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# Technical Manual

RS CAMBRIDGE RIE Platform, BTE

GN Making Life Sound Better

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

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Platform CAMBRIDGE RIE C6	Product	Model	DATA SHEET
Wireless programming & HI test Batt 312 zinc air	<p style="text-align: center;">NEXIA</p>  <p style="text-align: center;">312                      13</p>	NX961-DRW ..... NX761-DRW ..... NX561-DRW ..... NX461-DRW	<p style="text-align: center;">402383000 STD REC 402384000 M&amp;RIE REC</p>
Wireless programming & HI test Batt 13 zinc air		..... NX962-DRW ..... NX762-DRW ..... NX562-DRW ..... NX462-DRW	

**HIIs 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)

The HIIs 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*

Platform CAMBRIDGE RIE C6	Product	Model	DATA SHEET
<p>Wireless programming &amp; HI test Integrated Batt - rechargeable</p>	<p>OMNIA</p> 	RU960-DRWC	<p>402136000 MINI RIE RHI 402137000 MINI RIE RHI M&amp;RIE</p>
		RU760-DRWC	
		RU560-DRWC	
		RU460-DRWC	

**HI's 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)

***RU60-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 HI's 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***

Platform CAMBRIDGE RIE C6	Product	Model	DATA SHEET
Wireless programming & HI test Batt 312 zinc air	<p style="text-align: center;">OMNIA</p>  <p style="text-align: center;">RHI      312      13</p>	RU961-DRW RU761-DRW RU561-DRW RU461-DRW	401872000 RIE&RHI 401876000 M&RIE
Wireless programming & HI test Batt 13 zinc air		RU962-DRW RU762-DRW RU562-DRW RU462-DRW	
Wireless programming & HI test Integrated Batt - rechargeable		RU961-DRWC RU761-DRWC RU561-DRWC RU461-DRWC	

**HI's 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 HI's 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**

Platform CAMBRIDGE RIE C6	Product	Model	DATA SHEET
Wireless programming & HI test Batt 312 zinc air	<p style="text-align: center;">ONE</p>  <p style="text-align: center;">RHI      312      13</p>	RT961-DRW	<p style="text-align: center;">401304000 RIE&amp;RHI 401361000 M&amp;RIE</p>
Wireless programming & HI test Batt 13 zinc air		RT761-DRW	
		RT561-DRW	
		RT461-DRW	
		RT962-DRW	
		RT762-DRW	
		RT562-DRW	
		RT462-DRW	
Wireless programming & HI test Integrated Batt - rechargeable		RT961-DRWC	
	RT761-DRWC		
	RT561-DRWC		
	RT461-DRWC		

**HI's 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)

**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 HI's 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**

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
PIN,0.60X7.70 (TOP HSG pin,60-DRWC)	20992600

Description	Part No
CLEANING BRUSH, BLK	17435000
PIN REMOVAL TOOL. PACKED (white tool)	15502500
AUTOPHONE MAGNETS	17294600
KIT,COLOR MARKERS,CRIE312/13	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

COLOUR	TOP HSG ASM	BOT HSG (PTD with different logo)		BAT DOOR ASM (diff PTD)		
						
		RT61-DRW	NX&RU61-DRW	RT61-DRW	RU61-DRW	NX61-DRW
GOLD	21512570	21512670	22324270	21512770	22324370	22850670
WARM GREY	21512571	21512671	22324271	21512771	22324371	22850671
ESPRESSO	21512572	21512672	22324272	21512772	22324372	22850672
DEEP BLACK	21512573	21512673	22324273	21512773	22324373	22850673
BRONZE	21512574	21512674	22324274	21512774	22324374	22850674
CHAMPAGNE	21512575	21512675	22324275	21512775	22324375	22850675
SPARKLING SILVER	21512576	21512676	22324276	21512776	22324376	22850676
GRAPHITE	21512577	21512677	22324277	21512777	22324377	22850677

TOP HSG, mic filters & PB

BAT DR & Retention bat



COLOUR	TOP HSG ASM	BOT HSG (PTD with diff logo as shown on previous page)		BAT DOOR (diff PTD)		
						
		RT62-DRW	NX&RU62-DRW	RT62-DRW	RU62-DRW	NX62-DRW
GOLD	21512870	21513170	22324470	21513070	22324570	22850770
WARM GREY	21512871	21513171	22324471	21513071	22324571	22850771
ESPRESSO	21512872	21513172	22324472	21513072	22324572	22850772
DEEP BLACK	21512873	21513173	22324473	21513073	22324573	22850773
BRONZE	21512874	21513174	22324474	21513074	22324574	22850774
CHAMPAGNE	21512875	21513175	22324475	21513075	22324575	22850775
SPARKLING SILVER	21512876	21513176	22324476	21513076	22324576	22850776
GRAPHITE	21512877	21513177	22324477	21513077	22324577	22850777

TOP HSG, mic filters & TGL

*All HSG parts are nano coated*

COLOUR	TOP HSG ASM		TOP HSG ASM	FILTER REPL KIT
				<b>FILTER REPL KIT:</b> Pin tool with pin, TOP HSG ASM Filter repl guide
61-DRWC*		60-DRWC	61-DRWC	
GOLD	21513270	22283570	22402070	21618870
WARM GREY	21513271	22283571	22402071	21618871
ESPRESSO	21513272	22283572	22402072	21618872
DEEP BLACK	21513273	22283573	22402073	21618873
BRONZE	21513274	22283574	22402074	21618874
CHAMPAGNE	21513275	22283575	22402075	21618875
SPARKLING SIL	21513276	22283576	22402076	21618876
GRAPHITE	21513277	22283577	22402077	21618877

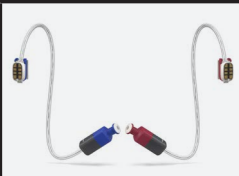
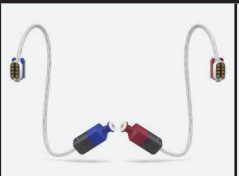

If the mic filters are damaged (they are mounted inside the TOP HSG) or the TOP HSG is damaged, the TOP HSG ASM can be replaced. Choose either the TOP HSG ASM or a FILTER REPL KIT.

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.

TOP HSG, mic filters & PB

\* TOP HSG ASM 61-DRWC: New p/ns are introduced - p/ns 2228357x. Possible stock of old p/ns 2151327x can be used up

*All HSG parts are nano coated*

		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 3 TM&RIE (8 pin) Rec with mic attached	
SIZE	SF3B	SF3C	
			
0L	21878800	22406500	
0R	21878801	22406501	
1L	21878802	22406502	
1R	21878803	22406503	
2L	21878804	22406504	
2R	21878805	22406505	
3L	21878806	22406506	
3R	21878807	22406507	
4L	21878808	22406508	
4R	21878809	22406509	





**TM&RIE SF3C vers is introduced with another filter:**

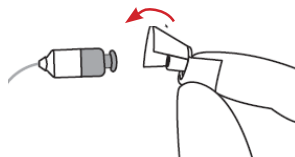
**SF3B M&RIE - filters included:**

20439700 FILTER,GN WAXGUARD,BOX,8PCS  
21536500 MIC FILTER,M&RIE,BAG,8PCS

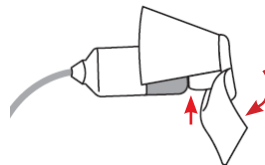
**SF3C TM&RIE - filters included:**

20439700 FILTER,GN WAXGUARD,BOX,8PCS  
22035700 FILTER,MIC,CASE,8PCS

SUREFIT (SF3) - STD, OPEN & CLOSED DOMES (light grey)		
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 (SF3) - POWER DOMES		
Description		Bag (10 pcs)
DOME,PWR REC,SM,BAG,10PC		21432700
DOME,PWR REC,MDM,BAG,10PC		21432800
DOME,PWR REC,LGE,BAG,10PC		21432900

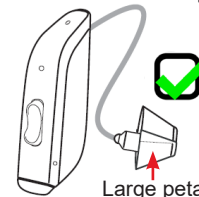


Push the largest petal back, then press the STD/tulip dome over the ribbed end of the rec tube



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



Large petal

**Not subject to issue control when printed**

Description	Part No
FITTING KIT,M&RIE,SF3B	22125800
FITTING KIT,TM&RIE,SF3C	22466000
MIC FILTER,M&RIE,BAG,8PCS (SF2B)	21536500
FITTING KIT,REC,SF3B	21997400
FILTER,MIC,CASE,8PCS (SF3C TM&RIE)	22035700
FILTER,GN WAXGUARD,BOX,8PCS (SF3B&C M&RIE & SF3 REC TUBES)	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 </td
SPORT LOCK,SF3 M&RIE,BAG,10	21502600

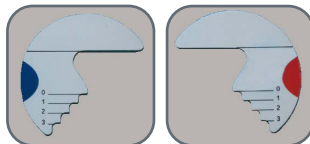
FILT,MIC,CASE,8PCS  
22035700  
SF3C M&RIE



FILT,GN WAXG,BOX,8PCS  
20439700  
SF3B&C M&RIE/SF3 REC TUBES

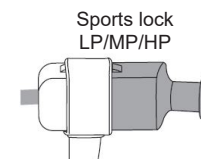
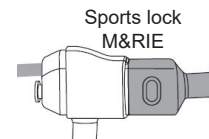
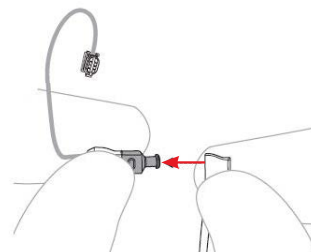
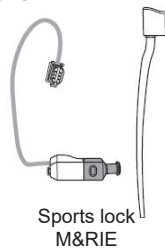


MIC FILTER,M&RIE SF3B (8pcs)  
21536500

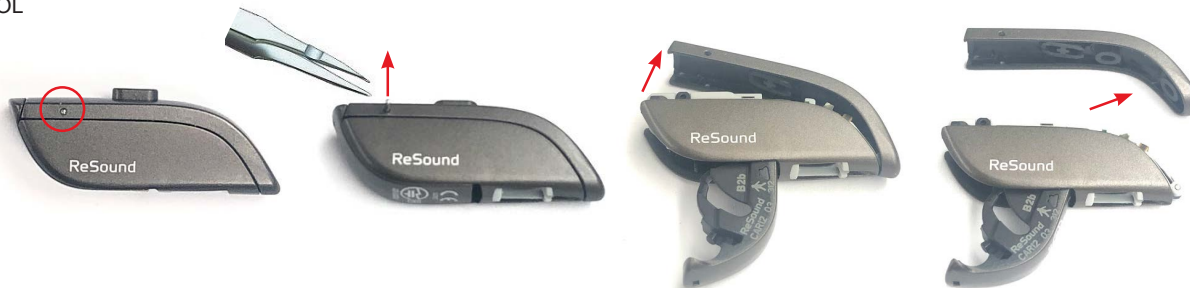


MEASUREMENT TOOL  
(for both L & R sides)  
15200800

Sports lock to be mounted as shown:



PIN REMOVAL TOOL  
15502500



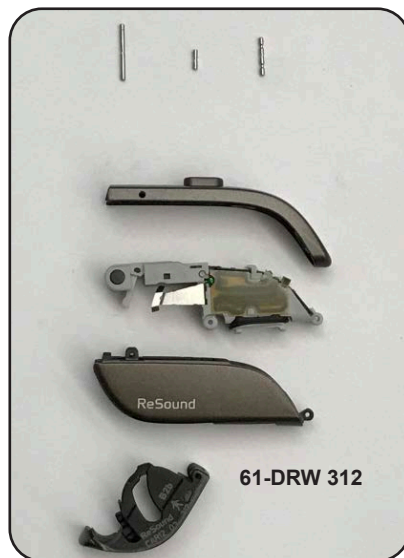
Locate the TOP HSG pin and push it out using a pin removal tool. Pull the pin complete out using a tweezers. Gently lift off the TOP HSG as shown



**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 tweezers. For both models: Gently lift up the module and BAT DR from BOT HSG



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



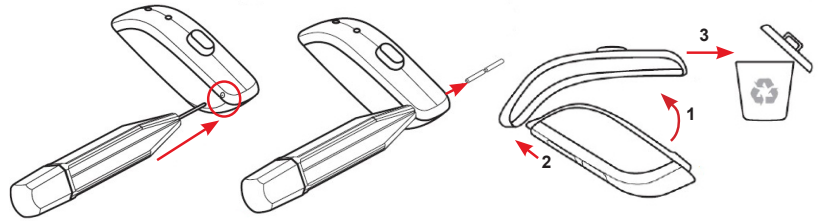
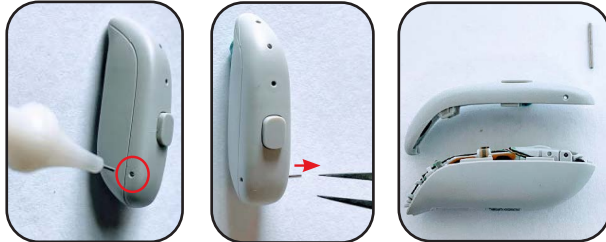
*Not subject to issue control when printed*

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

**61-DRWC:** The black SERVICE PIN TOOL can be used as it is delivered with the correct pin for fixing the TOP HSG - see below illustrations

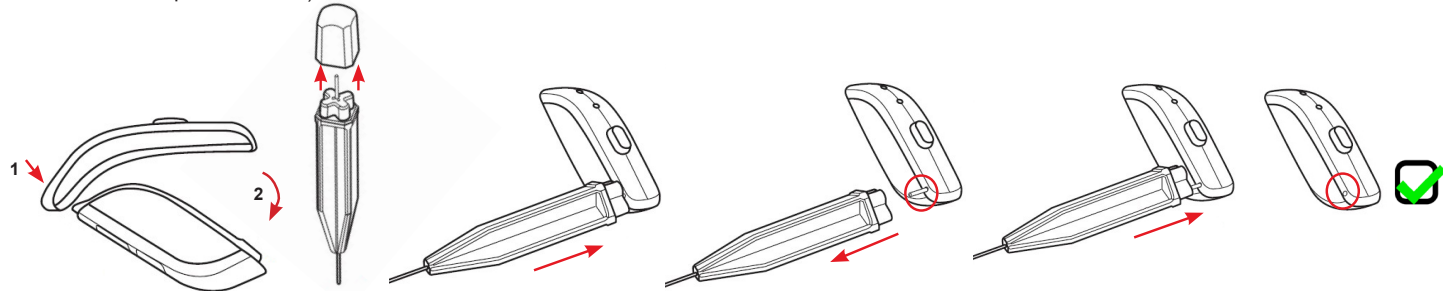
**60-DRWC:** The white pin removal tool can e.g. be used. Also the black SERVICE PIN TOOL can be used - but only the part pushing the pin out of HI as the HSG pin which is included in the other end of the tool is suitable for 61-DRWC only (different length of the pins depending on HI model)

*Note that the TOP HSG ASM is the only HSG part which can be replaced. Always mount a new TOP HSG and scrap the old one. Due to the construction of the HI, the BOT HSG must not be replaced*



**60-DRWC:** Locate the pin for the TOP HSG ASM. Push it out using e.g. the white pin removal tool and discard it. The black SERVICE PIN TOOL ASM can also be used (only use the push out function as explained above)

**61-DRWC:** Locate the pin for the TOP HSG ASM. Push it out using e.g. the SERVICE PIN TOOL ASM and discard it. Pull out the pin tool from the HI. The TOP HSG is now released from BOT HSG. Lift up the TOP HSG as shown on above pic and discard it as it must not be reused

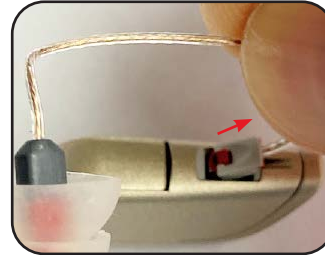
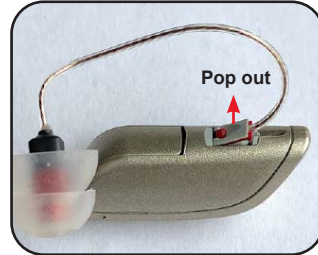
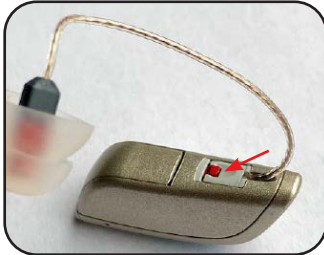


**61-DRWC only:** Attach a new TOP HSG ASM. Remove the protection cap from the service pin tool to reveal the new TOP HSG pin. Insert the new pin into TOP HSG by pushing in the tool as shown

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

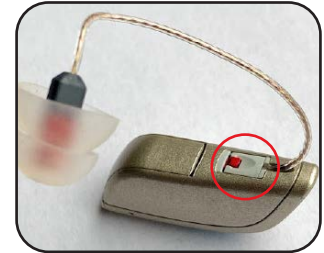
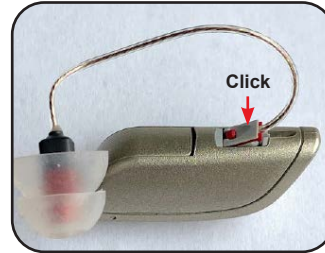
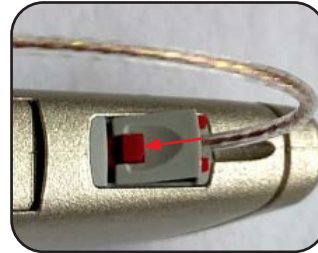
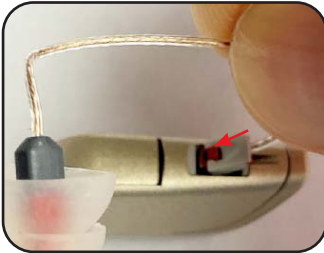
## Remove the rec

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



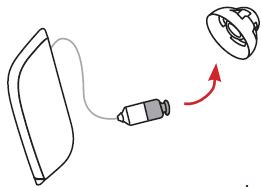
Use a fingernail to slide the receiver lock towards the bat end of the HI (red rec lock for right side is shown here). The receiver lock will unlock the receiver and it will pop out. Pull the receiver away from the HI

## Connect the rec

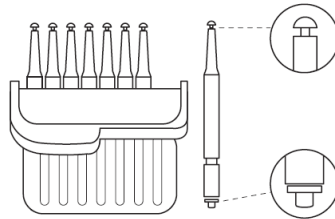


Connect a new receiver by sliding it into the HI as shown. Press to click it in place using e.g. a finger. Check that the rec is correct in place

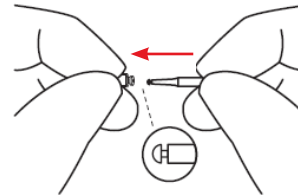
## Remove the used wax filter:



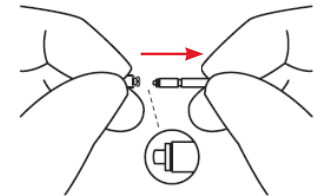
If a dome is mounted, remove it before starting replace the wax filter



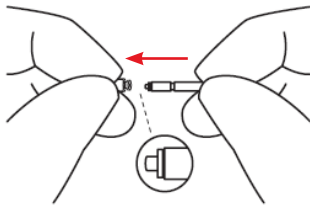
Box of 8 wax filter tools. The wax filter tool has two functions:  
A removal tip to collect the used filter, and a replacement tip with a new white filter



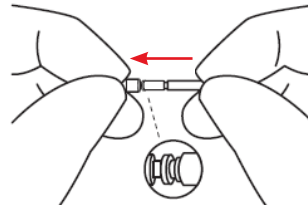
Insert the removal tip into the used wax filter and then pull the tool straight out. It is important to pull it straight and not on an angle



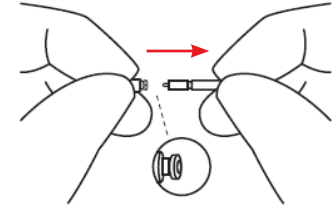
## Insert the new wax filter:



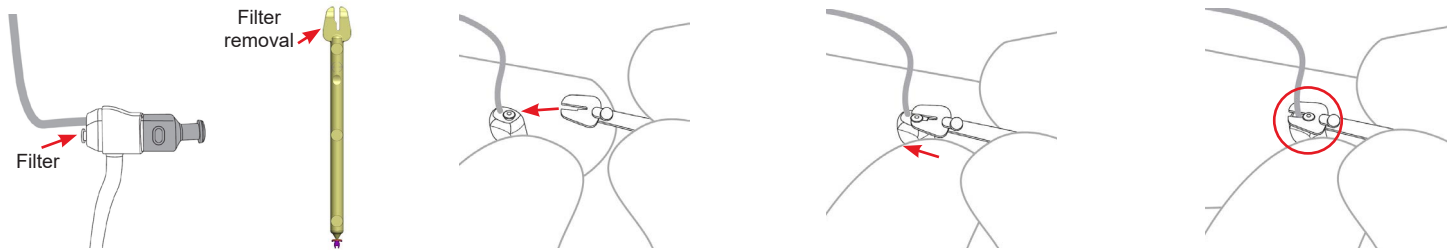
Insert the other end of the tool into the sound outlet (the end with the replacement filter)



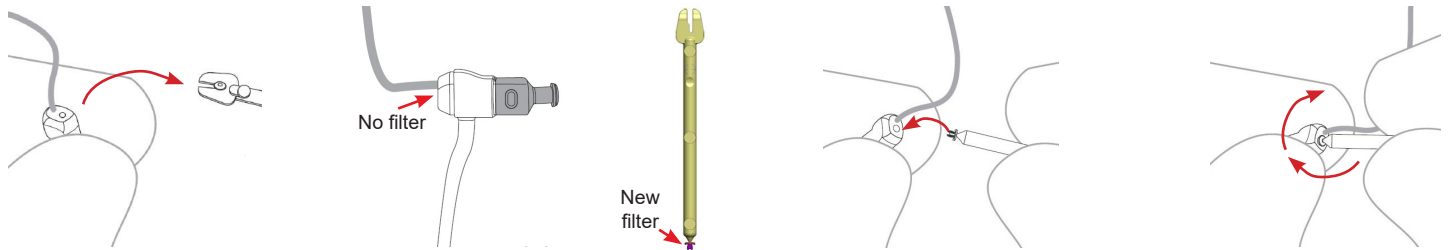
Gently press the replacement filter straight into the sound outlet until the outer ring is touching the sound outlet



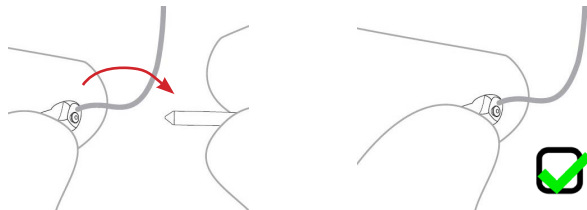
Pull the tool straight out – your new wax filter will remain in place. Re-attach your dome or a replacement dome



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 (p/n 21536500 MIC FILTER,M&RIE,BAG,8). 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

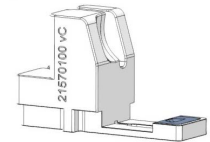
***The remaining part of the Technical Manual is for internal GN operations only***

Description	Part No
NOAHLINK WL CPD-1	20310800
FOAM,LUXOR RHI	20878000
FRAME (BLK test frame for ATC4000/TBS25 sound chamber)	16902800
TEST JIG,CAMBRIDGE RHI&13&DUNDEE	21570100
TEST JIG,CAMBRIDGE 312	21628300
2CC COUPLER SET,RA0038,DSA7K	22254900
THREAD CAP GR0316,DSA7K	22296200
TEST MIC,ASM,46AO-S3,DSA7K	22254800

TEST JIG,CAM 312  
p/n 21628300



TEST JIG,CAM RHI&13  
& DUNDEE  
p/n 21570100



NOAHLINK WL CPD-1  
p/n 20310800



TEST MIC,ASM  
46AO-S3,DSA7K  
p/n 22254800



TEST MIC,ASM,46AO-S3,DSA7K  
connected to a mic cable  
(mic cable CAB-MP35-174-17CM,  
delivered together with the DSA7000/  
APX511 analyzer)



THREAD CAP  
GR0316,DSA7K  
p/n 22296200

2CC COUPL SET  
RA0038,DSA7K  
p/n 22254900



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



BLK test frame  
p/n 16902800

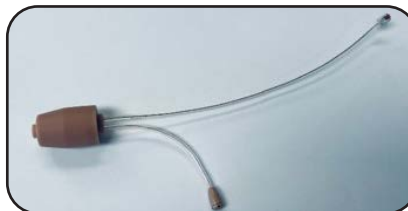
Description	Part No
RIE ADAPTOR, DSA7000	22239900
RIE ADAPTOR NUT, DSA7000	22240000
NG8 CONE REC, DSA7000	22240200
RUBBER WASHER (DSA6000 & DSA7000 test rec)	20012000
ASM TEST REC, NG8, DSA7000	22240400



RIE ADAPT, DSA7000  
p/n 22239900



RUBBER WASHER  
p/n 20012000



NG8 CONE REC, DSA7000  
p/n 22240200



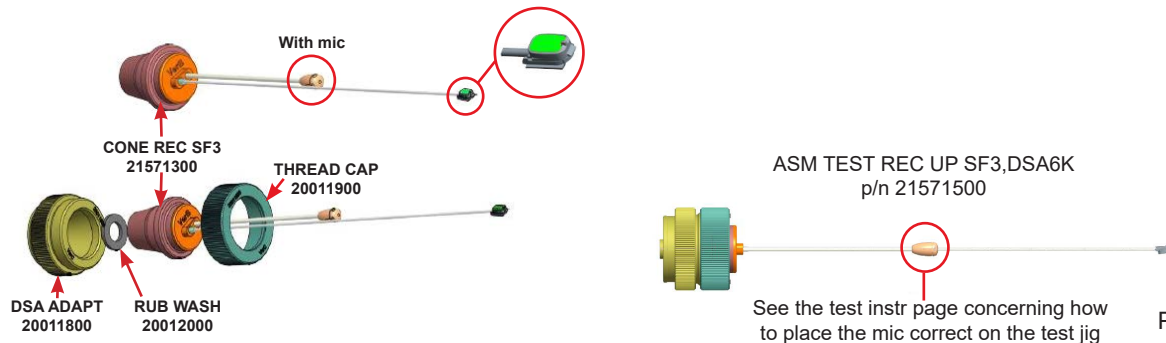
RIE ADAPT, NUT, DSA7000  
p/n 22240000



ASM TEST REC, NG8, DSA7000  
p/n 22240400

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 (BLK test frame for ATC4000/TBS25 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 more pics and p/ns of test equip parts on the next page*

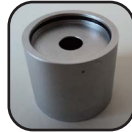




COUPL MIC, TM-12,  
MEASURED  
p/n 18220700



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



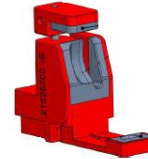
FOAM, LUX RHI  
p/n 20878000  
support for  
test rec & coupler



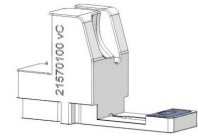
ASM TEST REC UP SF3, DSA6K  
p/n 21571500



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

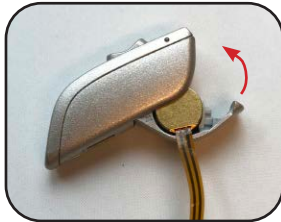


TEST JIG, CAMBRIDGE 312  
p/n 21628300

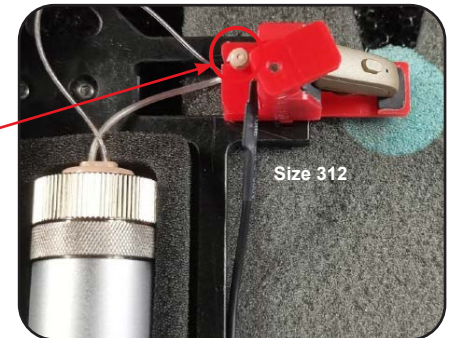
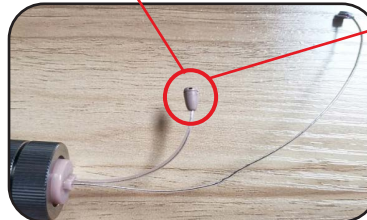
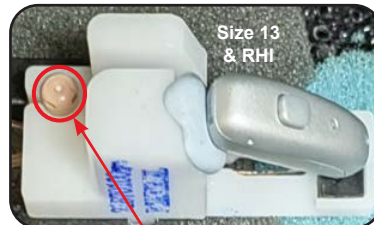
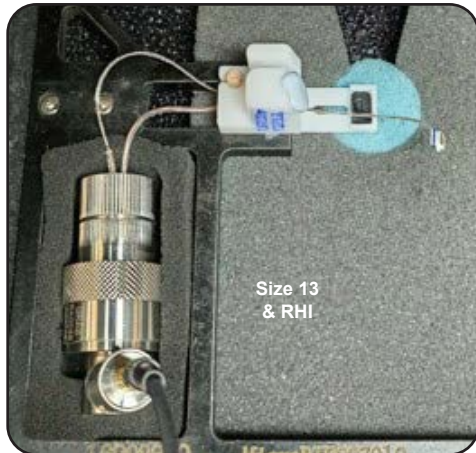


TEST JIG, CAM RHI&13  
& DUNDEE  
p/n 21570100

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). Attach the test rec to the HI.



Attach the jig to the black test frame and place all test parts in the ATC4000/TBS25 sound chamber as shown. 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

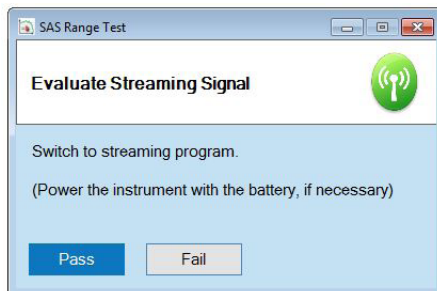
The wireless range test is a combined DSA6000/ DSA7000 Noahlink/SAS Range Check test using the SAS-3 with its MAC address entered into the DSA system configuration and a Noahlink mounted directly in any of the DSA units USB ports. No fixture is required performing a wireless range test

NOAHLINK



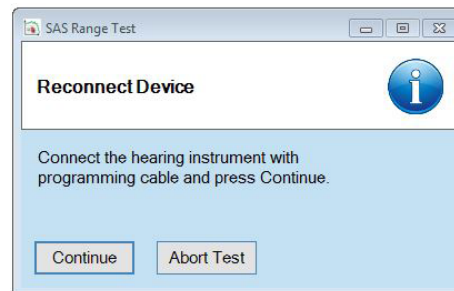
**How to get the MAC address of the SAS:** It is not directly available in the STD version. SAS streamers with MAC address labeled on the HSG can be requested from GTO. Please note that they are not available through regular ordering channels. Please contact HQ / GTO

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