

XTRONS PB7839BP install into a Nov 2000 E39 M5.

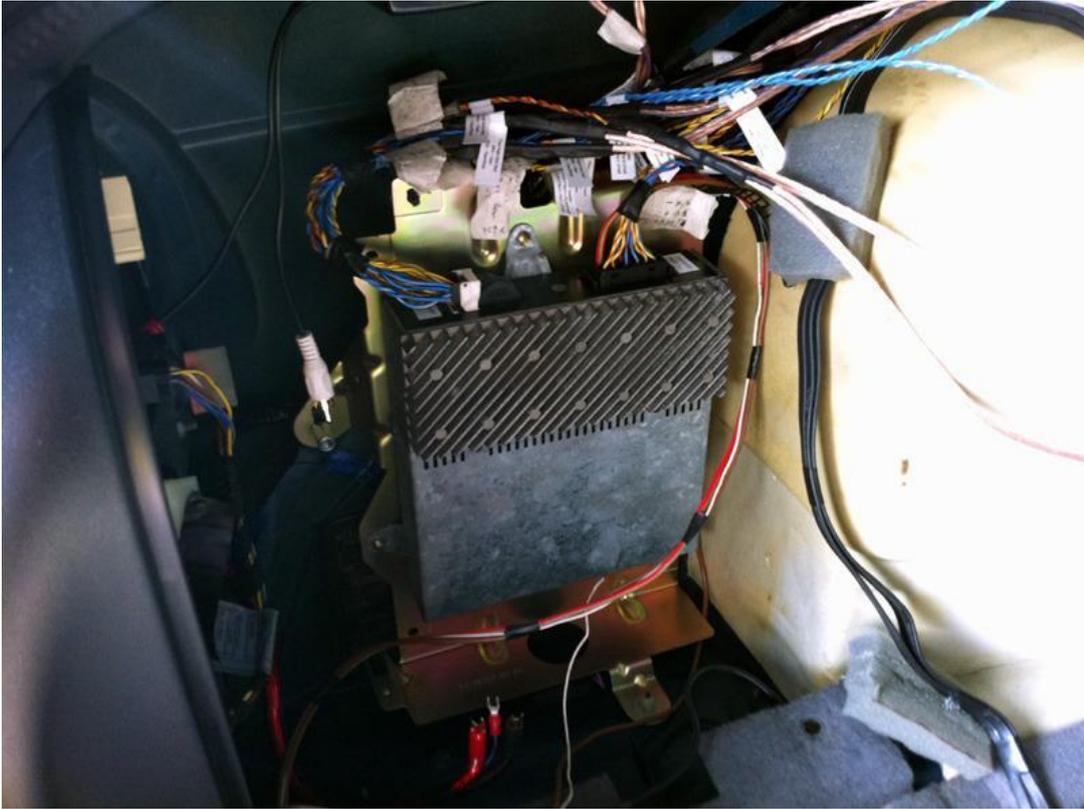
After seeing this thread on m5board.com (<http://www.m5board.com/vbulletin/e39-m5-e52-z8-discussion/586378-xtrons-pb7639bp-android-head-unit-installation.html>) I decided it was time to update the radio in the m5. I've been wanting to update it's looks since I bought the car but going oem seemed a bit silly as I'd be fitting old tech, but any aftermarket stuff meant I'd lose the BC functionality. Not anymore! The Resler interface allows the radio to communicate with the car's I-bus and the Android based I-bus app can make use of its functionality, bringing virtually all of the BC features to an aftermarket headunit, just what I was after. Also, apparently this combination allows for the digital dsp amp to be used too, though this doesn't apply to me.

The original setup I had was a cd drive, MID for high BC and I installed the 'Top HiFi' amp together with speakers in every possible oem position in the car. These are: front door tweeters, mid range and main drivers lower down, rear door tweeters, rear main drivers above the parcel shelf and also two 10" subs under the parcel shelf-similar to the M-audio ones- which are driven by an additional amp I installed in the boot (trunk) next to the HiFi amp.



The radio in the dash had the large radio connector, flat pin. The radio also provided a speaker level output and originally drove only the four main speakers (and little tweeters in the front doors with passive crossovers from the main front speakers).

I fancied using all speaker positions, why not! I discovered that the HiFi amp would drive each of the car's speakers directly, all ten of them, which was great. It did not have an output for subs-no problem. The HiFi amp also takes speaker level inputs, from the front radio. This bit of information I learnt from RichardP (thanks Richard) and saved a lot of experimenting.



The sub amp takes its signal from the rear speaker channels from the headunit, dropped down by a 'converter' to line level, suitable as an input to an amp.



The amps are powered from the battery connections in the 'first' distribution fusebox, they are earthed direct to the battery terminal (not to a puny screw driven into the chassis that will rust!). I used the white wire that activates the diversity antenna as a 'wake up' signal for the sub amp.

I also had an intravee2 setup instead of a cd changer and to give the extra functions it gives. This allowed me to have an ipod with all of my songs on it.

As it happened, my setup allowed for a relatively easy install for an Android unit, the main connector was just behind the radio in the dash (not in the boot), my amp could take speaker level inputs so I could retain the mid range and tweeter speakers

Anyway, I bought an XTRONS PB7839BP direct from the suppliers (www.xtrons.co.uk) and received a good discount (use code 'VIP15' for 15% discount). Delivery was quick and they have been very responsive to a few emails I sent them, can't fault them really.

I also bought a DAB+ usb receiver/decoder, an xtrons bluetooth obd dongle to plug into the car's diagnostic port and a microphone (subsequently not required).

I bought the 3D printed brackets from 'Da Ondy' who's a member on the BMW Xtrons und I-BUS Android App... group on Facebook, it's well known that the supplied brackets are not very good – there's a small screw on the back of where it mounts that interferes with how it fits against the brackets and the holes aren't in the correct position for a good fit. These 3D printed ones allow for the small screw, have the holes in sensible locations and allow for a little adjustment, it's a shame that the suppliers don't give you better brackets!

I also bought a Resler usb interface, from Resler himself.

I paid to unlock the I-bus software.

A bit later I realised that the diversity antenna could be used instead of the DAB antenna but required an extra splitter unit and various antenna cables to make it work, these were bought.

I also discovered that you could use the oem microphone, just make up a cable and run it up to the mic, I had bits for this.

Where did I gather the info: See links below. I translated one or two files into English, I've included them in this post. If you want to see the web pages in English, using Chrome to view will help as it will automatically translate, very handy!

Xtrons website (www.xtrons.co.uk)

Xtrons/I-bus app Wiki site – (<http://xtrons.ibus-app.de/index.php?title=Hauptseite>)

I-bus app information and purchase/unlock – <http://www.ibus-app.de/english>

Resler interface – <http://www.reslers.de/IBUS/order.htm>

Resler interface fitting – http://download.speedy-pics.de/uploads/safe/Einbauanleitung_Resler_Interface.pdf - I have translated this, file included in this post.

3D printed brackets link – http://xtrons.ibus-app.de/index.php?title=Alternative_zu_den_beigelegten_Montagewinkeln

Antenna splitter link – http://xtrons.ibus-app.de/index.php?title=Splitter_f%C3%BCr_DAB%2B_zur_Nutzung_der_OEM-Scheibenantennen – I have translated this, file is included in this post.

Using oem microphone link – http://download.speedy-pics.de/uploads/safe/eba_oem-mikro%20mit%20xtrons.pdf – I have translated this, file included in this post.

Stopping the screen from going black in reverse when no reversing camera installed –

<http://xtrons.ibus->

[app.de/index.php?title=Abschalten_des_schwarzen_Bildschirms_\(Rückfahrkamera\)_beim_Einlegen_des_Rückwärtsganges](http://xtrons.ibus-app.de/index.php?title=Abschalten_des_schwarzen_Bildschirms_(Rückfahrkamera)_beim_Einlegen_des_Rückwärtsganges) .

Installing a different bootlogo – http://xtrons.ibus-app.de/index.php?title=Bootlogo_%C3%A4ndern

Fitting:

I tried to test the unit 'on the bench' by hooking up a 12v supply to both yellow and red and earthing (or 0v) for the black. The illumination lights would flash once, but the unit wouldn't switch on! I tried resetting it but still nothing. It was either dead or the canbus interface was causing this 'issue'. I had a look on the net, not much info at all but there were a few posts about this. The canbus interface interrupts a few of the signals, if no bus traffic is detected it won't allow the power through. It's very similar regarding the illumination signal apparently, it monitors the orange wire (which would connect to the grey/red in BMW's) and is meant to send the correct information to the unit. A 'mod' is to remove the orange wire contacts from the canbus interface plug and join them together, so the actual illumination voltage goes direct into the headunit. This is true for the Android 6 ones, I haven't looked to see if it varies with the dimmer in mine yet. If it doesn't I'll probably do this but there might be a chance they've sorted it.

After failing to test it, I removed my MID (Tx10 under volume knob, remove MID, then unscrew the two screws all the way to remove the cd-drive) and tested it directly on the car, it worked great!

I then linked the unit to my phone (using my phone as a Mobile hotspot) and downloaded updates etc.

I also downloaded the I-bus software and unzip to unpack it, then installed it. This was dead easy, I was a bit concerned about this step!

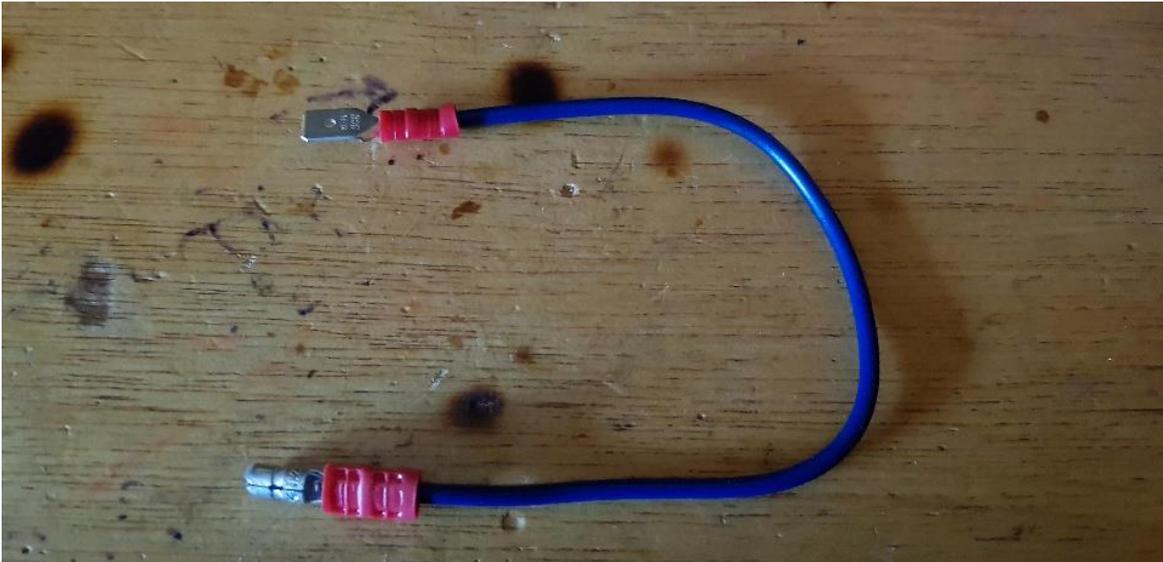
Checked that the phone operates (Bluetooth), worked great.

I connected up the wire tails to the Resler interface to make up an easy connection, removing the three required wires from the MFD connector (12v, gnd and ibus).

Used the file linked above, translated version is included.

No picture sorry, but there are some in the file.

I made an adaptor wire to go from headunit 'Ant.' Wire (bullet connector) to the antenna splitter power in (spade connector). I didn't want to cut into any of the original wiring.



Adapter wire to go from Ant wire to the power for the antenna splitter.

The following day I decided was the installation day.

I removed the glovebox side of the lower dash. This required removing the glovebox itself, centre console side panel to access the bolt for the lower dash and all of the screws under the trim and two going up from the inside of the glovebox. The lower dash twisted just enough to manipulate the old radio cage out.



Fitted the lower dash back and then went ahead to fit the supplied gps antenna (my car didn't have nav so no oem gps receiver under rear parcel shelf, if you have this you can get a cable to connect up to it from the headunit).

I positioned the gps receiver next to the passenger airbag, held in place with a thick pad of automotive double-sided foam tape, receiver is very light and this stuff really sticks, I doubt it will go anywhere!).



GPS receiver nestled next to airbag

I folded the wire (there was plenty of it!) and taped it to the steel frame, out of the way but leaving enough of the wire to easily connect to the headunit.



GPS receiver cable folded up and taped to steel frame

I then fitted the 3D printed brackets, adjusted until the unit looked ok to me, might need further adjustment which will be easy enough if required. The brackets did bend a bit though because of the varying thickness of the dash material, billet aluminium could be a possibility...



Left hand 3D printed bracket



Right hand 3D printed bracket

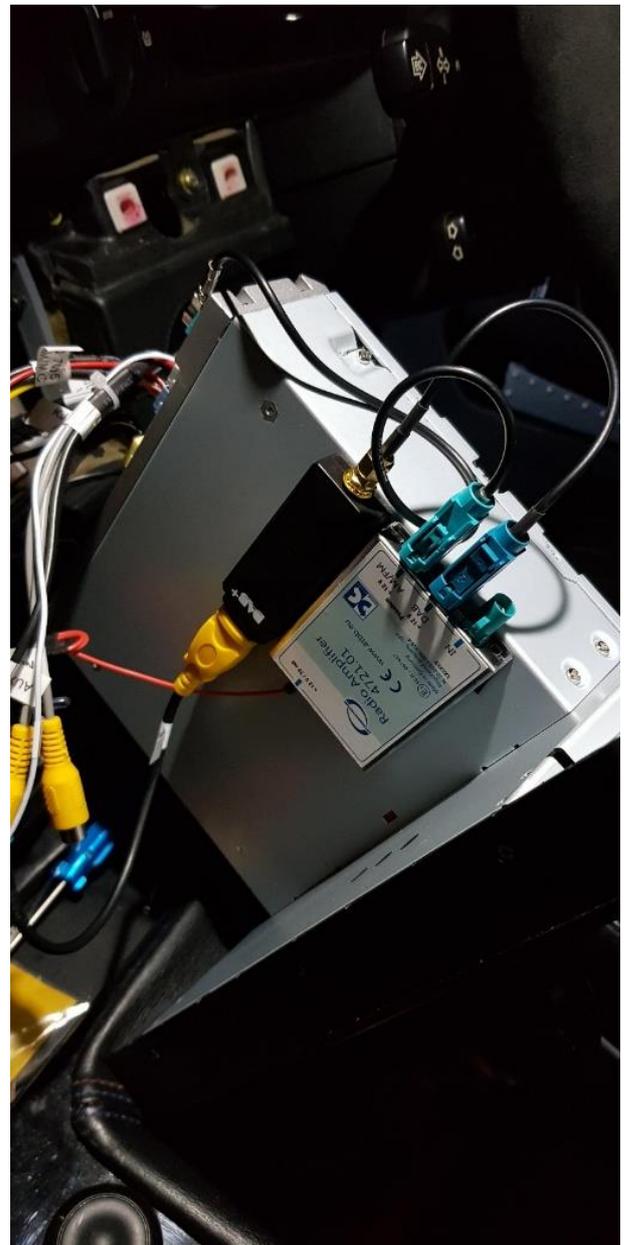
I installed the Resler interface, I-bus app seems happy and was unlocked very easily, just tap on unlock whilst ensuring you're connected to the internet. App finds your chassis no from somewhere (through the ibus) and compares it with the chassis number you entered when purchasing the unlock, this is the internet requiring bit.

Interface and app seems to do what it says it would. I connected the interface to the short usb lead with the green connector, usb 1 (1.1 and 2 protocols).

Fitted DAB antenna splitter (following guide on the Xtrons/I-bus wiki site, I've translated this too..). Decided to mount the unit with double sided tape under the headunit, should be safe and various wires can *reach*.



View from top left



View from underneath of splitter and DAB

Splitter works well, very good FM and DAB reception.

Fitted the dab usb receiver just behind the antenna splitter, seems ok and wires reach. Connected the yellow usb (2.0) lead to the DAB usb receiver. I had to open the cloth wrap that was around both red and yellow usb wires to fold back the yellow one.

The red usb connector was fed into the glovebox, under the steel brace and through the little gap by the plastic 'side piece' and steel bracket at the back of the glovebox.

To save quite a bit of space I decided to remove the second large connector that was supplied. I used two little bits of alu welding wire to push back the tabs to release the contacts out of the connector. I double taped all of the ends.



*Second 'large' connector removed, contacts taped up
That 'auto double-sided tape' is very strong!*

Everything was connected together and tested, all seem good so far. Next job was to run a wire from original microphone down to unit.



Microphone lead with three pin connector. 3.5mm end will be fitted once wire is in position, to get the length 'just right'.

As it happened I had a Parrot handsfree unit installed so I used the mic wire to pull the new mic wire through. Connected to oem mic as described in write up (translated version here).

This was a bigger job than anticipated, took ages! Roof lining dropped and several dash pieces removed but it was completed in the end. A mono 3.5mm jack was soldered onto the end of the wire and then plugged in to the relevant plug.

To save a bit on the oem antenna cable I fitted an antenna cable extension, this also means that the unit can be removed from the dash and operated with everything working, might come in handy sometime.



Antenna extension cable (Fakra M to to Fakra F)

Then I tried the XTRONS bluetooth code reader/Torque, they worked as expected.

Unit was finally screwed into place. I almost had a little ceremony to remove the protective film over the screen!



Had a fiddle with it and saw that I needed to disable the black screen that appears when in reverse. Followed instructions in the link : Stopping the screen from going black in reverse when no reversing camera installed – [http://xtrons.ibus-app.de/index.php?title=Abschalten_des_schwarzen_Bildschirms_\(Rückfahrkamera\)_beim_Einlegen_des_Rückwärtsganges](http://xtrons.ibus-app.de/index.php?title=Abschalten_des_schwarzen_Bildschirms_(Rückfahrkamera)_beim_Einlegen_des_Rückwärtsganges)

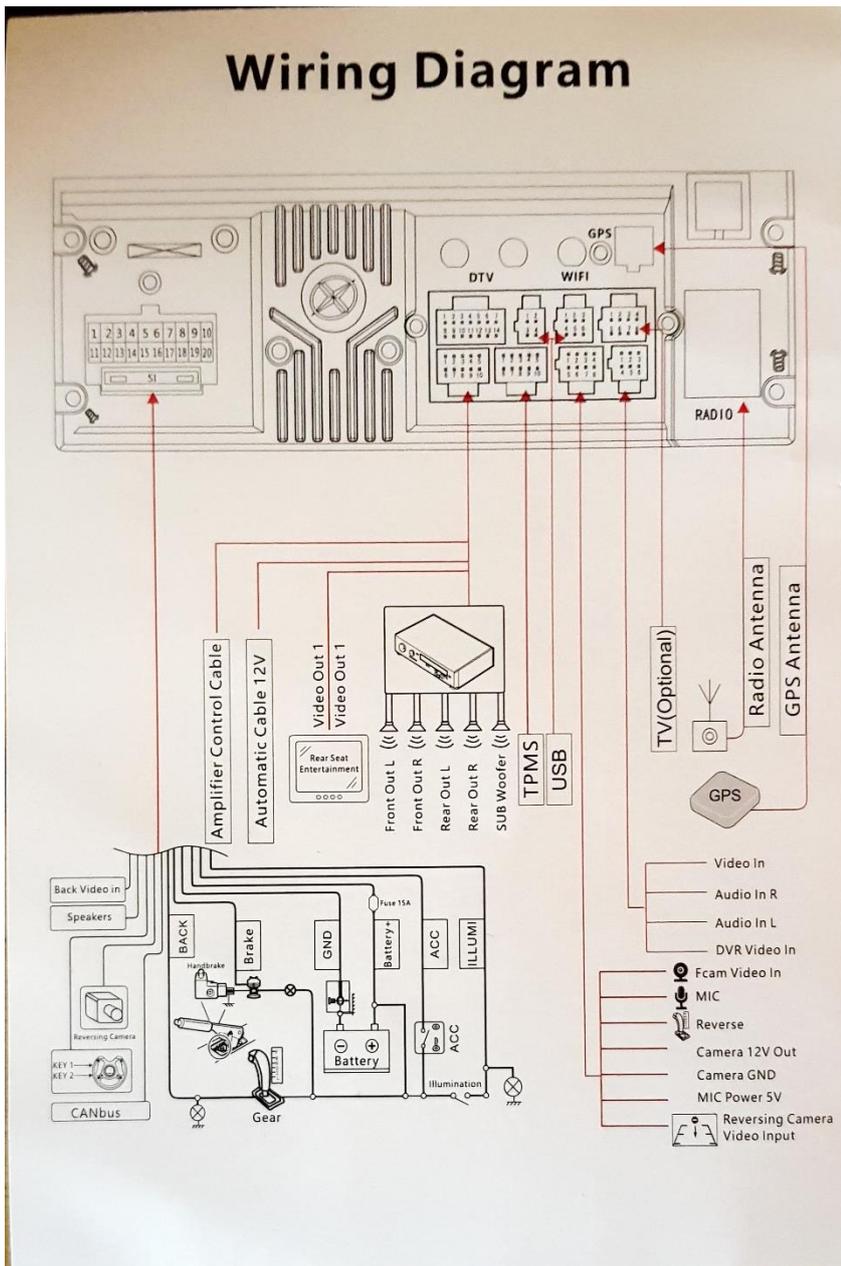
I also fancied a different bootlogo, so made one up. Nothing too fancy but it 'goes' with the car and it's not seen for long anyway! Installing a different bootlogo – http://xtrons.ibus-app.de/index.php?title=Bootlogo_%C3%A4ndern



New bootlogo, I like it anyway!

I tried a 64Gb micro sd card I had in my phone, it wouldn't read it. I had to reformat it. I haven't used it in the computer yet but I wonder what format it uses etc.

There is included a wiring diagram but I've not seen this available online, so I've taken a picture of it, in case it could come in handy sometime:



Included wiring diagram for PB7839BP

Thoughts.

Looks very good, oem and takes its place well.

Sound seems fine, it seems to work ok with my setup and I'm happy enough with it.

FM radio works great.

DAB radio works great but it's not keen when restarted, it says 'connecting' but never actually does connect-or maybe I'm not patient enough! I just close the dab app and restart it. Not a biggie but it would have been nice if it just works. There might be a workaround or something.

Google maps is installed and we all know how it works, but it needs an internet connection (unless you download the necessary maps before your trip).

I-bus app works great, showing all BC functions and resetting etc.

As my car is right hand drive, when driver's door (right) is open it shows the left hand door open. Might be easy to get it perfect or not, not a biggie anyway.

Very pleased with everything and a big thank you to the guys who've developed the ibus app and the Resler interface and to XTRONS for making the headunits suitable for the e39 and the good customer support.

I hope the original authors of the diy file don't mind me translating them. I've left their names and links in them and linked to the original files here.

Next up, I want to test my ipod connected to the red usb connector in the glovebox and I wonder what is the ipod selection in the factory menu...