Installing the Parrot MKi9200, or Mki9100 in a 2000-2006 Jaguar XK8 / XKR

Introduction

The Parrot MKi9200 is one of the coolest Bluetooth devices on the market:

It is a Bluetooth hands-free system with a 2.4-inch high-resolution TFT color screen. A wireless remote control can be mounted on the steering wheel or dashboard and allows the driver to control all the functions of the MKi9200.

In addition to conventional telephony functions - pick up, hang up, dual calls - the Parrot MKi9200 features include: automatic phonebook synchronization, training-free multi-speaker voice recognition, speech synthesis of the names in the phonebook, contact management (up to 2,000 per phone), and call records.

Its color screen displays the phonebook, caller ID and photo, phone information and user settings. The menus and phonebook are optionally audible for easier, more intuitive use.

The Parrot MKi9200 also supports music. With Bluetooth stereo (Bluetooth A2DP) phones (like Android, iPhone and others) it transmits high fidelity audio wirelessly.   Using an included 'octopus' cable, it is also compatible with all music sources, such as iPods, USB flash drives, MP3 players and any other analog players. The Parrot MKi9200 also features an SDHC-compatible SD card reader on the side of the screen. The MKi9200 displays the full playlist along with the name of the artist, the title and even the corresponding album cover in color when available on the iPod, iPhone or USB flash drive.

Music is delivered through all the car's speakers, giving the driver and passengers factory equivalent sound quality.

The Parrot MKi9200 kit connect to your car audio system and deliver hi-quality conversations whatever the conditions are. Each MKi kit is delivered with it independent RF

remote control. Positioned on the steering wheel or placed wherever is convenient, the remote control gives you the total control you need right at your fingertips. The Parrot MKi kits propose an incredibly efficient combination of an external double microphone and new software which eliminate environmental and in-car noises with full-duplex and zero-echo crystal clear conversations. Another unique feature of the MKi9200 is that its screen is detachable from its support when you leave your vehicle, for ultimate security.

Once paired with your Bluetooth mobile phone, the MKi9200 enables you to establish in a few seconds any phone conversations in your vehicle without needing to handle the telephone, even leaving it in your pocket. Connection with your mobile is made in a completely transparent way.

The user-independent voice recognition and voice synthesis are now integrated in all MKi car kits, which dramatically ease the way of using them in every situation.

Unfortunately, it is not plug and play out of the box or with any third party cable in a Jaguar XK8/R.

The good news is that an adapter cable on can be constructed with the Parrot harness to create a custom cable to work with the 2000-2006 XK8-XKR. This, in addition to an Alpine AI-NET Interface can create an installation that can use the built in front speaker phone audio and mute features in the Jag, plus take full advantage of the audio system for playing music at full fidelity...all wirelessly over Bluetooth. With premium audio, it will override the radio. With Standard audio, it will override the CD changer (see Appendix A for standard audio). Note that for standard audio without the CD changer, the PIE ALP AI-AUX cannot be used.

This document describes the construction of the custom cable and the system installation. It has been tested with an Android as well as an Iphone 4 and a USB memory stick.

It also applies to the **Parrot MKi9100**, which is essentially the same device with a smaller monochrome screen.

Parts List

-(Qty 1) Parrot MKi9200, or MKi9100

-(Qty 1) PIE ALP AI-AUX (http://www.amazon.com/PIE-AI-AUX-Switcher-Alpine-Ai-NET/dp/B000CK9NJW)

IMPORTANT NOTE: This unit will need to be modified for non-premium audio vehicles! See Appendix A.

-(Qty 1) PAC LD-10 Preamp (http://www.amazon.com/Peripheral-PAC-LD10-Driver-Booster/dp/B003LWV77Y/ref=sr_1_1?ie=UTF8&s=electronics&qid=1303006385&sr=1-1)

-(Qty 1) PAC SNI-35 Line Output Converter (http://www.amazon.com/PAC-SNI-35-Adj...0415371&sr=8-1)

- FOR **2001** (Qty 1) Phone Harness connector (14 pin) multilock 070 series
http://www.simtekuk.co.uk/www.simtekuk.co.uk/info.php?p=12&pid=1603059&ack=9

OR FOR **2003-2006** (Qty 1) Phone Harness (18 pin) multilock 070 series
http://www.simtekuk.co.uk/www.simtekuk.co.uk/info.php?p=12&pid=1700750&ack=9

For 2002, please check which connector you have in the console...it may be either the 14 pin or 18 pin connector above.

For 2000, see Appendix B

-(Qty 2) female RCA connectors, solder type.
http://www.radioshack.com/product/index.jsp?productId=2103426

-(Qty 1) 3 ft male to female RCA shielded stereo cable

-(Qty 1) 12 ft male to male RCA shielded stereo cable

-(Qty 1) 12v, automotive relay, diode protected
http://www.boardrelay.com/Detail.asp?Product_ID=303.100_BU5083

-(Qty 3) Recommended, optional, Automotive power line noise filter
http://www.amazon.com/Pyramid-NS12-InLine-Noise-Suppressor/dp/B0007V5X4U/ref=sr_1_2?ie=UTF8&qid=1321762085&sr=8-2

-(Qty 2) Recommended, optional, Ground loop isolator
http://www.radioshack.com/product/index.jsp?productId=2062214

-Heat shrink tubing (assorted sizes, but plenty of 3/8"-->3/16")
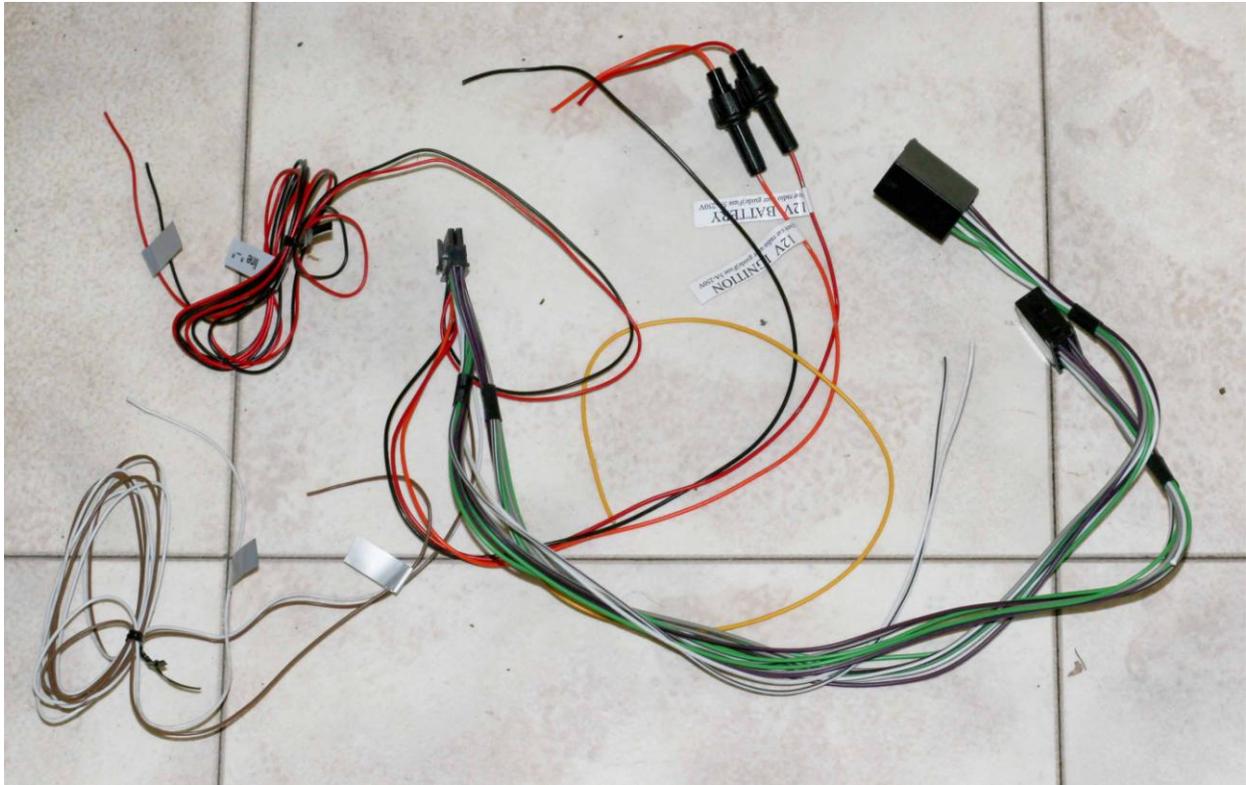
-Electronics grade solder

-Electrical tape (I prefer fabric friction tape, it helps cushion potential rattles, is neater, and does not readily unravel)
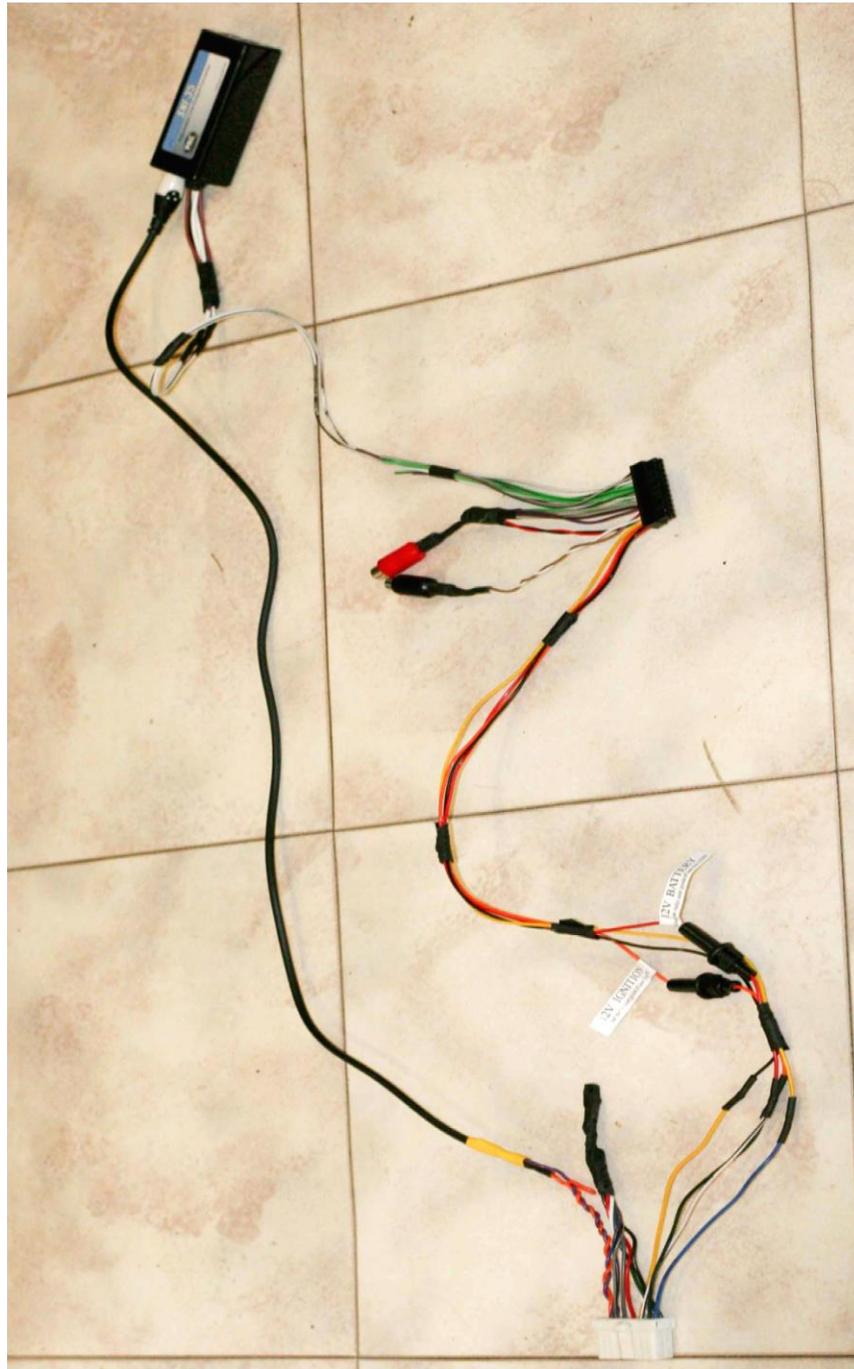
-Self adhesive Velcro

-18-22 ga. (red) 250" Quick connect terminals

Building the custom cable

The figure below illustrates the Parrot harness as it comes out of the box. This will need to be modified to work in the Jaguar XK.

The following illustration clarifies the functions and which connectors can be removed from the stock Parrot cable. In this configuration the line level output of the Parrot will be used for high fidelity audio, and a single speaker output will be used to drive the Jaguar telephone audio. The mute will directly interface to the vehicle.

The following photo illustrates the completed harness for a 2001. (Note in this photo there are wire extensions on the white 14 pin connector, they are not necessary are not described in this write-up.) The complete interconnect of the system is shown in the table that follows.
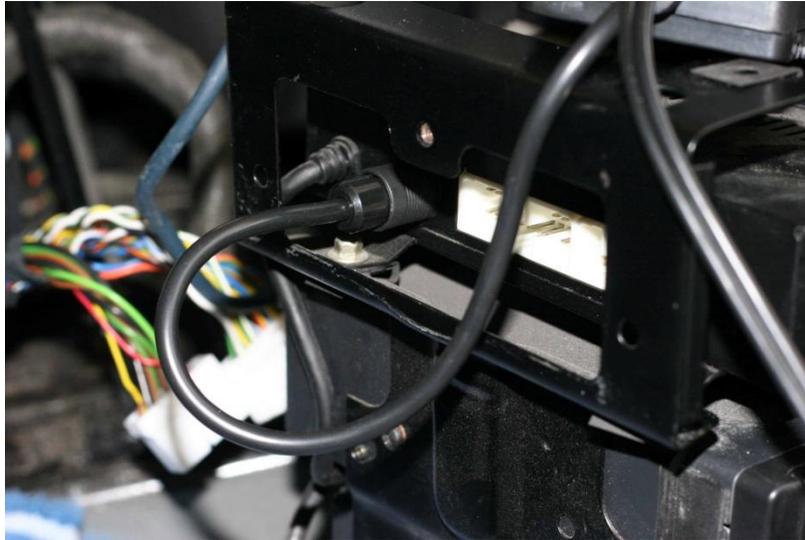
Connection Table

Function	2001 and some 2002 Jaguar 14 pin AND 2002-2006 18 pin console connector	SNI-35 in console	Parrot MKi9xxx in console wire color	Pac LD-10 in trunk	ALP AI-AUX adapter in trunk	Jaguar Navigation DVD player AI-Net in trunk	Jaguar Power Amp AI-Net in trunk	Jaguar Trunk Accessories connector
Ground @console	RT1-11, Black		Black					
Mute	RT1-6, Blue-Yellow		yellow					
Battery +12v @ console (note 1)	RT1-4, Brown/Red		red					
Ignition +12v @ console (note 1)	RT1-5, Green		orange					
Line level Telephone + Audio (note 2)	RT1-7, Blue	Left channel out w/white RCA plug-center conductor (note 6)						
Line Level Telephone - Audio (note 2)	RT1-8, Blue-yellow	Left channel out w/white RCA plug-shield (note 6)						
Speaker level telephone out + audio		White speaker in +	Grey Spkr out +(from socket G)					
Speaker level telephone out + audio		White/black speaker in -	Grey-black spkr out-(from socket G)					
Left channel Line out+ (note 2, 3)			White	Left channel in w/white RCA plug				
Left channel Line out- (note 2, 3)			Brown	Left channel in w/white RCA plug				
Right channel Line out+ (note 2, 3)			Red	Right channel in w/red RCA plug				
Right channel Line out- (note 2, 3)			Black	Right channel in w/red RCA plug				
LD-10 Preamp +12v switched in trunk (note 1, 4)				Red				BT26-3
LD-10 Preamp ground switched in trunk				Black				BT26-2
AI-net adapter left audio preamp out (note 2, 5)				Left channel out w/black RCA plug	Left channel in w/white RCA plug			
AI-net adapter right audio preamp out (note 2, 5)				Right channel out w/red RCA plug	Right channel in w/red RCA plug			
Eight pin AI-Net					X	X		
Eight pin AI-Net					X		X	

Notes:
1. Connection through optional power filters recommended
2. Connection through optional ground loop isolator recommended
3. Line outs run from console to trunk over a shielded 12 ft. male to male RCA cable. Terminate line outputs from Parrot in female RCA connectors
4. Usually requires addition of a relay in trunk fuse box (Accessory connector relay #6).
5. Line outs run over a shielded 3 ft. male to female RCA cable between preamp and AI-net adapter
6. Fabricate this cable by cutting one connector off of a 3ft male to male RCA shielded cable
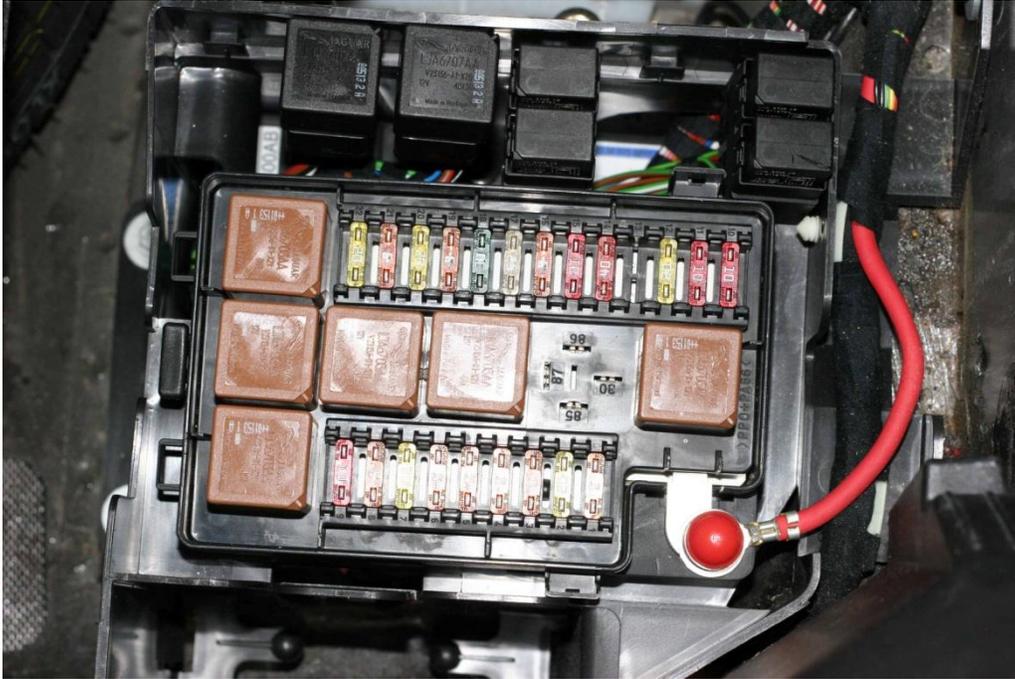
PIE ALP AI-AUX mounting

The PIE ALP AI-AUX has short cables and will need to mount behind the audio/nav. DVD module assembly. Mount it with Velcro or wrap it in foam weatherstrip to prevent rattles. Refer to the JTIS for removal instructions for the audio/DVD assembly. The PIE ALP AI-AUX connections are shown below:

LD-1 Preamp power and mounting

The LD-10 Preamp can be mounted on the fusebox with Velcro for easy access to the level controls. Here is the location of the relay in the trunk fusebox that needs to be added to power the LD-10 pre-amp:

Here is the BT-26 power connection in the trunk:

Parrot control box (blue box) placement

The Parrot blue box will fit under the center console. In pre 2003 models it can be mounted horizontally under the cubby or vertically beside the carpet. In 2003 and later models it will only fit beside the carpet. It is a tight squeeze. but it fits.

Telephone plug location

The telephone plug (RT1, 2001-2006 models) is an unconnected yellow connector under the cubby in the center console. It usually can be found on the side closest to the driver. See Appendix B for year 2000 cars.

Cable routing

-Console to trunk audio cables

Remove the rear seat. Tie wrap the cables to the main harness that runs from the console, under the rear seat, and past the rear speakers. Take care not to entangle the cable in the convertible top mechanism (remove the rear quarter trim if you are not sure, refer to JTIS if needed). Pass the cables over the rear shelf and into the trunk, following the same path as the top hydraulic hoses on convertibles. Always wrap electrical tape around RCA connectors in automotive applications.

-Microphone

Remove the driver side A pillar trim. Remove the driver side visor. Apply the microphone mount to the roof console on the driver side and tuck the cable under the header trim (now slightly loosened by removing the driver's visor and down the A-pillar). Continue routing it past the dash fusebox, under the dash and over to the console. This cable is just long enough, so you may need to tweak the routing carefully to assure it reaches the Parrot in the console.

-Display

Mount in your preferred dash position. The console may need to be loosened and pulled back slightly to hide the cable. Refer to JTIS as needed.

-Parrot user 'octopus' harness

Mount the user harness inside of the armrest cubby as shown (the switch is for antenna control, not described in this write-up, but can be found on Jaguarforums).

Setup:

At first power up (and after a software update) the Parrot must be set up properly for this configuration.

1) Deactivate mute on streaming. Press the jog wheel then select **Settings > Audio > Mute on Streaming**. Press the jog wheel to deactivate this option

2) Deactivate vocal menus. Press the jog wheel and select **Settings > Audio > Spoken menus.** Press the jog wheel to deactivate this option.

3) The PIE AI-AUX is used with a preamp, the PAC LD-10, since the ALP-AI-AUX needs a fairly robust signal to trigger, and may not otherwise trigger on soft music. Also remember the radio is overridden with a premium audio installation, and the CD changer is overridden with a standard audio installation as described in Appendix A.

To set this up properly, play some soft music on the XM Radio with the Parrot volume levels set to max. Then adjust the LD-10 level controls until the audio just start to clip (distort). This is your setting for the LD-10. Then back off the volume on the Parrot until the clipping is gone (probably one or two levels). This should be your default setting for the Parrot. If you still get clipping with some program material, you can back off the Parrot volume further until the clipping resolves. You should be able to use your Jaguar headunit volume now as the primary volume control.

4) It is recommended that in convertibles, lateral noise detection be enabled for best open top operation. This makes the microphone highly directional, so be sure it points toward your mouth when driving.

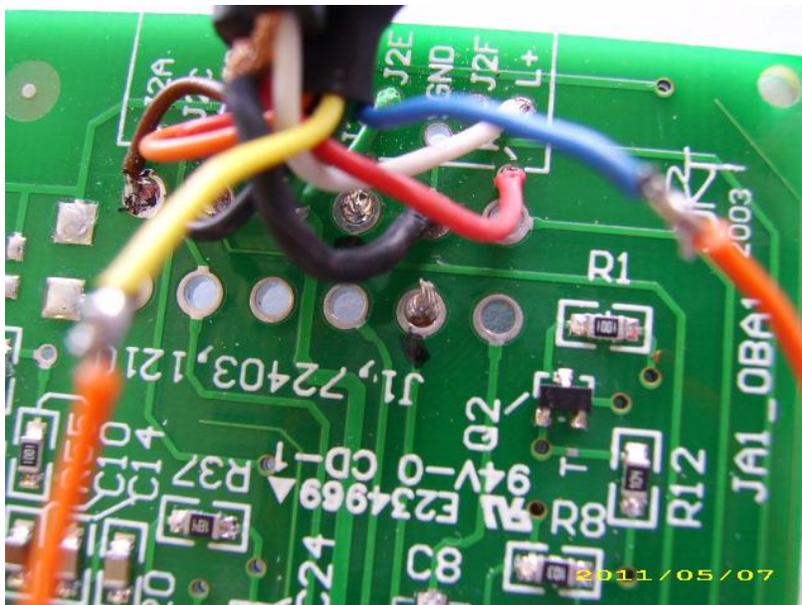5) A custom screen image can also be set if desired per the Parrot instructions.

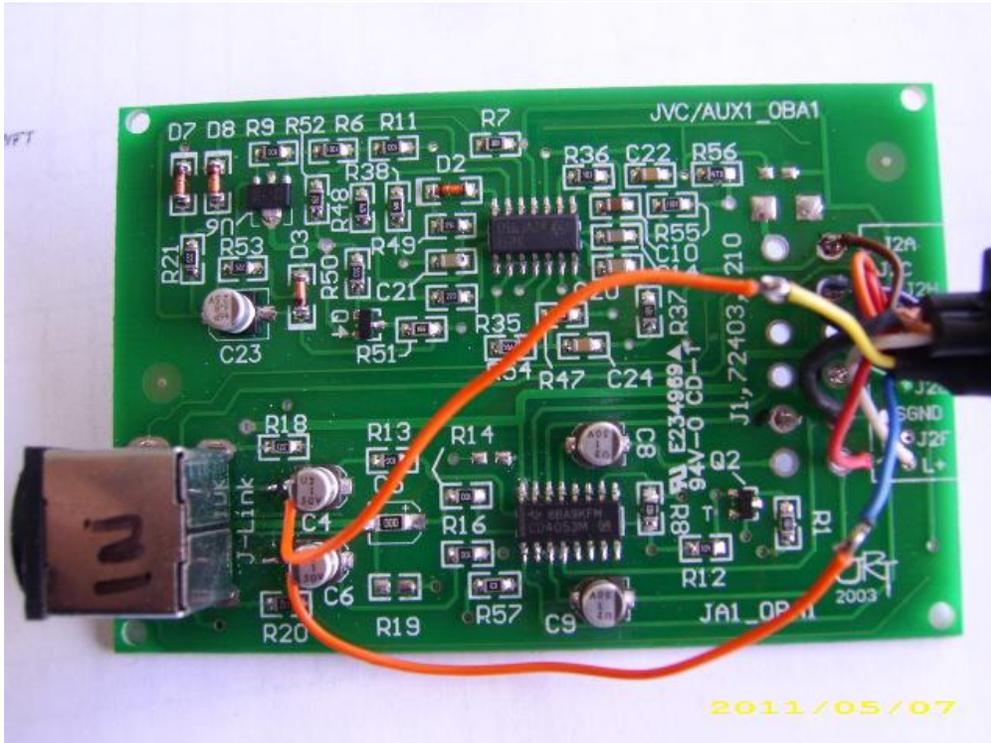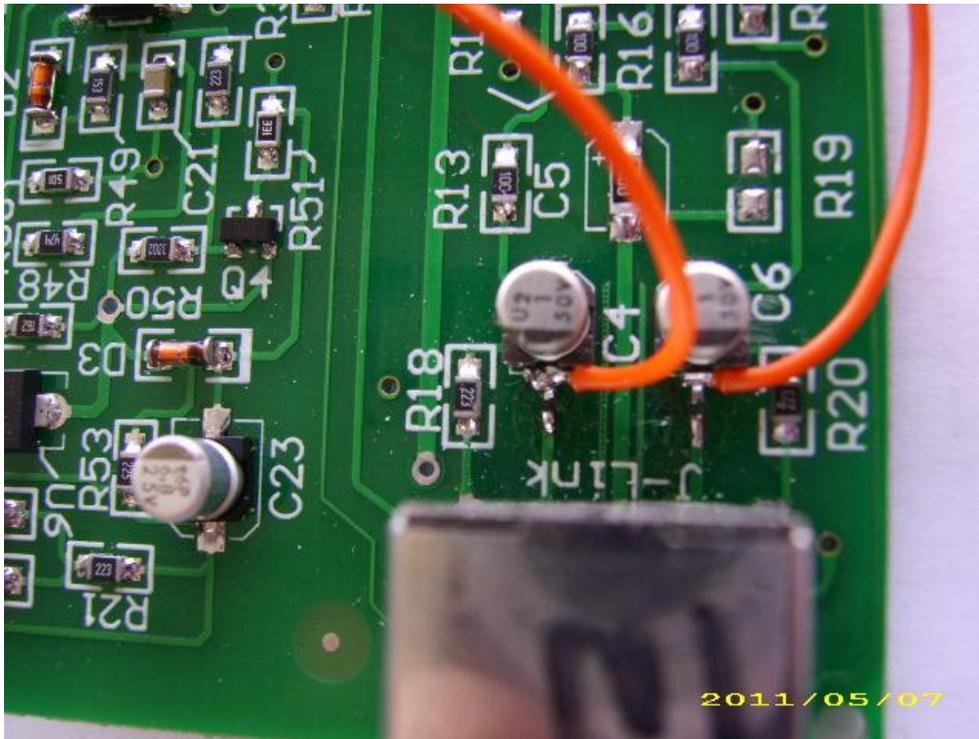**Appendix A: Vehicles with Standard Audio and CD Changer**

As noted in the parts list, vehicles with standard audio will need a modification made to the PIE ALP AI-AUX. This assumes the vehicle has a CD changer. If the vehicle has standard audio without a CD changer, this method cannot be used (an AI-Net 'hack' must be performed, more information can be found by searching Jaguarforums.com). Here is a description of the PIE ALP AI-AUX modification thanks to Jaguarforums member *dsetter*:
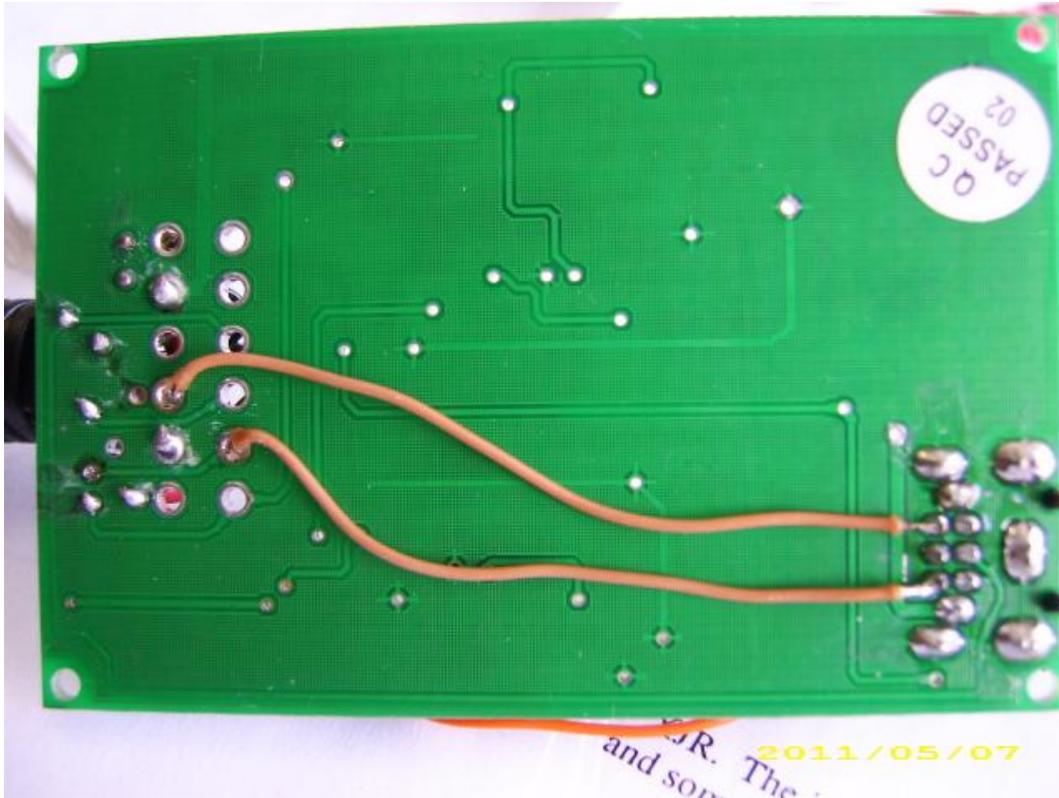

Original unit that we need to modify

Extending Audio cable leads

Cut track and add extensions from the capacitors. Be sure to insulate wire to wire connections with heatshrink or tape (not show in photo).

Solder wires as shown above on the bottom of the board.

Appendix B- Year 2000 Vehicles

Year 2000 has a different connector in the console. Here is a description thanks to Jaguarforums member *StevePAA*:

Connector RT3 is under the center console and is where you will pick up all the connections for Bluetooth.
RT3 is a grey 10 pin type 070 multi-lock connector plug AMP 174465-1 with mating connector receptacle AMP 174932-1. The 174465-1 plug uses 173630-1 pins (or similar) and the 174932-1 receptacle uses 175030-1 pins (or similar). These parts usually can be found at electronics distributors such as Digikey, Mouser, Newark Electronics or Arrow Electronics.

To enable RT3 there are connectors in the trunk, RT2 and RT5 are type 040 connectors with 12 and 16 pins respectively that need to be jumpered. You can find them at a wiring harness in the back left rear part of car where spare tire is located. Both RT2 and RT5 have wires that lead directly to RT3 so you need to jump wires between the two connectors to enable the pins in RT3. Use pins 173682-1 for jumpers.

The signal lines you need are
+ 12v battery brown/red stripe RT2-10
+ 12v ignition green RT2-2
mute white with black stripe RT5-5
audio + blue RT5-10
audio - blue with yellow stripe RT5-11

Jumpers to bring connections to RT3 at the center console:
for audio - on RT3-1 jump RT5-11 to RT5-8
for audio + on RT3-2 jump RT5-10 to RT5-13
for mute on RT3-3 jump RT5-5 to RT5-7
for ground on RT3-6 jump RT2-4 to RT2-8
for 12 v bat on RT3-8 jump RT2-10 to RT2-6
for 12 v ign on RT3-10 jump RT2-2 to RT5-14