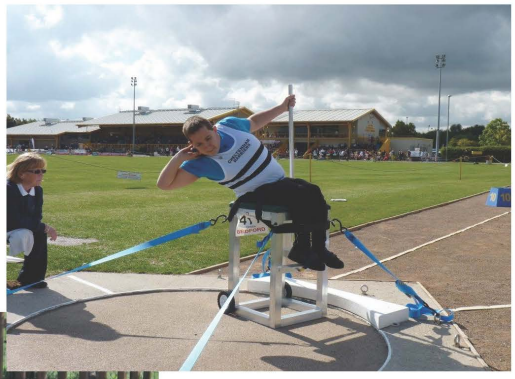
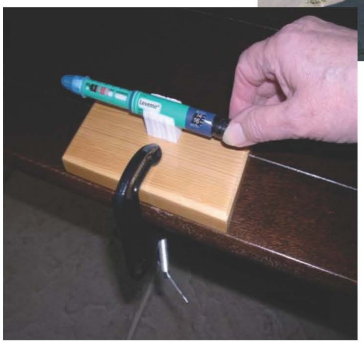
Remap

custom made equipment for
people with disabilities

Gloucestershire





Yearbook Number 8

Welcome to Remap Gloucestershire

Remap is a national charity that for over 50 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 Wendy Ripley on 01452 426104.

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.

Referrals can be made by submitting an on-line form using our website page:
https://secure106.prositehosting.co.uk/remapsecure/referral/entryform.php

We look forward to being of service to you

John Fox
Chairman, Gloucestershire Remap

Website: www.remapglos.org.uk
Email: remap.glos@btinternet.com

Our Local Sponsors

We are grateful to our sponsors without whom we could not serve the disabled community in the way we do. Some donate money to help with our operating costs (mainly materials and travel costs). Some donate materials or services to help us in a practical way to deliver solutions to our clients.
We should like to thank all our supporters, most of whom are listed below:

Financial

Gloucestershire County Council

The Barnwood Trust

Royal Antediluvian Order of Buffaloes

Zurich Insurance

All the clients who make individual donations

Benefits in Kind

National Star College

GIS Healthcare

The Barnwood Trust

Plastim Ltd, Staverton

Cotswold Foam, Gloucester

Nick's Timber, Gloucester

A J Lowther & Son Ltd

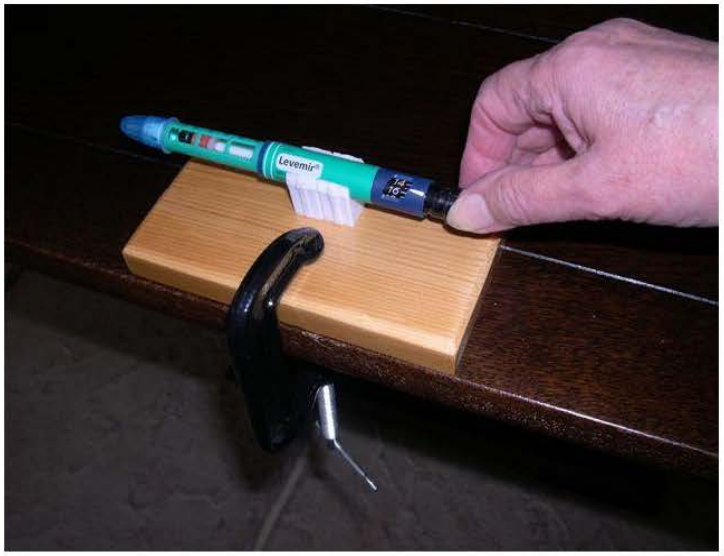
Cotsweld

Partington Engineering Ltd

Midwest Mobility

Gloucestershire College

Insulin Pen Adjustment



Problem

A lady in her late 50s who lived alone, with multiple problems including being in a wheelchair most of the time, having no use of her left hand and arm, and being insulin dependent due to diabetes could not adjust her insulin pen (syringe) as it needed to be held in one hand and adjusted with the other. This meant that a carer had to visit 4 times a day to prepare the injection for her. The request was for REMAP to devise something to hold the pen so that she could make the adjustment herself with one hand.

Solution

Two 15mm "plastic" pipe clips were mounted on a piece of varnished wood approximately 3" x 6" x ¾ ". The pen was 16mm diameter and the jaws of the clips were too close so they were filed down until the pen could be pushed in and out of position easily, but still held tightly enough for the client to make the necessary adjustment with one hand. The device was clamped to a table to hold it in position using a commercially available 3" G clamp.

Benefits

The client became independent regarding her insulin injections. The client's daughter did not have to visit so many times each day, and was happy that her mother would have the necessary injections whether anybody else was present or not.

Rocker for severely disabled wheelchair user.

Problem

Her carers thought that a severely disabled lady would benefit from being able to "rock" to and fro whilst in her wheelchair.

Solution

A curved wooden frame, similar to the base of a Rocking Horse, was constructed, with a platform mounted on top. A removable ramp was added to the front of the platform to enable a carer to move the wheelchair on and off the platform. With the wheelchair in position the client could then be lifted onto her chair that, with a little help from the carer, could gently rock. This was pleasant for the client, and stimulated her to keep the rocking motion going by her own efforts.

Bed Rail

Problem

An elderly leg amputee was having great difficulty getting in and out of bed. He needed something to hold on to to enable him to turn his body and complete the manoeuvre.

Solution

A wooden rail, which could be fixed to the frame of the client's bed, was turned on a lathe. This was positioned on the bed so he could reach it and pull himself up and round to assist in positioning himself to get out of bed. It also assisted him to reverse the process and get back into bed.

Benefits

The client felt a little more independent.

REMAP Gloucestershire

Collapsible Bed Rail

Problem

The client had Haemophilia and was in danger of causing internal bleeding whenever he knocked against a hard object. He required a bed rail to assist him in getting out of bed but a conventional fixed one was too dangerous for his condition especially as he may hit against it during the night.

Solution

A wooden ¾ inch plywood sheet was machined with two vertical parallel slots to enable it to slide vertically against a base plate. At the bottom the slots were extended in a hooked shape so that the device could be locked in the upright position by sliding it sideways and down a small amount. The pictures show the device in the lower position and in the locked upright position. A comfortable rail was fitted to the top for ease of use. In the lower position the bed rail was well clear of the mattress ensuring that there was no danger of contact by the client.

Benefits

The client was able to use the bed rail to help get in and out of bed and was then safe in the night by retracting it clear of the mattress.

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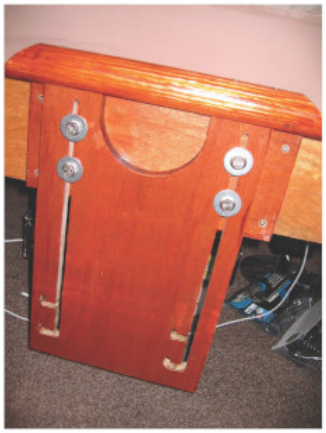

Dancing Wheelchairs

Problem

National Star College's Arts Faculty wanted to be able to use wheelchairs for dancing. Unfortunately, a joystick control does not make it easy for the user to control the wheelchair in a dancing mode.

Solution

Remap Gloucestershire developed a system of control using accelerometers on the wrists and headbands of the users to control the movement of the chair. So, by moving the hands and head in a particular way the motion of the chair could be controlled and dance choreography applied.

Benefits

The students of the College are able to perform dance moves in their wheelchairs. The project is on going, attempting to refine the response of the device.

Throwing Stool

Problem

Gloucestershire Remap panel were asked by Cheltenham Athletic Club if they could redesign their throwing stool seats to meet the new Paralympic requirements.

Solution

After much consultation and research a new seat design was manufactured for their budding young paralympic athletes. Following the success of the first seat, we have now manufactured and individually tailored seats to suit the needs of four of their athletes and two more are 'on the production line'.

Benefits

Our local athletes can pursue their paralympic goals using approved equipment.

Powered Garden Buggy

Problem

The client wished to adapt a powered buggy for gardening and use on uneven and sloping terrain. The hubs unfortunately were spinning on the tyres inhibiting traction.

Solution

The tyres were bonded to the hubs of the drive wheels. The upholstered seat was removed and replaced with a 'school hall' type seat. A lap belt was fitted and the seat height reduced by 6 inches.

Benefits

The client can now get to all parts of the garden and uses extended handled tools where necessary.

Milestone School Project

Problem

The Milestone School, Gloucester, a special-needs school catering for children from 3 years to 16 years, requested some bespoke garden toys for the playground to help the children develop socially, physically and emotionally.

Solution

Five play models were designed and manufactured by volunteers from Remap. An aeroplane, lorry, locomotive, car and stockade were delivered to the school each forming a focus for imagination, fun and adventure.

Benefits

The enjoyment and joy, evident when the children were let loose on the equipment showed just how much of a benefit to their development these toys would be in the future.

Over-bed sloping table

Problem

An elderly lady, having had a stroke that affected her left side, spent most of her time in bed. She wanted to read and do puzzles, but was unable to do either as she could not hold a book in a suitable position to read, and could not do a puzzle as she needed to hold a pencil in her right hand and write on paper which needed supporting.

Solution

A frame with an adjustable writing slope was constructed from wood. The left side of the frame was supported on her existing over-bed table, and the right side on the right hand bed rail. This meant that the slope was convenient for the client's (functional) right hand. The position could be adjusted by positioning the over-bed table, and the slope could be adjusted by a "deck chair" type arrangement on the frame. The frame could be folded down for storage or if it needed to be transported.

Benefits

The client was able to read and do puzzles.

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Cooker Knob

Problem

A lady who was largely confined to a wheelchair was finding it difficult to see the temperature figures on her cooker controls. This was because the control was at eye-level and the numbers were printed on the horizontal face of the knob. (See picture 'before'.)

Solution

A label was manufactured that fitted on the surface behind the knob and had numbers corresponding to the temperature setting of the knob (See picture 'after'). This enabled her to see the required temperature setting from her wheelchair.

Benefits

She is now able to control the oven setting without difficulty.

Before

After

Pushchair arm support

Problem

The client has a congenitally shortened left arm, terminating in a stump just below the elbow.
Safe use of a pushchair involving both arms resulted in unbalanced posture and associated shoulder and back pain.
Control such as steering and slowing down waslimited.

Solution

A gutter splint, profiled to accept the incomplete forearm was formed by the local hospital OT Dept.
This was fitted to a foldaway arm extension/support that in turn was attached to the pushchair handlebar.
The splint was made to be quickly detachable to facilitate compact folding when the pushchair was collapsed for transportation.
In addition, the original brake lever was extended and relocated for right hand operation.
The brake cable was upgraded and re-routed to reduce frictional losses, so easing operation and improving braking performance.

Benefits

The client can now control her son`s pushchair more safely, without causing shoulder pain or fatigue to her right hand.

Nebuliser Holder

Problem

The client has a rare chest and breathing condition that requires her to inhale through two different nebulisers for two hours twice a day. The process was taking much longer than necessary because holding the nebuliser in the mouth was very arm aching and the client had to keep having to rest her arms down.

Solution

A holder was designed that would support the two different nebuliser shapes and allow the client to change them over easily. The holder was mounted on a flexible arm that in turn was mounted on a portable stand.

Benefits

The client can now adjust the stand to use while she is in bed or sitting in a chair. She can inhale through the nebulisers while they are being supported in the holder and she no longer has to hold her arms up to support them. The process can now be done in the minimum time possible.

Portable sensory unit

Problem

Severe developmental delay due to extreme preterm birth meant that a 10-year-old boy, suffered from periods of high anxiety. He required a sensory unit to engage with at times of heightened anxiety to assist him to calm himself.

Solution

A portable unit was built that contained four different coloured, lockable sensory panels. Each one included different controls that switched lights and sounds. A wide range of coloured knobs, press buttons, keyboards and switches were used to control, volume, brightness and sequences with clear cause and effect actions.

At times of heightened anxiety Jordan is allowed access to the panels progressively until his mood is calmed.

Benefits

His teacher now has a means of controlling his bouts of anxiety that benefit him and the rest of his class.

Drinks Station for two bottles

Problem

The client had very little control of the use of her fingers and being confined to a wheelchair meant that she was unable to have a drink when thirsty and was becoming dehydrated.

Solution

Two drinks bottles were purchased that used a plastic tube with a bite valve in the end to allow the user to suck fluid out of the bottle. The bottles were hung on a mobile stand and the bite valve tubes were mounted in a holder on the end of a flexible arm that could be adjusted to the exact position for the client's mouth when she drove her wheelchair up to the stand.

Benefits

The mobile stand can be moved by the carer to the desired room position and the client has a choice of two drinks available at all times. The doctor has reported that the client is no longer suffering from dehydration.

Table trolley for use with adjustable chair

Problem

The client was confined to sitting in an adjustable chair and was having difficulties with meals and the use of a table surface. Standard trolleys would not fit into her chair and she also needed support for her feet as her ankles were becoming extended.

Solution

A table trolley was designed to fit neatly between her chair arms at the correct height and an adjustable footrest was built in to support her feet at the correct angle.

Benefits

The client now has a convenient table surface to work and feed from she also has a footrest that supports her feet and stops her ankles becoming extended.
Nicks Timber donated the hard wood so that the trolley was built as an attractive piece of furniture.

Mono-braked wheeled walkers

Problem

Both three and four wheeled walkers are supplied with independent left and right-hand braking. This is satisfactory for those users with fully functioning hands but many users, due to arthritis etc., are less fortunate and only have one effective hand. Braking with their good hand causes the walker to swing sideways and is therefore ineffective.

Solution

By using a bifurcated brake cable coupling both brakes can be operated from a single brake lever, fitted either on the left or right side. However, if this were to be the only change made, the force necessary to achieve satisfactory braking would be double that required for each hand of a the two handed braking system. To alleviate this to a large degree, the return springs on both wheel-braking mechanisms are reduced in stiffness.

Benefits

Walkers can be adapted to suit left or right-handed users providing them with stable braking, albeit with slightly increased hand pressure.

Touch control for bed positioning

Problem

The client suffered from MS and no longer had the dexterity or strength to press the control buttons on his hand held bed control and his quality of life and independence were suffering.

Solution

Capacitive switching was used to assist the client's limited hand and finger movement. An electronic circuit was devised using a commercially available silicone chip. Touch areas were positioned behind the plastic front panel of an ABS plastic box, which corresponded to the functions of the client's original bed control. Detection of a finger or hand placed in the desired area corresponding to an instruction would command relays mounted at the side of the bed to turn on electric motors, thus providing movement of the head or feet areas.

Benefits

The client can now command his bed to move in the direction he wishes, to make posture and sleeping more comfortable, giving a better quality of life.

Modification to wheelchair

Problem

Although there are many types of wheelchair with a whole range of accessories and attachments, often these do not meet the specific needs of a client. Remap can solve the problem in such cases with a bespoke solution. In this example, the lady has long suffered from rheumatoid arthritis that has left her feet and legs distorted. None of the leg supports available were comfortable, the result being that visits to shops, etc. were tests of endurance rather than times of pleasure.

Solution

The solution was to support both legs with deeply padded and concave, full length, supports. The one for the left leg, horizontal and fixed. The one for the right, hinged and adjustable for height.

Benefits

The lady states that she now enjoys trips out which can last many hours with no discomfort whatsoever.

Making a Referral

This is the process required to make a referral to Gloucestershire REMAP:

- Please confirm that all commercial options have been investigated and that none is suitable.

- On our website: www.remapglos.org.uk fill out the on-line form to give us the details of the client, the Occupational Therapist (if available) and the details of the problem to be solved. (If you cannot access the website please telephone John Fox on 01451 861432 for a paper form.)

- Submit the form electronically from the website or, in the case of a paper form, send it to Wendy Ripley (address on the form).

- The referral will be reviewed at our next meeting – meetings are held on the second Thursday of each month.

- We will be in touch with the referrer shortly after that and an engineer will be assigned to investigate the problem.

- Working together, the client, engineer and OT will agree a suitable solution and the engineer will design and build the required equipment.

- On completion, the equipment will be offered to the client to confirm that the problem has been resolved.

- In the event that there is still a problem, the engineer will attempt further changes to reach a satisfactory outcome.

We work closely with Gloucestershire County Council Social Services:

Adult Helpdesk 01452 426868

A wide range of information and help for adults regarding social care, including referrals taken for occupational therapy and personal care.

Children and Families Helpdesk 01452 426565

Social care referrals for children. Providing information and guidance.

Your help is needed

To continue to serve the disabled our Panel needs:

DONATIONS:
The service is free to the client and we therefore need donations. Please support us if you can – For donations please phone our Treasurer, Mike Davies on 01242 231250

MATERIAL:
If your Company could support us with engineering materials, metal, plywood, etc. please phone Mike Plant on 01242 245228

ENGINEERS:
If you are an engineer or craftsman and would like to join us, please phone John Fox on 01451 861432 or Mike Plant on 01242 245228

OCCUPATIONAL THERAPISTS:
If you are an OT and would like to attend a meeting, please phone Wendy Ripley on 01452 426104 or e-mail wendy.ripley@glos-care.nhs.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.

REFERRALS:
Please visit our website at www. remapglos.org.uk to submit the on-line form
or
phone John Fox on 01451 861432 for a paper form.

WEBSITE: www.remapglos.org.uk

Email: remap.glos@btinternet.com

Gloucestershire County Council supports
Remap in their work for the disabled

ZURICH
Community Trust

Zurich and its Cheltenham based staff have been proud to support the invaluable work of Remap Gloucestershire

ROYAL ANTEDILUVIAN ORDER OF BUFFALOES
GRAND LODGE OF ENGLAND
GLOUCESTERSHIRE PROVINCIAL GRAND LODGE

Pleased to support Remap Gloucestershire in their work for the disabled

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