

Nemoto Kyorindo

Dual Shot Alpha

Installation and Checkout Manual



INSTALLATION DOCUMENTATION

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IMPORTANT PRECAUTIONS

LANGUAGE

ПРЕДУПРЕЖДЕНИЕ

(BG)

- ТОВА УПЪТВАНЕ ЗА РАБОТА Е НАЛИЧНО САМО НА АНГЛИЙСКИ ЕЗИК.
- АКО ДОСТАВЧИКЪТ НА УСЛУГАТА НА КЛИЕНТА ИЗИСКА ЕЗИК, РАЗЛИЧЕН ОТ АНГЛИЙСКИ, ЗАДЪЛЖЕНИЕ НА КЛИЕНТА Е ДА ОСИГУРИ ПРЕВОД.
- НЕ ИЗПОЛЗВАЙТЕ ОБОРУДВАНЕТО ПРЕДИ ДА СТЕ СЕ КОНСУЛТИРАЛИ И РАЗБРАЛИ УПЪТВАНЕТО ЗА РАБОТА.
- НЕСПАЗВАНЕТО НА ТОВА ПРЕДУПРЕЖДЕНИЕ МОЖЕ ДА ДОВЕДЕ ДО НАРАНЯВАНЕ НА ДОСТАВЧИКА НА УСЛУГАТА, ОПЕРАТОРА ИЛИ ПАЦИЕНТ В РЕЗУЛТАТ НА ТОКОВ УДАР ИЛИ МЕХАНИЧНА ИЛИ ДРУГА ОПАСНОСТ.

警告

(ZH-CN)

- 本维修手册仅提供英文版本。
- 如果维修服务提供商需要非英文版本，客户需自行提供翻译服务。
- 未详细阅读和完全理解本维修手册之前，不得进行维修。
- 忽略本警告可能对维修人员，操作员或患者造成触电、机械伤害或其他形式的伤害。

VÝSTRAHA

(CS)

- TENTO PROVOZNÍ NÁVOD EXISTUJE POUZE V ANGLICKÉM JAZYCE.
- V PŘÍPADĚ, ŽE EXTERNÍ SLUŽBA ZÁKAZNÍKŮM POTŘEBUJE NÁVOD V JINÉM JAZYCE, JE ZAJIŠTĚNÍ PŘEKLADU DO ODPOVÍDAJÍCÍHO JAZYKA ÚKOLEM ZÁKAZNÍKA.
- NESNAŽTE SE O ÚDRŽBU TOHOTO ZAŘÍZENÍ, ANIŽ BYSTE SI PŘEČETLI TENTO PROVOZNÍ NÁVOD A POCHOPILI JEHO OBSAH.
- V PŘÍPADĚ NEDODRŽOVÁNÍ TÉTO VÝSTRAHY MŮŽE DOJÍT K PORANĚNÍ PRACOVNÍKA PRODEJNÍHO SERVISU, OBSLUŽNÉHO PERSONÁLU NEBO PACIENTŮ Vlivem ELEKTRICKÉHO PROUDU, RESPEKTIVE Vlivem MECHANICKÝCH ČI JINÝCH RIZIK.

ADVARSEL

(DA)

- DENNE SERVICEMANUAL FINDES KUN PÅ ENGELSK.
- HVIS EN KUNDES TEKNIKER HAR BRUG FOR ET ANDET SPROG END ENGELSK, ER DET KUNDENS ANSVAR AT SØRGE FOR OVERSÆTTELSE.
- FORSØG IKKE AT SERVICERE Udstyret medmindre denne servicemanual har været konsulteret og er forstået.
- MANGLENDE OVERHOLDELSE AF DENNE ADVARSEL KAN MEDFØRE SKADE PÅ GRUND AF ELEKTRISK, MEKANISK ELLER ANDEN FARE FOR TEKNIKEREN, OPERATØREN ELLER PATIENTEN.

WAARSCHUWING

(NL)

- DEZE ONDERHOUDSHANDLEIDING IS ENKEL IN HET ENGELS VERKRIJGBAAR.
- ALS HET ONDERHOUDSPERSONEEL EEN ANDERE TAAL VEREIST, DAN IS DE KLANT VERANTWOORDELIJK VOOR DE VERTALING ERVAN.
- PROBEER DE APPARATUUR NIET TE ONDERHOUDEN VOORDAT DEZE ONDERHOUDSHANDLEIDING WERD GERAADPLEEGD EN BEGREPEN IS.
- INDIEN DEZE WAARSCHUWING NIET WORDT OPGEVOLGD, ZOU HET ONDERHOUDSPERSONEEL, DE OPERATOR OF EEN PATIËNT GEWOND KUNNEN RAKEN ALS GEVOLG VAN EEN ELEKTRISCHE SCHOK, MECHANISCHE OF ANDERE GEVAREN.
- THIS SERVICE MANUAL IS AVAILABLE IN ENGLISH ONLY.

WARNING

(EN)

- IF A CUSTOMER'S SERVICE PROVIDER REQUIRES A LANGUAGE OTHER THAN ENGLISH, IT IS THE CUSTOMER'S RESPONSIBILITY TO PROVIDE TRANSLATION SERVICES.
- DO NOT ATTEMPT TO SERVICE THE EQUIPMENT UNLESS THIS SERVICE MANUAL HAS BEEN CONSULTED AND IS UNDERSTOOD.
- FAILURE TO HEED THIS WARNING MAY RESULT IN INJURY TO THE SERVICE PROVIDER, OPERATOR, OR PATIENT FROM ELECTRIC SHOCK, OR FROM MECHANICAL OR OTHER HAZARDS.

HOIATUS

(ET)

- KÄESOLEV TEENINDUSJUHEND ON SAADAVAL AINULT INGLISE KEELES.
- KUI KLIENDITEENINDUSE OSUTAJA NÕUAB JUHENDIT INGLISE KEELEST ERINEVAS KEELES, VASTUTAB KLIENT TÕLKETEENUSE OSUTAMISE EEST.
- ÄRGE ÜRITAGE SEADMEID TEENINDADA ENNE EELNEVALT KÄESOLEVA TEENINDUSJUHENDIGA TUTVUMIST JA SELLEST ARU SAAMIST.

VAROITUS

(FI)

- KÄESOLEVA HOIATUSE EIRAMINE VÕIB PÕHJUSTADA TEENUSEOSUTAJA, OPERAATORI VÕI PATSIENDI VIGASTAMIST ELEKTRILÖÖGI, MEHAANILISE VÕI MUU OHU TAGAJÄRJEL.
- TÄMÄ HUOLTO-OHJE ON SAATAVILLA VAIN ENGLANNIKSI.
- JOS ASIAKKAAN HUOLTOHENKILÖSTÖ VAATII MUUTA KUIN ENGLANNINKIELISTÄ MATERIAALIA, TARVITTAVAN KÄÄNNÖKSEN HANKKIMINEN ON ASIAKKAAN VASTUULLA.
- ÄLÄ YRITÄ KORJATA LAITTEISTOA ENNEN KUIN OLET VARMASTI LUKENUT JA YMMÄRTÄNYT TÄMÄN HUOLTO-OHJEEN.
- MIKÄLI TÄTÄ VAROITUSTA EI NOUDATETA, SEURAUKSENA VOI OLLA HUOLTOHENKILÖSTÖN, LAITTEISTON KÄYTTÄJÄN TAI POTILAAN VAHINGOITTUMINEN SÄHKÖISKUN, MEKAANISEN VIAN TAI MUUN VAARATILANTEEN VUOKSI.

ATTENTION

(FR)

- CE MANUEL DE SERVICE N'EST DISPONIBLE QU'EN ANGLAIS.
- SI LE TECHNICIEN DU CLIENT A BESOIN DE CE MANUEL DANS UNE AUTRE LANGUE QUE L'ANGLAIS, C'EST AU CLIENT QU'IL INCOMBE DE LE FAIRE TRADUIRE.
- NE PAS TENTER D'INTERVENIR SUR LES EQUIPEMENTS TANT QUE LE MANUEL SERVICE N'A PAS ETE CONSULTE ET COMPRIS
- LE NON-RESPECT DE CET AVERTISSEMENT PEUT ENTRAÎNER CHEZ LE TECHNICIEN, L'OPÉRATEUR OU LE PATIENT DES BLESSURES DUES À DES DANGERS ÉLECTRIQUES, MÉCANIQUES OU AUTRES.

WARNUNG

(DE)

- DIESE SERVICEANLEITUNG EXISTIERT NUR IN ENGLISCHER SPRACHE.
- FALLS EIN FREMDER KUNDENDIENST EINE ANDERE SPRACHE BENÖTIGT, IST ES AUFGABE DES KUNDEN FÜR EINE ENTSPRECHENDE ÜBERSETZUNG ZU SORGEN.
- VERSUCHEN SIE NICHT DIESE ANLAGE ZU WARTEN, OHNE DIESE SERVICEANLEITUNG GELESEN UND VERSTANDEN ZU HABEN.
- WIRD DIESE WARNUNG NICHT BEACHTET, SO KANN ES ZU VERLETZUNGEN DES KUNDENDIENSTTECHNIKERS, DES BEDIENERS ODER DES PATIENTEN DURCH STROMSCHLÄGE, MECHANISCHE ODER SONSTIGE GEFAHREN KOMMEN.

ΠΡΟΕΙΔΟΠΟΙΗΣΗ

(EL)

- ΤΟ ΠΑΡΟΝ ΕΓΧΕΙΡΙΔΙΟ ΣΕΡΒΙΣ ΔΙΑΤΙΘΕΤΑΙ ΣΤΑ ΑΓΓΛΙΚΑ ΜΟΝΟ.
- ΕΑΝ ΤΟ ΑΤΟΜΟ ΠΑΡΟΧΗΣ ΣΕΡΒΙΣ ΕΝΟΣ ΠΕΛΑΤΗ ΑΠΑΙΤΕΙ ΤΟ ΠΑΡΟΝ ΕΓΧΕΙΡΙΔΙΟ ΣΕ ΓΛΩΣΣΑ ΕΚΤΟΣ ΤΩΝ ΑΓΓΛΙΚΩΝ, ΑΠΟΤΕΛΕΙ ΕΥΘΥΝΗ ΤΟΥ ΠΕΛΑΤΗ ΝΑ ΠΑΡΕΧΕΙ ΥΠΗΡΕΣΙΕΣ ΜΕΤΑΦΡΑΣΗΣ.
- ΜΗΝ ΕΠΙΧΕΙΡΗΣΕΤΕ ΤΗΝ ΕΚΤΕΛΕΣΗ ΕΡΓΑΣΙΩΝ ΣΕΡΒΙΣ ΣΤΟΝ ΕΞΟΠΛΙΣΜΟ ΕΚΤΟΣ ΕΑΝ ΕΧΕΤΕ ΣΥΜΒΟΥΛΕΥΤΕΙ ΚΑΙ ΕΧΕΤΕ ΚΑΤΑΝΟΗΣΕΙ ΤΟ ΠΑΡΟΝ ΕΓΧΕΙΡΙΔΙΟ ΣΕΡΒΙΣ.
- ΕΑΝ ΔΕ ΛΑΒΕΤΕ ΥΠΟΨΗ ΤΗΝ ΠΡΟΕΙΔΟΠΟΙΗΣΗ ΑΥΤΗ, ΕΝΔΕΧΕΤΑΙ ΝΑ ΠΡΟΚΛΗΘΕΙ ΤΡΑΥΜΑΤΙΣΜΟΣ ΣΤΟ ΑΤΟΜΟ ΠΑΡΟΧΗΣ ΣΕΡΒΙΣ, ΣΤΟ ΧΕΙΡΙΣΤΗ Ή ΣΤΟΝ ΑΣΘΕΝΗ ΑΠΟ ΗΛΕΚΤΡΟΠΛΗΘΙΑ, ΜΗΧΑΝΙΚΟΥΣ Ή ΑΛΛΟΥΣ ΚΙΝΔΥΝΟΥΣ.

FIGYELMEZTETÉS

(HU)

- EZEN KARBANTARTÁSI KÉZIKÖNYV KIZÁRÓLAG ANGOL NYELVEN ÉRHEŐ EL.
- HA A VEVŐ SZOLGÁLTATÓJA ANGOLTÓL ELTÉRŐ NYELVRE TART IGÉNYT, AKKOR A VEVŐ FELELŐSSÉGE A FORDÍTÁS ELKÉSZÍTTETÉSE.
- NE PRÓBÁLJA ELKEZDENI HASZNÁLNI A BERENDEZÉST, AMÍG A KARBANTARTÁSI KÉZIKÖNYVBEN LEÍRTAKAT NEM ÉRTELMEZTÉK.
- EZEN FIGYELMEZTETÉS FIGYELMEN KÍVÜL HAGYÁSA A SZOLGÁLTATÓ, MŰKÖDTETŐ VAGY A BETEG ÁRAMÚTÉS, MECHANIKAI VAGY EGYÉB VESZÉLYHELYZET MIATTI SÉRÜLÉSÉT EREDMÉNYEZHETI.

AÐVÖRUN

(IS)

- ÞESSI ÞJÓNUSTUHANDBÓK ER EINGÖNGU FÁANLEG Á ENSKU.
- EF AÐ ÞJÓNUSTUVEITANDI VIÐSKIPTAMANNS ÞARFNAST ANNAS TUNGUMÁLS EN ENSKU, ER ÞAÐ SKYLDA VIÐSKIPTAMANNS AÐ SKAFFA TUNGUMÁLAPJÓNUSTU.
- REYNIÐ EKKI AÐ AFGREIÐA TÆKIÐ NEMA AÐ ÞESSI ÞJÓNUSTUHANDBÓK HEFUR VERIÐ SKOÐUÐ OG SKILIN.
- BROT Á SINNA ÞESSARI AÐVÖRUN GETUR LEITT TIL MEIÐSLA Á ÞJÓNUSTUVEITANDA, STJÓRNANDA EÐA SJÚKLINGS FRÁ RAFLOSTI, VÉLRÆNU EÐA ÖÐRUM ÁHÆTTUM.

AVVERTENZA

(IT)

- IL PRESENTE MANUALE DI MANUTENZIONE E DISPONIBILE SOLTANTO IN INGLESE.
- SE UN ADDETTO ALLA MANUTENZIONE ESTERNO ALLA GEMS RICHIEDE IL MANUALE IN UNA LINGUA DIVERSA, IL CLIENTE E TENUTO A PROVVEDERE DIRETTAMENTE ALLA TRADUZIONE.
- SI PROCEDA ALLA MANUTENZIONE DELL'APPARECCHIATURA SOLO DOPO AVER CONSULTATO IL PRESENTE MANUALE ED AVERNE COMPRESO IL CONTENUTO
- IL NON RISPETTO DELLA PRESENTE AVVERTENZA POTREBBE FAR COMPIERE OPERAZIONI DA CUI DERIVINO LESIONI ALL'ADDETTO ALLA MANUTENZIONE, ALL'UTILIZZATORE ED AL PAZIENTE PER FOLGORAZIONE ELETTRICA, PER URTI MECCANICI OD ALTRI RISCHI.

警告

(JA)

- このサービスマニュアルには英語版しかありません。
- サービスを担当される業者が英語以外の言語を要求される場合、翻訳作業はその業者の責任で行うものとさせていただきます。
- このサービスマニュアルを熟読し理解せずに、装置のサービスを行わないでください。
- この警告に従わない場合、サービスを担当される方、操作員あるいは患者さんが、感電や機械的又はその他の危険により負傷する可能性があります。

BRĪDINĀJUMS

(LV)

- ŠĪ APKALPES ROKASGRĀMATA IR PIEEJAMA TIKAI ANGLŪ VALODĀ.
- JA KLIENTA APKALPES SNIEDZĒJAM NEPIECIEŠAMA INFORMĀCIJA CITĀ VALODĀ, NEVIS ANGLŪ, KLIENTA PIENĀKUMS IR NODROŠINĀT TULKOŠANU.
- NEVEICIET APRĪKOJUMA APKALPI BEZ APKALPES ROKASGRĀMATAS IZLASĪŠANAS UN SAPRAŠANAS.
- ŠĪ BRĪDINĀJUMA NEIEVĒROŠANA VAR RADĪT ELEKTRISKĀS STRĀVAS TRIECIENA, MEHĀNISKU VAI CITU RISKU IZRAISĪTU TRAUMU APKALPES SNIEDZĒJAM, OPERATORAM VAI PACIENTAM.

ĮSPĖJIMAS

(LT)

- ŠIS EKSPLOATAVIMO VADOVAS YRA PRIEINAMAS TIK ANGLŲ KALBA.
- JEI KLIENTO PASLAUGŲ TIEKĒJAS REIKALAUJA VADOVO KITA KALBA – NE ANGLŲ, NUMATYTI VERTIMO PASLAUGAS YRA KLIENTO ATSAKOMYBĖ.
- NEMĖGINKITE ATLIKTI ĮRANGOS TECHNINĖS PRIEŽIŪROS, NEBENT ATSIŽVELGĖTE Į ŠĮ EKSPLOATAVIMO VADOVĄ IR JĮ SUPRATOTE.
- JEI NEATKREIPSITE DĖMESIO Į ŠĮ PERSPĖJIMĄ, GALIMI SUŽALOJIMAI DĖL ELEKTROS ŠOKO,
- MECHANINIŲ AR KITŲ PAVOJŲ PASLAUGŲ TIEKĖJUI, OPERATORIUI AR PACIENTUI.

ADVARSEL

(NO)

- DENNE SERVICEHÅNDBOKEN FINNES BARE PÅ ENGELSK.
- HVIS KUNDENS SERVICELEVERANDØR TRENGER ET ANNET SPRÅK, ER DET KUNDENS ANSVAR Å SØRGE FOR OVERSETTELSE.
- IKKE FORSØK Å REPARERE UTSTYRET UTEN AT DENNE SERVICEHÅNDBOKEN ER LEST OG FORSTÅTT.
- MANGLENDE HENSYN TIL DENNE ADVARSELEN KAN FØRE TIL AT SERVICELEVERANDØREN, OPERATØREN ELLER PASIENTEN SKADES PÅ GRUNN AV ELEKTRISK STØT, MEKANISKE ELLER ANDRE FARER.

OSTRZEŻENIE

(PL)

- NINIEJSZY PODRĘCZNIK SERWISOWY DOSTĘPNY JEST JEDYNIEM W JĘZYKU ANGIELSKIM.
- JEŚLI DOSTAWCA USŁUG KLIENTA WYMAGA JĘZYKA INNEGO NIŻ ANGIELSKI, ZAPEWNIENIE USŁUGI TŁUMACZENIA JEST OBOWIĄZKIEM KLIENTA.
- NIE PRÓBOWAĆ SERWISOWAĆ WYPOSAŻENIA BEZ ZAPOZNANIA SIĘ I ZROZUMIENIA NINIEJSZEGO PODRĘCZNIKA SERWISOWEGO.
- NIEZASTOSOWANIE SIĘ DO TEGO OSTRZEŻENIA MOŻE SPOWODOWAĆ URAZY DOSTAWCY USŁUG, OPERATORA LUB PACJENTA W WYNIKU PORAŻENIA ELEKTRYCZNEGO, ZAGROŻENIA MECHANICZNEGO BĄDŹ INNEGO.

ATENÇÃO

(PT)

- ESTE MANUAL DE ASSISTÊNCIA TÉCNICA SÓ SE ENCONTRA DISPONÍVEL EM INGLÊS.
- SE QUALQUER OUTRO SERVIÇO DE ASSISTÊNCIA TÉCNICA, QUE NÃO A GEMS, SOLICITAR ESTES MANUAIS NOUTRO IDIOMA, É DA RESPONSABILIDADE DO CLIENTE FORNECER OS SERVIÇOS DE TRADUÇÃO.
- NÃO TENDE REPARAR O EQUIPAMENTO SEM TER CONSULTADO E COMPREENDIDO ESTE MANUAL DE ASSISTÊNCIA TÉCNICA
- O NÃO CUMPRIMENTO DESTE AVISO PODE POR EM PERIGO A SEGURANÇA DO TÉCNICO, OPERADOR OU PACIENTE DEVIDO A CHOQUES ELÉTRICOS, MECÂNICOS OU OUTROS.

ATENȚIE

(RO)

- ACEST MANUAL DE SERVICE ESTE DISPONIBIL NUMAI ÎN LIMBA ENGLEZĂ.
- DACĂ UN FURNIZOR DE SERVICII PENTRU CLIENȚI NECESITĂ O ALTĂ LIMBĂ DECÂT CEA ENGLEZĂ, ESTE DE DATORIA CLIENTULUI SĂ FURNIZEZE O TRADUCERE.
- NU ÎNCERCAȚI SĂ REPARAȚI ECHIPAMENTUL DECÂT ULTERIOR CONSULTĂRII ȘI ÎNȚELEGERII ACESTUI MANUAL DE SERVICE.
- IGNORAREA ACESTUI AVERTISMENT AR PUTEA DUCE LA RĂNIREA DEPANATORULUI, OPERATORULUI SAU PACIENTULUI ÎN URMA PERICOLELOR DE ELECTROCUTARE, MECANICE SAU DE ALTĂ NATURĂ.

ОСТОРОЖНО!

(RU)

- ДАННОЕ РУКОВОДСТВО ПО ОБСЛУЖИВАНИЮ ПРЕДЛАГАЕТСЯ ТОЛЬКО НА АНГЛИЙСКОМ ЯЗЫКЕ.
- ЕСЛИ СЕРВИСНОМУ ПЕРСОНАЛУ КЛИЕНТА НЕОБХОДИМО РУКОВОДСТВО НЕ НА АНГЛИЙСКОМ, А НА КАКОМ-ТО ДРУГОМ ЯЗЫКЕ, КЛИЕНТУ СЛЕДУЕТ САМОСТОЯТЕЛЬНО ОБЕСПЕЧИТЬ ПЕРЕВОД.
- ПЕРЕД ОБСЛУЖИВАНИЕМ ОБОРУДОВАНИЯ ОБЯЗАТЕЛЬНО ОБРАТИТЕСЬ К ДАННОМУ РУКОВОДСТВУ И ПОЙМИТЕ ИЗЛОЖЕННЫЕ В НЕМ СВЕДЕНИЯ.
- НЕСОБЛЮДЕНИЕ ТРЕБОВАНИЙ ДАННОГО ПРЕДУПРЕЖДЕНИЯ МОЖЕТ ПРИВЕСТИ К ТОМУ, ЧТО СПЕЦИАЛИСТ ПО ОБСЛУЖИВАНИЮ, ОПЕРАТОР ИЛИ ПАЦИЕНТ ПОЛУЧАТ УДАР ЭЛЕКТРИЧЕСКИМ ТОКОМ, МЕХАНИЧЕСКУЮ ТРАВМУ ИЛИ ДРУГОЕ ПОВРЕЖДЕНИЕ.

UPOZORNENIE

(SK)

- TENTO NÁVOD NA OBSLUHU JE K DISPOZÍCII LEN V ANGLIČTINE.
- AK ZÁKAZNÍKOV POSKYTOVATEĽ SLUŽIEB VYŽADUJE INÝ JAZYK AKO ANGLIČTINU, POSKYTNUTIE PREKLADATEĽSKÝCH SLUŽIEB JE ZODPOVEDNOSŤOU ZÁKAZNÍKA.
- NEPOKÚŠAJTE SA O OBSLUHU ZARIADENIA SKÔR, AKO SI NEPREČÍTATE NÁVOD NA OBLUHU A NEPOROZUMIETE MU.
- ZANEDBANIE TOHTO UPOZORNENIA MÔŽE VYÚSTIŤ DO ZRANENIA POSKYTOVATEĽA SLUŽIEB, OBSLUHUJÚCEJ OSOBY ALEBO PACIENTA ELEKTRICKÝM PRÚDOM, DO MECHANICKÉHO ALEBO INÉHO NEBEZPEČENSTVA.

ATENCIÓN

(ES)

- ESTE MANUAL DE SERVICIO SOLO EXISTE EN INGLES.
- SI ALGUN PROVEEDOR DE SERVICIOS AJENO A GEMS SOLICITA UN IDIOMA QUE NO SEA EL INGLES, ES RESPONSABILIDAD DEL CLIENTE OFRECER UN SERVICIO DE TRADUCCION
- NO SE DEBERA DAR SERVICIO TECNICO AL EQUIPO, SIN HABER CONSULTADO Y COMPRENDIDO ESTE MANUAL DE SERVICIO
- LA NO OBSERVANCIA DEL PRESENTE AVISO PUEDE DAR LUGAR A QUE EL PROVEEDOR DE SERVICIOS, EL OPERADOR O EL PACIENTE SUFRAN LESIONES PROVOCADAS POR CAUSAS ELÉCTRICAS, MECÁNICAS O DE OTRA NATURALEZA.

VARNING

(SV)

- DEN HÄR SERVICEHANDBOKEN FINNS BARA TILLGÄNGLIG PÅ ENGELSKA.
- OM EN KUNDS SERVICETEKNIKER HAR BEHOV AV ETT ANNAT SPRÅK ÄN ENGELSKA ANSVARAR KUNDEN FÖR ATT TILLHANDAHÅLLA ÖVERSÄTTNINGSTJÄNSTER.
- FÖRSÖK INTE UTFÖRA SERVICE PÅ UTRUSTNINGEN OM DU INTE HAR LÄST OCH FÖRSTÅR DEN HÄR SERVICEHANDBOKEN.
- OM DU INTE TAR HÄNSYN TILL DEN HÄR VARNINGEN KAN DET RESULTERA I SKADOR PÅ SERVICETEKNIKERN, OPERATÖREN ELLER PATIENTEN TILL FÖLJD AV ELEKTRISKA STÖTAR, MEKANISKA FAROR ELLER ANDRA FAROR.

DİKKAT (TR)

- BU SERVİS KILAVUZUNUN SADECE İNGİLİZCESİ MEVCUTTUR.
- EĞER MÜŞTERİ TEKNİSYENİ BU KILAVUZU İNGİLİZCE DIŞINDA BİR BAŞKA LİSANDAN TALEP EDERSE, BUNU TERCÜME ETTİRMEK MÜŞTERİYE DÜŞER.
- SERVİS KILAVUZUNU OKUYUP ANLAMADAN EKİPMANLARA MÜDAHALE ETMEYİNİZ.
- BU UYARIYA UYULMAMASI, ELEKTRİK, MEKANİK VEYA DİĞER TEHLİKELERDEN DOLAYI TEKNİSYEN, OPERATÖR VEYA HASTANIN YARALANMASINA YOL AÇABİLİR.

DAMAGE IN TRANSPORTATION

All packages should be closely examined at time of delivery. If damage is apparent write "Damage In Shipment" on ALL copies of the freight or express bill BEFORE delivery is accepted or "signed for" by a General Electric representative or hospital receiving agent. Whether noted or concealed, damage MUST be reported to the carrier immediately upon discovery, or in any event, within 14 days after receipt, and the contents and containers held for inspection by the carrier. A transportation company will not pay a claim for damage if an inspection is not requested within this 14 day period.

To file a report:

- Call 1-800-548-3366 and use option 8.
- Fill out a report on <http://us44hdd21/sctg/InstallFulfill/InstallFulfillment.htm>
- Contact your local service coordinator for more information on this process.

CERTIFIED ELECTRICAL CONTRACTOR STATEMENT

All electrical Installations that are preliminary to positioning of the equipment at the site prepared for the equipment shall be performed by licensed electrical contractors. In addition, electrical feeds into the Power Distribution Unit shall be performed by licensed electrical contractors. Other connections between pieces of electrical equipment, calibrations and testing shall be performed by qualified GE Medical personnel. The products involved (and the accompanying electrical installations) are highly sophisticated, and special engineering competence is required. In performing all electrical work on these products, GE will use its own specially trained field engineers. All of GE's electrical work on these products will comply with the requirements of the applicable electrical codes.

The purchaser of GE equipment shall only utilize qualified personnel (i.e., GE's field engineers, personnel of third-party service companies with equivalent training, or licensed electricians) to perform electrical servicing on the equipment.

OMISSIONS & ERRORS

Customers, please contact your GE Sales or Service representatives.

GE personnel, please use the GE Healthcare iTrak Process to report all omissions, errors, and defects in this publication.

REVISION HISTORY

Rev	Date	Author	Reason For Change
1	March 5, 2008	J. Knipfer	Initial version.
2	April 2, 2008	J. Knipfer	Incorporate several corrections identified during the document review by GEHC. Add SSO and pressure test clarifications.
3	April 25, 2008	J. Knipfer	Converted document to Nemoto owned document per GEHC. Added Nemoto part number, revision history and cover picture.
4	Nov., 11, 2008	J. Knipfer	Modify the Flow Rate test procedure to clarify the impact of the Ramp Up settings to the Flow Rate measurement.
5	Dec. 1, 2008	J. Knipfer	Incorporate the information necessary for the NCOM Hub.
6	Jan. 19, 2009	J. Knipfer	Update manual to add blank pages and update the TOC page numbers

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1- INTRODUCTION

This manual provides the instructions for installation and checkout of the Dual Shot Alpha contrast delivery system. It is intended and should only be used by those trained and qualified to complete the installation.

All local laws, regulations and requirements etc. shall be followed in conjunction with installation process defined herein.

1-1 Specifications

The following specifications are a subset of the complete product specification which can be located in the Operation Manual or Service and Parts Manual. This subset is provided as a quick reference during the installation process.

1-1-1 Dimensions

Powerhead	20.47 x 4.41 x 7.09 in.	520 x 112 x 180 mm
Control Console	4.21 x 10.63 x 9.76 in.	107 x 270 x 248 mm
Power Supply Unit	9.45 x 7.48 x 3.94 in.	240 x 190 x 100 mm
Remote Stand	25.43in (dia.) x 38.8 in.	646mm (dia.) x 985.5 mm

1-1-2 Weights

Powerhead	15.43 lb.	9.2 kg
Control Console	8.16 lb.	3.7 kg
Power Supply Unit	13.23 lb.	6 kg
Remote Stand	37.7 lb.	17.1 kg

1-1-3 Electrical Ratings

Rated Voltage:	115 / 230 VAC + 10%
Frequency:	50 / 60 Hz
Power Consumption:	150 VA
Protection Type:	Class I
Protection Grade:	CF Type

FUSES

Power Supply Unit	5A 250VAC (power line 115 VAC) 2.5A 250VAC (power line 230 VAC)
-------------------	--

Syringe Heaters	F1 and F2, 0.5A rated, HM05 type
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1-1-4 Environment

Transportation & Storage Temperature:	-40 to 70 degrees C
Transportation & Storage Humidity:	10 to 100% non-condensing
Transportation & Storage Atmosphere:	50 to 106 kPa

Operating Temperature:	10 to 40 degrees C
Operating Humidity:	30 to 75% non-condensing
Operating Atmosphere:	70 to 106 kPa

1-1-5 Regulatory Approvals

U.S. FDA 510k		K062168
cTUVus Mark (includes) UL 60601-1:2003 CAN/CSA-22.2 No. 601.1-M90		CU 72060872 0001
IEC 60601-1, -1-1, -1-4		120013030 003
CS Test Certificate	1	2013030 001

2 - SYSTEM INSTALLATION

2-1 Unpacking

The system is delivered in one package, unless the optional ceiling suspension has been ordered. Ceiling suspension systems are shipped in a separate individual package. Below is the bill of materials that will be included in the Dual Shot Alpha package. Follow the steps indicated when removing system components.

Table 1 – Bill of Materials

Remote Stand	Remote Stand	Ceiling Mount
Powerhead with remote stand arm	X	
Powerhead with ceiling mount arm		X
Control Console	X	X
Power Supply	X	X
Operation Manual	X	X
100mL Syringe adapter (2)	X	X
Control Console cable (3m)	X	X
Powerhead extension cable (20m)	X	X
Installation instructions	X	X
CF Card (preinstalled in Console)	X	X
CF Card storage box	X	X
Power cable	X	X
Cable hanger with screws	X	
Remote stand pole	X	
Remote stand base	X	
3mm Allen wrench	X	X
8mm Allen wrench	X	X
Anti-rotation screw		X
NCOM Hub	Optional	Optional
Warranty activation and Checkout form	X	X

2-2 Assembly and Checkout Tools Required

The following tools are required to assemble the Remote Stand assembly and connect the necessary cables.

ASSEMBLY TOOLS

- #2 Philips screwdriver
- #1 Philips screwdriver
- 3mm Allen wrench (included)
- 8mm Allen wrench (included with remote stand version only)

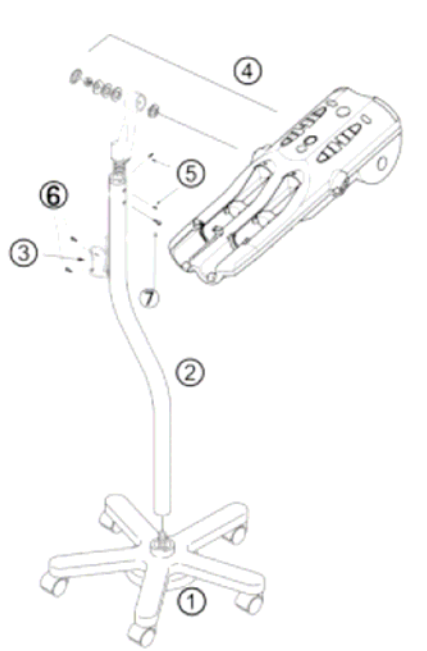
CHECKOUT TOOLS

- 10mL graduated cylinder
- 150mL graduated cylinder
- Pressure gauge
- Stopwatch

2-3 Remote Stand Assembly

Be sure to reference to Figure 2-1 and follow the assembly steps in order to assure proper assembly and operation of the Remote Stand assembly.

Figure 2-1



Assembly steps:

1. Place the rolling base (1) on a level surface and insert the stand pole (2) into the opening. Turn the stand pole clockwise to thread onto the securing bolt until tightened.

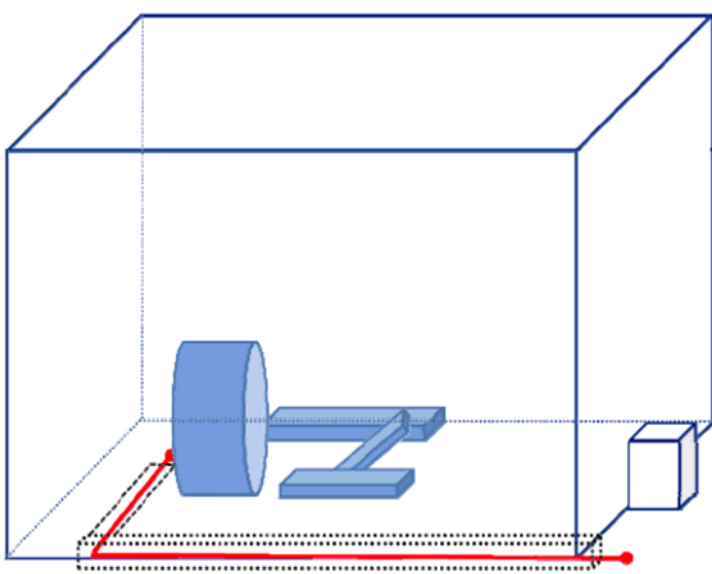
2. Lay the stand pole and rolling base assembly on its side. Using the 8mm Allen wrench, tighten the hex bolt to secure the stand pole and rolling base. When completed, position assembly in the upright position.
3. Loosen the rotation limit screw (7), and locking screws (5) using 3mm Allen wrench. Insert the Powerhead arm into the top of the Remote Stand pole (2).
4. Tighten the locking screws (5) by inserting through the stand pole using the 3mm Allen wrench.
5. Tighten the rotation limit set screw (7).
6. Attach the Powerhead cable holder (3) using two M4 x 8mm screws (6) using Philips screwdriver.

2-4 Console Assembly

The Control Console is completely assembled before shipment. It is necessary however to remove shipping material before use. The CF Card which activates the Q-Select mode is installed in the Console before shipment and is protected from damage with packing material. After removing the Control Console from the shipping carton, remove the bubble rap material on the right-hand side of the console to expose the CF Card opening. Verify the CF Card is installed.

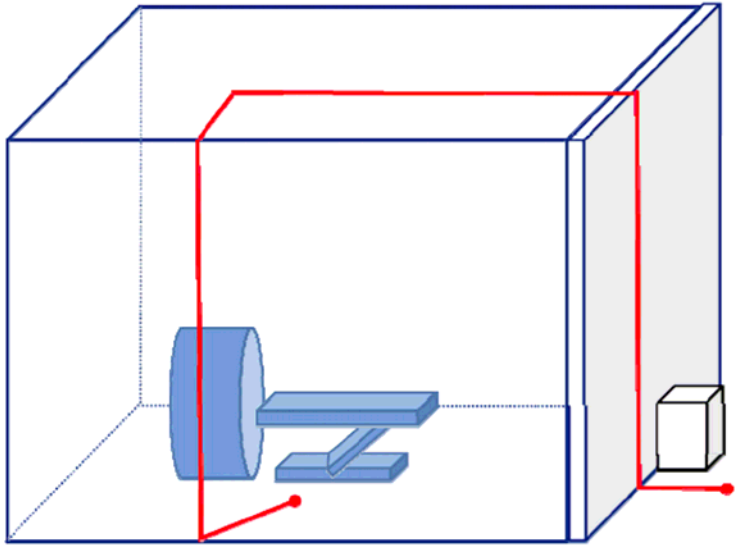
2-5 Typical Room Configurations

The following illustrations are provided to show typical CT room configurations and should be used for the purpose of the installation planning.



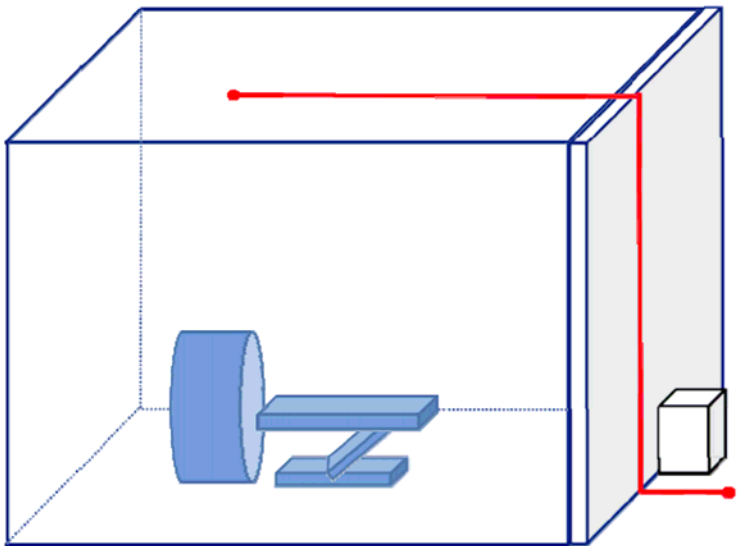
This situation is ideal for a remote stand installation. A cable trough is provided in the floor of the CT suite. In this case the injector Powerhead cable may be routed through to the equipment room for connection to the Power Supply.

Be cautious when pulling cable through so as not to disrupt other cable connections.



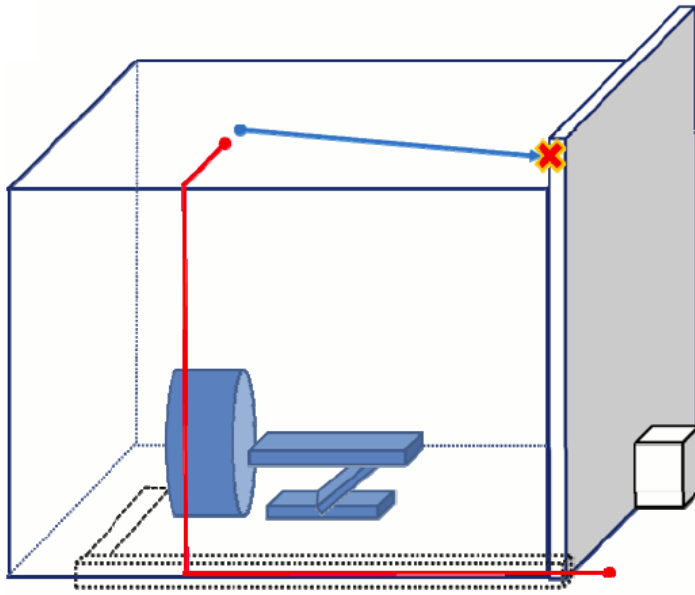
When a cable trough is not provided an alternative route is needed. In this case, the cable may be routed as shown on the left. Conduit may or may not be required.

Reference and adhere to local laws and regulations regarding the proper installation of cabling.



Often it is required to mount the injector Powerhead from a ceiling suspension.

This situation most often will enable the Powerhead cable to be routed above the ceiling and into control or equipment room.



In some cases a barrier wall may prevent routing the cables above the ceiling from the scan room to the equipment room. In this case it may be necessary to route cable through a floor trough or may require additional conduit installation.

Careful planning in advance of the installation is highly recommended. Understanding the room configuration, local laws and regulations in advance will make the installation go smoothly and without surprises.

2-6 Remote Stand Installation Planning

Before the installation of the Remote Stand configuration properly plan the installation as this will minimize time and cost of the installation process.

NOTICE

Before the installation process begins ensure that all site preparations for the installation have been completed. It is the responsibility of the site, facility, etc. to make certain that all conduits, penetrations, and ceiling support structures are installed in accordance with all local laws and regulations before the installation can begin.

The diagram below, Figure 2-2, is used for explanation purposes in this manual only and should not be considered the preferred, recommended or required installation plan. The following are guidelines that should be applied and considered with any installation.

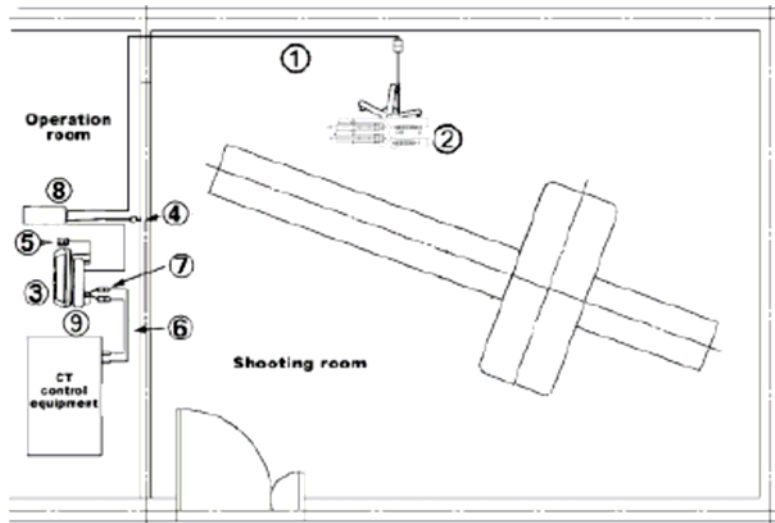


Figure 2-2

1. Make sure during the site preparation process the location of the Remote Stand (2) has been determined.
2. Lead the Powerhead extension cable from the planned Powerhead location to the planned location of the Power Supply Unit (8).
3. Place the Powerhead and Remote Stand assembly in the examination room and connect the Powerhead cable to the Powerhead extension cable connector.
4. Place the Control Console (3) at the desired location. Lead console cable from the Control Console to the Power Supply Unit (8) and connect.
5. Place the Handswitch (5) near the Control Console and connect the cable to the rear of the Control Console.
6. Verify the power line voltage is within the Dual Shot Alpha specification limits. (Refer to specification section). If correct, connect the power supply cable (4) from the main power outlet to the rear of the Power Supply Unit.

2-7 Ceiling Suspension Installation

WARNING

BEFORE THE INSTALLATION OF A CEILING SUSPENSION SYSTEM MAKE CERTAIN THE SUPPORT STRUCTURE AND CEILING SUSPENSION MOUNTING PLATE HAVE BEEN INSTALLED CORRECTLY. IT IS THE RESPONSIBILITY OF THE SITE, FACILITY, ETC. TO MAKE CERTAIN THAT ALL CONDUITS, PENETRATIONS, AND CEILING SUPPORT STRUCTURES ARE INSTALLED IN ACCORDANCE WITH ALL LOCAL LAWS AND REGULATIONS BEFORE THE INSTALLATION CAN BEGIN.

The diagram below is used for explanation purposes in this manual only and should not be considered the preferred, recommended or required installation plan. The following are guidelines that should be applied and considered with any installation.

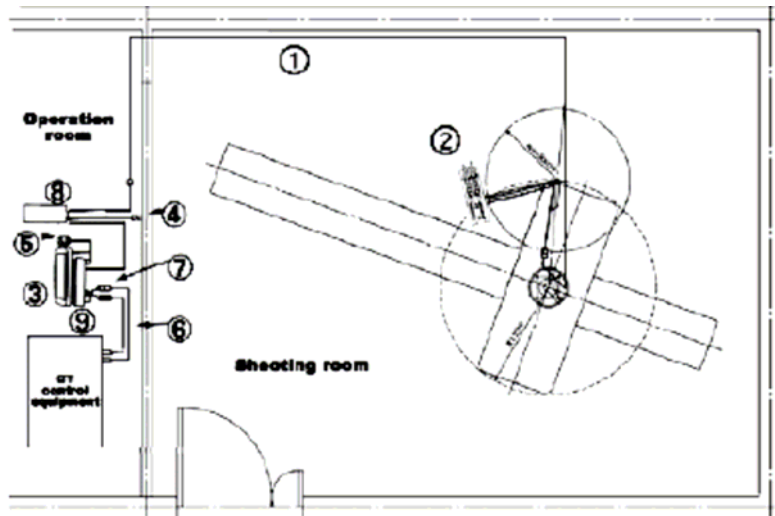


Figure 2-3

1. Ensure all bolts mounting the ceiling suspension to the mounting plate are secure and have been tightened to the ceiling suspension manufacturer's specifications.
2. Route the Powerhead extension cable (1) from the ceiling mount location in the examination room to the Power Supply Unit in the operation room.
3. Connect the Powerhead arm to the ceiling suspension as described in the "Installation of Powerhead to Ceiling Mount" section.
4. Connect the Powerhead cable (2) to the Powerhead extension cable (1) inside the covers of the ceiling suspension system. Connect the other end of the Powerhead extension cable to the rear of the Power Supply Unit (8) in the operation room.
5. Place the Control Console (3) at the desired location. Lead console cable from the Control Console to the Power Supply Unit (8) and connect.
6. Place the Handswitch (5) near the Control Console and connect the cable to the rear of the Control Console.
7. Verify the power line voltage is within the Dual Shot Alpha specification limits. (Refer to specification section). If correct, connect the power supply cable (4) from the main power outlet to the rear of the Power Supply Unit.

2-8 Installation of Powerhead to Ceiling Mount

WARNING

THE INSTALLATION OF THE CEILING SUSPENSION SYSTEM AND THE CONNECTING POWERHEAD ARM MUST BE PERFORMED BY TRAINED AND QUALIFIED PERSONNEL. FAILURE TO INSTALL CORRECTLY CAN RESULT IN A HAZARDOUS SITUATION.

Before the Powerhead can be attached to the ceiling suspension system it is necessary to attach the Connecting Powerhead Arm to the ceiling suspension system. Follow the instructions and the diagram carefully to ensure safe and reliable operation.

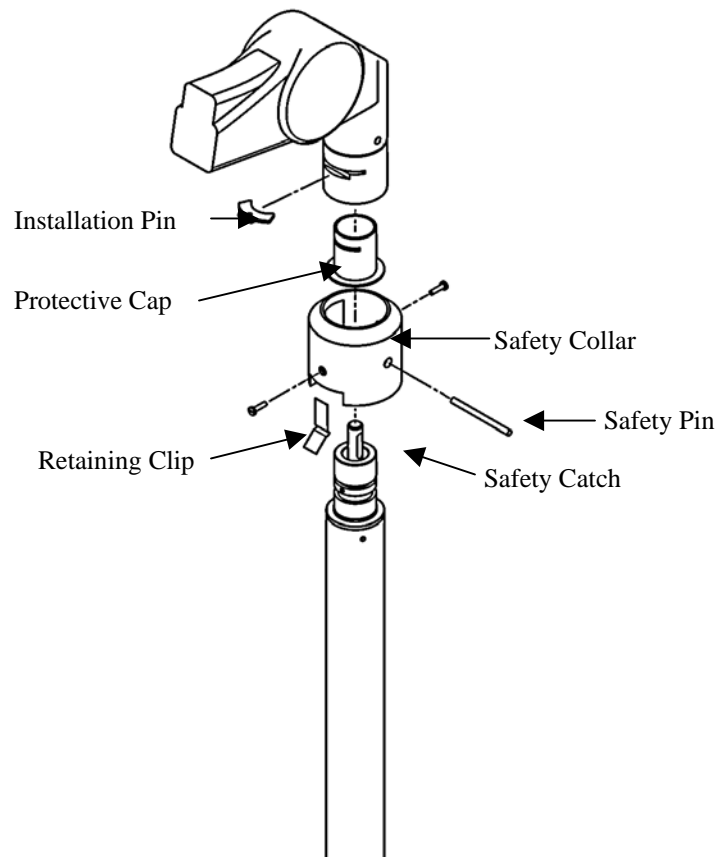


Figure 2-4

The Connecting Powerhead Arm must be installed as follows:

1. Remove the Protective Cap from the ceiling support arm.
2. Adjust the ceiling support arm to the recommended position by the ceiling support manufacturer.
3. Slide the Safety Collar up onto the ceiling arm and hold in place.

4. Insert the Powerhead Arm into the ceiling support arm. Insert the Installation Pin and Retaining Clip in the position shown. Allow the Powerhead Arm to be supported by the ceiling arm.
5. Lower the Safety Collar into position. Insert the Safety Pin through the Safety Collar and through the slot in the Safety Catch. Insert the Rear Holding Screw.

⚠ WARNING

The ceiling suspension Powerhead support arm is equipped with an internal safety device. Failure to install correctly can result in the support arm safety mechanism from operating correctly. The ceiling suspension and Powerhead support arm must only be installed by trained and authorized personnel.

6. Insert the Retaining Clip upward into the Safety Collar. Insert and tighten the Front Holding Screw.

⚠ WARNING

The ceiling support arm has been specifically configured for the Dual Shot Alpha and its approved accessories. Any modification or addition of unauthorized accessories may result in a hazardous situation or damage to the ceiling arm or Dual Shot Alpha.

⚠ WARNING

Follow the ceiling arm and ceiling suspension manufacturer's installation instructions to ensure reliable and safe operation. Failure to follow manufacturer instructions may result in a hazardous situation.

2-9 Overview of Basic System Connections

The following diagram is shown to provide an overview of the systems connections.

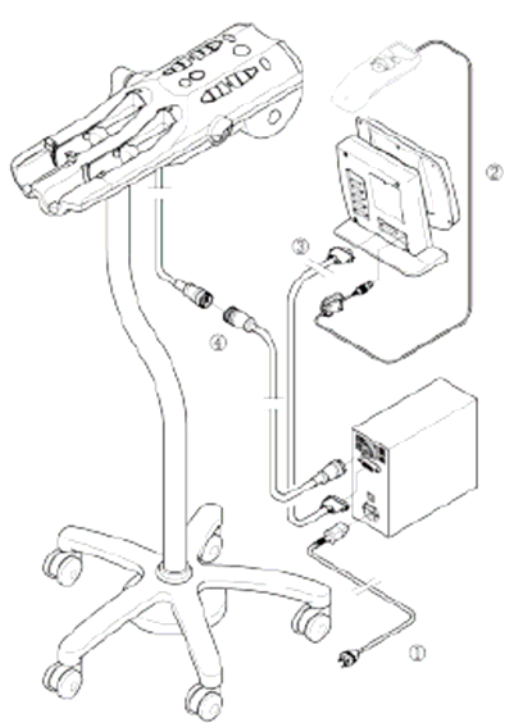


Figure 2-5

- (1) Power cable
- (2) Handswitch cable
- (3) Console cable
- (4) Powerhead cable and Powerhead extension cable

Note: Verify all connections are secure and fully tightened before completing the installation.

Note: When the DSA system is used with the NCOM option, please note that the power supply connection the mains power will come from the CT scanner. The cable is available from the CT scanner manufacturer.

2-10 NCOM Hub Connections (optional)

The following diagram should be used in connection with the basic system connections shown in Section 2-9. The NCOM Hub is recommended to be installed next to the DSA Power Supply Unit. The NCOM Hub kit will include several mounting options hardware to simplify the connection of the NCOM Hub to the Power Supply Unit. Refer to the instruction sheet included in the NCOM Kit for details of hardware connections.

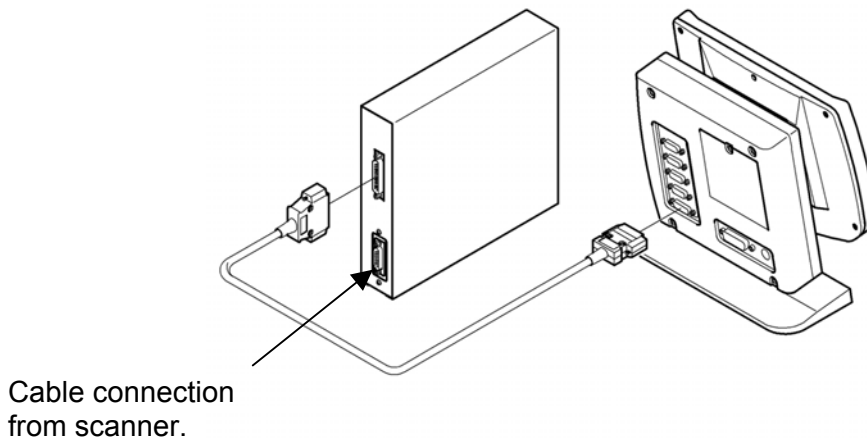


Figure 2-6

3 - SYSTEM CONFIGURATION

3-1 User Settable Configurations

The user settable functions are those that can be accessed without the use of any special tools and do not require trained technical personnel. For a complete description of how to access and to operate these functions refer to the Operation Manual. Accessing these functions is not required as part of this procedure,

3-2 Service Mode Settable Configurations

The service mode settable functions are those that can be accessed only by trained and qualified service personnel. For a complete description of how to access and to operate these functions refer to the Service and Parts Manual. Accessing these functions is not required as part of this procedure,

4 - SYSTEM CHECKOUT

Once the Dual Shot Alpha system installation is complete, the checkout procedure may begin. Be sure to complete the Warranty Activation and Installation / Checkout Checklist as you proceed with the system checkout.

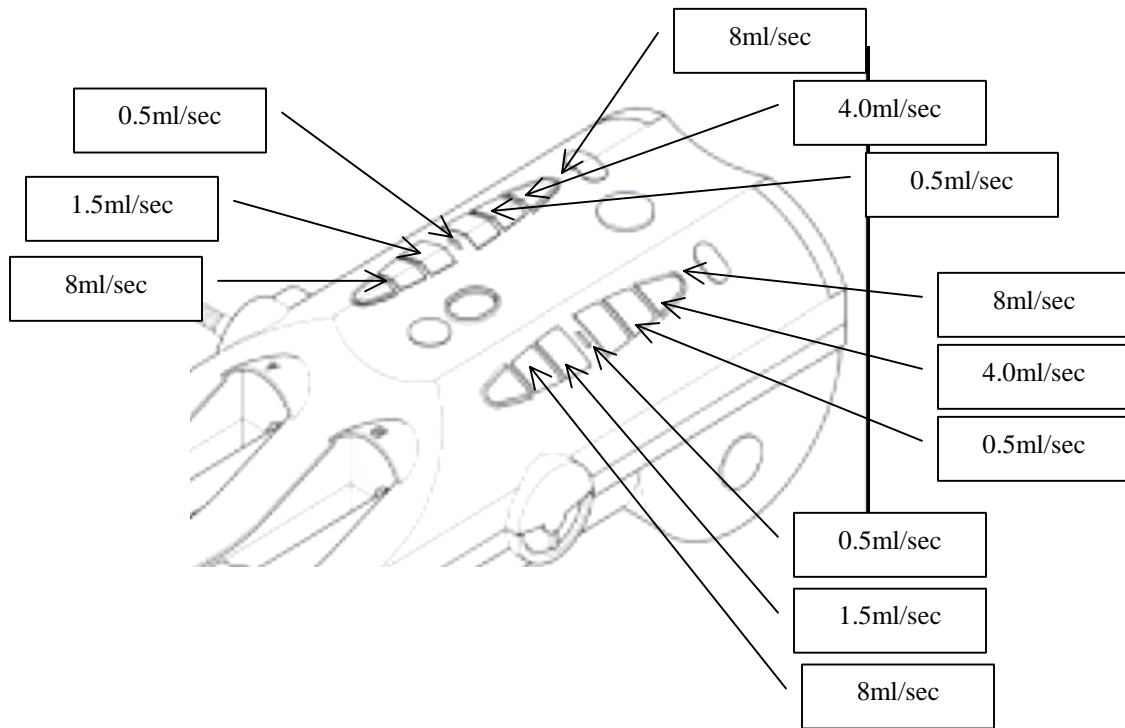
4-1 Basic Inspections

4-1-1 Power On

Locate the power cable that is connected to the rear of the Power Supply Unit and plug it into a power outlet rated at the specified limits in the "Specifications Section". Push the "—" side of the power switch. Press the power-on button on the console. The power on sequence will begin. Once completed the Control Console display will switch to a main injection programming screen.

4-1-2 Powerhead Ram Speed Check

When a main programming injection screen appears, the device is ready. Go to the Powerhead and individually activate each of the Powerhead forward and reverse buttons. Approximate speed of each button is as follows:



4-1-3 Lamp Indicator Check

When power is applied to the device, all visual indicators will illuminate for a short period of time. Inspect to make certain all indicators illuminate.

4-1-4 Powerhead Rotation

The design of the Powerhead is such that the rotation of the Powerhead is limited. The horizontal rotation is limited to zero degrees. The vertical rotation shall be greater than 180 degrees but less than 270 degrees. If rotation is possible beyond these limits verify all locking pins and assembly of the Powerhead to the Remote Stand or Ceiling Suspension has been completed correctly.

4-1-5 Remote Stand Inspection

The Remote Stand base does not require assembly, but the following inspection should be performed. With the Powerhead mounted to the Remote Stand move the Remote Stand using one hand. Verify the stand moves freely and without restrictions.

4-1-6 Syringe Clamp Inspections

The syringe clamps on the A-side and B-side should be visually inspected for any damage.

A-Side

The clamps should open and close freely without a syringe installed. Open the clamps and insert a 200mL syringe. The syringe and clamps should close easily. Once latched into place, the syringe should be securely seated into the syringe cradle. Remove the syringe using the clamp thumb handles by pushing them outward to open.

B-Side

The syringe cradle on the B-side is equipped with a rotating lock mechanism. To insert the syringe, place the flat sides of the syringe perpendicular to the Powerhead and push into the cradle guides. When completely inserted, rotate the syringe approximately 90 degrees, or until the syringe locking plungers are latched into place. (Note: A clicking sound will be heard)

4-1-7 Powerhead Motion Inspection

The Powerhead has been designed to operate smoothly and quietly. Using the Fast Forward and Fast Reverse keys for the A-side and B-side operate the Powerhead rams. Make certain there are no abnormal, e.g. clinking, grinding, etc. sounds coming from the Powerhead.

4-2 Performance Checks

The following performance checks are intended to verify the systems main control mechanisms are operating correctly. These tests must only be performed by someone trained and qualified to perform these tests.

4-2-1 Injection Time Check (Performance Injection #1)

Remove the syringes from the injector and fully retract the Powerhead rams. Program an injection of 1mL / sec with a volume of 60mL on the A-side. Press Check and start the injection. Simultaneously press start on the stopwatch. Verify the actual injection time is between 57 and 63 seconds.

Select an injection protocol that is of A then B type. Program the A-side for 1mL/sec with a volume of 5mL. Program the B-side with an injection of 1mL/sec and a volume of 60mL. Press Check and start the injection. When the A-side is completed, press the stopwatch start simultaneously with the starting of the B-side ram. Verify the injection time is between 57 and 63 seconds for the B-side injection.

Note: During the A-side and B-side injections the Console will display a message stating low pressure. This is expected in the normal operation of the system.

4-2-2 Injection Volume Check (Performance Injection #2)

Fully retract both Powerhead rams. Select an injection mode for A-side injections only. Program the A-side flow rate for 1mL/sec. Install the syringe indicated and perform the injections in Table 4-1 and Table 4-2. Using the graduated cylinder, verify the delivered volumes are within the Allowable Range.

Table 4-1: 200mL Syringe (A-side)

Volume	Allowable Range
2mL	0.8 – 3.2 mL
120mL	117 – 123 mL

Table 4-2: 100mL Syringe (A-side)

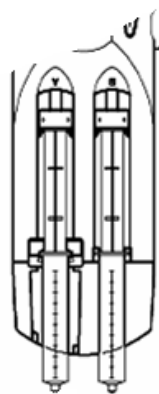
Volume	Allowable Range
2 mL	0.8 – 3.2 mL
90 mL	87 – 93 mL

Fully retract the A-side ram and configure an injection protocol of A then B type. Remove the syringe from the A-side and program the A-side for 1mL / sec with a volume of 1mL. Install a 100ml water filled syringe on the B-side. Program the B-side to 1mL/sec with the volumes specified in Table 4-3. Perform each injection and verify the delivered volumes are within the Allowable Range.

Table 4-3: 100mL Syringe (B-side)

Volume	Allowable Range
2mL	0.8 – 3.2 mL
90mL	87 – 93 mL

Note 1: All volume measurements must be measured without needles, catheters and extension tubing. Volume measurements should be performed directly from syringe tip into the graduated cylinder. Point syringe tips down to inject into graduated cylinder.

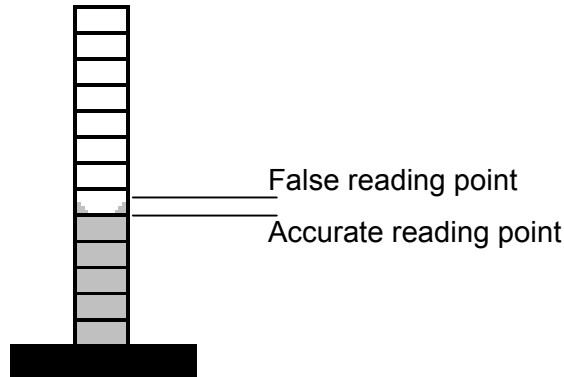


Position Powerhead with water filled syringes in this position and inject into graduated cylinders.

Note 2: The Allowable Range specified in Table 4-1 - Table 4-3 includes tolerances associated with the measuring equipment.

Note 3: During the A-side and B-side injections the Console will display a warning message state low pressure. This is expected and the normal operation of the system.

Note 4: When measuring with the graduated cylinder the volume reading must be taken from the bottom of the meniscus. Reference the diagram below. (For example, assuming each mark on the cylinder shown below is 1 ml, the correct reading is 5ml).



4-2-3 Injection Flow Rate Check (Performance Injection #3)

Install a water filled 200ml syringe in the A-side and a 100ml water filled syringe in the B-side. Program the injections listed in Table 4-4 and Table 4-5 below and verify the injection times are within the allowable range. Perform the injections on the A-side without a 100mL adapter installed. When performing the 2ml/sec injection, install the 23 gauge needle supplied in the Nemoto Service Kit. When performing the 8ml/sec injection the 23 gauge must be removed. **PLEASE REFER TO NOTE 2 BELOW**

Table 4-4: Flow Rate Check (200mL A-side)

Flow Rate	Volume	Time Expected	Allowable Range
2 ml/sec (w/needle)	20 mL	11 seconds	10.3 – 11.9 seconds
8 ml/sec (w/o needle)	40 mL	6 seconds	5.5 – 6.6 seconds

Table 4-5: Flow Rate Check (100mL B-side*)

Flow Rate	Volume	Time Expected	Allowable Range
2 ml/sec (w/needle)	20 mL	10 seconds	9.1 – 11.1 seconds
8 ml/sec (w/o needle)	40 mL	5 seconds	4.5 – 5.6 seconds

* The Ramp Up time on B-side is always 0 seconds.

Note 1: Do not pressure limit these injections as it will result in inaccurate measurements.

Note 2: The Ramp Up setting will impact the measured time during the flow rate check. Please make sure the Ramp Up is set according to Table 4-6.

Table 4-6

RAMP UP	Action Required
If displayed on Console	Set the Ramp Up value to 2 seconds
If not displayed on Console	No Ramp Up setting is required

4-2-4 Injection Pressure Check (Performance Injection #4)

Fully retract both Powerhead rams. Install the 100mL adapter into side A. Install a water filled 100mL syringe in the A side. Set the pressure limit to 300PSI. Program an A-side only injection with 4mL/sec flow rate and 100mL volume. Press Check and start the injection. The A-side injection will execute. Record the A-side injection.

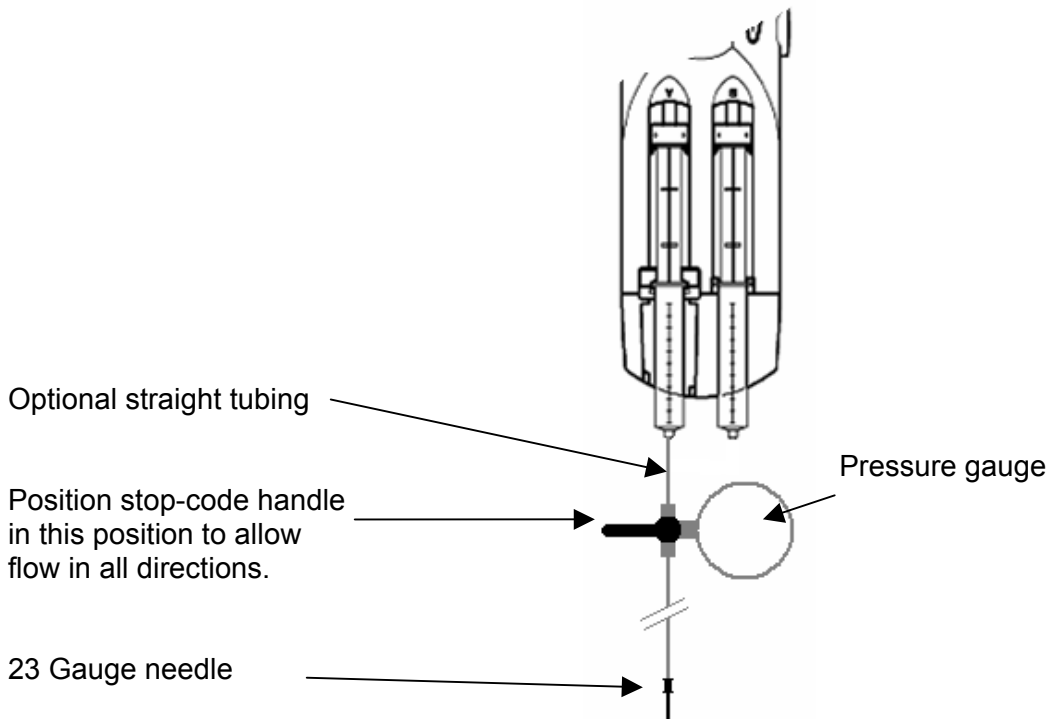
Remove the syringe and pressure measurement equipment from the A-side. Disconnect the syringe from the pressure measurement equipment and refill. Install syringe and reconnect the pressure equipment onto the B-side. Program the following A then B injection:

A-side: Flow Rate: 1ml/sec	Volume: 1ml
B-side: Flow Rate: 4ml/sec	Volume: 100ml

Set the pressure limit to 300psi, press Check and start the injection. Record the B-side pressure. Verify the pressure is within the allowable range of 270 – 330PSI for the A-side and B-side.

Pressure Measurement Setup

Example of A-side pressure measurement equipment connection.



Note: If the pressure reading in the gauge is unstable, record the estimated average value into the Warranty Activation and Installation / Checkout Checklist.

5 – NCOM OPERATION CHECKOUT (OPTIONAL)

Note: The checkout procedure for the NCOM operation is provided by the CT scanner manufacturer. Please reference the accompanying documentation of CT scanner for details.

6 - INSTALLATION AND CHECKOUT COMPLETION

Included with the shipment is a Warranty Activation and Installation / Checkout Checklist form, example shown in APPENDIX A. This form must be completed in its entirety upon completion of the installation and checkout process.

To activate warranty, fax completed form (both pages) to 949-643-8989 or email to mkh@nemotous.com and sendhhs@ge.com

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APPENDIX a – Warranty Activation and installation checklist
ATTENTION: COMPLETE AND RETURN TO ACTIVATE WARRANTY

Site Name:	Powerhead S/N:
Street Address:	Console S/N:
City:	Power Supply S/N:
State + Zip Code	Ceiling Suspension Arm S/N:
Site Phone:	Ceiling Suspension Colum S/N:
Installed By (and SSO if applicable):	Installation Date:
Global Order Number:	CT System ID:

Installation and Checkout Checklist

Installation:

- Completed visual inspection of all components for physical damage and imperfections and none were identified.
- Completed visual inspection of all interconnecting cable assemblies for frays, cuts, etc.
- Completed an inspection to make certain all fasteners are installed and tightened.

Basic Inspections:

- Apply power to unit and verify that power- up tests is completed and main screen appears without errors.
- Check movement of Powerhead rams using the forward and reverse keys. The following are the approximate speeds for each Powerhead forward and reverse button.

A-Side

- Fast Forward: 8ml/Sec
- Medium Forward: 1.5ml/sec
- Slow Forward: 0.5ml/sec

B-Side

- Fast Forward: 8ml/sec
- Medium Forward: 1.5ml/sec
- Slow Forward: 0.5ml/sec

- Fast Reverse: 8ml/sec
- Medium Reverse: 4ml/sec
- Slow Reverse: 0.5ml/sec

- Fast Reverse: 8ml/sec
- Medium Reverse: 4ml/sec
- Slow Reverse: 0.5ml/sec.

- Verify all lamps are on during power-up.
- Verify Powerhead rotates more than 180 degrees but less than 270 degrees.
- Verify Remote Stand moves freely, and that casters locking mechanisms operate.
- Verify syringe clamps open and close easily, including installation and removal of the 100ml adapter.
- During any Powerhead ram motion verify there are no abnormal sounds.

Performance Checks:

- Program and perform Performance Injection #1. Record the measured times in the space provided and verify it is within the specified range.
 - A-Side recorded value: _____ Acceptable Range: 57 seconds to 63 seconds
 - B-Side recorded value: _____ Acceptable Range: 57 seconds to 63 seconds
- Program and perform Performance Injection #2. Verify the actual volumes are within the specified limits.

A-Side Volume Checks

Complete	Syringe	Volume	Measured Value	Allowable Range
	200ml	2ml		0.8 – 3.2ml
	200ml	120ml		117 – 123ml
	100ml	2ml		0.8 – 3.2ml
	100ml	90ml		87 – 93ml

B-Side Volume Checks

Complete	Syringe	Volume	Measured Value	Allowable Range
	100ml	2ml		0.8 – 3.2ml
	100ml	90ml		87 – 93ml

- Program and perform Performance Injections #3. Verify the actual times are within the specified limits for each flow rate.

Flow Rate Check

Complete	Needle	Side	Flow Rate	Volume	Time Measured	Allowable Range
	Yes	A	2ml/sec	20ml		10.3 – 11.9 seconds
	No	A	8ml/sec	40ml		5.5 – 6.6 seconds
	Yes	B	2ml/sec	20ml		9.1 – 11.1 seconds
	No	B	8ml/sec	40ml		4.5 – 5.6 seconds

- Program and perform Performance Injections #4. Record the measured pressure below and verify it is within the specified range of 270psi to 330psi.
Note: If pressure is fluctuating, estimate and record the average pressure.

A-side Measured Pressure _____ psi

B-side Measured Pressure _____ psi

NCOM Checkout Complete

- Check this box if the NCOM option has been installed and checked out according to the instructions provided herein and with the CTscanner documentation.



The installation, inspections and checkouts must only be performed by trained and qualified personnel. Reference Installation and Checkout Manual for complete descriptions and instructions.

To activate warranty, fax completed form (both pages) to 949-643-8989 or email to mkh@nemotous.com and sendhhs@ge.com

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