SOUND DESIGN TECHNOLOGIES™

# Component Selection in Hearing Aids

## Information Note

# 1. Component Selection in Hearing Aids

For optimum performance of the hearing aid, good quality components must be used. Component selection depends on availability, price and size of the hearing aid. For a body hearing aid, 1/8 or 1/4 watt carbon film resistors, miniature electrolytic or tantalum capacitors of 3V to 6V for larger values and ceramic for smaller values, are recommended. Behind-the-ear (BTE) and in-the-ear (ITE) hearing aids require specialized subminiature components.

Efforts have been made to specify microphones, receivers, potentiometers and switches from several sources to simplify selection and substitution. Components recommended herein are a guide to assist first-time hearing aid designers. Equivalent components from other sources may be substituted. Final choice of component selection rests with the designer.

## 1.1 Microphones and Receivers

**Knowles Electronics Inc.**

1151 Maplewood Drive

Itasca, Illinois, U.S.A. 60143

Phone: (630) 250-5100

Fax: (630) 250-0575

www.knowles.com

**Sonion A/S**

Byleddet 12-14

DK - 4000 Roskilde

Denmark

Phone: +45 7025 6510

Fax: +45 7025 6520

www.sonion.com

**Tibbetts Industries Inc.**

PO Box 1096

5 Colcord Avenue

Camden, ME

USA 04843

Phone: (207) 236-3301

Fax: (207) 236-3303

www.tibbettsindustries.com

## 1.2 Capacitors

**AVX Corporation**

Raleigh, North Carolina

USA 27604

Phone: (843) 448-9411

www.avxcorp.com

**Sprague Goodman Electronics, Inc.**

1700 Shames Drive

Westbury, NY

USA 11590

Phone: (516) 334-8700

Fax: (516) 334-8771

www.spraguegoodman.com

**Murata Electronics North America, Inc.**

www.murata.com

For local Murata offices visit:

www.murata.com/short/adresse.html

**Tansitor Electronics**

PO Box 230

West Road

Bennington, Vermont

USA 05404

Phone: (802) 442-5473

Fax: (802) 447-1297

www.vishay.com/company/brands/tansitor

## 1.3 Switches and Potentiometers

(Volume Controls and Trimmers)

**Bourns Inc.**

Trimpot Products Division

1200 Columbia Avenue

Riverside, California

USA 92507

Phone: (714) 681-5500 Toll Free: 1-877-426-8767

Fax: (714) 781-5700

www.bourns.com

**Deltek Electronics, A Knowles Company**

1151 Maplewood Drive

Itasca, Illinois

USA 60143

Phone: (630) 250-5100

www.deltekelectronics.com or www.knowles.com

Deltek/Knowles Europe:

+44 1444 235 432

**Sonion A/S**

Byleddet 12-14

DK - 4000 Roskilde

Denmark

Phone: +45 7025 6510

Fax: +45 7025 6520

www.sonion.com

**Wilbrecht Electronics Ltd.**

1400 Energy Park Drive, Suite 18St. Paul, Minnesota

USA 55108-5248

Phone: (651) 659-0919

Fax: (651) 659-9204

Toll-free: 1-888-323-8751

www.wilbrecht.com

## 1.4 Telecoils

**Deltek Electronics, A Knowles Company**

1151 Maplewood Drive

Itasca, Illinois

USA 60143

Phone: (630) 250-5100

www.deltekelectronics.com or www.knowles.com

Deltek/Knowles Europe:

+44 1444 235 432

**Sonion A/S**

Byleddet 12-14

DK - 4000 Roskilde

Denmark

Phone: +45 7025 6510

Fax: +45 7025 6520

www.sonion.com

**Tibbetts Industries Inc.**

PO Box 1096

5 Colcord Avenue

Camden, ME

USA 04843

Phone: (207) 236-3301

Fax: (207) 236-3303

www.tibbettsindustries.com

# 2. Revision History

| Version | ECR | Date | Change Description |
|---|---|---|---|
| 8 | 148229 | November 2007 | Document conversion to new template and editing. |

DOCUMENT IDENTIFICATION
**INFORMATION NOTE**
Information relating to this product and the application or design described herein is believed to be reliable, however such information is provided as a guide only and Sound Design Technologies assumes no liability for any errors in this document, or for the application or design described herein. Sound Design Technologies reserves the right to make changes to the product or this document at any time without notice.

**SOUND DESIGN TECHNOLOGIES**

**Mailing Address: P.O. Box 278 , Burlington , Ontario , Canada , L7R 3Y2**

**Sound Design Technologies assumes no liability for any errors or omissions in this document, or for the use of the circuits or devices described herein. The sale of the circuit or device described herein does not imply any patent license, and Sound Design Technologies makes no representation that the circuit or device is free from patent infringement.**

**Sound Design Technologies and Sound Design Technologies logo are registered trademarks of Sound Design Technologies, Ltd.**

**© Copyright 2007 Sound Design Technologies, Ltd. All rights reserved. Printed in Canada.**

**www.SoundDesignTechnologies.com**