Honda builds a motorcycle mean enough for those guys who are tough enough to dip your heart out with a wooden spoon.

Don't be deceived. The 1100 Magna is not just another Special. Writing off the V65 as simply another boulevard parade float is like calling a 10-inch switchblade a pocketknife. It's true, but misses the point entirely. The term "Special" suggests highly styled motorcycles that go limp-wristed when it's time to perform. But the V65 is a urban streetfighter through and through, a bike that can kick almost anything flat in a stoplight-to-stoplight brawl.

What makes this Special so special? In a word, the engine. If you talk horsepower, the Magna speaks your language. Its horsepower translates directly into an immediate gut-wrenching rush unmatched by any other production street machine. To a man, the Cycle staff raved about the engine. With its wonderfully potent and flexible powerplant, this big four is a strong and willing worker that hums along happily at 1500 rpm or sings fortissimo at the 10,000-rpm redline. The best part of the V65 is a mid-range punch that would do justice to Larry Holmes. Whack the throttle open at 5000 rpm in first gear and the front wheel claws for the sky while the Magna catapults forward. These antics are interesting enough when you're mounted on an open-class motocrosser, but when a 589-pound motorcycle with a wheelbase of nearly 63 inches takes off like a carrier-based F14, it gets your full attention.

Honda built the V65 engine with technology carried over from the V45, but the big Magna has all-new hardware; it shares no parts with the 750s. Though the designs are virtually identical, everything has been scaled to 1100cc specs.

The V65 benefits from Honda's extremely compact Vee-engine design; at 17.4 inches, the 1100's engine is barely an inch wider than the narrow 750 V-four. The Magna's 90-degree Vee angle sets the two front cylinders low and nearly horizontal, while the rear cylinders stand almost vertical. This right angle configuration produces perfect primary balance, and a short stroke limits secondary imbalances. Finally, to ensure the 1100 Magna's smoothness Honda completely rubber-mounted the engine within the full-cradle frame, following the practice of last year's 750s. End result: a monster engine that's a pussycat to live with.

Except for the size increase, the 1100's top end appears identical to the V45's. The cylinders are an integral part of the upper case half, making the entire unit rigid. The liners are cast in freestanding cylinders—the cylinders and jack-
The highly oversquare 79.5 by 55.3mm engine displaces 1098cc. Like the 750s, the 1100 uses a high 10.5:1 compression ratio; it also incorporates similar anti-detonation features: water cooling to lower combustion chamber and exhaust-valve temperatures, a swirl-inducing intake tract that promotes quick burning of the fuel/air charge, and a carefully shaped combustion chamber that concentrates most of the charge near the spark plug to promote rapid flame travel. The 1100's 30mm intake and 26mm exhaust valves sit in their four-valve head at a narrow 38-degree included valve angle; the V45's intake and exhaust valve diameters are 26mm and 23mm respectively.

Each pair of cylinders has a set of dual overhead camshafts to actuate the valves. The cams spin directly on the cylinder-head material in a plain-bearing setup. A single cam lobe acting through a forked follower equipped with screw-type adjusters actuates each valve pair. A silent-type cam chain drives each set of cams, and an automatic chain tensioner eliminates maintenance chores.

Straight-cut gears transfer the power from crank to clutch, the clutch gear a split, zero-backlash type to damp out gear whine. The clutch itself is hydraulically operated, an enlarged version of the VT750 V-twin's rather than an upscaled version of the V45's. The V65's diaphragm clutch spring and clutch plates are larger in diameter than the VT750's, and the 1100 holds two more plates than the Shadow. The
diaphragm-spring clutch is more rugged than one of conventional design fitted in the same space. Considering the abuse the V65 is likely to absorb during streetfights, the diaphragm spring setup is indeed a good idea. As an anti-lockup device during downshifting, the V65’s clutch—like the V-twin’s—houses a one-way sprag clutch.

Vertically staggered transmission input and output shafts reduce overall engine length; the output shaft lies below and aft of the input shaft. Honda’s six-speed gearbox is unusual for an 1100cc bike. Because the V65’s gearbox was designed as a “five-speed plus overdrive-sixth transmission,” top gear is really tall; calculated top speed in sixth works out to 173 mph at the 10,000-rpm redline. At 60 mph the engine loafs along at 3460 rpm. Final drive is via a maintenance-free shaft.

The Magna carries its engine in a full-cradle frame equipped with an air-adjustable, anti-dive fork. Twin shocks adjustable for rebound and compression damping as well as spring preload grace the rear. The 1100’s wheelbase, a whopping 62.8 inches long, is less than a half-inch under a Gold Wing’s. This figure, combined with the V65’s rake and trail of 30.3 degrees and 4.1 inches, suggests the Magna might be cumbersome and slow-steering. Not true. Around-town and in parking lots the V65 handles just fine.

The VF1100 feels distinctly long and unmistakably big, yet it requires only average steering effort through the handlebar. The 31.6-inch-high seat is not especially low, but the Honda still feels fairly agile for an 1100. Honda engineers have done much to keep the weight low in the bike—the basic engine design, of course, is instrumental. Other features such as the small under-saddle gas tank contribute as well. Actually, styling trimmed the main tank’s volume, and the V65’s under-tank airbox and filter also steal space from the main tank. The under-seat tank and its fuel pump were the answer.

Following Special styling, the rider’s portion of the two-tiered seat is wide and well padded, although the steep step confines the pilot’s space. While most riders will find it adequate for in-town trolling, passengers get short-changed; their pegs are too high, and the narrow, firm rear portion of the seat has the comfort of a bird-cage bar. Once the riderenthrones himself in the saddle, the pullback handlebar and the forward-mounted footpegs define his position. The pegs aren’t as radical as the VT750C Shadow’s, and that’s good for comfort and control. Given the V65’s eyeball-flattening acceleration, a riding position mimicking a tipped-back rocking chair would be dangerous. The forward-mounted pegs are convenient if you’re paddling the V65 around a parking lot, and while the bar has two-way adjustability, it has too much pullback to please our staff.

Although the riding position may be a strong selling point on the showroom floor and a viable stance for stoplight-to-stoplight warfare, the bike’s ergonomics offer the rider very little support at freeway speeds. Arm, back and stomach muscles must position him against the windstream. This sort of onboard isometrics is no sweat for short hops. After 30 minutes though—especially if you’re riding at supra-legal speeds—you’ll feel as though you’ve been working overtime at your Nautilus club. Although long-legged riders can use the passenger pegs for a brief change in position, the reach-back leaves their legs nearly folded double in

The V65 Magna is one toughie-boy cruiser that has real kayo power rather than an okay punch.
the process. Shorter riders can't reach the rear pegs at all. For them, a radical forward crouch proves most effective, though it places their torsos at an awkward angle and their faces mere inches from the handlebar. Short of changing the bar/seat/peg relationships, the best remedy is to ride in half-hour spurs.

In a somewhat surprising move, Honda equipped the VF1100 with suspension components biased for sport riding. The up-and-down torque reaction of shaft-driven bikes forces manufacturers to make trade-offs when selecting rear suspension components. Typically, light spring and damping rates provide a soft, cushy ride at the expense of backroad handling, while a taut, well-damped rear suspension makes fast riding easier and steadier at the expense of slow-cruising comfort. Adjustable shock damping and air-adjustable springing usually provide an effective, albeit expensive, compromise that gives a rider latitude in setting his bike up for specific tasks.

The Magna's rear shocks have state-of-the-art adjustability: two-way adjustable compression damping and four-way adjustable rebound damping. The springing is not air adjustable, and Honda engineers selected spring rates that are decidedly stiff. Our heavier (185-pound) testers found the rear end firm, but acceptably soft for freeway cruising when the springs were set at minimum preload. Lighter testers found the ride stiff and harsh, and the riding position tends to exacerbate this assessment. The reclining riding position centers most of the rider's weight back toward the tailbone, and every bump...
and seam in the road transfers a sharp jolt directly to the rider's spine.

For backroad riding, Honda's choice of sporting shocks pays off handsomely. Set up stiffly, the VF's suspension damps well over all types of road surfaces, from fast sweepers to slow, knotty corners; however, the air-adjustable fork flexes perceptibly when winding through unusually bumpy sweepers. The Magna's triple disc brakes offer excellent feel and stopping power, and the anti-dive valving effectively preserves ground clearance during simultaneous braking and turning. The VF1100's clutch is an enlarged version of the VT750 V-twin's, complete with a diaphragm spring, a one-way sprag clutch and hydraulic actuation.

The 1100 head incorporates many of the 750 V-four's design concepts; the 38-degree included valve angle is the same, and the combustion chamber is shaped to concentrate most of the fuel charge near the centrally located spark plug to promote rapid flame travel. Each cam lobe actuates a pair of valves via a forked follower equipped with screw-type adjusters (far left).
Honda's V65 Magna is an authentic 10-second motorcycle. We're sure of it, but unofficially so.

Readers following the battle of the 10-second quarter know that the GPz1100 tested by Cycle last month ran 10.91. The Honda 1100F hovered at the 10-second threshold in January, but didn't quite make it. Honda was confident, though, that the V65 Magna was a 10-second jet, and there was plenty of evidence pointing in that direction. First, John Gleason, professional quarter-mile pilot, had taken the V65 Magna into the tens for Honda, a feat well publicized by the company. Second, Honda had every reason to believe that the Magna would turn out to be a 10-second bike in Cycle's hands—Mark Homchick (out of real curiosity) had run a pre-production V65 through the traps at 11.06 seconds long before the magazine's test unit, a line-production bike, showed up for evaluation.

Before Homchick could get our test Magna to the strip, he became the proud owner of an unwanted accessory: a plaster cast running from thumb to armpit. The cast had (and still has) optional features—stainless steel pins to immobilize a left wrist broken in a number of places and pieces. It was a bad break for Honda, too. As explained in February, it takes a deft touch to get a Superbike into the tens; only two or three journalists can, and MH is our quota. Honda had the weapon; Cycle, the broken trigger finger.

On the one hand, Cycle couldn't officially consider any quarter-mile times outside the ones turned in by staffers. On the other hand, Mark's performance with 10-second motorcycles is much closer to John Gleason's than to other staff members'. If Gleason could take our test V65 Magna and put it well into the tens, it would clearly indicate that the V65 would be a 10-second bike in Mark's hands. And that would give our readers a much fairer picture of the Magna's performance than if we published an 11.3 figure generated by Buzz Buzzelli.

Gleason turned in a 10.84-second, 124.82-mph shot with the Magna. That's about 0.04 second quicker than he managed on the GPz1100 while coaching Homchick on ten-second riding. The total run of Gleason's times on our test unit V65 were as follows: 11.20 @ 120.48; 11.14 @ 124.82; 11.13 @ 124.48; 10.92 @ 124.48; 10.67 @ 125.17; 10.91 @ 125.17; 10.86 @ 125.00; 10.90 @ 124.65; 10.95 @ 124.30; 10.91 @ 124.82; 10.84 @ 124.82.

The Honda V65 is easier to ride at the strip than the GPz1100 because the Magna has more mid-range punch—note the dyno charts. This means it gets off the line more easily. Furthermore, most street riders will have the impression that the Honda is a lot stronger than the GPz1100 because of the V65's telltale mid-range power. And that's a fact. The V65 shows more horsepower than the GPz at every rpm level on the dyno charts, and the power is more broadly distributed. At the very top the V65 produces 105 horsepower at the rear wheel, a touch more than the 104-horse GPz. Only at 8500 rpm does the GPz edge above the Monster Magna. At 3500 rpm, for example, the V65 has an additional 10 pounds-feet of torque. At 4000 rpm the V65 has over 10 horsepower and 14 pounds-feet on the GPz 1100. The V65 is, by a mile, the strongest stocker we've bolted to the dyno. Though most riders might find the Honda easier to deal with in the quarter, be assured that getting a 10-second motorcycle into the tens is tough. If you doubt that, pay a visit to your local drag strip.

Unofficially, the V65 is a 10-second bike. Officially, it's the Horsepower King. You can take those numbers to the bank and deposit them.

When Mr. Pins-and-Plaster Homchick mends, we want to run our V65 Magna again to get our official figures. At that time, we'd like to gather all the 10-second contenders for a little high drama around the old drag strip Christmas tree. We can hardly wait.
**HONDA V65 MAGNA**

when the engine was cold; slow, deliberate shifting is the best way to combat this quirk.

This king-size Magna exhibits some bothersome driveline snatch. Gearplay in the drive train, combined with the CV carb's tendency to snap the carb slides open and closed, accentuates the Magna's low-speed jerk-and-lurch routine. Long stints of stop-and-go traffic become irksome, and in congested, slow-moving traffic, riders can skirt the problem by shifting to a higher gear and idling along slowly.

The Magna has a number of attractive standard features. They include an LCD gear-position indicator, microprocessor-controlled self-canceling turn signals, and FOIL, Honda's built-in security cable/alarm system. Year one, FOIL was the exclusive feature of the V45 Sabre. We think the V65's engine and its streetfighter styling make the King-Kong Magna motorcycling's prime candidate for Midnight (and sometimes Daylight) Liberation Forces. Honda's fiber-optic security cable is pretty innovative—and probably offers as much protection as one can reasonably expect.

For sheer visceral attraction, nothing beats the 1100 engine. For that reason, it's the V65's best feature, and motorcyclists who buy the V65 on looks will quickly find themselves enchanted by the 1100's performance. The 65's power is irresistible. The 1100 Vee would make an ideal starting point for a full-fledged, pavement-hopping sport bike; and while the VF750F/50 Interceptor is a gorgeous piece, the 750 can't have 1100 punch. You have to wonder how many ways Honda can find to use the V65. A VF1100F is an obvious possibility, and the 1100's broad powerband, six-speed gearbox, driveshaft and excellent vibration control also make the V65 a wonderful platform on which to build a full-dresser. But for now, Honda has taken its premier performance engine to the streets to create a stoplight-to-stoplight blockbuster extraordinaire.

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**TEST SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Make and model</th>
<th>Honda VF1100C Magna</th>
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<tr>
<td>Price, suggested retail</td>
<td>$3898</td>
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</tbody>
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**Engine**

- Type: Four-stroke, 90-degree V-four
- Liquid-cooled with dual chain-driven overhead camshafts
- Four valves per cylinder
- 79.5 x 55.3mm (3.13 x 2.17 in.)
- Piston displacement: 1098cc (67.0 cu. in.)
- Compression ratio: 10.5:1
- Carburetion: 4 Keihin 36mm constant-vacuum
- Exhaust system: Four into two
- Ignition: Battery-powered, inductive, magnetically triggered
- Air filtration: Paper element, disposable
- Oil filtration: Paper element, disposable
- Oil capacity: 3.7 qts. (3.5 l)
- Bhp @ rpm: 105.00 @ 9500
- Torque @ rpm: 68.86 @ 7000

**Transmission**

- Type: Six-speed, constant-mesh, wet-clutch
- Primary drive: Straight-cut gear, 70:41, 1.71
- Secondary drive: Helical bevel gear, 18:17, 1.06
- Final drive: Shaft and bevel gear, 35:11, 3.18
- Gear ratios (transmission)...
- Gear ratios (overall)...

**Chassis**

- Type: Double-downtube, full-crade frame; tube/box-section steel swing arm
- Suspension, front: Leading-axle, air-assisted fork with 41mm tubes, anti-dive valving and 5.9 in. (150mm) of travel rear...
- Shock absorbers, adjustable for spring preload and rebound and compression damping, producing 4.1 in. (105mm) of rear-wheel travel
- Wheelbase: 62.8 in. (1595mm)
- Rake/trail: 30.3°/4.1 in. (105mm)
- Brake, front: Hydraulic, dual-disc with twin piston calipers
- Brake, rear: Hydraulic, single-disc with twin piston caliper
- Wheel, front: Cast, 2.50 x 18
- Wheel, rear: Cast, 3.00 x 16
- Tire, front: 110/90-18 Bridgestone Magno Mopus L303

**Electrical**

- Power source: Three-phase AC generator, 300 watts
- Charge control: Solid-state voltage regulator
- Headlight beams, high/low: 60/55 watts
- Tail/stoplights: 8/27 watts
- Battery: 12V 18AH
- Speedometer error: 30 mph indicated, actual 29.7 mph
- 60 mph indicated, actual 52.3 mph

**Customer Service Contact**

- American Honda Motor Co. 100 W. Aoneda Blvd.
- Gardenia, CA 90247
- (213) 321-8680

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A lift-up tank provides access to the air filter. Working conditions are cramped, but the paper filter requires changing only once every 8000 miles.