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★ HOTTEST MOVIES ON BLU-RAY: MISSION IMPOSSIBLE, CASABLANCA & MORE... P68 REVIEWED: LG BP620 BLU-RAY PLAYER P56

AV RECEIVER SPECIAL!

HOW TO BUY AN AVR
PLUS: NAD, CAMBRIDGE, ONKYO REVIEWED



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 IPHONE INTO
 A REMOTE



SUNFIRE
ATMOS
TESTED!
A TINY MONSTER
UNLEASHED



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BLU-RAY: JEFF LABRECQUE; CASABLANCA: JEFF LABRECQUE; MISSION IMPOSSIBLE: JEFF LABRECQUE; ONKYO: JEFF LABRECQUE; NAD: JEFF LABRECQUE; CAMBRIDGE AUDIO: JEFF LABRECQUE; KEF: JEFF LABRECQUE; VOOMOTE: JEFF LABRECQUE

Test Bench

BY Michael Fremer

NAD T 787 A/V Receiver

PRICE: \$4,000 **AT A GLANCE:** Seven powerful amplifiers • Complexity simplified • Future-proof modular design

Pitched to Music Lovers



For good reason, grizzled veterans of the audio/video hardware wars eagerly anticipate reviewing NAD gear. The company's distinguished history began in the 1970s with the invention of the business model that was adopted years later by Apple, among others. Rather than building a factory to produce its products, NAD contracted with existing manufacturing facilities, thus avoiding high capitalization costs.

But more important than the innovation that allowed the upstart company to go toe to toe with the existing audio establishment was New Acoustic Dimension's first smash-hit product: the NAD 3020. This shockingly inexpensive (under \$200) integrated amplifier sounded far more powerful than its rated 20 watts per channel and brought high-performance audio to the masses.

The 3020 spread virally through dorms and graduate

student apartments. Skeptics finally heard the difference between high-performance audio and the mainstream magazines of the day failed to acknowledge (since, as everyone back then knew, if it measured the same, it must sound the same) and that era's mass-produced audio swill.

Originally a distributor collective, NAD was purchased in 1999 by Canadian firm Lenbrook (its first and current North American distributor), who retained its original business model. As the new T 787 A/V receiver demonstrates, at a time

when too many other companies have lost their way in an insane race to tack on more unnecessary and unwanted features on the way to the price-point-driven, mediocre-sound-quality bottom, NAD has maintained its original commitment to high-quality sound, solid engineering, and the elegant simplicity of the design aesthetic that launched the company those many years ago.

Inside and Outside the T 787

On the outside, the T 787 exudes simplicity and maintains the 3020's industrial design aesthetic.

NAD T 787 A/V Receiver
AUDIO PERFORMANCE ★★★★★
VIDEO PERFORMANCE ★★★★★
FEATURES ★★★★★
ERGONOMICS ★★★★★
VALUE ★★★★★

The front fascia incorporates one large volume knob, yet no controls are hidden behind a fold-down door. Large, easy-to-read lettering populates a generously sized fluorescent screen. A fully equipped A/V input lurks behind a small pop-out panel adjacent to which is a button to select it without



• With the T 787, NAD takes a stand for superior sound quality over gadgetry and design elegance over bells and whistles.

SPECS

NAD T 787 A/V RECEIVER

AUDIO DECODING:

DOLBY: TrueHD, Digital Plus, 5.1, EX, Pro Logic IIx Movie, Music
 DTS: DTS-HD Master Audio, DTS, ES, Neo:6 Cinema, Music

OTHER: EARS, Enhanced Stereo

LOW VOLUME LISTENING: Audyssey

Dynamic Volume

3D: Yes

THX CERTIFIED: No

NUMBER OF AMP CHANNELS: 7

RATED POWER (WATTS PER CHANNEL):

150 into 8 ohms, two channels driven;

120 into 8 ohms, seven channels driven

SPECIFIED FREQUENCY RESPONSE:

20 Hz to 20 kHz \pm 1.5 dB

VIDEO PROCESSING: None

AUTO SETUP/ROOM EQ:

Audyssey MultEQ XT

DIMENSIONS (W X H X D, INCHES):

17.13 x 7.94 x 17.25

WEIGHT (POUNDS): 55.6

PRICE: \$4,000

incorporates seven HDMI, three component video, and even four S-video inputs along with three each optical and coaxial digital inputs. It has three remote audio zones and offers seven channels of high-power amplification. It has XM and iPod ports, an AM/FM RDS tuner with presets, Audyssey MultEQ XT (including a bespoke NAD setting), defeatable tone controls, a 7.1-channel input and a multichannel preamp output, and five A/V presets that you can apply to any input at the push of a button. Also included is a proprietary EARS surround mode that avoids the usual added tinny reverb as it turns stereo sources into multichannel. A direct mode passes undigitized analog signals such as those from a turntable/phono preamp.

Of course, the T 787 has all the latest Dolby Digital and DTS codecs and can pass a 3D video signal. It has a headphone jack and also includes two remotes: a small one for remote zone 2 and the large HTR8, among the most ergonomically pleasing, easy-to-use programmable remotes I've yet encountered. The rear panel is a model of layout efficiency, and



with their wide, easy-to-grip and -tighten flanges, the binding posts are among the best found on any A/V product.

Inside, the T 787 includes a stacked pair of large toroidal transformers. Rather than simply depleting the capacitor bank when called on to deliver high power, the 120-watt, seven-channel amplifier section has a second high-voltage rail that can kick in when needed. The T 787 also includes NAD's proprietary soft clipping feature that gently limits output to prevent audible and potentially speaker-damaging distortion at high SPLs (I left it off to maximize dynamics).

What has NAD left out? All the unnecessary bells and whistles most users don't need or want, such as height and extra front channels, lousy-sounding DSP-based surround modes, and all the video controls that unnecessarily duplicate those that all modern display devices already include. NAD limits video processing to an unidentified chipset that upconverts legacy 480i video to 480p. NAD doesn't specify either the DSP or the digital converter manufacturer, preferring to let the sonic performance speak for itself.

Also omitted is the thick, small-print, incomprehensible instruction manual that accompanies most modern A/V receivers, or at least, used to. Instead, NAD supplies a full-color, one-sheet, quick setup guide and a DVD-ROM containing PDF files of the instruction manual in various languages. The manual, refreshingly written in the active tense, runs a relatively short 48 pages. At 55.6 pounds, the T 787 is heavy and comes with a heavy (by today's cheapened A/V receiver standards) \$4,000 price to match.

Setting Up and Using the T 787

Although the T 787's GUI and operating system were unfamiliar, I fully set it up and began using it within a half hour and without the aid of the instruction manual. Still, it took me a few minutes to figure out how to access the GUI, which is not via the usual menu or setup button. Instead, you hit the cursor ring's right arrow, which makes complete sense since you're going to use those controls once you're in the GUI. Again, why has no one else thought of that?

Once that's figured out (and much appreciated), the rest is cake, although the easier-to-use Source Setup table view should be renamed the Normal view. In that mode, all inputs are listed vertically as a table of nine plus T for tuner. There, you can easily configure each input for both video and audio input jacks (HDMI, S-video, coaxial, or optical, etc.), assign a preset number, trigger function, and rename the input. Many GUIs nest the rename function elsewhere and force you to look for them and remember what each one was by number. Why? Let's just say that between the easy-to-access (once you know where it is!) GUI and the generously sized, properly illuminated remote control, configuring and using the T 787 is a pleasure.

A useful setup feature lets you assign more than one audio source to a given input. For instance, if your SACD player's multichannel analog output doesn't also output two-channel CD audio, you can assign a pair of analog inputs or coaxial digital inputs to the seven-channel analog input source. So configured, the 7.1-channel input can seamlessly output both 7.1 analog and decoded digital two channel.

fumbling with the remote. Why has no one else thought of that? The operating system is free of confusing menu nests. Nests are for birds!

At the same time, the T 787 hardly skimps on features. It



HT Labs Measures

NAD T 787 A/V RECEIVER

Two channels driven continuously into 8-ohm loads:

- 0.1% distortion at 152.7 watts
- 1% distortion at 184.5 watts

Five channels driven continuously into 8-ohm loads:

- 0.1% distortion at 110.3 watts
- 1% distortion at 149.2 watts

Seven channels driven continuously into 8-ohm loads:

- 0.1% distortion at 98.9 watts
- 1% distortion at 119.6 watts

Analog frequency response in Bypass mode:

- 2.06 dB at 10 Hz
- 0.64 dB at 20 Hz
- 0.14 dB at 20 kHz
- 3.35 dB at 50 kHz

Analog frequency response with signal processing:

- 4.08 dB at 10 Hz
- 1.28 dB at 20 Hz
- 1.20 dB at 20 kHz
- 42.86 dB at 50 kHz

This graph shows that the T 787's left channel, from A1 input to speaker output with two channels driving 8-ohm loads, reaches 0.1 percent distortion at 152.7 watts and 1 percent distortion at 184.5 watts. Into 4 ohms, the amplifier reaches 0.1 percent distortion at 180.1 watts and 1 percent distortion at 207.1 watts.

Response from the multichannel input to the speaker output

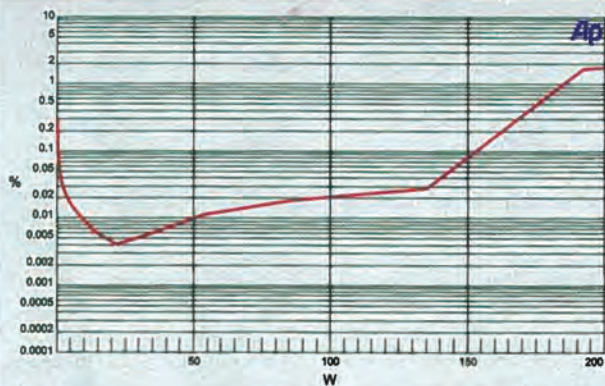
Visit our Website for a detailed explanation of our testing regimen, plus a list of our reference gear.

on the web

measures -1.93 decibels at 10 hertz, -0.60 dB at 20 Hz, -0.16 dB at 20 kilohertz, and -3.44 dB at 50 kHz. THD+N from the A1 input to the speaker output was less than 0.036 percent at 1 kHz when driving 2.83 volts into an 8-ohm load. Crosstalk at 1 kHz driving 2.83 volts into an 8-ohm load was -70.19 dB left to right and -75.42 dB right to left. The signal-to-noise ratio with an 8-ohm load from 10 Hz to 24 kHz with "A" weighting was -103.26 dB.

From the Dolby Digital input to the loudspeaker output, the left channel measures -0.95 dB at 20 Hz and -1.25 dB at 20 kHz. The center channel measures -0.98 dB at 20 Hz and -0.87 dB at 20 kHz, and the left surround channel measures -0.98 dB at 20 Hz and -1.10 dB at 20 kHz. From the Dolby Digital input to the line-level output, the LFE channel is +0.81 dB at 20 Hz when referenced to the level at 40 Hz and reaches the upper 3-dB down point at 58 Hz and the upper 6-dB down point at 68 Hz.—MJP

NAD T 787 A/V RECEIVER



The remote automatically illuminates when you pick it up, and you can program it for how long it remains illuminated. It's large, relatively heavy, and uses four AA batteries. But get your

hands on one, and you'll appreciate its workings, including the surround, center, and sub level trims lined up at the bottom. Maintaining the ergonomic logic, guess which of the nine input

buttons comes preprogrammed for the 7.1-channel analog input? (Hint: It's neither input 6 nor 8.)

Bold, Meaty Sound

What does meat have to do with sound? What does leather, asphalt, or jam have to do with wine? The wine guys use those and other descriptors all the time. The one they never use is grapey. God forbid a wine tastes like grapes! Ah, but I digress.

A/V receivers seem to have become increasingly thinned out and skeletal sounding over time, and some manufacturers are switching (no pun intended) to Class D amplification. But on first listen, the T 787 immediately took up residence on the full, rich, well-balanced, and pleasingly solid side of the audio street—and that was from a manual setup before I ran the Audyssey program. The T 787 exhibited a level of iron-fisted, speaker-gripping control rarely encountered in the receiver world.

Audyssey identified my three-way floorstanders as small and set the crossover at 40 hertz, and it measured the subwoofer distance as 30 feet or three times the actual distance. But NAD's Jeff Talmadge told me to leave both that way, so I did. The sonic results indicated he was correct. Although you can correct Audyssey's automatic settings, my advice is, if Audyssey identifies your large speakers as small, don't take it as an insult to your manhood. Just go with it.

After I ran and applied Audyssey, the sound became even better balanced tonally and more solid. The smoothed-out response produced superior detail resolution and improved spatial

dimensionality. The T 787 produced prodigious, deep, and solid bass (down to the 40-Hz crossover point) through the front L/R speakers and the rest through the ADAM Audio SW260 Mk3 subwoofer, which required some

tweaking to properly integrate since I'd previously set the L/R speakers to large.

I ended up watching straight through both Blu-ray Discs of the second season of Elvis Costello's superbly produced and engineered *Spectacle* music and interview TV show (Bono, Richard Thompson, Nick Lowe, Levon Helm, Bruce Springsteen, Lyle Lovett, etc.). Other than in terms of sheer power and overwhelming dynamic authority, the NAD's clarity of transient attack and overall high-frequency performance, though somewhat drier, produced sound that was different than but equally pleasing to that of the McIntosh separates I reviewed in *Home Theater's* June 2012 issue.

The NAD offers a taut, rhythmically certain, and harmonically correct bottom, meaty mids, and a clean top end devoid of etch and edge. These combine to produce ear-pleasingly well-balanced sonics that invite the kind of long-term listening pleasure few A/V receivers can produce.

With the NAD decoding at 192-kilohertz/24-bit resolution, Neil Young's well-worth-the-money *Archives Volume 1* box set produced a tonally well-balanced stereo

picture that revealed a wealth of detail within a spatially generous, three-dimensional field that floated untethered to the two loudspeakers. That's the goal, and the T 787 managed it with an ease



The T 787 includes a self-illuminating, programmable IR/IR8 main remote.



...and a smaller, secondary remote for zone 2 use.



• The NAD T 787's speaker binding posts are among the best Michael has seen on an AVR.

heard from any A/V electronics, thanks in great part to that meaty midrange.

Conclusion

NAD recognizes it can't effectively compete in the current "race to the price and sound bottom" that most A/V manufacturers seem intent on pursuing. With the T 787, NAD has taken a principled stand for superior sound quality over gadgetry and design elegance over buttons, bells, and whistles.

While the company's logic looks self-evident to performance enthusiasts, at a time when peripheral gadgetry unrelated to a product's core mission appears to take precedence everywhere (see most current touchscreen-happy car commercials), NAD's stand is not without risk.

You can buy far less expensive AVRs packed with far more bullet-pointed features and adorned with more control operability. Other than its industrial-design elegance, what NAD offers here can't be seen but must be heard—something that in today's retail environment is becoming increasingly more difficult to do.

However, if you do get the opportunity to hear the T 787 in a proper setting, its superb sonics should be immediately obvious. And its future-proof modular design converts a product usually on its way to obsolescence upon purchase into a long-term investment. Combine the T 787's superior sonics with its ease of use, and the \$4,000 price tag begins to make as much sense as does music played through it. Overall, the NAD T 787 is the best-sounding A/V receiver I've yet heard. ⚡

NAD • (800) 263-4641 • nadelectronics.com Dealer Locator Code NAD

CONNECTIONS

INPUTS: VIDEO: HDMI 1.3a (7), component video (3), composite video (4), S-video (4) **AUDIO:** Coaxial digital (3), optical digital (3), 7.1-channel analog (1), stereo analog (7) **ADDITIONAL:** Ethernet (1), IR (1), 12-volt trigger (1) **ACCESSORY:** iPod dock (1), Xbl (1) **OUTPUTS:** VIDEO: HDMI (2), component video (1) **AUDIO:** Coaxial digital (1), optical digital (1), 7.2-channel preout (1), stereo analog (3) **ADDITIONAL:** RS-232 (1), 12-volt trigger (3), IR (3)

few receivers in my experience manage.

NAD's EARS multichannel setting added a relatively pleasing surround enhancement, but being an insistent purist, I preferred listening to two-channel material as recorded.

When Young's *Topanga 2* disc had finished, I couldn't believe 51 minutes had passed, or that I'd sat there enjoying it for that long. Given what awaits downstairs, upstairs two-channel listening is usually for work, not for pleasure. That's a testament to the NAD's musicality, but don't ask for a definition of that word. You know it when you hear it, and you especially know it when you don't!

Later, I listened to Mobile Fidelity's exceptional-sounding reissue of *Music From Big Pink* in its entirety. I was more than satisfied by how the system managed the late Levon Helm's deeply tuned drum kit and how

well it differentiated between his voice and the reverb cushioned around it on "The Weight." When Helm hits those low toms, they sounded like pitch-identifiable toms, not undifferentiated thumps. Unlike with some receivers, the higher the SPLs, the better the T 787 sounded. It's a rare receiver that invites you, almost makes you, crank it up for extra enjoyment.

Unprocessed Video

The T 787 includes two HDMI outputs, which obviates the need to switch between them if you have both a wall-mounted display for everyday viewing and a projector for movies. With no video processing to get in the way of 1080p signals, the T 787 simply passes along what it's fed.

Among the movies I watched was *Super 8*, J.J. Abrams' ingenious Steven Spielberg tribute. Set in the late '70s, it's about a not-so-cute

space alien long imprisoned and exploited by the military that escapes in a small industrial Ohio town and the group of adolescent amateur filmmakers who get caught up in the government's plot to recapture it.

In the very Spielbergian telling, references to *Close Encounters* and *E.T.* abound, as objects (including bicycles) fly through the air and electronics turn on and off as if possessed. Abrams adeptly mixes violence, humor, and pathos, including a heartwarming and heart-stopping final encounter between the young protagonist and the alien.

Although the story has more holes in it than the proverbial Swiss cheese wheel, it makes for a heart-pounding, eye-tearing good time that the T 787 expressed fully both sonically and visually. It created an enormous and seamless three-dimensional environment in which it revealed low-level details skillfully inserted into the soundtrack by the sound editors and mixers, punctuated by thunderous, room-rocking explosions. Dialogue reproduction was solid, dimensional, artifact free, and as natural sounding and convincing as I've

| 3:2 HD | 2:2 HD | MA HD | 3:2 SD | 2:2 SD | MA SD | VIDEO CLIPPING | LUMA RESOLUTION | CHROMA RESOLUTION | PASSES 3D |
|--------|--------|-------|--------|--------|-------|----------------|-----------------|-------------------|-----------|
| N/A | N/A | N/A | N/A | N/A | N/A | PASS | PASS | PASS | YES |

VIDEO TEST BENCH While the NAD will cross-convert from an analog input such as component to an HDMI output, it performs no video processing at all from an HDMI input to an HDMI output. Its output resolution

Visit our Website for a detailed explanation of these video tests.



will always be the same as the source resolution. As tested from a 1080p HDMI input to a 1080p HDMI output, the passthrough performance on our standard tests was flawless.—TJN