Environmental Control Units/Electronic Aids to Daily Living for People with Polytrauma

Definition

Environmental Control Units (also referred to as Electronic Aides to Daily Living) are specialized assistive technologies designed to enable an individual to operate many household appliances and electronics if he or she cannot use the standard controls. For example, if an individual cannot access a standard light switch, an ECU could provide an alternative way for the individual to turn the lights on and off. Another example would be if someone had difficulty accessing and/or using the telephone. Once again, an ECU could provide a different way for the individual to use the telephone. ECU’s can also provide alternative controls for the television, cable box, DVD player, stereo, heating/air conditioning, fans, doors, etc.

From Cook and Hussey, 1995
The principal components of an ECU are also illustrated in the following block diagram:

The User Display and User Control Interface constitute the human/technology interface.

X-10 control input module (left) and receivers (right).

Two Common X-10 Input/Output Block Diagrams
TWO WAYS TO CATEGORIZ

COMERCIALMELY AVAILABLE ECU’s:

STAND ALONE SYSTEMS
(PERFORM ECU FUNCTIONS ONLY)

INTEGRATED SYSTEMS
(PART OF OR INTEGRATED WITH OTHER ASSISTIVE TECHNOLOGY)

STAND ALONE SYSTEMS
Voice and Switch Activated
All-in-One Environmental Control Unit

SiCare Senior pilot

Operation via: Infrared

RELAX 3 with the Tash Telephone
$1,200. U.S.

Tash technology delivers an exciting new option for simple and convenient telephone connections. Introducing The Tash Telephone, bring the benefits of infrared capabilities to switch controls. Combined with the Relax 3, The Tash Telephone offers an outstanding advance in easy access telephone use.

- Scan through 10 preset telephone functions, answer, hang-up, directory, down, up, dial, 5 speed dials
- Head set compatible

RELAX 3 SYSTEM PACKAGE
$1,350. U.S.

Includes Relax 3, any single switch, Transceiver, 2 X-10 modules and The Tash Telephone.
control unit in the industry just got even better!

The PowerLink\textsuperscript{3} Control Unit allows multiple students to participate in remote activities by enabling them to control their own devices. This feature is particularly useful for situations where it's impractical or impossible to control devices in person. The PowerLink\textsuperscript{3} Control Unit can be used to control devices in different rooms, such as science labs or music rooms.

Big Button Remote Control

This image shows a Big Button Remote Control. It is designed for easy control of devices, especially for people with limited motor function. The buttons are large and easy to press, making it accessible for a wide range of users.

mini RELAX

The mini RELAX is a simple remote control that operates using infrared. It's designed to provide easy access to various devices. The mini RELAX is available for only $199.00 and includes batteries.

Modes of Control

The device can be used in multiple modes, which can be switched via the toggles on top or bottom. The modes include:

- ON
- OFF
- Pause
- Fast Forward
- Rewind
- Stop
- Microphone

These modes allow for a variety of control options, making it versatile for different applications.
INTEGRATED SYSTEMS
JDS TimeCommander™

Purchase the JDS TimeCommander for 2-way X10 and expand later by adding the I/O Xpander. The standard TimeCommander provides all of the features of the TimeCommander Plus without the analog/digital inputs and relay outputs. Add the I/O Xpander module later to provide the exact same functionality as the TimeCommander Plus.

1210 JDS TimeCommander $299.00

X10 Computer Control

CP200 Home Automation Interface

Software for Windows

Plan: For Windows Software

Add “Virtual Reality” Dimensions to the X10 Control System

Integrated Software for X10 CP200 and Activator Interfaces

Pluto House, Inc™

Graphical Virtual Reality 3-Way X10 Controller With IR Audio/Video Control

Software for Windows

Plan: For Windows Software

Add “Virtual Reality” Dimensions to the X10 Control System

Integrated Software for X10 CP200 and Activator Interfaces
U-Control II

Wireless, Portable Control of TV, VCR, Stereo, plus Lights and Appliances Throughout the House.

U-Control II is a hands-free, full-functioning environmental control unit (ECU) on the market today. U-Control II's easy-to-program and use with E-Z App and Telling Screen to provide control of infrared devices, including:

- TV, VCR, CD Player
- Radio
- Fan

The basic U-Control II system includes:
- Serial port infrared transmitter
- Serial cable/adapter
- Infrared A-10 Command Center
- One A-10 alarm relay module
- Acctive Windows software

U-Control II's software versions now include U-Control II in the Environmental Control menu.

Never before has environmental control been this easy or affordable. Access to TV, VCR, stereo, and other household appliances means greater independence for users of augmentative communication.

ECU Integrated with Augmentative Communication

- Built-in infrared control gives independent operation of a TV, VCR, etc.
Infrared (IR) Capabilities built into power wheelchair electronics:

Invacare® Infrared Module with Mouse Emulation

Simplicity is the Key!

Infrared (IR) Control
- Allows power chair serves to control and command up to six infrared controlled devices with single push control

Computer Mouse Control
- Driver Control access to a wireless computer mouse if equipped in a powered chair control system

Features:
- Television
- DVD/VCR Player
- Stereo
- 6-9-Positions Right/Left/Forward
- Coasters/Trivet
- Innomed® R-Phone

Infrared Module with Mouse Emulation

Choose up to Six IR Devices

Display four different irs

- Four Position
- Four Position
- Four Position
- Four Position
- Four Position
- Four Position

Audio/Volume
- Volume
- Volume
- Volume
- Volume
- Volume
- Volume

Menu/Menu
- Menu
- Menu
- Menu
- Menu
- Menu
- Menu

Select Menu
- Select Menu
- Select Menu
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- Select Menu

User Manual
- User Manual
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- User Manual
- User Manual
- User Manual
The system provides access to a complete range of functions and capabilities—anywhere and anytime.
FACTORS TO CONSIDER WHEN RECOMMENDING AN ENVIRONMENTAL CONTROL UNIT:

* Client's Goals (what does he or she wish to control)
* What other assistive technology is utilized by the individual
* Client's prognosis (stable/progressive?)
* Client's cognition
* Where is the system going to be used (home or work, in one room or throughout the house, etc.)
* System reliability, flexibility and ease of operation
* Local tech support for installation/configuration/service
* Expense of the system and the funding source

Thank you. Any Questions

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