babyPAC vent
Quick setup sheet

- Gas-driven, pressure ventilation
- For neonates and up to infants <10kg (5-10kg could also use suitable volume-mode ventilators e.g. Oxylog 3000)
- **respiratory rate** is set by adjusting inspiratory and expiratory times- see examples on next page and on top of babyPAC ventilator
- Setup for ventilating intubated patient:
  - ensure patient monitoring (separate) and backup equipment (Ayres T-piece and suitable AmbuBag always available)
  - plug into ‘oxygen’ and ‘air’ outlets on wall
  - make simple ‘circle’ setup with ventilator tubing connected to ‘gas return’ and ‘gas outlet’ at side of babyPAC, with HME filter at patient end
  - connect test lung at patient end, then:
    - select **CMV+ Active PEEP** mode: ventilator should commence audible gas delivery
    - adjust settings (see next page)
    - check high pressure alarm (set alarm pressure below peak inspiratory pressure to test) and low pressure (disconnect test lung to test), then set appropriate alarm pressure
    - in absence of test lung, the high pressure alarm should be tested by occlusion of the circuit.
  - add capnography to system (ventilator-side of HME filter)
  - babyPAC ventilator now ready for connection to patient, or turned to Mode ‘0’ to standby
- Important **equipment points** to note:
  - **Respiratory rate** per minute = 60/(i-Time + expTime)
  - see example ratios printed on the machine
  - The FiO₂ will depend on which gas pipes are connected:
    - both O₂ and air connected delivers FiO₂ 0.21-0.7
    - O₂ alone delivers FiO₂ 0.5-1.0
    - Air alone delivers FiO₂ 0.21 (n.b. not recommended)
    - I.e. to deliver FiO₂ above 0.7 the air pipe must be disconnected
  - There is no facility to estimate **tidal volume** on the babyPAC
• **Example settings** for neonate/infant ventilation:

Mode: **CMV + ACTIVE PEEP**

- Expiratory time = 1.0 s
- Inspiratory time = 1.0 s
- Alarm pressure = 30 cmH₂O

FiO₂: **titrated** (see prev. page)

PEEP: 5 cmH₂O (adjust according to display)

Peak inspiratory pressure: 20 cmH₂O

These settings would deliver pressures of 20/5 cmH₂O at a rate of 30/min.

**Clinical tips** for neonatal/infant ventilation:

- Review clinical situation and adjust settings if necessary
- Neonatal/infant ventilation has similar principles to adult ventilation:
  - the main differences are smaller tidal volumes and a closer I:E ratio
  - PEEP is usually beneficial and can be increased (5 cmH₂O common)
  - transferring ‘standard’ safe adult pressures to neonatal patients using pressure control ventilation with the babyPAC should result in a safe tidal volume
- A post-intubation CXR is required prior to transfer to check tube position