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# Technical Manual

RS CAMBRIDGE RIE Platform

GN Making Life Sound Better

GN ReSound A/S
Global Technical Operations
https://gto.gnresound.com
Lautrupbjerg 7
DK-2750 Ballerup
Denmark

# Table of Contents

Form-Factor-Matrix & Product Information ..... 3-4
Part list ..... 5
Part list - HSG parts ..... 6-8
Part list - SureFit receiver tubes ..... 9
Part list - SureFit domes ..... 10
Part list - SureFit accessories ..... 11
Disassembling procedure for size 312 & 13 DRW models ..... 12-13
Replacing TOP HSG ASM (61-DRWC) ..... 14
Replacing rec tube ..... 15
Replacing wax guard/filter in rec tube ..... 16-17

*For internal GN Operations only* ..... 18
Part list - test equipment ..... 19
Test equipment ..... 20
HI testing ..... 21
Wireless test ..... 22



***Not subject to issue control when printed***

| Platform CAMBRIDGE RIE C6 | Product | Model | DATA SHEET |
|---|---|---|---|
| Wireless programming & HI test<br>Batt 312 zinc air | OMNIA<br> <br>RHI 312 13 | RU961-DRW<br>RU761-DRW<br>RU561-DRW<br>RU461-DRW | 401872000 RIE&RHI<br>401876000 M&RIE |
| Wireless programming & HI test<br>Batt 13 zinc air | | RU962-DRW<br>RU762-DRW<br>RU562-DRW<br>RU462-DRW | |
| Wireless programming & HI test<br>Integrated Batt - rechargeable | | RU961-DRWC<br>RU761-DRWC<br>RU561-DRWC<br>RU461-DRWC | |

**HIs are available in these colours:**
Gold (GLD)
Warm Grey (WRM GRY)
Espresso (ESP)
Deep Black (DP BLK)
Bronze (BRNZ)
Champagne (CHMPN)
Sparkling Silver (SPK SIL)
Graphite (GRPH)

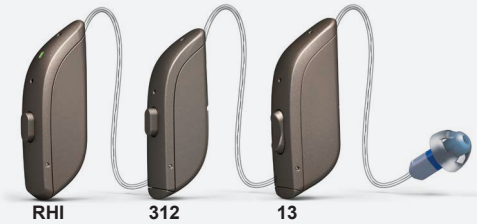
***RU61-DRWC:***
*Note that the TOP HSG ASM is the only HSG part which can be replaced. Due to the construction of the HI, the BOT HSG must not be replaced*

The HIs are available with 4 selectable receiver power levels: Low Power (LP), Medium Power (MP), High Power (HP) & Ultra Power (UP). The HI fits SureFit 3, 8 pin receiver tubes and the SureFit 3, 8 pin receiver M&RIE tubes

***See also Data Sheets for more tech info***



***Not subject to issue control when printed***

| Platform CAMBRIDGE RIE C6 | Product | Model | DATA SHEET |
|---|---|---|---|
| Wireless programming & HI test<br>Batt 312 zinc air | ONE<br>  <br> | RT961-DRW<br>RT761-DRW<br>RT561-DRW<br>RT461-DRW | 401304000 RIE&RHI<br>401361000 M&RIE |
| Wireless programming & HI test<br>Batt 13 zinc air | | RT962-DRW<br>RT762-DRW<br>RT562-DRW<br>RT462-DRW | |
| Wireless programming & HI test<br>Integrated Batt - rechargeable | | RT961-DRWC<br>RT761-DRWC<br>RT561-DRWC<br>RT461-DRWC | |

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***RT61-DRWC:***
*Note that the TOP HSG ASM is the only HSG part which can be replaced. Due to the construction of the HI, the BOT HSG must not be replaced*

The HIs are available with 4 selectable receiver power levels: Low Power (LP), Medium Power (MP), High Power (HP) & Ultra Power (UP). The HI fits SureFit 3, 8 pin receiver tubes and the SureFit 3, 8 pin receiver M&RIE tubes

***See also Data Sheets for more tech info***

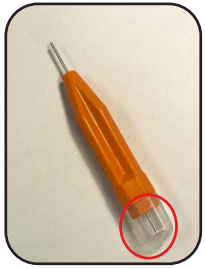


***Not subject to issue control when printed***

| Description | Part No |
|---|---|
| PIN,0.60X2.50 (module pin sound outlet end,61-DRW) | 20810100 |
| PIN,0.60X6.60 (module pin BAT DR end,62-DRW) | 15344300 |
| PIN,0.60X4.85,W/3GROOVES (BAT DR pin,61-DRW) | 20649700 |
| PIN,0.60X5.45,W/3GROOVES (BAT DR pin,62-DRW) | 19069900 |
| PIN,0.60X6.80 (TOP HSG pin,61-DRW) | 16949100 |
| PIN,0.60X7.25 (TOP HSG pin,62-DRW) | 16059800 |
| PIN,0.60X7.35 (TOP HSG pin,61-DRWC) | 21370600 |

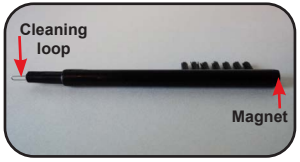
| Description | Part No |
|---|---|
| CLEANING BRUSH, BLK | 17435000 |
| PIN REMOVAL TOOL. PACKED (white tool) | 15502500 |
| AUTOPHONE MAGNETS | 17294600 |
| KIT,COLOR MARKERS,CAMBR RIE 13/312 | 20809900 |
| COLOUR MARKER,BERLIN,RED 13/312 | 18924900 |
| COLOUR MARKER,BERLIN,BLU 13/312 | 18924901 |
| KIT,COLOR MARKERS,CRHI | 20992600 |
| SERVICE PIN TOOL ASM,BLK (61-DRWC) | 21161685 |
| KIT,REC CHANGE TOOL,SF3 (tool & guide) | 21944100 |

The pin for the TOP HSG is attached under the transp cap



SERV PIN TOOL ASM,BLK
21161685
(orange proto type tool is shown)

PIN REMOVAL TOOL
15502500




Cleaning brush, black
17435000

REC CHANGE TOOL
(shown from both sides)
Packed in a plastic bag together with a guide

Colour mrk location
(red circle)
RHI

The rec has a red or blue conn lock which will also indicate R or L side on all models

Colour mrk location (red circle)
312 & 13




***Not subject to issue control when printed***

| COLOUR | TOP HSG ASM | BOT HSG (PTD with different logo) | | BAT DOOR ASM (diff PFF PTD) | |
|---|---|---|---|---|---|
| | | | | | |
| | | RT61-DRW | RU61-DRW | RT61-DRW | RU61-DRW |
| GOLD | 21512570 | 21512670 | 22324270 | 21512770 | 22324370 |
| WARM GREY | 21512571 | 21512671 | 22324271 | 21512771 | 22324371 |
| ESPRESSO | 21512572 | 21512672 | 22324272 | 21512772 | 22324372 |
| DEEP BLACK | 21512573 | 21512673 | 22324273 | 21512773 | 22324373 |
| BRONZE | 21512574 | 21512674 | 22324274 | 21512774 | 22324374 |
| CHAMPAGNE | 21512575 | 21512675 | 22324275 | 21512775 | 22324375 |
| SPARKLING SILVER | 21512576 | 21512676 | 22324276 | 21512776 | 22324376 |
| GRAPHITE | 21512577 | 21512677 | 22324277 | 21512777 | 22324377 |

TOP HSG, mic filters & PB

BAT DR & Retention bat

*Not subject to issue control when printed*

| COLOUR | TOP HSG ASM | BOT HSG (PTD with different logo as shown on previous page) | | BAT DOOR (diff PFF PTD) | |
|---|---|---|---|---|---|
| | | | | | |
| | | RT62-DRW | RU62-DRW | RT62-DRW | RU62-DRW |
| GOLD | 21512870 | 21513170 | 22324470 | 21513070 | 22324570 |
| WARM GREY | 21512871 | 21513171 | 22324471 | 21513071 | 22324571 |
| ESPRESSO | 21512872 | 21513172 | 22324472 | 21513072 | 22324572 |
| DEEP BLACK | 21512873 | 21513173 | 22324473 | 21513073 | 22324573 |
| BRONZE | 21512874 | 21513174 | 22324474 | 21513074 | 22324574 |
| CHAMPAGNE | 21512875 | 21513175 | 22324475 | 21513075 | 22324575 |
| SPARKLING SILVER | 21512876 | 21513176 | 22324476 | 21513076 | 22324576 |
| GRAPHITE | 21512877 | 21513177 | 22324477 | 21513077 | 22324577 |

TOP HSG, mic filters & TGL

***All HSG parts are nano coated***



***Not subject to issue control when printed***

| COLOUR | TOP HSG ASM | FILTER REPL KIT |
|---|---|---|
| | | **FILTER REPL KIT:**<br>Pin tool with pin,<br>TOP HSG ASM<br>Filter repl guide |
| | | |
| GOLD | 21513270 | 21618870 |
| WARM GREY | 21513271 | 21618871 |
| ESPRESSO | 21513272 | 21618872 |
| DEEP BLACK | 21513273 | 21618873 |
| BRONZE | 21513274 | 21618874 |
| CHAMPAGNE | 21513275 | 21618875 |
| SPARKLING SILVER | 21513276 | 21618876 |
| GRAPHITE | 21513277 | 21618877 |

TOP HSG, mic filters & PB

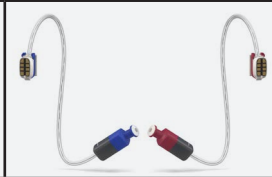
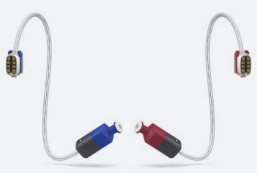
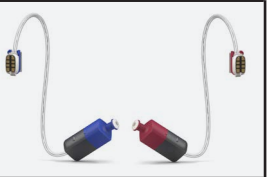
If the mic filters are damaged (they are mounted inside the TOP HSG) or the TOP HSG is damaged, the TOP HSG ASM can be replaced. Choose either the TOP HSG ASM or a FILTER REPL KIT.

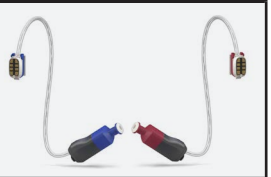
Due to the mechanical construction of the HI and a sealing inside the HI, the BOT HSG must not be replaced. If it is damaged and needs to be replaced, the complete HI should be returned for repair/replacement.

***All HSG parts are nano coated***



***Not subject to issue control when printed***

| | SUREFIT 3 (8 pin) | | |
|---|---|---|---|
| SIZE | LP | MP | HP (SF3B) |
| |  |  |  |
| 0L | 21384100 | 21385100 | 21879200 |
| 0R | 21384200 | 21385200 | 21879201 |
| 1L | 21384300 | 21385300 | 21879202 |
| 1R | 21384400 | 21385400 | 21879203 |
| 2L | 21384500 | 21385500 | 21879204 |
| 2R | 21384600 | 21385600 | 21879205 |
| 3L | 21384700 | 21385700 | 21879206 |
| 3R | 21384800 | 21385800 | 21879207 |
| 4L | 21384900 | 21385900 | 21879208 |
| 4R | 21385000 | 21386000 | 21879209 |

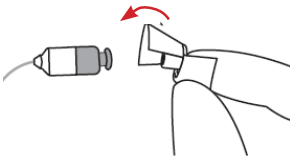
| | SUREFIT 3B (8 pin) M&RIE |
|---|---|
| SIZE | |
| |  |
| 0L | 21878800 |
| 0R | 21878801 |
| 1L | 21878802 |
| 1R | 21878803 |
| 2L | 21878804 |
| 2R | 21878805 |
| 3L | 21878806 |
| 3R | 21878807 |
| 4L | 21878808 |
| 4R | 21878809 |

M&RIE: Rec with mic attached

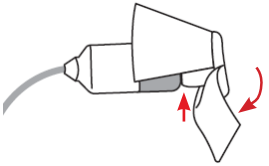


*Not subject to issue control when printed*

| SUREFIT (SF) - STD, OPEN & CLOSED DOMES | | |
|---|---|---|
| **Description** | | **Bag (10 pcs)** |
| DOME,REC,STD,BAG,10PC | | 21432300 |
| DOME,OPEN,REC,SM,BAG,10PC | | 21432400 |
| DOME,OPEN, REC,MDM,BAG,10PC | | 21432500 |
| DOME,OPEN, REC,LGE,BAG,10PC | | 21432600 |
| DOME,CLOSED,REC,SM,BAG,10PC | | 21432000 |
| DOME,CLOSED,REC,MDM,BAG,10PC | | 21432100 |
| DOME,CLOSED,REC,LGE,BAG,10PC | | 21432200 |
| **SUREFIT (SF) - POWER DOMES** | | |
| DOME,PWR REC,SM,BAG,10PC | | 21432700 |
| DOME,PWR REC,MDM,BAG,10PC | | 21432800 |
| DOME,PWR REC,LGE,BAG,10PC | | 21432900 |

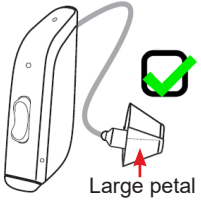


Push the largest petal back, then press the STD/tulip dome over the ribbed end of the rec tube



The dome must be correct mounted. Check that the collar completely covers the ribbed end rec tube. Push the large petal forward

Ensure that the large petal on the STD (tulip) dome is outside the small petal

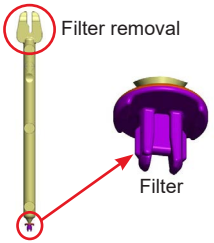




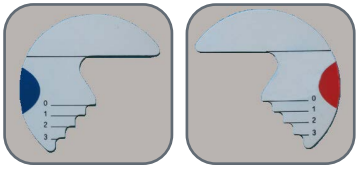

***Not subject to issue control when printed***

| Description | Part No |
|---|---|
| | |
| FITTING KIT,M&RIE,SF3B | 22125800 |
| MIC FILTER,M&RIE,BAG,8 | 21536500 |
| FITTING KIT,REC,SF3B | 21997400 |
| FILTER,GN WAXGUARD,BOX,8PCS | 20439700 |
| MEASUREMENT TOOL,MINI BTE | 15200800 |
| SPORT LOCK,SF3 LP,BAG,10 | 21410800 |
| SPORT LOCK,SF3 MP,BAG,10 | 21410900 |
| SPORT LOCK,SF3 HP,BAG,10 | 21411000 |
| SPORT LOCK,SF3 M&RIE,BAG,10 | 21502600 |

GN WAXGUARD
20439700



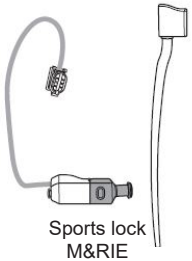

MIC FILTER,M&RIE (8pcs)
21536500



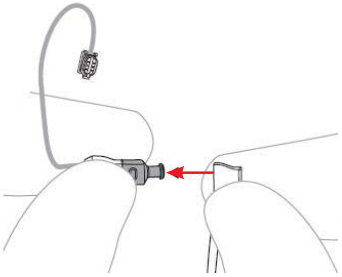
MEASUREMENT TOOL
(for both L & R sides)
15200800

**Sports lock to be mounted as shown:**

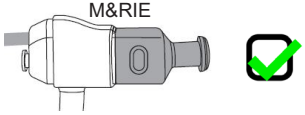
Sports lock
sizes LP/MP/HP available



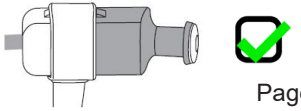
Sports lock
M&RIE



Sports lock
M&RIE



Sports lock
LP/MP/HP





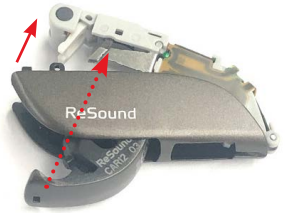
*Not subject to issue control when printed*

PIN REMOVAL TOOL
15502500

Locate the TOP HSG pin and push it out using a pin removal tool. Pull the pin complete out using a tweezers. Gently lift off the TOP HSG as shown

312

13

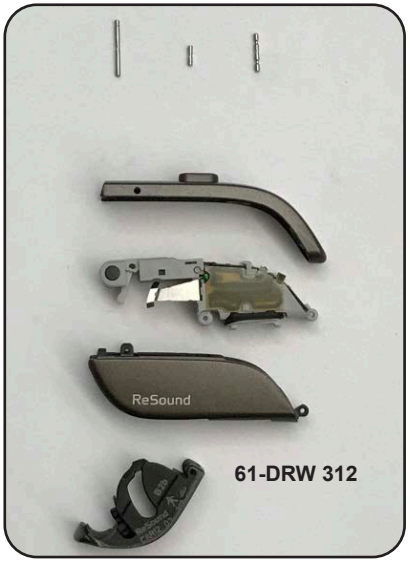



**For 61-DRW 312:** Locate the module pin in the sound outlet end and push it out with a pin removal tool. Pull it out with a tweezers. **For 62-DRW 13:** Locate the module pin (in the BAT end) and push it out with a pin removal tool. Pull it out with a tweezer. For both models: Gently lift up the module and BAT DR from BOT HSG



***Not subject to issue control when printed***

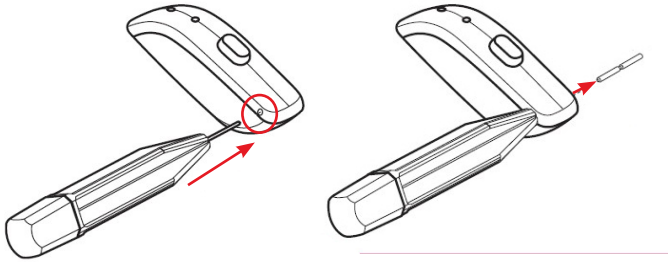
Locate the BAT DR pin and push it out with a pin removal tool. Pull it out using a tweezers



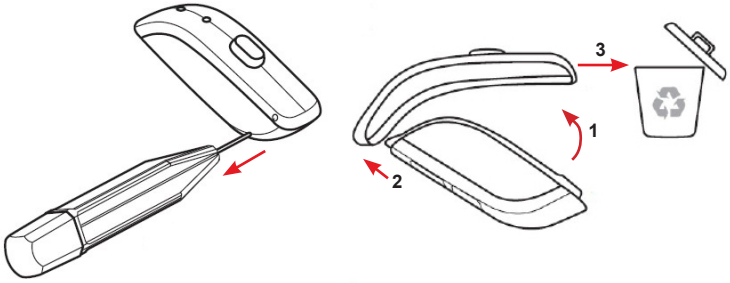
*Not subject to issue control when printed*

If the mic filters are blocked, the complete TOP HSG ASM must be replaced.

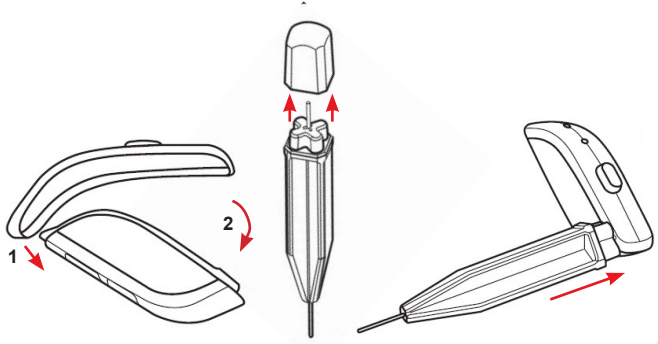
The black SERVICE PIN TOOL can be used (p/n 21161685). The tool is delivered with the correct pin for fixing the TOP HSG - use of the tool is shown in below pics. *Note that the TOP HSG ASM is the only HSG part which can be replaced on a 61-DRWC. Due to the construction of the HI, the BOT HSG must not be replaced.*



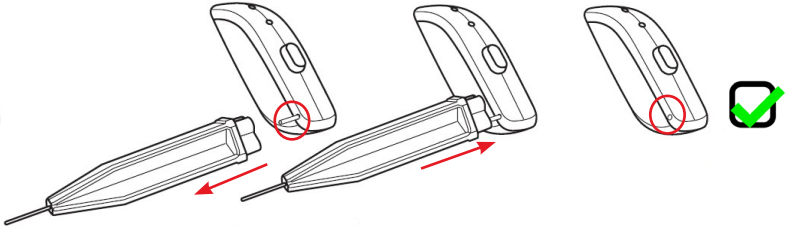
Locate the pin for the TOP HSG ASM and push it out using the SERVICE PIN TOOL ASM




Pull out the pin tool. The TOP HSG is now released from the BOT HSG. Lift up the TOP HSG as shown and discard it as it must not be reused




Attach a new TOP HSG ASM. Remove the protection cap from the pin tool to reveal the new TOP HSG pin. Insert the new pin into TOP HSG by pushing in the tool



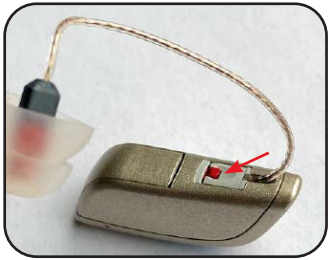
Pull back the pin tool and the pin will be pre-mounted. Complete the pin inserting by using the tool to push in the new pin

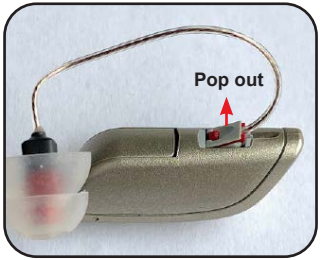


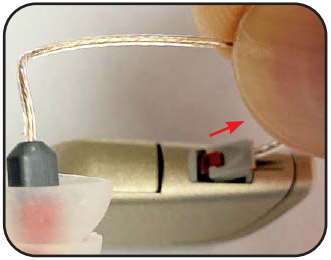
***Not subject to issue control when printed***

***Remove the rec***

***Use either the removal procedure described here or use the rec removal tool - see instr in the guide which is enclosed the rec removal tool kit***

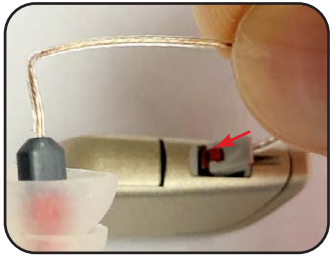


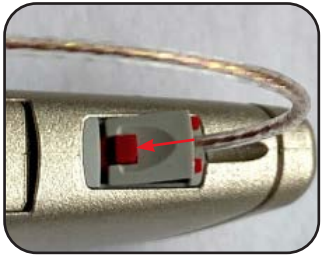


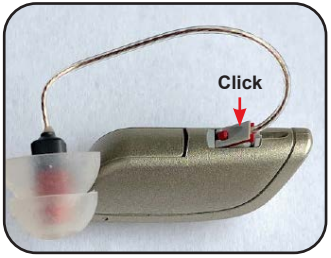



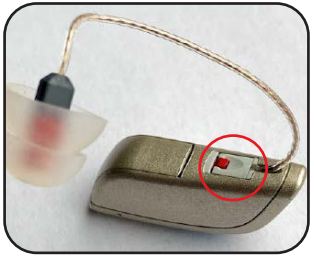
Use a fingernail to slide the receiver lock towards the bat end of the HI (red rec lock for right side is shown here). The receiver lock will unlock the receiver and it will pop out. Pull the receiver away from the HI

***Connect the rec***







Connect a new receiver by sliding it into the HI as shown. Press to click it in place using e.g. a finger. Check that the rec is correct in place



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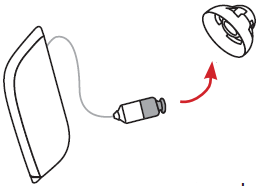
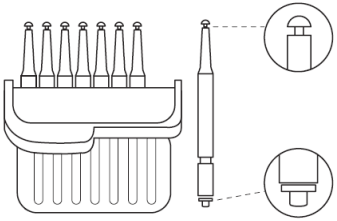
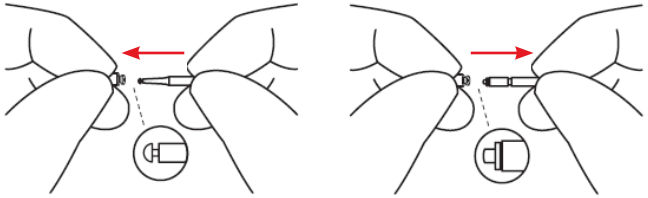
**Remove the used wax filter:**



If a dome is mounted, remove it before starting replace the wax filter

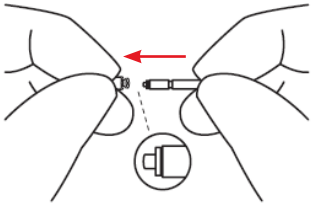


Box of 8 wax filter tools. The wax filter tool has two functions:
A removal tip to collect the used filter, and a replacement tip with a new white filter

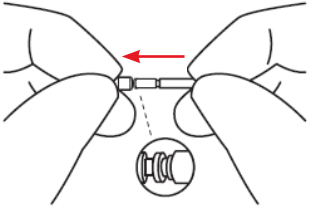


Insert the removal tip into the used wax filter and then pull the tool straight out. It is important to pull it straight and not on an angle

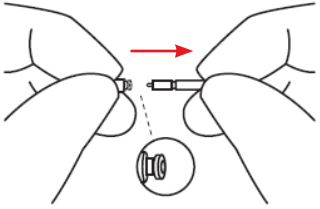
**Insert the new wax filter:**



Insert the other end of the tool into the sound outlet (the end with the replacement filter)



Gently press the replacement filter straight into the sound outlet until the outer ring is touching the sound outlet



Pull the tool straight out – your new wax filter will remain in place. Re-attach your dome or a replacement dome



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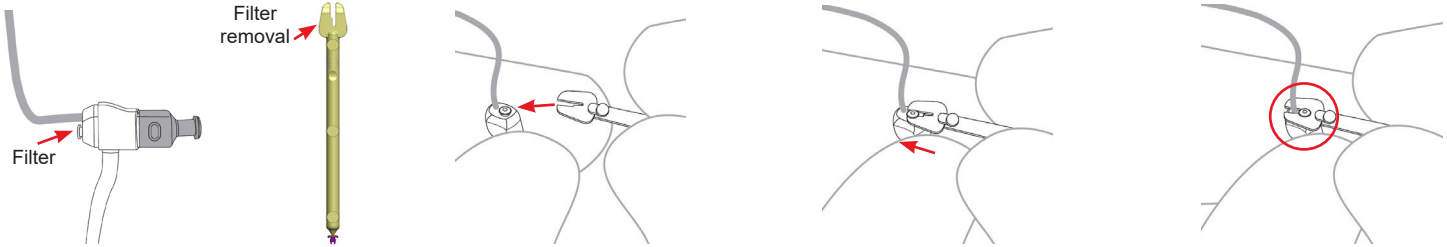
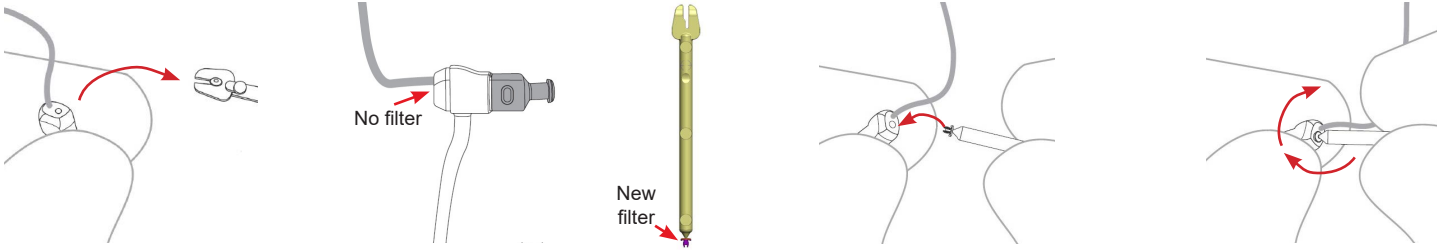
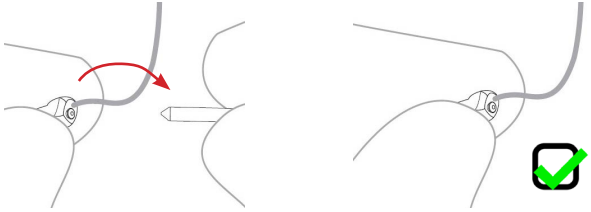



Locate the mic filter at the back of the rec tube. Use the filter removal end of the mic filter pin to remove the defective filter. Make sure the pin is pushed all the way in to get the best grip on the defective filter (see red circle)




Pull back the pin with the defective filter. In the other end of the filter pin, the new filter is attached. Push it into the hole/mic sound inlet. Make sure the filter is correct in place. Turn the pin clockwise until the new filter is released



Pull back the pin. Check that the filter is correct in place



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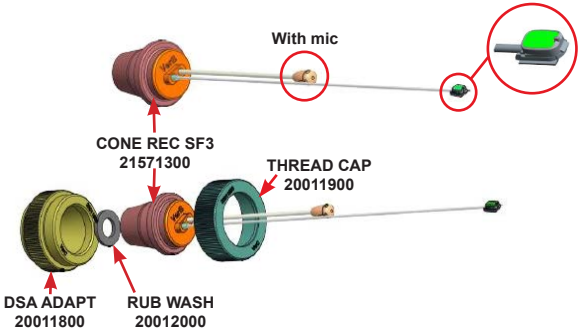
***The remaining part of the Technical Manual is for internal GN operations only***



***Not subject to issue control when printed***

| Description | Part No |
|---|---|
| | |
| BATTERY PILL 13+ (62-DRW) | 17449400 |
| BATTERY PILL 312+ (61-DRW) | 17449300 |
| NOAHLINK WL CPD-1 | 20310800 |
| FOAM,LUXOR RHI | 20878000 |
| FRAME<br>(BLK test frame for ATC4000 sound chamber) | 16902800 |
| TEST JIG,CAMBRIDGE RHI&13 | 21570100 |
| TEST JIG,CAMBRIDGE 312 | 21628300 |
| ASM TEST REC UP SF3,DSA6000 | 21571500 |
| DSA ADAPTOR | 20011800 |
| THREAD CAP | 20011900 |
| RUBBER WASHER | 20012000 |
| CONE RECEIVER,SF3,DSA6000 | 21571300 |

***Please find pics of test equipment parts on the next pages***




ASM TEST REC UP SF3,DSA6K
p/n 21571500

See the test instr page concerning how to place the mic correct on the test jig



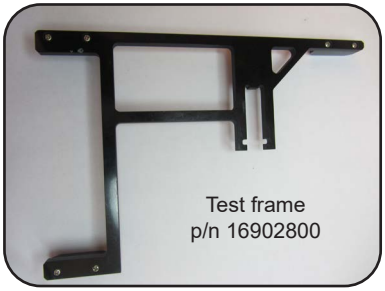
***Not subject to issue control when printed***

COUPL MIC,TM-12,
MEASURED
p/n 18220700

Bat pill must be used
during test, models
RT61 & 62-DRW
p/n 17449400 size 13
p/n 17449300 size 312

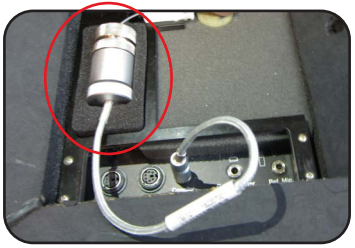
2cc coupler
p/n 30-4838800 can
be ordered with GTO
Dept / HQ DK

NOAHLINK WL CPD-1
p/n 20310800



Test frame
p/n 16902800

FOAM,LUX RHI
p/n 20878000
support for
test rec & coupler



ASM TEST REC UP SF3,DSA6K
p/n 21571500

See the test instr page concerning how
to place the mic correct on the test jig

TEST JIG,CAMBRIDGE 312
p/n 21628300

TEST JIG,CAMBRIDGE
RHI&13
p/n 21570100



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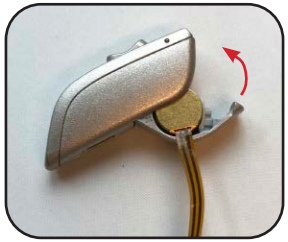
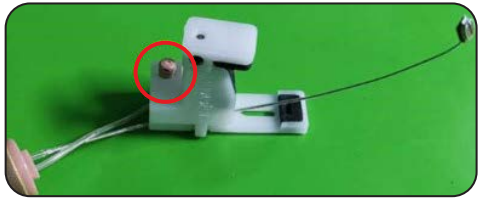
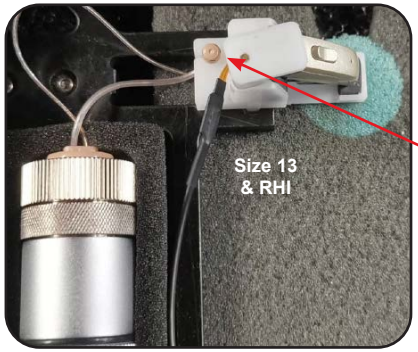
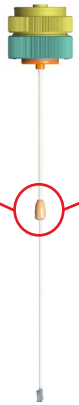
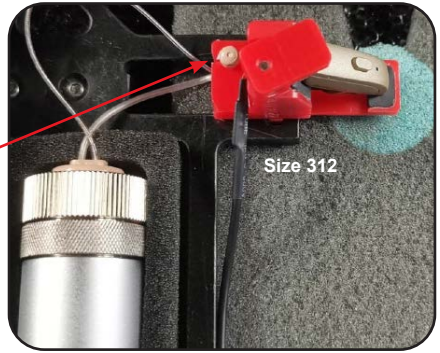
***Please also see GTO info doc "GI-01-10-002 – Guide to "WL Only test" - to be found on GTO web*** https://gto.gnresound.com





Add the correct bat pill size 312 or 13 and close the bat door (no bat pill for RHI models as they have integrated bat). Attach the test rec to the test jig. The test rec mic is to be placed on the jig as shown (see also pics below). Connect the test rec to the HI




Mount the 2cc coupler to the TM12 coupl mic. Attach the test rec to the 2cc coupler. Attach the HI to the test jig/fixture in the correct position. Attach the jig/fixt to the black test frame and place it all in the test chamber. Make sure to place the test rec mic correct on the test jigs before testing. Select the correct test prog and make sure to follow instructions coming up on the screen



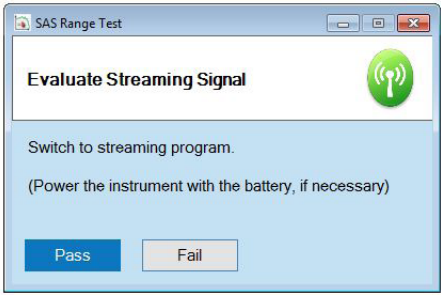
***Not subject to issue control when printed***

The wireless range test is a combined DSA6000 Noahlink/SAS Range Check test using the SAS-3 with its MAC address entered into the DSA 6000 system configuration and a Noahlink mounted directly in any of the DSA 6000 units USB ports. No fixture is required performing a wireless range test

NOAHLINK

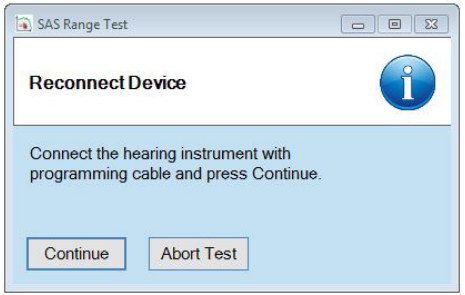
**How to get the MAC address of the SAS:** It is not directly available in the STD version. SAS streamers with MAC address labeled on the HSG can be requested from GTO. Please note that they are not available through regular ordering channels. Please contact HQ / GTO

1




At the end of the test sequence, after all acoustical test are done, the operator will be instructed to remove the HI from the test chamber, insert a battery (if necessary) and evaluate the quality of the streaming signal. If the signal is accepted click Pass. If the operator wish to mark this HI as defective click Fail

2




Regardless if the operator select Pass or Fail the device must be reconnected to the DSA system after evaluation is done



***Not subject to issue control when printed***