



# Livio CROS/BiCROS

Single-sided deafness treatment options



A CROS system consists of a single microphone and single receiver contained in two individual hearing aids. The ear with little-to-no functional hearing is fit with the microphone-equipped hearing aid, and the ear with normal hearing is fitted with the receiver-equipped hearing aid. Sound arriving at the ear with no functional hearing transmits through a wireless connection to the receiver-equipped hearing aid to help patients hear sounds from their non-hearing side to their normal-hearing side. This strategy improves audibility of sound on the side with unaidable hearing but does not restore the ability to localise to the source of a sound.

## Who will benefit

A CROS system is appropriate for a patient with a hearing loss in one ear such that little-to-no benefit can be provided through amplification for that ear. This condition is often referred to as "single-sided deafness." Patients with normal hearing or a mild high-frequency loss in their better-hearing ear can benefit from a CROS system.

A BiCROS system can help patients with unequal bilateral hearing loss. In such cases, the poorer-hearing ear would not benefit from amplification, while the better-hearing ear requires a traditional hearing aid. In this case, the BiCROS hearing aid will transmit audio from the poorer ear to be mixed with the amplification for the better ear.

## Why patients will want it

A severe to profound single-sided hearing loss creates communication difficulties even with normal hearing in the opposite ear. This is especially problematic for individuals who acquire the loss after experiencing normal bilateral hearing for much of their lives. Complaints about not hearing soft or distant speech, speech in noise or speech at a distance are common. A CROS or BiCROS system addresses these issues.

An important feature that the Starkey CROS/BiCROS systems offer is having the flexibility to easily select the setup that works the best for a given situation. If there is unwanted noise or speech on one side or the other, the user can switch modes for the best reception of the desired sound.

## How it works

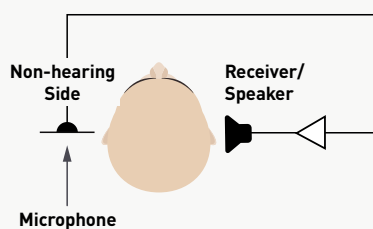


Figure 1: Schematic of CROS System.

Signal transmission occurs through near field magnetic induction (NFI) from CROS microphone to hearing aid.

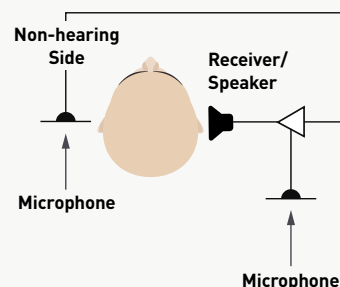


Figure 2: Schematic of BiCROS System.

Signal transmission occurs through 2.4 GHz from hearing aid to accessories and phone for streaming and app communication.

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## Where to find it

**CROS System** is available for Livio Edge AI, Livio AI and Livio RIC R, RIC 312 and BTE 13 styles.

Livio Edge AI	Livio AI				Livio				
2400	2400	2000	1600	1200	2400	2000	1600	1200	1000
✓	✓	✓	✓	✓	✓	✓	✓	✓	

## How it helps you

**Problem** — Patients with single-sided deafness present with more unique listening needs and need greater flexibility and customisation. Difficult listening environments become more challenging when listening with only one ear – need advanced processing and flexible configuration adjustments.

**Solution** — The Livio Edge AI, Livio AI and Livio CROS/BiCROS system provides:

- Multiple ways to access the balance of the microphone transmitter
- Direct connectivity to select Apple and Android phones
- RIC Rechargeable solution to provide a full-day-use time (12-14 hours)
- Easy fitting – you no longer need to enter into a “demo mode” to listen to the transmitter, as the transmitter is live throughout programming
- The flexibility Starkey allows in customising a CROS/BiCROS fitting is unique – each program can be setup as either CROS, BiCROS, or Hearing aid only

## Proof points

Balance control can be accessed through the Thrive Hearing Control app on the Home screen

## Set up



**Professionals** — [Download this QuickTIP](#) to set up a CROS System.

## To learn more

- Visit [starkeypro.com.au/livioedgeai](http://starkeypro.com.au/livioedgeai)
- Read our [white papers](#)
- Check out [training opportunities](#)
- Contact your Starkey representative today

## REFERENCES

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