

Thank you for purchasing the SP-23 EXTERNAL SPEAKER.

To fully enjoy the benefits of the SP-23, please read these instructions thoroughly before using the SP-23 with transceiver or receiver.

**FOREWORD**

The SP-23 EXTERNAL SPEAKER is designed for use with a wide variety of communication equipment, especially base station systems. The SP-23 is equipped with four separate audio network filters for maximum control of the audio characteristics of received signals.

**ACCESSORIES**

- This instruction sheet ..... 1
- Speaker cable ..... 1
- Sticker (Frequency characteristics) ..... 1

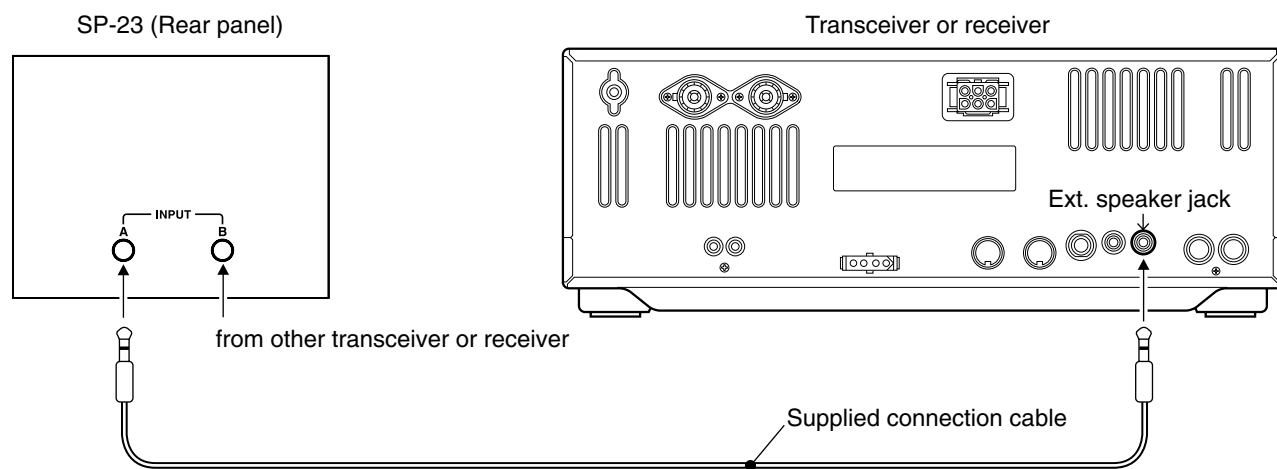
**CONNECTIONS**

Connect the supplied speaker cable between the [INPUT A] or [INPUT B] jack on the SP-23 rear panel and the transceiver or receiver's external speaker jack.

Another jack is available to connect other transceiver or receiver. In this case, it is necessary to purchase another speaker cable.

(Cable specification: 3.5 (d) mm, monophonic audio cable)

CONNECTION EXAMPLE



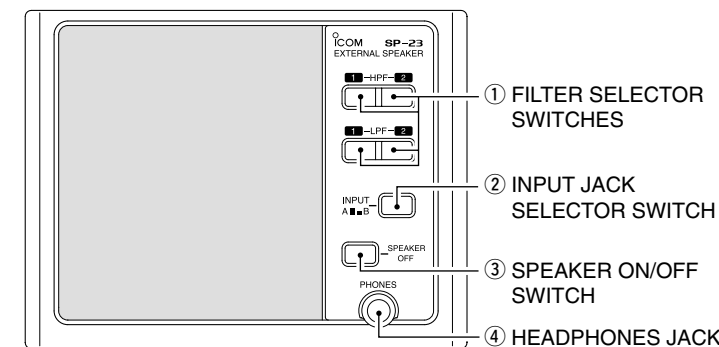
**SPECIFICATIONS**

- Rated Input Power : 2 W
- Maximum Input Power : 4 W
- Impedance : 8 Ω
- Dimensions (W × H × D) : 145 mm × 111 mm × 282.5 mm (Projections not incl.) 5<sup>23</sup>/<sub>32</sub> in × 4<sup>3</sup>/<sub>8</sub> in × 11<sup>1</sup>/<sub>8</sub> in
- Weight : Approx. 1.65 kg (3.6 lbs.)

All stated specifications are subject to change without notice or obligation.

**PANEL DESCRIPTION**

**FRONT PANEL**



① **FILTER SELECTOR SWITCHES [HPF-1/2, LPF-1/2]**

Push to select the internal audio filters that consist of high-pass and low-pass filters with two different cut-off frequency characteristics for each filter. They are useful in producing a customized, personal audio sound.

- **[HPF 1] SWITCH**  
Cuts off audio output frequencies of approx. 500 Hz or less when the switch is pushed IN.
- **[HPF 2] SWITCH**  
Cuts off audio output frequencies of approx. 250 Hz or less when the switch is pushed IN.
- **[LPF 1] SWITCH**  
Cuts off audio output frequencies of approx. 3 kHz or more when the switch is pushed IN.
- **[LPF 2] SWITCH**  
Cuts off audio output frequencies of approx. 1 kHz or more when the switch is pushed IN.

**NOTE:** [HPF 1] is selected automatically while [HPF 1] and [HPF 2] are pushed IN at the same time. [LPF 1] is also selected automatically while [LPF 1] and [LPF 2] are pushed IN at the same time.

② **INPUT JACK SELECTOR SWITCH [INPUT A/B]**

Push to select [INPUT A] or [INPUT B] on the rear panel.

- [INPUT A] is selected: Released ( ).
- [INPUT B] is selected: Pushed IN ( ).

③ **SPEAKER ON/OFF SWITCH [SPEAKER OFF]**

Push to turn the speaker audio output ON or OFF.

- The speaker is ON: Released ( ).
- The speaker is OFF: Pushed IN ( ).

**NOTE:** If no sound is emitted from both the speaker and headphones, make sure the [SPEAKER OFF] switch is in the OUT position.

④ **HEADPHONES JACK [PHONES]**

Connect a pair of headphones (impedance: 4–16 Ω) to this jack if required. The built-in speaker does not function while the [PHONES] jack is being used.

**STAND**

To raise the stand:  
With the speaker upside down, pull the stand upwards, as illustrated below.

**CAUTION**  
**BE CAREFUL** not to cut your fingers on the edge of the stopper when pulling up the stand.

