(c) Probe switch
(d) Application preset switch

4.4 Adjusting the ultrasound output power

Use the steps below to adjust ultrasound output power according to the ALARA principle and operating mode.
Examinations should be conducted according to the ALARA principle of extracting the maximum possible diagnostic information while reducing the acoustic output to the lowest reasonable level. This is the same principle as used with ionizing radiation.
In general, the Diagnostic Ultrasound System is said to be non-invasive. However, since it exposes the human body to ultrasonic waves, it is not completely safe. Therefore, perform examinations using the lowest possible ultrasound output power that the examination requires.

Procedure

- Turn the [Acoustic Power] rotary encoder to adjust the ultrasound output power.
  → The ultrasound output power is displayed on screen as a percentage of actual set transmitter voltage relative to what is regarded as safe maximum possible transmitter voltage under current scanning conditions.
  You can adjust the ultrasound output power in 1% increments.
  Lowering the ultrasound output power lowers the surface temperature at the tip of the probe.

4.4.1 Limiting the ultrasound output power for fetal observation

When the system is used for fetal observation, the ultrasound output power is limited according to our regulations in compliance with the risk management requirements stipulated in IEC 60601-2-37 Ed.2.1 (2015). The MI upper limit and the TI upper limit are both below 1.0.
This limitation on ultrasound output power applies to the following applications: General, Obst. 1st Trim, Obst. 2nd Trim, Obst. 3rd Trim, Obst. TV, Fetal Heart,Obst. 3D, Ob.3D 1st Trim, Ob.3D 2nd Trim, Ob.3D 3rd Trim, STIC, Obst. TV 3D, Ob. *** GP, and other applications that are edited based on the aforementioned applications.

(1) Overriding the limit on the ultrasound output power for fetal observation

Procedure

1. Select [Power Limit Override] from the System tab on the touch panel.