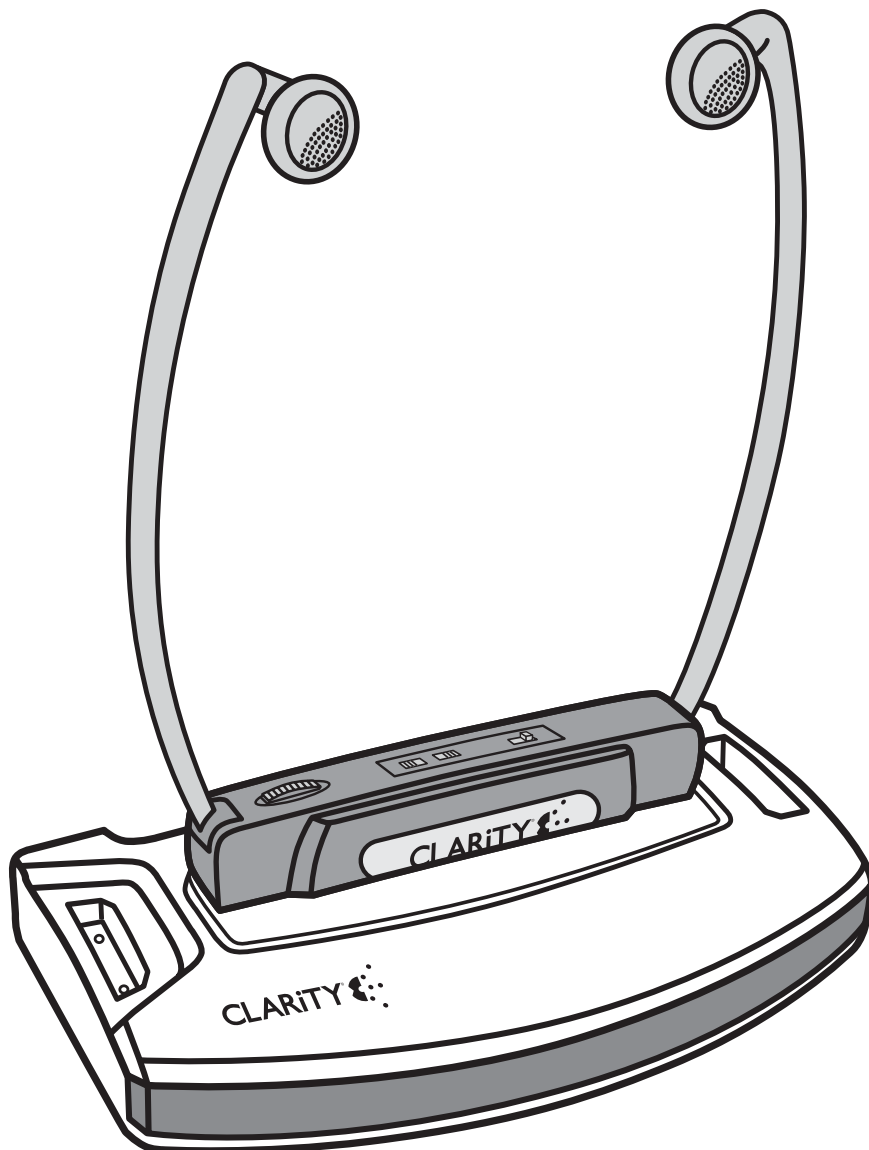


# Clarity®

## TV Listener

### CI20™ User Guide



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**CLARITY®**   
Amplifying Your Life™

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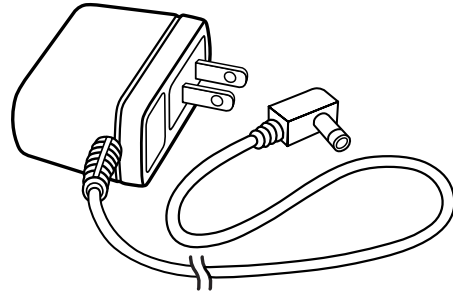
# PARTS CHECKLIST

1. Headset Receiver
2. Transmitter Base
3. TV Microphone
4. Rechargeable Battery
5. Power Supply
6. RCA Cable (dual red and white plugs)
7. RCA - 3.5mm Cable
8. Flathead Screwdriver
9. User Guide

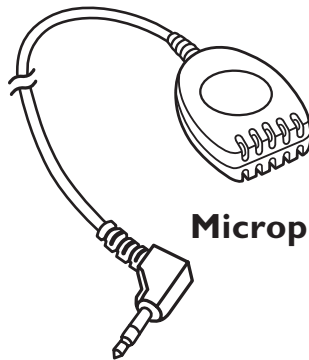


**C120 Headset**

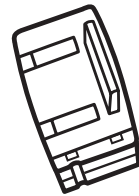
**C120 Transmitter**



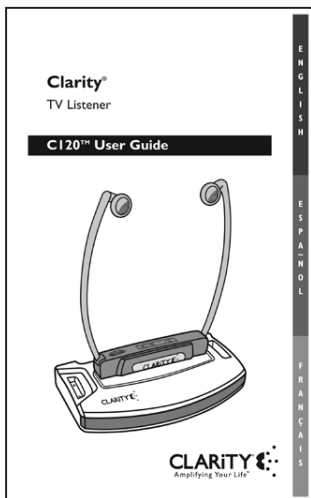
**AC wall charger**



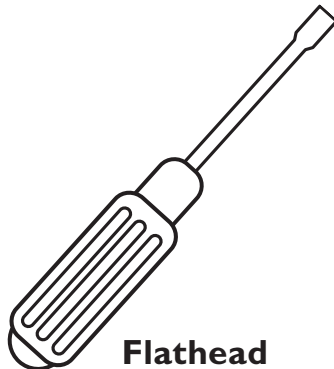
**Microphone**



**Rechargeable battery**

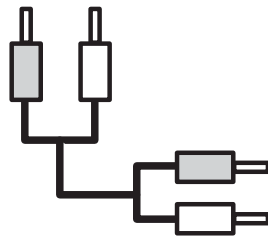


**User Guide**



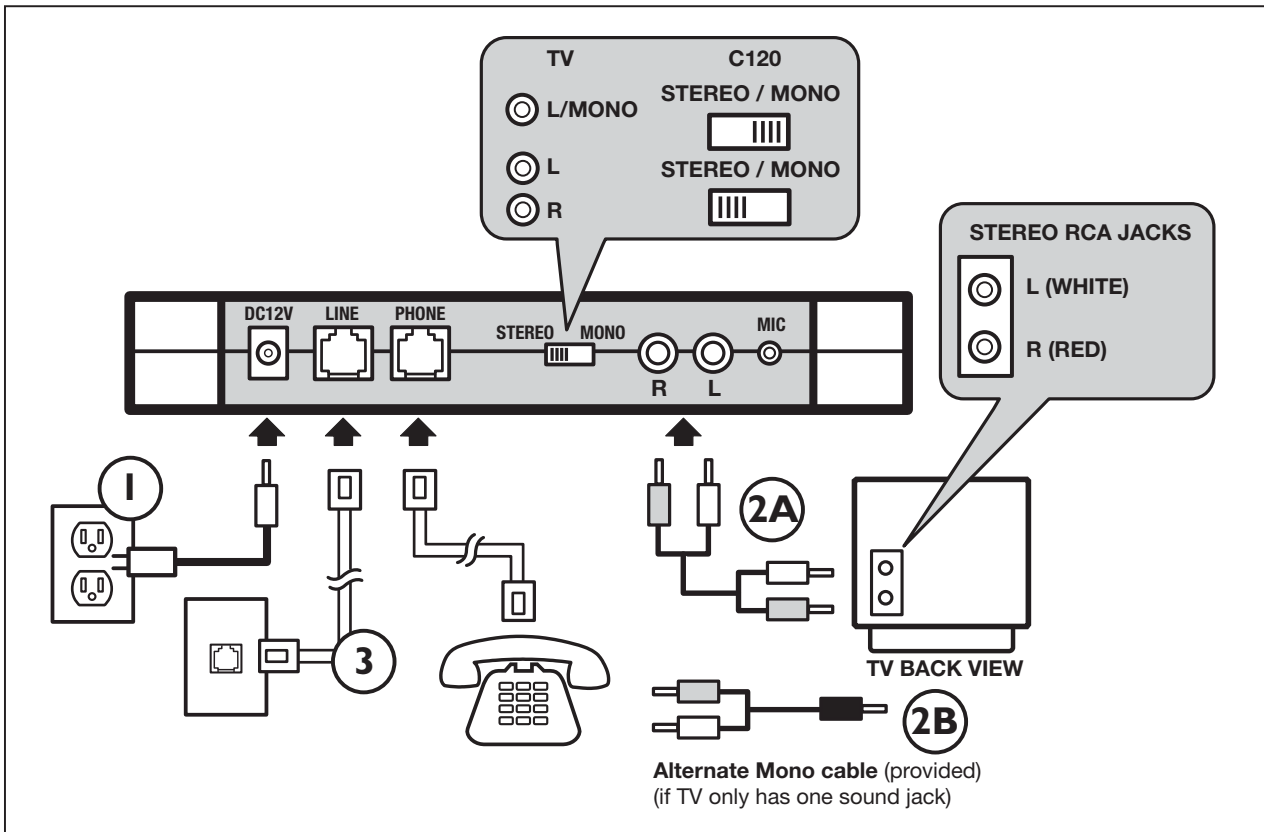
**Flathead screwdriver**

**RCA stereo cable**



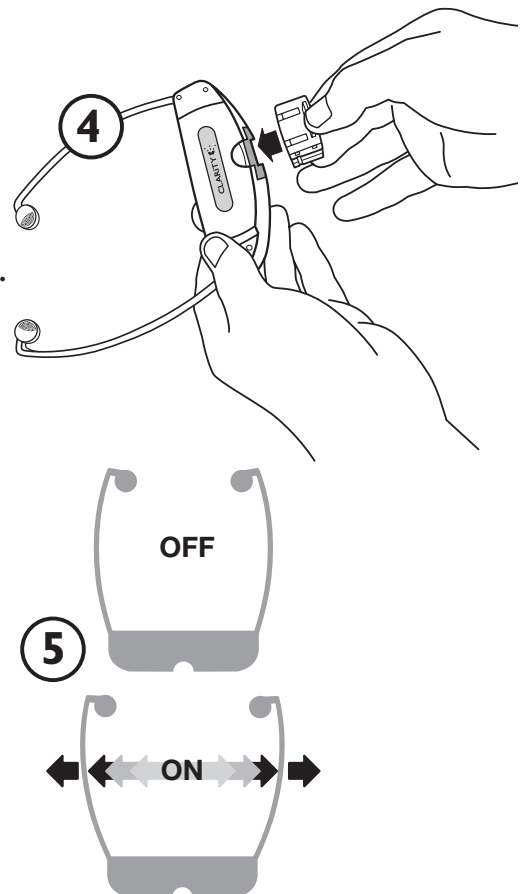
**RCA mono cable**





**QUICK START GUIDELINES**

1. Plug in power adapter
2. Connect RCA (red and white) jacks.
  - A. If the television has only one RCA jack, the “STEREO/MONO” switch on the base should be set to “MONO”.
  - B. If there are two RCA jacks, base should be set to “STEREO”.
3. For ring notification, connect telephone line from wall to “LINE” and connect line from “PHONE” to telephone.
4. After battery has charged overnight, place in headset.
5. To POWER-ON headset, place on head. As the arms are spread apart, the unit powers on.



# CI20™ OPERATION

Thank you for purchasing this new and exciting product from Clarity. The CI20™ provides an enjoyable television viewing experience for people who have a hard time hearing the television.

The CI20™ uses wireless infrared technology to send signals from the television or other device to the headset receiver. This means that this product can be used without the hassle or mess of cords.

The CI20™ can be used with HDTV, Satellite, Digital, Plasma, LCD and standard televisions. It can also be used to listen to other audio equipment, such as a stereo. The use of the product eliminates the need to turn the volume to extremely loud levels, without disturbing other viewers or others in the area.

The CI20™ not only can be used for enjoying at home, but can be used outside the home in places like the movies, conventions, museum tours, and sporting events (where a public infrared system is offered). Check with the site administration to see if infrared service is available.

## FEATURES

### **Clarity® Power Control™**

The Clarity Power Control improves the quality of the incoming audio signal from the television for a better listening and viewing experience. The amplification of the television audio will be increased and the frequency band from 2000 to 3000Hz will be specially enhanced to improve the clarity of the television audio.

### **Telephone Ring Notification**

This feature will notify the user of an incoming telephone call through the CI20™ Headset. An audible notification will be heard to notify the user that the phone is ringing.

### **Public IR Address Usage**

This feature allows the headset to be worn at public events where the infrared system is offered to those with assisted listening devices. Examples of these areas could be movies, churches and public speeches. Check with the site administration to see if infrared service is available.

# CI20™ OPERATION

## SETTING UP THE CI20™ TRANSMITTER

### Important Setup Guidelines

The CI20™ TV Listener transmitter may be placed on top of a television or shelf. This product uses infrared light. This type of signal can be blocked by solid objects. Do not place objects in between the transmitter base and the headset receiver.

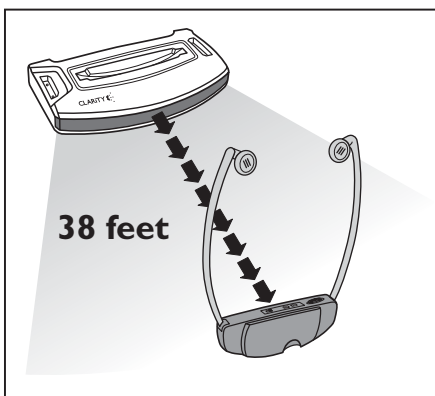


FIG. 1

For the clearest signal, place the base at your viewing eye level or above. As illustrated in **Fig. 1**, the clearest signal emitted from the base is in a straight line, directly in front of the base. **The base must be clearly visible from your television viewing position.**

It is important to follow the above guidelines to ensure communication between the base and headset.

Sunlight can cause interference with the product and cause problems such as buzz, static, or hiss. As a result, this product cannot be placed in direct sunlight or be used outdoors.

The headset will only receive the signal in the same room where the base is located. The maximum operating distance is approximately 38 feet, depending on environment.

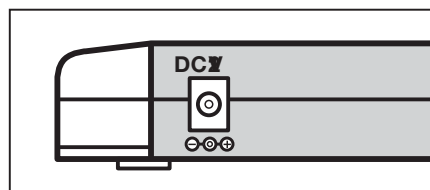
Multiple headsets may be used with a single base if they are set to the same frequency. However, if more than one base is being used at the same time, interference will occur.

# CI20™ OPERATION

## CONNECTING THE TRANSMITTER

### Power

First, connect the Power Supply into the DC12V jack located on the back of the base. The DC12V port is illustrated in **Fig. 2**. Then plug the Power Supply into a wall outlet.



**FIG. 2**

### Audio

Next, using one of the Audio Cable supplied, connect the base unit directly to the TV, VCR, or other equipment output jacks. See different connection options listed below.

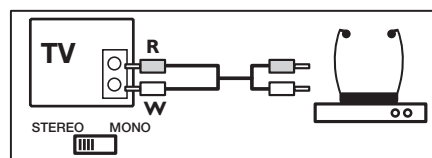
Included in the package, there are two cords to use for the incoming audio. One will have two RCA jacks (red and white) on both ends. (**Fig. 3**) This can be used to connect with devices with both Right and Left channel RCA jacks (TV's, VCR's, etc). The other is a cord with two RCA jacks (red and white) on one end and on the other is a 3.5mm jack. (**Fig. 4**) A 3.5mm jack is the size found on a pair of headphones. This can be used to connect the CI20™ to devices with 3.5mm ports, such as CD players, radios and other small electronics. See **Figures 6-9**.

### I. Stereo Mode:

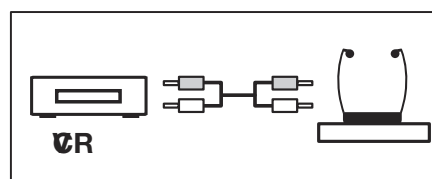
(For Highest Sound Quality) This mode should be used if the television (or other audio equipment) has two RCA audio jacks (red and white). See **Figures 3** and **4**.

Connect the RCA plugs from the speaker output of the TV or VCR into both the left and right RCA jacks on the base.

Next, select "Stereo" on the Mono/Stereo switch.



**FIG. 3**



**FIG. 4**

# CI20™ OPERATION

## 2. Mono Mode:

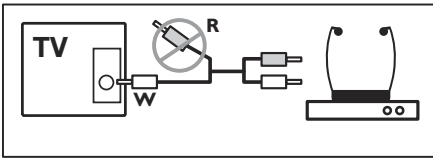


FIG. 5

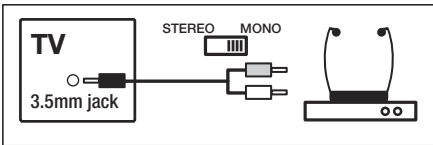


FIG. 6

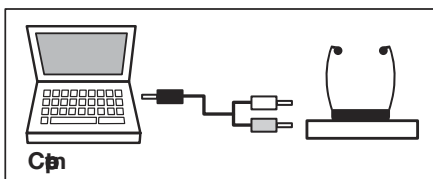


FIG. 7

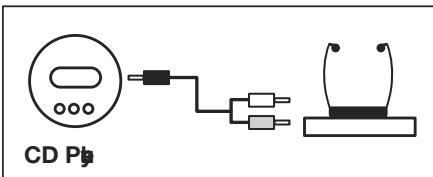


FIG. 8

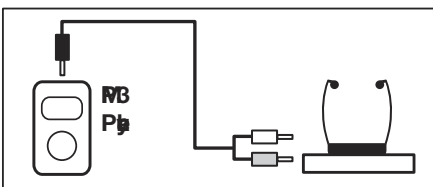


FIG. 9

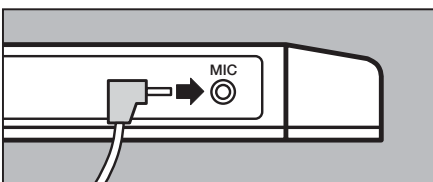


FIG. 10

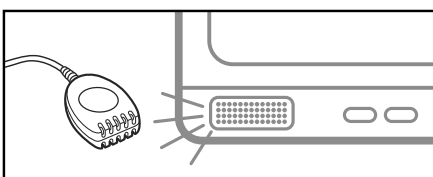


FIG. 11

This mode should be used if the television (or other audio equipment) has only one audio RCA or a 3.5mm jack.

This enables the CI20™ to be used with computers, CD players, stereos, mp3 players, and other related products.

If the television, or other device, has only one RCA port, connect the left (white) RCA plug from the output into the left (white) RCA jack of the base. The right (red) jack should remain unplugged. See **Figure 5**.

If the television, or other device, has a 3.5mm jack, use the cord with the RCA jacks on one end and 3.5mm jack on the other. Plug the 3.5mm into the device and plug the RCA jacks into the CI20™ base. See **Figures 6-9**.

Next, select “Mono” on the Mono/Stereo switch.

## 3. Microphone Mode:

Use this mode only if an RCA connection is not available. For example, older televisions do not have audio outputs. In this case, the microphone should be used. Connect the supplied microphone into the “Mic” jack on the back of the base, as illustrated in **Figure 10**. Place the microphone near the speaker of the television or stereo.

**Note:** The microphone may pick up any sound in the room, such as speech, the doorbell, or the telephone. (**Fig. 11**)



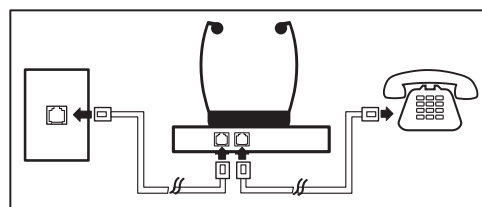
# CI20™ OPERATION

## Telephone

The CI20™ has the ability to produce an audible indicator heard through the headset when the telephone rings. The following step is necessary if telephone ring notification is desired.

First, plug the telephone cord coming from the wall into the jack on the rear of the base labeled “LINE.” A phone cord can then be connected from the jack labeled “PHONE” on the rear of the base to a telephone. This process is illustrated in **Figure 12**.

The CI20™ allows you to use the same phone wall outlet for both your phone and CI20™ TV Listener.



**FIG. 12**

## SETTING UP THE CI20™ HEADSET

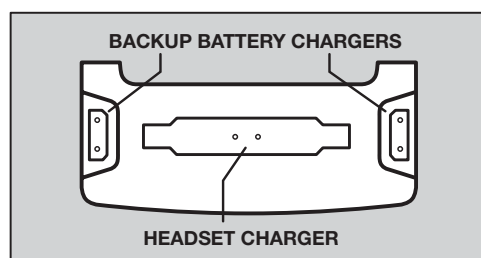
### Installing the Batteries

The supplied battery is a NiMH battery. Install the supplied Rechargeable Battery into the bottom of the headset. Once you place the headset into the base, as illustrated in **Fig. 13**, it begins to charge the battery.

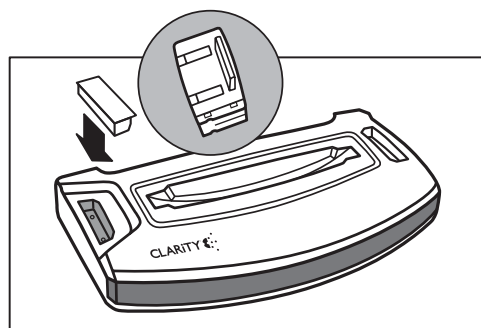
The main Headset Battery Charger and both backup batter chargers on the base have a corresponding LED light on the front panel that will light up when a dock is being used.

Backup batteries can be bought and placed in the additional charging docks located on the base. The charging docks are labeled in **Figure 14**.

Having these extra batteries to switch in and out will enable longer product usage without having to wait for a battery to charge. When the product is not in use, return the headset to the base to recharge the battery.



**FIG. 13**



**FIG. 14**

**Note: The battery is not charged when it comes out of the box. It must be charged overnight before usage.**

# CI20™ OPERATION

The volume at which the product is set will have an effect on battery life. At full volume, the battery will last approximately four (4) hours. Using lesser volumes will increase the length of the charge. An indication that the battery should be changed might be the sound getting weak or noisy. The battery takes four (4) hours to fully charge and can be charged approximately five hundred (500) times before it should be replaced.

## Adjusting the Headset

On the top of the headset (receiver) there is a switch labeled “Home/Away.” (Fig. 15) When using the headset to listen to the television with the included base, set switch to “Home.” For use with public infrared systems, set the switch to “Away.”

There is a volume control wheel on the top of the headset where the volume can be controlled easily while watching television. Turn the wheel in the direction of the “+” to increase volume and towards the “-” to decrease the volume. (See Fig. 18 on page 11)

When the headset arms are extended, the unit automatically powers on, as illustrated in Fig. 16. When the headset is removed from the head and the arms go back into original position, the unit will power down. If there is no audio signal being detected by the CI20™ for one and a half minutes, it will power down.

**Note:** The infrared sensor that communicates with the transmitter base is on the front of the headset and should be pointed directly at the base, as illustrated in Figure 17.

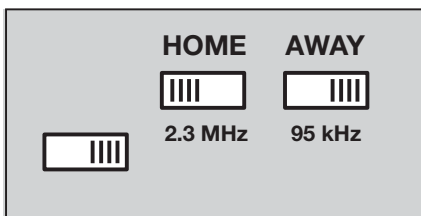


FIG. 15

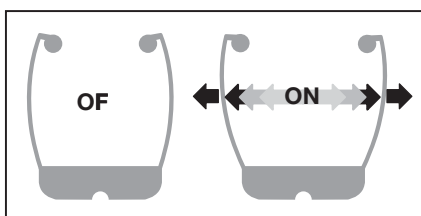


FIG. 16

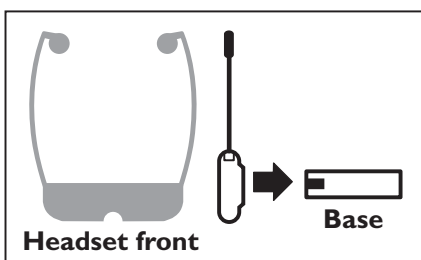


FIG. 17

# C120™ OPERATION

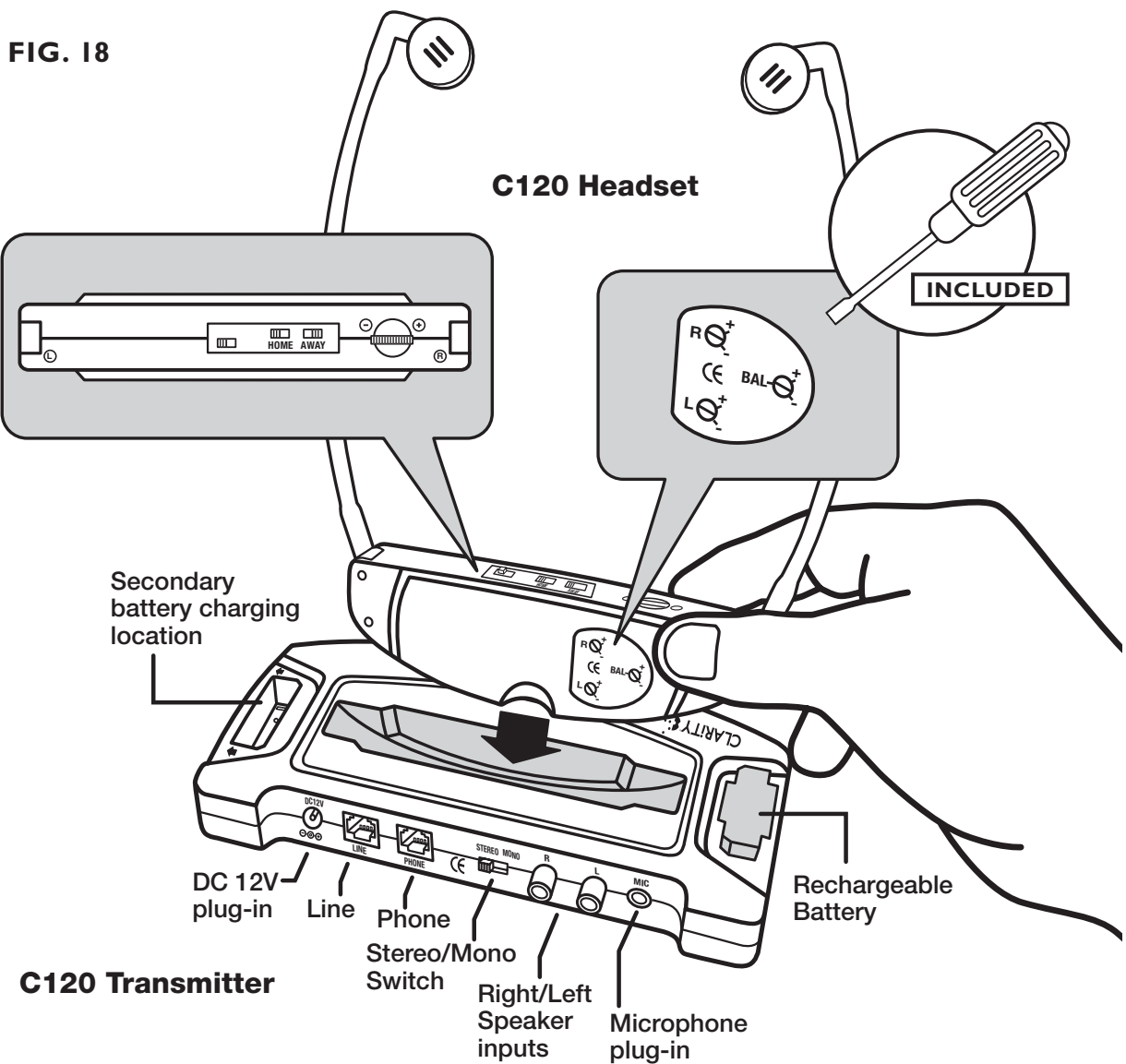
## AUXILIARY HEADSET CONTROLS

### Balance Control

This adjusts the volume balance between the Left and Right earphones. A small screwdriver will be needed to adjust this control.

### Tone Controls

There are two controls for tone, one for each earphone (left and right). A small screwdriver will be needed to adjust these controls.



## TROUBLESHOOTING

### **If the CI20™ is producing no sound:**

1. Ensure that proper installation and setup procedures were followed by reading the user guide carefully.
2. Check to see if all the equipment is turned on, including the television or VCR.
3. Look over all the cord connections (power, audio from television etc.), making sure none have become loose or disconnected.
4. Ensure that the line of sight from the transmitter base to the headset receiver is clear.
5. Check the battery in the CI20™ Headset to see if it is fully charged.
6. Check to see if the infrared sensor on the base is facing the headset and make sure the headset sensor is facing the base.
7. If the microphone is being used, try either turning up the television or repositioning the microphone.

### **If the sound produced by the CI20™ has static or is noisy:**

1. If while in one mode (Stereo/Mono), static is experienced, switch the base to the other mode.
2. Check the level of direct sunlight in the room. Too much direct sunlight can cause interference.
3. Make sure the base is at the same height or above the level of the headset when being worn.

### **Still Not Working?**

If, after going through this checklist, the CI20™ is still not functioning properly, call **Clarity at 1-800-426-3738**.

# **SAFETY INFORMATION**

## **Hearing Safety**

The CI20™ is designed to be used as an assisted listening device. This product is intended to amplify sounds to a high volume. This means that damage to hearing ability is a possibility if used improperly. To prevent any possible hearing damage, please observe the following guidelines.

1. Turn the volume all the way down on the headset before putting it on.
2. When adjusting the volume to a comfortable level, start at the minimum volume level then slowly turn the volume up. This will ensure the volume is set at the minimum volume level needed to hear.

## **Medical Device Safety**

Before using CI20™ TV Listener in the area of a pacemaker or other medical device, please consult a physician or the manufacturer of the medical device. This will help determine if this product can be used in conjunction with other medical devices in the area.

# TECHNICAL SPECIFICATIONS

## CI20™ TRANSMITTER INFORMATION

**Dimensions:** 7 1/16”L x 3 5/8”W x 1 1/8”H, (17.9cm x 9.2cm x 2.8cm)

**Weight:** 5.2 oz (147g)

**Power Supply:** 100-240V, 50/60 Hz, 0.15 Amps

**Charging Docks:** Charges one (1) CI20™ Headset and two (2) additional batteries in the auxiliary docks.

**Auto Off Power:** Transmitter turns off after it has not detected audio signal for 1.5 minutes.

**Transmitting Frequency:** 2.3MHz and 2.8MHz

**Transmitter Range:** Approx. 38ft

**Microphone Input:** 3.5mm jack for supplied TV Microphone.

**Audio Cable Input:** One (1) RCA cable, one (1) RCA to 3.5mm cable

## CI20™ HEADSET INFORMATION

**Weight:** 1.75 ounces (49g) without battery, 2.05 ounces (58g) including battery

**Frequency Received:** 2.3MHz and 2.8MHz from transmitter, 95kHz from public IR systems.

**Controls:** “Home/Away” switch to set the headset to proper frequency, volume wheel, tone and balance controls.

**Home:** 2.3/2.8 MHz **Away:** 95 kHz

**Amplified dB Level:** 50dB, 125 dB SPL

**Battery Type:** Nickel Metal Hydride (NiMH), Rechargeable, weight is 0.3 oz

**Battery Life:** Four (4) hour usage time, four (4) hour charge time, lasts 500 charges.

# REGULATORY COMPLIANCE

## Part 68 of FCC Rules Information

- a) This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the bottom of this equipment is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. If requested, this number must be provided to the telephone company.
- b) A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug, RJ11C USOC, is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.
- c) The REN is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company. For products approved after July 23, 2001, the REN for this product is part of the

product identifier that has the format US:AAAEQ##TXXXX.

The digits represented by ## are the REN without a decimal point (e.g., 03 is a REN of 0.3). For earlier products, the REN is separately shown on the label.

d) If this telephone equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

e) The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

f) If trouble is experienced with this telephone equipment, for repair or warranty information, please contact Clarity, 1-800-552-3368. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

## REGULATORY COMPLIANCE

- g) This telephone equipment is not intended to be repaired and it contains no repairable parts. Opening the equipment or any attempt to perform repairs will void the warranty. For service or repairs, call 1-800-552-3368.
- h) Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information.
- i) If your home has specially wired alarm equipment connected to the telephone line, ensure the installation of this telephone equipment does not disable your alarm equipment. If you have questions about what will disable alarm equipment, consult your telephone company or a qualified installer.
- j) This telephone equipment is hearing aid compatible.

### **Customer-Owned Coin/Credit Card Phones:**

To comply with state tariffs, the telephone company must be given notification prior to connection. In some states, the state public utility commission, public service commission or corporation commission must give prior approval of connection.

### **Part 15 of FCC Rules Information**

This device complies with 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.

Your equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to Part 15 of FCC rules. These limits are designed to provide reasonable protection against harmful interference in residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation; if this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by one of the following measures:

1. Where it can be done safely, reorient the receiving television or radio antenna.
2. To the extent possible, relocate the television, radio or other



## REGULATORY COMPLIANCE

receiver with respect to the telephone equipment. (This increases the separation between the telephone equipment and the receiver.)

3. Connect the telephone equipment into an outlet on a circuit different from that to which the television, radio, or other receiver is connected.
4. Consult the dealer or an experienced Radio/TV Technician for help.

**CAUTION:** Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

### Industry Canada Technical Specifications

**This product meets the applicable Industry Canada technical specifications.**

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with a single line individual service may be extended by means of a certified connector assembly (telephone extension cord). The customer should be aware that compliance

with the above conditions may not prevent degradation of service in some situations. Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier.

Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

**CAUTION:** Users should not attempt to make such connections themselves, but should contact the appropriate electrical inspection authority, or electrician, as appropriate.

The Ringer Equivalence Number is an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed five.

## REGULATORY COMPLIANCE

(The term “IC:” before the certification/registration number only signifies that the Industry Canada technical specifications were met.)

### **The party responsible for regulatory compliance:**

Clarity, A Division of Plantronics, Inc.  
4289 Bonny Oaks Drive, Suite 106  
Chattanooga, TN 37406  
Phone: 1-800-552-3368

#### **Battery Disposal Information**

The rechargeable batteries in the CI00™ need to be disposed of properly and may need to be recycled. Your local recycling company can give instructions on proper disposal methods.

**CAUTION: Never dispose of batteries in a fire.**



Clarity, a Division of Plantronics, Inc.  
4289 Bonny Oaks Drive, Suite 106  
Chattanooga, TN 37406  
1-800-552-3368  
[www.clarityproducts.com](http://www.clarityproducts.com)

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combined, Amplifying Your Life, Clarity Power and CI20 are  
trademarks or registered trademarks of Plantronics, Inc.

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