

pendulum rod by the knurled holding knob and turn the complete bob. One complete turn changes the rate one second per hour. Regulate the pendulum to within one second per day by this coarse adjustment. For fine regulation, use the free running nut under the bob. Two complete turns changes the rate approximately one second per day.

● SETTING CLOCK

Never turn the clock hands backwards nor move the hour or seconds hand. If the clock is fast, stop the pendulum and then start again when it is at the exact time. If the clock is slow, stop the pendulum just after any minute as indicated by the seconds hand. Move the minute hand until it is over the minute marker and so the clock is just ahead of the correct time, then start pendulum swinging again at the correct instant. Note that when the seconds hand points to 60, the minute hand points directly to a minute marker.

● MAINTENANCE

The oiling of this clock is very important and to obtain the best results from this equipment, we recommend a periodic cleaning and oiling throughout each year by an IBM Customer Engineer. For further information, contact the nearest IBM Office.

THIS FOLDER IS VALUABLE . . .

- We suggest that it be filed in a convenient place to insure easy access to the operating and maintenance information necessary for continuous satisfactory operation of your International equipment.

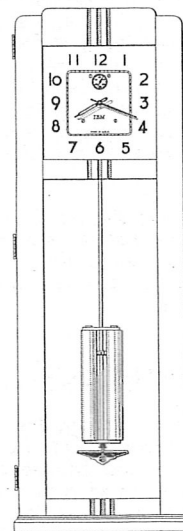
INSTRUCTIONS

FOR THE OPERATION AND CARE

OF YOUR

IBM

MASTER CLOCK



NO. 25

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● INSTALLATION

The clock should always be installed on a substantial post or wall that is free from dust, moisture and vibration. The usual practice is to place the top of the clock approximately eight (8) feet from the floor. This locates the clock within easy reach for setting and regulating.

The clock should be securely attached to the wall so that it will not move out of plumb even with a severe jolt. If the clock is moved only slightly, it will throw it out of beat and thus affect its time-keeping, and may even stop it. The clock is designed to be attached at two points, viz: (1) The hanger, which may be a large screw in the wall, or the special International wall box for Master Clocks. This screw or bolt in the wall box is the main support for the weight of the clock. (2) One screw is provided for the bottom center of the case. This prevents side sway of the bottom of the case and keeps the clock in beat. The wall upon which the clock is to be mounted should be perpendicular and true. If not, block out the case where necessary.

It is advisable to use the pendulum as a plumb before installing the bottom screw. The end of the pendulum screw should hang directly over the "O" position of the scale, and neither in front of, nor behind the scale.

● INSTALLING PENDULUM

Before shipment from factory, the pendulum and pendulum bob are disassembled to prevent damage to parts or clock during shipment. Before disassembly begins, a piece of tape is applied to the pendulum rod, adjacent to the top of the pendulum bob or pendulum bob collar, and a red mark is made on pendulum sticks directly behind the top of the pendulum bob. When reassembling, this will permit a much closer pendulum bob adjustment for quicker regulation.

When assembling, the pendulum rod or stick is inserted through the pendulum bob and the pendulum bob nut is adjusted so that the pendulum bob collar or the pendulum bob, if no collar is used, is immediately adjacent to the tape. If a pendulum stick is used, the red mark is directly behind the top of the pendulum bob. After adjustment, the tape is removed.

The suspension spring is located almost directly behind the seconds hand shaft. The slotted end of the pendulum rod or stick is hung on the suspension spring pin so that the hooks of the rod or stick are to the rear of the clock. Care must be exercised so that the suspension spring is never twisted at any time. With the pendulum hung properly, the verge crotch is adjusted so it straddles the rod and the verge wire is inserted in the slot in the pendulum stick.

The mercurial pendulum bob is shipped completely assembled. If, after installing the pendulum bob on the rod, it does not hang with the cross bar parallel to the rear of the case, loosen set screw in friction guide assembly (just under top cross bar) and turn jar frame until parallel to rear of case. Hold pendulum rod so that it will not twist the suspension spring. Retighten set screw. If the brass bob is not flat with the rear of the case, do not attempt to twist it to align it. Check fork at the top of the pendulum stick to see if bent. The free-running pendulum bob adjustment nut is installed with the small end down on all pendulum rods.

● CONNECTING CLOCK

The clock must be connected according to the wiring diagram sent with the system. All terminals are clearly marked.

● REGULATING

The regulation of the clock is obtained by lengthening or shortening the pendulum. The longer the pendulum, the slower the clock will run and vice versa. The brass bob pendulum has but one regulating nut, and one complete turn of the nut will cause a variation of approximately 1/2 minute per day.

Adjust the mercurial pendulum to within one second per day by means of the graduated nut at bottom of pendulum. One complete turn changes the rate approximately one second per hour and one division approximately one second per day. The free running nut on the lower end of pendulum rod is used for fine regulation only, and one turn makes a change of approximately one second per week.

The invar pendulum has two regulating mediums, coarse and fine. For coarse regulation, hold the
