



Ian Cull's Auto-Up Circuit

Installation and Set-Up Guide

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CHAPTER 1 WELCOME!

FEATURES

The Ian Cull's Auto-Up circuit adds auto-up window, track-mode DSC defeat, and auto front fog-light control to the R50, R52 and R53 Mini Cooper. Ian's "MINI circuit" solves the annoyance of having to hold the window toggle switch up to close windows in a MINI – especially troublesome with a manual transmission when pulling away from a toll booth in wet weather!

- Once the auto-up feature has been enabled, it can be activated by a quick double click up of the appropriate window toggle switch.
- The "Track Mode DSC" will turn the DSC off shortly after starting the car. This is very useful for those that race, AutoX or participate in HPDEs.
- The "Auto Front Fogs" turns the front fog lights on whenever the headlights are turned on. Great for those that like lots of light!
- All of the functions can be enabled or disabled via the toggle switch panel.

WHAT'S IN THE BOX

- 1 Auto-Up Circuit with integrated cable

CHAPTER 2 DISCLAIMER

DISCLAIMER

USE AT YOUR OWN RISK

Do not use this product until you have carefully read the following agreement. This sets forth the terms and conditions for the use of this product. The installation of this product indicates the BUYER has read and understands this agreement and accepts its terms and conditions. This agreement takes precedence.

DISCLAIMER OF LIABILITY

FES, LLC (hereafter SELLER) shall in no way be responsible for the product's proper use and service. **THE BUYER HEREBY WAIVES ALL LIABILITY CLAIMS.**

The BUYER acknowledges that he/she is not relying on the SELLER's skill or judgment to select or furnish goods suitable for any particular purpose and that there are no liabilities which extend beyond the description on the face hereof and the BUYER hereby waives all remedies or liabilities, expressed or implied, arising by law or otherwise, (including without any obligations of the SELLER with respect to fitness, merchantability, and consequential damages) or whether or not occasioned by the SELLER's negligence.

The SELLER disclaims any warranty and expressly disclaims any liability for personal injury or damages. The BUYER acknowledges and agrees that the disclaimer of any liability for person injury is a material term for this agreement and the BUYER agrees to indemnify the SELLER and to hold the SELLER harmless from any claim related to the item of the equipment purchased. Under no circumstances will the SELLER be liable for damages or expenses by reason of use or sale of any such equipment.

The SELLER assumes no liability regarding the improper installation or misapplication of its products. It is the installer's responsibility to check for proper installation and if in doubt, contact the manufacturer.

LIMITATION OF WARRANTY

FES, LLC (hereafter "SELLER") gives Limited Warranty as to description, quality, merchantability, fitness for any product's purpose, productiveness, or any other matter of SELLER's product sold herewith. The SELLER shall be in no way responsible for the product's open use and service and the BUYER hereby waives all rights other than those expressly written herein. This Warranty shall not be extended or varied except by written instrument signed by SELLER and BUYER.

The Warranty is Limited to one (1) year from the date of sale and limited solely to the parts contained in within the product's kit. All products that are in question of Warranty must be returned shipping prepaid to the SELLER and must be accompanied by a dated proof of purchase receipt. All Warranty claims are subject to approval by FES, LLC.

Under no circumstances shall the SELLER be liable for any labor charged or travel time incurred in diagnosis for defects, removal or reinstallation of this product, or any other contingent expenses.

If the BUYER sends back a failed unit that is out of warranty and chooses to buy a refurbished unit, the refurbished unit will only carry a 60 day warranty. If the BUYER purchases a new unit at a predetermined discounted rate, it will have the standard 1 year warranty.

Under no circumstances will the SELLER be liable for any damage or expenses insured by reason of the use or sale of any such equipment.

IN THE EVENT THAT THE BUYER DOES NOT AGREE WITH THIS AGREEMENT: THE BUYER MAY PROMPTLY RETURN THIS PRODUCT, IN A NEW AND UNUSED CONDITION, WITH A DATED PROOF OF PURCHASE, TO THE PLACE OF PURCHASE FOR A FULL REFUND.

THE INSTALLATION OF THIS PRODUCT INDICATES THAT THE BUYER HAS READ AND UNDERSTANDS THIS AGREEMENT AND ACCEPTS ITS TERMS AND CONDITION

CHAPTER 3 INSTALLATION IN YOUR CAR

The MINI circuit is installed "inline" to the toggle switch panel. To achieve this, the original connector into the back of the toggle switch panel must be removed, and a new connector (part of the MINI circuit) installed.

Access to the back of the toggle switch panel is tricky. One method is to remove the downtubes (see pages 17-20) then remove the toggle switch panel. An alternative is to remove the trim piece below the toggle switch panel, and reach up behind the panel - there is enough space there to work blind, but it is not easy!

Even if you remove the downtubes, you will need to also remove the trim piece because behind it is where the circuit will finally be located. This is because you cannot squeeze the MINI circuit through the hole behind the toggle switch panel, once it is all connected up. You must connect the MINI circuit under the removed trim piece, as the accompanying pictures show!

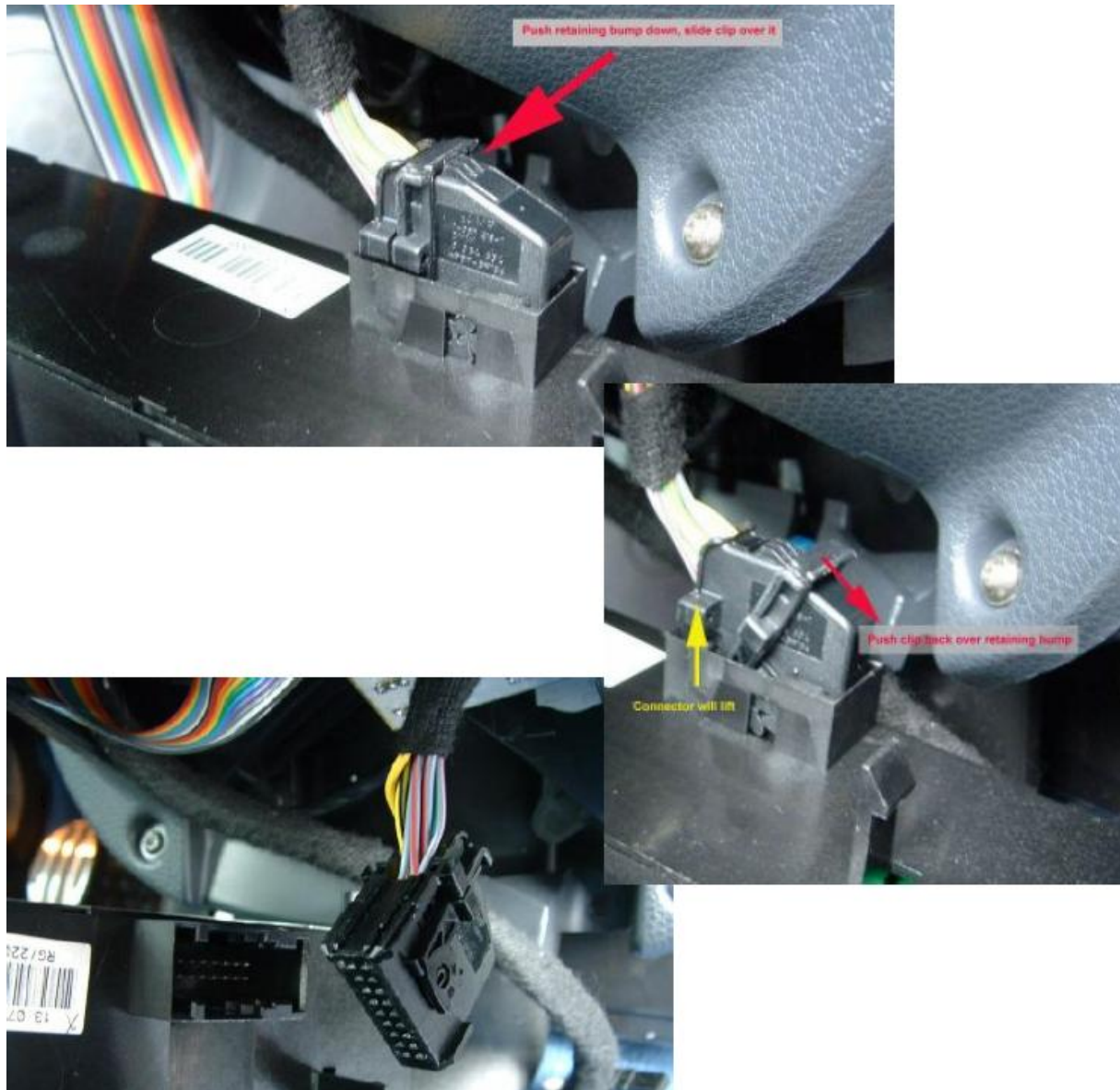
Here is a picture of the trim piece that you want to remove - it is held by one Torx screw (T20), and some clips:



Here the trim piece is removed:



Next you need to reach up behind the toggle switch panel, and feel for the connector - you can follow the wire bundle to find it. The original connector is latched into the back of the toggle switch panel; a retaining bump on the back of the connector must be pushed down to allow a latching clip to be slid over it; this will release the connector from the toggle switch panel:



I find it easier to reach the connector from the left side of the car (driver side in USA). Be careful not to reach very high into the car, where this is a similar feeling connector to the a/c controls!

If the connector you get is not black, it is wrong!

Once the original connector is removed, it can be connected onto the MINI circuit (note that this picture shows the "version 1" circuit, slightly different to the final design). The connector can be fitted many ways, but only one is correct! You must have the connectors wire bundle exiting from the side closest to the edge of the circuit board, and you must have all 18 pins connected.

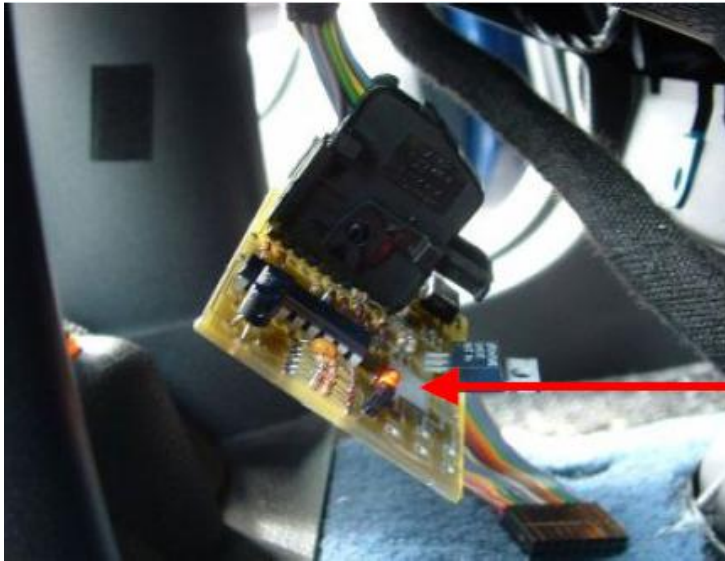


STOP AND TEST! (#1)

At this point, you should test that the original connector is correct onto the MINI circuit. If you get it wrong you risk blowing fuse F40 in the car, which will disable many features (such as full beam headlights!).

Turn the ignition on; there is no need to start the car but you need to turn the key to position 2 so that the ignition is on. There is a small LED (light) on the MINI circuit - if you have the connection correct the light will come on for three seconds then turn off. If this happens - great! Turn the car off and continue!

If the LED on the MINI circuit does not come on, check the connector and make sure it is the right way up and no pins are missed.



LED! (may be red or green)

Now you want to connect the new 18 way connector that comes with the MINI circuit into the back of the toggle switch panel. The supplied connector has a side marked "UP"; that side must be "facing the sky" when the connector is plugged into the toggle switch panel. The connector has two empty positions which go to the right (USA: driver side of car) of the opening in the panel and help to guard against misalignment.

Here the connector is correctly connected into the back of the toggle switch panel:



This view is "from the engine bay" looking toward the rear of the car!

IMPORTANT: Be **EXTREMELY** gentle when trying to connect to the back of the toggle switch panel. The pins on the back of the panel can be easily bent and will be difficult to straighten - if this happens, you will be forced to replace the toggle switch panel !

STOP AND TEST! (#2)

Now the MINI circuit should be correctly installed. **Turn the car on again** (to ignition 2) and check that the LED on the MINI circuit again turns on for three seconds then turns off.

Now confirm that the connector is correctly aligned: hold the **door lock/unlock toggle UP** (=UNLOCK) and confirm that the doors unlock. Keep the toggle held up and watch the LED on the MINI circuit - after five seconds it should begin to flash, until you release the toggle (if you keep the toggle held for a really long time, the LED will start to flash quickly!)

If the LED does not come on, you have probably connected upside-down into the back of the toggle switch panel! Don't worry - if you did the earlier test before connecting to the toggle switch panel, the MINI circuit should be protecting your fuse. Just turn the car off, correct the connector and check again.

If the doors do not unlock, the connector is probably misaligned into the back of the toggle switch panel: the switches will do strange things - for example the door unlock might lock the car! If the toggles do strange things, turn off the car and re-check the connector alignment.

SETUP TIME!

Your MINI circuit should now be successfully installed. But it won't (yet) do its auto-up trick on either window! You need to choose which window(s) you want to have auto-close, and enable the circuit to function for you.

You need the ignition on position 2. It is also a good idea to have the windows open, so that you can confirm when you have successfully enabled the auto-up function.

To enable (or "unlock") the auto-up function for either window, first hold the door lock/unlock toggle **UP (=UNLOCK)** for more than five seconds, until the LED starts to flash. Now, **while still holding** the door toggle up, **double click the window up toggle** for the driver or passenger side, as

appropriate. You should see the window auto-close completely, confirming that you have successfully enabled auto-up for that window. If you wish, you can enable both windows (you do not need to wait for the auto-up to complete on one window before enabling the other and you do not need to release and re-close the door toggle).

If at any time you wish to disable (or "lock") the auto-up function - perhaps to stop children in the car playing around - then simply hold the door lock/unlock toggle **DOWN (=LOCK)** for more than five seconds (until the LED starts to flash) then again while still holding the toggle, double click either window up toggle to disable auto-up for that window. You can freely choose to disable and enable auto-up on either window as often as you wish and the latest setting will be remembered (even if the battery is disconnected).

REMEMBER: The auto-up feature is activated by a quick double click up of the toggle - the same as when you enabled the function (but you don't need to hold the door toggle once the feature has been enabled once - the circuit never forgets!)

OPTIONAL FEATURES! TRACK MODE DSC

The V6 MINI circuit **includes track mode DSC control, although you do not have to use it!** The function is initially not active. This means that the car is "normal " with DSC (or ASC+T) unaffected by the MINI circuit.

To enable track mode DSC, hold the door lock/unlock toggle **UP (=UNLOCK)** for five seconds (same as for enabling auto-up windows) and, while still holding it, click the DSC toggle once, and then release both toggles.

If you were successful you should see the DSC light change state a short time later. To confirm function, turn the car off, and then turn it on again - after a short delay the DSC should be disabled (and the DSC light will come on).

When you wish to disable **track mode DSC**, hold the door lock/unlock toggle **DOWN (=LOCK)** for more than five seconds, then click the DSC toggle. Then turn the car off then on again to confirm that the DSC remains on (and the DSC light remains off).

REMEMBER: When "**track mode DSC**" is enabled, "DSC" is turned off when the car is started. For normal car operation, ensure "**track mode DSC**" is disabled.

OPTIONAL FEATURES! AUTO FRONT FOGS

The V6 MINI circuit includes **auto front fog control** , **although you do not have to use it!** The function is initially not active. This means that the car is "normal" with front fogs unaffected by the MINI circuit.

To auto front fogs, hold the door lock/unlock toggle **UP (=UNLOCK)** for five seconds (same as for enabling auto-up windows) and, while still holding it, click the FRONT FOG toggle once, then release both toggles. To confirm that **auto front fogs** is active, turn on the cars lights – the front fogs should automatically turn on.

When you wish to auto front fogs, hold the door lock/unlock toggle **DOWN (=LOCK)** for more than five seconds, then click the FRONT FOG toggle. When you turn the lights on, the front fogs will now not automatically come on.

IMPORTANT: I recommend you do not **enable auto front fogs** if your car has auto headlights – this is because if the auto headlights turn on (in a tunnel , say), the front fogs will come on too; then the auto headlights will never turn off again.

OPTIONAL FEATURES! GARAGE OPENER

If you have ordered a MINI circuit with the garage door opener control, you will need to connect the circuit to your opener and test it. The opener is triggered by the MINI circuit after holding the door lock/unlock toggle up or down for more than half a second - if the two are correctly connected together, this should cause your garage door to open.

IMPORTANT: On some MINIs, holding the door toggle up causes windows/sunroof to open; if you have such a MINI hold the toggle down to avoid this!

UPDATE (March 10, 2004): If you have a garage door opener powered by a 9V battery and connected with a flying lead, the MINI circuit can come with a mating connector to make installation easy and solder-free -you just need to mechanically jam the switch always on and have the MINI circuit turn the 9V power on/off.

This picture shows two 9V connectors mated together:



TIDY UP!

When everything is working, you should tuck the MINI circuit away and re-install the trim piece. You can check [GadgetGavs install](#) on my web pages where he used velcro to attach the MINI circuit and his garage door opener to the back of the trim piece.



From my views of the interior of GBMINI, there is no metal in the area under the toggle switch panel that could cause a short-circuit to the MINI circuit, but if you are worried you could wrap the circuit in duct-tape to insulate it. The MINI circuit is supplied with a water-protection coat, but that will not protect from any sharp metal cutting into the coating and shorting to the circuitry.

3/31/2004: IMPORTANT CLARIFICATION!

Enabling & disabling functions uses the door lock/unlock toggle, labeled like this:



It is held for 5s to put the MINI circuit into "program" mode. To enable a function you hold it UP (think **unlock=enable**); to disable a function hold it DOWN (think **lock=disable**). Be sure to keep the door lock/unlock toggle held (up or down) while clicking the other toggle to indicate which function is to be enabled or disabled.

ADDENDUM: DOWN TUBE REMOVAL – FROM WWW.MINI2.COM

Each dash downtube is screwed to the radio-a/c-toggle-switch cluster. The top of each downtube is covered by the dash center fascia [surrounding the speedometer and two air vents], and the bottom of each is anchored in the center console.

To remove them, you may need the following tools: Torx screwdrivers (T40 and T20), #2 Phillips screwdrivers

1) *Remove the 2 Torx screws (T40 or T20) from each downtube:*



Accessing the top Torx screw where a glovebox or knee bolster is present will require opening the glovebox door or releasing the knee bolster. To release the knee bolster, grab the top edge with both hands. Pull down sharply keeping the pressure toward the direction of the door in order to prevent the bolster from scratching the downtube when it comes free. Once free it can be swung down out of the way to provide clearance to access the Torx screw.

2) *Provide clearance under the dash center fascia for the top of each downtube by either steps 3-7 or steps 8-9.*

I use the quicker steps 8-9 but steps 3-7 are shown here in case you prefer the center console removal method:

- 3) *Remove the gearshift surround: Pull gently straight up so you don't break any of the 4 pins holding it to the center console. Pull the surround up as far as possible to avoid creasing the leather while you work.*
- 4) *Remove the side -mirror adjustment unit: Reaching through the opening behind the gearshift, depress the two metal prongs and push up from underneath the unit to pop it up.*
- 5) *Remove the 2 Phillips-head screws now visible.*
- 6) *Remove the Phillips-head screw from the middle of each cupholder.*
- 7) *Provide clearance: Lift up the console to reveal the polystyrene piece under each downtube, and carefully remove each piece , allowing the downtubes to drop down.*
- 8) *Remove the T20 Torx screw that secures lower passenger side edge of the dash center fascia near the airbag panel:*

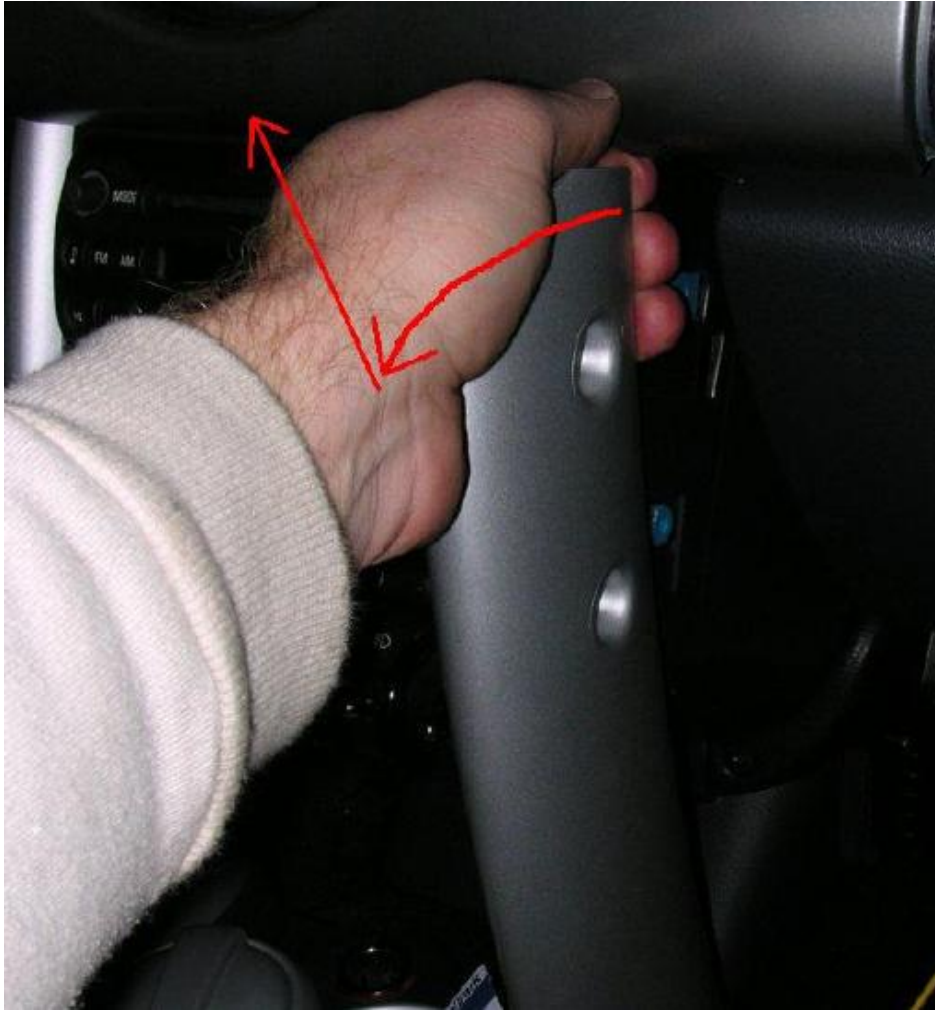


- 9) *Provide clearance: Pop the lower clips of the fascia by grabbing its lower edges and giving a medium sharp tug. Pull the fascia outward just far enough for the tops of the downtubes to clear.*



IMPORTANT: On newer '05 and '06 MINIs you don't need to do this step! Instead you will find that once the Torx screws are removed, you can slightly drop the downtubes so that they can be lifted out from behind this trim panel – you can't remove them but you can push them sideways sufficiently to access the screws holding the toggle switch panel (see next step).

- 10) *Remove the downtubes: Angle the downtubes toward you, pulling the tops under the dash center fascia, and lift them out of the center console (again, you cannot do this on newer '05/'06 MINIs – instead just push them out of the way):*



At this point you can remove the Torx screws holding the toggle switch panel, and pull it out to access the connector behind. Remember to install the circuit through the lower trim piece – there is not room to slide the circuit through the opening behind the toggle switch panel once the original connector is plugged onto it.

NOTE: Refitting is reverse of removal – ease the downtubes back under the dash center fascia, push the fascia back into place so that the clips re-engage, replace all Torx screws.

Thanks to <http://www.MINI2.com> and the MINI community for the excellent FAQs from which these instructions are summarized.

UPDATE: '05 & LATER MINIS

On '05/'06 MINIs the trim piece below the toggle switch panel has been redesigned to incorporate a storage area; this makes it **VERY** difficult to remove, and the "blind install" procedure described for earlier MINIs does not work.

The MINI circuit is compatible with '07 MINI convertibles, but not with '07 MINI hardtops.

If you wish to install the MINI circuit on an '05 MINI without removing the downtubes, it is still possible but people (like me) with large hands will find it painful! Here is a description from Murray:

No need to remove any trim, I simply flipped the trim piece down using the two tabs and there was plenty of 'give ' on the hinge to open it. Then I suggest you do the install from the right-hand side (USA passenger side) if you kneel outside the car your hand can go up the opening where the trip panel is opened. Your first finger can press the release catch while your 2nd finger can flip the clip off the connector. I think it's easier to connect to the switch pane l prior to connecting the cable to your circuit. Also, it then pays one to look at the way the car's connector and your connector differ (cars connector is much thicker) and he lps you think about locating your connector more in the middle of the switch pane l's socket (does that make sense ?)

Here is a picture from Luke, showing the partly open trim piece, with the original toggle switch connector removed, extracted, and plugged into the MINI circuit:



You can also still do the "downtube removal" install if you prefer. Bill writes:

I decided to be safe and NOT do it the "blind" way. (If I was going to do it blind I'd follow the advice in the feedback of Murray since the 2005's larger "Trim" piece is a major pain to completely remove.) My 2005 didn't have any screws holding down the "Fascia". A sharp tug was all it took. (Note: The plastic surrounds from the Hazard, and Dash light buttons also popped out as a result of the tug, but wasn't a problem to replace later.) I also didn't have to remove, or even open the "Trim" piece, as there was enough room to pass the connected MiniCircuit through the hole behind the "Toggle Switch Panel."

This pic from Bill shows the downtubes removed, the toggle switch panel removed, and the original toggle switch panel connector plugged into the MINI circuit:



This pic from Bill shows the MINI circuit pushed in behind where the toggle switch panel normally fits, with the harness from it going to the toggle switch panel (the downtubes are still removed)



July 2005: MikeyTheMINI recently wrote that you cannot pull the downtubes out of the center console on the newest '05 MINIs – however you can move them out of the way sufficiently to access the toggle switch panel screws (see note on page 16).

ACKNOWLEDGMENTS

Thanks to Ian Cull (www.gbmini.net) for coming up with the circuit, improving it, and helping to transfer production over to FES.

Thanks to Murray, Luke, Bill and the many other MINI owners who have helped to improve these directions.