



## M-B Diagnostic Options

The Compact<sup>3</sup> is the ultimate diagnostic system for difficult troubleshooting situations on Mercedes-Benz vehicles. Here, it's connected to the Internet and in its DAS mode.

# Choosing the best for your shop

The overwhelming majority of Mercedes-Benz vehicles are maintained and repaired at independent shops like yours, not at dealerships. But not all independent shops are the same in terms of the work they do. At one extreme are shops that service a wide range of cars, including the occasional Mercedes-Benz. At the other extreme are the shops that work exclusively on Mercedes-Benz vehicles. Most shops are somewhere between the extremes.

As a leader in automotive technology, Mercedes-Benz vehicles are equipped with some of the industry's most advanced operation and control systems. Engine management, drivetrain operation, suspension, steering, brakes, and passenger comfort features are programmed to give optimal performance under all driving conditions. Each of these systems has its own dedicated set of onboard diagnostic software and related service technology.

The variation in service volume among independent repair shops and the sophistication built into every Mercedes-Benz presents an interesting challenge in terms of diagnostic equipment. To do more than routine fluid and filter change maintenance on a Mercedes-Benz, each shop needs a diagnostic tool for troubleshooting and repair. However, a basic diagnostic unit adequate for a shop with an occasional Mercedes-Benz customer probably won't be powerful enough to handle the workload in

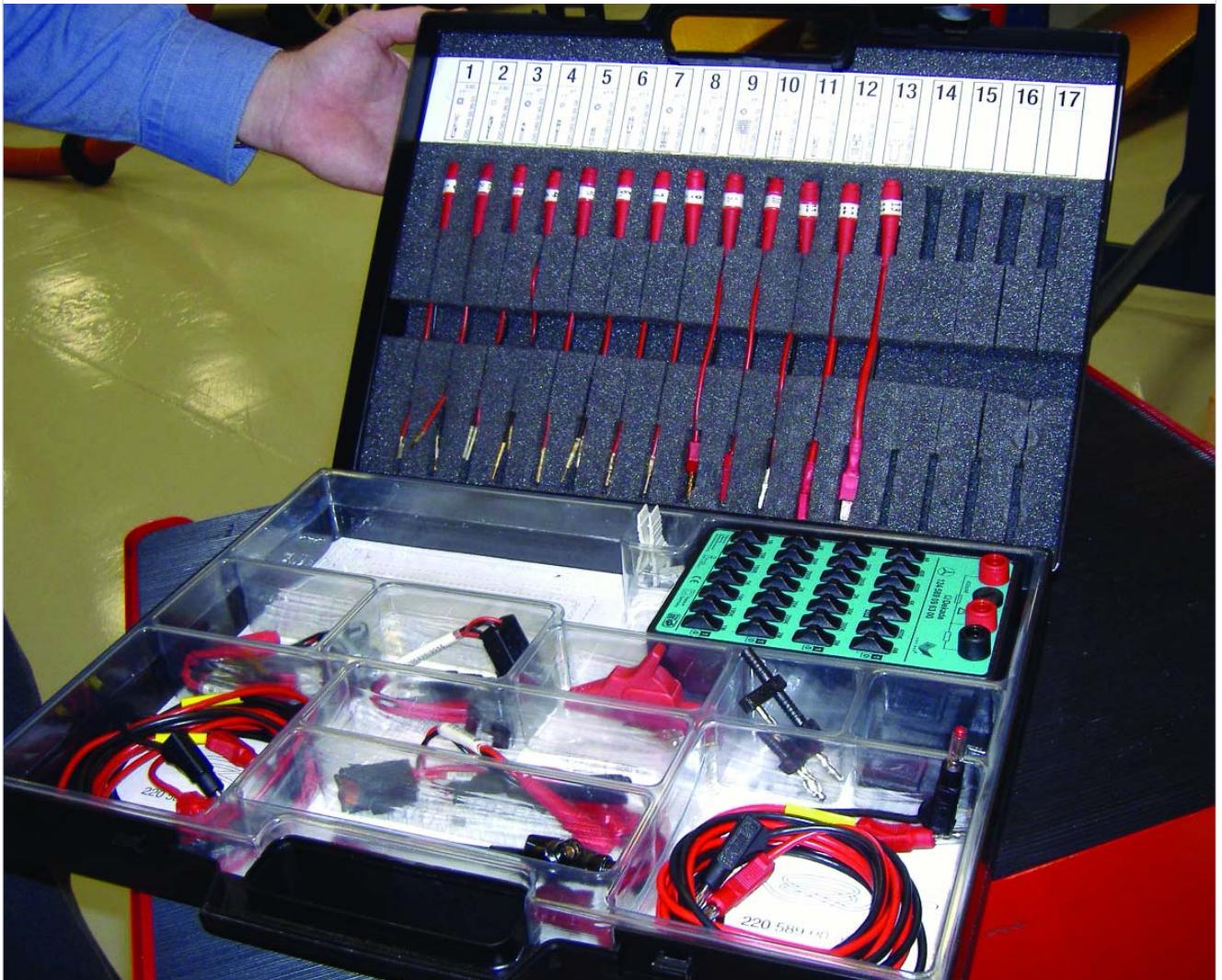
a dedicated Mercedes-Benz shop. A full-function tool that the dedicated shops require will likely have a price tag that is beyond the investment a low-volume shop would consider making. Trying to develop a "just right" tool that splits the difference between the extremes would result in a unit that would probably meet the needs of the large group in the middle, but would still be too expensive for a small shop and probably not powerful enough for a large-volume shop.

Mercedes-Benz has resolved this challenge with the same thoughtfulness and attention to detail that characterizes the design and engineering of its cars. The company offers independent shops three different diagnostic tools—a scanner with a specific Mercedes-Benz program card, the Basic Star Diagnosis unit, and the Compact<sup>3</sup> with the optional "Measurement Technology." One of the three is right for your shop, based on the volume of Mercedes-Benz work you do and how deeply into diagnostics and service you want to go.

This commitment to support the varying needs of independents should not be a surprise. Mercedes-Benz recognizes that most owners rely on shops like yours for service work. Offering three different diagnostic units with various capabilities and price tags helps you do a better job for your customers, which, in turn, enables Mercedes-Benz to:



*With the trunk panels removed, you can get an idea of just some of the complex electronics on board a late-model Mercedes-Benz. Sooner or later, you'll have to diagnose these high-tech systems.*



*Sure, there are other great Mercedes-Benz troubleshooting aids, such as this convenient connector kit, but you're still going to need one of the diagnostic tools reviewed here.*

- Increase brand loyalty. A successful service experience whenever and wherever an owner has his or her vehicle repaired builds brand loyalty. And brand loyalty is the reason current Mercedes-Benz owners become future owners when they purchase their next vehicle.
  - Improving brand equity. As a Mercedes spokesman put it, "We know our cars will last a long time when properly cared for. When people see a large number of our cars on the road, especially older vehicles, they realize that buying a Mercedes-Benz is an investment in a quality automobile." Strong brand equity is an important reason many first-time buyers choose Mercedes-Benz.
- Review the features of these three diagnostic units to see which one is the best fit for your shop. As you make your comparison, don't think "price;" instead think in terms of "investment." You want the unit that gives you the best payback on your investment, the unit that will return the most based on the amount of Mercedes-Benz work you do now and in the future if you want that volume to grow.
  - Whatever unit you select, you can maximize your investment with a subscription to Star TekInfo. This website ([www.startekinfo.com](http://www.startekinfo.com)) is "information central" for Mercedes-Benz technical data, service bulletins, parts information, etc. As an independent that works on Mercedes-Benz vehicles, you would handicap

yourself without the “click of a mouse” information available through Star Tek Info.

## Scanner

The Mercedes-Benz Deluxe Scanner (Part No. A 107-MT2501MB) is a Snap-on unit with a customized data cartridge programmed exclusively for Mercedes-Benz vehicles. This is primarily an OBD-II scanner for diagnosing engine management (both gas and diesel) and electronic-controlled shifting problems.

The scanner sells for \$2,166 and includes:

- The scanner, with the dedicated Mercedes-Benz program cartridge.
- All required power and data connection cables.
- MB1, MB2A, and DL-16 adapters.
- S-17, S-20, and S-21 OBD-II personality keys.
- Carrying case.
- User's manual.

The scanner:

- Gives you primary engine coverage for EZ, DM, DM2, LH, HFM, ME1.0, ME2.0, and ME2.1 systems from 1992-01.
- Has a diagnostic code memory.
- Displays live data.
- Features a movie capture and review function.
- Allows you to customize data lists.
- Has bi-directional actuator tests on: LH, HFM, ME1.0, ME2.0, and ME2.1 systems including: air pump, VTS, A/C Clutch, air flap switch, IM switch cover, TV, fuel pump, injectors, exhaust flap, purge system, canister cutoff, fan control and supercharger clutch.
- Can output readings to a printer.

## Basic<sup>2</sup>

It's called “basic,” but the power of the Star Diagnosis basic<sup>2</sup> is impressive. This unit, which is brand new this summer from Mercedes-Benz, supercedes the previous Star Diagnosis basic. With the basic<sup>2</sup>, you can access any electronically controlled system on a Mercedes-Benz.

The basic<sup>2</sup> comes loaded with the full Mercedes-Benz Diagnosis Assistance System (DAS) software. DAS displays a complete set of diagnostic trees for servicing Mercedes-Benz vehicles. The diagnostic multiplexer permits complete data communication between the built-in DAS and all vehicle control modules. With the basic<sup>2</sup>, you can replace or program modules.

In addition to DAS, basic<sup>2</sup> comes with the Star Utilities package, which is a maintenance program used for self-diagnosis of various components and for word processing. The unit also comes bundled with the INFO system, which is packed with user information and tips on using STAR Diagnosis.

One year of service updates, sent monthly on a DVD, keeps your basic<sup>2</sup> current. You can purchase a subscription for future updates after the first year.

Much more than just a scanner, the basic<sup>2</sup> is

### basic<sup>2</sup> Features

- 10.4 "TFT"-XGA monitor
- Glass touch screen
- DVD-ROM drive
- Chipcard reader
- Expandable via PCMCIA slots
- Network-capable Software
- HHT-Win
- DAS

### Connections

- Diagnostic multiplexer interface
- Printer port
- PCMCIA slot
- External keyboard connection
- 2 Ethernet connections
- Serial communication interface

a laptop computer size (13.5" x 12.8" x 4.2") diagnostic tool for any shop that is serious about serving Mercedes-Benz vehicles. The basic<sup>2</sup> is powered by a 600 MHz Intel Mobile Celeron M processor and comes with 512 MB RAM (Random Access Memory) and a large, 60 gigabyte hard drive. There is a built in DVD "read only" drive that is used to input new programming and system updates.

You have two options for inputting data and commands to the basic<sup>2</sup>. The unit's 10-inch monitor normally operates as a touch screen. You just touch or press your selection using the basic<sup>2</sup> stylus. You can also "key stroke" your inputs using the "virtual keyboard." Press a button on the basic<sup>2</sup> and a keyboard appears on the screen. You then input data or commands by touching the letters and numbers with the stylus. The basic<sup>2</sup> can also be connected to an external keyboard.

Want a printout of any screen or reading? Then hook the basic<sup>2</sup> to just about any Windows compatible printer and hit the print button.

The basic<sup>2</sup> can be used in the shop or on the road. The unit weighs only about eight pounds and is housed in an impact-resistant case. The basic<sup>2</sup> is powered by a feed from the vehicle's diagnostic connector so the unit can be used virtually anywhere at any-time, making it an excellent tool for road-side service.

The basic<sup>2</sup> doesn't have to operate solo. It comes with built-in connections allowing you to link the unit to your shop's network.

Unlike the Deluxe Scanner, basic<sup>2</sup> is designed, built, and supported by DaimlerChrysler, the parent of Mercedes-Benz. The basic<sup>2</sup> comes with a 3-year warranty. The Mercedes-Benz Star Diagnosis Support Center is available 24 hours a day, Monday through Saturday, to respond any problems or questions about the basic<sup>2</sup>.

The basic<sup>2</sup> costs \$9,270.00 (plus tax) and normal delivery is 30 to 60 days.

## Compact<sup>3</sup>

The Mercedes-Benz Compact<sup>3</sup> is the fastest, most powerful diagnostic and service tool you

### Compact<sup>3</sup> Features

- 15" TIF XGA monitor
- Glass touch screen
- DVD-ROM drive
- Chipcard reader

### Connections

- Diagnostic multiplexer interface
- Printer port
- Dual PCMCIA slot
- External mouse
- External keyboard
- Ethernet connection
- 3 USB slots
- Audio in/out

can carry under your arm. It is the ultimate service tool for any independent shop doing a large volume of Mercedes-Benz business. The Compact<sup>3</sup> weighs about the same as the basic<sup>2</sup>, but it is physically larger. Its overall size is about 14.3" x 13.5" x 3" and it features a 15" monitor. The unit operates on the Windows XT platform with an Intel 'Banias' 1.4 Ghz processor, 512 megabytes of RAM, and a 60 gigabyte hard drive.

Like basic<sup>2</sup>, Compact<sup>3</sup> comes with DAS and the Star Utilities software. In addition, the Compact<sup>3</sup> comes with the powerful Workshop Information System (WIS) software from Mercedes-Benz. WIS provides detailed wiring diagrams, installation instructions, and technical details on repair procedures.

If the built-in software and chip readiness aren't enough to meet your needs, the Compact<sup>3</sup> comes ready to link to a local area network (LAN) for access to Star TekInfo, provided you have a subscription.

The Compact<sup>3</sup> can be matched up with the HMS 990 USB Measurement Technology unit for even greater diagnostic and analysis power.

You select/switch among the installed programs with the touch of one button. Because the Compact<sup>3</sup> is a Windows-based system, you

can have multiple screens available at the same time. You can switch between screens/programs, with the touch of a button.

To boost productivity, the unit is designed for maximum technician convenience. The screen can be tilted to 5, 30, 45, or 70 degrees to select the best viewing position. In addition, the screen is easily readable even when viewed at a wide angle to the screen.

Inputs to the Compact<sup>3</sup> can be made using the touch screen or the virtual keyboard. An external keyboard and mouse can also be connected to the unit. Virtually any Windows-compatible printer can be hooked up to the Compact<sup>3</sup> to print out any screen. Printers can also be connected via LAN or Wireless LAN.

A removable, rechargeable battery powers the Compact<sup>3</sup>. The built-in Power Management function regulates the voltage supply and power consumption. For heavy use, purchase a second battery so you always have a charged battery ready to go.

The Compact<sup>3</sup> is designed, built, and supported by Mercedes-Benz. It comes with a 3-year warranty and the same service support as the basic<sup>2</sup>.

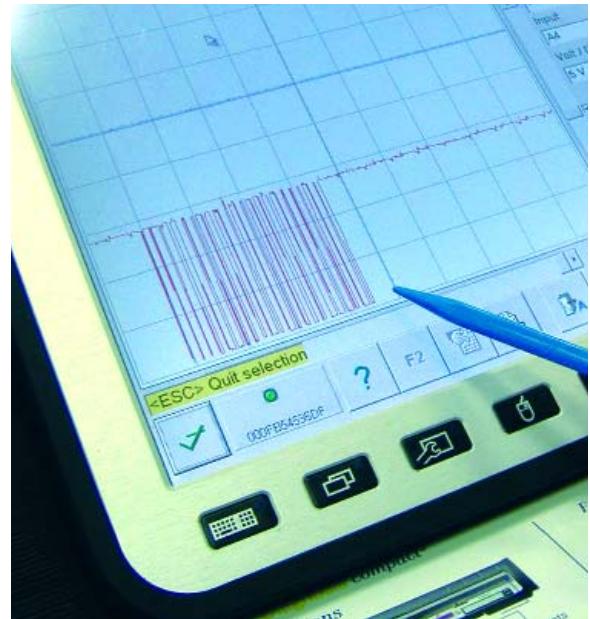
The unit price includes a year of software and specification updates, sent monthly on a CD. Additional updates can be purchased after the first year.

The Compact<sup>3</sup> is \$20,232. With the Measurement Technology unit, the price is \$26,316.

## Measurement Technology

The Measurement Technology unit is a secondary device that links directly to the Compact<sup>3</sup>. It can only be used with the Compact<sup>3</sup>, and does not link to the basic<sup>2</sup> or earlier versions of the Compact. The Compact<sup>3</sup> comes with the Measurement Technology already programmed in, so you just plug the units together.

With the Compact<sup>3</sup> and Measurement Technology teamed up, you have a powerful engine analyzer and oscilloscope in a package that can be conveniently placed on the fender or front seat.



*The digital oscilloscope display on the Compact<sup>3</sup>. This is the "known good" pattern, which you compare with the live pattern that would be displayed in the space above.*

Measurement Technology features a digital oscilloscope and digital readouts for volts, amps, resistance, frequency, temperature, and pressure. You can check and adjust ignition readiness to ensure smooth starting for your customers. The unit also monitors and allows you to adjust oxygen sensor (lambda) readings and exhaust gas readings.

The 12-channel oscilloscope shows ignition traces and compares crankshaft rotation and ignition duration by cylinder. Traces and readings can be stored in memory for comparison over time and changing conditions.

For more information on how you can purchase a Star Diagnosis System, please visit [www.startekinfo.com](http://www.startekinfo.com) and look under the M-B Workshop Resources tab.