

Premium ADS/OBD diagnostic interfaces for BMW

Since I work predominantly on BMW 3 series cars built between the mid 1990's and 2007, I am often asked for recommendations concerning the best choice of an aftermarket diagnostic interface for use by BMW owners and enthusiasts who want to work on their own cars.

These are people looking not just for simple fault code readers or for software suited to the home mechanic, they include competent mechanics and even technicians with prior BMW experience looking for diagnostic, coding and programming functionality from their equipment and are using software such as INPA/EDIABAS, DIS and even PROGMAN to achieve that aim.



**Aftermarket switchable ADS/OBD interfaces:-
Rv8flyboy's 20pin integrated interface & cable set (Top)
The venerable "Fister" interface from bmwecu.org (left)
Rv8flyboy's aluminium cased interface (Centre) and
the Do-it Auto switchable ADS/OBD interface (right).**

Since Siemens no longer manufacture the original yellow EDIC DK diagnostic head, dissatisfaction with the quality of available copies amongst BMW enthusiasts has led to the development of a range of alternative interfaces designed to emulate the functionality of the Siemens product, which was the tool originally used by BMW dealerships.

The alternative interfaces needed to offer the ability to communicate with both ADS and OBD compliant BMW's to perform diagnostics and support changing of available functionality options (coding) from the car's available computer modules.

Perhaps the best known and most respected of the newly developed switchable ADS/OBD interfaces was the venerable "Fister" interface, which was offered in kit form only through bmwecu.org. No longer currently available, this interface had it all, offering full ADS and OBD functionality, the ability to perform service resets and bullet-proof build quality all mounted in a robust aluminium case. There is no doubt that this interface is still a sought-after item by enthusiasts, so here is the good news—there is a viable alternative

Rv8flyboy, a member of a number of BMW forums with some obvious electrical design talent and the skills to apply his knowledge to BMW applications now offers two beautifully designed, fully functional, switchable ADS/OBD interfaces for the fastidious BMW enthusiast.

The first, like the Fister interface, is mounted in a rugged aluminium case and offers the same functionality that won the bmwecu.org unit its enviable reputation.



The Rv8flyboy Aluminium cased interface is a great unit.

As is evident from the photographs, the Rv8flyboy aluminium cased unit is more compact than the Fister interface, but like the original, has an internal jumper setting which allows the interface to be configured for use with cables that are wired to detect the true ignition signal from pin 16 of the BMW round diagnostic port, or to provide an emulated ignition signal for use with cables not equipped to detect an ignition signal.

Since this interface is used with cables, connection to either the round 20 pin diagnostic port under the hood, or to a 16 pin OBD port under the dash of later cars is a snap by using the appropriate adaptor cable.



Connection to either the round 20 pin diagnostic port under the hood, or to a 16 pin OBD port under the dash of later cars is a snap .

The Rv8flyboy aluminium cased unit (top) is more compact than the Fister interface (below).

Also like the Fister interface, these interfaces have a switch for resetting your car's service intervals and are switchable to work in either ADS or OBD mode through the appropriate positioning of the mode switch and configuration of the interface setting in your Ediabas.ini file.

But wait—there's more - Rv8flyboy also offers an integrated interface and serial cable with identical functionality to his aluminium cased unit.

If you are only interested in an interface that connects directly to BMW's round 20 pin diagnostic port, or are prepared to cobble your own adaptor cable to connect to the under dash 16 pin OBD port, this unit is an absolute cracker, representing the ultimate in integrated design and functionality.

Make no mistake, this interface is no lightweight, offering identical functionality to the aluminium-cased model.



This includes the same ability to choose between ADS and OBD modes and to reset the service interval at the flip of a switch mounted on the side of the integrated 20 pin plug.

Both the aluminium cased and the integral 20 pin interface are usually supplied in kit form, but pre-assembled interfaces can be arranged by request.

Don't be put off by the thought of buying an interface as a kit—these are kits the like of which is rarely seen. With components methodically packaged, labelled and cross-referenced to a parts list, every step of construction is detailed in logical sequence, supported by detailed, full-colour photographs.

The attention to detail provided in the assembly manuals is obviously focused upon ensuring that the purchaser will finish up with an interface which reflects the quality and functionality of a professionally assembled unit.

If you lack confidence in your ability to

execute construction of your kit to the same high standard as a pre-assembled unit, you can turn the package and instructions over to any competent electronics technician or even a student with decent soldering skills and a rudimentary knowledge of electronic

All components except the serial cable and the 20 connector are stored in bags with labels marking the contents. This was done to ease the difficulty level for people less familiar with small components.



Kit components are methodically packaged, labelled and cross-referenced to an included parts list

Step 1:

Solder the 16 pin and 20 pin chip sockets in place. When placing the chip sockets note the position of the cut-out or notch, pointed at by the 2 red arrows. Insert the chip sockets and carefully turn the board solder side up on a flat heat resistant surface. Solder one corner pin of each chip socket. When cooled, inspect the chip sockets to make sure they are mounted flat against the board. If not, carefully push against the socket whilst heating the soldered pin. When the socket is properly aligned, go ahead and solder the remaining pins.



CHECK:

Are the sockets properly aligned?
Are all pins of the sockets soldered?
No shorts between the 5 volt and the ground on IC3?

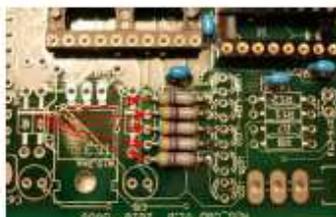
Step 2:

Solder capacitors C7, C8, C9 and C10 in place. These are marked with a red arrow in the picture. The capacitors are marked with the numbers 104 and may have a color different than blue.



Step 3:

Solder resistors R1, R2, R3, R4 and R9 in place. These resistors are 470 ohms and are marked with 4 colored bands: Yellow, Purple, Brown and Gold. Note that R10 is left open.



componentry, who will be able to assemble your interface in a single evening.

Every conceivable facet of construction is covered in such detail that you can be assured your finished interface will exhibit the same standards of reliability, longevity and ruggedness of the original design.

Attention to detail is evident throughout the assembly manual, with every facet of construction covered in simple steps, supported by dozens of detailed, full colour photographs.

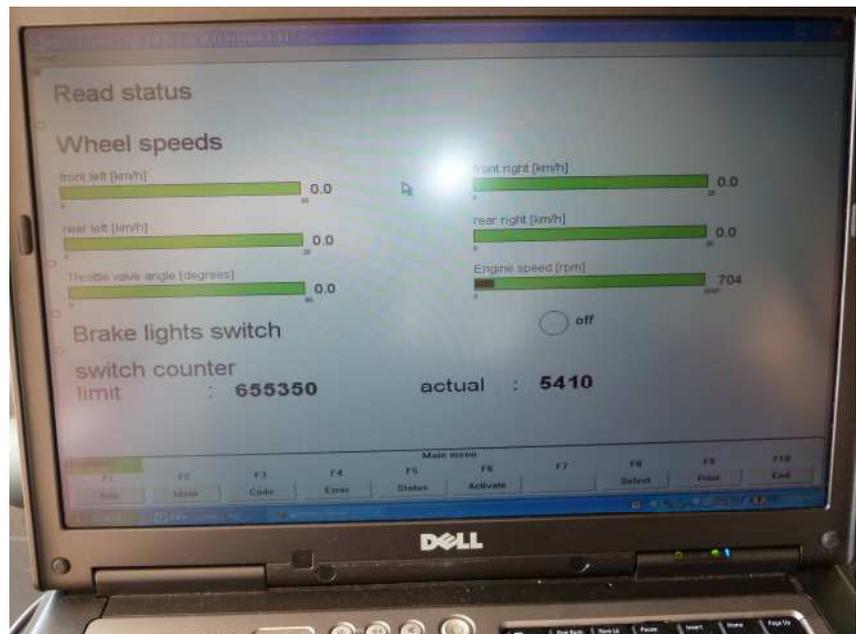


Rv8flyboy's round 20 pin integrated interface and serial cable connects directly between the round 20 pin diagnostic port under the hood of your car and your computer's serial port.

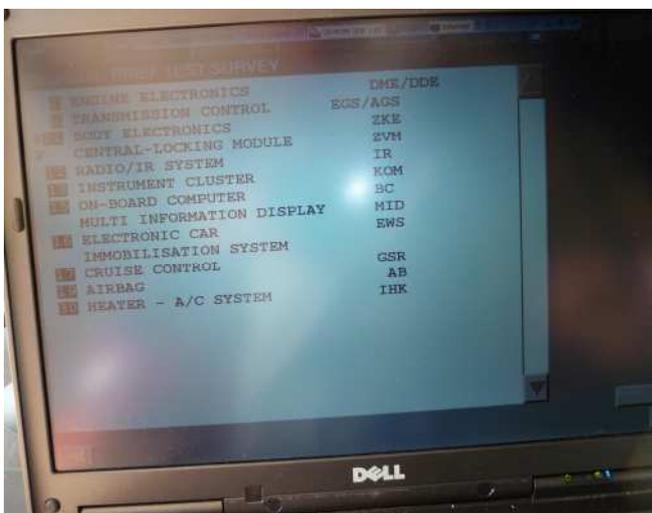
So we know that both of the Rv8flyboy interfaces look great and have impressive specs, but how do they perform? I tested both with INPA/EDIABAS and DIS v44 to find out. As performance of the 2 units was identical with all the software tested, here are the results:-

Both units provided reliable power and ignition signal detection and when configured for the mode appropriate to the vehicle under test (the test vehicle in this instance was a Euro-spec, ADS compliant E36 328i), were able to detect and access all available modules.

I was able to read module information, clear and erase errors and access all diagnostic functions of the software with both INPA/EDIABAS and DIS v44.



All available modules were accessible, with full functionality using INPA/EDIABAS. (ABS data displayed).

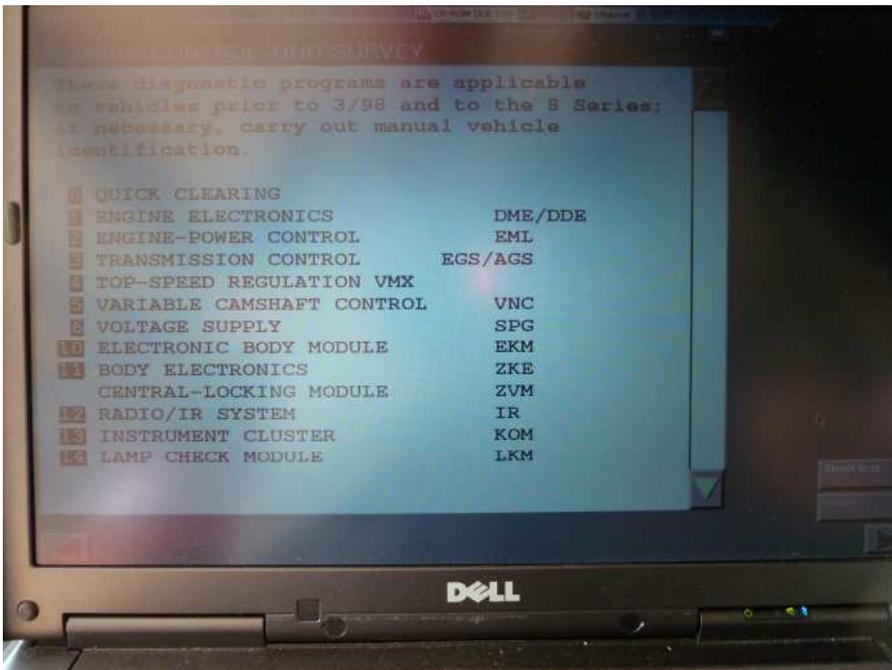


Automatic detection of the vehicle model worked as it should using the diagnostic functionality of DIS v44, which runs through VMware on the test computer.

A brief test successfully returned detection and diagnostic results for all modules fitted to the vehicle under test.

Okay, this is all good for diagnostics, but how would the interfaces perform with coding and programming functions?

I accessed the coding/programming functions offered under DIS v44 and successfully surveyed all codeable modules in the test vehicle, pursuing this further, I was also offered the full range of programming options offered by the software.



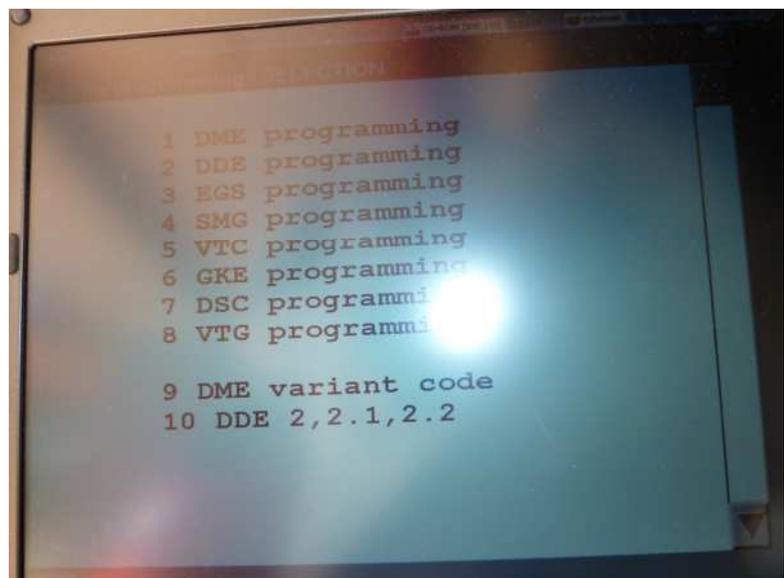
For users whose requirements necessitate the use of later versions of DIS for diagnostics and PROGMAN to carry out coding and programming functions, interfaces should naturally be configured to run in OBD mode.

Even though the test vehicle in this instance is ADS compliant and all diagnostic, coding and programming functions are accessible in ADS mode when using DIS v44, since PROGMAN was designed for use

The control unit survey was successful using DIS v44's coding/programming option

predominantly in conjunction with OBD compliant vehicles, I need to run ADS/OBD switchable interfaces configured for OBD mode in order to successfully perform coding and programming functions with PROGMAN.

Access was available to the full range of programming functions using the interfaces in ADS mode in conjunction with DIS v44.



After a full half day of testing Rv8flyboys interfaces, I was impressed. Both units performed flawlessly and the standard of construction was excellent. I would suggest that prospective purchasers place clear protective labels over the external labels attached to the interfaces to maximise their endurance in an inevitably dirty workshop environment as these are products that are obviously built to last.

Bear in mind that the cars we are working on are not junk and warrant purchasing the best equipment you can afford in order to endure their long term performance and longevity.

I consider the fact that I actually personally purchased one of Rv8flyboy's interfaces for my own use, in spite of owning numerous other switchable ADS/OBD interfaces to be the highest accolade I can assign for his products.

David Mc

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