Thus, the transportable life support system of the present invention provides a means for transporting an individual medical patient from the site of the injury or the occurrence of a medical problem to a remote hospital. In battlefield applications intensive care is provided for casualties while maintaining chemical and/or biological isolation of the medical patient. Isolation from the environment and/or care givers is also facilitated. Additionally, the transportable life support system of the present invention provides means to reconfigure austere facilities into resuscitative, operative, and post-operative medical care facilities. Thus, various field environments such as shipboard, aircraft, school, home, office, hospital, battlefield, etc. may be effectively converted into medical care facilities because of the autonomous nature of the transportable life support system of the present invention.

The transportable life support system of the present invention provides continuity of care during transport of a medical patient from a site of injury to a hospital or other location where medical care may be provided. Its lightweight facilitate hand carrying and its configuration facilitates interface with various different military evacuation vehicles.

Built-in communications and intelligence provide a head count of injuries and logistics reporting, so as to facilitate enhanced battlefield and civilian emergency management. Intelligent and closed-loop controls automate the medical treatment process, so as to reduce the skill and training required of a resident care giver. Medical monitoring devices and physiological parameter processing facilitates intelligent automated decision making for controlling the operation of medical treatment devices, as well as treatment administration via the care giver. Medical patient and system status are automatically reported via the telecommunications to enhance medical care provided and also further facilitate battlefield and civilian emergency management.

The use of such closed-loop automation and automated intelligent decision making autonomous operation, wherein the care giver may leave the medical patient within the transportable life support system unattended for extended amounts of time. Audible and/or visible alarms notify the care giver in the instance that a condition arises which requires the care giver's immediate attention. Thus, advance levels of intensive care may be provided with minimally trained on-site personnel.

The telecommunications capability of the present invention allow remote medical personnel to monitor the medical patient and to control the medical treatment devices providing care thereto. Such telecommunications may either be automatic, i.e., self-activated in response to the monitoring of medical parameters of the medical patient, or may be initiated by the local care giver. Such telecommunications facilitate reporting of the condition of the medical patient, queries by the local care giver and responses to such queries from remote medical personnel, and control of the medical treatment devices by such remote medical personnel.

It is understood the exemplary transportable life support system described herein and shown in the drawings represents only a presently preferred embodiment of the invention. Indeed, various modifications and additions may be made to such embodiment without departing from the spirit and scope of the invention. For example, various different configurations of the present invention are contemplated. It is contemplated that a housing may be configured so as to accommodate more than one medical patient. Additional medical devices may then be provided, or advantage of the capability of existing medical devices to service more than one person may be taken. Additionally, the upper housing section **26** may be configured so as to be disposable, in the fashion of the roof of a convertible automobile. Additionally, as those skilled in the art will appreciate, various other medical monitoring and/or medical treatment devices may be integrated into the present invention. Thus, these and other modifications and additions may be obvious to those skilled in the art and may be implemented to adapt the present invention for use in a variety of different applications.

The program listing for controlling the microprocessor of the control circuit **46** such that the medical treatment devices are responsive to the medical monitoring devices and such that the medical treatment devices cooperate with one another to provide medical care for the patient are provided as a microfiche appendix hereto.

What is claimed is:

1. A self-contained transportable life support system for resuscitation, stabilization, and transport of a patient, the system comprising:

a) an environmentally controlled housing for receiving and supporting a patient;

b) a plurality of medical devices disposed within the housing, the plurality of medical devices comprising:

i) a ventilator;

ii) a suction device;

iii) a fluid infusion device;

iv) a defibrillator;

v) an oxygen enricher/generator;

vi) an electrocardiograph;

vii) a blood pressure monitor;

viii) a temperature sensor;

ix) a respiration volume and rate monitor;

x) a ventilator gas monitor for monitoring pO_2 and pCO_2;

xi) an O_2 saturation monitor;

xii) a cardiac rate, cardiac output, and local blood flow monitor;

xiii) a device for performing blood chemistry analysis; and

xiv) an electroencephalograph; and

c) a control circuit attached to the housing, at least a portion of the control circuit extending to an external surface of the housing, for regulating operation of the medical devices and environmental conditions within the housing in response to monitored life support conditions of the patient.

2. A self-contained transportable life support system for resuscitation, stabilization, and transport of a patient, the system comprising:

a) an environmentally controlled housing for receiving and supporting a patient;

b) a plurality of medical devices disposed within the housing; and

c) a control circuit attached to the housing, at least a portion of the control circuit extending to an external surface of the housing, for regulating operation of the medical devices and environmental conditions within the housing in response to monitored life support conditions of the patient, said control circuit comprising:

i) first and second battery sections; and

ii) a charging circuit for selectively charging either one of the first and second battery sections;

iii) the control circuit being operative to alternately charge the first battery section from an external