



F64-USB V2

product manual

V1.0

steering wheel for racing simulators

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1. general information

- USB connection via coiled cable
- 285mm diameter
- mass: 1140 g
- standard 6 x 70mm bolt pattern (M5 threaded) to mount quick release
- 64 inputs in total
- grips covered in genuine leather

- package contents:
 - F64-USB steering wheel
 - coiled USB cable (Binder connector to USB Type-A)
 - alternative magnets to adjust paddle shifter force (**see foam insert**)
 - bolts and washers to mount standard Quick Release (such as Q1R)
 - tool to remove Binder connector nut
 - button & encoder labels sheet

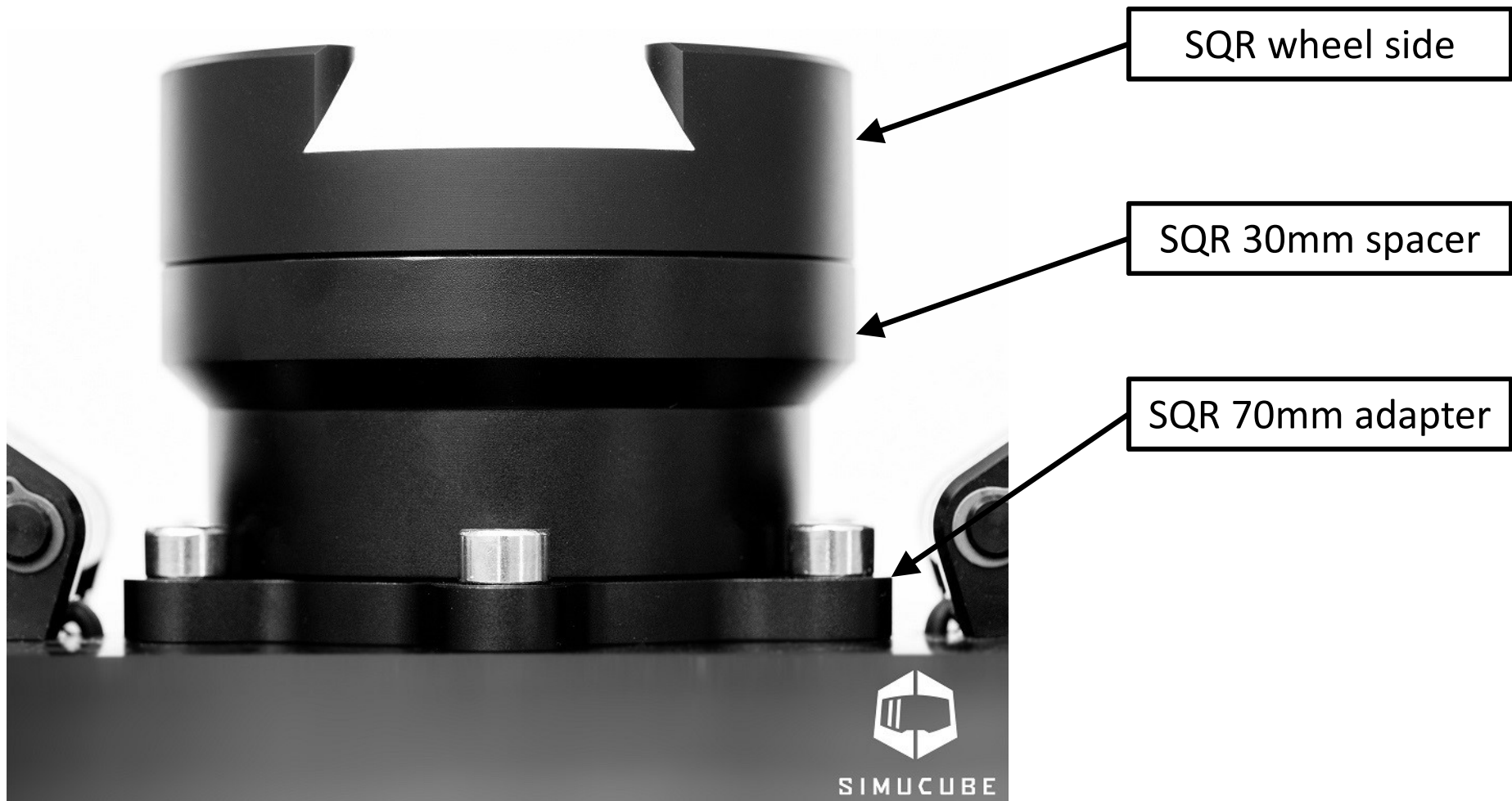
2. mounting and connection

- sufficient clearance between steering wheel and motor required for coiled cable connector
- length of Binder connector approx. 64mm
- SQR (see 2.1) provides sufficient clearance
- additional spacers may be required for other mounting solutions
- USB extension cable mounted securely to the sim rig is recommended

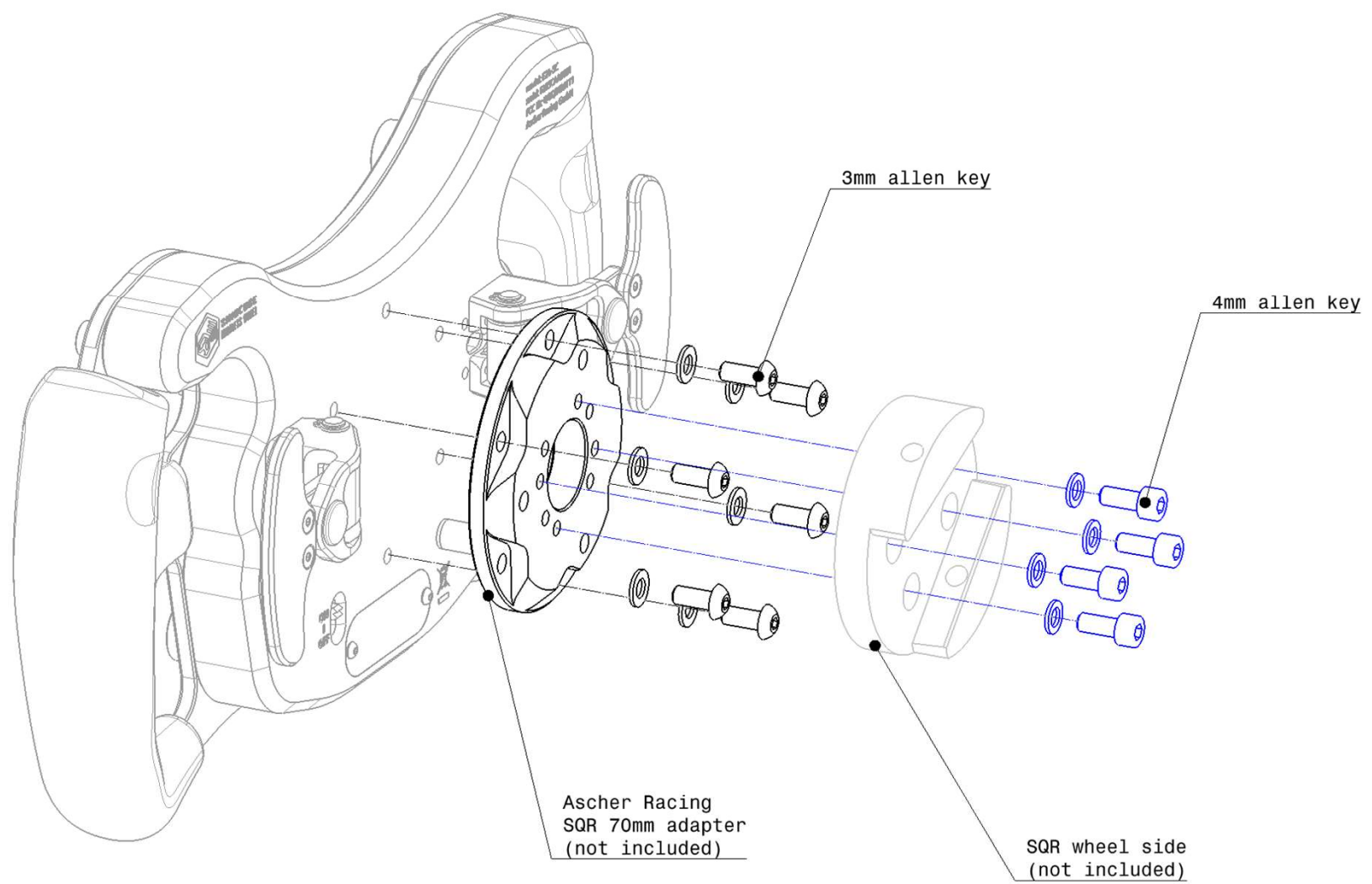
mount Quick Release:

1. SQR wheel side via standard SC2 adapters
2. SQR wheel side via *Ascher Racing SQR 70mm Adapter*
3. Q1R 70mm wheel side
4. M5 threaded QRs

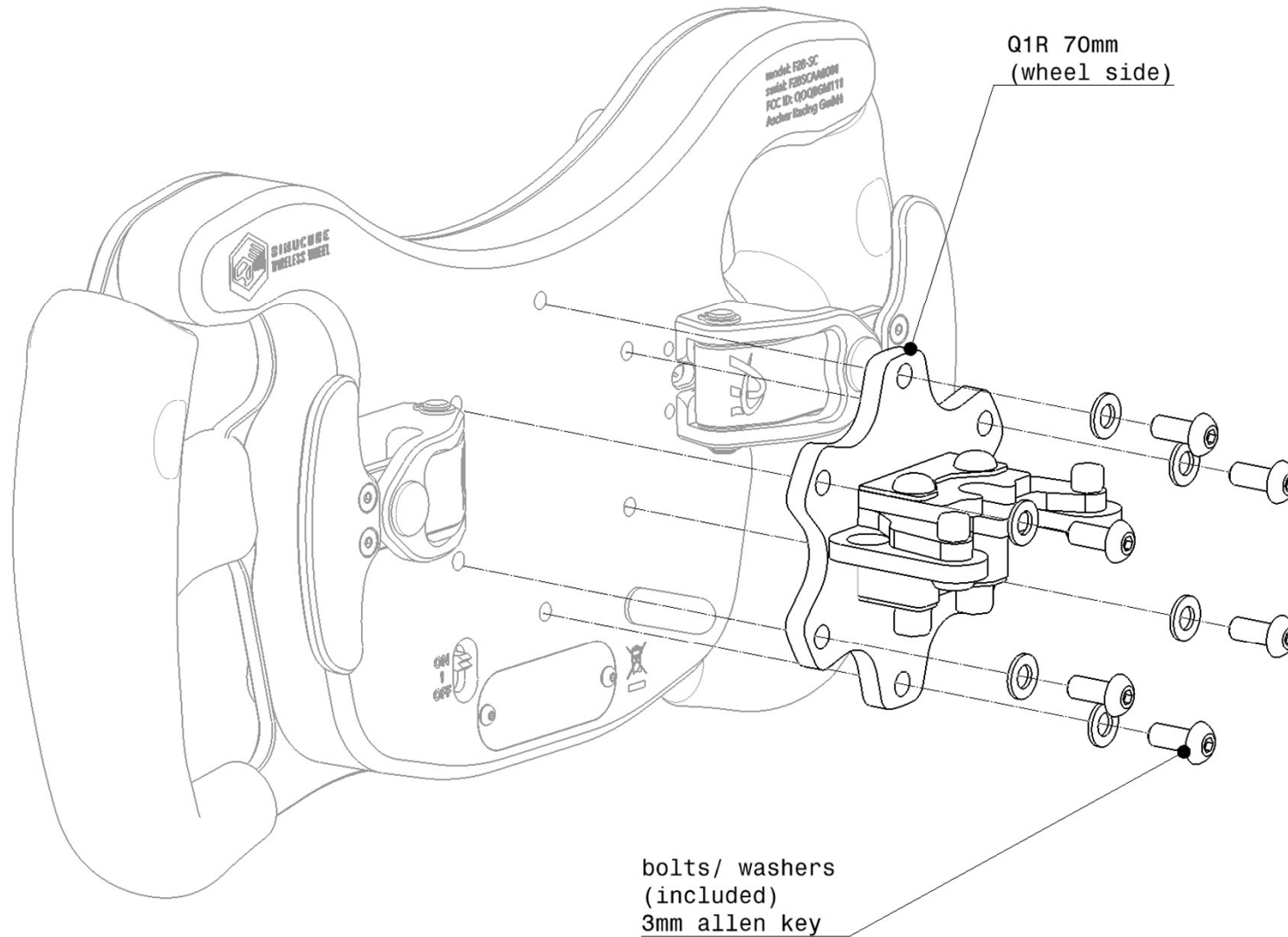
2.1 SQR wheel side via standard SC2 adapters



2.2 SQR wheel side via *Ascher Racing SQR 70mm Adapter*



2.3 Q1R 70mm wheel side



2.4 M5 threaded QRs

- not as straight forward as previous QRs due to both parts being M5 threaded
- M5 threads of one part need to be bypassed using captive screws
- through hole M5 threaded QRs (e.g. HRS Xero Play QR) → bypass the QR part
- blind hole M5 threaded QRs (e.g. NRG/ Fanatec Podium Hub) → use captive screws from inside the wheel casing
 1. remove Binder connector nut (rear side; required tool included)
 2. open wheel rim by removing 7 x front plate bolts (2.5mm allen key)
 3. screw in 5 x captive screws completely until threads do not intersect anymore
 4. attach QR by turning each bolt $\frac{1}{4}$ turn in a circular pattern
 5. attach front plate – make sure not to squeeze shifter/ clutch cables

3. operation

- no driver installation required
- wheel shows up in Windows as a standard HID-Gamecontroller (human interface device)
- configuration tool can be used to adjust settings such as rotary switch modes, master clutch...
- refer to the product page to download latest configuration tool/ firmware
- clutch bite point can be adjusted on the wheel (without using the configuration tool):
 - push both joystick buttons for 1s to enter bite point mode
 - rotate left joystick for 1% increments
 - rotate right joystick for 0.1% increments
 - push both joystick buttons for 1s to exit bite-point mode

4. configuration tool

Ascher Racing F64 Configuration Tool v3.0 b4

Device Details
Serial Number: GWD316
Manufacturer: Leo Bodnar
Product: Ascher Racing F64
Version: 2.19 **1** Reset All

Analog Input Mode
Dual Clutch **2**

Master Clutch
Right **3**

Clutch Bite Point
0% **4** 100%
50,0 %

Rotary Switch Mode
Left: Encoder (R-Shifted) **5**
Right: Shift (L-Encoder)

Encoder Pulse Width
64 ms **6**

LED Intensity
0% **7** 100%
100,0 %

Inputs
1 2 3 4 5 6 7 8
9 10 11 12 13 14 15 16
17 18 19 20 21 22 23 24
25 26 27 28 **8** 29 30 31 32
33 34 35 36 37 38 39 40
41 42 43 44 45 46 47 48
49 50 51 52 53 54 55 56
57 58 59 60 61 62 63 64

X Axis
Linearity Mode: Linear
-5 0 5
9 0,0 %
Show Curve >>
10 Calibrate
dead zone HIGH 1,0 %
dead zone LOW 1,0 %

Y Axis
Linearity Mode: Linear
-5 0 5
0,0 %
Show Curve >>
Calibrate
dead zone HIGH 1,0 %
dead zone LOW 1,0 %

4. configuration tool

1. **Reset All:** reset all settings to factory default
2. **Analog Input Mode**
 - Throttle and Brake: two separate axis for both clutches
 - Dual Clutch: one single axis for both clutches, both signals are compared and whichever signal is greater will be the output
3. **Master Clutch**
 - set which clutch is the master clutch
 - master clutch will not be affected by clutch bite point setting
 - slave clutch is scaled down so that 100% mechanical throw equals clutch bite point
4. **Clutch Bite Point:** set the value of slave clutch at 100% mechanical throw
5. **Rotary Switch Mode:**
 - 12 Way Rotary: constant button press of the rotary switch
 - 12 Way Rotary Pulsed: pulsed button press of the rotary switch
 - Encoder: pulsed button for each clockwise and anti-clockwise rotation
 - Shift Encoder: one rotary switch acts as selector, the other one as encoder -> use 12 encoders for various settings this way
6. **Encoder Pulse Width:** set the duration of button presses of encoders
7. **LED Intensity:** adjust intensity of the bite point calibration mode signal LED
8. **Inputs:** shows all available inputs (must not show every single encoder step due to update cycle)
9. **X-Axis/ Y-Axis:** output of left/ right clutch
 - linearity modes: linear, progressive/ degressive, S-Curve
 - dead zones: adjust buffer between electrical and mechanical throw, LOW = start/ HIGH = end
10. **Calibrate:**
 1. set **Analog Input Mode** to **Throtte and Brake**
 2. release clutch and click **Set Low**
 3. pull clutch fully and click **Set High**

5. how to use bite point

- recommended procedure for finding suitable bite point setting
 1. enter calibration mode and set bite point to high value, e.g. 80 %
 2. pull slave clutch only
 3. apply throttle
 4. reduce bite point in 1.0 % increments (left joystick) until vehicle starts moving
 5. make test starts to fine tune desired bite point setting
 6. exit bite point calibration mode
- recommended procedure for quick race starts
 1. pull both clutches (master and slave)
 2. apply throttle
 3. race start → let master clutch snap (it will take less than 20 ms to reach desired bite point)
 4. slowly release slave clutch

6. label application

- encoder knobs must be removed to apply label (hex wrench)
- to apply labels the easiest way use a tool such as a knife
- put the label on the very tip of the knife
- position label centered and horizontal
- press the label on the surface

7. paddle shifter force setting

- paddle shifter snap action force is set by the combination of magnets and spacers
- do not let magnets smash into each other – magnets are very brittle and can break
- to pull out installed magnets, put additional magnets carefully on top
- press the paddle shifter to separate installed magnets
- pull out top and bottom magnet
- magnets can be separated the best by shearing them off

- 4 pcs 3mm **magnets & spacers** can be found in the **packaging foam insert**
- approx. actuation force depending on magnet height and spacers:
 1. 800g = 5mm + 5mm (factory default)
 2. 570g = 5mm + 5mm + 1 spacer
 3. 480g = 3mm + 3mm
 4. 440g = 5mm + 5mm + 2 spacers
 5. 340g = 3mm + 3mm + 1 spacer
 6. 260g = 3mm + 3mm + 2 spacers

8. dimensions

