

AMG GT3 WHEEL KIT

BY PABLO GUERRA



THINGS TO PRINT

INCLUDED IN THIS KIT:

- LEFT PANEL
- RIGHT PANEL
- BACK CASING
- LEFT HANDLE TOP
- LEFT HANDLE BOTTOM
- RIGHT HANDLE TOP
- RIGHT HANDLE BOTTOM
- EMBLEM PLATE
- JOYSTICK COVER
- BUTTON GUARD X2
- BUTTON CASING X2
- BUTTON CASING CAP X2

**** NOTE: UPDATED HANDLES HAVE BEEN ADDED WHICH ARE ROUNDED AND MORE COMFORTABLE TO USE. THESE ARE RECOMMENDED OVER THE ORIGINAL FLAT HANDLES.**

NOT INCLUDED IN THIS KIT:

- PADDLE SHIFTERS BY JKOLJO
 - [HTTPS://WWW.THINGIVERSE.COM/THING:1678086](https://www.thingiverse.com/thing:1678086)
- MERCEDES LOGO BY CONAIR83
 - [HTTPS://WWW.THINGIVERSE.COM/THING:1552272](https://www.thingiverse.com/thing:1552272)
 - **NOTE: THIS SHOULD BE PRINTED AT 83.60% SCALE**
- THRUSTMASTER HUB ADAPTOR BY RAMJETX
 - [HTTPS://WWW.THINGIVERSE.COM/THING:3169190](https://www.thingiverse.com/thing:3169190)

THINGS TO BUY

ELECTRONICS:

NOTE: THESE ARE NON-AFFILIATED LINKS.

I AM INCLUDING THESE LINKS SINCE THEY ARE EXACTLY WHAT I USED FOR THIS PROJECT.

- **6 PIN MINI DIN PLUG (X1)**
 - [HTTPS://WWW.AMAZON.COM/GP/PRODUCT/B000LE8G56/REF=OH_AUI_DETAILPAGE_007_S00?IE=UTF8&PS
C=1](https://www.amazon.com/gp/product/B000LE8G56/ref=oh_aui_detailpage_007_s00?ie=UTF8&psc=1)
- **12MM PUSH BUTTONS (X8)**
 - [HTTPS://WWW.AMAZON.COM/GP/PRODUCT/B01LYZSEVB/REF=OH_AUI_DETAILPAGE_008_S01?IE=UTF8&PS
C=1](https://www.amazon.com/gp/product/B01LYZSEVB/ref=oh_aui_detailpage_008_s01?ie=UTF8&psc=1)
 - [HTTPS://WWW.AMAZON.COM/GP/PRODUCT/B075VBWFM6/REF=OH_AUI_DETAILPAGE_008_S00?IE=UTF8&P
SC=1](https://www.amazon.com/gp/product/B075VBWFM6/ref=oh_aui_detailpage_008_s00?ie=UTF8&psc=1)
- **PSP 1000 JOYSTICK (X1)**
 - [HTTPS://WWW.AMAZON.COM/GP/PRODUCT/B073GYFP2M/REF=OH_AUI_DETAILPAGE_008_S01?IE=UTF8&P
SC=1](https://www.amazon.com/gp/product/B073GYFP2M/ref=oh_aui_detailpage_008_s01?ie=UTF8&psc=1)
- **SPDT LIMIT MICRO SWITCH (X2)**
 - [HTTPS://WWW.AMAZON.COM/GP/PRODUCT/B073TYWX86/REF=OH_AUI_DETAILPAGE_005_S00?IE=UTF8&P
SC=1](https://www.amazon.com/gp/product/B073TYWX86/ref=oh_aui_detailpage_005_s00?ie=UTF8&psc=1)
- **ARDUINO NANO (X1)**
 - [HTTPS://WWW.AMAZON.COM/HILETGO-ATMEGA328P-CONTROLLER-DEVELOPMENT-
UNSOLDED/DP/B01DLJQA2?CRID=3V5TKRC2X7HKL&KEYWORDS=ARDUINO+NANO&QID=1540765194&SPRE
FIX=ARDUINO+NANO%20CAPS%20246&SR=8-16&REF=SR_1_16](https://www.amazon.com/hileto-atmega328p-controller-development-unsoldered/dp/B01DLJQA2?CRID=3V5TKRC2X7HKL&keywords=arduino+nano&qid=1540765194&spre-fix=arduino+nano%20caps%20246&sr=8-16&ref=sr_1_16)

OTHER:

- **NEODYMIUM MAGNETS 8X3MM (X4)**
 - [HTTPS://WWW.AMAZON.COM/GP/PRODUCT/B07D1QPN4N/REF=OH_AUI_DETAILPAGE_007_S00?IE=UTF8&PSC=1](https://www.amazon.com/gp/product/B07D1QPN4N/ref=oh_aui_detailpage_007_s00?ie=UTF8&psc=1)
 - **M3 X 20MM FEMALE STANDOFF (X8)**
 - [HTTPS://WWW.AMAZON.COM/GP/PRODUCT/B06XQ33Y9X/REF=OH_AUI_SEARCH_DETAILPAGE?IE=UTF8&PSC=1](https://www.amazon.com/gp/product/B06XQ33Y9X/ref=oh_aui_search_detailpage?ie=UTF8&psc=1)
 - **M3 X 8MM SCREWS & NUTS (X4)**
 - **M3 X 12MM SCREWS (X16)**
 - **M3 X 20MM SCREWS & NUTS (X10)**
 - **M3 X 30MM SCREWS (X10)**
 - **M5 X 16MM SCREWS & NUTS (X4)**
 - [HTTPS://WWW.AMAZON.COM/GP/PRODUCT/B074Q4Z2C6/REF=OH_AUI_SEARCH_DETAILPAGE?IE=UTF8&PSC=1](https://www.amazon.com/gp/product/B074Q4Z2C6/ref=oh_aui_search_detailpage?ie=UTF8&psc=1)
 - **M2 SCREWS (X2)**
 - [HTTPS://WWW.AMAZON.COM/GP/PRODUCT/B06Y3TVKMR/REF=OH_AUI_SEARCH_DETAILPAGE?IE=UTF8&PSC=1](https://www.amazon.com/gp/product/B06Y3TVKMR/ref=oh_aui_search_detailpage?ie=UTF8&psc=1)
 - **VINYL WRAP (CARBON FIBER)**
 - [HTTPS://WWW.AMAZON.COM/GP/PRODUCT/B00MJ7U0FC/REF=OH_AUI_SEARCH_DETAILPAGE?IE=UTF8&PSC=1](https://www.amazon.com/gp/product/B00MJ7U0FC/ref=oh_aui_search_detailpage?ie=UTF8&psc=1)
 - **VINYL WRAP (LEATHER)**
 - [HTTPS://WWW.AMAZON.COM/GP/PRODUCT/B01MR890SP/REF=OH_AUI_SEARCH_DETAILPAGE?IE=UTF8&PSC=1](https://www.amazon.com/gp/product/B01MR890SP/ref=oh_aui_search_detailpage?ie=UTF8&psc=1)
- OR**
- HANDLEBAR TAPE**
- [HTTPS://WWW.AMAZON.COM/GP/PRODUCT/B06XCF6XHV/REF=PPX_YO_DT_B_ASIN_TITLE_001_000_S01?IE=UTF8&PSC=1](https://www.amazon.com/gp/product/B06XCF6XHV/ref=ppx_yo_dt_b_asin_title_001_000_s01?ie=UTF8&psc=1)

ASSEMBLY GUIDE

1. PRINT ALL PARTS FROM THIS KIT INCLUDING THE FILES LINKED IN THIS DOCUMENT.
2. ASSEMBLE THE **PADDLE SHIFTERS**.
 - A. FOLLOW AMSTUDIO'S GUIDE TO DO THIS.
[HTTPS://WWW.YOUTUBE.COM/WATCH?V=HBHKLQDCX0&T=23S](https://www.youtube.com/watch?v=HBHKLQDCX0&T=23S)
3. SOLDER THE WIRES TO THE **6 DIN MINI CONNECTOR**.
(DISCARD THE PLASTIC CASING.)
4. ATTACH THE **HUB ADAPTER** TO THE **BACK CASING** USING M5 SCREWS AND NUTS.
5. INSERT THE **6 DIN MINI CONNECTOR** INTO THE **HUB ADAPTER**.
6. ATTACH THE **PADDLE SHIFTERS** TO THE **BACK CASING**.
7. ATTACH 8 OF THE **M3 FEMALE STANDOFFS** TO THE **BACK CASING**.

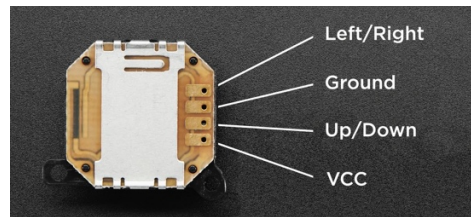


8. USING SUPERGLUE, GLUE TOGETHER THE **LEFT AND RIGHT PANELS**. BE SURE TO EITHER CLAMP THESE TO ENSURE A PROPER BOND OR USE THE CENTER SCREWS TO TEMPORARILY TIGHTEN THE PANELS TOGETHER UNTIL THE GLUE DRIES.
9. USING THE **CARBON FIBER VINYL WRAP**, WRAP THE JOINT **PANELS** AS WELL AS THE **EMBLEM PLATE**. CUT OUT THE EXCESS VINYL FOR THE BUTTONS AND HANDLES.
10. INSERT THE **BUTTONS** ONTO THE **PANEL** ALONG WITH THE **JOYSTICK** AND SECURE IT IN PLACE WITH THE **JOYSTICK COVER**. PLACE THE **BUTTON GUARDS** ON THE TOP TWO **BUTTONS**. (THE TOP PART OF THE JOYSTICK CAN BE REMOVED. DISCARD THE PROTECTIVE FILM.)
11. SOLDER WIRES TO THE **BUTTONS** AND THE **JOYSTICK**.
- 12.SOLDER ALL WIRES FROM **BUTTONS**, **JOYSTICK**, **PADDLE SHIFTER**, AND **DIN CONNECTER** TO THE **ARDUINO NANO**.
- 13.SCREW ON THE TOP **PLATE** TO THE **BACK CASING**.
- 14.GLUE THE **BUTTON CASING CAPS** ON THE **BUTTON CASINGS** AND SLIDE THEM ONTO THE BACK OF THE TOP TWO **BUTTONS**.
- 15.GLUE HEX NUTS INTO THE **LEFT HANDLE TOP** AND **RIGHT HANDLE TOP**.
- 16.EITHER USE THE **LEATHER VINYL WRAP** AND WRAP THE FOUR **HANDLE PARTS** MAKING CUTOUTS FOR THE SCREW HOLES ONLY ON THE **LEFT HANDLE BOTTOM** AND **RIGHT HANDLE BOTTOM** THEN SCREW THE **HANDLES** ONTO THE **FRONT PANEL**.
- 17.OR SCREW THE **HANDLES** ONTO THE **FRONT PANEL** FIRST AND THEN USING **HANDLEBAR TAPE**, WRAP THE HANDLES.

18. SAND, PRIME AND PAINT THE MERCEDES LOGO AND GLUE IT ONTO THE EMBLEM PLATE.

19. ATTACH THE EMBLEM PLATE ONTO THE FRONT PANEL.

WIRING REFERENCES



PSP 1000 JOYSTICK PINOUT DIAGRAM



WHEEL BUTTON MAPPING

WHEEL BUTTONS	ARDUINO PINS
A	D7
B	D6
X	D9
Y	D11
GEAR UP	D8
GEAR DOWN	D3
MENU	D4
VIEW	A4
LEFT	A1
RIGHT	A2
JOYSTICK (UP/DOWN)	A6
JOYSTICK (LEFT/RIGHT)	A7
JOYSTICK (VCC)	+5V
JOYSTICK (GROUND)	GND

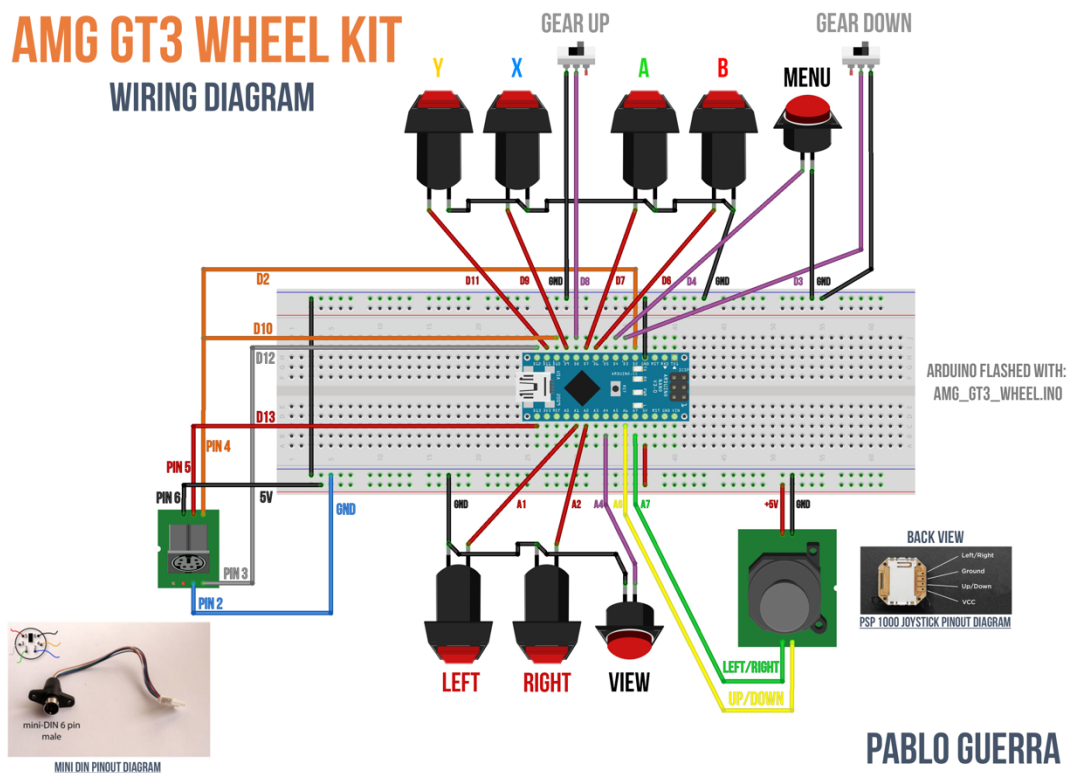


mini-DIN 6 pin
male

MINI DIN PINOUT DIAGRAM

MINI-DIN PIN NUMBERS	ARDUINO PINS
1	NOT USED
2	GND
3	D12
4	D10 + D2
5	D13
6	+5V

AMG GT3 WHEEL KIT WIRING DIAGRAM



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PROGRAMING

DOWNLOAD THE ARDUINO SKETCH FILE AND UPLOAD TO THE ARDUINO.

(EVERYTHING SHOULD BE WORKING FINE UNLESS A WIRE WAS CONNECTED INCORRECTLY)

- [HTTPS://MEGA.NZ/#!NW4X1YQK!IP3_DEFIZXRYVS9D1NSLQTUEV06KJHCFT8ESUCWCT9G](https://mega.nz/#!NW4X1YQK!IP3_DEFIZXRYVS9D1NSLQTUEV06KJHCFT8ESUCWCT9G)

MORE PHOTOS

