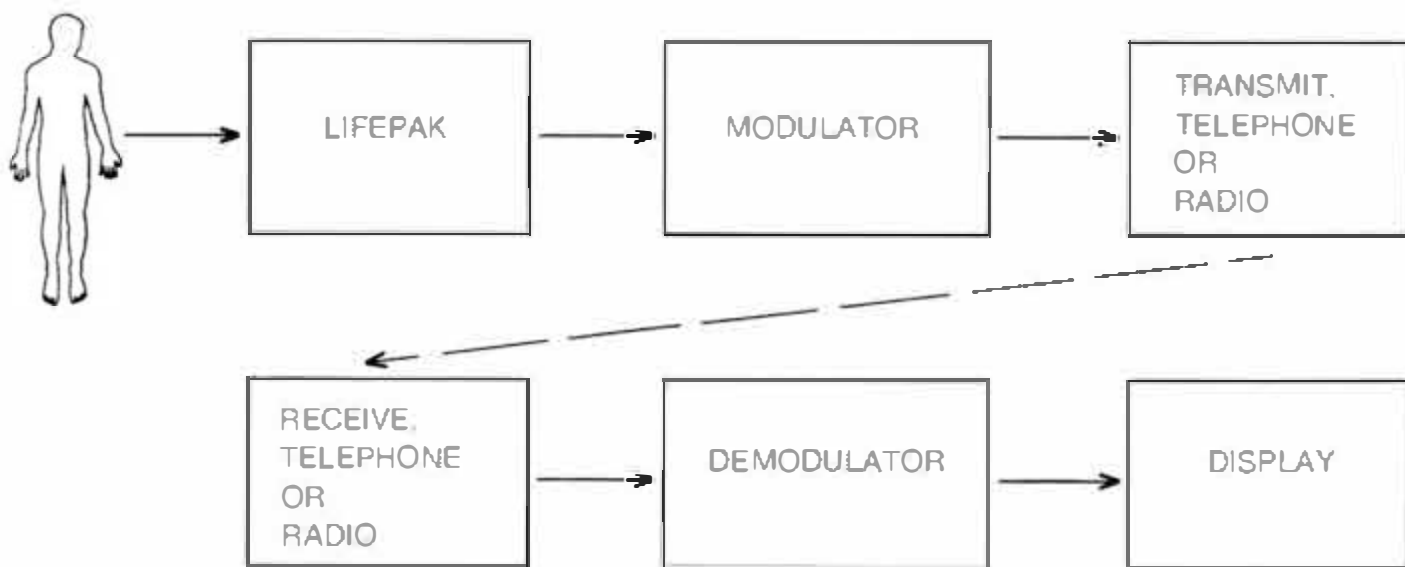


ECG Modulator/Demodulator



PHYSIO-CONTROL CORP.
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An FM modulator and demodulator are available for use with the PhysioControl® LIFEPAK® 4 and 5 battery-operated cardiograph/recorder/defibrillator models (minor modifications to Lifepak 4 are required). The modulator may also be connected to any ECG monitor or recorder with a high level output. The modulator and demodulator are designed to transmit ECG's via telephone line or radio transmitter/receiver link.

MODULATOR

The modulator is a rugged hand held unit that connects to the Lifepak by a single 12 foot long coil cord. The modulator converts the patient's ECG signal by frequency modulating an audio carrier. This FM audio signal then may be transmitted over standard voice communications networks. Any telephone, radio microphone, or walkie-talkie may be held against the specially designed foam pad for acoustic coupling. The transmitted signal is always visible on the Lifepak cardiograph or strip recorder. The modulator operates on two easily replaceable standard 9 V batteries. An LED provides a low battery warning.

Specifications

- Subcarrier center frequency: 1400 Hz \pm 2%
- Deviation sensitivity: full: 50 Hz/V \pm 10%
half: 25 Hz/V \pm 10%
- Maximum deviation: \pm 250 Hz
- Input passband: DC to 40 Hz \pm .5dB
- Input range: 0 to \pm 5 V (0 to \pm 5 mv at Lifepak input)
- Weight: .7 kg (1.5 lbs.)
- Size: 4.6 cm H x 8.4 cm W x 15.2 cm D (1.8" x 3.3" x 6.0")
- Temperature: 0° to + 55° C operating
-30° to + 80° C storage
- Humidity: to 95% R.H.
(non-condensing)
- Altitude: Operate to 4570 meters (15,000 ft.)

Physio-Control®

SPECIFICATIONS

LIFEPAK 5

CARDIOSCOPE/RECORDER MODULE

- ECG Signal Input: Paddles serve as both monitoring and defibrillator electrodes
Three lead low noise patient cable
- QRS beeper and volume control
- 1 mv cal, ECG size control and low battery indicator
- ECG output: 1 volt/mv
- Scope Size: 60 mm X 36 mm, non-fade
- Shielded against radio frequency interference
- Input protected from high voltage defibrillator pulses
- Electrically isolated input while monitoring
- Common mode rejection 80 dB or greater with respect to chassis ground and 5K Ω misbalance
- Differential ECG amplifier provides interference free trace
- Built in 40 mm chart recorder with stylus heat control
- Frequency Response: Cardioscope 0.5 to 40 Hz
Recorder 0.5 to 40 Hz
- Display Speed: 25 mm/sec. for both cardioscope and recorder
- Size: 9.7 cm H X 19.1 cm W X 33.8 cm D (3.8" X 7.5" X 13.3")
- Weight: 3.60 kg (7.9 lbs), including Battery/Pak



DC DEFIBRILLATOR MODULE

- All controls located on paddles
- Delivered output energy (joules): 40, 80, 120, 180, 240, 320
- 5 ms monophasic pulse (Edmark) waveform
- Charge time to 320 joules delivered energy, less than 10 seconds
- Size: 9.7 cm H X 23.4 cm W X 33.8 cm D (3.8" X 9.2" X 13.3")
- Weight: 4.64 kg (10.2 lb), including Battery/Pak

POWER SOURCE (Battery/Pak)

- High quality rechargeable Nickel-Cadmium batteries
- Separate, removable and interchangeable Battery/Paks in both Cardioscope/Recorder and Defibrillator Modules
- Fully charged Battery/Pak will provide
 - Defibrillator module: Minimum of (15) 320 joule discharges at -10°C. Nominally, (40) 320 joule discharges at 25°C
 - Cardioscope/Recorder module: Minimum (-10°C.) 1.7 hours ECG monitoring, or 30 minutes of recorder use, or any linear combination. Nominally at 25°C, 2.5 hours of ECG monitoring, or 45 minutes recorder use, or any linear combination
- Size: 2.8 cm X 9.4 cm X 13.7 cm (1.1" X 3.7" X 5.4")
- Weight: 0.60 kg (1.32 lb)

BATTERY/PAK CHARGER

- Integral test load - 50 ohm load
- Recharges 2 Battery/Paks in 5 hours
- Operating voltage: 110 VAC, 220 VAC, 12 VDC
- Size: 10.8 cm H X 28.6 cm W X 21.0 cm D (4.25" X 11.25" X 8.25")
- Weight: 2.1 kg (4.7 lb)

GENERAL (Defibrillator-Cardioscope)

- Temperature Characteristics
Operating: -10°C to +55°C
Storage: -35°C to +65°C
- Humidity: 0-95% R.H.
- Altitude: 4570 meters (15,000')
- Shock: 30 g, 11ms, 1/2 sine
- Vibration: MIL-STD 810C method, 514.2 curve V
- Molded cases of high impact plastic
- Completely sealed cases and controls - MIL-STD-108E Section 4.9
- This equipment should not be used in the presence of flammable agents or anesthetics

CARDIOSCOPE/RECORDER CONTROLS AND INDICATORS

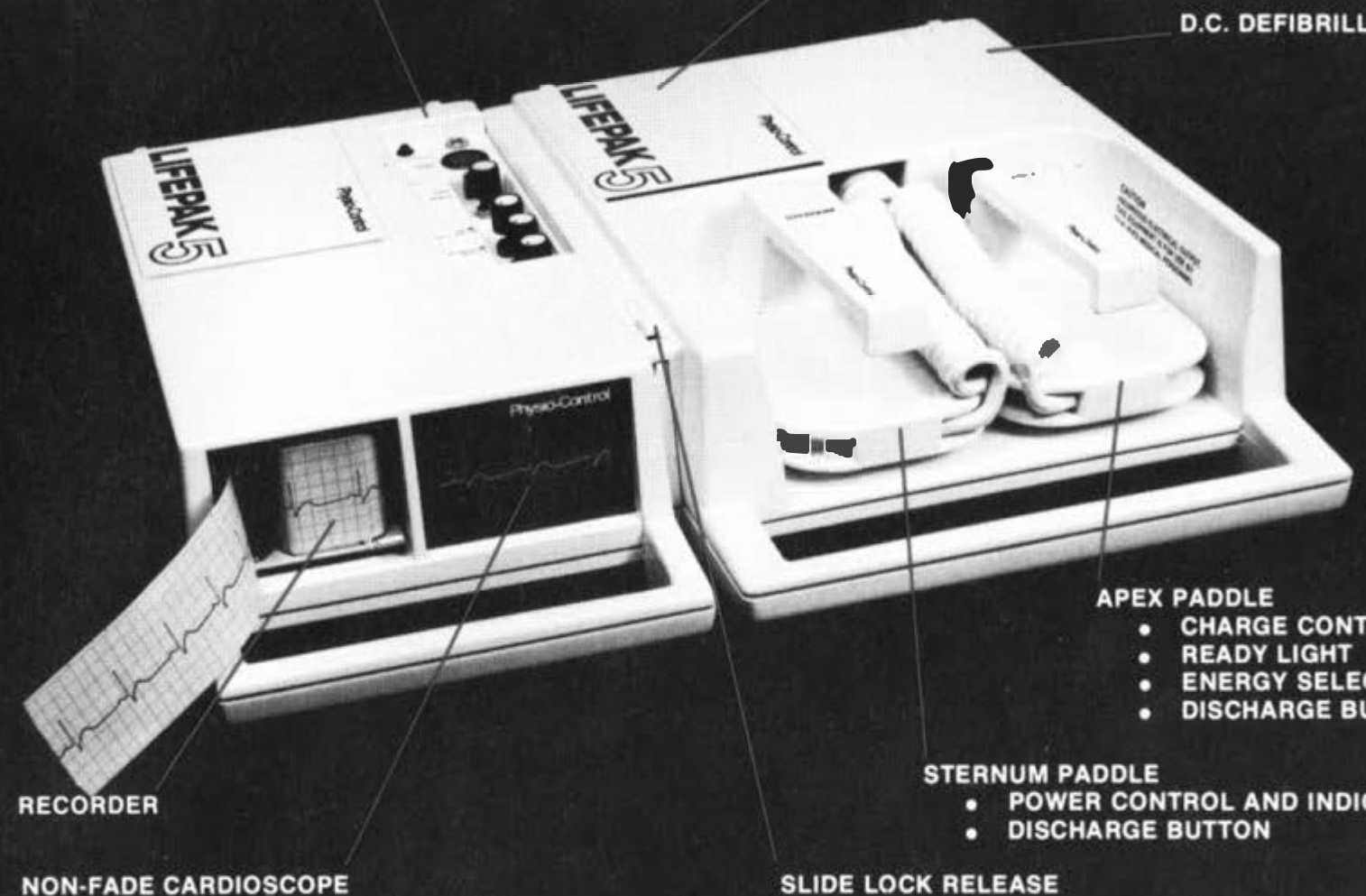
- POWER
- ECG SIZE
- RECORD POWER
- STYLUS HEAT
- 1 mv
- SYSTOLE BEEPER
- INPUT SELECTOR, PADDLES OR PATIENT CABLE
- LOW BATTERY INDICATOR



BATTERY/PAK CHARGER

BATTERY/PAK

D.C. DEFIBRILLATOR



RECORDER

NON-FADE CARDIOSCOPE

SLIDE LOCK RELEASE

- APEX PADDLE
- CHARGE CONTROL
 - READY LIGHT
 - ENERGY SELECTOR
 - DISCHARGE BUTTON

- STERNUM PADDLE
- POWER CONTROL AND INDICATOR
 - DISCHARGE BUTTON

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