

Peerless Nomex 164 : Scan-Speak D2608/913000// Peerless HDS-P830875

Builders response

Good news everyone ! A Gravesen design in Reunion Island — Somewhere in this island in between volcano, mountains, lagoon and coconut trees lies a house where you could listen to a Gravesen designed speaker from Denmark.

<https://www.google.fr/maps/@-21.2494355,55.7188182,4449m/data=!3m1!1e3>

I've just finished the scanspeak + peerless nomex 164' build 40l version.

I am a huge fan of your website where I could have started it all and learned a lot about acoustics. Collecting component was a complex logistics due to my location **but it was a lot of fun** (after all).

This project deliver an incredible sound experience to me AND Wife Acceptance Factor is 100%. Thank you for your support, for your website, and thank you to share your knowledge.

Filter :



Placement of coils was made by following cases 1 and 6* of the coils schematics. (*reference : <http://www.troelsgravesen.dk/coils.htm>)

AFTER I finished all, I had some doubts about the one on the bottom left corner, which magnetic flux might affect 2 capacitors. As I had to deal with a “ground” error so I eventually turned the coil some degrees toward outside so that it does not points to the capacitors

Cable choice: for ALL possible connections I used [sommecable orbit 240 MKII](#)

Thinner component conductors have been backed-up with stripped down parts of this cable.

Orange stuff is for electric isolation. I soldered everything and used copper connecting terminals to have best contact surface : even with a 3.5/4% Ag/Sn soldering wire... you still have 96% Sn... My version looks ugly but I have a better [Electrical Conductivity of Materials](#) than Ag/Sn soldering points alone.

Filter's Vertical positioning avoid metal spikes and screws, even if I expected low impact and interferences with the coils.

Feets: metal spikers + 3M round felt, mounted on a 30mm 800kg/m³ MDF, glued to the box.

Damping material and Cabinet Damping: Reference = <http://www.troelsgravesen.dk/cabinet-damping.htm>

It was too "complicated" to get the original 10mm felt material from jantzen and get it delivered at the other side of the world (literally).

I ordered 20mm felt material used for damping cars! (boot).

⇒ To compensate thickness difference, I used much less polyester acoustilux than preconized (1 layer up and 1 down only). I reduced thickness to 10mm in some small places to optimise air flow (around the peerless speakers only)

Wood work: Cutting plan from MDF panels.

MDF is an industrial product with minimal tolerance: here how I cut the panels.

Just remember I'm novice.

Parts		dimensions	qty
Back (19mm) MDF	:	166 * 916 mm	2
Front (30mm) Valchromat	:	204 * 954 mm	2
Sides (19mm) MDF	:	282 * 935 mm	4
Up (19mm) MDF	:	204 * 282 mm	2
Down (19mm) MDF	:	166 * 312 mm	2
Bracing (19mm) MDF	:	166 * 263 mm	6
Down/Feets(30mm)Valchromat	:	242 * 312 mm	2

I used MDF panels with **19mm**, average density =**750kg/m³** for the main box and **30mm** "Dark Valchromat*" with average density **800kg/m³*** for the front panel and feet's support

*marketing says "[Valchromat](#)" (the 30mm MDF I used for front) is not MDF, it's an evolution of it.

Cutting the holes for the Peerless Woofer : using the router with a tolerance of less than 0.5mm to perfectly fit the peerless was a real stress... but after some mistakes, I started over and I managed to make it right the 2nd time.

In comparison, standard round cuts is a piece of cake...



Box glued and screwed.

the felt being glued. I took what I had to apply low pressure on it.



Filter tests with cheap (but not bad) cables.

All parts where air must flow has been eased with the router.

Panels were adjusted almost perfectly. Not much sanding needed.

using some wood filler to mask the numerous screws, then sanding again until you cannot feel and see the screws anymore.

Spending time on sanding made sure the box looked like one piece with no visible joints, screws, holes, on any sides.

“lacquer” finish, not visible on the bad quality photo.

I painted using a basic LVHP gravity paint gun.



I'm just a beginner, so I choose to make a "basic" square box.



For my next project I will make things easier about filters: I would make 1 separate slim box that I would place just under my Amp, that would include the 2 filters. So the only thing I would have to deal with would be how to aesthetically plug 4 cables/box : 1 negative cable and 3 positive cables (woofers, tweeter).

My actual setup : all digital oriented experience

End-user features:

- Manage all digital sound library from the volumio local webpage. Access spotift, youtube playlists and audiophile internet radio while having a dedicated quality player for audio processing (better than playing from any pc without a dedicated quality soundcard). This means you can forgot about remote controls as you can control the sound and playlists from almost anything connected to the local network.

- Connect to the amp using Bluetooth so it makes very easy to listen to any connected source from PC, laptop, smartphones, tablets etc. Quite cool when a visitor wants to listen to something I do not have.
- Use the speakers for Music TV and movies. To me bass are good enough to forget about subwoofer.

Material specifications:

- HifiBerry DAC+ pro and a Volumio interface.
- TV Box interface for movies (remote).

HiFiBerryPro : <https://www.hifiberry.com/shop/boards/hifiberry-dac-pro/>

Volumio : <https://volumio.org/>

Amplifier : BC Acoustique EX-222.3 (<https://www.bc-acoustique.com/en/electronics/integrated-amplifiers/ex-2221-amplificateur-hi-fi-2x70w-bluetooth-2-detail>)

Connection :

TV ↔ TV Box ↔ optical audio cable ↔ Amp (with the optical digital audio cable, music channels gives a very good, detailed sound).

HiFiBerryPro DAC+ ↔ Gold plated RCA ↔ Amp

Any Bluetooth connected source ↔ Amp