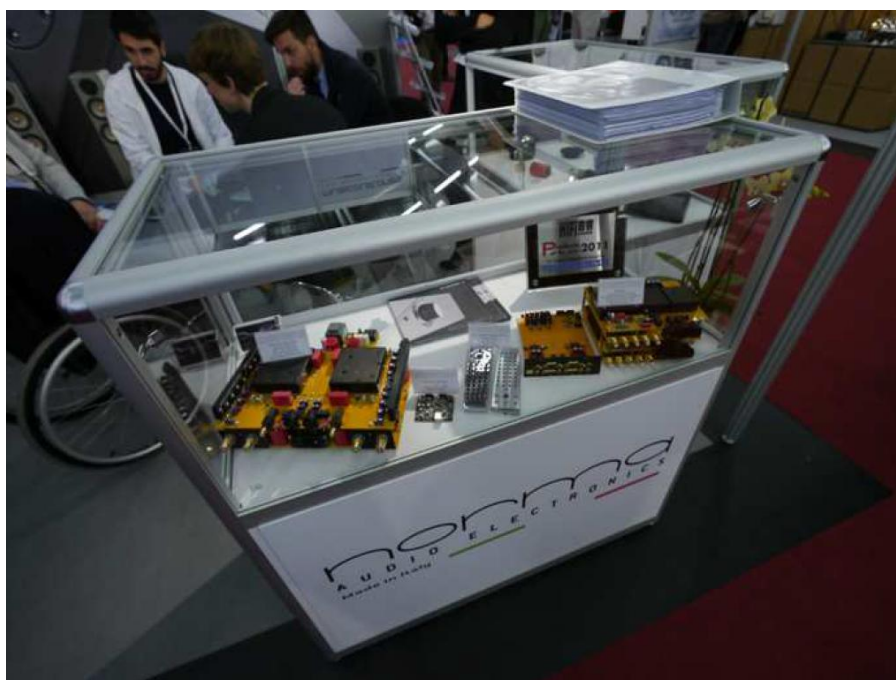




Audio's problem is proof. Or rather its absence. One cannot *prove* superior sound. Try. Play someone a system you've spent ten years comparing and meticulously refining. You're convinced of its quality. But if that person doesn't like it, you can't convince them. There's no proof your system is better than theirs. This drives engineers batty. If they design the fastest race car, get the best driver and have just a bit of luck, they win the race. Posting the best time proves that their car was fastest. Zero ambiguity. But hifi is full of it. Ambiguity. And the other thing. Naturally marketers don't capitulate so easily. They simply exploit our human desire for proof and certainty with snazzy figures. With hifi amps that used to be power. More was better. Eventually that got ridiculous. Who really believed they needed 2 kilowatts? Then the game became a bit subtler. Now it was about total harmonic distortion or IMD. The more zeros behind the decimal point the better. Once that game was up—people soon realized they couldn't hear the difference between 0.0001% and 0.000075% THD—marketers aimed for the still empty space in *front* of the decimal point. Hello sampling rates. At press time we already had three D/A converters—Antelope Audio Zodiac Platinum, Gryphon Kalliope, exasound e20—which could do DSD 256 at 11.28MHz. No such software exists. Yet. No matter. It's basic psychology. Higher numbers win.



Norma at Munich HighEnd 2013

One Jim Ricketts of TMH Audio applies the same primitive proof to the same pre-decimal space but now amplifiers. For greater success he adds money. First he shamelessly inflates what the same equipment sells for in Europe—expense equals quality—then he highlights slew rate and response bandwidth. In Europe Norma's IPA-140 integrated with USB retails for €5,450. TMH hawks it for 'from \$11,000' to US customers using an antiquated abacus for currency conversion. For conclusive proof he then has a small comparison table. It lists Soulution's 710/720 models (\$85,000) and the darTZeel CTH-8550 (\$22,300). Now he highlights their ultrasonic -3dB points. At 100kHz the first Swiss amp gets clobbered by the second Swiss which offers 1MHz. That one gets hammered by the Italian Norma with 2MHz on tap. It also annihilates the darTZeel's 88V/μs slew rate with 175V/μs. Soulution's isn't available. Norma for office! What does slew rate sound like?

PREAMPLIFIERS REVO SC SERIES

REVO SC-2 LN <i>[Line Stereo, 4 RCA, 2 XLR Input, RCA & XLR Output]</i>	from \$11K with USB & S/PDIF	4.950,00
MCHG-REVO <i>[Multichannel Option for SC-2 LN, 2 set of 6 channel Input]</i>		1.290,00
DAC1-REVO <i>[Dac Option for SC-2 LN, 5 Digital Input, 4xSPDIF, USB, 192 KHz, 24 Bit]</i>	All prices in red from US importer TMH Sound as per a group email of May 22, 2013	1.790,00
PH3-REVO <i>[Phono Option for REVO SC-2 LN]</i>		320,00

POWER AMPLIFIER REVO PA SERIES

REVO PA 150 (STEREO) <i>[2x150W@80hm; 48A Output Current, 200A Peak]</i>		4.950,00
REVO PA 160 MR (MONO REGULATED) <i>[1x160W@80hm; 48A Output Current, 200A Peak, Full regulated Power Supply, High speed, Very low noise]</i>	approx. \$25K	NEW

INTEGRATED AMPLIFIER REVO IPA SERIES

REVO IPA-70B <i>[2x70W@80hm; 24A Output Current, 100A Peak]</i>		2.990,00
REVO IPA-140 <i>[2x140W@80hm; 36A Output Current, 150A Peak]</i>	from \$11K with USB	4.950,00
PH1-REVO <i>[Phono Option for REVO IPA-70B]</i>		180,00
PH2-REVO <i>[Phono Option for REVO IPA-140]</i>		320,00
USB1-REVO <i>[USB 24Bit/196KHz Option for REVO IPA-140]</i>		499,00

	NORMA IPA-140	Soulution 710+720	Databeef CTH-8550
Power @ 8Ω	140	100	220
FR (-3db)	2Mhz	1Mhz	100Khz
Slew Rate (V/us)	175	na	80
Current (Peak)	150A	60A	na
Power Supply (VA)	2@400	2@1K	1@1
Sound/Noise (db)	115	108	90
US Retail	\$1,000	\$85,000	\$20,300

DIGITAL SOURCE REVO DS SERIES

REVO DS-1 <i>[CD Player + 5 Digital Input, 4xSPDIF, USB, Blue or Red display color]</i>	from \$6.500	3.790,00
REVO CDP-1BR <i>[Reference CD Player, Blue or Red display color]</i>		3.190,00
REVO DAC-1 <i>[DAC, 5 Digital Input, 4xSPDIF, USB, Blue or Red display color]</i>	from \$6.500	3.190,00

HS SERIES (HALF SIZE)

HS-DA1 <i>[DAC, 5 Digital Input, 4xSPDIF, USB, XLR& RCA Output, Blue display]</i>	from \$4.000	NEW
HS-DA1 VAR <i>[DAC, 5 Digital Input, 4xSPDIF, USB, Blue display, Variable & Fix. Output, Remote control]</i>		NEW
HS-DA1 PRE <i>[DCA, Variable & Fix. Output, 2 Analog Inputs Preamplifier, 2 Headphones Class A Output, Remote control]</i>		NEW

REVO AUDIO STAND

REVO AUDIO STAND, GROUND SHELF <i>[95 mm working height, with set of 4 under spikes, massive base disks Metallic Dark Grey MDF, Metallized lacquered]</i>	810,00
REVO AUDIO STAND 140 <i>[140 mm working height additional shelf]</i>	785,00
REVO AUDIO STAND 210 <i>[210 mm working height additional shelf]</i>	875,00

REMOTE CONTROL

REVO RC-43 ALU <i>[43 Key System Remote Control, machined from massive aluminium block, anodized finish]</i>	NEW
REVO RC-43 CHROME <i>[43 Key System Remote Control, machined from massive brass block, chrome finish]</i>	NEW

It's all very suggestive, no explanations required. Like that 2MHz is just an octave over 1MHz. Or that human hearing cuts off at 20kHz. Two bands below. Why would you want such excessive bandwidth? Never mind. The biggest numbers win. By selling for essentially half at what he lists the darTZeel and 1/8th what Soulution demands, his IPA-140 Norma becomes a bargain despite having been generously overpriced first. Welcome to hifi marketing 101. Flip a page in Jim's book and you get to the equally Italian Alef brand. That weighs in with 6MHz bandwidth. "Think Soulution but executed at a *much* higher level!" That's really how he puts it. Emphasis included though he goes caps. Naturally Alef didn't

make it on his Norma comparison chart. He might steal sales from himself. Plus Alef's 180µs slew rates—just five more than Norma—could raise uncomfortable questions when this type of math finally hits its limits. Are we having fun yet?

Having talked with Norma Audio's Enrico Rossi through a translator at [Munich HighEnd 2013](#), I'd come away very impressed. His bonnet-up gear oozed obvious quality and showed very well-considered featurization plus immaculate industrial design. Holding what seemed to be a *very* fair Euro price sheet in my hand, I also knew how Enrico struggled with US pricing being out of (his) control. Without turning his uncommon specs into any primitive marketing stunt, he had very solid design reasons and was most happy to explain them.



Norma at Munich HighEnd 2013

Because two other wide-bandwidth amps—Bakoon's AMP-11R, Job's 225—had already suggested particular sonics I'd grown very fond of, I spotted a perfect opportunity to learn more about this school of circuit design; *and* an excellent chance that Norma's €4,950 integrated with a solid 140/280wpc into 8/4_ would fall into the Bakoon/Job class with more useful power and more useful features (remote control, MM/MC phono, configurable outputs). That'd surely be a story worth telling, never mind my offbeat intro. More soon whilst Enrico readies a Revo DS-1 CD player (which you can also buy without the transport section as just a converter) and a Revo IPA-140 for review. I'll report on a complete compact Norma system. And before that I'll have plenty of questions for Enrico to expand my horizons on what exactly 2MHz bandwidth offers our human hearing which lesser response doesn't; and to learn more about his company which we haven't heard much of in the English-speaking press though they've been around since 1987. . .