

# THE OFF-THE-SHELF SYSTEM

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Don't want to build your own? Put down this mag and consider a build-to-order system. While DIY used to mean faster and cheaper, custom high-end systems have taken over at least one of those adjectives. Now where do you find six and a half grand? And if you're willing to shell out more money, your smokin' system can have a custom, glossy, hand-painted exterior too.

There are a number of small manufacturers that make superbly performing PCs. But Falcon Northwest has been around longer than all of them, and the company continues to churn out barnburner systems that can keep up with the best out there. We took a look at their fastest Mach V system, the Falcon Northwest Mach V, which is built around an overclocked AMD Athlon 64 FX-57. When we tested the system, we focused on 3D gaming performance. After all, you're not buying a liquid-cooled system with an SLI graphics setup to run Office, are you?

## IT'S WHAT'S INSIDE THAT COUNTS

Some people may worry about having a liquid-cooled system. After all, water and high performance electronics don't exactly mix. Don't fret your pretty little head. The liquid cooler

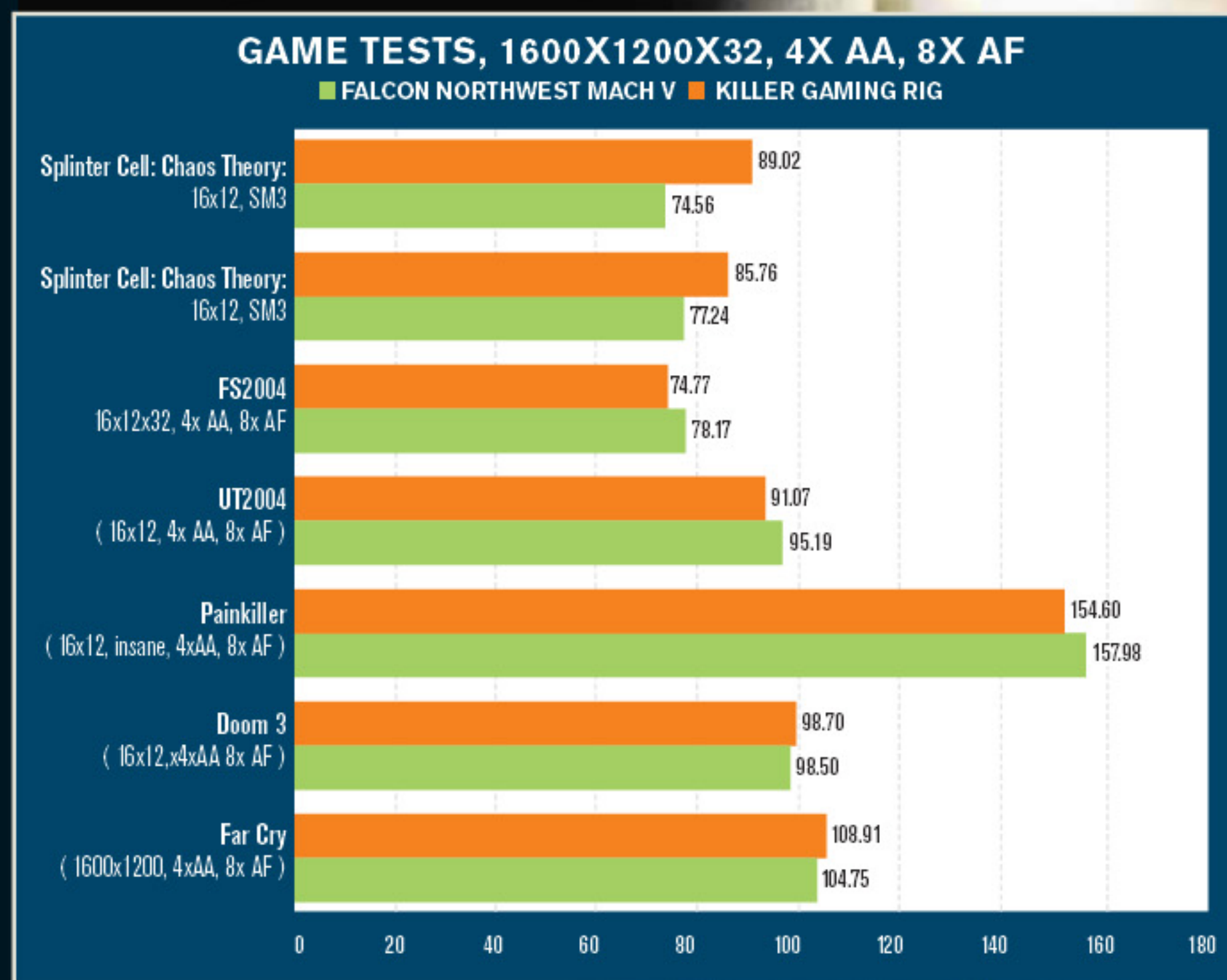
inside the Falcon Northwest system, manufactured by Sanyo Denki, is completely sealed and warranted for seven years. Additional ducting over the CPU cooler helps keep the processor cool. The downside is that it's just a CPU cooler. You can't add liquid cooling to your graphics card, as we did with the water-cooled gaming

rig we built (see the pictures on the facing page for info on how that system worked). But the net result is a cool-running, relatively quiet system.

Still, the lack of a water cooler on the graphics card didn't hurt this system's performance numbers one bit. The guys at Falcon Northwest have wrung out a number of optimized settings that give their system a slight edge; for starters, they settled on a 207-MHz memory clock and a CPU multiplier of 14.5x. This is slightly different than the 15x multiplier and 200-MHz clock we just used in the gaming rig, but it helps when you need just a bit more memory bandwidth. And the clock rate is still 3.0 GHz (3,001.5 MHz, to be precise). This is all possible because AMD ships their FX series processors unlocked.

The Mach V ships with an Asus A8N-SLI Deluxe motherboard, a pair of fan-cooled BFG 7800GTX OC graphics cards and the basic version of Creative Labs latest X-Fi sound card, the Xtreme-Music. The new audio processor on the card has over 51 million transistors and runs at 400 MHz. The Audigy family of sound cards ran at 200 MHz and had a mere 4.6 million transistors.

The boys from Oregon also equipped the system with a pair of 300GB Maxtor drives (each with 16MB of cache), configured as a RAID 0 array. Finally, this killer PC arrived



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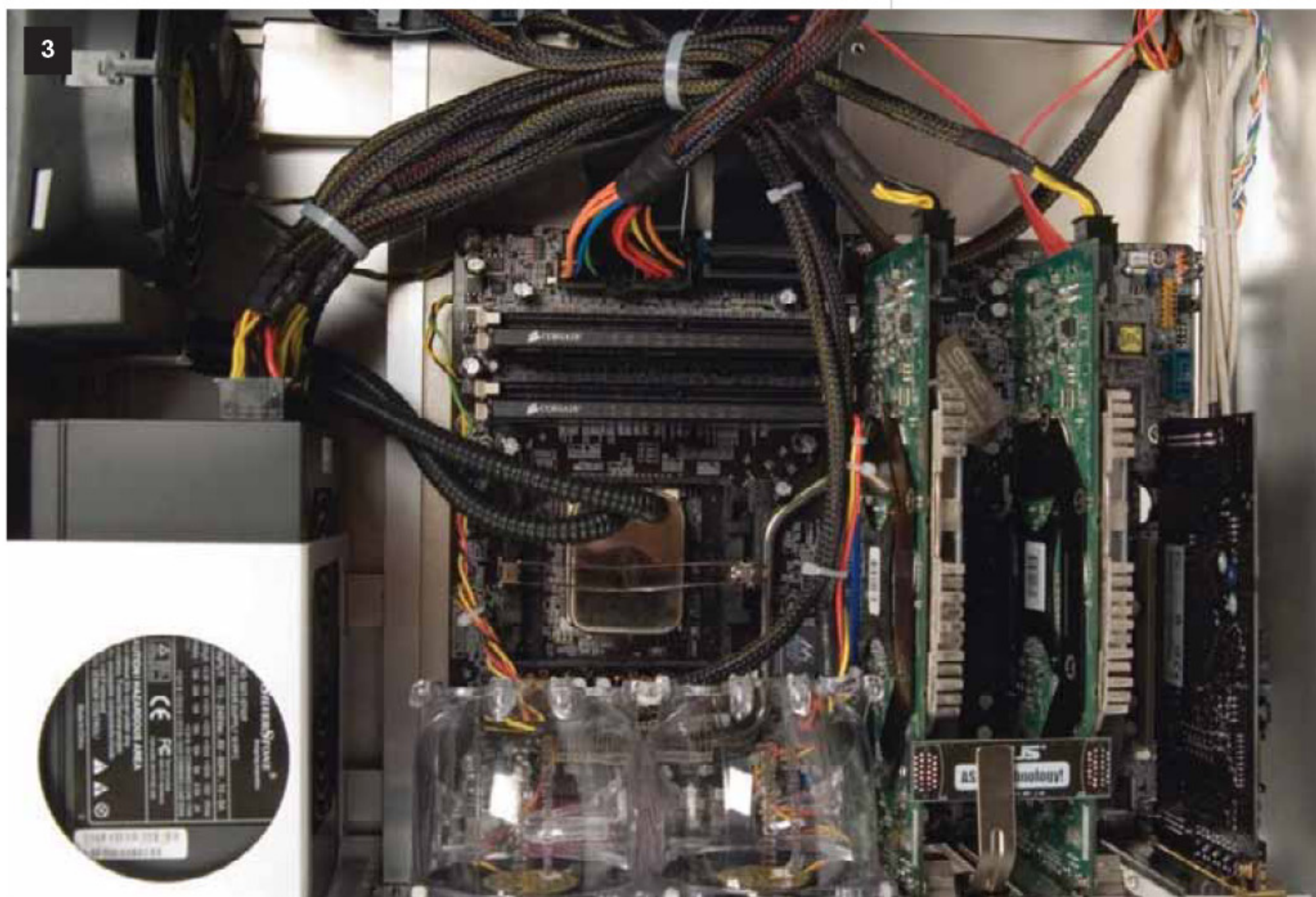
# THE FASTEST PCs MONEY CAN BUY

There are a number of small manufacturers that make superbly performing PCs. But Falcon Northwest has been around longer than all of them, and the company continues to churn out barnburner systems.



## The Components

**1.** One of the reasons to buy an off-the-shelf powerhouse from Falcon is the available custom paint job. **2.** Falcon adds a custom Sanyo Denki San Ace radiator to this case to keep the system cool. **3.** Here you can see the tubing running from the CPU heat sink to the Sanyo radiator.



with a pair of NEC 19-inch displays (maxing out at 1,280-by-1,024, which seems a bit anemic) and high-end Klipsch Promedia Ultra 5.1 speakers. All this high performance goodness weighs in at \$6,761. Again, you're going to need a solid line of credit before you even look at something like this.

## WHAT'S OUTSIDE COUNTS TOO

The case itself is one of the deeper chassis we've seen. You'll need a fair amount of under-the-desk space to house it, but the tradeoff is that the internals are very clean, and it's easy to swap in new gear. The Sanyo Denki water cooler is mounted at the top of the case and doesn't obstruct any of the hardware. This is an improvement over similar setups we've seen from other companies, which mount a sealed liquid cooler into the side panel, making internal access a big chore.

A 600W Silverstone SLI-capable power supply delivers enough current to keep things humming along. The system also came equipped with a pair of Corsair XMS Pro modules, configured at CAS 2-2-2-5 and complete with blinking LED activity lights. Cables are neatly dressed, and a recovery CD is shipped with the system, allowing users to readily restore the OS if needed.

Falcon Northwest will paint a system case any way you like—we asked Falcon to paint ours this wicked shade of purple—but the automotive paint job contributes substantially to the Mach V's price. In this case, our single color adds nearly \$550.

Performance is about even with our homebrew killer rig. Games that depend on system memory bandwidth tend to be a bit faster on the Mach V, due to its juiced memory clock. Games that depend on the GPU performance are slightly faster on the killer rig, because the water cooled BFG card offers up a 30-MHz clock rate advantage over its air-cooled sibling. Both these systems are blisteringly fast, of course; the Mach V scored over 95 frames per second on Unreal Tournament at 1200x1600 resolution, with 4x AA and 8x AF.

### Speed Kills

Neck-breaking speed doesn't come cheap...just watch what you do with it, Superman. "Sorry" doesn't put thumbs back on hands, after all.



### Tech Toolbox: Off-the-Shelf

#### What you need

COMPONENT	BRAND / MODEL	PRICE
Case	ICON aluminum chassis	
Custom Paint Job	Exotix Paint - Acura Sage Brush Pearl	
Power supply	Silverstone 600-Watt ST60F	
CPU	AMD Athlon64 FX-57 (Socket 939)	
Cooling system	Icon water-cooling kit	
Motherboard	Asus A8N-SLI	
Memory	2 x Corsair TwinX 512MB 3200XL-PRO	
Graphics	2 x BFG GeForce 7800 GTX 256MB	
Sound card	Creative Labs X-Fi ExtremeMusic	
Speakers	Klipsch ProMedia Ultra 5.1	
Mouse/Keyboard	Logitech Cordless Desktop MX-3100	
Displays	2 x NEC 19-inch LCDs	
Hard drives	2 x Maxtor DM-10 300GB SATA	
Optical drive	Sony 16X Speed DVD-ROM	
Burner	Lite-On 16X Dual Layer DVD+-RW	
Operating system	Microsoft Windows XP Home	
<b>Total</b>		<b>\$6,761</b>

## FINAL THOUGHTS: BUY OR BUILD?

Is it worth the extra cash to get something like this? Ultimately, that depends on how obsessed you really are with performance. If your desire to own the speediest hot rod gaming rig is stronger than your sense of thrifti-

ness, then the Mach V is right up your alley. And if you're the kind who likes their hardware to stand out from the pack, both inside and out, you'll appreciate the custom paint jobs that Falcon offers. But if your desire for a hand-built system isn't great enough to overpower your empty wallet...welcome to the crowd. **X**

