

INTRODUCTION:

I am an R&D design manager/engineer.

My design teams have had many design wins in numerous large companies. My designs have been produced by: Sony, Samsung, Sampo, Hitachi, Hyundi, Lucky Gold Star, HP, AT&T, NCR, Apple, Ball Electronic Systems, just to name the larger companies. Most designs went into consumer products and medical equipment with a few in the field of automotive and solar power. Some reached multi-million volume production.

I have presented engineering training classes in many companies, mostly to engineers with a limited understanding of English. For years I have studied and taught the process of finding innovative answers.

Power supply designs have ranged from milliwatts to ten kilowatts. Output voltages have ranged from 1.2 volt to 40,000 volts. Power supply designs presently in production include power factor corrected supplies, resonant and quasi-resonant supplies along with an assortment of switching supplies.

Like many engineers I do ASIC and digital design including embedded firmware, but enjoy the 'little-known' fields of electronics. Few engineers will admit to using relay logic, tube amplifiers or (my real love) analog design---I know more than how to spell RF! I put my self through school working on broadcast transmitters.

My lab is fully equipped with oscilloscopes, power supplies, signal generators, spectrum analyzer, metal fabrication tools, etc. The network is equipped with CAD, SPICE, ASIC design tools, and PCB layout software.

Multilingual: I speak, UL, CE, VDE, EMC, ISO and NEC.



Ron Simpson

Ron Simpson
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EMPLOYMENT

- 8-01 to GRAD Engineering , Loveland, CO Owner
Duties: FPGA design, Imbedded CPU, Instrumentation, LED lighting, Power Supplies
- Develop switching supplies that fit inside flashlight bulbs.
 - Designed switching power supply for LED night light.
 - Designed FPGA based military targeting computer.
 - Made FPGA video processing engines for LCD monitors.
 - Built wide range, low power, supply for instrumentation.
 - Made high power IR light source and switching supply.
 - Technical advisor on a line of toys, flashlights and light bulbs.
- 3-00 to 7-04 and 9-82 to 12-85 Data Ray Corporation, Westminster, CO. New Development Manager
Duties: Manage R&D, Engineering, Manufacturing Engineering, Component Engineering and Drafting. Advise: Repair Technicians, Quality and Agency departments.
Move Data Ray Corp. into new technology fields and develop new products and off shore production.
- Designed medical grade light meter.
 - Redesign and cost reduce a line of power supplies and CRT monitors.
 - Design high resolution CRT monitors, LCD monitors and power supplies.
 - Developed Altera FPGA development board.
- 8-86 to 3-00 Display Laboratories Inc., Boulder, CO. Principle Engineer
Duties: develop ASICs, prototype with FPGAs, consult on designs, train engineers, develop high resolution CRT displays, machine vision systems and switching power supplies. Write manuals for engineering classes. Display Labs. was a consulting-design house that specialized in new product development and training.
- Designed many different types of CRT monitors and TV sets.
 - Developed an assortment of switching power supplies. (PFC, Green, Resonant)
 - Did hardware design for a line of machine vision systems.
 - Designed light valve projector used in theaters.
 - Wrote application notes, data sheets and develop design tools for custom ICs.
 - Video processing development using TI ASICs and Xilinx FPGAs.
- 12-85 to 7-86 Ball Electronic Systems Division, Broomfield/Boulder, CO. Project Engineer
Duties: develop high resolution CRT displays, switching power supplies, train engineers.
Mentoring for junior engineers.
- 9-80 to 7-82 Vultron Inc. Research and Development, Royal Oak, Mi. Engineer
Duties: microprocessor design, digital (CMOS and TTL), power supplies, computerized automotive accessories, LED advertising sign, develop assembly line test fixtures, maintain automated production equipment. Project problem solving.
- 6-76 to 7-80 KUCV-fm, KFOR-am KFRX-fm Lincoln, NE Chief Engineer
Duties: build new radio stations, prepare F.C.C. documents, old station major modifications, install and maintain transmitters and studio equipment, and assist fellow network stations.
- 10-78 to 6-79 Intelligent Systems and Robotics, Lincoln, NE Contract Engineer
Designed: modem, power supply, miniature transmitter and receiver.

EDUCATION

74 to 81 University of Nebraska, Lincoln, NE · Union College, Lincoln, NE · Southeast Community College, Lincoln, NE · Oakland Community College, Pontiac, MI · CUC Lacombe, Alberta, Canada

AFFILIATIONS

Institute of Electrical and Electronics Engineers
Society for Information Display
Federal Communications Commission Restricted Radiotelephone Operator Permit
FCC General Radiotelephone Operator License (First Class Radiotelephone)

PUBLICATIONS

Published in Society For Information Display, Power Conversion & Intelligent Motion magazine and presented papers at trade shows.

PATENTS

Thirteen US patents and numerous international patents.

DESIGN CONTESTS

Winner 1990 Power Integration Inc. & P.C.I.M.; Power design contest.
Winner 1990 Integrated Device Technology Inc.; Four port RAM design contest.