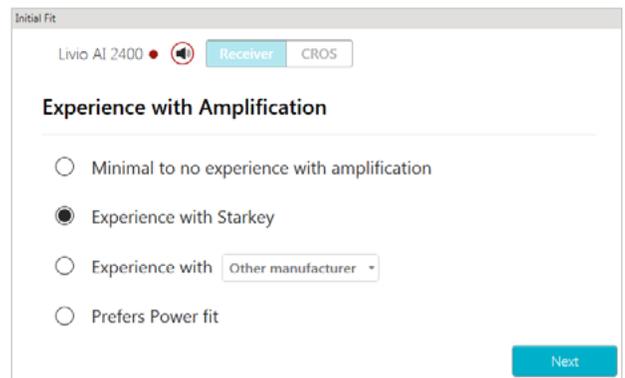


Figure 4

User Controls

The User Control Configuration demo box will appear upon initial programming. Select **Show Demo** for demonstration of user control configuration options or select **Close**. Drag any user control you wish to enable from the left and drop it into the desired gesture on the right. Double Tap gesture is available for a Livio AI CROS System. Double Tap will work on the Receiver side only. [Fig. 5]

Balance Control

Balance control is unique to BiCROS fittings. Mute will behave differently depending on whether Ear-to-Ear is enabled or disabled. BiCROS Balance Control adjusts the level of sound coming from the Transmitter relative to the Receiver. Changes will not affect the hearing aid response. At least one memory needs to be configured as BiCROS in order to utilize this user control.

Mute with Ear-to-Ear Enabled

Ear-to-Ear is enabled by default for the Mute user control. Both the Receiver and the Transmitter will be muted via one user control.

Mute with Ear-to-Ear Disabled

Muting the Transmitter in BiCROS memories results in audio only from the Receiver microphone. Muting the Receiver in BiCROS memories results in no audio even if the Transmitter is active.

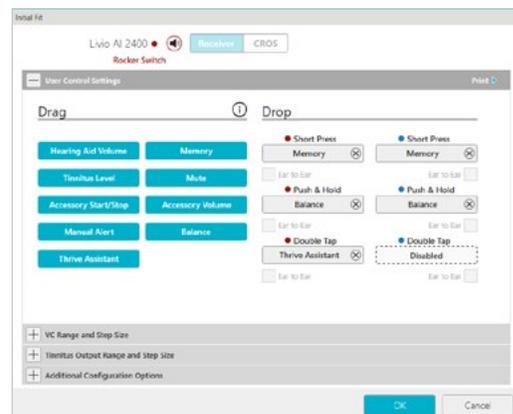


Figure 5

QuickFit and Fine Tuning

- 1 Select **QuickFit** on the left navigation bar to make global fitting adjustments (**Occlusion, Low Hz, Gain, High Hz, Output**). [Fig. 6]
- 2 Select the **Memory drop-down arrows** on the memory bar to program memories.
- 3 Select **Fine Tuning** on the left navigation bar or from the bottom of the QuickFit screen. [Fig. 7]
- 4 Select **Tables** or **Sliders** to choose desired view for adjustments.
- 5 Select **+** to expand **Low, Mid, High and/or Ultra** channel groups.
- 6 Select channels and input levels to adjust, then select **up and/or down** arrows to make adjustments.



Figure 6



Figure 7

Self Check

- 1 Select **Patient Tools** from the left navigation bar.
- 2 Place hearing aids on a flat surface with the receiver facing up.
- 3 Reduce all sources of noise.
- 4 Click **Set Baseline** to begin.
- 5 A brief, robust stimulus will play in each hearing aid.
- 6 A green check mark for each component indicates the baseline was established.

Please refer to the Self Check QuickTIP for additional information.

Memories

CROS and BiCROS modes can be enabled on a per-memory basis.

- 1 Select **Memories** on left navigation bar or select **Memories** from the middle of all fitting screens. Select **drop-down arrows** to extend the **Memories** menu, then select the desired memories to program.
- 2 Select **CROS/BiCROS** on the left navigation bar.
- 3 For each compatible memory, select **Hearing Aid Only**, **CROS**, or **BiCROS**. [Fig. 8]

NOTE: Some memories are incompatible with the CROS/BiCROS Transmitter including: Streaming, Telephone, Telecoil, Autophone, Autocoil and Stream Boost.

Balance Control

The BiCROS Balance Control adjusts the level of sound coming from the Transmitter relative to the sound coming from the Receiver. BiCROS Balance Control settings apply to all BiCROS memories. Changes will not affect the hearing aid response. [Fig. 8]

- 1 Select **CROS/BiCROS** on the left navigation bar.
- 2 Select the **Balance Control pin** and move it closer to the Transmitter or Receiver to set the default Balance Control.
NOTE: Each step results in a change of +1 dB on one side and -1 dB on the other side, resulting in a 2 dB step size. The maximum difference between the Transmitter and the Receiver is 10 dB.
- 3 The Balance Control can be adjusted by the user via user controls (if enabled) or within the Thrive™ Hearing Control app but will default to the level set by the hearing professional.



Figure 8

Indicators

Select **Indicators** on the left navigation bar. [Fig. 9]

- 1 Select or de-select **check boxes** to enable or disable indicators.
NOTE: *Volume and Balance indicators may be enabled or disabled on an individual basis.*
- 2 Select **Adjust All Indicators** to increase or decrease volume level for all Tone or Speech/Chimes indicators in 5 dB increments, or to change the voice language.
- 3 Select the **Individual Indicator names** to adjust the volume level and stimulus type for individual indicators. Select the **Hearing Aid icon** to play indicator directly through the devices or the **Computer icon** to play an indicator through the loudspeaker for demonstration purposes.
- 4 The user will hear a special tone after the **Low Battery** and **Mute** indicators for the Transmitter. This helps the user determine which side has a low battery or is being muted. To demonstrate the indicators for each side, select **Receiver** or **Transmitter**, then select either the Hearing Aid icon or the Computer icon.

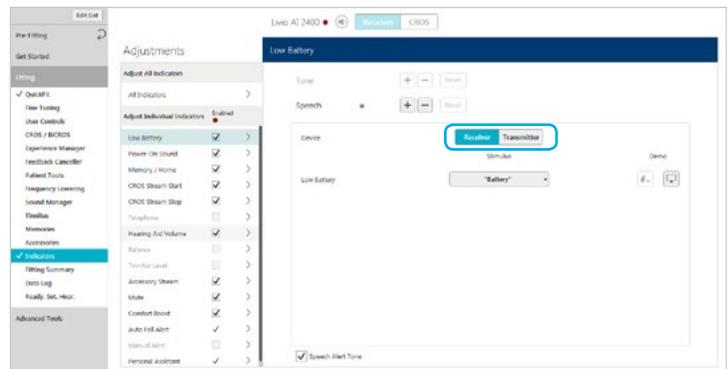


Figure 9

CROS Stream Start:

This indicator will play when the user navigates to a memory where CROS/BiCROS is enabled from a Hearing Aid Only memory. Also, this indicator will play when the Transmitter is powered on after the Receiver is powered on and in a CROS/BiCROS memory.

CROS Stream Stop:

This indicator plays when the Transmitter signal stops. This could be due to the Transmitter being turned off, moving out of range or a dead battery.

Balance:

This indicator plays when adjustments are made to the Balance user control. Individual indicators for **Maximum**, **Minimum**, **Home** and **Steps** can be enabled or disabled. The Maximum balance indicator will play when the balance has been shifted to maximize sound coming from the Transmitter. The Minimum balance indicator will play when the balance has been shifted to minimize sound coming from the Transmitter.

Accessories

Use of all Starkey® Hearing Technologies 2.4 GHz wireless accessories with the CROS System is supported. Audio will stream to the Receiver side only and the Transmitter signal will be unavailable. Set the Starkey Hearing Technologies TV Streamer to monaural streaming for CROS/BiCROS.

Refer to the Starkey Hearing Technologies 2.4 GHz wireless accessories QuickTIPS for additional information.

Fitting Summary

Select **Fitting Summary** on the left navigation bar. [Fig. 10]

Select **details** to change the status of features, if necessary. Details are hyperlinks and will navigate to the feature's adjustment screens.

Select **Remote Programming** under Status to enable remote programming. You will click the **Check Box** next to Remote Programming. Then click **Accept** after reviewing the disclosure notice with your patient. Next click the code generator icon to generate a unique code for your patient to enter into their Thrive™ Hearing Control app to allow access for Remote Programming. [Fig. 11]

Select **Auto Fall Alert** under Status to change the Fall Detection Sensitivity and complete the Fall Risk Screening with your patient. Please refer to the Fall Alert QuickTIPs for full instructions on completing setup and use. Please note Auto Fall Alert is only available for Livio AI hearing aids. [Fig. 12]

Select **Print** to generate a Fitting Report, a Data Log report or a personalized Device Guide that displays the volume adjustments, memories and speech indicators that have been enabled. The Device Guide can be translated into several languages from the Print screen.

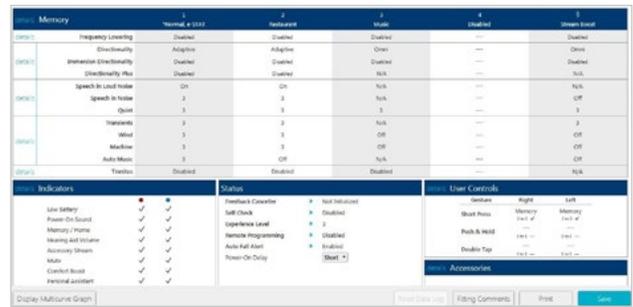


Figure 10

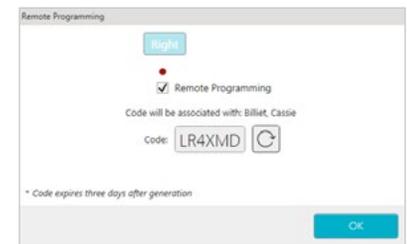


Figure 11

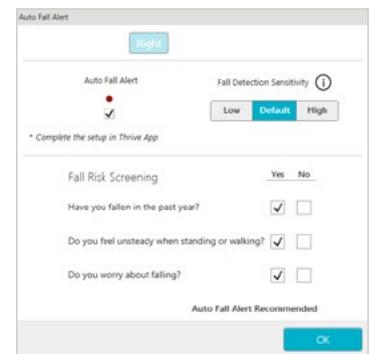


Figure 12

Thrive Hearing Control App

The Balance screen will be visible in the Thrive app if at least one BiCROS memory has been programmed in Inspire X.

To adjust the Balance Control:

- **Drag the circle icon** along the slider towards **Receiver** for more sound from the Receiver and less sound from the Transmitter.
- **Drag the circle icon** along the slider towards **Transmitter** for more sound from the Transmitter and less sound from the Receiver.

To Mute the Transmitter:

- Tap the **Mute Transmitter** button. Blue indicates the Transmitter is muted. Tap the button again to unmute.

