

**dyaco**

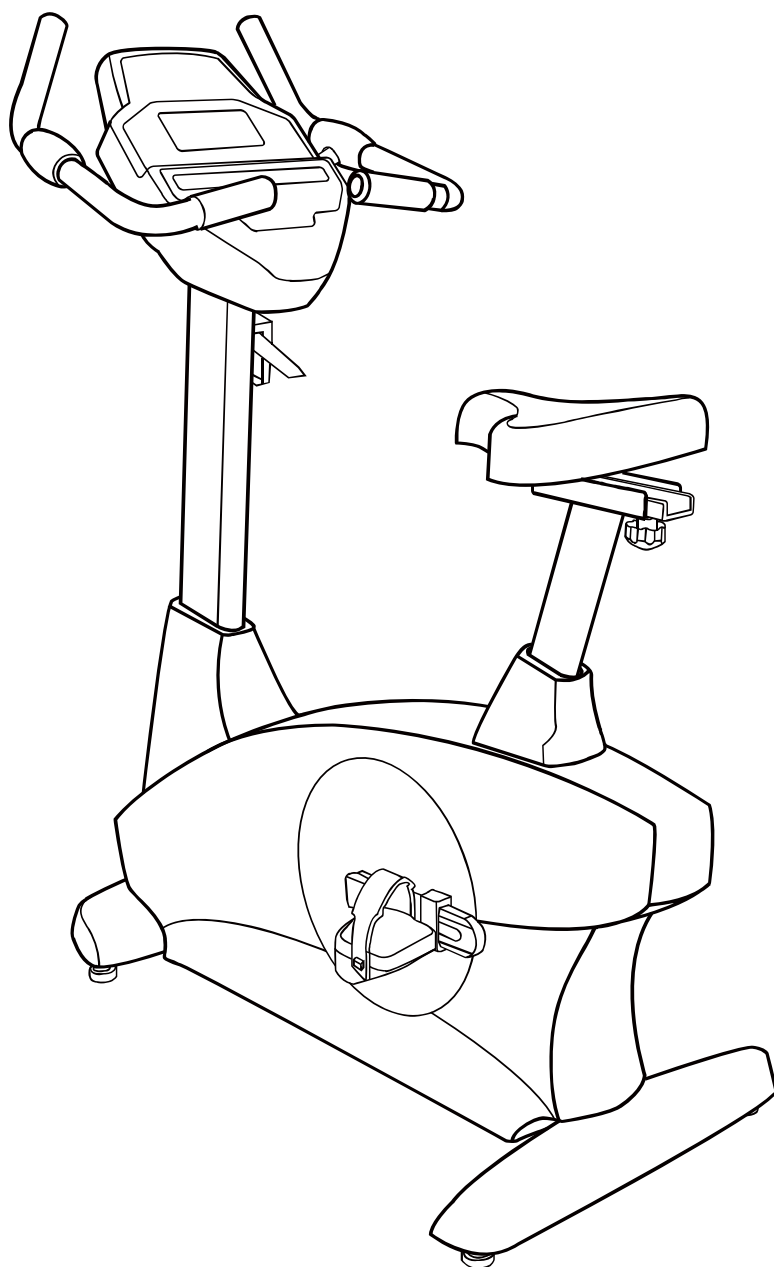
**MED**

**Rehabilitation bike**

**7.0U**

# User manual

Please read this entire manual carefully before operating your new 7.0U and save it for future use.



Thank you for your recent purchase of the 7.0U. Dyaco provides simple, reliable products that offer the most relevant feedback to caregivers and users to achieve best-in-class outcomes and empower individuals to build confidence in rebuilding and maintaining healthy lifestyles and keep in touch with their communities.

Your new product has been manufactured by one of the world's leading medical product manufacturers. It is backed by one of the most comprehensive warranties in the industry. Through our dealers, distributors and manufacturer's representatives, we will do all we can to provide many years of successful and prosperous ownership. Your warranty and service needs will be addressed either through your regional sales representative or our highly trained service technicians.

It is their responsibility to provide you with both the technical knowledge and access to service personnel to make your ownership experience more informed, and resolve any issues quickly.

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# Important safety instructions

## **Attention**

Read all instructions in this manual before using this 7.0U.

## **Danger**

To reduce the risk of electric shock, disconnect your 7.0U from the electrical outlet prior to cleaning and/or service work.

## **Warning**

- Do not modify this equipment without authorization of the manufacturer.
- To reduce the risk of burns, fire, electric shock, or injury to persons, install the 7.0U on a flat level surface with access to a 90 to 240-volt AC, 50/60 Hz, 15-amp grounded outlet. Do not use an extension cord unless it is 16awg or larger, with only one outlet on the end. The 7.0U should be the only appliance in the electrical circuit. Do not attempt to disable the grounded plug by using improper adapters, or in any way modify the cord set; a serious shock or fire hazard may result along with computer malfunctions.
- Use this 7.0U only for its intended use as described in this manual.
- Keep children away from the 7.0U. There are moving parts, obvious pinch points and other caution areas that can cause harm.
- Except as instructed for use of the 7.0U, keep hands away from all moving parts.
- Keep the electrical cord away from heated surfaces and out of all travel lanes and do not operate the 7.0U if the cord or plug is damaged.
- Never drop or insert any object into any openings.

- Do not use outdoors.
- To disconnect, turn all controls to the off position then remove the plug from the outlet.
- This 7.0U is designed for commercial use and will meet the demands of orthopedic, sports wellness and general conditioning programs.
- Do not attempt to use your 7.0U for any purpose other than for the purpose it is intended.
- The pulse sensors are not medical devices. Various factors, including the user's movement, may affect the accuracy of heart rate readings. The pulse sensors are intended only as exercise aids in determining heart rate trends in general.
- Heart rate monitoring system may be inaccurate. Over exercise may result in injury or death. If you feel faint stop exercising immediately.
- Ensure there is a minimum space on the sides of the 7.0U of two feet for proper operation, easy access and to prevent possible injuries to others standing or walking nearby. There should be a minimum of at least one foot of free space at the front and rear of the 7.0U.
- Do not use any after market parts on this 7.0U, other than those recommended by Dyaco.
- Do not attempt any servicing or adjustments other than those described in this manual. All else must be left to trained service personnel familiar with electro-mechanical equipment and authorized under the laws of the country in question to carry out maintenance and repair work.
- Installation and assembly of this product should be performed by trained personnel only.
- Hold the handlebar for support when getting on or off the 7.0U.
- To avoid injury please observe all minimum and maximum seat adjustment settings.
- Warning: The adjustable crank arms may become entangled in pant legs if the pant legs are loose fitting. To avoid injury roll up the pant legs or secure the pant legs in some other fashion.
- The flywheel in the 7.0U does not have a freewheel, but is directly connected to the pedals. The 7.0U is equipped with auto-braking software that will stop the flywheel when it detects the user is trying to stop pedaling. In the unlikely event that the electronics fails, or the Auto-brake function is disabled in the software, a spinning flywheel can make the 7.0U difficult to stop when pedaling at higher RPM(Revolutions per minute). There is an emergency brake lever provided that will stop the flywheel when pressed.

# إرشادات السلامة المهمة

## ⚠ تنبيه

اقرأ جميع الإرشادات الواردة في هذا الدليل قبل استخدام الجهاز.

## ⚠ خطر

لتقليل خطر التعرض للصدمات الكهربائية، يُرجى فصل المقبس الكهربائي قبل التنظيف و/أو أعمال الصيانة.

## ⚠ تحذير

- لا تحاول تعديل الجهاز بغير تصريح من الشركة المصنعة.
- للحد من خطر التعرض للحروق أو صدمة كهربية أو الإصابة أو اندلاع حريق، تثبت الدراجة على سطح مستوي، وتوصل بمقبس تيار كهربائي متردد مؤرض بجهد تتراوح من 90 إلى 240 فولت، وبتردد 50 / 60 هرتز، وشدة 15 أمبير. لا تستخدم سلك امتداد ما لم تكن سعته 16awg على الأقل، أو أكثر، وتأكد من توصيله بمقبس منفرد عند طرفه. ينبغي توصيل دراجة التمارين بدائرة كهربائية مستقلة ومنفصلة. لا تحاول فصل تأريض القابس، ولا تحاول استخدام محولات غير ملائمة، ولا تحاول تعديل سلك التوصيل بأي طريقة كانت، لأن هذا قد يعرضك لصدمة كهربائية خطيرة، أو لمخاطر اندلاع حريق، وقد ينتج عنه تلف الحاسوب المضمن بالجهاز أو تعطله.
- لا تستخدم هذا الجهاز سوى للاستخدامات المعنية والمقصودة كما يصف هذا الدليل.
- أبق الأطفال بعيداً عن الجهاز. يتضمن الجهاز أجزاء متحركة، ومناطق احتكاك واضحة، ومناطق أخرى تستدعي الانتباه إليها، ويمكن أن تتسبب في إحداث ضرر.
- وباستثناء التعليمات الموضحة لاستخدام الجهاز، لا تلامس أي أجزاء متحركة من الجهاز بيدك.
- حافظ على إبعاد السلك الكهربائي بعيداً عن الأسطح الساخنة، وكذلك كافة مسارات التنقل، ولا تشغل الدراجة إذا تلف السلك الكهربائي أو القابس.
- تجنب مطلقاً إسقاط أو إدخال أي شيء في أي فتحات.
- لا تستخدم الجهاز في المناطق الخارجية.
- لفصل الدراجة، أعد كل وحدات التحكم إلى وضع الإيقاف، وبعداً أزل القابس من مصدر التيار الكهربائي.
- هذا الجهاز مصمم للاستخدام التجاري، وسيلبي متطلبات برامج أطباء العظام، والعافية الرياضية، وبرامج الحالات العامة.
- لا تحاول استخدام هذه الدراجة لأي غرض آخر بخلاف الغرض المخصصة له.

- مستشعرات نبضات اليد ليست جهازًا طبيًا. قد تؤثر العوامل المختلفة، التي من بينها حركة المستخدم، في دقة قراءة معدل ضربات القلب. مستشعرات النبض المقدمة في الجهاز معدة للمساعدة في أغراض التمرين فقط وذلك بتحديد اتجاهات ضربات القلب بشكل عام.
- قد تكون أنظمة مراقبة معدل ضربات القلب غير دقيقة. قد تؤدي التدريبات الزائدة إلى التعرض لإصابة جسيمة أو الوفاة. إذا شعرت بدوار الإغماء، فتوقف عن ممارسة التدريبات في الحال.
- تأكد من ترك مسافة لا تقل عن قدمين بحد أدنى على جانبي الدراجة لضمان التشغيل السليم، وسهولة الوصول إليها، والوقاية من تعرض الواقفين حول الدراجة أو المشاة بجوارها إلى الإصابات. ينبغي ترك مسافة خالية لا تقل عن قدم واحدٍ على الأقل أمام الجهاز وخلفه.
- لا تستخدم الملحقات المتوفرة في الأسواق لهذا الجهاز، فيما عدا تلك التي توصي شركة Dyaco باستعمالها.
- لا تحاول إجراء الصيانة أو إدخال أي تعديلات على الجهاز بخلاف ما يصفه هذا الدليل. وكل ما عداهما ينبغي تركه لموظفي الصيانة والخدمة المدربين على التعامل مع المعدات الكهربائية الميكانيكية، والمصرح لهم بالعمل بموجب قانون البلد المعني الذي تتم فيه أعمال الصيانة والإصلاح.
- ينبغي عدم تركيب وتجميع هذا الجهاز إلا على يد الموظفين المدربين دون سواهم.
- تمسك بقضيب المقبض لدعم جسدك عند ركوب الدراجة أو النزول من عليها.
- يُرجى مراعاة الحد الأدنى والحد الأقصى لضبط المقاعد، وهذا لتجنب تعرضك للإصابة ضبط الإعدادات.
- تحذير: قد تتشابك أذرع الكرنك القابلة للضبط في ساقى البنطال إذا كان البنطال واسعًا وينبغي طي البنطال لأعلى أو تثبيت البنطال على الساقين بأي طريقة أخرى.
- العجلة الطائرة في الدراجة ليست عجلة حرة، ولكنها متصلة مباشرة بالدواسات. الدراجة مجهزة ببرمجية مكابح تلقائية، توقف بكرة الحدافة عند كشفها عن محاولة المستخدم إيقاف الدواسات. في حالة التعرض لحادث مفاجئ لفشل الإلكترونيات، أو تعطيل وظيفة المكابح التلقائية في البرنامج، يمكن أن يصعب دوران بكرة الحدافة من إمكانية إيقاف الدراجة عند التبديل بسرعة مرتفعة (زيادة عدد الدورات في الدقيقة). توجد رافعة لمكبج طوارئ يمكنها إيقاف بكرة الحدافة عند الضغط عليها.



# Wichtige Sicherheitshinweise

## **⚠ Achtung**

Lesen Sie vor dem Gebrauch dieses Geräts alle Anweisungen in diesem Handbuch.

## **⚠ Gefahr**

Vor Reinigungs- und / oder Wartungsarbeiten den Stecker aus der Steckdose ziehen, um das Risiko eines elektrischen Schocks zu verringern.

## **⚠ Warnung**

- Nehmen Sie an dem Gerät keine Änderungen ohne die Genehmigung des Herstellers vor.
- Stellen Sie das Rad auf einer ebenen Fläche mit Zugang zu einer geerdeten Steckdose mit 90 bis 240 Volt AC, 50/60 Hz, 15 Ampere auf, um die Gefahr von Verbrennungen, Bränden, Stromschlägen oder Verletzungen von Personen zu verringern. Verwenden Sie nur ein Verlängerungskabel mit 16 AWG oder mehr und nur einem Stecker. Das Rad sollte das einzige Gerät im Stromkreis sein. Versuchen Sie nicht, den geerdeten Stecker mit falschen Adaptern zu deaktivieren oder den Kabelsatz in irgendeiner Weise zu modifizieren. Zusammen mit Fehlfunktionen des Computers kann dies zu einem schweren Schlag oder Brand führen.
- Benutzen Sie dieses Gerät nur für den vorgesehenen Zweck, wie in diesem Handbuch beschrieben.
- Kinder von dem Rad fernhalten. Es gibt bewegliche Teile und offensichtliche Stellen, an denen man sich einklemmen kann sowie andere Gefahrenbereiche, die zu Verletzungen führen können.
- Halten Sie die Hände von allen beweglichen Teilen fern, es sei denn, dies ist für den Gebrauch des Geräts vorgesehen.
- Halten Sie das Elektrokabel von heißen Flächen und allen Wegen fern und benutzen Sie das Rad nicht, wenn das Kabel oder der Stecker beschädigt ist.
- Niemals Gegenstände in Öffnungen fallenlassen oder hineinstecken.

- Nicht im Freien verwenden.
- Zum Ausschalten alle Kontrollen in die Ausstellung bringen und dann den Stecker aus der Steckdose ziehen.
- Dieses Gerät ist für die gewerbliche Nutzung konzipiert und erfüllt die Anforderungen von orthopädischen, sportlichen Wellness- und allgemeinen Konditionsprogrammen.
- Versuchen Sie nicht, dieses Produkt für einen anderen als den vorgesehenen Zweck zu verwenden.
- Die Pulssensoren sind keine medizinischen Geräte. Verschiedene Faktoren, einschließlich die Bewegung des Benutzers, können die Genauigkeit der Auslesedaten der Herzfrequenz beeinträchtigen. Die Pulssensoren sind nur als Übungshilfe bei der Bestimmung von Herzfrequenztrends im Allgemeinen gedacht.
- Das Herzfrequenzüberwachungssystem kann ungenau sein. Überanstrengung kann zu Verletzungen oder Tod führen. Wenn Sie sich schwach fühlen, hören Sie sofort mit dem Training auf.
- Stellen Sie sicher, dass auf beiden Seiten des Rades ein Mindestfreiraum von zwei Fuß vorhanden ist, um eine ordnungsgemäße Bedienung und einen einfachen Zugang zu gewährleisten und mögliche Verletzungen anderer Personen zu vermeiden, die in der Nähe stehen oder gehen. Vor und hinter dem Gerät sollte ein Mindestfreiraum von einem Fuß vorhanden sein.
- Verwenden Sie bei diesem Gerät keine anderen Ersatzteile, als die von Dyaco empfohlenen.
- Führen Sie keine anderen als in diesem Handbuch beschriebenen Wartungen oder Anpassungen aus. Alles andere muss geschultem Servicepersonal überlassen werden, das mit elektromechanischen Geräten vertraut und nach den Gesetzen des jeweiligen Landes zur Durchführung von Wartungs- und Reparaturarbeiten befugt ist.
- Die Installation und Montage dieses Geräts sollte nur von geschultem Personal ausgeführt werden.
- Beim Auf- oder Absteigen von dem Rad, halten Sie sich an den Griffstangen fest.
- Um Verletzungen zu vermeiden, beachten Sie alle minimalen und maximalen Sitzeinstellungen.
- Warnung: Die verstellbaren Pedalarms können sich in Hosenbeinen verfangen, wenn die Hosenbeine locker sitzen. Um Verletzungen zu vermeiden, krempeln Sie die Hosenbeine hoch oder sichern Sie die Hosenbeine auf andere Weise.
- Das Schwungrad des Rades hat keinen Freilauf, sondern ist direkt mit den Pedalen verbunden. Das Rad ist mit einer Automatikbremse ausgestattet, die das Schwungrad sofort stoppt, wenn sie bemerkt, dass der Benutzer versucht, mit dem Treten aufzuhören. In dem unwahrscheinlichen Fall, dass die Elektronik ausfällt oder die Funktion der Automatikbremse in der Software deaktiviert ist, kann ein durchdrehendes Schwungrad das Anhalten des Rades erschweren, wenn mit einer höheren Drehzahl (Umdrehungen pro Minute) getreten wird. Es ist ein Notbremshebel vorhanden, der das Schwungrad anhält, wenn er gedrückt wird.

# Consignes de Sécurité importantes

## **Attention**

Lire toutes les instructions de ce manuel avant utilisation.

## **Danger**

Pour réduire le risque d'électrocution, débranchez l'appareil de la prise avant d'effectuer des travaux de nettoyage et/ou d'entretien.

## **Avertissement**

- Ne modifiez pas cet appareil sans l'autorisation de l'autorité du fabricant.
- Pour réduire les risques de brûlures, d'incendie, d'électrocution ou de blessures, installez le cycle exerciceur sur une surface plane avec un accès à une prise de courant alternatif de 90 à 240 volts CA, 50/60 Hz, 15 ampères reliée à la terre. N'utilisez pas de rallonge électrique à moins qu'elle ne soit de 16 AWG ou plus, avec une seule prise à l'extrémité. Le cycle exerciceur doit être le seul appareil du circuit électrique. N'essayez pas de désactiver la prise mise à la terre à l'aide d'adaptateurs inappropriés ou de modifier de quelque façon que ce soit le cordon d'alimentation ; un choc électrique ou un risque d'incendie peut entraîner un dysfonctionnement de l'ordinateur.
- Utilisez cet appareil uniquement pour l'usage auquel il est destiné, tel que décrit dans ce manuel.
- Tenir les enfants éloignés du cycle exerciceur. Il y a des pièces mobiles, et donc, des points de pincement apparents ainsi que d'autres zones nécessitant la plus grande prudence afin d'éviter tout danger.
- Sauf indication contraire pour l'utilisation de l'appareil, tenir les mains éloignées de toutes les pièces mobiles.  
Tenir le cordon électrique à l'écart des surfaces chauffées et des voies d'accès, et ne pas faire fonctionner le cycle exerciceur si le cordon ou la fiche sont endommagés.
- Ne jamais laisser tomber ou insérer un objet dans un orifice.
- Ne pas utiliser à l'extérieur.
- Pour débrancher l'appareil, mettre toutes les commandes en position d'arrêt, puis débrancher la fiche de la prise de courant.

- Cet appareil est conçu pour un usage commercial et répondra aux exigences des programmes d'orthopédie, de bien-être sportif et de conditionnement général.
- Ne pas utiliser le cycle exerciseur à d'autres fins que celles pour lesquelles il a été conçu.
- Les capteurs de pouls manuels ne sont pas des dispositifs médicaux. Divers facteurs, y compris les mouvements de l'utilisateur, peuvent affecter la précision des mesures de la fréquence cardiaque. Les capteurs de pouls ne sont destinés qu'à faciliter l'exercice pour déterminer les tendances de la fréquence cardiaque en général.
- Les systèmes de surveillance de la fréquence cardiaque peuvent s'avérer imprécis. Un excès d'exercice peut entraîner des blessures voire la mort. Si vous vous sentez faible, arrêtez-vous immédiatement.
- Veillez à prévoir un espace minimum de deux pieds de chaque côté du cycle exerciseur pour une utilisation optimale, un accès aisé et afin d'éviter de blesser d'autres personnes se tenant ou marchant à proximité. Il devrait y avoir au moins un pied d'espace libre à l'avant et à l'arrière.
- N'utilisez pas de pièces après-vente sur cet appareil, autres que celles recommandées par Dyaco.
- N'essayez pas d'effectuer d'autres opérations d'entretien ou de réglage que celles décrites dans ce manuel. Tout le reste doit être confié à un personnel de service qualifié et connaissant les équipements électromécaniques, et autorisé par la législation du pays en question à effectuer des travaux d'entretien et de réparation.
- L'installation et le montage de ce produit ne doivent être effectués que par du personnel qualifié.
- Tenez le guidon pour vous soutenir lorsque vous montez ou descendez du tapis de course.
- Pour éviter tout risque de blessure, veuillez respecter les valeurs minimales et maximales.
- Avertissement : Les bras de manivelle réglables peuvent prendre dans les jambes du pantalon si celles-ci ne sont pas bien ajustées. Afin d'éviter tout risque de blessure, enroulez les jambes du pantalon ou fixez-les d'une autre manière.
- Le volant du cycle exerciseur n'a pas de roue libre, mais il est directement relié aux pédales. Le cycle exerciseur est équipé d'un logiciel de freinage automatique qui bloque le volant lorsqu'il détecte que l'utilisateur essaie d'arrêter de pédaler. Dans le cas peu probable d'un dysfonctionnement électronique ou d'une désactivation de la fonction de freinage automatique dans le logiciel, un volant tournant peut rendre le cycle exerciseur difficile à arrêter si l'on pédale à un régime plus élevé (tours par minute). Un levier de frein d'urgence permet de bloquer le volant en appuyant dessus.

# Belangrijke veiligheidsinstructies

## **Let op**

Lees alle instructies in deze handleiding voordat u dit apparaat gebruikt.

## **Gevaar**

Haal de stekker uit het stopcontact voordat u reinigings- en / of servicewerkzaamheden uitvoert om het risico op elektrische schokken te verminderen.

## **Waarschuwing**

- Wijzig deze apparatuur niet zonder toestemming van de fabrikant.
- Installeer de fiets op een vlakke ondergrond met toegang tot een geaard stopcontact van 90 tot 240 volt wisselstroom, 50/60 Hz, 15 ampère om het risico op brandwonden, brand, elektrische schokken of persoonlijk letsel te verminderen. Gebruik geen verlengsnoer tenzij deze 1,5 mm (16awg) of zwaarder is, met slechts één stekker aan het uiteinde. De fiets moet het enige apparaat in het elektrisch circuit zijn. Probeer de geaarde stekker niet uit te schakelen met behulp van onjuiste adapters of wijzig op geen enkele manier de kabelset; een ernstige schok of brand kan het gevolg zijn, samen met computerstoringen.
- Gebruik dit apparaat alleen voor het beoogde gebruik, zoals beschreven in deze handleiding.
- Houd kinderen uit de buurt van de fiets. Er zijn bewegende delen, duidelijke knelpunten en andere waarschuwingsgebieden die schade kunnen veroorzaken.
- Houd de handen uit de buurt van alle bewegende delen, behalve zoals aangegeven voor het gebruik van het apparaat. Houd het elektrische snoer uit de buurt van verwarmde oppervlakken en uit de buurt van alle circulatiestroken en gebruik de fiets niet als het snoer of de stekker beschadigd is.
- Laat nooit iets in een opening vallen en steek hierin geen voorwerpen.
- Niet buitenshuis gebruiken.
- Om het apparaat los te koppelen, draait u alle bedieningselementen naar de uit-stand en haalt u vervolgens de stekker uit het stopcontact.

- Dit apparaat is ontworpen voor commercieel gebruik en voldoet aan de eisen van orthopedische, sportieve en algemene conditieprogramma's.
- Probeer uw fiets niet voor een ander doel te gebruiken dan .waarvoor deze is bedoeld.
- De pulssensoren zijn geen medische apparaten. Verschillende factoren, waaronder de beweging van de gebruiker, kunnen de nauwkeurigheid van de hartslagmetingen beïnvloeden. De pulssensoren zijn alleen bedoeld als hulpmiddel bij het bepalen van hartslagtrends in het algemeen.
- Hartslagbewakingssystemen kunnen onnauwkeurig zijn. Overmatig trainen kan leiden tot letsel of de dood. Stop onmiddellijk met trainen als u zich zwak voelt.
- Zorg voor een minimale ruimte aan de zijkanten van de fiets van zestig centimeter om een goede bediening en gemakkelijke toegang mogelijk te maken en om mogelijk letsel aan anderen die in de buurt staan of lopen te voorkomen. Er moet minimaal 30 centimeter vrije ruimte zijn aan de voor- en achterkant van het apparaat.
- Gebruik geen aftermarket-onderdelen op dit apparaat, andere welke worden aanbevolen door Dyaco.
- Voer geen onderhoud uit of breng geen aanpassingen aan die niet in deze handleiding worden beschreven. Al het overige moet worden overgelaten aan opgeleid onderhoudspersoneel dat vertrouwd is met elektromechanische apparatuur en volgens de wetgeving van het betreffende land bevoegd is om onderhouds- en reparatiewerkzaamheden uit te voeren.
- Installatie en montage van dit product dienen uitsluitend te worden uitgevoerd door hiervoor opgeleid personeel.
- Houd het stuur vast als steun bij het op- en afstappen.
- Houd u aan alle minimale en maximale zadelerstellingen om letsel te voorkomen.
- Waarschuwing: De verstelbare krukarmen kunnen verstrikt raken in de broekspijpen als deze los zitten. Rol de broekspijpen op of bindt de broekspijpen op een andere manier vast om letsel te voorkomen.
- Het vlieg wiel in de fiets heeft geen vrijloop, maar is direct verbonden met de pedalen. De fiets is uitgerust met auto-remmen-software die het vlieg wiel stopt wanneer het detecteert dat de gebruiker probeert te stoppen met trappen. In het onwaarschijnlijke geval dat de elektronica uitvalt of de auto-remfunctie in de software is uitgeschakeld, kan een ronddraaiend vlieg wiel het moeilijk maken om de fiets te stoppen bij het trappen met een hoger toerental (omwentelingen per minuut). Er is een noodremhendel aanwezig die het vlieg wiel zal stoppen wanneer deze wordt ingedrukt.

# Important electrical information

## **⚠ Warning**

- Never remove any cover without first disconnecting AC power. If voltage varies by 10% or more outside the specified range (90 to 240V), the performance of your 7.0U may be affected. Such conditions are not covered under your warranty. If you suspect the voltage is low, contact your local power company or a licensed electrician for proper testing.
- Never expose this 7.0U to rain or moisture. This product is not designed for use outdoors, near a pool or spa, or in any other high humidity environment.
- The 7.0U is not protected against the ingress of water or particulate matter.
- The 7.0U is not suitable for use in an oxygen rich environment.
- If not stated otherwise Dyaco 7.0U are designed for operation in normal climatic surroundings (IEC 60601-1):
  - Temperature: + 10° ... + 36° C
  - Relative humidity: 30 ... 90 % (non condensing)
  - Air pressure: 700 ... 1060 mbar
  - Maximum operating altitude: approx. 10,000 feet (3000m), without pressurization
  - Transport and store the 7.0U at a temperature of – 20° ... + 50° C.

## **Grounding instructions**

- This product must be grounded. In the unlikely event that the 7.0U's electrical system should malfunction or breakdown grounding provides a path of the least resistance for electric current, reducing the risk of electric shock. This product is equipped with a cord having an equipment-grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

### **Danger**

- Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or serviceman if you are in doubt whether the product is properly grounded. Do not modify the plug provided with the product if it will not fit the outlet; have a proper outlet installed by a qualified electrician.



# معلومات

## كهربائية مهمة

### ⚠️ تحذير

- تجنب مطلقاً إزالة أي أغطية دون فصل مقبس التيار الكهربائي أولاً. إذا كان الجهد الكهربائي يتباين بمقدار 10% أو أكثر خارج النطاق المحدد (90 إلى 240 فولت)، فإن أداء الدراجة قد يتضرر من ذلك. لا يشمل الضمان مثل تلك الحالات. إذا شككت في انخفاض الجهد، فاتصل بشركة الكهرباء المحلية أو فني كهربائي مرخص لإجراء الاختبارات الملائمة.
- تجنب مطلقاً تعريض هذا المنتج للمطر أو الرطوبة. هذا المنتج غير مصمم للاستخدام في المناطق الخارجية ولا بجوار حمام سباحة أو مركز صحي ولا في أي بيئات تتميز بالرطوبة العالية.
- الدراجة العمودية ليست محمية من التعرض للماء، أو الجسيمات الصلبة.
- الدراجة العمودية ليست مناسبة للاستخدام في البيئات الغنية بالأكسجين.
- وإذا لم يذكر غير ذلك، فإن أجهزة Dyaco مصممة للعمل في الظروف المناخية المعتادة (IEC 60601-1): درجات الحرارة: + 10 درجة مئوية ... + 36 درجة مئوية  
- الرطوبة النسبية: 30 ... 90 % هواء (غير مكثف) - الضغط الجوي: 700 ... 1060 مللي بار  
- الحد الأقصى لارتفاع التشغيل: حوالي 10,000 قدم (3000م)، بدون التعرض لضغط خارجي  
- يتعين نقل الجهاز وتخزينه عند درجة حرارة - 20 درجة مئوية ... + 50 درجة مئوية

### تعليمات التأريض

- ينبغي تأريض المنتج. في حالة التعرض لخلل أو عطل مفاجئ في النظام الكهربائي للدراجة، يوفر التأريض مسارًا أقل مقاومة للتيار الكهربائي، مما يقلل من خطر التعرض لصدمة كهربائية. هذا المنتج مجهز بكابل مزود بقباس وأداة تأريض. يجب توصيل القابس بمأخذ تيار كهربائي مثبت وموصل بشكل صحيح بما يتفق مع كافة الرموز واللوائح المحلية.

### ⚠ خطر

- يمكن أن يؤدي التوصيل غير الصحيح لموصل تأريض المعدات إلى التعرض لصدمة كهربائية. إذا كنت تشك في توصيل المنتج وتأريضه بشكل مناسب، فاطلب من فني كهربائي مرخص لإجراء الاختبارات الملائمة التحقق منه. لا تحاول تعديل القابس المرفق مع المنتج إذا لم يكن مناسبًا للمنفذ؛ واطلب من فني كهربائي مؤهل تركيب منفذ مناسب.

# Wichtige elektrische Hinweise

## **Warnung**

- Entfernen Sie nie eine Abdeckung ohne vorher den Stecker aus der Steckdose zu ziehen. Wenn die Wechselspannung um 10% oder mehr außerhalb des angegebenen Bereichs (90 bis 240 V) variiert, kann dies die Leistung Ihres Rades beeinträchtigen. Solche Bedingungen werden nicht von Ihrer Garantie abgedeckt. Wenn Sie vermuten, dass die Spannung niedrig ist, kontaktieren Sie Ihr örtliches Stromversorgungsunternehmen oder einen lizenzierten Elektriker für eine ordnungsgemäße Prüfung.
- Setzen Sie dieses Rad niemals Regen oder Feuchtigkeit aus. Dieses Produkt ist nicht zur Verwendung im Freien, in der Nähe eines Pools oder Spas oder in einer anderen Umgebung mit hoher Luftfeuchtigkeit konzipiert.
- Das Upright-Rad ist nicht gegen das Eindringen von Wasser oder bestimmten Stoffen geschützt.
- Das Upright-Rad ist nicht für den Gebrauch in einer sauerstoffreichen Umgebung geeignet.
- Wenn nichts anderes angegeben ist, sind die Geräte von Dyaco für einen Betrieb in normalen klimatischen Umgebungen (IEC 60601-1) bei
  - Temperaturen von +10° bis +36° C konzipiert
  - Relative Luftfeuchtigkeit: 30 ... 90 % (nicht kondensierend)
  - Luftdruck: 700 ... 1060 mbar
  - Maximale Betriebshöhe ca. 3000 m (10.000 Fuß) ohne Druckbeaufschlagung
  - Transport und Lagerung der Geräte bei Temperaturen von -20° ... +50° C.

## **Erdungsanweisungen**

- Dieses Produkt muss geerdet werden. In dem unwahrscheinlichen Fall, dass an dem Elektrosystem des Rades Fehlfunktionen oder eine Unterbrechung der Erdung auftreten, besteht die Gefahr eines Stromschlags. Dieses Produkt ist mit einem Kabel mit Erdungsstecker ausgestattet. Der Stecker muss in eine geeignete Steckdose gesteckt werden, die ordnungsgemäß, in Übereinstimmung mit allen örtlichen Vorschriften und Verordnungen eingebaut und geerdet ist.

### **⚠ Gefahr**

- Ein unsachgemäßer Anschluss des Erdungsleiters des Geräts kann zu einem Stromschlag führen. Wenn Sie Zweifel an der ordnungsgemäßen Erdung Ihres Produktes haben, lassen Sie es von einem qualifizierten Elektriker oder Servicetechniker überprüfen. Ändern Sie den mit dem Produkt gelieferten Stecker nicht, wenn er nicht in die Steckdose passt. Lassen Sie eine geeignete Steckdose von einem qualifizierten Elektriker einbauen.

# Consignes Renseignements importants en matière d'électricité

## **Avertissement**

- N'enlevez jamais le couvercle sans avoir préalablement débranché l'alimentation secteur en CA. Si la tension varie de dix pour cent (10 %) ou plus (90 à 240 V), les performances de votre cycle exerciceur risquent d'être affectées. De telles conditions ne sont pas couvertes par la garantie. Si vous pensez que la tension est trop basse, contactez votre fournisseur local d'électricité ou un électricien qualifié pour tester le courant électrique.
- Ne jamais exposer ce produit à la pluie ou à l'humidité. Ce produit n'est pas conçu pour être utilisé à l'extérieur, près d'une piscine ou d'un spa, ni dans aucun autre environnement particulièrement humide
- Le tapis de course n'est pas protégé contre les infiltrations d'eau ou l'humidité.
- Le cycle exerciceur ne convient pas à une utilisation dans un environnement riche en oxygène.
- Sauf indication contraire, les appareils Dyaco sont conçus pour fonctionner dans un environnement au climat normal (CEI 60601-1) :
  - Température : + 10°... + 36 °C
  - Humidité relative : 30... 90 % (sans condensation)
  - Pression atmosphérique : 700... 1 060 mbar
  - Altitude maximale de fonctionnement : environ 3000 m (10 000 pieds), avec mise en pression de sortie.
  - Transporter et stocker les appareils à une température de - 20°... + 50 °C.

## **Renseignements concernant la mise à la terre**

- Ce produit doit être mis à la terre. Dans le cas peu probable où le système électrique du cycle exerciseur ne fonctionnerait pas correctement ou que la mise à la terre serait interrompue, le courant électrique serait moins résistant, ce qui réduirait le risque de choc électrique. Ce produit est équipé d'un cordon d'alimentation muni d'une fiche à contact de mise à la terre. La fiche doit être branchée dans une prise de courant appropriée installée convenablement et mise à la terre conformément aux codes et aux règlements locaux.

### **Danger**

- Un branchement incorrect du conducteur de mise à la terre de l'appareil peut entraîner un risque d'électrocution. En cas de doute sur la mise à la terre de l'appareil, consultez un électricien ou un dépanneur qualifié. Ne modifiez pas la fiche fournie avec l'appareil si elle ne s'adapte pas à la prise ; faites installer une prise appropriée par un électricien qualifié.

# Belangrijke informatie betreffende elektriciteit

## **Waarschuwing**

- Verwijder nooit een afdekking zonder eerst de netvoeding los te koppelen. Als de spanning met 10% of meer buiten het opgegeven bereik (90 tot 240 V) varieert, kunnen de prestaties van uw fiets worden beïnvloed. Dergelijke omstandigheden vallen niet onder de garantie. Als u vermoedt dat de spanning laag is, neem dan contact op met uw plaatselijke energiebedrijf of een erkende elektricien voor een test op correcte wijze.
- Stel deze fiets nooit bloot aan regen of vocht. Dit product is niet ontworpen voor gebruik buitenshuis, in de buurt van een zwembad of spa, of in een andere, zeer vochtige omgeving.
- De staande fiets is niet beschermd tegen binnendringen van water of deeltjes.
- De staande fiets is niet geschikt voor gebruik in een zuurstofrijke omgeving.
- Tenzij anders vermeld, zijn Dyaco-apparaten ontworpen voor gebruik onder normale klimatologische omstandigheden (IEC 60601-1):
  - Temperatuur: + 10 ° ... + 36 ° C
  - relatieve luchtvochtigheid: 30 ... 90% (niet condenserend)
  - Luchtdruk: 700 ... 1060 mbar
  - Maximale bedrijfshoogte: ca. 3000 m (10.000 voet), zonder extra druk
  - Transporteer en sla de apparaten op bij een temperatuur van - 20 ° ... + 50 ° C

## **Aardingsinstructies**

- Dit product moet geaard worden. In het onwaarschijnlijke geval dat het elektrische systeem van de fiets defect raakt of een storing optreedt, biedt aarding een weg van de minste weerstand voor elektrische stroom, waardoor het risico op elektrische schokken wordt verminderd. Dit product is uitgerust met een snoer met een aardstekker. De stekker moet worden aangesloten op een geschikt stopcontact dat op de juiste wijze is geïnstalleerd en geaard in overeenstemming met alle lokale voorschriften en verordeningen.

### **Gevaar**

- Een onjuiste aansluiting van de aardgeleider van de apparatuur kan leiden tot een elektrische schok. Neem contact op met een gekwalificeerde elektricien of onderhoudsmonteur, indien u twijfelt of het product correct is geaard. Wijzig de bij het product geleverde stekker niet als deze niet in het stopcontact past; laat een geschikt stopcontact installeren door een gekwalificeerde elektricien.



# Important operation instructions

- Never use your 7.0U during an electrical storm. Surges may occur in your facility power supply that could damage the 7.0U's components.
- All users should have medical clearance before starting any rigorous exercise program. This is especially important for persons with a history of heart disease or other high risk factors.
- The user should adjust the seat to a position that is comfortable during exercise. The console has a program in the setup menu that can aid in setting the correct seat position.
- Start at a safe exercise level. Do not allow the user to be over exerted. Symptoms to watch for, but not limited to, are: shortness of breath or difficulty in breathing, pain or discomfort, feeling faint.
- Make sure the user warms up and cools down properly to avoid over taxing the cardio vascular system. Allow three to five minutes of warm up and cool down during each exercise session.
- 7.0U should not be used for patients with severe osteoporosis, non-union fractures, debilitating dizziness, or poor safety awareness/cognition. Do not use for patients weighing greater than 200kgs (bariatric). Do not use for patients with acute conditions such as pulmonary embolus, thrombus, acute MI, acute fractures, or BP over 180/110 Hg.

# معلومات إرشادات التشغيل المهمة

- لا تستخدم دراجتك أبدًا أثناء عاصفة كهربائية. قد تحدث طفرات في مصدر التيار الكهربائي في مرافق إقامتك، بما يمكن أن يتلف مكونات الدراجة.
- يجب أن يحصل مستخدم الدراجة على تصريح طبي قبل بدء أي برنامج تمارين مكثف. وتتمثل الأهمية الخاصة لهذا في حالة الأشخاص الذين لديهم تاريخ لأمراض القلب أو غيرها من عوامل الخطورة المرتفعة.
- ينبغي على المستخدم ضبط المقعد على وضع مريح خلال التمارين. تحتوي وحدة التحكم على برنامج في قائمة الإعدادات يمكن أن يساعد في تحديد موضع المقعد الصحيح.
- ابدأ التمرين عند مستوى آمن. ولا تسمح بإجهاد المستخدم للغاية. من الأعراض التي يجب الانتباه إليها، على سبيل المثال لا الحصر: ضيق التنفس أو صعوبة التنفس أو الألم أو الانزعاج أو الشعور بالإغماء.
- تأكد من التزام المستخدم بتمارين الإحماء والتهدئة بشكل صحيح لتجنب إجهاد القلب والأوعية الدموية. والتزم بالإحماء والتهدئة لفترة تتراوح من ثلاث إلى خمس دقائق خلال كل جلسة تمارين.
- لا ينبغي استخدام الدراجة المستقيمة U7.0 لإعادة التأهيل للمرضى الذين يعانون من هشاشة العظام الشديدة أو الكسور غير النقيية أو الدوخة المبهكة أو ضعف الوعي / الإدراك بالسلامة. لا تستخدم للمرضى الذين يزيد وزنهم عن 200 كجم (علاج السمنة). لا تستخدمه للمرضى الذين يعانون من حالات حادة مثل الصمة الرئوية أو الجلطة أو احتشاء عضلة القلب الحاد أو الكسور الحادة أو ضغط الدم فوق 110/180 زئبق.

# Wichtige Bedienungsanwe isungen

- Benutzen Sie Ihr Rad nie während eines Gewitters. In Ihrem Anlagennetzteil können Überspannungen auftreten, die die Radkomponenten beschädigen können.
- Alle Benutzer sollten eine ärztliche Genehmigung haben, bevor sie mit einem strengen Trainingsprogramm beginnen. Dies ist besonders wichtig für Personen mit einer Vorerkrankung des Herzens oder anderen hohen Risikofaktoren.
- Der Benutzer sollte den Sitz so einstellen, dass er während des Trainings angenehm ist. Die Konsole verfügt in dem Einstellungsmenü über ein Programm, das bei der Einstellung der korrekten Sitzposition helfen kann.
- Beginnen Sie mit einer sicheren Übungsstufe. Achten Sie darauf, dass sich der Benutzer nicht überanstrengt. Symptome, auf die geachtet werden sollten, sind unter anderem Kurzatmigkeit oder Atemschwierigkeiten, Schmerzen oder Unwohlsein, Schwächegefühle.
- Achten Sie darauf, dass sich der Benutzer vernünftig aufwärmt und abkühlt, um eine Überbelastung des Herz-Kreislauf-Systems zu vermeiden. Eine Aufwärm- und Abkühlphase von drei bis fünf Minuten sollten bei jedem Training eingehalten werden.
- 7.0U-Rehabilitation Das Fahrrad sollte nicht für Patienten mit schwerer Osteoporose, nicht gelenkigen Frakturen, lähmendem Schwindel oder mangelndem Sicherheitsbewusstsein/ schlechter Wahrnehmung verwendet werden. Nicht für Patienten mit einem Gewicht von mehr als 200 kg (Adipositas) verwenden. Nicht bei Patienten mit akuten Zuständen wie Lungenembolie, Thrombus, akutem MI, akuten Frakturen oder Blutdruck über 180/110 Hg anwenden.

# Consignes d'utilisation importantes

- N'utilisez JAMAIS ce cycle exerciseur pendant un orage. Des surtensions peuvent survenir dans l'alimentation électrique de votre installation et pourraient endommager les composants du cycle.
- Tous les utilisateurs doivent obtenir une autorisation médicale avant d'entreprendre tout programme d'exercice. Cette remarque revêt une importance particulière pour les personnes présentant des antécédents de maladie cardiaque ou d'autres facteurs de risque élevé.
- L'utilisateur doit régler le siège dans une position confortable pendant l'exercice. La console dispose d'un programme dans le menu Réglages qui peut vous aider à régler correctement la position du siège.
- Commencez à utiliser l'appareil à un niveau d'exercice sans danger. L'utilisateur ne doit en aucun cas être surmené. Les symptômes à surveiller, sans toutefois s'y limiter, sont : l'essoufflement ou des difficultés respiratoires, une douleur ou un certain inconfort, une sensation de faiblesse.
- L'utilisateur doit s'être échauffé, de même qu'il devra récupérer adéquatement pour éviter de déstabiliser le système cardio-vasculaire. Prévoyez de trois à cinq minutes d'échauffement et de récupération à chaque séance d'exercice.
- Le vélo droit de rééducation 7.0U ne doit pas être utilisé chez les patients souffrant d'ostéoporose sévère, de fractures non consolidées, d'étourdissements débilissants ou d'une mauvaise sensibilisation/connaissance en matière de sécurité. Ne pas utiliser chez les patients pesant plus de 200 kg (bariatrique). Ne pas utiliser chez les patients souffrant d'affections aiguës telles que embolie pulmonaire, thrombus, infarctus du myocarde aigu, fractures aiguës

# Belangrijke bedieningsinstructies

- Gebruik uw fiets nooit tijdens onweer. Pieken kunnen optreden in de stroomvoorziening, die de fietsonderdelen kunnen beschadigen.
- Alle gebruikers moeten over medische toestemming beschikken voordat ze aan een streng trainingsprogramma beginnen. Dit is vooral belangrijk voor personen met een voorgeschiedenis van hartaandoeningen of andere hoge risicofactoren.
- De gebruiker moet het zadel zo instellen dat deze comfortabel is tijdens het trainen. De console heeft een programma in het setup-menu dat kan helpen bij het instellen van de juiste zitpositie. Begin op een veilig trainingsniveau. Laat de gebruiker niet te vermoeid raken. Symptomen om op te letten, zonder zich hiertoe te beperken, zijn: kortademigheid of ademhalingsproblemen, pijn of ongemak, zich zwak voelen.
- Zorg ervoor dat de gebruiker een goede warming-up of cooling-down respecteert om te voorkomen dat het cardiovasculaire systeem te zwaar wordt belast. Zorg gedurende drie tot vijf minuten voor een warming-up en cooling-down tijdens elke trainingssessie.
- 7.0U revalidatie upright bike mag niet worden gebruikt voor patiënten met ernstige osteoporose, non union fractuur, slopende duizeligheid, of slechte veiligheidsbewustzijn / cognitie op gebied van veiligheid. Niet gebruiken bij patiënten die meer dan 200 kg wegen (bariatrisch). Niet gebruiken bij patiënten met acute aandoeningen zoals longembolie, thrombus, acute MI, acute fracturen of bloeddruk hoger dan 180/110 Hg.

# Application specification

## **Medical purpose**

- Patient warm-up before a physical therapy session.
- Have the patient walk to improve ambulation and range of motion after knee/hip/ankle surgery or neurological conditions.
- Allow patients to perform cardiovascular exercise.
- Used for open kinetic chain exercise only, patient is not restrained or connected to the 7.0U.
- 7.0U is a device intended to be used to redevelop muscles or restore motion to joints.

## **Intended patient population**

- Male and Female Adults. Children at the discretion of a Qualified Physical Therapist and or parental consent.
- Maximal patient's weight is 200kg.
- Patient must be ambulatory.
- Patient should have medical clearance before starting any rigorous exercise program. This is especially important for person with a history of heart disease or other high risk factors.

## **Intended part of the body or type of tissue applied to or interacted with:**

- Contact site: hands, feet, and trunk
- Condition: should not have any trauma

## **Intended conditions of use**

- Environment including hygienic requirements
  - General: intended for indoors use. This product is not designed for use outdoors, near a pool or spa, or in any other high humidity environment.
  - Conditions of visibility:
    - ① Ambient luminance: standard ambient room lighting is sufficient.
    - ② Viewing distance: 1 m
    - ③ Viewing angle: 120°
  - Physical
    - ① Temperature range: 10°C ~ 36°C
    - ② Relative humidity range: 30% R.H. ~ 90% R.H., non condensing
  - Hygienic requirements: there is no particular restriction on hygienic requirements.
- Frequency of use
  - Dependent on therapist's plan.
- Location
  - Intended for hospital use, clinic use, home use and research in academic institutions.
- Mobility
  - The product is intended to be fixed.

# Operating principle

The patient pushes the pedals with their feet. The operator can increase the workload using the Up and Down Key on the console. When the workload change is requested, an electromagnet is energized at field strengths relative to the workload requested. The magnetic field generated by the coil is induced into a flywheel creating eddy currents to flow in the flywheel. The eddy currents then create an opposing magnetic field to the electromagnetic field creating more or less resistance at the pedal, determined by workload setting by the operator.

## Significant physical characteristics

Please refer to **Features** of 7.0U manual.



# Significant performance characteristic

Please refer to “**Unique uses for the 7.0U**” in Operating the 7.0U.

# Intended user profile

## **Intended operator**

- There is no particular restriction on age, gender, height, weight, ability and culture.
- Education: University or above
- Knowledge: The operator should read the User's Manual before use.
- Discipline: The operator should receive training from the manufacturer before use.
- Experience: The operator must have experience in physical therapy.
- Background: The operator must be a major in physical therapy.
- Professional competence: The operator should have the physical therapist license.

## **Intended installer**

- There is no particular restriction on age, gender, height, weight, ability and culture.
- Education: High School or above
- Knowledge: The installer shall be able to manipulate this product properly.
- Discipline: The installer shall be given a specific training by manufacturer.
- Experience: The installer must have experience in product assembly and disassembly.
- Background: The installer must be electro-mechanically trained.
- Professional competence: Normal vision ability required.

# Operating the 7.0U

The 7.0U is intended to be used in aiding in the physical rehabilitation process for patients with orthopedic and neurological problems. Also used in sports medicine, wellness and general conditioning programs.

## **Typical applications for this type of product are**

- Patient warm up before physical therapy session.
- Have the patient pedal to improve range of motion after knee/hip/ankle surgery.
- Allow patients to perform cardiovascular exercise

## **Unique uses for the 7.0U**

- Adjustable crank allows patients to pedal in smaller range of knee motion, from 15 degrees to full range.
- Symmetry program measures balance between left and right pedal stroke. Graphical Bio-feedback display motivates patients to maintain even power symmetry between left and right legs.

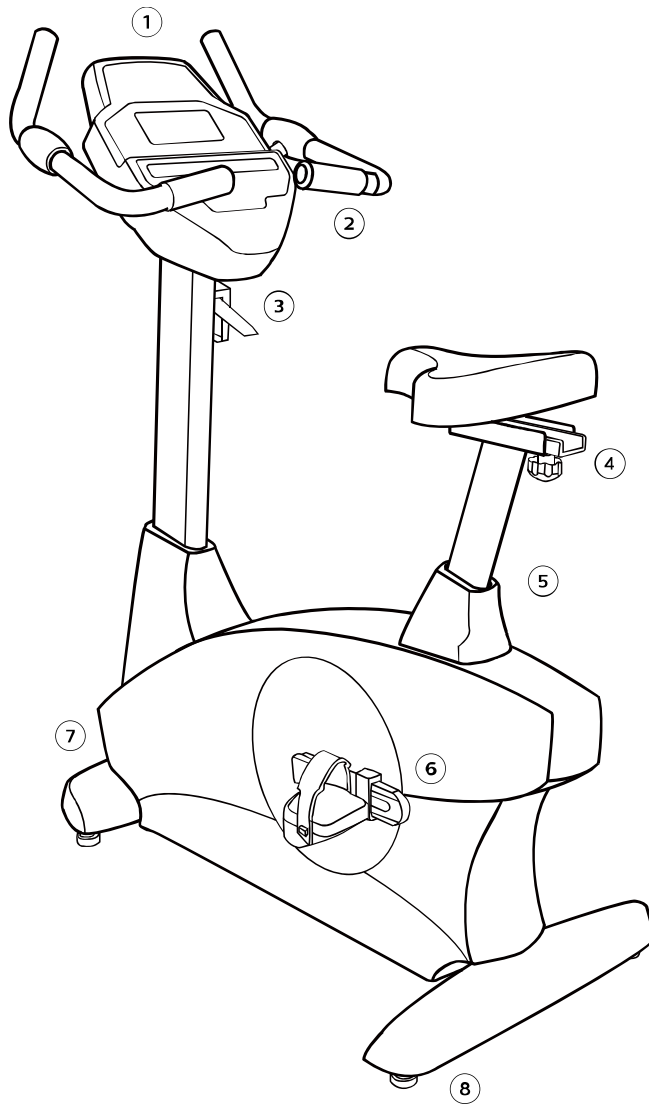
## **Other features of the 7.0U**

- Work range up to 750 watts (60 RPM) when level settings are at 15 watts per level (see Setup under Console section for Level settings).
- Indexed seat positioning accommodates users from 147 cm to 200 cm (4' 10" to 6' 7").
- Heart Rate monitoring using the optional heart rate chest-strap.

## **Heart rate measurements are not for medical use**

The heart rate function on this product is not a medical device and should not be relied on when accurate readings are necessary. Some people, including those in a cardiac rehab program, may benefit from using an alternate heart rate monitoring system like a chest or wrist strap. Various factors, including movement of the user, may affect the accuracy of your heart rate reading. The heart rate reading is intended only as an exercise aid for measuring heart rate trends in general.

# Features



## 7.0U

Parts and adjustments

1. Electronic console
2. Hand Pulse grips
3. Manual mechanical brake
4. Fore / aft seat adjustment
5. Vertical seat adjustment
6. Pedal adjustment
7. A.C. power input
8. Leveling glides

Optional parts (not shown)

- 2.1 Neurological pedal set

The 7.0U is an easy product to set up and use, from the adjustments to the intuitive interface. This section explains how to set up, adjust and operate your 7.0U.

## **Leveling the 7.0U**

Once the 7.0U is assembled, and placed on a flat level floor, it may be necessary to adjust the leveling glides on the bottom of the 7.0U to ensure proper stability of the 7.0U. Use a 1/2" wrench to loosen the top nut of the leveler. Adjust the levelers by hand as necessary to remove any wobble in the 7.0U. Then tighten the top nut against the bottom of the stabilizer tube. Make sure the bottom nut remains cinched against the leveling foot.

## **Connecting to A.C. power**

The 7.0U has a built-in universal power supply. You can plug the 7.0U into any A.C. power source from 90 to 240 volts, 50 to 60 Hz. The A.C. input is located in the front of the 7.0U. The input module has an input connector for the line cord, a power switch and a 5 amp fuse. Turn the power switch to off when the 7.0U is not in use.

## **Adjusting the seat vertical position**

To raise the seat position, loosen the knob one or two turns and lift up from under the rear of the seat. The Knob has a spring-loaded pin that will automatically seat in the slots in the seat post at each position. Once the seat is at the desired setting, tighten the knob to ensure the seat post won't accidentally slide downward during use. To lower the seat, loosen the knob then hold under the rear of the seat and pull the knob out to disengage the pin from the seat post. You can then lower the seat position to just below the desired setting then release the knob and pull the seat up until the pin clicks into place and tighten the knob. There is a numbered scale located on the seat post, under the seat, for repeatable settings.

## **Adjusting the seat fore/aft position**

Loosen the knob and slide the seat to the desired position. There is a numbered scale located on the seat slide, under the rear of the seat, for repeatable settings.

## **Pedal adjustment**

- Loosen the knob on the adjustable crank and pull up to disengage the pin. Slide the pedal up or down the crank arm to the desired setting then tighten the knob. There is a numbered scale for repeatability and a program in the Set Up function of the console that can assist in setting up the pedal position to accommodate various patient knee angles.

Warning: Avoid wearing pants with loose fitting legs as they may get caught on the crank arm while pedaling.

## **Auto-braking feature**

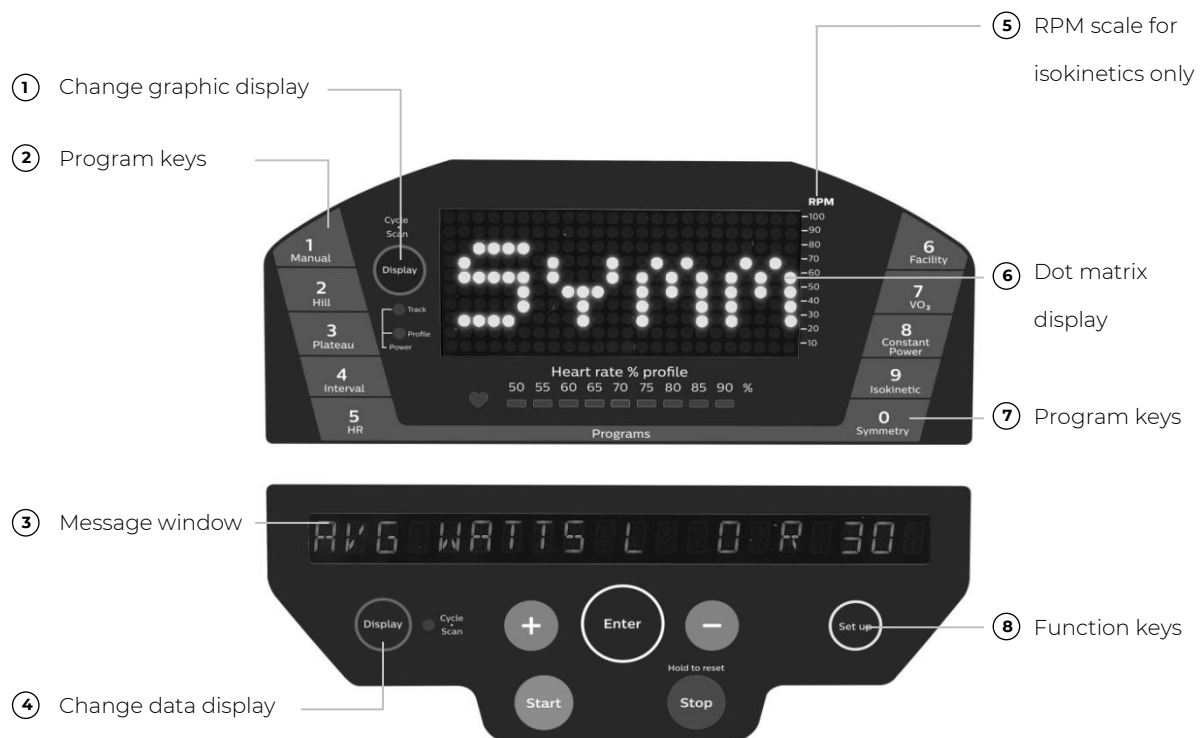
The 7.0U has built-in sensing technology and software that will automatically stop the flywheel when it senses the user is attempting to stop pedaling. This auto-braking software can be disabled during program set up before beginning a session. The Auto-Brake is set to off for the Symmetry and VO2 programs and can be turned on during program set up.

## **Manual mechanical brake lever function**

The brake's flywheel is also equipped with a manual mechanical brake that can be activated to stop the flywheel by pressing down on the lever.

# Operation of your new 7.0U

## 7.0U Electronic console



## Power on

When initially powered on the console, it will perform an internal self-test. During this time all the lights will turn on for a short time. The dot matrix display will then show a software version (i.e. VER 1.0) and the message window will display an odometer reading. The odometer reading displays how many hours the 7.0U has been used and how many virtual miles the 7.0U has been ridden. The display will look like this: ODO 123 MI 123 HRS.

The odometer will remain displayed for only a few seconds then the console will go to the start up display, also known as Idle Mode. The message window will be scrolling the start up message. You may now begin to use the 7.0U.

The console will automatically power down after 20 minutes of inactivity. Press any key to wake the console up again. Always turn off the main power switch when the 7.0U is not in use.

## **Console operation**

### **Set up**

The set up key function will allow you to enter patient data and customize the settings of the 7.0U. When the Set Up key is pressed the first option in the menu appears. Use the up/down arrows to scroll through the menu and press the enter key to select an option.

### **Set up menu**

- Patient data
  - Age : used in VO2 and heart rate programs.
  - Gender : used in VO2 program.
  - Weight : used in METS and Calorie calculations and VO2 program.
  - Height : used in the Symmetry program.
- Seat position
  - User may input desired knee flexion angles (6 options) and the software will calculate the seat's vertical position and pedal position settings.
  - This feature is intended to aid in patient set up but may not be the final settings as patient's body symmetry may vary slightly.
  - This program uses the height from the Patient Data settings for limb length. The seat Fore/Aft position is assumed to be in the center of the adjustment range.



## **The six knee angle options are**

- R Min (Right leg minimum flexion)  
L Min (Left leg minimum flexion)
- R Max (Right leg maximum flexion)  
L Max (Left leg maximum flexion)
- R Max (Right leg maximum flexion)  
L Min (Left leg minimum flexion)
- R Min (Right leg minimum flexion)  
L Max (Left leg maximum flexion)
- R Max (Right leg maximum flexion)  
R Min (Right leg minimum flexion)
- L Max (Left leg maximum flexion)  
L Min (Left leg minimum flexion)
- Watts per row
  - Adjusts the scale of the dot matrix when power (watts) is displayed. The default setting is 10 watts per row. The default of 10 watts per row means the full display (all 10 rows lit) equal 100 watts.
  - The setting can be adjusted from 10 to 100 watts per row of lights on the graph.
- Level Scale
  - Set the amount of change in the level adjustment of workload (resistance at the pedals) each time the arrow keys are pressed.
  - This feature allows you to have very fine increments of resistance for physically challenged patients or set very high resistance levels for sports training. The default setting is; Fine, 5 watts per level. The three options are:
    - ① Fine – 5 watts per level (at 60 RPM)
    - ② Medium – 10 watts per level (at 60 RPM)
    - ③ Coarse – 15 watts per level (at 60 RPM)

## Quick start

This is the quickest way to start an exercise session. After the console powers up you just press the Start key to begin; this will initiate the Quick start mode. In Quick start, the Time will count up from zero, all workout data will start to accrue and the workload may be adjusted manually by pressing the Up or Down key. The dot matrix will display a workload level at the lowest resistance. As you increase the workload, more rows will light indicating a harder workout. The 7.0U will get harder to pedal as the rows increase.

The dot matrix has 24 columns of lights and each column represents 1 minute in the Quick start program (time per column can be modified in other programs). At the end of the 24th column (or 24 minutes of work) the display will wrap around and restart at the first column again. There are 50 levels of resistance displayed in 10 rows of LED lights. The amount of workload for each level can be modified in the Set up menu.

## Basic information

The dot matrix display is used for displaying graphic feedback and has three basic displays for most programs, except for Isokinetic and Symmetry programs which are described later. When you begin a program, the dot matrix will display a workload profile (constant resistance). To the left of the dot matrix there is a key labeled display. Pressing this key will switch the display to show a Power graph (watt profile) and then a track. When both LEDs under the key are blinking, the graph will scan through the three displays.

The message window is the main display for programming instructions and relevant measurements during a program. The measurement data shown varies depending on the program.

Measurements include: Time and Segment time, RPM, Pulse, Work level, Watts and Average watts (left and right leg), METS, Calories and Symmetry.

Below the dot matrix display is a Heart icon and a bar graph. Simply grasping the hand pulse sensors, or wearing a heart rate chest belt transmitter, will start the Heart icon blinking (this may take a few seconds). The Message window will display your heart rate in beats per minute. The bar graph represents the percentage of maximum heart rate. Note: enter the correct age in Set up for the bar graph to be accurate. Refer to Heart rate section for details about these features.

### **The Stop / Reset key provides several functions**

- Pressing the Stop/Reset key once during a program will pause the program. To resume the exercise session just press the Start key or start pedaling.
- If the Stop/Reset button is pressed twice during a workout the program will end and a summary of information of the exercise session will be displayed.
- If the Stop/Reset key is held down for 3 seconds the console will perform a complete Reset.
- During data entry for a program the Stop/Reset key performs a Previous Screen function. This allows you to go back one step in the programming each time you press the Stop/Reset key.

The program keys may be used to preview each program when in the idle mode. Press each program key to preview what the program profile looks like. To begin a program press the corresponding program key and then press the Enter key to select the program.

The program keys also function as a Number Key Pad when you are in the data-setup mode. The number for each key is shown above the program name. If you are entering new data such as Time, Age, weight etc., you can use these keys to enter the numbers quickly.

## Selecting and customizing programs

When you enter a program you have the option of modifying the settings. If you want to begin without entering new settings, just press the Start key. This will bypass the programming of data and take you directly to the start of the program. If you want to change the settings, just follow the instructions in the message window. If you start a program without changing the settings, the data from the Set Up menu will be used.

### Manual

The Manual program works as the name implies, manually. This means that you control the workload yourself, not the computer. To start the Manual program follow the instructions below or just press the Manual button then the Enter button and follow the directions in the message window.

- Press the Manual key then press the Enter key.
- The message window will prompt you to enter the time for the program. You may enter the time using the Up and Down keys or the numeric key pad then press the Enter key to accept and proceed to the next screen.
- The next setting is for the Auto-braking feature. You may turn the auto-brake on or off then press enter to continue.
- Now you are finished editing the settings and can begin the program by pressing the start key. You can also go back and modify your settings by pressing the Enter key. Note: At any time during the editing of data you can press the Stop key to go back one level, or screen.
- During the manual program you will be able to scroll through the data in the message window by pressing the display key. You may also switch between the profile or power displays and a quarter mile track by pressing the display key adjacent to the dot matrix display.
- When the program ends you may press start to begin the same program again or stop to exit the program, or you can save the program you just completed as the Facility program by pressing the Facility key and following the instructions in the message window.

## **Preset programs**

The 7.0U has three preset exercise programs that have been designed for a variety of workout goals. The initial built-in level of difficulty for each program is set to a relatively easy level. You may adjust the level of difficulty (Max level) for each program before beginning.

The profiles shown in the dot matrix are merely pictures of the whole profile and will not change in size when the work level keys are pressed. When setting up a program you will enter the maximum resistance setting for the peak of the profile. During the program the resistance levels will change as the profile progresses. When the up key is pressed to request more resistance the profile picture will not change, but the workload will increase. The message window will display the level setting for the current segment and also the maximum level for the peak of the profile. Pressing the work keys actually change the peak level of the program not the current segment level. You may need to change the peak setting several times before the current segment increases.

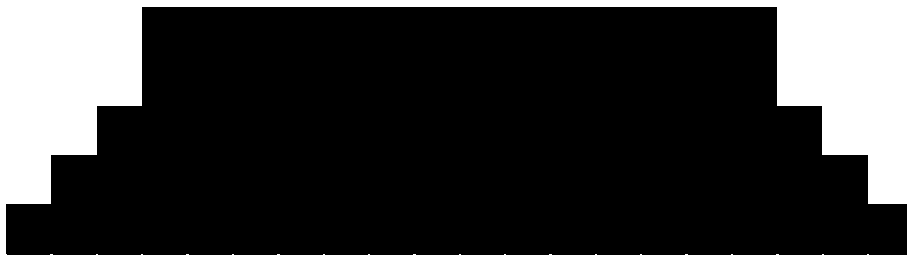
## Hill

The Hill program simulates going up and down a hill. The resistance in the pedals will steadily increase and then decrease during the program.



## Plateau

The Plateau program provides a steady state exercise with warm up and cool down periods.



## Interval

The Interval program takes you through high levels of intensity followed by periods of low intensity. This program increases your endurance by depleting your oxygen level followed by periods of recovery to replenish oxygen. Your cardio vascular system gets programmed to use oxygen more efficiently this way.



## **Programming preset programs**

- Select the desired program button then press the Enter key.
- The message window will prompt you to enter the time for the program. You may enter the time using the Up and Down keys or the numeric key pad then press the Enter key to accept and proceed to the next screen.
- The next setting is for the Auto-braking feature. You may turn the auto-brake on or off then press enter to continue.
- Now you are finished editing the settings and can begin the program by pressing the Start key. You can also go back and modify your settings by pressing the Enter key.
- Note: At any time during the editing of data you can press the Stop key to go back one level, or screen.
- During the Manual program you will be able to scroll through the data in the message window by pressing the Display key. You may also switch between the profile or power displays and a quarter mile track by pressing the Display key adjacent to the dot matrix display.
- When the program ends you may press Start to begin the same program again or Stop to exit the program, or you can save the program you just completed as the Facility program by pressing the Facility key and following the instructions in the message window.

## **Facility program**

The Facility program allows you to build and save a custom program. You can build your own custom program by following the instructions below or you can save any other preset program you complete as a custom program. The Facility program allows you to further personalize it by adding your facility name.

## **Designing and saving a new program**

Press the Facility key. The message window will show a welcome message; if you had previously saved a program, the message will contain the name you gave it. Then press the Enter key to begin programming.

- When you press enter, the message window will show “Name – A”, if there is no name saved. If the name “Custom Workout” had been previously saved the message window will show “Name – Custom Workout” and the C in Custom will be blinking. If there is a name saved, you can change it or you may press the Stop key to keep the name and continue to the next step. If you want to enter a name, use the Up and/or the Down key to change the first letter then press Enter to save the first letter and continue to the next letter. When you have finished entering the name, press the Stop key to save the name and continue to the next step.
- The message window will ask you to enter an Age. You may enter an Age, using the Up and Down keys or the numeric key pad, then press the Enter key to accept the new number and proceed on to the next screen.
- You are now asked to enter a Weight. You may adjust the Weight number using the Up and Down keys or the numeric key pad then press enter to continue.
- Next is Time. You may adjust the Time and press enter to continue.
- Now you are asked to adjust the Max Level. This is the peak exertion level you will experience during the program. Adjust the level and then press enter.
- Now the first column will be blinking and you are asked to adjust the level for the first segment of the workout. When you finish adjusting the first segment, or if you don't want to change, then press enter to continue to the next segment.
- The next segment will show the same level as the previously adjusted segment. Repeat the same process as the last segment then press enter. Continue this process until all twenty-four segments have been set.
- The message window will then tell you to press enter to save the program. After saving the program the message window says “New program saved” then will give you the option to Start or modify the program. Pressing Stop will exit to the start up screen.
- During the Facility program you will be able to scroll through the data in the message window by pressing the adjacent Display key.



## Running a saved program

- Press Facility key then Enter
- Enter Time then set Auto-brake on or off and press enter. Then press start to begin program.

## VO2 Test

The VO2 program is based on the YMCA protocol and is a sub-maximal test that uses pre-determined, fixed work levels that are determined based on the heart rate readings measured as the test progresses. The test will take anywhere between 6 to 15 minutes to complete, depending on the fitness level of the user. The test ends when the user's heart rate reaches 85% of maximum at any time during the test, or the heart rate is between 110 bpm and 85% at the end of two consecutive stages. At the end of the test a VO2max score will be displayed.

The YMCA protocol employs two to four stages, lasting 3 minutes each, of continuous exercise (see charts below). You will be prompted to choose either, Male or Female at the beginning of the test. This choice determines which protocol will be used during the test as shown in the charts below. The only caveat is if you are a very de-conditioned male you may need to choose option Female. If you are a very conditioned female, you may need to choose option Male.

## Workload chart for male or very fit female

|           |                                |                                |                                   |                                |                                   |                               |                                   |                                 |                              |
|-----------|--------------------------------|--------------------------------|-----------------------------------|--------------------------------|-----------------------------------|-------------------------------|-----------------------------------|---------------------------------|------------------------------|
| 1st Stage |                                |                                |                                   | 50 watts<br>– 300<br>kgm/min   |                                   |                               |                                   |                                 |                              |
| HR        |                                | < 90                           |                                   |                                | 90 -105                           |                               |                                   | > 105                           |                              |
| 2nd Stage |                                | 150 watts<br>– 900<br>kgm/min  |                                   |                                | 125 watts<br>– 750<br>kgm/min     |                               |                                   | 100<br>watts-<br>600<br>kgm/min |                              |
| HR        | HR <120                        | HR 120-135                     | HR >135                           | HR <120                        | HR 120-135                        | HR >135                       | HR <120                           | HR 120-135                      | HR >135                      |
| 3rd stage | 225 watts<br>– 1350<br>kgm/min | 200 watts<br>– 1200<br>kgm/min | 175<br>watts -<br>1050<br>kgm/min | 200 watts<br>– 1200<br>kgm/min | 175<br>watts -<br>1050<br>kgm/min | 150 watts<br>– 900<br>kgm/min | 175<br>watts -<br>1050<br>kgm/min | 150 watts<br>– 900<br>kgm/min   | 125 watts-<br>750<br>kgm/min |

## Workload chart for female or de-conditioned male

|                       |                      |                     |                     |                     |
|-----------------------|----------------------|---------------------|---------------------|---------------------|
|                       |                      | 1st Stage           | 25W<br>150 kgm/min  |                     |
| Heart Rate            | HR<80                | HR: 80-90           | HR: 90-100          | HR>100              |
| 2nd Stage             | 125W<br>750 kgm/min  | 100W<br>600 kgm/min | 75W<br>450 kgm/min  | 50W<br>300 kgm/min  |
| 3rd Stage             | 150W<br>900 kgm/min  | 125W<br>750 kgm/min | 100W<br>600 kgm/min | 75W<br>450 kgm/min  |
| 4th Stage (if needed) | 175W<br>1050 kgm/min | 150W<br>900 kgm/min | 117W<br>700 kgm/min | 100W<br>600 kgm/min |

## VO2 test programming

- Press the VO2 button and press enter.
- The message window will prompt you to enter your Gender. Use the Up and Down keys to change and press the Enter key to accept and proceed on to the next screen.
- You are now prompted to enter your Age. You may adjust the age using the Up or Down key then press enter to continue.
- You are now prompted to enter your Weight. You may adjust the weight using the Up or Down key then press enter to continue.
- Now press Start to begin the test.

## **Before the test**

- Make sure you are in good health; check with your physician before performing any exercise if you are over the age of 35 or persons with pre-existing health conditions.
- Adjust the seat to the proper position so that when your leg is extended during pedaling there is a slight bend at the knee of about 5 degrees.
- Make sure you have warmed up and stretched before taking the test.
- Do not take caffeine before the test.

## **During the test**

- The console must be receiving a steady heart rate for the test to begin. You may use the hand pulse sensors or wear a heart rate chest strap transmitter, although chest strap transmitter is recommended.
- The user must maintain a steady 50 RPM pedal speed. If the pedal speed drops below 48 RPM or goes above 52 RPM the console will emit a steady beeping sound and the RPM number will flash until the speed is within this range.
- You may scroll through the various data readings in the message window by pressing the Display button under the message window.
- The message window will always display your pedal speed on the right side to help you maintain 50 RPM.
- The data shown during the test is
  - Work in KGM is actually an abbreviated form of kg-m/min. which is a work measurement of kilogram-force meter/minute
  - Work in Watts (1 watt is equal to 6.11829727787 kg-m/min.)
  - HR is your actual heart rate; TGT is the target heart rate to reach to end the test.
  - Time is the total elapsed time of the test.

## **After the test**

- Cool down for about one to three minutes.
- Take note of the score because the console will automatically return to the start-up mode after a few minutes.

## What the score means

VO2max Chart for males and very fit females

|                  | 18-25<br>years<br>old | 26-35<br>years<br>old | 36-45<br>years<br>old | 46-55<br>years<br>old | 56-65<br>years<br>old | 65+<br>years<br>old |
|------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------|
| excellent        | >60                   | >56                   | >51                   | >45                   | >41                   | >37                 |
| good             | 52-60                 | 49-56                 | 43-51                 | 39-45                 | 36-41                 | 33-37               |
| above<br>average | 47-51                 | 43-48                 | 39-42                 | 35-38                 | 32-35                 | 29-32               |
| average          | 42-46                 | 40-42                 | 35-38                 | 32-35                 | 30-31                 | 26-28               |
| below<br>average | 37-41                 | 35-39                 | 31-34                 | 29-31                 | 26-29                 | 22-25               |
| poor             | 30-36                 | 30-34                 | 26-30                 | 25-28                 | 22-25                 | 20-21               |
| very poor        | <30                   | <30                   | <26                   | <25                   | <22                   | <20                 |

VO2max Chart for females and de-conditioned males

|                  | 18-25<br>years<br>old | 26-35<br>years<br>old | 36-45<br>years<br>old | 46-55<br>years<br>old | 56-65<br>years<br>old | 65+<br>years<br>old |
|------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------|
| excellent        | 56                    | 52                    | 45                    | 40                    | 37                    | 32                  |
| good             | 47-56                 | 45-52                 | 38-45                 | 34-40                 | 32-37                 | 28-32               |
| above<br>average | 42-46                 | 39-44                 | 34-37                 | 31-33                 | 28-31                 | 25-27               |
| average          | 38-41                 | 35-38                 | 31-33                 | 28-30                 | 25-27                 | 22-24               |
| below<br>average | 33-37                 | 31-34                 | 27-30                 | 25-27                 | 22-24                 | 19-22               |
| poor             | 28-32                 | 26-30                 | 22-26                 | 20-24                 | 18-21                 | 17-18               |
| very poor        | <28                   | <26                   | <22                   | <20                   | <18                   | <17                 |

## Constant Power

The Constant Power program automatically controls the resistance level at the pedals, depending on user speed, to maintain a steady power workload.

- Press the Constant Power key then press the Enter key.

- The message window will prompt you to enter the Time for the program. You may enter the time using the Up and Down keys or the numeric key pad then press the Enter key to accept and proceed to the next screen.
- Set the target Watt Level for the program then press Enter. The default setting is 50 watts.
- You may turn the Auto-brake on or off then press enter to continue.
- Now you are finished editing the settings and can begin your workout by pressing the Start key. You can also go back and modify your settings by pressing the Enter key.
- Note: At any time during the editing of Data you can press the Stop key to go back one level, or screen.
- During the program you will be able to scroll through the data in the message window by pressing the Display key. You may also switch between the power profile, resistance profile or a quarter mile track by pressing the Display key adjacent to the dot matrix display.
- When the program ends you may press Start to begin the same program again or Stop to exit the program, or you can save the program you just completed as the facility program by pressing the Facility key and following the instructions in the message window.

## **Isokinetic**

The Isokinetic program provides accommodating resistance at a fixed speed level. The user controls the resistance at the pedals by pushing harder or lighter. The desired pedaling speed is entered and the computer increases the resistance automatically if the user tries to overcome the set speed.

- Press the Isokinetic key then press the Enter key.
- The message window will prompt you to enter the Time for the program. You may enter the time using the Up and Down keys or the numeric key pad then press the Enter key to accept and proceed to the next screen.
- Set the target RPM Level for the program then press Enter. The default setting is 30 RPM.
- You may turn the Auto-brake on or off then press enter to continue.
- Now you are finished editing the settings and can begin your workout by pressing the Start key. You can also go back and modify your settings by pressing the Enter key.

Note: At any time during the editing of data you can press the Stop key to go back one level, or screen

- During the program you will be able to scroll through the data in the message window by pressing the Display key. You may also switch between the speed profile, power profile or a quarter mile track by pressing the Display key adjacent to the dot matrix display. There is an RPM graph to the right of the dot matrix to monitor user speed.
- When the program ends you may press Start to begin the same program again or Stop to exit the program, or you can save the program you just completed as the Facility program by pressing the Facility key and following the instructions in the message window.

## **Symmetry**

The Symmetry program may aid in achieving a more balanced pedaling stroke for patients with lower limb deficiencies, such as stroke patients and post-op knee patients. The program will measure the left and right power around the pedal rotation and display the watt measurements in the message window. The dot matrix display will show a graph indicating the leg power symmetry so the user has a visual feedback to aid in improving the involved limb's strength.

- Press the Symmetry key then press the Enter key.
- The message window will prompt you to enter the Time for the program. You may enter the time using the Up and Down keys or the numeric key pad then press the Enter key to accept and proceed to the next screen.
- You may turn the Auto-brake on or off then press enter to continue. Since the auto-brake may be activated with severe asymmetry the auto-brake default setting is off. If you want the auto-brake feature operational please set to on and press enter.
- Now you are finished editing the settings and can begin by pressing the Start key. You can also go back and modify your settings by pressing the Enter key.

## **For best results**

The Symmetry program starts at level 1 and the resistance needs to be increased manually by pressing the Up arrow. Make sure to set the resistance to a level where the patient is doing enough work to generate a meaningful measurement. It is recommended to set the resistance as high as the patient can perform without discomfort, but low enough so they can complete full pedal revolutions. Very low resistance settings result in erratic or inconsistent measurements.

## Biofeedback measurements and graph

Below is a sample picture showing the symmetry graph. In the message window there is an average watt measurement and it is indicating that the left leg is producing more power than the right leg, 41 vs. 34 watts. The graph reflects the higher wattage of the left leg. If the power is equal in both legs only two dots would be lit on the bottom center of the graphic screen. If the power is equal in both legs only two dots would be lit on the bottom center of the graphic screen.

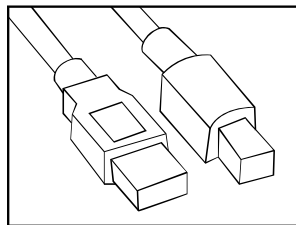
To view the Symmetry Index number, press the Display key located under the message window. The Symmetry Index number is the percentage of difference between the left and right leg power. If the left and right legs are producing the same power the Symmetry Index will be 0%.



Note: The Symmetry program employs a proprietary algorithm using a power table and velocity calculations to generate the watt readings; they are not from direct force measurements.

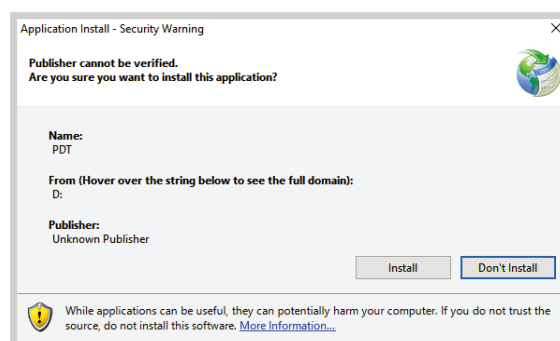
# Data transfer software instructions

- Works with newer 7.0T, 7.0S, 7.5S, 7.0R and 7.0U consoles with USB ports on the back
- The software works with Windows 10, 7 and XP series, with .Net Framework 2.0.
- The output for the data is in a .CSV file format.
- <http://www.dyaco.com/software>  
Please follow the website instructions to download software.
- Use a USB cable (type a to type b, illustrated to the right) to connect the product and the computer.



## Step 1.

Download the software from the link (<http://www.dyaco.com/software>) and connect the console of the product to the computer via USB cable. Click "Install" when you see the pop-up window as below during installation.

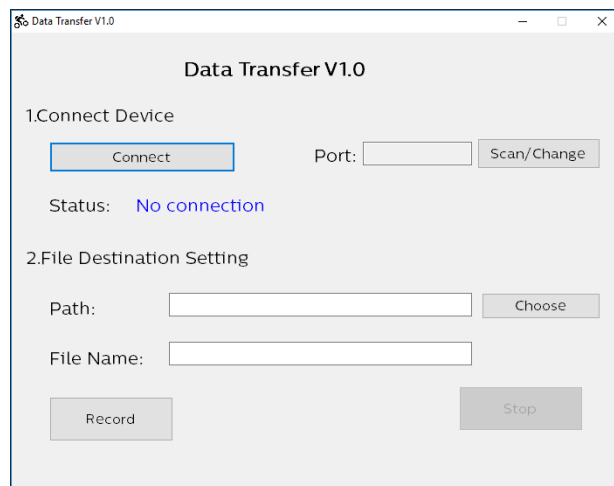




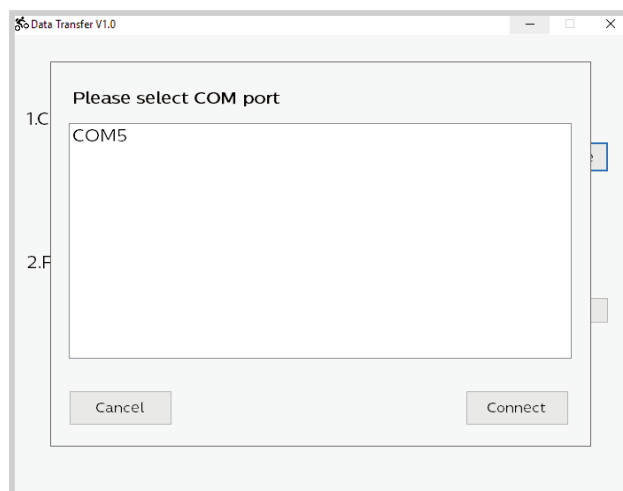
## Step 2.

Click "Connect" or "Change" to select the connecting port (left figure). After clicking the "Change", or connecting to the wrong port, the COM port selection window pops up (right figure). Select the correct COM port and click "Connect".

Selecting COM port



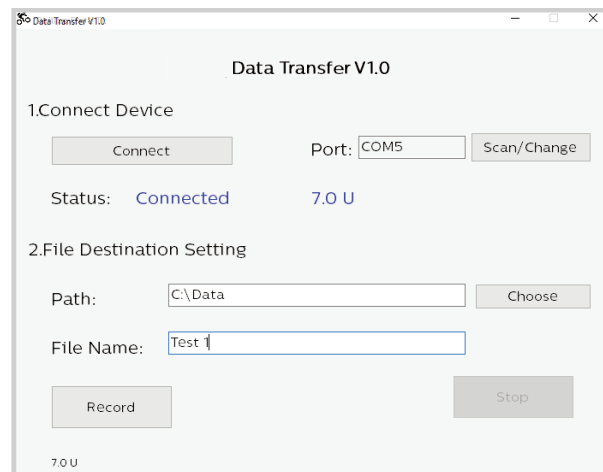
Pop-Up COM Port Selection Window



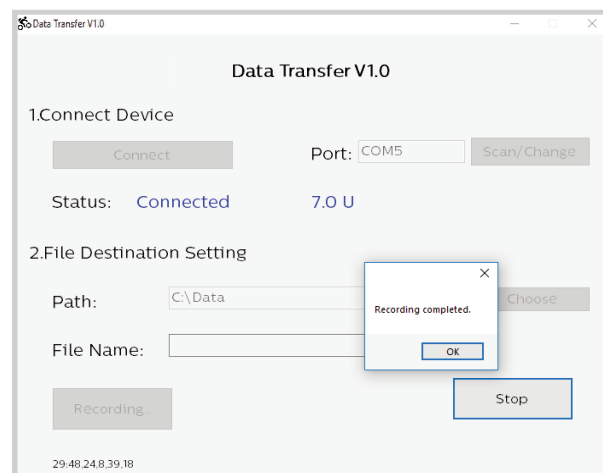
### Step 3.

After the status shows “Connected” and the product model name to the right, choose the file path and create the file name for saving the data. Click the “Record” button to start collecting data. Click “Stop” or quit the program from the console of the product to stop the data collection process. The saved data can be found at the assigned destination.

Click record button



Recording complete



The file is saved in .CSV format, which can be opened by Microsoft Excel. Example shown below.

|              |       |              |                |          |           |            |          |       |
|--------------|-------|--------------|----------------|----------|-----------|------------|----------|-------|
| Model:       | 7.0 U | Date & Time: | 2017/8/1 10:02 | Program: | MANUAL    |            |          |       |
| Program time | SPM   | Steps        | Level          | Watt     | Left Watt | Right Watt | Symmetry | L/R   |
| 00:01        |       | 0            | 0              | 1        | 0         | 0          | 0        | 0 R   |
| 00:02        |       | 0            | 0              | 1        | 0         | 0          | 0        | 0 R   |
| 00:03        |       | 0            | 0              | 1        | 4         | 0          | 4        | 200 R |
| 00:04        |       | 0            | 0              | 1        | 4         | 0          | 4        | 200 R |
| 00:05        |       | 29           | 1              | 1        | 8         | 8          | 4        | 66 L  |
| 00:06        |       | 48           | 2              | 1        | 14        | 8          | 4        | 11 R  |

# Using a heart rate transmitter

Note: The chest strap transmitter is not a standard part, but is a separate purchase. Most transmitters that operate at 5kHz frequency will also work.

## **How to wear your wireless chest strap transmitter?**

- Attach the transmitter to the elastic strap using the locking parts.
- Adjust the strap as tightly as possible as long as the strap is not too tight to remain comfortable.
- Position the transmitter with the logo centered in the middle of your body facing away from your chest (some people must position the transmitter slightly left of center). Attach the final end of the elastic strap by inserting the round end and, using the locking parts, secure the transmitter and strap around your chest.
- Position the transmitter immediately below the pectoral muscles.
- Sweat is the best conductor to measure very minute heart beat electrical signals. However, plain water can also be used to pre-wet the electrodes (2 black square areas on the reverse side of the belt and either side of transmitter). It's also recommended that you wear the transmitter strap a few minutes before your work out. Some users, because of body chemistry, have a more difficult time in achieving a strong, steady signal at the beginning. After "warming up", this problem lessens. As noted, wearing clothing over the transmitter/strap doesn't affect performance.

- Your workout must be within range - distance between transmitter/receiver – to achieve a strong steady signal. The length of range may vary somewhat but generally stay close enough to the console to maintain good, strong, reliable readings. Wearing the transmitter immediately against bare skin assures you of proper operation. If you wish, you may wear the transmitter over a shirt. To do so, moisten the areas of the shirt that the electrodes will rest upon.

Note: The transmitter is automatically activated when it detects activity from the user's heart. Additionally, it automatically deactivates when it does not receive any activity. Although the transmitter is water resistant, moisture can have the effect of creating false signals, so you should take precautions to completely dry the transmitter after use to prolong battery life (estimated transmitter battery life is 2500 hours). If your chest strap has a replaceable battery the replacement battery is CR2032.

### **Erratic operation**

Caution! Do not use this 7.0U for Heart Rate Control unless a steady, solid Actual Heart Rate value is being displayed. High, wild, random numbers being displayed indicate a problem.

Areas to look at for interference, which may cause erratic heart rate

- Microwave ovens, TVs, small appliances, etc.
- Fluorescent lights.
- Some household security systems.
- Perimeter fence for a pet.
- Some people have problems with the transmitter picking up a signal from their skin. If you have problems try wearing the transmitter upside down. Normally the transmitter will be oriented so the logo is right side up.

- The antenna that picks up your heart rate is very sensitive. If there is an outside noise source, turning the whole machine 90 degrees may de-tune the interference.
- If there is another person wearing a chest strap within 1 meter, it will interfere.
- If you continue to experience problems contact your dealer.

## **Heart rate program operation**

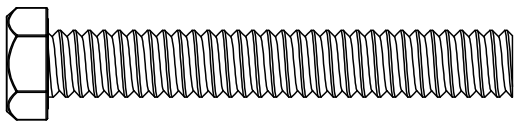
To start the HR program follow the instructions below or just press the HR key then the Enter button and follow the directions in the message window.

- Press the HR key then press the Enter key.
- The message window will ask you to enter your Age. You may enter your Age, using the Up and Down keys or the numeric key pad, then press the Enter key to accept the new number and proceed on to the next screen.
- You are now asked to enter your Weight. You may adjust the Weight number using the Up and Down keys or the numeric key pad, then press enter to continue.
- Next is Time. You may adjust the Time and press enter to continue.
- Now you are asked to adjust the Heart rate Level. This is the heart rate level you will experience during the program. Adjust the level and then press enter.
- Now you are finished editing the settings and can begin your workout by pressing the Start key. You can also go back and modify your settings by pressing the Enter key. NOTE: At any time during the editing of data you can press the Stop key to go back one level, or screen.
- If you want to increase or decrease the workload at any time during the program press the Up or Down key. This will allow you to change your target heart rate at any time during the program.
- During the HR program you will be able to scroll through the data in the message window by pressing the adjacent Display key.
- When the program ends you may press Start to begin the same program again or Stop to exit the program or you can save the program you just completed as a custom user program by pressing the Facility key and following the instructions in the message window.

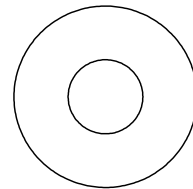
# Assembly instructions for 7.0U

## Hardware

### Step 1.

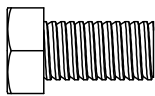


#50-  $\frac{3}{8}$ "  $\times$  2- $\frac{1}{4}$ "  
(4PCS)

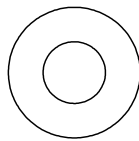


#71-  $\frac{3}{8}$ "  $\times$  1"  
(4PCS)

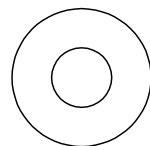
### Step 2.



#51-  $\frac{5}{16}$ "  $\times$   $\frac{5}{8}$ "  
(7PCS)



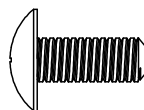
#72-  $\frac{5}{16}$ "  $\times$   $\frac{3}{4}$ "  
(6PCS)



#99-  $\frac{5}{16}$ "  $\times$   $\frac{3}{4}$ "  
(1PC)

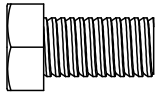


#106-2- M4  $\times$  5L  
(2PCS)

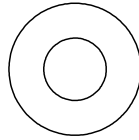


#144- M6  $\times$  15L  
(2PCS)

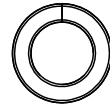
### Step 3.



#51- 5/16" × 5/8"  
(2PCS)



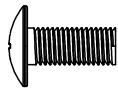
#72- 5/16" × 3/4"  
(2PCS)



#103- 5/16"  
(2PCS)

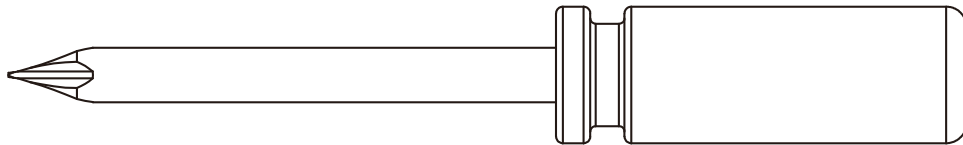


### Step 4.

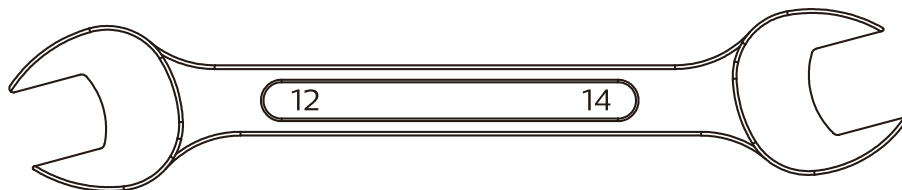


#58- M5 × 12L  
(10PCS)

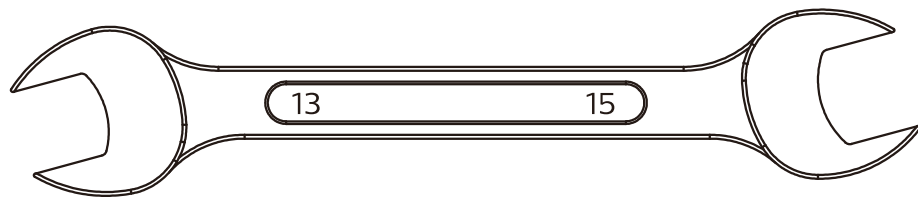
### Tools



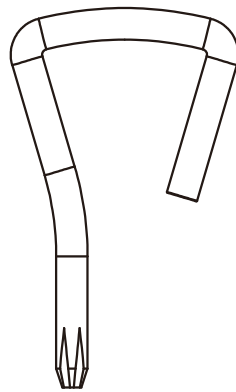
#93- Phillips Screwdriver  
(1PC)



#100- 12/14mm Wrench  
(1PC)



#117- 13/15mm Wrench  
(1PC)



#165- Short Phillip Screwdriver  
(1PC)

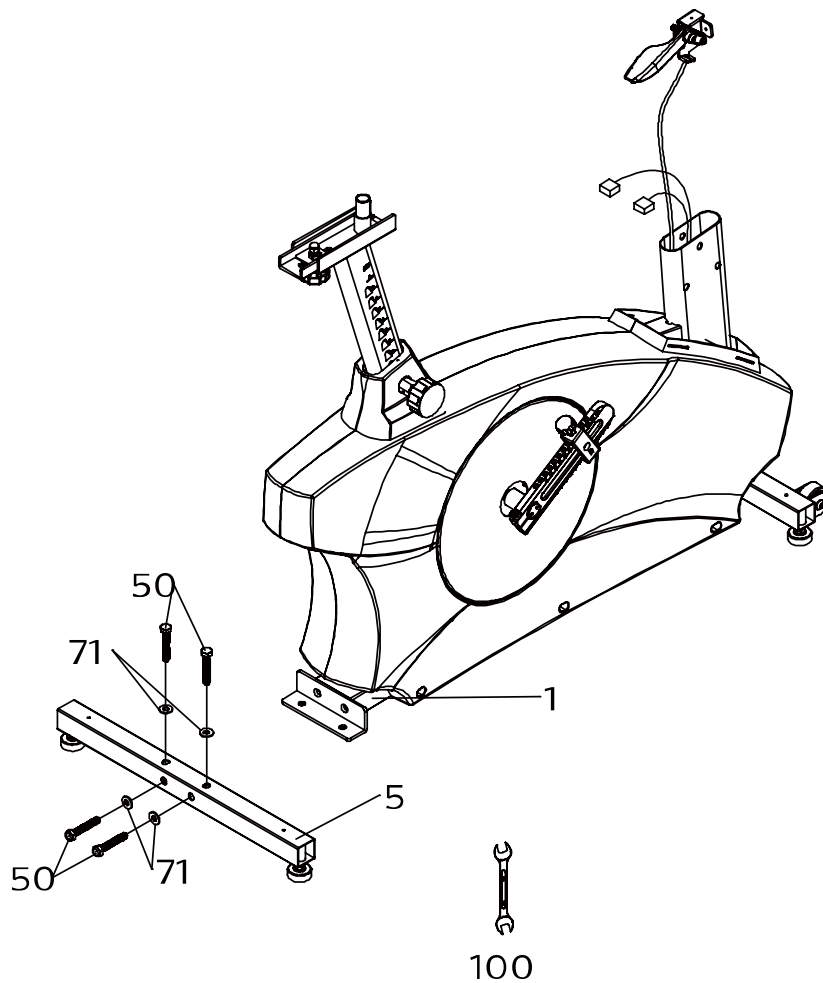


## Assembly

Read each step's instructions and study the drawing carefully to become familiar with all the parts and procedures before beginning each step.

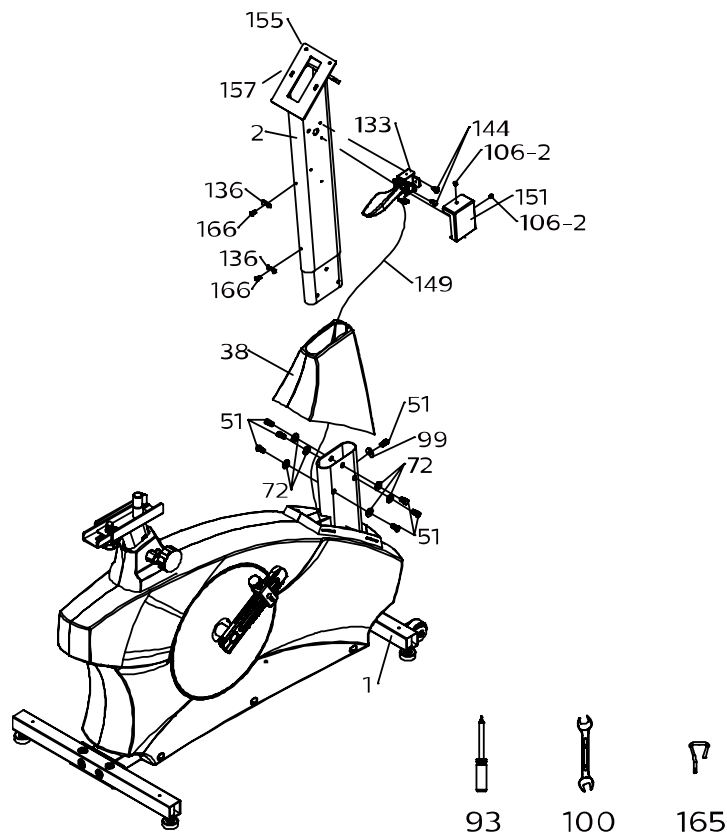
### Step 1. Rear stabilizer assembly

- Install the rear stabilizer (5) onto the main frame (1) with the four 3/8" x 2-1/4" hex head bolts (50) and four 3/8" flat washers (71).



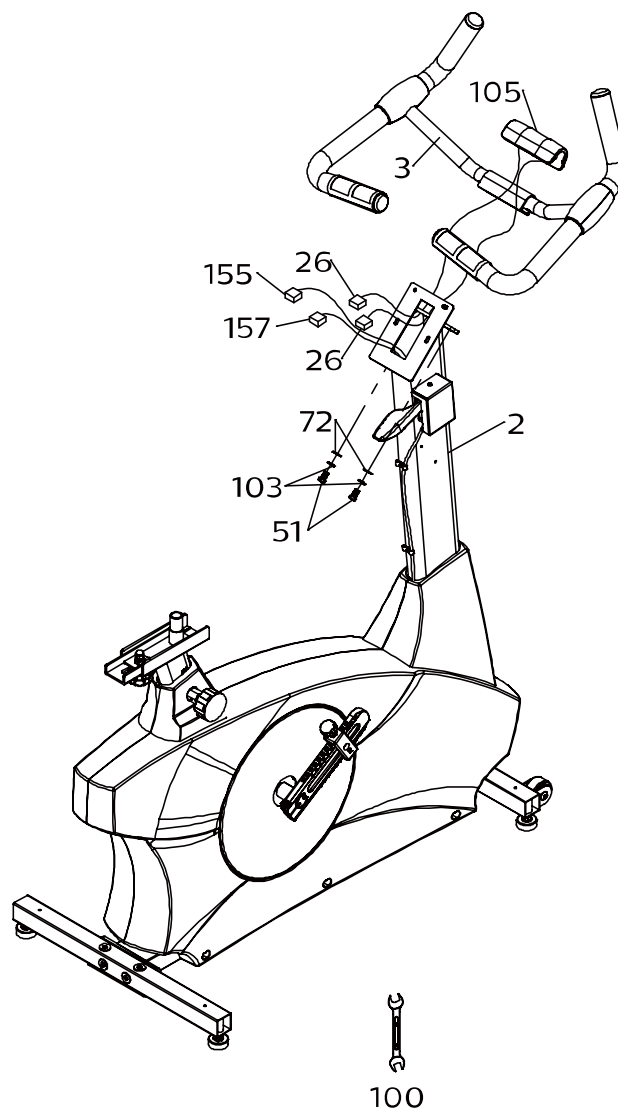
## Step 2. Front console mast assembly

- Locate the console mast cover (38) and route the computer cables (155 & 157) and the brake lever & cable (133 & 149) through the cover. Temporarily place the cover down on the main body of the 7.0U. Do not snap the cover in place yet.
- Unravel the Computer Cables (155 & 157) and snake them through the Console Mast (2) until the cable connectors come out the top opening of the console mast. Be sure the brake cable (149) is in the groove of the cover when installing the mast during the next step.
- Holding the console mast in one hand and gently keeping tension on the computer cables at the top of the mast with the other, Install the Console Mast (2) into the Main Frame receiving tube under the cover (38). Keeping tension on the cables will ensure the wires don't get caught between the mast and receiving tube. Do not bolt the mast in place at this time
- Install the Brake Lever (133) on the mast with the two 6mm Phillips screws (144). Install the cover (151) with the two 4mm screws (106-2). The top screw needs to be tightened with the short screwdriver.
- Slide the cover (38) up the mast and bolt the mast in place with seven 5/16" x 5/8" Hex Head bolts (51), six 5/16" Flat Washers (72) on the six side bolts and one 5/16" Curved Washer (99) on the front bolt. Slide the cover down and snap in place on the main body.
- Install the two brake cable tie downs (136) with the two 5mm screws (166).



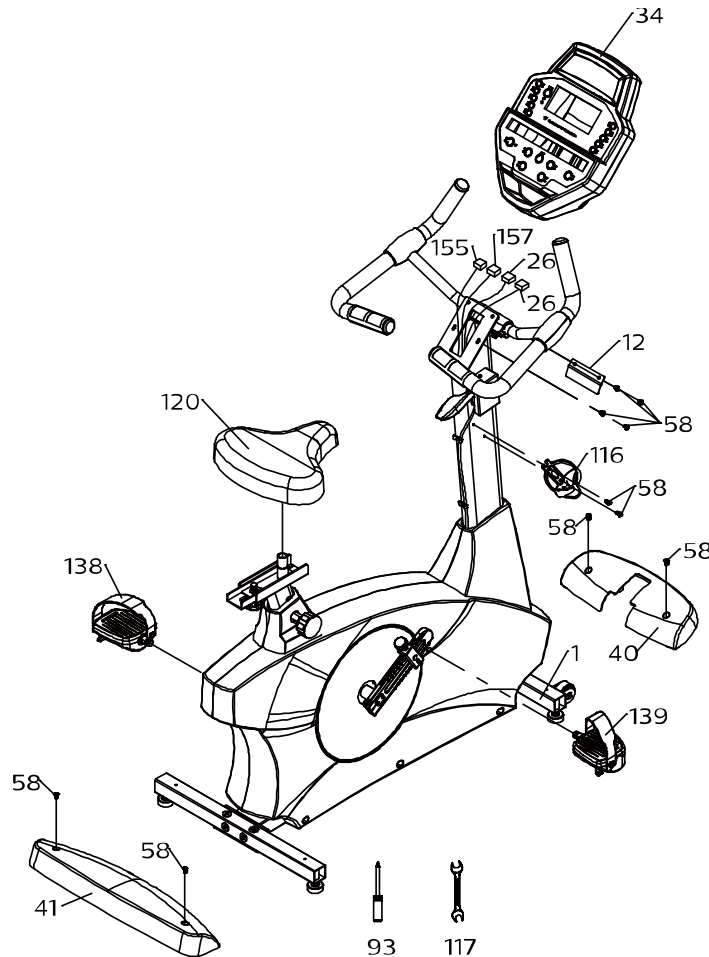
### Step 3. Handle bar assembly

- Route the two hand pulse wires (26) through the hole in the handle bar mounting plate and out through the hole in the console plate. Install the Handle Bar (3) onto the Console Mast (2) with two 5/16" x 5/8" Hex Head bolts (51), two 5/16" Flat Washers (72) and two 5/16" Split Washers (103) being careful not to pinch the hand pulse wires between the handle bar and mounting plate, lastly align the cover, Handle Bar (105).

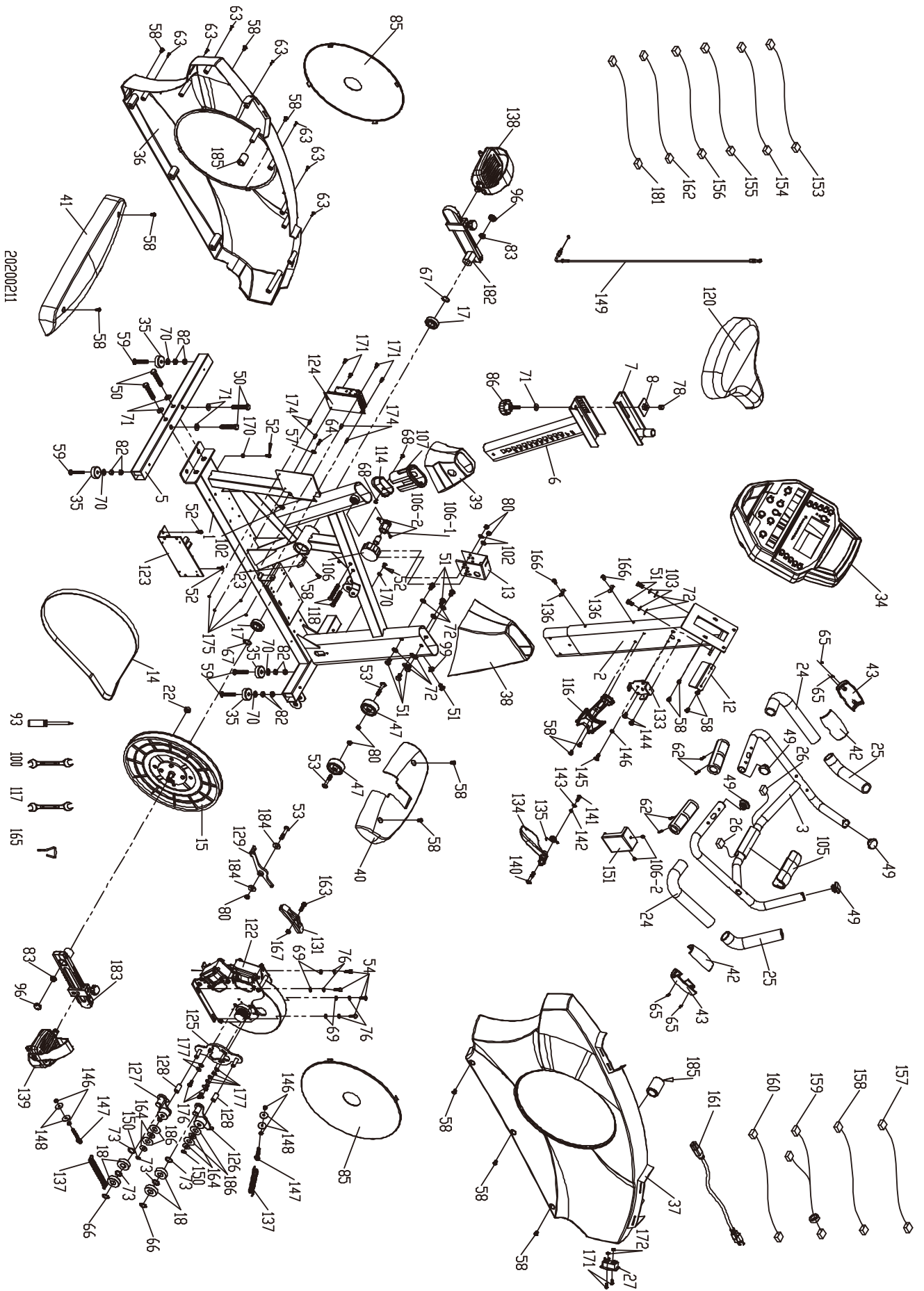


#### Step 4. Console, seat, pedals and beauty covers assembly

- Plug in the two Computer Cables (155 & 157) and two Hand pulse cables (26) into the connectors in the back of the Console (34). Install the Console (34) onto the Console Mast with the two M5x12mm bottom screws first (58). Install the cover plate (12) with the two top mounting screws (58).
- Install the Front Stabilizer Cover (40) and the Rear Stabilizer Cover (41) onto the Main Frame (1) with four M5x12mm Phillips Head Screws (58).
- Install the Pedals (138 & 139) onto the Crank arms. Remember that the left pedal has a reverse thread and will be screwed into the crank in the opposite rotation from normal threads. There is an "L" stamped into the end of the threaded post of the left pedal and an "R" in the right. Make sure to tighten the pedals as much as you possibly can. It may be necessary to re-tighten the pedals if you feel a thumping during pedaling the 7.0U. A noise or feeling such as a thumping or clicking is usually caused by the pedals not being tight enough.
- Install the seat (120) onto the seat post. Mount the Drink Bottle Holder (116) onto the Console Mast (2) with two M5x12mm Phillips Head Screws (58).



## Exploded view drawing



## 7.0U parts list

| Item | Description                          | Qty |
|------|--------------------------------------|-----|
| 1    | Main Frame                           | 1   |
| 2    | Console Mast                         | 1   |
| 3    | Handle Bar                           | 1   |
| 5    | Rear Stabilizer                      | 1   |
| 6    | Seat Post                            | 1   |
| 7    | Sliding Seat Mount                   | 1   |
| 8    | Seat Mount Plate                     | 1   |
| 12   | Wire Cover, Console Mount            | 1   |
| 13   | Support Bracket, Side Case           | 1   |
| 14   | Drive Belt                           | 1   |
| 15   | Ø330_Drive Pulley with Axle          | 1   |
| 17   | 6004_Crank Bearing                   | 2   |
| 18   | 6203_Idler Bearing                   | 4   |
| 22   | Magnet, Crank Position               | 1   |
| 23   | Reed Sensor W/Cable                  | 1   |
| 24   | 1" × 5T × 255mm_Handgrip Foam, Lower | 2   |
| 25   | 1" × 5T × 205mm_Handgrip Foam, Upper | 2   |
| 26   | 800mm_Hand Pulse Cable Assembly      | 2   |
| 27   | AC Power Input Module                | 1   |
| 34   | Console Assembly                     | 1   |
| 35   | Ø35 × 10mm_Foot Pad, Leveling Glide  | 4   |
| 36   | Side Case (L)                        | 1   |
| 37   | Side Case (R)                        | 1   |
| 38   | Console Mast Cover                   | 1   |
| 39   | Seat Post Cover                      | 1   |
| 40   | Front Stabilizer Cover               | 1   |
| 41   | Rear Stabilizer Cover                | 1   |
| 42   | Handgrip Cap(Top)                    | 2   |
| 43   | Handgrip Cap (Bottom)                | 2   |
| 47   | Ø54_Transportation Wheel             | 2   |
| 49   | Ø25.4 × 2.0T_Handle Bar End cap      | 4   |
| 50   | 3/8" × 2-1/4"_Hex Head Bolt          | 4   |
| 51   | 5/16" × 5/8"_Hex Head Bolt           | 9   |
| 52   | 5 × 19mm_Mounting Screw, Controller  | 4   |
| 53   | 5/16" × 1-3/4"_Button Head Bolt      | 3   |

| Item  | Description                                | Qty |
|-------|--------------------------------------------|-----|
| 54    | 1/4" × 3/4"_Hex Head Bolt                  | 4   |
| 57    | 3/16" × 15mm × 1.5T_Flat Washer            | 1   |
| 58    | M5 × 12mm_Phillips Head Screw              | 17  |
| 59    | 3/8" × 2"_Flat Head Socket Bolt            | 4   |
| 62    | Ø3 × 20mm_Self Tapping Screw               | 4   |
| 63    | Ø3.5 × 16mm_Sheet Metal Screw              | 7   |
| 64    | Ø3.5 × 20mm_Sheet Metal Screw              | 1   |
| 65    | Ø3 × 10mm_Self Tapping Screw               | 4   |
| 66    | Ø17_C-Clip                                 | 2   |
| 67    | Ø20_C-Clip                                 | 2   |
| 68    | 4 × 12m/m_Sheet Metal Screw                | 2   |
| 69    | 1/4" × 13mm × 1T_Flat Washer               | 4   |
| 70    | 3/8" × 19mm × 1.5T_Flat Washer             | 4   |
| 71    | 3/8" × 25mm × 2T_Flat Washer               | 5   |
| 72    | 5/16" × 18mm × 1.5T_Flat Washer            | 8   |
| 73    | Ø17 × 23.5mm × 1T_Flat Washer              | 4   |
| 76    | Ø1/4"_Split Washer                         | 4   |
| 78    | 3/8" × 7T_Cap Nut                          | 1   |
| 80    | 5/16" × 6T_Nyloc Nut                       | 5   |
| 82    | 3/8" × 7T_Nut                              | 8   |
| 83    | M10 × 1.25mm_Nut                           | 2   |
| 85    | Round Disk Cover                           | 2   |
| 86    | 3/8" × 35mm_Adjustment Knob, Seat Fore/Aft | 1   |
| 93    | Phillips Head Screwdriver                  | 1   |
| 96    | End Cap, Crank Arm                         | 2   |
| 99    | 5/16" × 19 × 1.5T_Curved Washer            | 1   |
| 100   | 12/14mm_Wrench                             | 1   |
| 102   | 5/16" × 16 × 1T_Flat Washer                | 3   |
| 103   | 5/16" × 1.5T_Split Washer                  | 2   |
| 105   | Cover, Handle Bar                          | 1   |
| 106   | Adjustment Knob, Seat Vertical             | 1   |
| 106-1 | Barrel Nut                                 | 1   |
| 106-2 | M4 × 5L_Phillips Head Screw                | 4   |
| 107   | Sleeve, Seat Post                          | 1   |
| 114   | End Cap, Seat Post                         | 1   |
| 116   | Drink Bottle Holder                        | 1   |

| Item | Description                                     | Qty |
|------|-------------------------------------------------|-----|
| 117  | 13/15mm_Wrench                                  | 1   |
| 118  | 5/16" × 2-1/4"_Hex Head Bolt                    | 2   |
| 120  | Seat                                            | 1   |
| 122  | Induction Brake                                 | 1   |
| 123  | Controller, Brake                               | 1   |
| 124  | Switching Power Supply                          | 1   |
| 125  | Idler Bracke                                    | 1   |
| 126  | Bracket, Idler Wheel Assembly (Upper)           | 1   |
| 127  | Bracket, Idler Wheel Assembly (Lower)           | 1   |
| 128  | Podwer metallurgy Sleeve                        | 2   |
| 129  | Bracket, Manual Brake                           | 1   |
| 131  | Felt Pad, Manual Brake                          | 1   |
| 133  | Bracket, Manual Brake Lever                     | 1   |
| 134  | Lever, Manual Brake                             | 1   |
| 135  | Torsion Spring, Manual Brake                    | 2   |
| 136  | Bracket, Brake Cable Hold Down                  | 2   |
| 137  | Tension Spring, Idler Assembly                  | 2   |
| 138  | Pedal(L)                                        | 1   |
| 139  | Pedal(R)                                        | 1   |
| 140  | 5/16" × 42mm_Button Head Socket Bolt            | 1   |
| 141  | M5 × 20mm_Phillips Head Screw                   | 1   |
| 142  | M5 × 5.0T_Nyloc Nut                             | 1   |
| 143  | Ø5 × Ø12 × 1.0T_Flat Washer                     | 1   |
| 144  | M6 × 15mm_Phillips Head Screw                   | 2   |
| 145  | M6 × P1.0 × 20mm_Phillips Head Screw            | 1   |
| 146  | M6 × P1.0 × 5.0T_Nut                            | 5   |
| 147  | M6 × P1.0 × 57mm_Eye Bolt, Idler Spring Tension | 2   |
| 148  | Ø6.5 × Ø25 × 1.5T_Flat Washer                   | 4   |
| 149  | Cable, Manual Brake                             | 1   |
| 150  | Ø10_C-Clip                                      | 2   |
| 151  | Steel Cover, Manual Brake Lever                 | 1   |
| 153  | 200mm_Wire Harness, Brake Coil                  | 1   |
| 154  | 250mm_Wire Harness, Brake Coil                  | 1   |
| 155  | 1650mm_Wire Harness, Computer                   | 1   |
| 156  | 80mm_Wire (White)                               | 1   |
| 157  | 1850mm_Wire Harness, Computer                   | 1   |



| Item | Description                          | Qty |
|------|--------------------------------------|-----|
| 158  | 200mm_Ground Wire                    | 1   |
| 159  | 1400mm_Wire                          | 1   |
| 160  | 600mm_Wire                           | 1   |
| 161  | Power Cord, Hospital Grade           | 1   |
| 162  | 80m/m_Connecting Wire (Black)        | 1   |
| 163  | M6 × 25mm_Socket Head Cap Bolt       | 1   |
| 164  | Ø10 × Ø25 × 0.8T_Nylon Washer        | 4   |
| 165  | Short Phillips Head Screwdriver      | 1   |
| 166  | M5 × 12mm_Phillips Head Screw        | 2   |
| 167  | M6 × 6.0T_Nyloc Nut                  | 1   |
| 170  | M5_Star Washer                       | 2   |
| 171  | M4 × P0.7 × 12mm_Phillips Head Screw | 6   |
| 172  | M4 × 5T_Nyloc Nut                    | 2   |
| 174  | Isolation Column                     | 4   |
| 175  | M4 × 3.5T_Nut                        | 4   |
| 176  | M5 × 15mm_Socket Head Cap Bolt       | 3   |
| 177  | Ø5.5 × Ø15 × 1.5T_Flat Washer        | 6   |
| 181  | 450mm_Ground Wire                    | 1   |
| 182  | Crank Arm (L)                        | 1   |
| 183  | Crank Arm (R)                        | 1   |
| 184  | Ø10 × Ø24 × 3T_Nylon Washer          | 2   |
| 185  | Spacer for Stopper Axle              | 2   |
| 186  | Rubber Pad                           | 4   |

# Maintenance

- Wipe down all areas in the sweat path with a damp cloth after each use to prevent rust.
- Check the pedal to make sure they are tight (monthly).
- If a squeak, thump, clicking or rough feeling develops the main cause is most likely one of two reasons:
  - The hardware was not sufficiently tightened during assembly. All bolts that were installed during assembly need to be tightened as much as possible. It may be necessary to use a larger wrench than the one provided if you cannot tighten the bolts sufficiently. I cannot stress this point enough; 90% of calls to the service department for noise issues can be traced to loose hardware.
  - The crank arm nut and/or the pedals need to be retightened.
- If squeaks or other noises persist, check that the 7.0U is properly leveled. There are 2 leveling pads on the bottom of the rear stabilizer, use a ½" wrench (or adjustable wrench) to adjust the levelers.

## **Maintenance menu in console software**

The console has built in maintenance/diagnostic software. The software will allow you to change the console settings from English to Metric and turn off the beeping of the speaker when a key is pressed for example. To enter the Maintenance menu (may be called Engineering mode, depending on version) press and hold down the Start, Stop and Enter keys. Keep holding the keys down for about 5 seconds and the message window will display "Maintenance mode". Press the enter button to access the menu below:

- Key test
  - Will allow you to test all the keys to make sure they are functioning. Press all the keys one at a time.
- Display test
  - Tests all the display functions by lighting each LED light sequentially.
- Functions (press enter to access menu)
  - Sleep mode
 

Turn on to have the console power down automatically after 30 minutes of inactivity, this is the default setting. Turn off and the console will remain on always unless the main power switch is turned off.
  - Pause mode
 

Turn on allow 5 minutes of pause, turn off to have the console pause indefinitely.
  - Odometer reset
 

Resets the odometer to zero (Time and distance)
  - Units
 

Set to English (imperial units) or metric display readings. The default is imperial, which means data such as bodyweight and height will be in pounds and inches.
  - Beep sound
 

Turn on or off the speaker to silence beeping sound.
- Security
  - Allows you to lock the keypad so no unauthorized use is allowed. When the keypad is locked press the start and enter key for 3 seconds to unlock.
- Factory settings
  - Brake Test allows you to manually change resistance levels one bit at a time to test whether the brake is functioning properly. There are 512 levels.

- Sensor test
  - The 7.0U has two sensors, one angle sensor for speed/velocity measurements located on the brake, and one reed switch that measures crank rotation which we use to determine crank position.
  - MW will show: ANGLE 0 REED 0  
When sensors operate correctly: rotate the crank and the Angle reading will show pedal RPM measurement and the Reed will change from 0 to 1 once per pedal revolution.
- Crank position cali
  - Software calibration to set the position of the right pedal at 12 o'clock.
  - Set right pedal to 6 o'clock position then press start.
  - Rotate the right pedal clockwise until the console beeps.
- Watts calibration (Factory use only)
- Unit type
  - Select on the console: Upright.

## Error messages

EEPROM error: Solution for this is to replace the console (Note: this is the only error message)

## Troubleshooting

Below are common problems and basic checks to solve them. If these tips do not solve your problem then call your local distributor for service)

### No power

- Make sure the A.C. outlet has power (90~240VAC), the line cord plugged in securely and the power switch is on.
- Check the fuse in the Input module (located between the power switch and line cord input).
- Make sure all connectors in back of the console are securely seated in place.

### **Console programs do not start**

- Perform Keypad test in Maintenance mode
- If you cannot access the test, and the keys seem to have no affect when pressed, then the keypad has malfunctioned.

### **Program starts but no data registers when 7.0U is pedaled**

- Check that the connectors are properly seated in the back of the consoles.
- Perform the Sensor tests in Maintenance mode. If one of the sensors does not work it needs replacement. If both sensors do not work, it could be a bad console or both sensors are bad.

### **Symmetry measurement is incorrect**

- Perform the sensor tests in Maintenance Mode
- If sensors are functioning then perform Crank Position Calibration
- If calibration is ok then check the Unit Type is set to upright.

### **Pedal resistance seems harder/different than before**

Check the watts per level setting in the Set Up menu (see page 20).  
The default setting from the factory is 5 watts per level.

### **Clicking noise when pedaling**

- Make sure the pedal is tightened properly. It is common to have to retighten the pedal after the first few hours use.
- Make sure the adjustment knob for the pedal slide is tightened as much as possible.
- Check that the leveling feet on the bottom of the 7.0U are adjusted properly.

# Specifications

**REF** 7.0U

## Dimensions

Length : 57" (145cm)

Width : 21-1/4" (54cm)

Height : 53-1/4" (135cm)

## Weight

117.5 Lbs. (53.3 Kgs)

## Resistance

Constant and Isokinetic with  
50 levels of effort.

## Work load

5 watts up to 750 watts.

## Patient weight capacity

440 Lbs. (200 Kgs.)

## Power

90-240V ~: 50/60 Hz: 1.76-0.71A

## Fuse rating

Replace with only 5A, 250V glass fuse.  
Fast acting  $\varnothing$ 5.2 x 20 mm.

## Readouts

Time and Segment time remaining,  
RPM, Watts (Left and Right), METS,  
Symmetry Index, Heart Rate, Calories,  
Work Level

## Disposal

Reference should be made to local regulations concerning the disposal of  
this product at the end of useful life.

## Certifications

CAN/CAS-C22.2 No. 60601-1:14 , ANS/AAMI ES60601-1:2005+A2 (R2012) +A1

MDD 93/42/EEC Class Im

IEC 60601-1-2:2007 , EN 60601-1-2:2007 , IEC 60601-1:2005

EN 60601-1:2006+A11+A12 , EN ISO 20957:2013 , ISO 14971: 2012



## Manufacturer



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# Guidance and manufacturer's declaration – electromagnetic compatibility

The 7.0U is intended for use in the electromagnetic environment specified below. The customer or the user of the 7.0U should assure that it is used in such an environment.

| Emissions test                                             |                            | Compliance               | Electromagnetic environment – guidance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------------------|----------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RF emissions<br>CISPR 11                                   |                            | Group 1                  | The 7.0U uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| RF emissions<br>CISPR 11                                   |                            | Class B                  | The 7.0U is suitable for use in all establishments, including domestic establishments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Immunity test                                              | IEC 60601 test level       | Compliance level         | Electromagnetic environment – guidance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Electrostatic discharge (ESD)<br>IEC 61000-4-2             | 6 kV contact<br>8 kV air   | 6 kV contact<br>8 kV air | Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Power frequency (50/60 Hz) magnetic field<br>IEC 61000-4-8 | 3 A/m                      | 3 A/m                    | Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Radiated RF<br>IEC 61000-4-3                               | 3 V/m<br>80 MHz to 2,5 GHz | 3 V/m                    | $d = 1,2 \sqrt{P}$ 80 MHz to 800 MHz<br>$d = 2,3 \sqrt{P}$ 800 MHz to 2,5 GHz<br>Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m).<br>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, a) should be less than the compliance level in each frequency range. B) Interference may occur in the vicinity of equipment marked with the following symbol:<br> |

## Recommended separation distances between portable and mobile RF communications equipment and the 7.0U

The 7.0U is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the 7.0U can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the 7.0U as recommended below, according to the maximum output power of the communications equipment.

| Rated maximum output power of transmitter<br>W | Separation distance according to frequency of transmitter<br>m |                                         |                                          |
|------------------------------------------------|----------------------------------------------------------------|-----------------------------------------|------------------------------------------|
|                                                | 150 kHz to 80 MHz<br>$d = 1,2 \sqrt{P}$                        | 80 MHz to 800 MHz<br>$d = 1,2 \sqrt{P}$ | 800 MHz to 2,5 GHz<br>$d = 2,3 \sqrt{P}$ |
| 0,01                                           | 0,12                                                           | 0,12                                    | 0,23                                     |
| 0,1                                            | 0,38                                                           | 0,38                                    | 0,73                                     |
| 1                                              | 1,2                                                            | 1,2                                     | 2,3                                      |
| 10                                             | 3,8                                                            | 3,8                                     | 7,3                                      |
| 100                                            | 12                                                             | 12                                      | 23                                       |

For transmitters rated at a maximum output power not listed above, the recommended separation distance  $d$  in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where  $P$  is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

| Immunity test                                           | IEC 60601 test level                                             | Compliance level                                                 | Electromagnetic environment – guidance                                              |
|---------------------------------------------------------|------------------------------------------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>Electrical fast transient/burst</b><br>IEC 61000-4-4 | +/-2 kV for power supply lines<br>+/-1 kV for input/output lines | +/-2 kV for power supply lines<br>+/-1 kV for input/output lines | Mains power quality should be that of a typical commercial or hospital environment. |
|                                                         |                                                                  |                                                                  |                                                                                     |

## Note

- If the device is interfered by power or signal cable, image quality may be reduced or abnormally displayed. Such kind of interference images could be easily identified and differentiated from the physiological characteristics of patient and longer clinical time consumed but wouldn't have any diagnostic accuracy issue.
- If there is a certain frequency of image interference, there is a need of isolation or filtering of the RF signal.



# Description of packaging & labeling symbols



Indicates that the package is heavy and two or more people are required to lift.



Package contains fragile electronic equipment.

Care should be used when handling.

The product inside the packaging could be easily damaged if dropped or handled without care and attention. The contents are fragile!



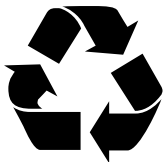
Do not use forklift truck here.

Do not use Spade truck here.

Do not use Razorback truck here.



Hand truck only.



Indicates that an object is capable of being recycled - not that the object has been recycled or will be accepted in all recycling collection systems.



Top. This side up.



AC power 90-240 Volt, 15Amps, 50Hz



Product certificate logo, CE MDD 93/42/EEC  
Class Im



read this entire manual carefully before  
operating your new 7.0U



Type B applied parts. This is used for parts  
applied to the patient that require only ordinary  
electrical protection, e.g. headphones.



Follow Instructions for use