Physiological data recording integrated with Paravision MRI:
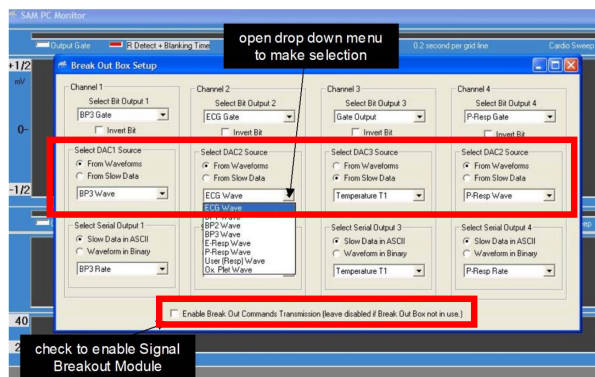
Summary: A custom device (LabJack) has been setup at the MCW 9.4T Bruker small animal system to record physiological data during MRI scans that can be used for later analysis. It will automatically record data from up to 4 values from the PC-SAM and 1 value from the POET gas analyzer. Data will be stored in a text file along with the MRI raw data.
Note: The hardware and its connections should not be changed.
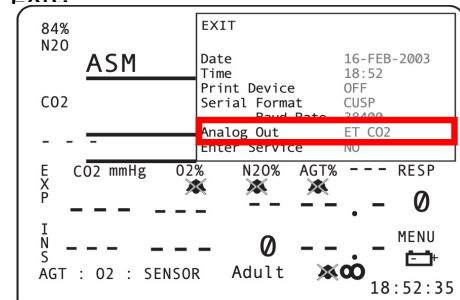
Setup:

PC-SAM:

- Select BreakoutBox button on bottom of window.
- **Select DAC Source** to record.
- Only **From Slow Data** option is currently compatible.
- **Ensure the checkbox at the bottom is selected.**

Gas/POET Analyzer:

- Use the selector button to select Menu, Configuration.
- Select **Analog Out** setting. **AGT** is isoflurane percentage.
- Press button to activate setting
- Exit.

Starting:

Only needed once after starting Paravision. Python libraries may install automatically for new users.
- Open Paravision as usual.
- Select "Programs/Terminal…" menu item.
Note: Cannot be run from non-Paravision terminal.
- In the terminal, type the command (alias):
`waves`
- Choose *Sample Period* (recording interval).
- Select channels matching previous Setup.

- To monitor without PV or saving data, select: *Run without PV*. Data will display in the window but will not be saved.

- To log the data alongside imaging data, select: *Start PV Recording*. The Program will run continuously, monitor PV, and save data as csv file in the raw data folder. No other input needed.
- Additional data/events entered in the Custom panel can be logged when in PV mode. Enter text and click *Update* for Iso changes, injections, or stimulation events, etc.