ASCHER RACING

B16-SC
product manual
V1.0

button plate for racing simulators

Ascher Racing GmbH

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1. general information

- wireless button plate for Simucube 1 & 2
- mass: 700 g
- 3,6 V lithium battery (ER 14250)
- standard 6 x 70mm bolt pattern (through hole) to mount quick release
- 16 inputs in total
- do not apply excessive force on the antenna; handle with care (e.g. laying wheel on a table)
- for compatible steering wheel rims refer to the list on the product page

- package contents:
  - B16-SC button plate
  - alternative magnets to adjust paddle shifter force (**see foam insert**)
  - bolts and washers to mount wheel rim & Quick Release (such as SQR, Q1R)
  - button & encoder label sheets

2.   Quick Release mounting

- assemble steering wheel rim, button plate, QR with supplied bolts
- compatible with standard 70mm QRs (maximum outer diameter of 88mm) such as:
  - Q1R
  - SQR
  - NRG

3.   adjust shifter position

- to achieve the most comfortable ergonomics, paddle location is adjustable
- paddle shifters can be moved inwards by 9.5 mm each:
    1. open button plate by removing 4 x screws (hex wrench) on the frontplate
    2. unmount paddle shifters (hex wrench)
    3. mount shifters to alternative mounting position
    4. inward screws (now located inside the casing) must be replaced with supplied shorter ones
- paddle can be moved closer to the wheel rim:
    - mount paddle to the lower side of the shifter lever arm
    - for additional adjustment, 5mm paddle spacers are available separately

4.   initial operation

- open *True Drive/ Simucube Configuration Tool* → go to *Simucube Wireless Wheels* tab
- set checkmark: *Connect automatically to paired devices*
- switch on steering wheel (ON-OFF switch on the rear side)
- double click *Ascher Racing B16*
- wheel is now paired, connected and shows up in the *Overview* tab
- check connection signal quality (*Overview* tab) for a full rotation of the steering wheel
- signal quality must be above 20% at all times for perfect operation

5.   general operation

- when switched ON, the wheel will go into discovery mode for 30s (blinking LED)
- if Simucube is switched on, it connects automatically and shows up in the *Overview* tab
- LED will indicate successful connection by blinking three times
- SC2 will indicate connection/ disconnection by an audible beep (if checked in the *Hardware Settings* tab)

- alternative connection:
  - pull both paddle shifters simultaneously to connect immediately
  - pull both paddle shifters simultaneously for 5s to disconnect

- **after driving** session, it is recommended to **switch-off/ disconnect the wheel** to avoid constant battery drain in specific circumstances when a connection to SC is active
- expected battery life of 2 - 3 years on heavy daily usage
- low battery voltage: *True Drive* will show a warning message, SC2 will play an audible beep
- remaining energy will still last for many days to have time for replacing the battery

- to swap batteries, open access window on the rear side (1.5mm allen key required)
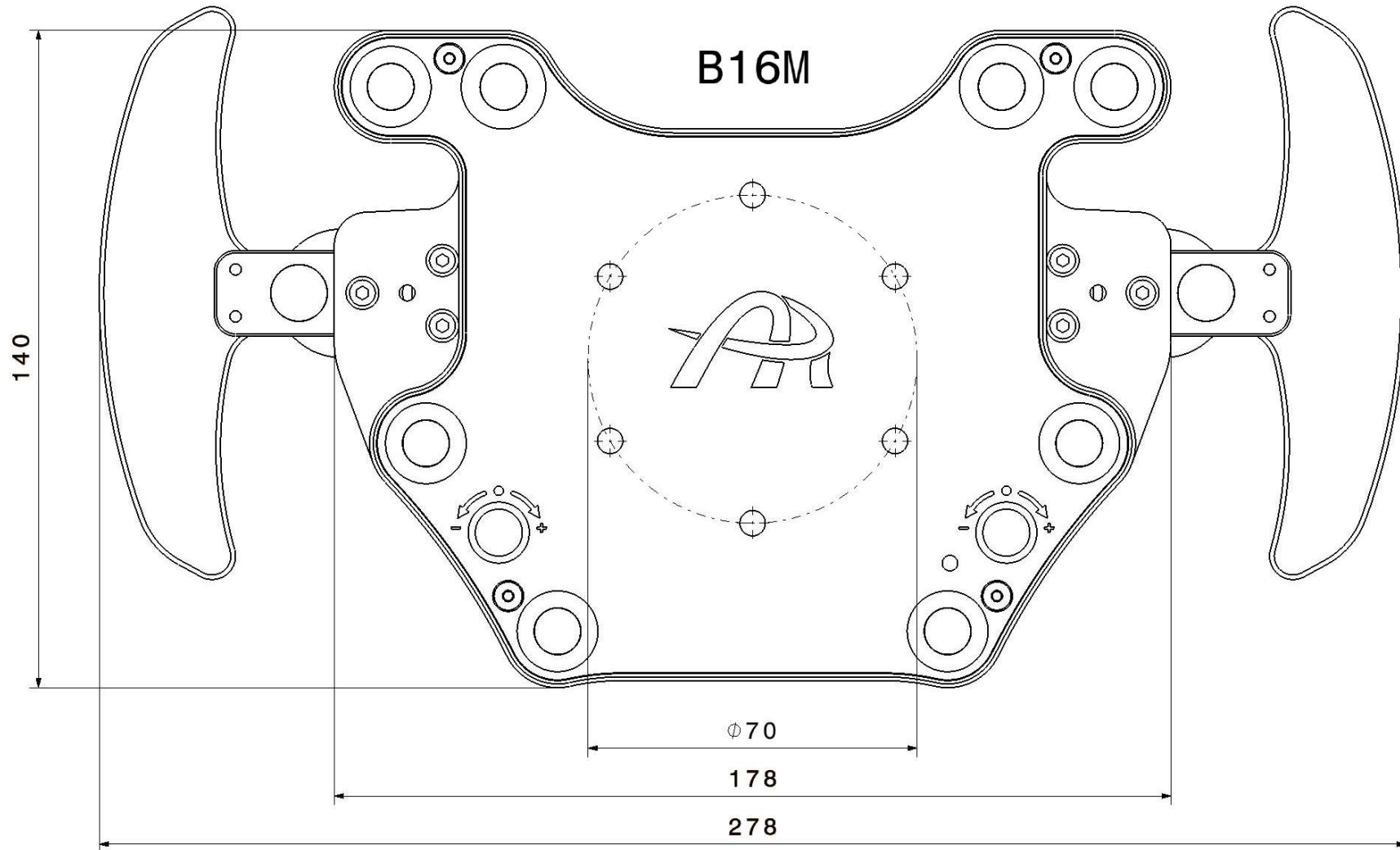
6.   label application

- encoder knobs must be removed to apply label (hex wrench)
- to apply button 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
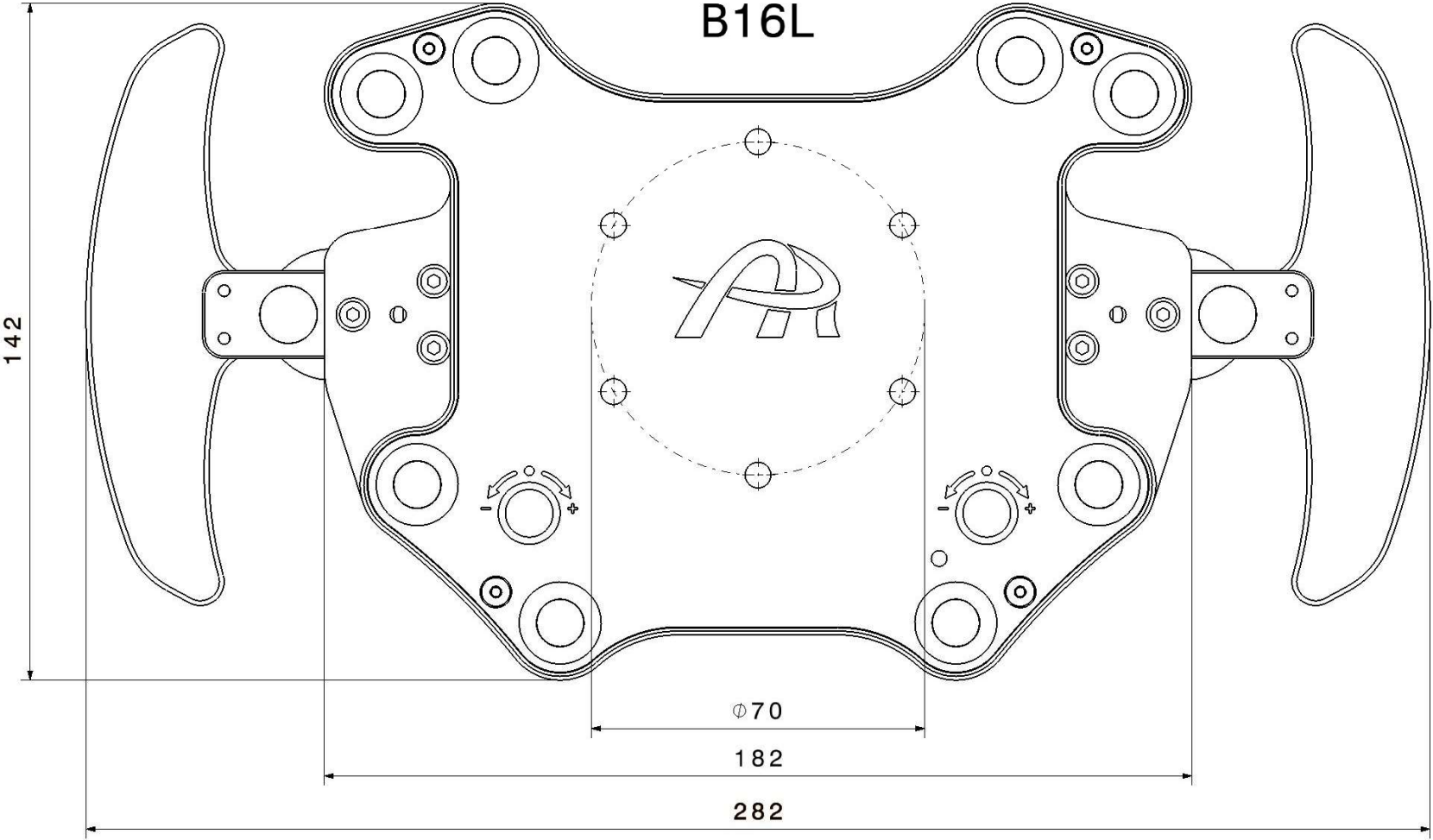
7.   paddle shifter force setting

- 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. B16M dimensions

9. B16L dimensions

10. wiring schematic

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┌─────────────────────┐
│    push buttons      │
│     joysticks        │
│   paddle shifters    │
└─────────────────────┘
           │
           ▼
┌─────────────────────┐         ┌──────────┐   wireless bluetooth connection   ┌──────────┐
│     SC2BTEA         │─────────│ antenna  │- - - - - - - - - - - - - - - - - ▶│ Simucube │
│   wireless module   │         └──────────┘                                    │wheel base│
└─────────────────────┘                                                         └──────────┘
           ▲
           │
┌─────────────────────┐
│    ON-OFF switch     │
└─────────────────────┘
           ▲
           │
┌─────────────────────┐
│     ER 14250         │
│ 3,7 V lithium battery│
└─────────────────────┘
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