

# Du-it Controls



# DU-IT CONTROLS

WHEELCHAIR CONTROL • COMPUTER ACCESS • ENVIRONMENTAL CONTROL AND MORE....

## SHE'S DU-ING IT!

With her proportional chin controller she drives the wheelchair AND controls

- Power recline (any unit)
- LIAISON - full use computer workstation, keyboard, mouse, phone, ECU too! Remote control from chair and bed
- EASICORDER note taking tape recorder
- Lights and appliances throughout the home
- Control most power chairs and accessories
- Max. INDEPENDENCE - no help required!



## HE'S DU-ING IT!

With his Tongue Switch he controls

- DEUCE Environmental Control (ECU) from bed or chair, remote or direct Phone (Answer/Dial, Directory, Etc.) Lights, fan, bed, X-10, and more
- TV/VCR by scanning remote control
- Other switches, ECU's, accessories available
- Combine modules to meet specific needs

# DU-IT... TAKE CONTROL!

DU-IT Control Systems Group, Inc.

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Affordable,  
Integrated, Expandable  
DU-IT Wheelchair Systems

Control most power chairs **PLUS**

- Computers and peripherals
- Communication aids
- Lights and appliances
- ECU's and accessories like page turners
- Signalling, safety, comfort and convenience functions like recline, lights, horn, etc.

for SCI - Proportional Control

- Small, precise movements from operator give accuracy and speed for most effective wheelchair and computer control

for CP - Switch-Type Control

- Specialized inputs - variety of switches — good choice for imprecise movements
- Adjust all aspects of chair dynamics
- In-field custom configuration

**DU-IT** Nobody gives you as much



CP CONTROLLERS (switch type)



## SCI Wheelchair Control Systems

SHE'S DU-ING IT.

- Proportional control of the wheelchair using chin controller
- Access using chin controller to all other functions through DU-IT wheelchair system
- Control of power recline
- Operation of Liaison full function computer work station from wheelchair by remote
- Access to telephone, X - 10 Lights and appliances operated through Liaison, Deuce or Mecca ECU's
- Control of Easiconder note taking tape recorder
- Control of page turner and other ECU accessories by Liaison, Deuce or Mecca



### Proportional Control Systems for High-Level Quadriplegics

#### Very High Degree of Independence

DU-IT makes 3 SCI systems for high-level spinal cord injured people (C-5 to brain stem injured). The DLT, DLT-X and MCB are fully integrated, wheelchair based, environmental control systems. This means that the user, using only 1 controller, achieves both proportional control of the wheelchair AND control of other onboard and remote functions, giving him a very high degree of independence. Selection of an appropriate control system board, controller, and accessories on a powered wheelchair, yields a custom-tailored mobility and environment-

al control system. DU-IT makes a number of useful accessories: MECCA, the first mobile ECU and telephone system for the active powered wheelchair user; DEUCE, probably all the ECU you'll ever need at a surprisingly low price; Easiconder, DU-IT note taking, high speed recorder for the student and professional; LIAISON full function computer work station; controls for power reclining; remote controls for appliances, lights, TV, VCR, etc.; and more.

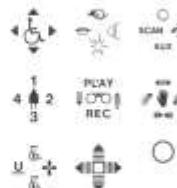
### DU-IT Deluxe 8 Channel Quad System

#### Extensive Capability 8-channel System — MCB — with System Monitor

The DU-IT Extensive Capability 8-Channel System, MCB, because of its capacity, its many built-in extras, and its provisions for numerous accessories, is especially attractive to the active professional, who fears overall system operation quickly because the picture format of the display is so visually descriptive. When fitted with the appropriate controller, this system provides the user with proportional wheelchair control in both high and low speed ranges, and selection of 8 control channels. The MCB system can control up to 24 accessory functions in addition to the horn/siren, blaster, and headlight which are standard equipment. It operates most 12 and 24 V powered wheelchairs in use today. The lapboard provided houses the pictographic display and provides for easy installation and control of the DU-IT Easiconder E2C 2-48 note taking tape recorder. The system monitor, which is part of the display, allows the user to monitor the functioning of the system, troubleshoot malfunctions, and direct necessary adjustments. A bar graph indicates when various system parameters are over, under, or at, correct levels. The monitor is designed to enhance our ability to diagnose system problems over the phone. When the monitor is not in use, the bar graph serves as a battery status indicator. (Controller not included. Easiconder not included.)

#### Mini Display for MCB Systems — DMCB

The Mini Display for MCB Systems, DMCB, is a version of the standard DLT display that allows an MCB equipped powered wheelchair to be driven without the lapboard. The



The MCB's pictographic display makes learning overall system operation quick and easy.

DMCB shows only 4 channels and has the battery status indicator. It is not meant to replace the lapboard, but is for temporary use when the lapboard is not convenient.

#### 4 & 6 Channel Proportional Control Systems

##### Basic 4-Channel SCI System — DLT

The DU-IT Basic Capability 4-Channel SCI System, DLT, gives the user proportional control of the wheelchair. It includes momentary horn/air, automatic tip-over alarm, right/left speed selection, display with battery status indicator, connections for battery and motor, and complete documentation. Up to 9 accessory functions can be added to this basic system. Channel 1 controls the wheelchair drive motors, channel 2 the utilities (horn, siren, speed control, etc.), channel 3 remote operation of ECU's, and channel 4 controls power recline. It works with 12 or 24 V powered wheelchairs. (Controller not included.)

##### Intermediate 6-Channel SCI Systems — DLT-X

The DU-IT Intermediate Capability 6-Channel SCI System, DLT-X, is the same as the DLT (above) but has 6 control channels controlling up to 18 accessory functions. The configuration of the first 4 channels is the same as the DLT (above), with 2 additional control channels for accessories. This system has provisions for immediate addition of accessories such as the Eastcoorder note-taking tape recorder and/or typewriter and computer interface. In the DU-IT tradition, the horn/air functions have been combined to free space for an additional control function. This is our most popular system for high-level SCI users. (Controller not included.)



DLT System  
with display (insert)

### SCI System Controllers

#### Small Movement Proportional Controller — SMP-1

The DU-IT Small Movement Proportional Controller, SMP-1, gives precise, proportional wheelchair control to persons with high-level spinal cord injuries who find a conventional joystick difficult or impossible to use. With a DU-IT SCI control system, the SMP-1 can control the wheelchair, as well as a variety of accessories. Moving the controller no more than 1/4" produces full-range signals, and the range of motion for a particular user may be set to less than 1/8" in each direction. Sensitivities forward/backward and right/left may be increased or decreased using separate adjustments for the X and Y axes within the system. Because of its proportionality and sensitivity, this controller is **NOT** intended for mounting on the wheelchair frame. It requires custom mounting on the operator's body. See DU-IT's mounting solutions (below and following page). If none of these meet your needs, consult us for other custom mounting possibilities. The SMP-1 comes provided with 1/4-20 threaded stud and selector switch cable.

#### SCI Chin Controller — CHP-1

The DU-IT Proportional Chin Controller, CHP-1, is the most commonly used mounting for the SMP-1 and is the most effective controller for SCI systems. It is well suited to those with the modest to good head and neck mobility typical of C-5 to C-2 injuries. The CHP-1 is made up of the DU-IT small movement proportional controller (above) and the DU-IT chin control collar with channel select switch. The collar is worn on the chest and fastened behind the neck with Velcro®. Made of Kydex® thermoplastic, it can be cut, and molded with a heat gun to exactly fit the user. The selector switch has a 8" wire activator lever which can be bent to fit, and is normally mounted on the collar's right side. Left mounting is available on request. Controller motion may be adjusted via a locking ball and swivel. The mounting hardware is adjustable to a wide range of sizes.



SCI Chin Controller — Precise, proportional wheelchair and accessory control for persons with high-level spinal cord injury.

#### SCI Tongue/Lip Controller — TLP-1

The DU-IT Proportional Tongue/Lip Controller, TLP-1, is most effective for those who have little or no head and neck mobility, such as C1/C2 and brain stem-injured people. The TLP-1 is made up of the DU-IT small movement proportional controller and the tongue/lip mounting hardware. The TLP-1 allows the controller to be worn on the user's head and provides extremely effective control of the wheelchair's movement. Both the proportional controller and the selector switch can be located near the mouth so that very small movements (1/8 to 1/4") of the tongue and/or lips can be utilized. The mounting hardware is made of Kydex® and can be cut and molded to fit. The large number of mounting holes allow great flexibility in adjustment for fit and also provide ventilation of covered skin areas. Several mounting variations are possible depending on the user's needs.



Tongue/Lip Controller Effective wheelchair control for those with little or no head and neck mobility

#### Head Cradle Controller Kit — HCP-1K

The DU-IT Head Cradle Controller Kit, HCP-1K, was designed to allow custom mounting of the tongue/lip controller active components on a comfortable head cradle, giving proportional control of the wheelchair. The user's head rests in the custom molded Kydex® head cradle and the controller is mounted on the cradle so that it moves with the user's head without requiring mounting on the head. The cradle is suspended from the wheelchair frame by rubber bands in a trampoline-like fashion so that the operator's head is cushioned from the frame's vibrations. We call it a kit because further work is required to fit it. This is a new controller which should be very useful to high level spinal cord injured people with little or no neck and head mobility. Contact DU-IT for more information.



Head Cradle  
Proportional Controller

#### SCI Joystick Controller — JSP-1

The DU-IT JSP-1 is a proportional joystick controller for DU-IT SCI class control systems. It has a pushbutton selector switch and a Cinch 5-308-PP socket for auxiliary select input. Null and gain of this controller are similar to the CHP-1 and TLP-1 controllers. It is intended for people already using a DU-IT SCI system who now need a hand-operated wheelchair controller following some functional return of hands and arms. This is a lighter touch manual joystick than those normally provided with powered wheelchairs. Threaded holes provide easy mounting using the standard E&J® joystick mounting bracket.

Where the level of injury/function is C-6 or lower and stable, the joystick controller provided with most powered wheelchairs is generally adequate and a DU-IT system may not be appropriate. The DU-IT JSP-1 is not intended as a replacement for the joystick provided with your powered chair unless you already have a DU-IT system you now want to control manually.



SCI Joystick Controller

## DU-IT ALL with one controller