

## Phase-lock fMRI scan to artificial ventilation setup quick guide for FY3200S

(Version: w202103, Wenju@Keilholz MIND Lab)

- Set master channel frequency (MF), press **CH1** button to select (keep the sideward LED indicator on).
  - MF=0000.00160kHz (1.6Hz for TR=1.25s scan every other breath; 1.5Hz for TR=2s scan every third breath)(press **PARM** button to switch pages)
  - AMPL=05.00V (amplitude=5v)
  - SQUR (square wave)
  - Offs=2.5V (offset=2.5v)
  - DUTY=99.9% (99.9% 5v baseline and 0.1% downward pulse to meet Bruker trigger requirement of high-to-low pulse triggering)
  - Phase=000' (no phase shift)
- Lock slave channel to master channel: press **SYS** button to the page of **Freq CH1=Ch2?** select **OK** by pressing the blue turnable button. Set slave channel frequency (SF), press **CH2** button to select (keep the sideward LED indicator on). MF=0000.00160kHz, AMPL=05.00V SQUR, Offs=2.5V, DUTY=70.0%, Phase=000'
- Save frequency, press **SYS** button to the page **\*SAVE P\_ON FREQ**, press the blue turnable button. Turn the blue button to the page **SAVE configurati Following**, press the blue button to save the setup. (the saved parameters will be default when power up)
- Ch2 used to control the ventilator, adjusting DUTY (select and turn blue turnable button) to change respiration/inspiration ratio in need. (70% meets the most situations in rats)
- Ch1 used to trigger a scan.(connect to scanner trigger-in cable)

