**ECG-GATE-CARDRESP-E/EL: COMPLETE DUAL CHANNEL GATING SYSTEMS**

**ECG-GATE-CARDRESP-E with DTU200**

**ECG-GATE-CARDRESP-EL with DTU300**

This system provides the cardiac trigger via an electrocardiogram amplifier and includes an MP160/150 data acquisition & analysis system, dual channel cardiac respiratory gating system, and appropriate amplifiers, transducers, cables, electrodes, and leads.

The **MRI Smart Electrocardiogram Amplifier** ([ECG100C-MRI](#)) records electrical activity generated by the heart and will reliably record ECG from humans or animals. The amplifier output can be switched between normal ECG output and R-wave detection. The R-wave mode outputs a smoothed pulse with the occurrence of each R-wave. The exact timing of the R-wave is detected even under conditions of extreme signal artifact.

The **Respiration Transducer** ([TSD110-MRI](#)) requires no electrical connections inside the chamber and works on a number of body locations. The multipurpose assembly can be used to noninvasively measure pulse, respiration—from a small mouse to a human, small pressing forces (like pinching fingers together) for Parkinson’s evaluations, human facial expressions (smiling, frowning, etc.), spacing and pressure between teeth coming together, or startle blink response.

The **dual channel gating system** ([DTU200 in -E or DTU300 in -EL](#)) works for small animal and human MRI applications. It sends cardiac trigger pulses to the MRI when a respiration signal is in the quiet phase. Additional filters and gain controls further refine the quality of the signal and ensure reliable triggering.

**AcqKnowledge** includes automation tools for artifact frequency removal, artifact projection removal, median filter artifact removal, and signal blanking.

**System includes:**

- MP160/150 Data Acquisition & Analysis System with AcqKnowledge software (for Windows or Mac)
- ECG100C-MRI Electrocardiogram Amplifier
- MECMRI-BIOP MRI Cable/Filter Set to Biopotential Amplifiers
- LEAD108B (x 3) Radiotranslucent Clip Lead—unshielded, 15 cm
- EL508 (100/pk) Disposable Radiotranslucent Electrodes (Human)
  
  or
  
- EL510 (20/pk) Disposable Radiotranslucent Electrodes (Animal)
- TSD110-MRI Respiration Transducer
- DA100C General-purpose Transducer Amplifier
- Dual Channel Cardiac Respiratory Gating System
  - DTU200 with GATE-CARDRESP-E
  - DTU300 with GATE-CARDRESP-EL