



Remap

custom made equipment for
people with disabilities

Gloucestershire

Yearbook 2009 - 2010

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Welcome to REMAP Gloucestershire

REMAP is a national charity that for over 30 years has offered people with disabilities a better quality of life by providing individually designed technical aids free of charge to the users.

The local Gloucestershire Panel of REMAP meets regularly in Gloucester to hear of cases where people of all ages with disabilities need specialist equipment to help resolve their problems and provide greater independence. Clients' needs are brought to the REMAP panel through occupational therapists, social services, other NHS workers or directly by the client contacting a member of the panel. If you are an engineer or health professional who would like to attend one of our meetings, please contact Joan Davies on 01452 426405.

Members of the panel are all engineers or craftsmen who give their spare time and their specialist skills to design and build equipment that helps to overcome the individual problems that people with disabilities face. They operate out of their own workshops and provide a free service to the disabled client.

This Yearbook is intended to provide a snapshot of the work that we are actively involved in, with the purpose also of encouraging more work for the disabled. It is not possible to show everything that we do here, because we average eight or nine case referrals a month.

A blank Referral Form is in the centre page of this booklet – please photocopy as necessary.

We look forward to being of service to you.

John Fox
Chairman

REMAP Gloucestershire

To flourish the Panel needs:

- CASES:** Please photocopy the Referral Form in the centre of this Yearbook, **or** visit our website at www.remapglos.org.uk to download a copy,
or
phone Joan Davies on 01452 426405
- DONATIONS:** The service is free to the client and we therefore need donations. Please support us if you can – phone our Treasurer, Ron Crumpler on 01453 756825
- MATERIAL:** If your Company could support us with engineering materials, metal, plywood, etc. please phone Charles Dobbin on 01452 527851
- ENGINEERS:** If you are an engineer or craftsman and would like to join us, please phone Charles Dobbin on 01452 527851
- OCCUPATIONAL THERAPISTS:** If you are an OT and would like to attend a meeting, please phone Joan Davies on 01452 426405 or e-mail joan@remapglos.org.uk
- PUBLICITY:** If you are a member of an organisation that would like to hear more about REMAP and what we do please phone John Fox on 01451 861432 to arrange a presentation.
- WEBSITE:** www.remapglos.org.uk

REMAP Gloucestershire Case No. 0867

Powered Electric Scooter Seat Adaptation

Problem

Post operative lower limb changes meant that the client could no longer use his powered scooter.

Solution

The electric scooter seat now has a front extension provided by an open fronted box sitting tightly in the foot tray. Top padding gives the necessary 'under thigh' support to the client. By using the quick release / quick adjustable webbing straps fixed to the base box, the client controls his undesirable leg splay.

Benefits

Shopping, fishing tackle and cans of beer go into the open fronted box. Client has a stabilised and secure driving position, and drives with confidence.



REMAP Gloucestershire Case No. 0851

Computer Furniture

Problem

Ergonomic problems following installation of a new computer at home were causing major frustrations for the client.

Solution

A non-standard piece of shelving was built to house the PC, to carry a side mounted radius arm for the LCD, and provide lots of storage for important documents and box files. Interface and power cables had to be rerouted.

Benefits

The client is delighted with the new equipment and layout.



Wheelchair Frame for Battery Scooter

Problem

A client's large electric scooter is too large to take into some of the shops the client likes to visit. He wanted to carry a light-weight wheel chair to use as a transfer vehicle on arrival at the shops. He has just enough mobility to do everything necessary.

Solution

A square section tubular frame was built to be supported on strong points at the rear of the scooter. A small tray (old rain guttering) stabilises the front wheels of the folded chair, and a vertical extension from the frame hooks under the chair handles. Everything is stabilised with QR webbing and velcro straps.

Benefits

The client is now able to spend more time shopping and less time worrying about running into display stands and other shoppers.



REMAP Gloucestershire Case No. 0754

Vertical Handlebars

Problem

The client had suffered a severe tendon damaging accident and needed help with pushing his invalid mother in her wheelchair, because the horizontal handlebar was difficult to use.

Solution

By fitting near vertical handle bars to the ends of the horizontal grip as shown in the picture the client was able to grip the wheelchair much more comfortably.

Benefits

The client was able easily to push the wheelchair up and down hills, and kerbs too.



REMAP Gloucestershire Case No. 0774

Rotatable Wheelchair Control

Problem

The client's electric wheelchair had a vertical hand control (joystick) which was at the same height as her desk. As she approached the desk the control became stuck against the desktop, occasionally damaging her hand.

Solution

The solution was to enable the hand control to rotate whenever the client needed to approach the desk. The rotation meant that the joystick was on the side and did not interfere with the desk. The bar on which the control was fitted was square and it was filed to produce indentations to which the spring loaded round bar could be secured to allow a two-position (vertical or horizontal) control, easily moved from one position to the other while the client was in the wheelchair.

Benefits

The solution has proved entirely satisfactory, much to the client's joy.



REMAP Gloucestershire Case No. 0785

Dual brake lever for bicycle

Problem

The young client had a short right arm from birth, and needed her bike adapted to have a handlebar modification for her short arm to hold. In addition she needed a dual brake lever on the left since she had no fingers on her right miniature hand.

Solution

The solution was to mount an extra tube to the right handlebar to bring it closer to her right arm, and a dual brake lever was found from a local cycle shop which allowed both front and back brakes to be applied at the same time. An additional in-line adjuster was necessary to balance the front and rear brakes appropriately.

Benefits

The client now rides around the steep hills of Stroud quite safely, a feat that she was unable to do before.



REMAP Gloucestershire Case No. 0763

Lavatory Protector

Problem

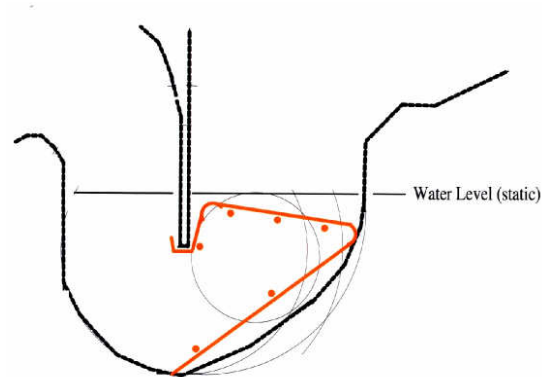
The client suffered from Alzheimer's and incontinence and used pads which she unfortunately flushed down the toilet, blocking the pipe outside the house and requiring an expensive clear out jet wash.

Solution

The solution was to provide a wire frame which was fitted into the lavatory bowl, and prevented the pads from being flushed away. The frame was made from stainless steel wire brazed at the joints and which fitted the bowl tightly, so that it in turn could not be flushed away!!

Benefits

The device worked satisfactorily. It merely had to be regularly cleaned.



REMAP Gloucestershire Case No. 0721

Mouth Painters Easel

Problem

The client was only able to use her mouth to write and paint and the easels on the market were not transportable or stiff enough for use by a mouth painter.

Solution

The solution was to find a light transportable frame and adapt for her to use. Long “wings” were added to provide the required stiffness when joined to the lower legs by lengths of plated wire. The desk already had an easel and table but needed modifying to support her paint brushes for easy access by her mouth.

Benefits

The client now happily uses her transportable easel, it merely needing to be easily opened out by her carer.



REMAP Gloucestershire Case No. 0739

Walker Kerb Climber

Problem

The client needed to lift the front wheels of a wheeled walking aid over a 3 inch high kerb. The only way to raise the front wheels is to apply the rear brakes and pull back on the hand grips. Obviously it is impossible to move forward in this state.

Solution

A device was designed that would rotate the castor wheels to a forward pointing position whilst the frame was held in a elevated position by applying the rear wheel brakes and pulling the hand grips rearwards. Rotating the castor to a forward position effectively advances the wheel, relative to the threshold, by twice the castor offset less the wheel radius. The aid is then pushed forward, at the same time releasing the brakes, until the rear wheels strike the threshold, these are then lifted onto the threshold by lifting the hand grips. This function was achieved by manufacturing a sloped cam at the castor bearing so that the normal trailing position when pushed forward, became a leading position when the front wheels were lifted off the ground. To ensure sufficiently rapid rotation of the castors, additional weight was added to each castor wheel.

Benefits

The client is now able to “climb” 125mm (5 inch) high kerbs, quickly, safely and satisfactorily.



REMAP Gloucestershire Case No. 07104

Finger Controlled Scooter

Problem

The client suffered rheumatism in her thumbs and could no longer control the scooter power satisfactorily. She was able to use her fingers on a bicycle brake lever.

Solution

Two bicycle brake levers were bought and fitted to the ends of the scooter handlebar, in the reverse direction from their normal use on a bike. The ends of the levers were then connected to the thumb paddles so that forward and reverse could be obtained using the bicycle levers fingers alone. The potentiometer head inside the scooter was soldered the other way around so that the right hand still obtained forward drive and the left hand obtained reverse.

Benefits

The client happily drove away - like her tail was on fire!!



REMAP Gloucestershire Case No. 0858

Padded headrest

Problem

A brain injured client often needed to lean forward and rest his head on a padded surface. The problem was that the dining room table was being used with appropriate thick cloth coverings for him to do this, but it effectively put the table out of action, so a new head rest was requested.

Solution

The solution was to construct a padded headrest which would be attached to the room wall, and which could be stowed away when not needed, by using an over-centre latch. It was important that the headrest was sideways secure because of the head leaning force, so a strong inserting bracket was used to hold the head rest against the wallboard when in use. The headrest itself was a wooden structure supporting a plywood base upon which the foam padding was glued and with a vinyl covering on top.

Benefits

The client was able to use the padded headrest effectively.



REMAP Gloucestershire Case No. 0801

Armchair raiser

Problem

The client used a stand aid to assist her in getting in and out of her favourite armchair, but the aid was too high. This resulted in the sling being very uncomfortable. The chair needed to be raised by 3 inches to enable the stand aid to be used effectively. Commercial chair raisers were not suitable as they did not allow the stand aid to get close enough to the client for the sling to be attached.

Solution

A timber frame was constructed to raise the chair legs by 3 inches and support them in position. This frame still allowed the stand aid to get close enough for the client to access it. The frame was left in two pieces to ease transportation.

Benefits

The client could now be moved to and from her favourite chair in reasonable comfort.



REMAP Gloucestershire Case No. 0776

Music Player

Problem

The client was a totally blind youth with severe learning difficulties. He enjoyed music, and wanted a player that he could control himself.

Solution

A Fisher-Price “FP3 Player”, “Player Speakers Unit” and a suitable cabinet were supplied by the parent for REMAP to modify and integrate. The music output from the speakers was insufficient so the parent also supplied a pair of speakers with a built in amplifier.

It was modified so that it could be powered from the mains and a jack socket was fitted so that the music output could be taken to the external speakers. The client had access only to the controls to “Play”, “Stop”, “Next Tune” and “Previous Tune”. He was expected to learn the position of these controls and operate the unit by himself when the unit was powered up for him.

Benefits

The client is now able to listen to his favourite music and control which tunes he listens to without the assistance of a carer. He can replay tunes he enjoys, and fast forward past tunes he does not want to listen to.



REMAP Gloucestershire Case No. 0766

Stabilising Bar for Commode

Problem

A wheelchair bound client suffering from MS was unable to use the commode over his toilet safely as it moved as he tried to transfer on to it.

Solution

A wooden stabilising bar was made and attached to the wall via a sturdy shelf bracket. The bar was able to swivel on the bracket which enabled the commode to be removed, when it was required in another location, but stabilised it sufficiently when used in conjunction with the toilet.

Benefits

The commode, which was moved by a carer, was now stable enough for the client to transfer safely, and use the toilet without assistance.



REMAP Gloucestershire Case No. 0649

Drinking Aid

Problem

The client had lost the ability to raise a cup to her mouth and had also lost the ability to actively swallow. She frequently ingested food and drink into her lungs. Any kind of fluid was being administered by her carer, one teaspoon at a time. She therefore required a drinking aid that would enable her to take fluid in a controlled manner, without calling for assistance from her carer.

Solution

The drinking aid was built around a peristaltic pump, gravity-fed from a 1 litre wide-mouth flask (allowing carers to add ice cubes to the liquid if necessary). The pump was converted from mains power to 12V for obvious safety and portability reasons by changing the drive motor. A variable timer allowed the pumping-time, and thereby the quantity of fluid (the 'dose'), to be set within suitable limits (a time equivalent to 5ml was used). The whole drinking aid is self-contained and portable, being powered by an internal rechargeable battery, and provided with a commercially available intelligent plug-in charger.

Benefits

The client is now in control of her own fluid intake, and can satisfy her thirst without calling for help.



REMAP Gloucestershire Case No. 07100

Attachment of shopping trolley to wheelchair

Problem

The client's special wheelchair could not be attached to the Tesco disabled shopping trolley, due mainly to the angled front leg supports. Other supermarket trolleys could not be used for the same reason.

Solution

A U-shaped bracket was made that attached to the existing leg support adjustment mountings and the uprights of the shopping trolley. The bracket could be fitted in less than 45 seconds

Benefits

Instead of relying on her husband, the client can now use the supermarket to shop at her own pace. She is completely independent in the choice of her purchases. Her comment, "I can now do my own shopping again" sums up the worth of this simple device.



REMAP Gloucestershire Case No. 0833

Chair on castors

Problem

A lady client who is self employed as a seamstress needed to be able to move her work chair to each of her other work stations with ease. The chair needed to be completely stable when in use but readily moveable without lifting.

Solution

A platform with four castors was fitted to the legs of the chair and was spring loaded relative to the frame of the chair. When the chair was not being used the springs lifted the feet of the chair fractionally off the ground and the chair could be moved by rolling it on the four castors. As soon as someone sat in the chair the springs allowed the feet to touch the ground providing complete stability for the seated person. Once out of the chair it became moveable again on the castors.

Benefits

The client can now move her working seat from station to station easily whilst maintaining complete safety and stability when seated.

