## [ Construction of the present equipment ]

The equipment consists of the components shown on the picture below. The heater unit (heat transfer plate with built-in heater) contacts the outer surface of the reed plate through the bottom surface of a chromatic harmonica and is pressed against the reed plate into close contact by tightening screws. The heat from the heater is transferred to the reed plate through the contact surface between the heat transfer plate and reed plate, raising the reed plate temperature to an approximately the same level as the human body temperature, and reducing the temperature difference between the blown air and reed plate to prevent the condensation.

AC adapter [ Components of the present equipment ]



Heater

Power

lamp

Casing

## [Temperature rise characteristics]

The following chart shows samples of temperature rise at the middle part of the reed plate of a harmonica (Hohner Super 64) caused by the use of a mass production prototype. The four graphs contained represent temperature rise by four types of power supply. With Super 64X, the temperature will be lower by approximately 2°C and, with Chromonica 48 and 270, higher by around 2°C. But, neither of them is guaranteed.

Ordinarily, the temperature at the middle of the harmonica reed plate reaches a steady state in 30 minutes after powering ON and the temperature is maintained thereafter when using AC adapter. In case of battery, the temperature will be maintained approximately 60 minutes (the duration will vary depending on the charged conditions and type of the battery used).



The temperature represents one at the middle of the reed plate. It will be lower on both ends by about 5°C.

The temperature shown above represents the temperature rise. The absolute temperature is obtained by adding the room temperature to that temperature rise.

Solid lines represent measurements and broken lines predicted predictions.