

# François Ernout R&D engineer (audio hardware)

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37 years old (mobile)

## Objective

*As an R&D hardware engineer specialized in audio technologies, I'm looking for opportunities to open my career to new and challenging horizons.*

## Professional Experience

Since September 2011

### Trinnov – Manufacturer active acoustic correction processors (Paris, FR)

Trinnov was and still is a small but fast growing company. Within the R&D team, I am the hardware specialist. My experience gave a boost to hardware design quality and speed of development. We now launch 2 or 3 new processors a year.

- expansion
- qualitative and quantitative jump

The second man of the hardware team is a junior engineer. I was responsible of his sandwich training program within Trinnov and is now able to manage a project from the idea to the production.

2008 - 2011

### Innovason – Manufacturer of digital live mixing desks (Plougoumelen, FR)

Within the R&D team, I'm in charge of the hardware development from the solution research to the start of the production. It includes many different fields:

- Development of new boards and enhancement of existing ones
- PC and embedded operating system integration
- Integration of external developments (hardware and software)

Although my preferred skills are focused on pure electronic design, my general engineering knowledge and my ability to learn about new subjects help me to succeed in doing more complex and interdisciplinary projects.

My position is at the cross-point of the other professions inside the R&D team. This allows me to put forward simple and reliable solutions across different disciplines.

April 2005

### Creation of Pro Audio System Design SARL

The activity is separated in two poles:

- Design, production, and selling of audio devices.
- Realization of audio electronics projects as an independent engineer.

As the only actor, I'm in charge of technical roles but also commercial and communication ones.

During vacant periods  
and full time since  
February 2004

### Development of my own product line

The first product is a preamp/equalizer for musical instruments. It has been designed as a high quality preamplifier for bass guitars, but it as shown good results different in acoustic instruments.

I also designed a few different Microphone Preamplifiers.

Many projects between  
July 2002 and January  
2004

### Innovason – Manufacturer of digital live mixing desks (Plougoumelen, FR)

Fixed term contract (as an R&D engineer)

Test and industrialization of an 8 microphone preamplifiers board with digital conversion.

Iterative procedure: modifications / tests.

Realization of the technical documentation and sub-contractors piloting.

Studies and prototyping of a silent embedded PC.

This project required the test of different components, the heat flux optimization and the collaboration with the mechanics engineer team.

First implantation of an EtherSound (DIGIGRAM) module in the console.

This project was a first step to the integration of Ethersound as the main transmission protocol in the console.

EtherSound is an audio network based on Ethernet and carries 64 channels in each direction.

Mars / October 2001  
(6 months)

### PUBLISON – Manufacturer of studio digital audio devices (Paris, FR)

End of studies period (as a DSP engineer)

Development on an editing station (up to 48 tracks with DSP) :

Optimization of the DSP firmware to maximize performances and allow more simultaneous effects and editing functions.

Development on a digital mixing desk (up to 128 inputs with 60 DSP) :

Optimization of input processes calculation and of the transfer to the mixing unit.

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July / September 2000  
(3 months)

## Trace Eliot – Manufacturer of bass and guitar amplifiers (*Maldon, UK*)

Training period (as a service engineer)  
My first experience in a medium sized company in the musical instrument industry.

August / September  
1999  
(6 weeks)

## C.M.R.R.F. Kerpape – Readaptation centre for disabled people

(*Ploemeur, FR*)

Training Period (development of readaptation tools)  
It was a very rich experience mainly on the Human point of view, but also on a technical plan: we are looking for the simplicity and the answer to the need of autonomy of the patients.

July 1998 (1 month)  
October 1997 (1 week)

## Valves House Music – Guitar amplifier repair shop (*Paris, FR*)

Training Period (repair of bass, guitar, and sound reinforcement amplifiers). First time working in the audio field.

June / July 1997  
(7 weeks)

## Société Générale – French Bank (*Londres, UK*)

Training Period (use financing software tools)

July 1996  
(1 month)

## Crédit Immobilier Général, Société Générale – French Bank (*Paris, FR*)

Summer Job.

## Studies

1996 – 2001

## E.S.M.E. Sudria – Engineering Five Years Undergraduate Program

(*Paris, FR*)

2000 – 2001

Signal processing and electronics specialization (DSP, modeling)

End of studies project: Study of the acoustic radiant of a plate in transient mode by spatiotemporal imaging methods. (CNAM)

1998 – 2000

First and second years of the engineer cycle (general studies)

1996 – 1998

Mathématiques supérieures/spéciales (integrated preparation classes to competitive examination)

1996

## Baccalauréat Scientifique (S) (Equivalent to the A level of science)

## Personal realizations

Mai / August 2003

Sound assistant on a short movie – *Love Song* of Gwenn and Philippe Pacote Perchman during filming. Sound engineer assistant during the sound editing and mixing.

Before 1996

Modification et prototyping of valves guitar amplifiers

## Languages

### English (fluent)

Fluent use in a professional context  
Many training periods and journeys in England during my studies

### French (native)

## Computer skills

### Operating Systems

Windows, Windows Embedded (development), Linux (development, system optimization, administration), VMS (as a user)

### Programming languages

VHDL, C, Assembly (Pic, Cypress, x86, DSP, ...), Visual Basic, VBscript, HTML, PHP, MySQL, Fortran

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### Software

Altium, Eagle, OrCad, GEDA (CAD Printed circuit boards)  
Spice 3, XSpice (analog circuit simulator)  
Ardour (DAW for Linux and MacOS)

### Processors

DSP Sharc (Analog Devices) and TMS320 (Texas Instrument);  $\mu$ Controllers (Microchip, Cypress, 8080)

### Other skills

Driving license for cars

Music (guitar, sound engineer)

Sport (Horse riding, roller, surf)