

# Ypush Owner's Manual

Model: Ypush/YPPAWC/01



**CARER-CONTROLLED  
& POWER-ASSISTED**



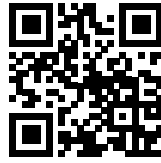
**ypush**  
THE WHEELCHAIR

**Hybrid Manual &  
Power-assisted Pushing Aid**  
Owner's Manual  
& Service Record



**brintal**

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E. and O.E.  
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**INSTRUCTIONS TO THE YPUSH DEALER**

This Owner's Manual is part of the Ypush package and a copy should be provided with every product supplied.



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Thank you for purchasing the Ypush Carer Controlled, Power-assisted Wheelchair. We really hope that our unique hybrid wheelchair will help you to maintain and enjoy your independence, visit old friends, travel to new places, and make some great new memories.

The brief behind the development of the Ypush was quite simple. There are many people who use a standard type of manual wheelchair, but we noticed that you never really see them out and about. Why was this? We realised the big issue was although pushing a wheelchair may look easy, if you have tried, you will know how physically demanding it is, in many cases causing fatigue and injury to the Carer, and severely restricting travel and activities. Whether you are a professional Carer, a partner, a family member or a friend, it can become a difficult and stressful situation.

It's difficult enough to push someone on the flat, but throw in a hill or a tricky surface, and it can be pretty much impossible. If the Carer is struggling and the occupant feels like a burden, no one is having fun, and it's not going to be a happy day for anyone. It becomes easier for everyone, to just stay at home.

We wanted to create a solution that would ensure the Carer and occupant could both enjoy access to places and activities, and most importantly, could really look forward to spending stress free quality time together, choosing where they want to go, whether at home or travelling away.

*Dedicated to my friend Patrick Tam*

The Ypush had to be an integrated product like no other, with seamless Power-assistance, no extra bolt on bits, and be quick to set up. Moreover, as a medical product, it would need to be incredibly safe and easy to use. It took more than 5 years to develop all the unique functions, features, new technology and mechanisms that make the Ypush possible. We have also tried to address some of the small details, to make it as simple and fun to use as possible.

I would like to thank Chantal, my wife of 21 years, our children Oliver and Darcie, our family, our team of designers, engineers, manufacturers, consultants, partners and investors, who have worked tirelessly together to help us achieve our goal. It has really been a team effort. Five years is a long time, and without your patience, enthusiasm, focus, absolute belief and determination, the Ypush would still be a pencil sketch.

From all of us at Brintal, we hope you enjoy getting out and about with the Ypush. Where to next?

Very best wishes to you and your family for a happy, healthy and active life,

Brian J Harrison  
Inventor/CEO Brintal Limited



**CARER-CONTROLLED  
& POWER-ASSISTED**



**The Brintal Ypush** is an attendant controlled, hybrid manual & Power-assisted wheelchair providing a comfortable ride for adults with disabilities. It provides the attendant with an effortless means of transporting an occupant using Power-assist, the option to push manually, or a seamless combination of both.

The Ypush is easy to use, lightweight, and can be quickly and easily folded for transportation.

Provided that the Ypush is maintained and operated in accordance with this manual, it will last for many years.

Please read this manual thoroughly before using the Ypush. If you have any doubts about warnings or instructions, ask your Dealer for an explanation. If at any time you feel you may not be able to control the wheelchair safely, do not drive, but consult your Dealer for a solution.

You must keep this manual in a safe place. It contains essential information on the operation of the Ypush wheelchair and also includes the service records.

If you think the Ypush wheelchair may be damaged, or otherwise faulty, do not drive it, but contact your Dealer for advice.



**Warning!** This manual contains important safety information. Please take time to read and understand it. Never ignore the guidance in this manual, doing so may endanger you and or others.

# Product/Dealer Information

**This is your contact number  
for service and support**  
Dealer Stamp

Product Model Number

**Ypush/YPPAWC/01**

Serial Number

Date of Purchase

Telephone

Owner

Email

For more product information see labels under the armrests and throughout this manual.

## Features and Layout

Brintal Ypush/YPPAWC/01

Please see Technical Specifications on page 35 for more details.

- 1 Right & Left Push Handles with Brintal "Hands off" safety brake system
- 2 Right & Left Power Steering buttons underneath handles (left shown)
- 3 Power-assist throttle lever, Reverse button and fuel gauge (right side only)
- 4 Battery Charger and on-board charging socket located under left armrest (pivots up)
- 5 Super lightweight alloy folding chassis
- 6 Swing-away foot rests
- 7 Removable Lithium Battery Pack located under right armrest (pivots up)
- 8 Removable Anti-tip and foot bars
- 9 Electronic Anti-tip sensors
- 10 USB accessory power outlet socket
- 11 Seat back storage pockets
- 12 Brintal Advanced Dual Drive System (ADDS)
- 13 Occupant sensor
- 14 Walking stick or crutch holder
- 15 Circuit breaker and LED lights
- 16 Ignition key - On/Off-Charge



# What's in the Box?

**1 x Ypush Attendant Controlled Power-assisted Wheelchair**

**Model:** Ypush/YPPAWC/01

**1 x Travel Roller Bag**

**Model:** YP-TRB/01



**1 x Battery Charger**

**Model:** YPCv1

**1 x Lithium Battery Pack**

**Model:** YPE 01/1

**1 x Battery Pack Carry Case**

**Model:** YPBPC/1

# General safety information

Please read this manual thoroughly before driving or operating the Ypush, and ensure the Ypush is serviced regularly. If you have any doubt about the content of this manual or any questions please contact your Dealer.



**ISO Book symbol:** This symbol appears on the product. Please read this product manual before assembling or operating the Ypush.

This manual contains important safety notices and warnings. They are clearly marked with the **Warning triangle**, or the **Pinch-point symbol** below. Make sure that you understand these notices. If you have any doubt, contact your Dealer.



**Warning triangle:** Pay particular attention and follow instructions carefully. Failure to do so could cause injury or even death.



**Pinch-point symbol:** Wherever you see this sign there is a nearby risk of injury owing to a pinch or crushing point. Take extreme care.

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# Intended use of the Ypush wheelchair

The Ypush attendant controlled Power-assisted wheelchair is designed to be operated by an attendant or Carer, to be used by adult occupants with a disability, within the recommended maximum weight – please see Technical Specification. The Ypush is designed for indoor and light outdoor use, and can be used manually or with Power-assist, or a seamless combination of both.

The light-weight construction enables the Ypush to be easily transported, whilst the intuitive driving controls offer the Carer an enjoyable and effortless experience, and the occupant a new sense of quality and freedom.

The Ypush is intended for use in the home, and on paved or other smooth hard surfaces. Kerbs should be avoided if possible, however the Ypush can mount obstacles up to the size specified in the Technical Specifications.

Attendants and Carers could endanger themselves and others if they are not capable of driving the Ypush safely. It is essential that the attendant (driver) is capable of driving the occupant safely and that the occupant's condition is suited to this type of wheelchair.

Dealers will advise on the most suitable wheelchair from the Brintal range, but it is the responsibility of attendants and Carers to ensure that they have the manual dexterity to drive the vehicle, adequate sight and hearing to perceive danger in time, and can at all times operate the Ypush safely in the expected conditions. Attendants and Carers should regularly assess their ability to operate the vehicle safely.

The Ypush wheelchair has relatively small wheels and so should not be used on uneven, pot-holed, rutted or slippery surfaces such as grass and similar.





## Safety information

### General usage

Before you drive the Ypush, please read all the warnings. You must also understand, practise, and be confident at operating all the Controls, and be familiar with all the functions and features described in this manual.

**Warning:** The operation of the Ypush can endanger the life of the attendant, occupant and third parties. The attendant should always be fully capable of operating the Ypush safely.

**Warning:** The Ypush has been designed and tested for occupants up to the maximum weight recorded in the Technical Specification. This weight should never be exceeded.

**Warning:** Do not exceed the specification; do not modify the Ypush or use it other than as an attendant controlled Power-assisted wheelchair.

**Warning:** Passengers, children, and pets should never be carried or attached to the Ypush.

**Warning:** Sitting for long periods may increase the chance of thrombosis or pressure sores. Occupants prone to such conditions are advised to take medical advice.

**Warning:** Electromagnetic interference may affect the performance of the Ypush :

- Avoid getting close to transmitter masts, such as television and radio stations.
- If the Ypush ever starts to operate by itself switch it off and report this to your Dealer.

**Warning:** The operation of any powered wheelchair may affect sensitive electronic circuits such as alarm systems, garage door closing mechanisms, or automatic doors in shops.

**Warning:** Do not carry, balance or attach anything to the armrests. Anything attached to the seat arms could affect stability, or interfere with the control of the Ypush.

**Warning:** Never carry bags or loads (unless they are an approved accessory) behind the seat as this could affect stability.

**Warning:** Before charging the Battery, always check the Battery Charger and Battery Pack for damage. Never use a charger or battery that is damaged or malfunctioning.

**Warning:** Never stand or store the Ypush on its end or side as it may topple and cause injury or damage.

**Warning:** Do not use, store, or charge your Ypush in temperatures outside the ranges stated in the Technical Specifications section of this manual. Always charge and keep your battery indoors when not in use and if outside temperature or conditions are unpredictable.

**Warning:** If the Ypush is left out in the sun, surfaces could become extremely hot. Always try to park the wheelchair in the shade.

**Warning:** The Ypush is not for use on roads, apart from crossing them at designated places.

**Warning:** The Ypush is not suitable for use as a seat for an occupant in a motor vehicle.

**Warning:** The attendant or occupant should not wear clothing, or carry items on the Ypush that could become entangled in the wheels or other moving parts as severe injury could occur.

**Warning:** Do not drive the Ypush onto an escalator as this could result in severe injury to the occupant, the attendant, or third parties.

**Warning:** Consider wearing a high visibility jacket to warn others of your presence, particularly in poor visibility. Avoid driving in bad weather conditions.

**Warning:** Unauthorised modifications or additions to the Ypush could result in injury or permanent damage. Such modifications will invalidate any guarantees.

**Warning:** Only fit approved Brintal accessories.



## Safety information

### Driving & general warnings

**Warning – Damage:** Before using the Ypush, check it over for damage. If you notice anything, do not use it and refer to your Dealer.

**Warning – Brake override levers:** Before allowing an occupant to get on or off the Ypush, always check that both brakes are on, with the brake levers both in the UP position, and the bright green override levers "locked" down - sat flush on top of the handles. IMPORTANT: When the override levers are pivoted back into the "unlocked" position, the Ypush can free-wheel and there is no braking, so it could run down a slope and cause injury or death. NEVER sit on the Ypush when the override levers are unlocked.

**Warning – Battery Charge:** Before driving always check the battery indicator. Ensure that if possible the battery is fully charged before starting any journey.

**Warning – Transferring On and Off:** Do not attempt to get on or off the Ypush unless it is switched off, at rest, and on a stable, level surface with the brakes on. Never get on or off on a hill.

**Warning – Armrests:** Do not use armrests as a sole support when getting in or out of the Ypush. Make sure they are both closed before driving.

**Warning – Seat Belt:** Always ensure that the occupant is wearing their seat belt before driving. Adjust the belt to suit the occupant and check that they are comfortable.

**Warning – Footrests:** Before using the Ypush, ensure that the occupant's feet are correctly placed in the footrests. If you drive forward with the occupant's feet still on the ground, their feet could become trapped under the wheelchair and serious injury could result. When getting on or off the Ypush, pivot the footrests up, and swivel to the side to make getting on and off easier.

**Warning – Castoring:** Be aware that when you set off, if the front castor wheels are not straight, the initial movement could be partially sideways.

**Warning – Leaning Over:** Occupants, do not lean sideways, as this could cause the Ypush to topple.

**Warning – Speed:** Always slow down for turns, and reduce speed when amongst pedestrians to ensure you do not run into them.

**Warning – Slopes and slippery surfaces:** On steep slopes the Ypush could topple over. Always try to avoid crossing a slope. If you have to cross a slope, take great care to avoid tipping. Never make sharp turns on slopes. Never drive on slippery or icy surfaces. Never reverse down a slope as the Ypush could tip over backwards. If you are not comfortable with the hill gradient, consider an alternative route.

**Warning – Going down slopes:** Do not use Power-assist whilst going down slopes. Let the Ypush freewheel, and use the brakes to slow your speed or to stop.

**Warning – Kerbs:** Try to avoid driving up or down kerbs as this may cause the Ypush to topple. Use access ramps wherever possible. Never attempt kerbs greater than that in the Technical Specification. If you have to climb or descend a low kerb, always tackle it straight on. Occupants must lean forward when climbing a kerb and lean back when descending.

**Warning – Braking:** Never use brakes whilst the thumb throttle is being pressed. **ALWAYS** release the thumb throttle to cut motor power before applying the brakes.

**Warning – Braking and turning in manual mode and whilst travelling down slopes:** Use even pressure on left and right brakes to steer the Ypush straight. Applying one side more than the other will turn the wheelchair. Become familiar with this turning action before driving with an occupant.

**Warning – Turning using Power-assist:** DO NOT use the brake levers to try to turn whilst using Power-assist. Always keep **BOTH** brake levers pushed fully down onto the handles until after the thumb throttle is released.

**Warning – Stopping:** If you apply braking suddenly when turning, the Ypush might skid or topple. Take care when braking and turning.

**Warning – Reversing:** Always take particular care when reversing the Ypush as injury to other people could occur if safe distances are not maintained. Attendants are advised to take great care during this type of manoeuvre to avoid serious injury.

# Controls and features

## Ignition key/Battery indicator on throttle assembly/ Maximum speed control



**Do not** attempt to drive the Ypush before reading this manual thoroughly and practising driving, turning, and braking safely without an occupant on-board.

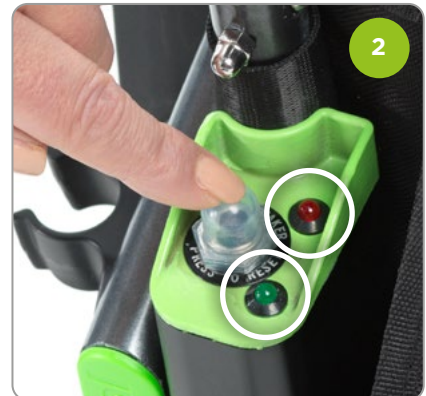
**Ignition On/Off/Charge Key:** Switch the power on and off using the key switch. **1** The **Green** LED on the left dash panel will light, and if there is no weight on the seat the **Red** LED will also light up **2** When in the off/charge position the battery can be charged (see charging section) and the Power-assist will be disabled for safety reasons. Always remove the key when the Ypush is unattended or when the battery is being charged.

**Battery Indicator:** **3** The LED lights mounted on the throttle assembly, located on the right handlebar, show the current level of charge in the battery pack when the ignition is on. These consist of a row of 1x Red, 1x Yellow & 1x Green LEDs. All LEDs lit indicates a full battery. The fewer LEDs that are lit, the more discharged the battery has become. The red LED will flash to indicate the battery is almost empty and power could be cut at any time. Immediate recharging is required.

**Note:** When climbing an incline or starting off, the battery level indicator LED's lights may flicker or drop momentarily; this is normal.

**Maximum Speed pre-set control:** The maximum speed the wheel-chair will reach at full throttle using Power-assist, can be adjusted to suit the occupant and attendant **4** The adjustment is made by turning a grey knob inside the left hand armrest. Turn the knob fully clockwise for the maximum pre-set speed of 4MPH/6.4KPH, and fully anti-clockwise for minimum. Find a speed that is comfortable for both you (the attendant) and the occupant.

Set the pre-set speed to the slowest setting (Fully anti-clockwise) until you are familiar with controlling the Ypush.



# Controls and features

## Power-assist & Thumb throttle/Forward & Reverse button/ Sleep mode/Charging socket/USB Power socket

**Thumb throttle:** The Ypush can be pushed manually, or used with Power-assistance at any time, by pressing the thumb throttle.

**Power-assist:** The throttle control **5** is actuated using thumb pressure, as shown by the green arrow. **Note:** Brake handles MUST both be pressed down as shown by the black arrow, to release both brakes **before** the throttle is used. **Never** press the throttle when the brakes are on. Gently press down the throttle lever as shown by the green arrow, and the Ypush will start moving along. Adjusting the pressure on the throttle lever will proportionately adjust the speed. **Note:** Fully pressed, the Ypush will accelerate towards the pre-set maximum speed.

Release the thumb throttle and the vehicle will no longer have Power-assist and will freewheel along. If the attendant releases pressure on the brake handles, allowing them to pivot back up, the automatic braking will be applied.

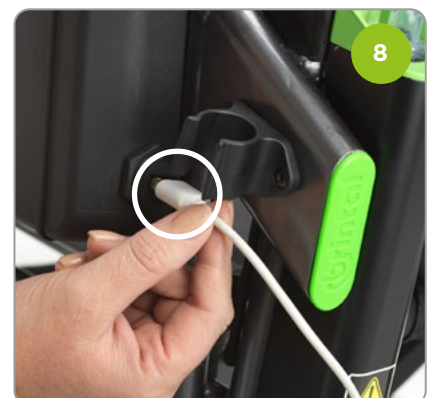
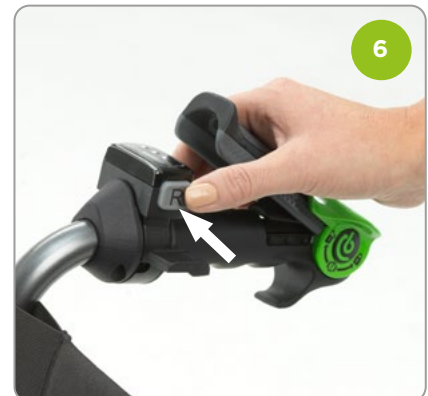
**Forward and Reverse button:** To switch between forward and reverse Power-assist, first come to a stand-still and press the Reverse button **R** as shown by the white arrow. **6** When switched into reverse, 3 short beeps will be heard to alert the attendant to the fact that reverse has been engaged, and the red LED light on the left dash panel will start flashing. This red LED will continue to flash until the Ypush is switched back to forward by pressing the Reverse button again. Be very careful that there is ample space behind you (the attendant) to be able to safely complete a reversing manoeuvre. If you become worried at any time, first simply release the throttle lever, and then release pressure on the brake levers to come to a complete standstill. **Note:** In reverse the maximum speed possible is slower.

**Sleep mode:** If the Ypush is left switched on and not used for 30 minutes, it will go into "Sleep mode" to save battery power. All throttle and ignition LED's will go out. To reset, simply turn the key to the off position, wait a moment, and then turn back to the on position.

**Note:** If the Ypush goes into sleep mode after being used in reverse, upon start-up it will automatically revert to forwards mode, but in that instance will require 2 presses of the button to go back into reverse.

**On-board Battery Charging Point:** A Battery Charging Socket is situated inside the left hand casing **7** under the armrest. The socket is protected by a rubber cover A which must be removed before charging and replaced afterwards. For further details see page 20.

**USB Power socket:** Devices with a USB plug, may be connected with a maximum consumption not exceeding 2.0Amps. To connect, remove the rain cap by unscrewing it anti-clockwise and connect your USB device. **8** Replace the cap when the port is not in use to protect from moisture.



# Controls and features

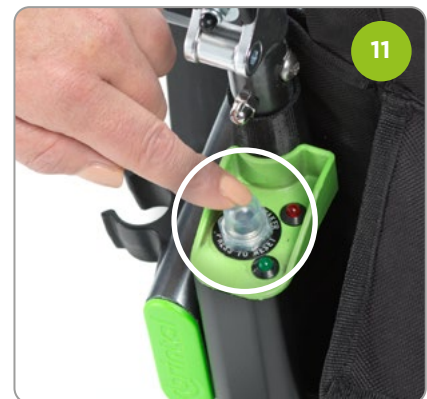
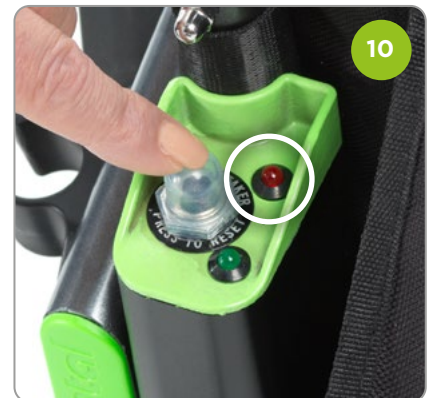
## Power steering buttons/Red LED light & audio "beeper" Electrical circuit breaker

**Power steering buttons:** The Ypush features unique power steering, which is operated by pressing either the left or right green buttons located under the handles, depending which way you want to turn. This feature reduces attendant effort and provides excellent steering control and manoeuvrability. **9** Press for left or right and release the button to stop turning. **Note:** Power steering only functions when the throttle is pressed and the Ypush is being used with Power-assist.

**RED Info LED and audio "sounder/beeper".** There is a red LED light situated on the left dash panel alongside the circuit breaker **10** The red LED will illuminate for various reasons and on occasions you will also hear an audio "beeper" to indicate a function or a warning. Please see page 33/34 of this manual for full explanations.

**Electrical circuit breaker:** To protect the Ypush's electrical system it is fitted with a circuit breaker switch **11** If the switch button "pops up" inside the clear cap, press it back down to reset it. If it will not stay down, or immediately "pops up" again or activates randomly, switch off the Ypush ignition, disconnect the battery and report the fault to your Dealer for investigation.

**Note:** In the event of an electrical fault or issue, and Power-assist cannot be used for any reason, the Ypush can still be pushed manually, but for safety reasons, disconnect the battery first.



# Controls and features

## Safety braking system operation



**Braking System:** The Ypush is fitted with the unique Brintal "Hands off" safety braking system **13**. When the Ypush is unattended and "hands are off" the brake levers, they automatically pivot upwards as shown by the green arrow, and the brakes lock the rear wheels. The left and right levers operate the left and right brakes independently. The brakes are designed to be comfortable and easy to use, and there is very little effort required to hold the brake levers down during use.

**Warning!** When the Ypush is left parked, or unattended, to prevent rolling, the brake levers should always be UP **13** with the brakes on.

**Moving along:** **14** To enable the Ypush to move along, either pushing manually or using Power-assist, the brakes are first gradually released by the attendant pressing both levers down together onto the handles, as shown by the black arrow. Fully release the brakes **FIRST** before pressing the thumb throttle for Power-assist.

**Braking to STOP:** Whether pushing manually or using Power-assist, the brakes are operated in exactly the same way. The attendant simply releases pressure on the levers to allow them to pivot all the way back up to fully lock the brakes. (Thumb OFF throttle!)

**Braking to SLOW DOWN:** When travelling down a slope, to slow down and reduce the speed, gradually release and alter pressure on the brake levers to slow the Ypush to the speed required. (Thumb OFF throttle!)

**Note: Brake Steering:** When travelling down a slope, by releasing more pressure on one brake lever than the other, it is possible to "brake steer" the Ypush to turn left or right whilst still moving along. (Thumb OFF throttle!)



**Warning!** In the event that the brake lever is jammed in the "UP" position with the brakes locked on, and you can't easily push down the lever/s **DO NOT** try to force the lever down, this will cause severe damage. Stop using the Ypush and contact your dealer for assistance.



# Controls and features

## Brake Override lever Unlocking/Locking

**Brake Override lever:** There will be occasions when you wish to unlock the brakes so you can freewheel/roll the Ypush along. For instance, when the Ypush does not have an occupant, has been folded for storage or transportation, or when rolling the Ypush back into the Travel Roller Bag.

**Brakes – Lock & Unlock:** The automatic braking system may be locked and unlocked by swivelling the bright green override levers **15** located on the back of each brake handle. See previous page 14.

**Direction arrows:** The direction arrows and a "locked" and "unlocked" symbol are clearly printed on each as indicated by the circles.



**Warning!** The override levers must both remain in the **Locked (SAFE/BRAKES ON)** position in normal use. The unlock function is only to enable moving/freewheeling of the Ypush when unoccupied.

**Note:** When you receive your Ypush the Override levers may be unlocked, so be aware of this feature and always check before use.

### Unlocking Override lever – (UNSAFE/BRAKES OFF)

After using the Ypush the brake handles should be in the "UP" position. **16** To release the brakes, press down on brake lever as shown by the white arrow until it pivots fully down onto the top of the main handle. Hold the brake lever down **17** as shown, and with the other hand swivel the bright green override lever back, as shown by the black arrow, swivelling in the direction of the "unlocked" symbol printed on the side of the lever, until you hear a "click" to confirm it is in the correct position.



**Warning!** When the green brake override levers are pivoted back unlocked, the braking is disabled. **NEVER** unlock if the Ypush is on a slope or with an occupant on board! **NEVER** leave one override lever locked and the other unlocked. You could damage your Ypush wheelchair and cause injury. Always leave the brakes in the User/SAFE position **16** when the Ypush is in use.

### Locking Override lever – (SAFE/BRAKES ON)

Before using the Ypush check that the override levers are both in the **(SAFE/BRAKES ON)** position. If they are unlocked, hold the brake handle firmly down **18** as shown by the black arrow, and using the other hand, "un-click" and swivel the bright green override lever in the direction of the "locked" symbol printed on the side, as shown by the green arrow, until it sits flush on the main handle. Once the green override lever is sat flush on the main handle, release pressure on the brake lever to allow it to "spring back up" as shown by the green arrow **19** to the locked **(SAFE/BRAKES ON)** position.

**IF YOU ARE NOT COMPLETELY SURE OF THIS FEATURE CONTACT YOUR DEALER BEFORE OPERATING THE YPUSH.**



# Controls and features

## Mechanical Anti-tip/Occupant sensor

**Mechanical Anti-tip System:** The Ypush features a pair of mechanical Anti-tip wheels, fitted and stored at the rear of the wheelchair.



**Warning!** Always fit correctly before an occupant boards the Ypush. They should remain in place at all times while being used, as they are a safety device to reduce the risk of injury from tipping over backwards if excessive gradients are attempted.



**Note:** Before packing the Ypush into the Travel Roller Bag, the Anti-tip wheels must be removed, swivelled around, and securely reconnected to the front end of the same mounting tube in the "storage" position. Follow these steps to install, use and store.

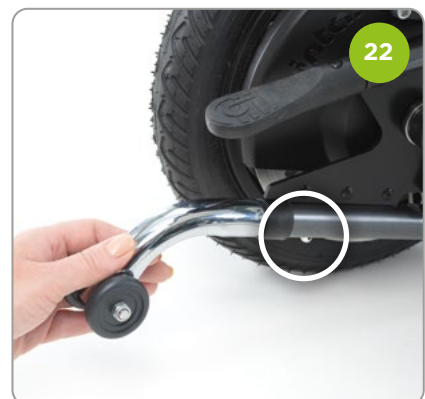
**1 Removal from storage position:** Remove the Anti-tip wheels from the "storage" position at the front of the mounting tube **20** by pressing the spring button as shown by the green arrow, and pulling the chrome tube out as shown by the black arrow. **Note:** Wheels face upwards in storage.

**2 Installation for use:** Take the assembly to the rear of the Ypush, rotate it, and press the spring button as shown by the green arrow, slide the wheel assembly inside the rear of the mounting tube. **Note:** Wheels face downwards for use. **21**

**3** Make sure that the spring button reappears through the hole to confirm that the wheels are locked securely in place. **22**

**4 Stowing the anti-tip wheels:** Simply reverse the above procedure. Make sure that the spring button reappears in the "storage" position to prevent the anti-tip wheels from getting lost during transit.

**Occupant Sensor:** The Ypush requires an occupant on board, or a weight of at least 10kg placed on the seat base to enable the Power-assist to function. This is a safety device to reduce the risk of unintended operation or misuse. If there is no weight in the seat the red LED light will remain illuminated and Power-assist is not available.





# Controls and features

## Electronic Anti-tip system/Footbars

**Electronic Anti-tip System:** In addition to the Anti-tip wheels fitted to the rear, the Ypush also features a unique electronic anti-tip safety system which only operates whilst using Power-assist. If both the front wheels leave the ground, power to the drive system will be suspended and the red LED light will light up. **23** Power will be automatically restored, and the LED will go out as soon as one, or both of the front wheels return to the ground. To resume Power-assist, the throttle must be released and reapplied.

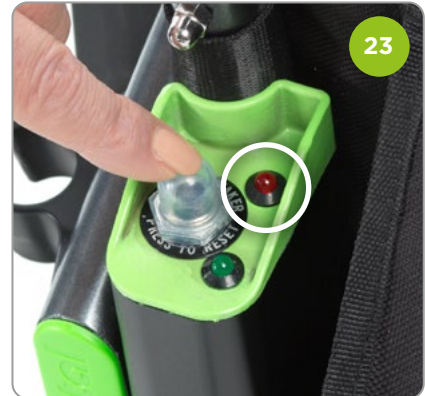
**Footbars:** There are two adjustable footbars fitted inside the chassis at the rear of the Ypush. Foot pressure on them can help the attendant negotiate small obstacles such as kerbs. **24**

**How to use:** The attendant can apply progressive downward foot pressure as shown by the green arrow, on either of the foot bars, to tilt the Ypush back, and assist in briefly lifting the front wheels off the ground **25**

**Note:** **Never stand on the foot bars with your full weight – one foot must stay on the ground. You should not use Power-assist whilst using the foot bars, or attempt to use Power-assist to lift the front wheels. Always release the throttle before use.**

**Adjustment and packing:** In use, to give maximum leverage, the foot bars can be locked in the "out" position as shown **26** To slide back to the "in" or "packed position", press on the spring button as shown by the white arrow, and then push in the direction of the green arrow until it slides forward and the button clicks correctly into the second hole 'X'.

**Note:** **Packing up** When packing the Ypush into the Travel Roller Bag, first slide the foot bars fully in to the "packed" position so that they do not damage the end of the bag.



# Battery Introduction

## Battery level indicator/Installation Connection and Removal



**Warning!** When you receive your Ypush, the high performance Lithium Battery Pack is only partially charged – always fully charge it before use. You can either charge it fitted in the Ypush, or remove the battery and charge it in another location.

**Built-in battery indicator:** There is a battery level indicator on the throttle assembly, but you can also check the level on the battery itself, by pressing button A. 27 This is very useful if the battery is being charged away from the Ypush. When all of the four LED lights are lit, the battery is fully charged. As the level of charge reduces so do the number of lights illuminated. See page 33.

**Installation:** Open the right armrest fully 28 then pull the battery release knob as shown by the green arrow, hold the battery by the handle, and lower it down into the side casing. Ensure the connector plug in the white circle is kept out of the way and does not get trapped.

**Connecting:** Remove the rubber bung B from the battery socket, and slide the connector plug 29 in the direction shown by the green arrow until it is firmly connected to the battery socket.

**Note:** Similar to a house plug, the battery plug fits only one way into the socket. There is an arrow on the TOP of the connector plug which should face UP. Slight rotation each way whilst sliding it in can help line the pins up.

Lastly, fold the battery handle back down flush onto the top of the battery case, and close the armrest compartment, being careful not to trap your fingers or anything else.

**Disconnecting and removal:** To disconnect, reverse the instructions above 30 remove the connector plug, replace the rubber bung B, pull the battery retainer knob and lift out by handle. Close the armrest.

**Note:** When removing the Lithium Battery Pack from the Ypush always refit the grey cap/isolator bung B to the battery socket as shown 29



**Warning!** Before installing the battery or using the Ypush, please read the Battery and Battery Charging sections of this manual.





## Battery care & Charging warnings

Battery characteristics can change depending on charging, temperature, usage and other factors. Listed below are some guidelines to help you prolong battery life, and to ensure safety:

- **After using the Ypush** always charge the battery, even after a short journey.
- **Try to charge the Ypush battery weekly**, whether it is in use or not, and any other spare batteries you may have.
- **Only use a Brintal Battery Charger** supplied for use with this specific make and model.
- **Only use a Brintal Battery Pack** supplied for use with this specific make and model.
- **Never immerse the battery** or expose it to water.
- **Never expose the battery to extreme heat**, or dispose of it in a fire.
- **Never charge** a battery in conditions outside of the permissible temperature ranges stated in the Technical Specification section of this manual.
- **Never charge a battery** in a wet or damp area. Keep the Ypush and batteries in a well-ventilated area and away from naked flames.
- **Whenever possible**, do not part-charge the battery. Allow the charger to complete its full cycle.
- **When not in use**, take batteries indoors to protect them from climatic effects.
- **Fill in the owner's information** on the battery label in case it is misplaced.



**Warning!** Always try to use a battery that is fully charged. If the battery fails to charge or is suspected of malfunctioning then stop using it and refer to your Dealer.

**Warning!** Never use a faulty or unapproved battery and or charger.

**Warning!** If the charger or battery pack appears damaged in any way do not try to use it. Contact your Dealer as soon as possible for a replacement.

**Warning! NEVER** smoke or charge batteries in a place where there are naked flames such as gas-fired heaters as, under exceptional circumstances, batteries may give off gases that could ignite and explode. If the Ypush has been damaged, it is possible that the battery has been affected. In this case do not charge the Ypush battery and refer to your Dealer for assistance. Never charge the Ypush outside as the charger is not designed to get wet.

**Warning!** Always charge in a dry, well ventilated area and strictly observe the temperature limits in the Technical Specification section of this manual.

**Warning!** It is strongly recommended that the mains socket used for charging the Ypush is protected by a 30 m/A RCD (residual current device). Many buildings have sockets protected by a system based RCD. If you are in doubt as to the level of protection in your charging location then either purchase a plug in RCD or consult a qualified electrician to verify that your charging location mains sockets are protected.

**Warning!** If batteries are damaged or frozen they could heat up during charging and in an extreme case, explode.

**Warning!** Do not attempt to open the battery case, there are no user serviceable parts inside. It may be necessary for some carriers such as airlines to physically disconnect the battery pack for transit. If this is the case the battery can be removed and the grey isolating bung fitted. See the Transportation and Travel section for further details.

# Battery Charger and Charging

## Charging with the Battery installed in the Ypush



**Warning!** Always charge the battery in an area that is dry and well-ventilated and within the charging temperature range stated in the Technical Specification.

For your convenience, you can charge the battery on-board the Ypush, without removing it from the wheelchair, using the special Brintal Battery Charger **31** located under the left hand armrest. **32** The long flexible charger lead extends, to reach mains power sockets quite a distance from the wheelchair.

**1** Place the Ypush in an area that is dry and well ventilated and within the charging temperature range stated in the Technical Specification. Make sure a mains power socket is within reach. Do not over-stretch the flexible cable.

**2** Switch off the ignition and remove the key.

**3** Open the right hand armrest and check that the battery is plugged in.

**4** Remove the Battery Charger A from the left armrest **32** and lift the rubber socket cover B, to expose the charging socket C. **33**

**5** Insert the Brintal Battery Charger plug into the socket as shown by the green arrow **33** **Note:** The plug will only plug into the socket in one position, with the wire from the plug facing forwards to the front of the Ypush as shown.

**6** Check the mains power socket you are going to use is switched off. Never connect or disconnect the Charger with the mains power already switched on.

**7** Plug the Charger into the mains power socket and switch the power on. See page 21 **37**

**8** Whilst charging, a red light **31** illuminates to indicate charging is taking place. This changes to green when the battery is fully charged. If no battery is connected, or the battery is fully charged and the mains power is switched on, then the Charger will also show a green light.

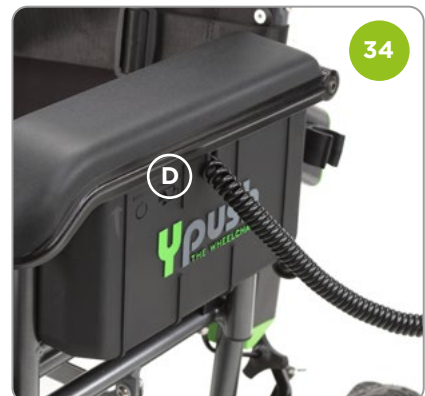


**Warning!** Do not close the armrest unless you have checked the lead is correctly positioned in the gap. **34** Damage could occur.

**9** When charging is complete, first switch off the mains power, remove the mains plug, and then disconnect the battery from the Charger. The Charger can be stored inside the left hand armrest compartment (D).

**Note:** The Ypush will NOT operate if the plug is left in the on-board socket. If you do turn on the Ignition key there will be a continuous beeping sound and the red LED light on the left dash will flash as a warning.

**Note:** Do not leave the charger plugged in with the mains power switched off. This may gradually discharge your battery.



# Battery Charger and Charging

## Charging with the battery removed from the Ypush



**Warning!** Always charge the battery in an area that is dry and well-ventilated and within the charging temperature range stated in the Technical Specification.

For your convenience, you can charge the battery away from the Ypush using the special Brintal Battery Charger **35** located under the left hand armrest. See page 20 **32** This can be helpful if a mains power socket is not available within reach of the Ypush, or for charging spare batteries.

**1** Remove the battery from the right armrest compartment of the Ypush. See page 18 for more details.

**2** Remove the rubber bung from the battery socket, **36** and connect the Brintal Battery Charger plug to the socket.

**3** Check the mains power socket you are going to use is switched off. Never connect or disconnect the Charger with the mains power already switched on.

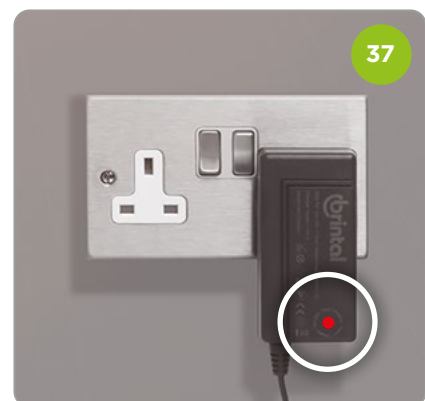
**4** Plug the Charger into the mains power socket and switch the power on. **37**

**5** Whilst charging, a red light **37** illuminates to indicate charging is taking place. This changes to green when the battery is fully charged. If no battery is connected, or the battery is fully charged and the mains power is switched on, then the Charger will also show a green light.

**6** When charging is complete, first switch off the mains power, remove the mains plug, and then disconnect the battery from the Charger. The Charger can be stored in the left compartment.

**Note:** Do not leave the Charger plugged in with the mains power switched off. This may gradually discharge your battery.

**Note:** The battery level can be checked at any time by pressing the check-charge button A on the top of the battery **38** Ensure the battery is fully charged before use or storage.



# Setting up the Ypush

## Unpacking and assembly – see images page 23



**Warning!** Assembling the Ypush involves some lifting and handling. Before lifting, check the Technical Specifications section of this manual for the various weights to avoid injury.

**Warning!** Pinching or Crushing. Be careful to avoid being pinched or having your hands crushed when setting up the Ypush.

The Ypush is designed to be quickly and easily unpacked and assembled. The Travel Roller Bag supplied is the best way to keep the Ypush protected. The following steps will guide you through the set-up process. Please refer to images on page 23.

- 1 Put the Travel Roller Bag in an open, level area. **39**
- 2 Unclip any pull handles from the front of the bag that might be in the way, and fully unzip the large flap. **40**
- 3 Hold the flap and start lifting it forward **41** until it sits on the floor.
- 4 With the flap on the ground, roll the Ypush out of the bag. **42**
- 5 Pivot both the footrests down as shown by the green arrow **43** Ensure that the brackets lock firmly onto the square chassis tubes.

6 Release the pack-up clip attached to the inner chassis tube, by pulling upwards as shown by the green arrow. **44**

7 Push down and outwards on the seat sides as shown **45** to start opening up the wheelchair. As the seat area widens use the palms of your hands to apply downward force to "click" the seat in place. **46**

8 Pivot both footrests into place as shown. **47**

9 Raise both handles together **48** until they both "click" into the locked position. Pull backwards on the handles to check that they are both locked securely, and in the correct position.

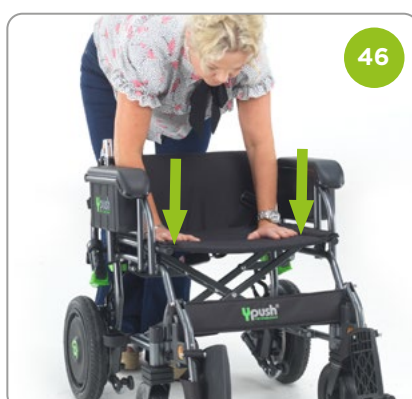
10 Lift the right hand armrest and fit the Battery **49** and connect ready for use as shown on page 18.

11 Fold right armrest back down, check through all the above details to ensure everything is set up correctly. Ensure brakes are ON with the brake levers "UP" as shown, **50** then fully inspect Ypush before use.

12 Read this manual thoroughly, understand all the functions and features, and undertake all the safety checks before use.

# Setting up the Ypush

Unpacking and assembly – see text page 22



# Packing up the Ypush

## For transport or storage – see images page 25



**Warning!** Packing up the Ypush involves some lifting and handling. Before lifting, check the Technical Specifications section of this manual for the various weights to avoid injury.

**Warning!** Pinching or Crushing. Be careful to avoid being pinched or having your hands crushed when setting up the Ypush.

The Ypush is designed to be quickly and easily folded up and packed for transportation or storage. The Travel Roller Bag is the best way to keep the Ypush protected. The following sequence will guide you through packing up. Please refer to images on page 25.

- 1 Ensure there is nothing on the seat and the Ypush is on level ground.
- 2 Remove the ignition key.
- 3 Unzip the Travel Roller Bag ready, with the flap open on the floor.
- 4 Lift the right armrest, 51 disconnect the battery power plug as shown by the white arrow, and fit the rubber bung B into the Battery Charge Socket.
- 5 Pull the battery retainer knob as shown by the white arrow, 52 and lift the battery from the compartment as shown by the green arrow. Take care not to damage the battery connector plug, circled, by holding it out of the way.
- 6 Pack the battery into the Battery Pack Carry Case 53 to protect it and store it safely.



**Warning!** Store the battery safely. Be sure to observe the battery storage and charging instructions, as shown in the Technical Specification section of this manual.

7 Fold up both footrests 54 as shown by the green arrow.

8 To enable the Ypush to roll freely, unlock the Override levers circled 56 see page 15.

9 Press lever on both push handles 55 to release the hinge catches as shown.

10 Fold both handles down 56 together as shown.

11 Grip the seat base fabric 57 at the front and pull UP to release the seat clips. This will allow the Ypush to start folding up narrower, then push the seat material back down along with the seat belt and buckle.

12 Whilst squeezing the seat rails towards each other with one hand, line up the pack-up clip 58 in position above the **inner** chassis tube, and press down to "click" the pack-up clip into place.

13 Pivot both footrests upwards 59 so that the footrests slide into the "pack up" position between the inside of the armrests and the seat base material.

14 Roll the Ypush backwards, 60 large rear wheels first, into the Roller Bag. **Tip:** Put one foot on the Roller Bag flap as shown to prevent it moving backwards while you are rolling the Ypush inside.

**Note:** Ensure that the Ypush is fully pushed to the rear of the bag centrally, with the push handle hinges tucked into the inside of the bag behind the zip before zipping up.

15 Holding the Ypush in place, carefully zip up the flap, 61 adjusting the position of the Ypush inside if necessary, to ensure the zip is not over-stretched. Do not force the zip.

16 Connect any handles required – the Ypush is ready to transport or store. 62



# Packing up the Ypush

For transport or storage - see text page 24



# Practise Driving - without occupant

## Manual and Power-assist



**Warning!** Attendants must read this entire manual and be familiar with all the controls, before practising to drive or carrying an occupant.

Although the Ypush has Power-assist, it can also be pushed manually like a normal wheelchair, with the power switched off or disconnected. With practice, become familiar and confident with manually pushing, turning, and operating the brakes.

### Practising Manual driving:

**1** Set up the Ypush **63** as described on page 22, ensuring the Override levers are in the "locked" position so the brakes are applied, and place a weight on the seat of at least 10kg.

**Note:** You may notice that when weight is put on the seat the Ypush lowers slightly at the front. This is normal and part of the anti-tip design.

**2 Manual Steering:** Push the Ypush, and practise steering by applying left or right sideways force **64** to the push handles, as shown by the green arrows, in exactly the same way as a conventional transit wheelchair.

**3 Brakes:** Standing behind the Ypush, rest your hands on the brake levers and gently press them down, release the brakes and walk off. Then remove your hands to apply the brakes again. See page 14. Practise this until you feel confident with the feel and operation of the brakes for both slowing down and stopping.

**Practising Power-assist driving:** Fit the battery as described on page 18, and switch the ignition on. You should hear a single "beep" and the green LED light should be lit. If the red light is also lit, you may need to add more weight on the seat. Set Maximum speed knob to slow, see page 11.

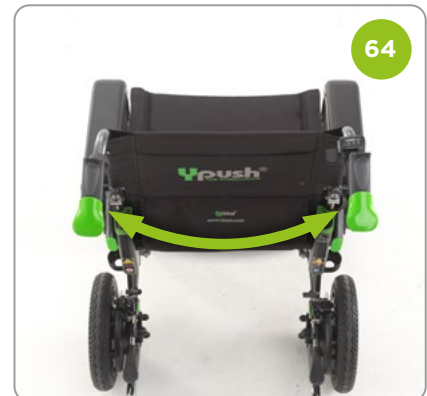
**1** Push the brake levers down to release them, as shown by the grey arrow, **65** and then press down gently on the thumb lever as shown by the green arrow. The Ypush will start to move forwards. Release the throttle to stop Power-assist, and then release the brake levers to stop.

**2** Power steering: Whilst moving along, practise using the power steering buttons, **66** pressing them one at a time. Note: To turn a tight circle, press one of the buttons **before** pressing the throttle, and just one wheel will operate.



**Warning!** NEVER try to turn using the brakes or apply the brakes when the throttle is pressed. Always release the throttle first before braking.

**3** Practice reversing: Press the Reverse button R **66** and practice slowly reversing, stopping, and switching back to forward.



# Attendant & Occupant

## Transferring in and out/Seatbelts/Footrests



**Warning!** If the occupant feels uncertain about getting in or out of the Ypush, please always ask an attendant for help and advice.

### Transferring in:

- 1 Ensure that the Ypush is set up correctly - see pages 22-23, on a level surface, the brakes are on, with the brake handles UP. See page 14.
- 2 Ensure the ignition key is off, the Battery Charger is disconnected, and both armrests are down.
- 3 Try to push the wheelchair, check both the brakes are on and check that both the rear wheels are locked.
- 4 First, pivot the leg rests up, 67 fold the footrests in, and pivot the whole assembly up and then around to the side of the chair 68 This allows the occupant as much space as possible in front of the seat to get on and off.
- 5 The occupant, with their back to the chair, can steady themselves using the armrests, and gently lower themselves down onto the seat.
- 6 When the occupant is sitting comfortably, the attendant can swivel the footrests back down into position to support their feet, 69 locking them to the required height by adjusting the position of the spring buttons in the green circle.

**IMPORTANT:** Ensure that the footrest brackets lock securely into the chassis. Failure to lock in properly could result in injury.

- 7 Fit the seatbelt and adjust accordingly. 70 The belt can be adjusted at each side to achieve the correct fit. Make sure that the occupant is sitting fully back in the seat and then clip the two halves of the belt together. Adjust length as necessary. To release the belt press the RED release button.

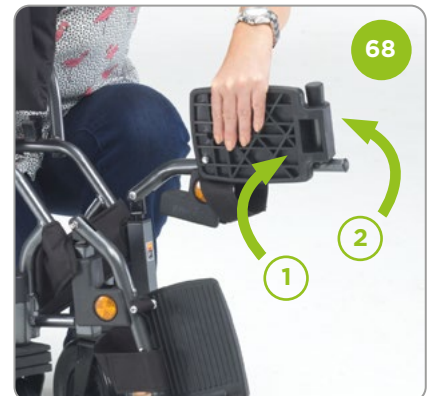


**Warning!** Always fit and adjust the seatbelt correctly whenever an occupant is seated. Never allow the seat belt to hang free as the risk of entanglement could cause injury.

### Transferring Out:

When transferring out of the Ypush, always ensure that it is on a level surface, the brakes are applied, and reverse the above instructions.

**OCCUPANT:** Place your feet on the ground, steady yourself on the armrests and carefully stand up. If you feel uncertain about getting out, ask for assistance.



# Driving the Ypush

## Attendant checklist and driving tips



- Before setting out, check the weather forecast. If it is snowy or icy, do not attempt to use the Ypush. Ensure you are wearing suitable clothing, whether your journey is long or short.
- If you are taking medication, check with your doctor or physician that your ability to control the vehicle will not be impaired. Do not drink alcohol or consume drugs and drive.
- Only use the Ypush for the purpose it is intended for. Do not drive through water or on slippery surfaces; do not transport more than one person and do not attempt to tow other vehicles or carry loads.
- Check the Brintal Battery Charger is disconnected and the Battery Pack is fully charged, installed and connected. Consider your route, as if you are going up hills it requires more energy.
- Check that the brake override levers are in the locked SAFE/BRAKES ON position.
- Ensure that the occupant's seat belt is adjusted and fastened, their feet are correctly positioned on the footrests, and they are comfortable.
- Check that the Anti-tip wheels and foot bar assemblies are correctly installed and adjusted.
- Set the pre-set speed control to a low setting.
- Switch on the ignition key. Check the battery is fully charged.

A unique feature of the Ypush is that in the event you run out of battery power, if necessary, there is the option to push. When planning a journey, consider your physical ability to manually push.

- 1** Push down on both brake levers to release the brakes.
- 2** Gently press the throttle lever to start powered driving, or start manually pushing.
- 3** To slow down, first take your thumb off the throttle lever, and then evenly reduce pressure on the brake levers. If you become unsure or feel unsafe, completely relax your grip on the handles and the brakes will be fully applied.
- 4** As you get accustomed to the Power-assist you can increase the speed but make sure that the occupant is comfortable at the chosen speed.
- 5** Remember, use the throttle whenever you need extra help, but down hills release it and coast, using the brakes to slow and stop.
- 6** Avoid crossing slopes as it could be difficult to control – always drive straight up and down a slope or take an alternative route if you can.
- 7** Remember, the Steering buttons only function whilst using Power-assist and whilst the throttle lever is pressed. If you are coasting down a hill, use the brakes to help turn, to slow down, or to stop.
- 8** When parking, always ensure that both brake override levers are in the locked SAFE/BRAKES ON position.
- 9** Switch off the ignition and remove the key when not in use.



**Note: The Ypush has a limited battery range. Ensure you fully charge the battery and account for user weight, weather and terrain, which can all affect range. If you have a spare a second battery, make sure that is also fully charged and carry it in the rear pocket of the chair.**

# Transporting & Air Travel information

## IATA/UN 38.3



**Warning!** To transport the Ypush in a car or another vehicle, you may need to lift it. The component weights are recorded in the Technical Specification section of this manual. You may decide not to use the Trolley Travel Bag for shorter journeys, making it easier to lift and handle. Do not attempt lifting anything unless you are confident that you can do so without injury. If you are uncertain, ask for assistance.

**Note:** Ensure that the Ypush and any spare batteries are safely secured before driving the vehicle. Unsecured objects can become lethal in the event of a road accident.

### Assembling the Ypush following transportation

After removing your Ypush from the vehicle and placing it on level ground:

- 1 Check the Ypush for any sign of damage before assembly.
- 2 Ensure the ignition key is in the off position or removed from the Ypush.
- 3 Follow the “Setting up the Ypush” section page 22-23 of this manual.
- 4 Ensure that the brakes are in the safe position. (Make sure the Ypush cannot move when pushed).
- 5 Test the Ypush without an occupant to make sure everything is functioning correctly. If there are any issues check the troubleshooting guide or contact your Ypush Dealer if necessary.

### Air Travel IATA/UN 38.3



We have tried to make it as easy as possible to travel with the Ypush. The battery has been fully tested and certified for air and sea travel, but different airlines and carriers have different regulations on the size and type of battery they will carry.

**BEFORE** you travel with the Ypush, speak to your airline or carrier and inform them that the battery is certified IATA/UN 38.3 for Sea and Air Travel and discuss their regulations.

- In some cases you may be asked to disconnect the battery, place the isolation “bung” in place, and leave the battery inside the armrest compartment of the Ypush.
- Alternatively, the airline or carrier may ask you to remove the battery so they can store it in the hold, or they may ask you to pack it in the Battery carry case and take it on board with you. Refer to page 18 for battery removal information.

### CERTIFICATION FOR SEA AND AIR TRANSPORTATION

Certification document: **IATA/UN 38.3 & ISO 62133-2: 2017**

Model: **YPE01/1**

Battery type: **Lithium-ion**

Capacity: **36v/5Ah/180Wh**

Weight: **1.3kg**

### INFORMATION FOR YOUR AIRLINE OR CARRIER

Your airline or other carrier may view the transport information @ [www.ypush.com](http://www.ypush.com) via a browser or use a smartphone to scan the QR code below.



IATA/UN 38.3

# FAQs Frequently-asked questions

## How long will my battery pack last?

This is a difficult question as it depends on many factors. The life of a battery depends upon the number of "use and charge" cycles the battery goes through, and on the conditions of use. Some general advice about battery care is to ensure your battery is fully charged after use. Batteries may not perform as well in very warm or cold weather. Care can prolong the life of the batteries but eventually all batteries will fail to perform to their "new" specification and are classed as consumable parts.

## What range can I expect?

The expected (theoretical) range if there is no manual pushing is shown in the Technical Specification. However, the Ypush has been designed to offer the attendant manual and Power-assisted, or a combination of both, so any pushing greatly extends the range possible.

- Temperature. Cold weather can reduce the output of the batteries.
- Type of terrain - Climbing hills takes a lot more energy than driving on the flat.
- Weight of the occupant makes a big difference. Double the weight will use double the power.
- The age, condition and charge state of the battery. As the battery runs down the output reduces slightly.

## What if I get a puncture?

The Ypush wheels and tyres are puncture-proof, and apart from an occasional clean are designed to be maintenance free.

## Can I take the Ypush on an aircraft?

Yes, in many cases this is possible, BUT depends on the carriers specific regulations on batteries - see page 29 for details.

## Can I take the Ypush on a cruise ship?

Yes, the Ypush folds up to the same size as a regular travel chair, so current regulations allow stowage in the wardrobe of a standard cabin BUT check with your carrier first.

## Can the Ypush be adapted to be operated by the occupant like a power chair?

The Ypush Power-assist and braking systems have been specifically designed to be operated by an attendant only.

## Can I push the Ypush manually if I run out of battery power?

Yes, of course - this is a hybrid Power-assisted and manual wheelchair. Push or power at any time - the choice is yours.

## Do the brakes still work if the battery is flat?

Yes, the Brintal "Hands off" safety brakes are totally separate from the Power-assist, and operate in exactly the same way whether you have the ignition on or off.

## If I choose to push manually and I get to a hill and I want Power-assist, do I need to stop moving and change any settings?

No, as long as the Ypush ignition is already switched "On" when you started your journey, you can add Power-assistance at any time by pressing the throttle lever, at any walking speed. The Ypush Advanced Dual Drive System (ADDS) monitors the current speed you are travelling at, and seamlessly provides the exact amount of power you need to the wheel motors.

# Regular maintenance checks and Servicing

## Owner/Attendant



It is important for safety reasons that you carry out the following checks daily or before using the Ypush.

- Walk around the Ypush and check for any visual signs of damage.
- Check tyres for damage or excessive wear.
- The battery should be fully charged and locked in position.
- Check the operation of the brakes and brake override levers and if you have any concerns, do not use the Ypush and contact your Dealer.
- Are there any unusual noises during use?
- Is the battery charging up correctly – is the “full” charge green light on after charging?
- Does the Ypush stop smoothly when the brake handles are progressively released?
- Does the throttle lever and pre-set maximum speed control operate properly?
- Has anything come loose?
- Are levers operating correctly? Are they worn?
- Can the Ypush be folded and unfolded easily? Are there noises or rattles that were not there before?
- Are there any signs of damage, corrosion or cracking?

**Important** As you get used to the Ypush you will get a feel for how it behaves. If something feels unusual, for instance it does not accelerate or brake smoothly, tries to turn to one side, the brakes are not holding on a slope, or the Power-assist function operates strangely, stop using the Ypush immediately, contact your Dealer, and explain to the engineer exactly what the problem is.

### Servicing information

**The Ypush is designed for minimal maintenance.** It is recommended however that an approved Ypush Dealer services it at least once a year. If the wheelchair is used constantly we recommend twice yearly maintenance.

**Ensure the engineer stamps the Service Record** (page 38) on completion of all servicing carried out. Keep all receipts for servicing and repairs with this manual.

**Contact your Dealer for advice** before you consider disposing of the Ypush. They will be aware of the environmental regulations in force at the time and will assist you to meet the applicable legislation.

**When the Ypush is due for its service make sure you report any concerns you have,** preferably when you book the service.

**On completion of the service,** always test the Ypush before the engineer leaves and make sure you are satisfied with the work carried out.

**Cleaning the Ypush** Keep the Ypush clean by using a damp cloth and soapy water – **never use a hose or a pressure washer.**

# User Trouble-shooting

## Owner/User quick guide

This is a very basic guide to initial fault finding, and the fault may be simple to fix. If you have any doubts or concerns don't use the Ypush and immediately contact your Dealer.

### Symptom

- When the key is switched on there are no lights on the dashboard.
- Ignition on, red and green dash lights on, but throttle does not operate Power-assist.
- Brake lever fully pressed down but when wheels rotate they are noisy and/or bind.
- Brake lever is locked in the "UP" position with the brakes jammed on and I can't push it down or release the brakes.
- Ypush behaves strangely or erratically when driven.

Your Dealer is there to help you so please give them as much information as possible. This will hopefully get the problem fixed quickly. Contact your Dealer and explain exactly what the problem is, recounting as much detail as possible including the indicated faults.

**Help and Advice** see [www.ypush.com](http://www.ypush.com) which will be regularly updated as time goes by with general information, user tips, and handy hints to help you get the most out of the Ypush.

### Solution

- Battery flat or not connected – check
- Check circuit breaker – Page 13
- Ypush in "Sleep mode" see Page 12
- Occupant sensor activated – Page 16 - red light must be **off** to operate Power-assist, place a 10kg + weight on the seat and retest. If problem persist contact your Dealer.
- A small amount of rubbing is normal, but if it is excessive, then adjustment to the brake calipers may be necessary – contact your Dealer.
- **DO NOT** try to force the brake lever back down, this **will** cause damage. Excessive wear in mechanism or cable has occurred and requires adjustment of the brake cable – see page 14, or contact your Dealer.
- Possible electronic issue – contact your Dealer.














# Diagnostics and functions guide

## Page 1

Components	Visual indicator / LED	Sounder	Comments
<b>Battery Pack</b>		N/A	Press the button on the battery to show the charge level <b>Full</b> (3 green lights and one red light) to <b>Empty</b> (one red light only) <b>NOTE:</b> If used with only one red light lit, shut-down without warning is imminent.
<b>Charger</b>	<ul style="list-style-type: none"> <li> Charged/Standby</li> <li> Red - Charging</li> <li> No LEDs lit</li> </ul>	N/A	When plugged into the mains and power is switched on, if no LED's are lit then the charger is faulty. Stop using the charger and order a replacement if you suspect it to be faulty or damaged.
<b>Throttle assembly Battery Indicator</b>	<ul style="list-style-type: none"> <li> All LEDs off</li> </ul>	N/A	Check the battery is connected and the ignition key is on. Check battery level, see page 18. Check overcurrent breaker and reset if necessary. Possibly in "Sleep mode" see Page 12.
	<ul style="list-style-type: none"> <li></li> </ul>	N/A	Full battery. Ready to use.
	<ul style="list-style-type: none"> <li></li> </ul>	N/A	Battery half-charged. Continue using.
	<ul style="list-style-type: none"> <li></li> </ul>	N/A	Low Battery - recharge now.
	<ul style="list-style-type: none"> <li></li> </ul> <p>Flashing</p>	N/A	Shut-down imminent - Recharge ASAP - A small amount of range remains. Recharge or replace with a spare battery. The Ypush may still be operated in manual mode.
<b>Turn assist controls</b>	N/A	N/A	N/A
<b>Left hand dash Red LED</b>	<ul style="list-style-type: none"> <li> Constant red</li> </ul>	N/A	Either there is no weight in the seat (Occupant sensor) or both front wheels are off the ground (Anti-tip) – Motor power will be cut until there is weight in the seat and one, or both front wheels are back on the ground.

# Diagnostics and functions guide

## Page 2

Components	Visual indicator / LED	Sounder	Comments
<b>Left hand dash Red LED con't</b>	 Same pattern as sounder	2 x long beeps not repeating	Motor stalled - one or both drive wheels cannot turn due to excessive load or brake applied. Release throttle, check brakes and obstructions and try again.
	 Same pattern as sounder	2 x long beeps	Either one, or both of the motors have reached their maximum allowed temperatures - shut down is imminent. Turn ignition off and allow 10 minutes to cool down and try again.
	 Same pattern as sounder	Continual beeping pattern	General controller malfunction - stop using the Ypush and contact your Dealer/service agent.
	 Same pattern as sounder	1 sec beep once	Reverse button pressed when still moving forwards or vice versa.
	 Same pattern as sounder	Constant 1 hz repeating beep	Battery charger is plugged in to on-board socket. Ignition key is on. Unplug before use.
<b>Power-assist mode - reverse</b>	 Flashing	3 x short beeps	Warning that reverse has been engaged. When switched back to forward the red light will stop flashing.
<b>Green LED</b>	 Constant Green	1 sec beep once	Power on (Key on) - Ypush ready
	 Off	N/A	POWER OFF / Charge position on Key / No Battery connected / Electrical protection breaker triggered.
<b>On/off Charge Key</b>	 Constant Green	1 sec beep once: - as key is turned to on	Power on (Key on) - Ypush ready
	 Off	N/A	Key Off/charge. All lights off.
	 Off	N/A	Key On - Battery connected/no lights could be sleep mode. Switch ignition off, wait a moment, and switch back on.

# Technical Specification

## Brintal Ypush/YPPAWC/01

Type class	Technology/Laboratory classification	Hybrid manual & power-assisted pushing aid - Medical Class 1 Non-sterile, Non measuring
Type class (USA & Canada)	Technology/Laboratory classification	Hybrid manual & power-assisted pushing aid - Power Assisted Wheelchair (ITI) - Medical Class 2 Non-sterile, Non-measuring.
Overall dimensions fully assembled	length x width x height mm (in)	1010 (39.8) x 630 (24.8) x 945 (37.2)
Overall dimensions fully folded	length x width x height mm (in)	715 (28.1) x 340 (13.4) x 720 (28.3)
Maximum carrying capacity – do not exceed	kg (lb)	100 (220.4)
Mass (weight) including battery pack	kg (lb)	23.5 (51.8)
Battery voltage and capacity	Volts and Ampere hours	36v/5Ah/180Wh – only use Brintal battery packs
Mass of battery pack	kg (lb)	1.3 (2.86)
Type of battery	Lithium Ion – IATA/UN38.3/EN 62133. Model: YPE01/1	
Type of seat	Padded fabric, folding back & folding armrests. Integral seatbelt.	
Motors	Technology	2 x - rear wheels – brushless
Brake Override (Freewheel)	Technology	2 x auto with override - auto-mechanical
Seat depth	mm (in)	395 (15.5)
Seat width	mm (in)	460 (18.1)
Wheel size - front/rear	mm (in)	180 (7) / 280 (11)
Type of tyres	type	Foam-filled/Puncture-resistant
Maximum speed	km/h (mph)	6.4 (4)
Minimum braking distance from maximum speed	m (ft)	0.8 (2.62)
Range on full charge and flat ground*	km (miles)	Up to 8 (5)
The turn-around width	m (ft)	1.25 (4.3)
The maximum safe slope	degrees of slope	6° - Do not exceed the Ypush may topple
The maximum climbing ability facing upwards	degrees of slope	6° - Do not exceed the Ypush may topple
Ground clearance	mm (in)	100 (4)
Maximum obstacle climbing ability	mm (in)	25 (1)
Maximum safe descendable kerb height	mm (in)	50 (2)
Force to operate Accelerator control	Newtons (lbs)	1 (0.224)
Force to operate Brake Override levers	Newtons (lbs)	45 (10.1)
Ambient operating temperature range	°C (°F)	5 (41) to 40 (104)
Ambient Storage temperature range	°C (°F)	10 (50) to 25 (77)
Ambient Charging temperature range	°C (°F)	5 (41) to 40 (104)
USB outlet output and capacity	Volts DC / Amperes DC	5V/2A – Do not exceed rated output
Charger	Model	Brintal YPCv01 - Never use any other charger

\* Range. This assumes no push input from the attendant. Additional input from the attendant will extend range further.

**Notes:** This product meets the following criteria:

1. The applicable climatic requirements of ISO 7176-9:2009 - For the operational safety of users and longevity of the battery pack, please observe all temperature limits and advice stated in this Owner's Manual.
2. The relevant requirements of ISO 7176:14 2008.

Due to a policy of continual improvement, Brintal Ltd (Guernsey) UK reserves the right to change specifications without prior notice.

# Technical information EMI/EMC

## Battery disposal

### Battery disposal



**Notice:** Return your unserviceable batteries to your supplier or ensure they are disposed of in accordance with the environmental regulations applicable at the time.

**Waste Batteries and Accumulators Regulations** In accordance with the Waste Batteries and Accumulators Regulations 2009, Dealers will continue to dispose of waste/exhausted batteries in-line with current environmental legislation. Should the Dealer or end user encounter any problems relating to battery disposal, please contact Brintal Limited, Marion Place, Port Grat, St Sampsons, Guernsey GY2 4TD [www.ypush.com](http://www.ypush.com)



Li-ion

### EMI/EMC



#### Important Technical Information regarding Electromagnetic Interference (EMI)

The intensity of interference from electromagnetic energy is measured in volts per meter (v/m), which refers to the strength of the electrical source (voltage) as it relates to the distance away from the object being considered (in meters). Resistance of a scooter/wheelchair to certain EMI intensity is commonly called its "immunity level". 20 volts/meter is a generally achievable and useful immunity level against interference from radio wave sources (the higher the immunity level, the greater protection).

The Ypush has been tested to **ISO 7176-21** for the purposes of EMC compliance, meeting the required immunity level from Electromagnetic Interference (20v/m): the recommended density of interference from electromagnetic energy.

**Warning!** Even with the immunity level of 20 volts/meter, certain precautions must be followed to ensure your wheelchair will not be affected by outside electromagnetic sources.

- Do not operate devices such as CB radios or mobile phones while the vehicle is switched on.
- Avoid getting close to transmitter masts, such as television and radio masts.
- Note you may experience interference when close to ambulance or fire stations.

If your Ypush starts to operate by itself switch it off and report this to your Dealer.

## Standards

Description	General Standard	Referenced Standard
Radiated emissions (30.0 MHz to 1 GHz)	ISO 7176-21:2009+	CISPR 11:2016 inc A1:2017 EN 55011:2016 inc A1:2017 Group 1
Electrostatic discharge	ISO 7176-21:2009+	EN 61000-4-2:2009
Radiated RF immunity	ISO 7176-21:2009+	EN 61000-4-3:2006 inc A1:2008 & A2:2010
Power frequency magnetic field	ISO 7176-21:2009+	EN 61000-4-8:2010



### EMC Radiated Emissions results:

Using the pre-scan results as a guide, each emission from the EUT was maximised. Measurements were carried out a distance of three metres in a CISPR 16-1-4 compliant semi-anechoic chamber. Cable positions were then finally adjusted to produce the maximum emission levels. The worst-case CISPR results are reported below.

Emission frequency	Measured quasi-peak value	Class B specified quasi-peak limit	Pass Margin	Antenna polarity	Antenna height	Turntable azimuth	Status
MHz	dBµ V/m	dBµ V/m	dB	H/V	cm	deg	
37.243396	29.17	40.00	10.83	V	314.00	164.0	Pass
43.881132	36.97	40.00	3.03	V	100.00	8.0	Pass
68.910455	31.30	40.00	8.70	V	106.00	354.0	Pass
91.486098	36.06	40.00	3.94	H	177.00	259.0	Pass
175.849802	35.63	40.00	4.37	H	106.00	195.0	Pass
988.144910	39.95	47.00	7.05	V	122.00	21.0	Pass

V = vertical / H = horizontal

### EMC Immunity results:

As specified in ISO 7176-21, for wheelchair drives, the average wheel speed change, shall not exceed +/- 20%

Radiated RF immunity			
<b>Test method</b>	<b>EN 61000-4-3</b> <b>Referencing procedure: RES-02</b>		
<b>Test details</b>	<ul style="list-style-type: none"> <li>• 26 MHz to 2.5GHz; 20.0 V/m</li> <li>• 80% amplitude modulation at 1kHz</li> <li>• 1% steps, 3s dwell time</li> </ul>		
Exerciser program during test	Referencing section 3.4 Referencing section 5.1		
EUT performance criterion	Pass		
<b>Results</b>			
<b>Test points</b>	<b>Antenna polarities</b>	<b>Field level swept frequency</b>	<b>Status</b>
Front	Horizontal & vertical	20.0 V/m	Pass
Rear	Horizontal & vertical	20.0 V/m	Pass

# Servicing the Ypush

## Engineer's service basic checklist

**Obtain all comments from the customer** on the condition and serviceability of the Ypush and then complete an initial diagnostic test. Record all defects to be corrected. Test and check the following:

- Chassis, general parts and fixtures for damage, corrosion or cracks.
- Fold and unfold the Ypush to check for smoothness of operation - check chassis pivots, seat clips, footrests and all fastenings are correct tightness.
- Check walking stick holders and other chassis parts for damage.
- Push handle hinges and retaining lock - check for play, and tighten if necessary.
- General damage, tears, or excessive wear to seat back and seat base.
- Ankle straps and leg protector material and Velcro fastenings.
- Armrest hinges opening, closing, and locking correctly. Check for play and tighten hinge bolts if armrest closes under its own weight.
- Front wheels for tyre damage or wear, axle for tightness, and for any play in the bearings.
- Rear wheels for tyre wear and any other cosmetic damage.
- Check tightness of nuts and bolts fastening the throttle assemble, handlebar collars, brake handles, brake calipers, and rear dash panels.
- Test for smooth operation of brake handles when pressed down and then released - also check override lever holds brakes "OFF" effectively.
- Check "play" when brake handles are released, and they pivots back so brakes are "ON" Should be 10mm of "play" at handle end. Adjust cable accordingly using knob above brake calipers. See page 14.
- Remove Battery Pack and check for signs of damage or corrosion.

**Fit battery** and turn the ignition on to make the following checks:

- Controller "beeps" on start up
- Dash lights illuminate correctly
- Electronic Anti-tip/Occupant sensor operates correctly both sides - check "switch" point is half way by observing warning LED and adjust if necessary

**Next:** Elevate the rear wheels so they are off the ground by rotating the mechanical Anti-tip wheel assembly by 180 degrees from the storage position. Put a weight on the seat to de-activate the Anti-tip cut out. Add the battery, connect and turn ON the ignition.

**1** Hold the brake handles down and unlock the override levers so the brakes are held "OFF" so the wheels can freewheel.

**2** Press the throttle and check throttle response and function. Release throttle, press reverse button and check function and user warnings.

**3** Hold with thumb throttle on full power so the wheels freely rotate.

**4** Test and adjust the Pre-set maximum speed knob to check it is functioning correctly and the wheels speed up and slow down. Set to FULL speed.

**5** Press the turn buttons one by one to check that the wheel on that side slows down when you press it.

**6** Whilst the wheels are spinning under power, adjust brake pad/disc alignment with sprung adjusters to reduce any disc rubbing to a minimum.

**7** Releasing Override levers one at a time, test brake performance and override cut out. Allow brake handle to spring UP to stop/lock the wheel. The brake should completely stop the wheel rotating and 2-3 seconds later the power will be cut with 2 warning beeps. Re-set throttle and test other brake.

**8** Spin rear wheels by hand and adjust brake pads tolerance to brake disc.

# Owners Service Log

## Brintal Ypush/YPPAWC/01

**Notice for the Service Engineer:** Please make sure this service record is stamped and dated after each service and or repair. Customers must be given a detailed receipt in support of stamps entered to validate this record.

**Dealer stamp - 1st Service**

Date:

Invoice reference:

**Dealer stamp - 2nd Service**

Date:

Invoice reference:

**Dealer stamp - 3rd Service**

Date:

Invoice reference:

**Dealer stamp - 4th Service**

Date:

Invoice reference:

**Dealer stamp - 5th Service**

Date:

Invoice reference:

**Dealer stamp - 6th Service**

Date:

Invoice reference:

**Dealer stamp - 7th Service**

Date:

Invoice reference:

**Dealer stamp - 8th Service**

Date:

Invoice reference:

Model: Ypush/YPPAWC/01

**Ypush**<sup>®</sup>  
THE WHEELCHAIR

**brintal**<sup>®</sup>  
[www.ypush.com](http://www.ypush.com)

**Hybrid Manual &  
Power-assisted Pushing Aid**  
Owner's Manual  
& Service Record

UK  
CA | CE



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