COSY™ Digital Pulse Rate Monitor

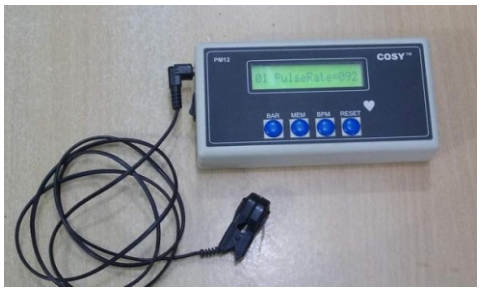
Model PM-12

With Infra-Red Finger/ Ear lobe Clip Sensor

- ★ Infra-Red Optical Finger / Eearlobe Clip Sensor .
- ★ Monitors pulse rate and rhythm.
- ★ Alphanumeric LCD Display.
- ★ Pulse monitoring by sound beeps and LED indication.
- ★ Shows Pulse per minute after every 5 pulse count.
- ★ Bar graph to display signal sensitivity.
- ★ 15 Memories.

Extremely useful in:

Pulse monitoring in Exercise / Sports (Gyms etc.).
Medicine and Bio-research.



Introduction :

Electronic pulse meters are accurate enough when they count from your finger or ear lobe at normal body temp.

A normal, healthy, human heart beats 72 times per minute. A lower heart rate can result from being a consistent exerciser, from some medications for heart or blood pressure problems, or simply because you came that way.

Your resting heart rate can be measured by recording your pulse before arising on two different days and averaging the figures. If your rate is less than 50, or more than 90, please check with your doctor.

Your maximum heart rate is age related. Take 220 and subtract your age. That rate is as fast as your heart should safely be encouraged to beat .
Target heart rate zone is 50 to 85 percent of your maximum heart rate. Target heart rate is an estimate of exercise intensity made by measuring heartbeats per minute.

If you are just starting your healthy activity program, aim for 50 to 60 percent of maximum heart rate. If you are a moderate exerciser, try 60 to 70 percent. If you are in great and improving fitness condition, go for it at 70 to 80 percent.
Your pulse rate should be back to normal by 8-10 minutes after exercising, if not, you are working too hard.

Curtsey : Artical published by Dr. Geoge .L.Dixon available at :
www.destinationfitness.com/dixon/dixonarticles/heart_rate.htm

Important : All above information is for general reference only, It is strongly recommended to consult a qualified doctor for obtaining best results from use of this device.

Operation :

1. Connect the AC Adapter and Sensor to the device & Switch ON the Red power switch.

2. Clip the sensor to the finger tip (on the center of nail of fore finger) or on ear lobe as shown, as per requirement.. Keep your hand and body stationary and breath normally.

3. Push the Bar Graph Button and adjust the position of sensor on finger clip or ear lobe to get the maximum consistent signal. Normally a minimum of 6 to7 bars flashing with heartbeat rhythm should be visible to get the proper result. longer flashing bars indicate better sensitivity.

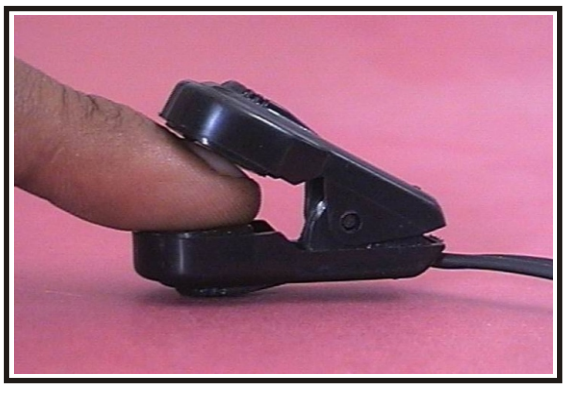
(Proper readings may not be obtained if body temperature is below 35'C or fingers are very cold because this is due to an insufficient blood flow to finger ends. Also often it is difficult to get consistent readings at earlobes due to many factors i.e. insufficient flow of blood , dirty skin ,presence of hair etc. Also device will not work properly in direct sunlight or very high intensity lights, If required cover sensor clip and finger with a dark cloth in such conditions)

4. Push the BPM button to start getting pulse beeps with LED indication and showing pulse count in display . After every 5 pulses the meter shows the average pulse per minute count. The average reading after every 5 pulses is stored in memory up to 15 times. The actual useful reading will be after about 10 pulses (2nd or 3rd reading).

For detailed observation , the readings of about 1 minute in the Memory may be used. Pressing the memory button will automatically show upto 15 readings from start in the memory one by one.

5. To take fresh set of readings press reset and start again as above.

It is also possible to take average reading after every 10 or 15 pulses . To set 15 pulse count keep pressed the BPM button before switching ON the instrument. Now switch ON the set and then release the BPM button . The set will start taking average reading after every 15 seconds.. Similarly keep pressed the Bar Graph button before switching ON the set to get an average reading after every 10 pulse count.



Finger Clip Appliction

Ear Lobe Application

TECHNICAL SPECIFICATIONS

- ✪ ***PRINCIPAL OF DETECTION*** : FINGER PLYTHYSMOGRAPHY
- ✪ ***PROCESSOR*** : 8 BIT MICRO CONTROLLER
- ✪ ***POWER SOURCE*** : 9 to 12V VOLTS POWER ADAPTER
  or 9V 300mAH chargeable Battery Type R 22 or eqv.
- ✪ ***MEASUREMENT RANGE*** : 10-300 PULSE PER MINUTE.
- ✪ ***ACCURACY*** : 3% OF READING
- ✪ ***SIZE & WEIGHT*** : 14 cm x 7 cm x 3 cm & 250 gms. (Approx.)

Accessories included :

1. **Infra-Red Finger /Ear lobe clip sensor - 1 no**
2. **12 Volt power adapter for use with 100V - 240V AC.**

Use with 9V Chargeable Battery:

Pl. Note : Device can also be operated by fixing a small 9 V 300mAH chargeable battery Type **R22** , A fully charged battery can run the device for appx**.** 2 hours of continuous use..
Continuous fast beeps or flashing display indicate the low battery .
To charge the battery connect the Monitor with Power adapter for 8 to 10 hours.
Keep the red power switch in OFF condition while charging the battery.

Due to postal restrictions these batteries are not offered with product in shipment.
However they can easily be procured by users locally.
Important: Never install Non Chargeable 9V batteries in this device .

Statutory Notice :

This is a low cost product for general Pulse rate monitoring applications in exercises by individuals and for qualified medical practitioners for research purposes.
The device is not meant and sold for use in any life support system and regular medical applications.

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