

Concept and design: Michelangelo Lupone

First presentation: HEM-Haute Ecole de Musique di Ginevra, May 2012



SkinAct is an augmented percussion instrument. It is composed of a 20 centimetres high on which a 40 inches membrane is set, for a total diameter of 106 centimetres. A sensor and a vibrational actuator are placed on the membrane. A 21 circles and 13 diameters map, designed on the membrane surface, put in evidence the vibrational nodes which allow the selection of the partial instrument frequencies. SkinAct represents a progress in the study of the vibrational characteristics already observed in the augmented instrument Feed-Drum (Lupone, 2002) and makes its interactive character evolve considerably.

The SkinAct has a vibrational detector and an actuator placed in feed-back condition through the membrane. This characteristic allows choosing different tuning modes (with a fundamental frequency between 30 and 45 Hz) maintaining a wide range selection of partial frequencies. These ones are selected imposing vibrational nodes connecting the circles and the diameters of the map.

The skin characteristics have been accurately studied and chosen also to allow the dynamic projection of light in relation with the performer's gesture.

The SkinAct is anchored to a mechanical system which permits its use in both vertical and horizontal position, at variable heights.

The SkinAct, like the Feed-Drum, allows the insertion of dynamic controls for sensor and actuator, with algorithms specifically implemented on Mac and PC platforms.

Designed by composer Michelangelo Lupone for his composition "Spazio curvo" (curved space), it was produced by Centro Ricerche Musicali – CRM of Rome in 2011, and was presented for the first time in May 2012 at HEM - Haute Ecole de Musique, Geneva

Artistic consultant: Laura Bianchini

Project assistant: Emanuela Mentuccia

Technical and audio assistant: Maurizio Palpacelli