

*Desktop*  
**Telephony**  
from  **BLACK BOX**

## **2-in-1 Mobile Headset with 2.5 mm Connector**

HS402A



**FEDERAL COMMUNICATIONS COMMISSION  
AND  
INDUSTRY CANADA  
RADIO FREQUENCY INTERFERENCE STATEMENTS**

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio communication. It has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when the equipment is operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to take whatever measures may be necessary to correct the interference.

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

*This digital apparatus does not exceed the Class A limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation of Industry Canada.*

*Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de classe A prescrites dans le Règlement sur le brouillage radioélectrique publié par Industrie Canada.*

### FCC REQUIREMENTS FOR TELEPHONE-LINE EQUIPMENT

1. The Federal Communications Commission (FCC) has established rules which permit this device to be directly connected to the telephone network with standardized jacks. This equipment should not be used on party lines or coin lines.
2. If this device is malfunctioning, it may also be causing harm to the telephone network; this device should be disconnected until the source of the problem can be determined and until the repair has been made. If this is not done, the telephone company may temporarily disconnect service.
3. If you have problems with your telephone equipment after installing this device, disconnect this device from the line to see if it is causing the problem. If it is, contact your supplier or an authorized agent.
4. The telephone company may make changes in its technical operations and procedures. If any such changes affect the compatibility or use of this device, the telephone company is required to give adequate notice of the changes.

5. If the telephone company requests information on what equipment is connected to their lines, inform them of:
  - a. The telephone number that this unit is connected to.
  - b. The ringer equivalence number.
  - c. The USOC jack required: RJ-11C.
  - d. The FCC registration number.

Items (b) and (d) can be found on the unit's FCC label. The ringer equivalence number (REN) is used to determine how many devices can be connected to your telephone line. In most areas, the sum of the RENs of all devices on any one line should not exceed five (5.0). If too many devices are attached, they may not ring properly.

6. In the event of an equipment malfunction, all repairs should be performed by your supplier or an authorized agent. It is the responsibility of users requiring service to report the need for service to the supplier or to an authorized agent.

## **CERTIFICATION NOTICE FOR EQUIPMENT USED IN CANADA**

The Canadian Department of Communications label identifies certified equipment. This certification means that the equipment meets certain telecommunications-network protective, operation, and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction.

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 (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—in this case, your 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.*

### **NORMAS OFICIALES MEXICANAS (NOM) ELECTRICAL SAFETY STATEMENT**

#### **INSTRUCCIONES DE SEGURIDAD**

1. Todas las instrucciones de seguridad y operación deberán ser leídas antes de que el aparato eléctrico sea operado.
2. Las instrucciones de seguridad y operación deberán ser guardadas para referencia futura.
3. Todas las advertencias en el aparato eléctrico y en sus instrucciones de operación deben ser respetadas.
4. Todas las instrucciones de operación y uso deben ser seguidas.
5. El aparato eléctrico no deberá ser usado cerca del agua—por ejemplo, cerca de la tina de baño, lavabo, sótano mojado o cerca de una alberca, etc..
6. El aparato eléctrico debe ser usado únicamente con carritos o pedestales que sean recomendados por el fabricante.
7. El aparato eléctrico debe ser montado a la pared o al techo sólo como sea recomendado por el fabricante.
8. Servicio—El usuario no debe intentar dar servicio al equipo eléctrico más allá a lo descrito en las instrucciones de operación. Todo otro servicio deberá ser referido a personal de servicio calificado.
9. El aparato eléctrico debe ser situado de tal manera que su posición no interfiera su uso. La colocación del aparato eléctrico sobre una cama, sofá, alfombra o superficie similar puede bloquea la ventilación, no se debe colocar en libreros o gabinetes que impidan el flujo de aire por los orificios de ventilación.

10. El equipo eléctrico deber ser situado fuera del alcance de fuentes de calor como radiadores, registros de calor, estufas u otros aparatos (incluyendo amplificadores) que producen calor.
11. El aparato eléctrico deberá ser connectado a una fuente de poder sólo del tipo descrito en el instructivo de operación, o como se indique en el aparato.
12. Precaución debe ser tomada de tal manera que la tierra fisica y la polarización del equipo no sea eliminada.
13. Los cables de la fuente de poder deben ser guiados de tal manera que no sean pisados ni pellizcados por objetos colocados sobre o contra ellos, poniendo particular atención a los contactos y receptáculos donde salen del aparato.
14. El equipo eléctrico debe ser limpiado únicamente de acuerdo a las recomendaciones del fabricante.
15. En caso de existir, una antena externa deberá ser localizada lejos de las líneas de energia.
16. El cable de corriente deberá ser desconectado del cuando el equipo no sea usado por un largo periodo de tiempo.
17. Cuidado debe ser tomado de tal manera que objetos liquidos no sean derramados sobre la cubierta u orificios de ventilación.
18. Servicio por personal calificado deberá ser provisto cuando:
  - A: El cable de poder o el contacto ha sido dañado; u
  - B: Objetos han caído o líquido ha sido derramado dentro del aparato; o
  - C: El aparato ha sido expuesto a la lluvia; o
  - D: El aparato parece no operar normalmente o muestra un cambio en su desempeño; o
  - E: El aparato ha sido tirado o su cubierta ha sido dañada.



### **TRADEMARKS USED IN THIS MANUAL**

Any trademarks mentioned in this manual are acknowledged to be the property of the trademark owners.

# 1. Specifications

## Transmit:

**Frequency Response** — 100 to 4000 Hz

**Microphone** — Noise-canceling electret

**Sensitivity** — -46 dBV/Pa @ 1 kHz  
with 2.2 Kohm load

**Power** — Current consumption: 300  $\mu$ A;  
Operating voltage: 1.1 to 9 volts

## Receive:

**Frequency Response** — 300 to 3300 Hz

**Input Impedance** — 150 ohms

**Speaker** — Dynamic

## General:

**Weight** — 1.09 oz. (30.9 g)

# 2. Introduction

The 2-in-1 Mobile Headset is the perfect complement to enhance the freedom your cordless/cellular telephone provides. Its convertible style gives you maximum versatility—wear it with the headband or over your ear for hands-free communications any time you use your cordless/cellular telephone.



**Figure 2-1. Components (you supply the cellular phone).**

### NOTE

If your cordless/cellular telephone requires a 3.5 mm connector, insert the enclosed adapter into the telephone receptacle, then attach your Mobile Headset 2.5 mm connector to the adapter.

## 3. Wearing the 2-in-1 Mobile Headset

### 3.1 Wearing the Headset Over Your Ear

#### STEP A.

Swing the microphone boom/speaker assembly outward at the ball-joint. This motion creates a path for your ear to enter the headset.

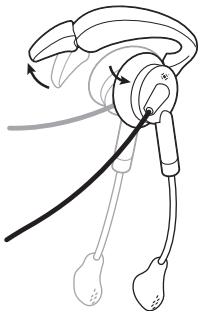


Figure 3-1. Wearing the Headset Over Your Ear: Step 1.

## 2-IN-1 MOBILE HEADSET WITH 2.5-MM CONNECTOR

### STEP B.

Starting forward of the ear, use your thumb and index finger to rotate the capsule to a comfortable position behind your ear.

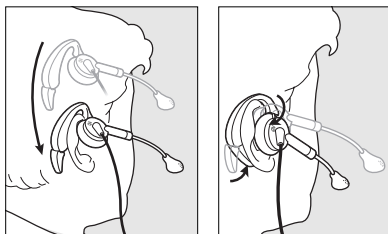


Figure 3-2. Wearing the Headset Over Your Ear: Step 2.

### STEP C.

Use your thumb to push the lobe hinge to a gentle but snug rest behind your ear lobe.

### 3.2 Wearing the Headset on Either Ear

Your headset comes packed ready to wear on your right ear. To wear it on your left ear, simply:

#### STEP A.

Remove the small foam ear cushion from the speaker housing on the acoustic module.

#### STEP B.

Remove the acoustic module from the “C” shaped wire ring, reverse its direction, then snap it back into place.

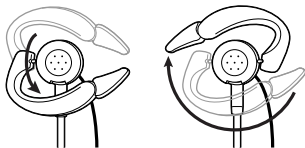


Figure 3-3. Wearing the Headset on Your Left Ear: Step B.

### 3.3 How to Remove the Ear Capsule

Remove the ear cushion. Firmly grasp the top of the ear capsule at the saddle. Pull down and out, releasing the C-ring from the receiver housing.

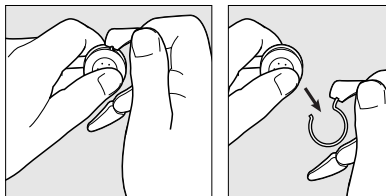
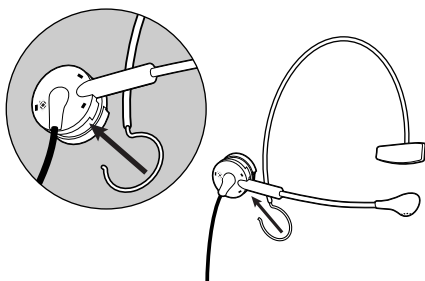


Figure 3-4. Removing the Ear Capsule.

### 3.4 How to Install the Headband or Contour Capsule

Align the groove on the acoustic module with the “C” shaped wire ring on the headband or contour capsule and snap it in.



**Figure 3-5. Installing the Headband or Contour Capsule.**



## 4. Troubleshooting

### 4.1 Calling Black Box

If you determine that your 2-in-1 Mobile Headset is malfunctioning, do not attempt to alter or repair the unit. It contains no user-serviceable parts. Contact Black Box at 724-746-5500.

Before you do, make a record of the history of the problem. We will be able to provide more efficient and accurate assistance if you have a complete description, including:

- the nature and duration of the problem.
- when the problem occurs.
- the components involved in the problem.
- any particular application that, when used, appears to create the problem or make it worse.

## **4.2 Shipping and Packaging**

If you need to transport or ship your 2-in-1 Mobile Headset:

- Package it carefully. We recommend that you use the original container.
- If you are shipping the 2-in-1 Mobile Headset for repair, make sure you include everything that came in the original package. Before you ship, contact Black Box to get a Return Materials Authorization (RMA) number.



**CUSTOMER SUPPORT INFORMATION**

Order **toll-free** in the U.S.: Call **877-877-BBOX** (outside U.S. call **724-746-5500**)  
FREE technical support 24 hours a day, 7 days a week: Call **724-746-5500** or fax **724-746-0746**  
Mailing address: **Black Box Corporation**, 1000 Park Drive, Lawrence, PA 15055-1018  
Web site: [www.blackbox.com](http://www.blackbox.com) • E-mail: [info@blackbox.com](mailto:info@blackbox.com)

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