

The Resuscitation Timer has been designed to work with a bag mask resuscitator. The Resuscitation Timer monitors the patient airway pressure to determine and display inspiratory time, breaths per minute (BPM) and airway pressure. The Resuscitation Timer will guide the caregiver to deliver resuscitation per the American Heart Association Guidelines 2005. Should the Resuscitation Timer stop working for any reason, continue to use the bag mask resuscitator in a normal manner.

### ResusciTIMER™



#### Functional Specifications

Size	3.9" width x 2.7" height x 1.4" depth (9.9 cm width x 6.8 cm height x 3.5 cm depth)
Weight	5 ounces including battery
Battery Type	9V Alkaline
Battery Life	4.5 hrs, continuous use @ 72°F
Airway Pressure	60 cm of H <sub>2</sub> O maximum Accuracy 5%
Adult Setting	I time = 1.0 – 1.4 sec 10 ± 2 BPM
Child Setting	I time = 1.0 – 1.4 sec 18 ± 2BPM
Accuracy	I time = 10% or .1 sec BPM = ±1

#### Operating Conditions

Temperature	0°F to 120°F (10°C to 38°C)
Relative Humidity	0% to 90%

#### Storage Conditions

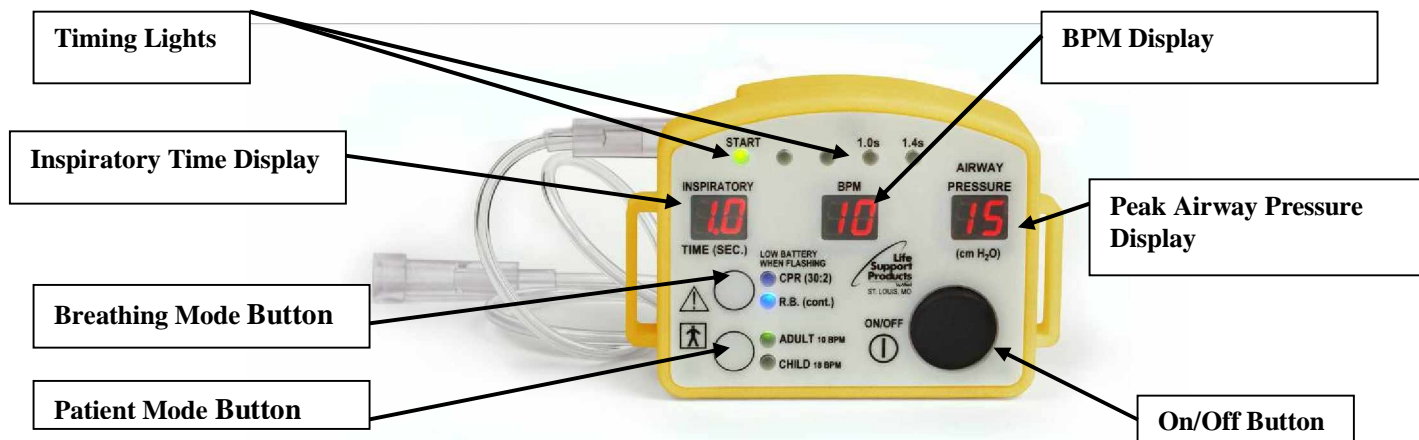
Temperature	-20°F to 140°F (-29°C to 60°C)
Relative Humidity	0% to 90%

#### Shipping Conditions

Temperature	-40°F to 140°F (-40°C to 60°C)
Relative Humidity	0% to 90%

**PATENT PENDING**

## Operating Instructions:



### Power Button

The power button is labeled “On / Off”. Push the button to turn the unit on and push the button again to turn the unit off.

### Patient Modes

There are two Patient modes, Adult and Child. The bottom switch on the left side will toggle between the two modes. There are two LED’s to the right of the switch to indicate which mode the device is in. Green indicates Adult mode and blue indicates Child mode. In the Adult mode you will be guided to a breath rate of  $10 \pm 2$  BPM. In the child mode you will be guided to a breath rate of  $18 \pm 2$  BPM.

### Breathing Modes

There are two Breathing modes, Rescue Breathing mode and CPR mode. The breathing mode button will toggle between the two modes. There are two LED’s to the right of the switch to indicate which mode the device is in. Green indicates CPR mode and blue indicates Rescue Breathing mode. In CPR mode the unit will detect that a breath is being delivered and guide you to the proper inspiratory time. It will then guide you to deliver a second breath at a rate of 18 breaths per minute regardless of the Patient mode selected. This mode is designed for alternating between chest compressions and 2 breaths per AHA guidelines. In rescue breathing mode (RB) the unit will guide to deliver continuous breaths at the rate selected by the child / adult patient mode. The RB mode may also be used during CPR when continuous breaths are given. The breathing mode light will flash when a **low battery condition** has been detected.

### Buzzer

The timer comes with a built in buzzer that will signal the caregiver to start a breath and show the desired 1 second inspiratory time. The buzzer will chirp when it is time to deliver a breath to the patient. When the start of the breath has been detected the buzzer will turn on and stay on for one second. This is the inspiratory time recommended by the AHA and will serve as an audible guide to the proper inspiratory time. When it is time to deliver the next breath the buzzer will chirp again.

To disable the buzzer press and hold the CPR / RB mode button down for about 3 seconds. The buzzer will chirp twice indicating that it is now disabled. Pressing and holding the button down again for 3 seconds will enable the buzzer.

### Timing Lights

There are 5 bi-color LED’s across the top of the timer. When the start of a breath is detected the first LED on the left will turn on. As the breath continues the next LED will turn on, this will continue until all 5 LED’s are on. Ideally the breath will end with 4 or 5 LEDs on. Next the LED’s will begin to turn off starting with the right LED. Once all of the LED’s are off it is then time to start the next breath. When these lights are green the timer has determined that the last breath was delivered according to the American Heart Association (AHA) guidelines. When the lights are red the timer has detected that the last breath was not delivered according to AHA guidelines.

### Numerical Displays

There are 3 sets of numerical displays indicating Inspiratory Time, BPM and Peak Airway Pressure.

**Inspiratory Time** is the amount of time taken to deliver a breath to the patient. This will be reset at the start of each breath and be updated continuously while the breath is being delivered to the patient. The Inspiratory time is measured in seconds.

**BPM** (Breaths Per Minute) This number is updated at the start of each breath.

**Peak Airway Pressure**, this number is the peak pressure delivered during each breath. It is continuously updated during the delivery of a breath and is cleared at the start of each breath. The Peak Airway Pressure is measured in centimeters of water (cm-H<sub>2</sub>O). The peak airway pressure display will flash “61” if pressures over 60 cm H<sub>2</sub>O are delivered to the patient.

**⚠️ WARNING:** This device has been designed as a guide to help achieve resuscitation per the American Heart Association Guidelines 2005. Physician’s instructions or department protocols should be followed if they differ from this device.

### Installation of the Resuscitation Timer with a Life Support Products L770 BMR

**⚠️ Warning:** Do not attach the ResusciTimer to an ET tube or other airway device. The weight of the ResusciTimer may cause the airway device to move from its intended position.

#### Installation of ResusciTimer with a Life Support Products, Inc. L770 BMR:

1. Install the ResusciTimer to the corrugated tubing using the optional hose clip or the Velcro strap.
2. Install one end of the pressure tube onto the CPR timer hose barb as shown. See Fig. 1.0
3. Install the second end of the pressure tube onto manometer port of the L770 BMR, as shown. See Fig. 1.0

A ResusciTimer is shown installed on a L770 BMR in the figure 1.0 to the right

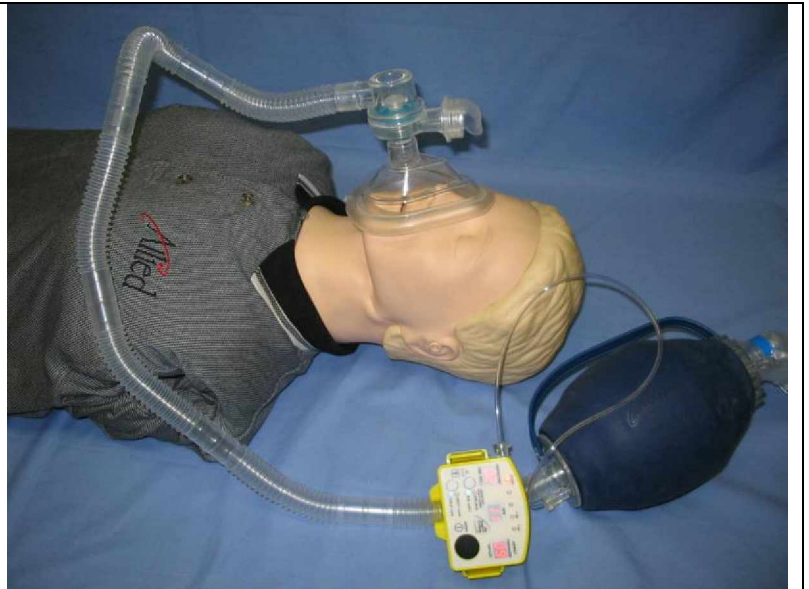


Figure 1.0

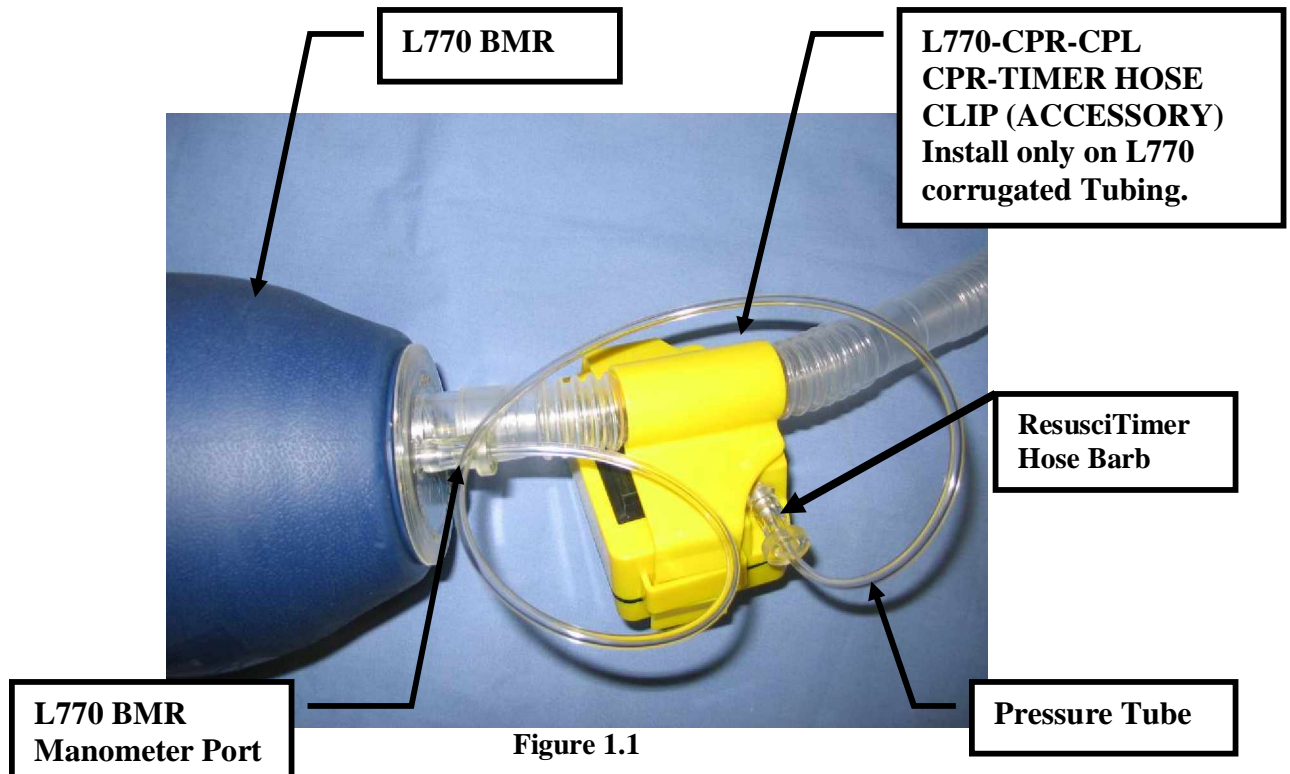


Figure 1.1

**Installation of the Resuscitation Timer with other BMRs**  
(Life Support Products L670, Ambu-“Ambu Spur”, Laerdal-“The Bag”,  
O-Two Systems-“Smart Bag” and Mercury Medical-“CPR Bag”)

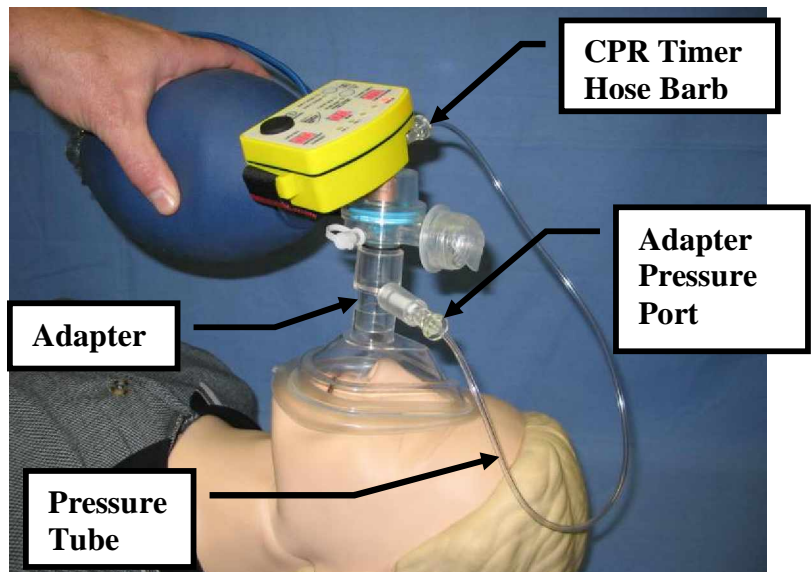
**Instructions for attaching Bag mask Resuscitator with Velcro strap:**

To attach the CPR-timer to a Bag mask resuscitator, simply wrap the Velcro strap, Allied P/N: L770-CPR-VEL, through the slots shown in Figure 3.0, and around bag mask resuscitator. Tighten the Velcro strap so that CPR timer is snug to the outlet of the BMR and the front face of the CPR timer is visible to the caregiver.

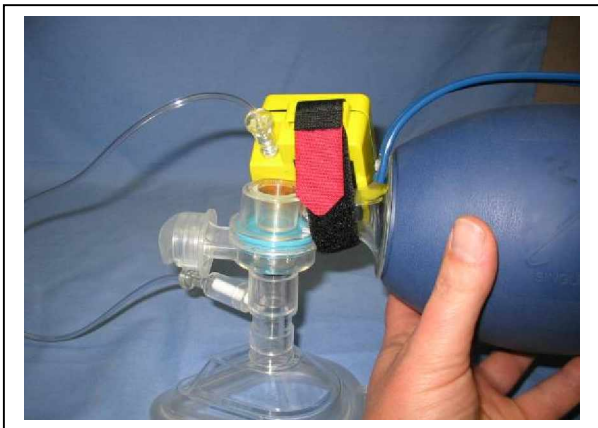
**⚠ Warning: Do not attach the ResusciTimer to an ET tube or other airway device. The weight of the ResusciTimer may cause the airway device to move from its intended position.**

**Installation of CPR timer on other BMRs**

1. Install the CPR Timer adapter with filter between the BMR outlet and the patient mask if the BMR does not have a manometer port.
2. Install one end of the pressure tube onto the CPR timer hose barb as shown.
3. Install the second end of the pressure tube onto the CPR Timer adapter as shown. If the BRM is equipped with a manometer port you can connect the tube to the manometer port. Verify that the tube securely connect to the manometer port.



**Figure 2.0**



**Figure 3.0**



**Figure 4.0**

**Instructions for replacing batteries:**

To replace the batteries, See Fig. 4.0, turn unit over to expose the battery compartment. Using a number one Philips head screw driver, loosen the two screws and battery cover to access the battery. Replace the depleted 9 volt alkaline battery with a new battery. Return the cover and two screws to the unit and tighten. Note, the screws are captive in the battery cover so they do not become lost.



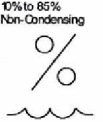
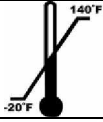

**Cleaning Instructions:**

Clean unit with clean cloth and mild soap or alcohol only. Unit is only liquid resistant and should not be submerged in any liquid. If patient valve of bag mask resuscitator becomes contaminated by liquids such as vomit, the adaptor and hose assembly, Allied P/N's: L770-CPR-ADP and L770-CPR-TUBE respectively, will need to be replaced. They are intended for single use only.

The following table summarizes the AHA Guidelines 2005 for CPR. These are guidelines and one should always follow physician's orders.

Maneuver	Adult (Lay Rescuer $\geq$ 8 Years) (HCP: Adolescent and Older)	Child (Lay Rescuers: 1 to 8 Years)
Airway	Head tilt-chin lift (HCP: suspected trauma, use jaw thrust)	Head tilt-chin lift (HCP: suspected trauma, use jaw thrust)
Breathing Initial	2 breaths at 1 second per Breath	2 breaths at 1 second per Breath
Rescue breathing without chest compressions	10 to 12 breaths per minute (approximately) at 1 second per Breath	12 to 20 breaths per minute (approximately) at 1 second per Breath
Rescue breathing with chest compressions	30 compressions then 2 quick breaths	30 compressions then 2 breaths for single rescuer 15 compressions then 2 breaths for 2 rescuers
Rescue breathing for CPR with an advanced Airway	8 to 10 breaths per minute (approximately) at 1 second per Breath	8 to 10 breaths per minute (approximately) at 1 second per Breath

Per the AHA Guidelines 2005 “excessive ventilation is unnecessary and is harmful because it increases intrathoracic pressure, decreases venous return to the heart and diminishes cardiac output and survival. Risk of gastric inflation is increased by high proximal airway pressure. High pressure can be created by a short inspiratory time, large tidal volume, high peak inspiratory pressure, incomplete airway opening and decreased lung compliance.

	Degree of protection against electric shock: Type BF
	Caution, Consult accompanying documents
	% Relative Humidity: 0 to 90%
	Temperature Range: -20°F to 140°F
	On/Off

- § Internally powered device.
- § IP20 degree of protection against ingress of water.
- § Equipment not suitable for use in presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide.
- § Suitable for continuous operation.

*This equipment has been tested and found to comply with the EMC limits for the Medical Device Directive 93/42/ECN (EN 55011 and EN 60601-1-2). These limits are designed to provide reasonable protection against harmful interference in a typical medical installation. The equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with these instructions, may cause harmful interference to other devices in the vicinity. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference with other devices, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:*

- § *Reorient or relocate the receiving device*
- § *Increase the separation between the equipment*
- § *Connect the equipment into an outlet on a circuit different from that to which the other device(s) is connected.*

*Consult the manufacturer or field service technician for help*

**Accessories:**

- L770-CPR-CPL            Bag Mask Hose Clip, qty. 2
- L770-CPR-PWR           9V Power Supply with battery door, qty. 1
- L770-CPR-ADP           Adaptor with filter and tube assembly (“*Single use only*”, includes 15 of each)
- L770-CPR-TUBE          Pressure Tube assembly (“*Single use only*”, includes 15 tube assemblies)
- L770-CPR-VEL           Velcro strap, to be used with competitor’s bags listed, qty 15

**WARNING: CPR TIMER NOT FOR USE ON INFANT, SMALL CHILDREN OR PERSONS WEIGHING LESS THAN 19 KG (42 lbs)**

**CAUTION: USE ONLY 9 VOLT ALKALINE BATTERIES.**

**CAUTION: DO NOT EXCEED 100cm OF WATER, OR PRESSURE TRANSDUCER MAY BE DAMAGED.**

**CAUTION: CLEAN UNIT WITH CLEAN CLOTH AND MILD SOAP OR ALCOHOL ONLY. UNIT IS ONLY LIQUID RESISTANT AND SHOULD NOT BE SUBMERGED IN ANY LIQUID.**

**CAUTION: DO NOT AUTOCLAVE OR ETO STERILIZE.**

**CAUTION: FEDERAL LAW RESTRICTS THIS DEVISE TO SALE BY OR ON THE ORDER OF A PHYSICIAN.**

If any problems are noted with this product, contact the Allied Healthcare Products, Inc.’s Technical Support Center for assistance at **800-411-5136**.

**1 YEAR LIMITED WARRANTY**  
The seller makes no warranties, expressed or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose, except as expressly stated in the seller’s contract or the sales acknowledgment form. This warranty excludes the 9V alkaline battery.

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