GE Healthcare

Venue 40

Basic Service Manual

Part Number: 5314293-100
Revision: 19

Important Precautions

THIS SERVICE MANUAL IS AVAILABLE IN ENGLISH ONLY.

- **IF A CUSTOMER'S SERVICE PROVIDER REQUIRES A LANGUAGE OTHER THAN ENGLISH, IT IS THE CUSTOMER'S RESPONSIBILITY TO PROVIDE TRANSLATION SERVICES.**

WARNING (EN)

- **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, MECHANICAL OR OTHER HAZARDS.**

CE MANUEL DE MAINTENANCE 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.**

AVERTISSEMENT (FR)

- **NE PAS TENTER D'INTERVENTION SUR LES éQUIPEMENTS TANT QUE LE MANUEL SERVICE N'A PAS éTé CONSULTé 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.**

DIESES KUNDENDIENST-HANDBUCH EXISTIERT NUR IN ENGLISCHER SPRACHE.

- **FALLS EIN FREMDER KUNDENDIENST EINE ANDERE SPRACHE BENöTIGT, IST ES AUFGABE DES KUNDEN FüR EINE ENTSPRECHENDE ÜBERSETZUNG ZU SORGEN.**

WARNUNG (DE)

- **VERSUCHEN SIE NICHT, DAS GERäT ZU REPARIEREN, BEVOR DIESES KUNDENDIENST-HANDBUCH NICHT ZU RATE GEZOGEN UND VERSTANDEN WURDE.**
- **WIRD DIESE WARNUNG NICHT BEACHTET, SO KANN ES ZU VERLETZUNGEN DES KUNDENDIENSTTECHNIKERS, DES BEDIENERS ODER DES PATIENTEN DURCH ELEKTRISCHE SCHLäGE, MECHANISCHE ODER SONSTIGE GEFAHREN KOMMEN.**

AVISO (ES)

ESTE MANUAL DE SERVICIO SÓLO EXISTE EN INGLÉS.

- **SI ALGÚN PROVEEDOR DE SERVICIOS AJENO A GEHC SOLICITA UN IDIOMA QUE NO SEA EL INGLÉS, ES RESPONSABILIDAD DEL CLIENTE OFRECER UN SERVICIO DE TRADUCCIÓN.**
- **NO SE DEBERÁ DAR SERVICIO TÉCNICO 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.**

ATENÇÃO (PT-Br)

ESTE MANUAL DE ASSISTÊNCIA TÉCNICA SÓ SE ENCONTRA DISPONÍVEL EM INGLÊS.

- **SE QUALQUER OUTRO SERVIÇO DE ASSISTÊNCIA TÉCNICA, QUE NÃO A GEHC, SOLICITAR ESTES MANUAIS NOUTRO IDIOMA, É DA RESPONSABILIDADE DO CLIENTE FORNECER OS SERVIÇOS DE TRADUÇÃO.**
- **NÃO TENTE 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.**

AVISO (PT-pt)

ESTE MANUAL DE ASSISTÊNCIA ESTÁ DISPONÍVEL APENAS EM INGLÊS.

- **SE QUALQUER OUTRO SERVIÇO DE ASSISTÊNCIA TÉCNICA, QUE NÃO A GEHC, SOLICITAR ESTES MANUAIS NOUTRO IDIOMA, É DA RESPONSABILIDADE DO CLIENTE FORNECER OS SERVIÇOS DE TRADUÇÃO.**
- **NÃO TENTE EFECTUAR REPARAÇÕES NO EQUIPAMENTO SEM TER CONSULTADO E COMPREENDIDO PREVIAMENTE ESTE MANUAL.**
- **A INOBSERVÂNCIA DESTE AVISO PODE RESULTAR EM FERIMENTOS NO TÉCNICO DE ASSISTÊNCIA, OPERADOR OU PACIENTE EM CONSEQUÊNCIA DE CHOQUE ELÉCTRICO, PERIGOS DE ORIGEM MECÂNICA, BEM COMO DE OUTROS TIPOS.**

AVVERTENZA (IT)

IL PRESENTE MANUALE DI MANUTENZIONE è DISPONIBILE SOLTANTO IN INGLESE.

- **SE UN ADDETTO ALLA MANUTENZIONE ESTERNO ALLA GEHC RICHIEDE IL MANUALE IN UNA LINGUA DIVERSA, IL CLIENTE è TENUTO A PROVVEDERE DIRETTAMENTE ALLA TRADUZIONE.**
- **SI PROCEDA ALLA MANUTENZIONE DELL'APPARECCHIATURA SOLO DOPO AVER CONSULTATO IL PRESENTE MANUALE ED AVERNE COMPRESO IL CONTENUTO.**
- **NON TENERE CONTO 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.**

HOIATUS (ET)

KÄESOLEV TEENINDUSJUHEND ON SAADAVAL AINULT INGLISE KEELES.

- **KUI KLIENDITEENINDUSE OSUTAJA Nõ UAB JUHENDIT INGLISE KEELEST ERINEVAS KEELES, VASTUTAB KLIENT Tõ LKETEENUSE OSUTAMISE EEST.**
- **ä RGE ü RITAGE SEADMEID TEENINDADA ENNE EELNEVALT Kä ESOLEVA TEENINDUSJUHENDIGA TUTVUMIST JA SELLEST ARU SAAMIST.**
- **Kä ESOLEVA HOIATUSE EIRAMINE Võ IB Põ HJUSTADA TEENUSEOSUTAJA, OPERAATORI Võ I PATSIENDI VIGASTAMIST ELEKTRILö ö GI, MEHAANILISE Võ I MUU OHU TAGAJä RJEL.**

VAROITUS (FI)

TÄMÄ HUOLTO-OHJE ON SAATAVILLA VAIN ENGLANNIKSI.

- **JOS ASIAKKAAN PALVELUNTARJOAJA VAATII MUUTA KUIN ENGLANNINKIELISTä MATERIAALIA, TARVITTAVAN Kä ä NNö KSEN HANKKIMINEN ON ASIAKKAAN VASTUULLA.**
- **ä Lä YRITä KORJATA LAITTEISTOA ENNEN KUIN OLET VARMASTI LUKENUT JA YMMä RTä NYT Tä Mä N HUOLTO-OHJEEN.**
- **MIKä LI Tä Tä VAROITUSTA EI NOUDATETA, SEURAUKSENA VOI OLLA PALVELUNTARJOAJAN, LAITTEISTON Kä YTTä Jä N TAI POTILAAN VAHINGOITTUMINEN Sä HKö ISKUN, MEKAANISEN VIAN TAI MUUN VAARATILANTEEN VUOKSI.**

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 ΗΛΕΚΤΡΟΠΛΗΞΙΑ, ΜΗΧΑΝΙΚΟΥΣ Ή ΑΛΛΟΥΣ ΚΙΝΔΥΝΟΥΣ.**

FIGYELMEZTETÉS (HU)

EZEN KARBANTARTÁSI KÉZIKÖNYV KIZÁRÓLAG ANGOL NYELVEN ÉRHETŐ 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 ÁRAMÜTÉS, MECHANIKAI VAGY EGYÉB VESZÉLYHELYZET MIATTI SÉRÜLÉSÉT EREDMÉNYEZHETI.**

VIÐVÖRUN (IS)

ÞESSI ÞJÓNUSTUHANDBÓK ER EINGÖNGU FÁANLEG Á ENSKU.

- **EF ÞJÓNUSTUAÐILI VIÐSKIPTAMANNS ÞARFNAST ANNARS TUNGUMÁLS EN ENSKU, ER ÞAÐ Á ÁBYRGÐ VIÐSKIPTAMANNS AÐ ÚTVEGA ÞÝÐINGU.**
- **REYNIÐ EKKI AÐ ÞJÓNUSTA TÆKIÐ NEMA EFTIR AÐ HAFA SKOÐAÐ OG SKILIÐ ÞESSA ÞJÓNUSTUHANDBÓK.**
- **EF EKKI ER FARIÐ AÐ ÞESSARI VIÐVÖRUN GETUR ÞAÐ VALDIÐ MEIÐSLUM ÞJÓNUSTUVEITANDA, STJÓRNANDA EÐA SJÚKLINGS VEGNA RAFLOSTS, VÉLRÆNNAR EÐA ANNARRAR HÆTTU.**

VÝSTRAHA (CS)

TENTO SERVISNÍ NÁVOD EXISTUJE POUZE V ANGLICKÉM JAZYCE.

- **V PŘÍPADĚ, ŽE POSKYTOVATEL SLUŽEB ZÁKAZNÍKŮM POTŘEBUJE NÁVOD V JINÉM JAZYCE, JE ZAJIŠTĚNÍ PŘEKLADU DO ODPOVÍDAJÍCÍHO JAZYKA ÚKOLEM ZÁKAZNÍKA.**
- **NEPROVÁDĚJTE ÚDRŽBU TOHOTO ZAŘÍZENÍ, ANIŽ BYSTE SI PŘEČETLI TENTO SERVISNÍ NÁVOD A POCHOPILI JEHO OBSAH.**
- **V PŘÍPADĚ NEDODRŽOVÁNÍ TÉTO VÝSTRAHY MŮŽE DOJÍT ÚRAZU ELEKTRICKÁM PROUDEM PRACOVNÍKA POSKYTOVATELE SLUŽEB, OBSLUŽNÉHO PERSONÁLU NEBO PACIENTŮ VLIVEM ELEKTRICKÉHO PROUDU, RESPEKTIVE VLIVEM K RIZIKU MECHANICKÉHO POŠKOZENÍ NEBO JINÉMU RIZIKU.**

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 ER BLEVET LÆST OG 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.**

BRĪDINĀJUMS (LV)

šĪ APKALPES ROKASGRĀMATA IR PIEEJAMA TIKAI ANGĻU VALODĀ.

- **JA KLIENTA APKALPES SNIEDZĒJAM NEPIECIEŠAMA INFORMĀCIJA CITĀ VALODĀ, NEVIS ANGĻU, 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 IŠLEISTAS TIK ANGLŲ KALBA.

- **JEI KLIENTO PASLAUGŲ TEIKĖJUI REIKIA VADOVO KITA KALBA – NE ANGLŲ, VERTIMU PASIRŪPINTI TURI KLIENTAS.**
- **NEMĖGINKITE ATLIKTI ĮRANGOS TECHNINĖS PRIEŽIŪROS DARBŲ, NEBENT VADOVAUTUMĖTĖS ŠIUO EKSPLOATAVIMO VADOVU IR JĮ SUPRASTUMĖTE**
- **NEPAISANT ŠIO PERSPĖJIMO, PASLAUGŲ TEIKĖJAS, OPERATORIUS AR PACIENTAS GALI BŪTI SUŽEISTAS DĖL ELEKTROS SMŪGIO, MECHANINIŲ AR KITŲ PAVOJŲ.**

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 JEDYNIE W JĘZYKU ANGIELSKIM.

- **JEśLI FIRMA śWIADCZĄCA KLIENTOWI USŁUGI SERWISOWE WYMAGA UDOSTęPNIENIA PODRęCZNIKA W JęZYKU INNYM NIŻ ANGIELSKI, OBOWIĄZEK ZAPEWNIENIA STOSOWNEGO TłUMACZENIA SPOCZYWA NA KLIENCIE.**
- **NIE PRóBOWAć SERWISOWAć NINIEJSZEGO SPRZęTU BEZ UPRZEDNIEGO ZAPOZNANIA SIę Z PODRęCZNIKIEM SERWISOWYM.**
- **NIEZASTOSOWANIE SIę DO TEGO OSTRZEŻENIA MOżE GROZIć OBRAŻENIAMI CIAłA SERWISANTA, OPERATORA LUB PACJENTA W WYNIKU PORAŻENIA PRĄDEM, URAZU MECHANICZNEGO LUB INNEGO RODZAJU ZAGROŻEń.**

ATENŢIE (RO)

ACEST MANUAL DE SERVICE ESTE DISPONIBIL NUMAI ÎN LIMBA ENGLEZĂ.

- **DACĂ UN FURNIZOR DE SERVICII PENTRU CLIENŢI NECESITĂ O ALTĂ LIMBĂ DECÂT CEA ENGLEZĂ, ESTE DE DATORIA CLIENTULUI SĂ FURNIZEZE O TRADUCERE.**
- **NU ÎNCERCAŢI SĂ REPARAŢI ECHIPAMENTUL DECÂT ULTERIOR CONSULTĂRII ŞI ÎNŢELEGERII 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 ПРЕДОСТАВЛЯЕТСЯ только на английском Языке.

- **Если сервисноМУ ПЕРСОНАЛУ клиента необходимо руководство не на английском ЯЗЫКЕ, клиенту следует самостоЯтельно ОБЕСПЕЧИТЬ перевод.**
- **ПЕРЕД ОБСЛУЖИВАНИЕМ ОБОРУДОВАНИЯ ОБЯЗАТЕЛЬНО ОБРАТИТЕСЬ К ДАННОМУ РУКОВОДСТВУ И ПОЙМИТЕ ИЗЛОЖЕННЫЕ В НЕМ СВЕДЕНИЯ.**
- **НЕСОБЛЮДЕНИЕ УКАЗАННЫХ ТРЕБОВАНИЙ МОЖЕТ ПРИВЕСТИ К ТОМУ, ЧТО СПЕЦИАЛИСТ ПО ТЕХОБСЛУЖИВАНИЮ, ОПЕРАТОР ИЛИ ПАЦИЕНТ ПОЛУЧАТ УДАР ЗЛЕКТРИЧЕСКИМ ТОКОМ, МЕХАНИЧЕСКУЮ ТРАВМУ ИЛИ ДРУГОЕ ПОВРЕЖДЕНИЕ.**

ПРЕДУПРЕЖДЕНИЕ (BG)

ТОВА СЕРВИЗНО РЪКОВОДСТВО Е НАЛИЧНО САМО НА АНГЛИЙСКИ ЕЗИК.

- **АКО ДОСТАВЧИКЪТ НА СЕРВИЗНИ УСЛУГИ НА КЛИЕНТ СЕ НУЖДАЕ ОТ ЕЗИК, РАЗЛИЧЕН ОТ АНГЛИЙСКИ, ЗАДЪЛЖЕНИЕ НА КЛИЕНТА Е ДА ПРЕДОСТАВИ ПРЕВОДАЧЕСКА УСЛУГА.**
- **НЕ СЕ ОПИТВАЙТЕ ДА ИЗВЪРШВАТЕ СЕРВИЗНО ОБСЛУЖВАНЕ НА ТОВА ОБОРУДВАНЕ, ОСВЕН ВСЛУЧАЙ, ЧЕ СЕРВИЗНОТО РЪКОВОДСТВО Е ПРОЧЕТЕНО И СЕ РАЗБИРА.**
- **НЕСПАЗВАНЕТО НА ТОВА ПРЕДУПРЕЖДЕНИЕ МОЖЕ ДА ДОВЕДЕ ДО НАРАНЯВАНЕ НА ДОСТАВЧИКА НА СЕРВИЗНИ УСЛУГИ, НА ОПЕРАТОРА ИЛИ ПАЦИЕНТА ВСЛЕДСТВИЕНА ТОКОВ УДАР, МЕХАНИЧНИ ИЛИ ДРУГИ РИСКОВЕ.**

UPOZORENJE (SR)

OVAJ PRIRUČNIK ZA SERVISIRANJE DOSTUPAN JE SAMO NA ENGLESKOM JEZIKU.

- **AKO KLIJENTOV SERVISER ZAHTEVA JEZIK KOJI NIJE ENGLESKI, ODGOVORNOST JE NA KLIJENTU DA PRUŽI USLUGE PREVOĐENJA.**
- **NEMOJTE POKUŠAVATI DA SERVISIRATE OPREMU AKO NISTE PROČITALI I RAZUMELI PRIRUČNIK ZA SERVISIRANJE.**
- **AKO NE POŠTUJETE OVO UPOZORENJE, MOŽE DOĆI DO POVREĐIVANJA SERVISERA, OPERATERA ILI PACIJENTA UZROKOVANOG ELEKTRIČNIM UDAROM, MEHANIČKIM I DRUGIM OPASNOSTIMA.**

OPOZORILO (SL)

TA SERVISNI PRIROČNIK JE NA VOLJO SAMO V ANGLEŠČINI.

- **ČE PONUDNIK SERVISNIH STORITEV ZA STRANKO POTREBUJE NAVODILA V DRUGEM JEZIKU, JE ZA PREVOD ODGOVORNA STRANKA SAMA.**
- **NE POSKUŠAJTE SERVISIRATI OPREME, NE DA BI PREJ PREBRALI IN RAZUMELI SERVISNI PRIROČNIK.**
- **ČE TEGA OPOZORILA NE UPOŠTEVATE, OBSTAJA NEVARNOST ELEKTRIČNEGA UDARA, MEHANSKIH ALI DRUGIH NEVARNOSTI IN POSLEDIČNIH POŠKODB PONUDNIKA SERVISNIH STORITEV, UPORABNIKA OPREME ALI PACIENTA.**

UPOZORENJE (HR)

OVAJ SERVISNI PRIRUČNIK DOSTUPAN JE SAMO NA ENGLESKOM JEZIKU.

- **AKO KLIJENTOV SERVISER ZAHTIJEVA JEZIK KOJI NIJE ENGLESKI, ODGOVORNOST KLIJENTA JE PRUŽITI USLUGE PREVOĐENJA.**
- **NEMOJTE POKUŠAVATI SERVISIRATI OPREMU AKO NISTE PROČITALI I RAZUMJELI SERVISNI PRIRUČNIK.**
- **AKO NE POŠTUJETE OVO UPOZORENJE, MOŽE DOĆI DO OZLJEDE SERVISERA, OPERATERA ILI PACIJENTA PROUZROČENE STRUJNIM UDAROM, MEHANIČKIM I DRUGIM OPASNOSTIMA.**

UPOZORNENIE (SK)

TÁTO SERVISNÁ PRÍRUČKA JE K DISPOZíCII LEN V ANGLIČTINE.

- **AK ZÁKAZNÍKOV POSKYTOVATEĽ SLUŽIEB VYŽADUJE INÝ JAZYK AKO ANGLIČTINU, POSKYTNUTIE PREKLADATEĽSKÝCH SLUŽIEB JE ZODPOVEDNOSŤOU ZÁKAZNÍKA.**
- **NEPOKÚŠAJTE SA VYKONÁVAŤ SERVIS ZARIADENIA SKÔR, AKO SI NEPREČÍTATE SERVISNÚ PRÍRUČKU A NEPOROZUMIETE JEJ.**
- **ZANEDBANIE TOHTO UPOZORNENIA Môže VYÚSTIŤ DO ZRANENIA POSKYTOVATEĽA SLUŽIEB, OBSLUHUJúCEJ OSOBY ALEBO PACIENTA ELEKTRICKýM PRúDOM, PRÍPADNE DO MECHANICKéHO ALEBO INéHO NEBEZPEčENSTVA.**

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 KILAVUZU YALNIZCA İNGİLİZCE OLARAK SAĞLANMIŞTIR.

- **EĞER MÜŞTERİ TEKNİSYENİ KILAVUZUN İNGİLİZCE DIŞINDAKİ BİR DİLDE OLMASINI İSTERSE, KILAVUZU TERCÜME ETTİRMEK MÜŞTERİNİN SORUMLULUĞUNDADIR.**
- **SERVİS KILAVUZUNU OKUYUP ANLAMADAN EKİPMANLARA MÜDAHALE ETMEYİNİZ.**
- **BU UYARININ GÖZ ARDI EDİLMESİ, ELEKTRİK ÇARPMASI YA DA MEKANİK VEYA DİĞER TÜRDEN KAZALAR SONUCUNDA TEKNİSYENİN, OPERATÖRÜN YA DA HASTANIN YARALANMASINA YOL AÇABİLİR.**

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。
GEHC 以外で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下さい。
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。

警告 (繁體中文) Traditional Chinese

本服務手冊僅提供英文版。

- 如顧客之服務提供者需要英文版以外之語言， 顧客需自行負擔其翻譯服務之責任。
- 在查閱並了解本服務手冊之內容前，請勿試圖維修本設備。
- 未確實遵守本警告，可能導致服務提供者、操作者或病患遭受電擊、機械危險或其他傷害。

注意:
(ZH-CN)

本维修手册仅存有英文本。
非 GEHC 公司的维修员要求非英文本的维修手册时，客户需自行负责翻译。
未详细阅读和完全了解本手册之前，不得进行维修。忽略本注意事项会对维修员，操作员或病人造成触电，机械伤害或其他伤害。

경고
(KO)

- 본 서비스 지침서는 영어로만 이용하실 수 있습니다.
- 고객의 서비스 제공자가 영어이외 언어를 요구할 경우, 번역 서비스 지침서를 제공하는 것은 고객의 책임입니다.
- 본 서비스 지침서를 지참했고 이해하지 않는 한은 해당 장비를 수리를 시도하지 마십시오.
- 이 경우에 유해하지 않은 전기쇼크, 기계상의 혹은 다른 위험으로부터 서비스 제공자, 운영자 혹은 환자에게 위험을 가할 수 있습니다.

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 GE 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.

CERTIFIED ELECTRICAL CONTRACTOR STATEMENT - FOR USA ONLY

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. Other connections between pieces of electrical equipment, calibrations and testing shall be performed by qualified GE Healthcare personnel. 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

If there are any omissions, errors or suggestions for improving this documentation, please contact the GE Healthcare Global Documentation Group with specific information listing the system type, manual title, part number, revision number, page number and suggestion details.

Mail the information to:

Service Documentation,

No.19, Changjiang Road, Wuxi National Hi-Tech Dev. Zone,
Jiangsu, P.R.China 214028

GE Healthcare employees should use TrackWise to report service documentation issues. These issues will then be in the internal problem reporting tool and communicated to the writer.

SERVICE SAFETY CONSIDERATIONS

DANGER **DANGEROUS VOLTAGES, CAPABLE OF CAUSING DEATH, ARE PRESENT IN THIS EQUIPMENT. USE EXTREME CAUTION WHEN HANDLING, TESTING AND ADJUSTING.**

WARNING ***Use all Personal Protection Equipment (PPE) such as gloves, safety shoes, safety glasses, and kneeling pad, to reduce the risk of injury.***

For a complete review of all safety requirements, see the Chapter 1, Safety Considerations section in the Service Manual.

LEGAL NOTES

TRADEMARKS

COPYRIGHTS

Revision History

Revision	Date	Reason for change
1	Sep 17th, 2008	Initial Release
2	Feb 26th, 2009	Add FRU replacement procedures, update repair parts list.
3	May 14th, 2009	Update UIs, diagnostics and FRU description
4	Jun 1st, 2009	Update renewal parts list
5	July 27th, 2009	Update renewal parts list
6	Nov 16th, 2009	Update as software updates to R1.0.4
7	Nov 23th, 2009	Update as software updates to R1.0.4, add 4C-SC
8	Jun 24th, 2010	Update as software updates to R2.x.x, add L8-18i-SC
9	Aug 12th, 2010	Update renewal parts list
10	Nov 12th, 2010	Update for software R2.0.3, update renewal parts list.
11	Dec 16th, 2010	Update renewal parts list and unpacking procedure.
12	Jun 10th, 2011	Update as software update, add E8CS-SC
13	Aug 01st, 2011	Update FRU list
14	Jan 12th, 2012	Update Chapter 9 about spare parts
15	Apr 11th, 2012	Update for Venue40 OB software R3.1.x
16	Dec 17, 2012	Update package label and add new spare parts
17	Apr. 08, 2013	Add two notes
18	Sep. 10, 2013	Update as 3-probe Port Box released
19	May. 28, 2014	Update the spare part list

List of Effected Pages(LOEP)

Pages	Revision	Pages	Revision	Pages	Revision
Title Page	19	Chapter 3 - Installation pages 3-1 to 3-19	19	Chapter 8 - Replacement Procedures pages8-1 to 8-28	19
Important Precautions pages i to x	19	Chapter 4 - Functional Checks pages 4-1 to 4-18	19	Chapter 9 - Replacement Parts pages 9-1 to 9-17	19
Table of Contents pages xi to xxviii	19	Chapter 5 - Theory pages 5-1 to 5-7	19	Chapter 10 - Periodic Maintenance pages 10-1 to 10-22	19
Chapter 1 - Introduction pages 1-1 to 1-14	19	Chapter 6 - Service Adjustments pages 6-1 to 6-6	19	Index pages I to II	19
Chapter 2 - Pre-Installation pages 2-1 to 2-10	19	Chapter 7 - Diagnostics/ Troubleshooting pages 7-1 to 7-20	19	Back Cover	19

Table of Contents

CHAPTER 1
Introduction

CHAPTER 2
Site Preparation

CHAPTER 3
System Setup

CHAPTER 4
Functional Checks

CHAPTER 5
Components and Functions (Theory)

CHAPTER 6
Service Adjustments

CHAPTER 7
Diagnostics/Troubleshooting

CHAPTER 8
Replacement Procedures

CHAPTER 9
Renewal Parts

CHAPTER 10
Care & Maintenance

Chapter 1 Introduction

Section 1-1 Overview

1-1-1 Purpose of Chapter 1

This chapter describes important issues related to safely servicing this ultrasound machine. The service provider must read and understand all the information presented here before installing or servicing a unit.

1-1-2 Chapter Contents

Table 1-1 Contents in Chapter 1

1-1-3 Purpose of Service Manual

This Service Manual provides service information for the Venue 40 Ultrasound Scanning System. It contains the following chapters:

1.) **Chapter 1 - Introduction:** Contains a content summary and warnings.
2.) **Chapter 2 - Site Preparation:** Contains pre-installation requirements for the Venue 40.
3.) **Chapter 3 - System Setup:** Contains installation procedures.
4.) **Chapter 4 - Functional Checks:** Contains functional checks that are recommended as part of the installation, or as required during servicing and periodic maintenance.
5.) **Chapter 5 - Components and Functions (Theory):** Contains block diagrams and functional explanations of the electronics.
6.) **Chapter 6 - Service Adjustments:** Contains instructions on how to make available adjustments to the Venue 40.
7.) **Chapter 7 - Diagnostics/Troubleshooting:** Provides procedures for running diagnostic or related routines for the Venue 40.
8.) **Chapter 8 - Replacement Procedures:** Provides disassembly procedures and reassembly procedures for all changeable Field Replaceable Units (FRU).
9.) **Chapter 9 - Renewal Parts:** Contains a complete list of field replaceable parts for the Venue 40.
10.) **Chapter 10 - Care & Maintenance:** Provides periodic maintenance procedures for the Venue 40.

1-1-4 Typical Users of the Service Manual

- Repair Center Personnel (installation, maintenance, etc.).
- Online Center Personnel

1-1-5 Venue 40 Models Covered by this Manual

Table 1-2 Venue 40 Model Designations (R1.x.x)

Part Number	Description
5324338	Venue 40 Console
5352135	Venue 40 Console light version
5365959	Venue 40 Console light version with film
5454161	Venue 40 Console China

Table 1-3 Venue 40 Model Designations (R2.0.x)

Part Number	Description
5391353	Venue 40 Console
5392880	Venue 40 Console with film
5416098	Venue 40 Console for Korea

Table 1-4 Venue 40 Model Designations (R2.1.x)

Part Number	Description
5418925	Venue 40 Console

Table 1-5 Venue 40 Model Designations (R3.0.x)

Part Number	Description
5418778	Venue 40 Console
5418779	Venue 40 Console with film
5477730	Venue 40 Console China
5436436	Venue 40 Console Korea

Table 1-6 Venue 40 Model Designations (R3.1.x)

Part Number	Description
5461896	Venue 40 Console

Table 1-7 Venue 40 Model Designations (R3.2.x)

Part Number	Description
5487523	Venue 40 Console

1-1-6 Purpose of Operator Manual(s)

The Operator Manual(s) should be fully read and understood before operating the Venue 40 and also kept near the unit for quick reference.

Section 1-2
Important Conventions

1-2-1 Conventions Used in Book

Icons

Pictures, or icons, are used wherever they reinforce the printed message. The icons, labels and conventions used on the product and in the service information are described in this chapter.

Safety Precaution Messages

Various levels of safety precaution messages may be found on the equipment and in the service information. The different levels of concern are identified by a flag word that precedes the precautionary message. Known or potential hazards are labeled in one of following ways:

DANGER **DANGER IS USED TO INDICATE THE PRESENCE OF A HAZARD THAT WILL CAUSE SEVERE PERSONAL INJURY OR DEATH IF THE INSTRUCTIONS ARE IGNORED.**

WARNING ***WARNING IS USED TO INDICATE THE PRESENCE OF A HAZARD THAT CAN CAUSE SEVERE PERSONAL INJURY AND PROPERTY DAMAGE IF INSTRUCTIONS ARE IGNORED.***

CAUTION **Caution is used to indicate the presence of a hazard that will or can cause minor personal injury and property damage if instructions are ignored.**

NOTICE **Equipment Damage Possible**

Notice is used when a hazard is present that can cause property damage but has absolutely no personal injury risk.

Example: Disk drive will crash.

NOTE: Notes provide important information about an item or a procedure. Information contained in a NOTE can often save you time or effort.

1-2-2 Standard Hazard Icons

Important information will always be preceded by the exclamation point contained within a triangle, as seen throughout this chapter. In addition to text, several different graphical icons (symbols) may be used to make you aware of specific types of hazards that could cause harm.

Table 1-8 Standard Hazard Icons

ELECTRICAL	MECHANICAL	RADIATION
		
LASER	**HEAT**	**PINCH**
		

Other hazard icons make you aware of specific procedures that should be followed.

Table 1-9 Standard Icons Indicating a Special Procedure Be Used

AVOID STATIC ELECTRICITY	TAG AND LOCK OUT	WEAR EYE PROTECTION
		

1-2-3 Product Icons

The following table describes the purpose and location of safety labels and other important information provided on the equipment.

Table 1-10 Warnings

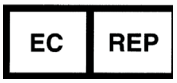
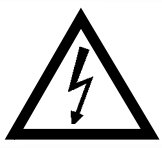
LABEL/SYMBOL	PURPOSE/MEANING	LOCATION
Identification and Rating Plate 	• Manufacture's name and address • Date of manufacture • Model and serial numbers • Electrical ratings (Volts, Amps, phase, and frequency)	Bottom panel of the console
Type/Class Label	Used to indicate the degree of safety or protection.	Bottom panel of the console
IP Code (IPX8) IPX8: MKF 2 1S/1S-MED HID GP26	Indicates the degree of protection provided by the enclosure per IEC60 529. IPX8 can be used in an operating room environment.	
	Authorized European Representative address	
	United States only Prescription Requirement label	
	Equipment Type BF (man in the box symbol) IEC 878-02-03 indicates B Type equipment having a floating applied part.	Probe connectors
	General Warning	Various
	"Consult accompanying documents" is intended to alert the user to refer to the operator manual or other instructions when complete information cannot be provided on the label.	Various
	"CAUTION - Dangerous voltage" (the lightning flash with arrowhead in equilateral triangle) is used to indicate electric shock hazards.	Various
	"ON" indicates the power on position of the power switch. CAUTION This Power Switch DOES NOT ISOLATE Mains Supply	Stick to Power Switch

Table 1-10 Warnings

LABEL/SYMBOL	PURPOSE/MEANING	LOCATION
	"Protective Earth" indicates the protective earth (grounding) terminal.	Inside of AC adapter with docking station
	"TUV" Listing and Certification Mark is used to designate conformance to nationally recognized product safety standards. The Mark bears the name and /or logo of the testing laboratory, product category, safety standard is assessed and a control number.	Bottom panel of the console
	Date of manufacture. The date could be a year, year and month, or year, month and day, as appropriate. See ISO 8601 for date formates.	Rating Plate
	Catalog or model number.	Rating Plate
	Serial number	Rating Plate
	Direct Current. For products to be powered from a DC supply.	Rating Plate
	This symbol indicates that the waste of electrical and electronic equipment must not be disposed as unsorted municipal waste and must be collected separately. Please contact an authorized representative of the manufacturer for information concerning the decommissioning of your equipment.	Rating Plate
	No hazardous substance, above the maximum concentration value, is present. Maximum concentration values for electronic information products, as set by the People's Republic of China Electronic Industry Standard SJ/T11364-2006,Include the hazardous substances of lead, mercury, hexavalent chromium, cadmium, polybrominated biphenyl (PBB), and polybrominated diphenyl ether (PBDE)	Bottom

Table 1-10 Warnings

LABEL/SYMBOL	PURPOSE/MEANING	LOCATION
	Indicates the product contains hazardous materials in excess of the limits established by Chinese standard SJ/T11363-2006 Requirements for Concentration Limits for Certain Hazardous Substances in Electronic Information Products. The number in the symbol is the Environment-friendly Use Period (EFUP), which indicates the period during which the toxic or hazardous substances or elements contained in electronic information products will not leak or mutate under normal operating conditions so that the use of such electronic information products will not result in any severe environmental pollution, any bodily injury or damage to any assets.	Rear panel, rating plate
	GOST symbol: Russia Regulatory Country Clearance.	Rating Plate
	This symbol is affixed to a battery to advise the user or owner that it must be recycled or disposed of in accordance with local, state, or country laws. The letter below indicates the toxic element (Pb=Lead, Cd=Cadimium, Hg=Mercury) that is contained in the battery that may require special recycling or disposal methods. Please contact a GEHC representative to facilitate servicing, removal and disposal options.	
	Utilize additional care and personnel when moving on steep inclines (>5 degrees) or loading into vehicle for transport.	Rating Plate of Docking Cart
	Do not put anything weighed over 5kg on the shelf.	Printer shelf of Docking Cart
	Do not push the system.	Back of Docking Cart
	Do not step on the system	Base chassis covers of Docking Cart

Section 1-3
Safety Considerations

1-3-1 Introduction

The following safety precautions must be observed during all phases of operation, service and repair of this equipment. Failure to comply with these precautions or with specific warnings elsewhere in this manual, violates safety standards of design, manufacture and intended use of the equipment.

1-3-2 Human Safety

Operating personnel must not remove the system covers.
Servicing should be performed by authorized personnel only.
Only personnel who have participated in a Venue 40 Training are authorized to service the equipment.

1-3-3 Mechanical Safety

⚠ **WARNING** ***Ultrasound probes are highly sensitive medical instruments that can easily be damaged by improper handling. Use care when handling and protect from damage when not in use. Do not use a damaged or defective probe. Failure to follow these precautions can result in serious injury and equipment damage.***

⚠ **WARNING** ***Never use a probe that has fallen to the floor. Even if it looks ok, it may be damaged.***

NOTE: Special care should be taken when transporting the unit in a vehicle:

- *Before transporting, place the system in its special storage case.*
- *Ensure that the system is firmly secured while inside the vehicle.*
- *Secure system with straps or as directed otherwise to prevent motion during transport.*
- *Prevent vibration damage by driving cautiously. Avoid unpaved roads, excessive speeds, and erratic stops or starts.*

1-3-4 Electrical Safety

To minimize shock hazard, the equipment chassis must be connected to an electrical ground. The system is equipped with a three-conductor AC power cable. This must be plugged into an approved electrical outlet with protective ground.

The power outlet used for this equipment should not be shared with other types of equipment.

Both the system power cable and the power connector meet international electrical standards.

1-3-5 Labels Locations

See Basic User Manual 5265930-1xx or 5419428-1xx for detail information.

1-3-6 Battery Safety

To avoid the risk of injury, follow the warning and cautions to make sure that the battery does not burst, ignite, or generate heat of fumes.

WARNING

- **The battery has a safety device. Do not disassemble or alter the battery.**
- **Charge the batteries only when the ambient temperature is between 0° and 40° C (32° and 104° F) and discharge the batteries between 0° and 40° C (32° and 104° F).**
- **Do not short-circuit the battery by directly connecting the negative terminals with metal objects.**
- **Do not heat the battery or discard it in a fire.**
- **Do not expose the battery to temperature over 50° C (122° F). Keep it away from fire and other heat sources.**
- **Do not charge the battery near a heat source, such as a fire or heater.**
- **Do not leave the battery in direct sunlight.**
- **Do not drop packs from height to prevent them from possible malfunction damage.**
- **Do not pierce the battery with a sharp object, hit it, or step on it.**
- **Do not use a damaged battery.**
- **Do not solder a battery.**
- **Do not connect the battery to an electrical power outlet.**
- **In the case of the Venue 40 will not be used for a long time, remove the battery.**

CAUTION **To avoid the battery bursting, igniting, or fumes from the battery causing equipment damage, observe the following precautions:**

- **Do not immerse the battery in water or allow it to get wet.**
- **Do not put the battery into a microwave oven or pressurized container.**
- **If the battery leaks or emits an odor, remove it from all possible flammable sources.**
- **If the battery emits an odor or heat, is deformed or discolored, or in a way appears abnormal during use, recharging or storage, immediately remove it and stop using it. If you have any questions about the battery, consult GE or your local representative.**
- **Short term (less than one month) storage of battery pack:**
    - **Store the battery in a temperature range between 0° C (32° F) and 50° C (122°F).**
- **Use only GE recognized batteries.**
- **In case of the long term (3 months or more) storage:**
    - **Store the battery in a temperature range of -20° C (-4° F) and 45° C (113°F).**
    - **When charging for the first time after long-term storage. Recover such packs to original performance through repeating several cycles of full charging and discharging.**
    - **When store packs for more than 6 months, charge at lease once charging require per 6 months to prevent leakage and deterioration in performance due to self-discharging.**
- **When the system isn't powered on continuously more than 6 months, in order to prevent leakage and deterioration in performance of CMOS battery, power on the system at least once per 6 months for more than 10 hours to have CMOS battery fully charged. Time and date need to be re-setup.**

1-3-7 Dangerous Procedure Warnings

Warnings, such as the examples below, precede potentially dangerous procedures throughout this manual. Instructions contained in the warnings must be followed.

DANGER **DANGEROUS VOLTAGES, CAPABLE OF CAUSING DEATH, ARE PRESENT IN THIS EQUIPMENT. USE EXTREME CAUTION WHEN HANDLING, TESTING AND ADJUSTING.**

WARNING ***EXPLOSION WARNING***

DO NOT OPERATE THE EQUIPMENT IN AN EXPLOSIVE ATMOSPHERE. OPERATION OF ANY ELECTRICAL EQUIPMENT IN SUCH AN ENVIRONMENT CONSTITUTES A DEFINITE SAFETY HAZARD.

WARNING ***DO NOT SUBSTITUTE PARTS OR MODIFY EQUIPMENT***

BECAUSE OF THE DANGER OF INTRODUCING ADDITIONAL HAZARDS, DO NOT INSTALL SUBSTITUTE PARTS OR PERFORM ANY UNAUTHORIZED MODIFICATION OF THE EQUIPMENT.

WARNING ***SYSTEM FILE DAMAGE MAY RESULT FROM FORCED SHUT DOWN OR REMOVING THE ACDC PLUG.***

Section 1-4
Lockout/Tagout (LOTO) requirements

Follow OSHA Lockout/Tagout requirements (USA) or local Lockout/Tagout requirements by ensuring you are in total control of the AC power plug at all times during the service process.

To apply Lockout/Tagout:

1.) Plan and prepare for shutdown.
2.) Shutdown the equipment.
3.) Isolate the equipment.
4.) Apply Lockout/Tagout Devices.
5.) Remove battery.
6.) Control all stored and residual energy.
7.) Verify isolation.
All potentially hazardous stored or residual energy is relieved.

NOTICE Energy Control and Power Lockout for Venue 40

WHEN SERVICING PARTS OF THE SYSTEM WHERE THERE IS EXPOSURE TO VOLTAGE GREATER THAN 30 VOLTS:
1. TURN OFF THE SCANNER.
2. UNPLUG THE SYSTEM.
3. MAINTAIN CONTROL OF THE SYSTEM POWER PLUG.
4. WAIT FOR AT LEAST 20 SECONDS FOR CAPACITORS TO DISCHARGE AS THERE ARE NO TEST POINTS TO VERIFY ISOLATION. THE AMBER LIGHT ON THE OP PANEL ON/OFF BUTTON WILL TURN OFF.
5. REMOVE THE SYSTEM BATTERY.

Section 1-5
Returning/Shipping Probes and Repair Parts

Equipment being returned must be clean and free of blood and other infectious substances.

GE Healthcare policy states that body fluids must be properly removed from any part or equipment prior to shipment. GE Healthcare employees, as well as customers, are responsible for ensuring that parts/ equipment have been properly decontaminated prior to shipment. Under no circumstance should a part or equipment with visible body fluids be taken or shipped from a clinic or site (for example, body coils or an ultrasound probe).

The purpose of the regulation is to protect employees in the transportation industry, as well as the people who will receive or open this package.

NOTE: The US Department of Transportation (DOT) has ruled that "items that were saturated and/or dripping with human blood that are now caked with dried blood; or which were used or intended for use in patient care" are "regulated medical waste" for transportation purposes and must be transported as a hazardous material.

NOTE: The USER/SERVICE staff should dispose all the waste properly as per federal, state, and local waste disposal regulation.

Section 1-6
EMC, EMI, and ESD

1-6-1 Electromagnetic Compatibility (EMC)

Electromagnetic compatibility describes a level of performance of a device within its electromagnetic environment. This environment consists of the device itself and its surroundings including other equipment, power sources and persons with which the device must interface. Inadequate compatibility results when a susceptible device fails to perform as intended due interference from its environment or when the device produces unacceptable levels of emission to its environment. This interference is often referred to as radio–frequency or electromagnetic interference (RFI/EMI) and can be radiated through space or conducted over interconnecting power of signal cables. In addition to electromagnetic energy, EMC also includes possible effects from electrical fields, magnetic fields, electrostatic discharge and disturbances in the electrical power supply.

1-6-2 CE Compliance

The Venue 40 unit conforms to all applicable conducted and radiated emission limits and to immunity from electrostatic discharge, radiated and conducted RF fields, magnetic fields and power line transient requirements.

For applicable standards refer to the Safety Chapter in the Basic User Manual.

NOTE: ***For CE Compliance, it is critical that all covers, screws, shielding, gaskets, mesh, clamps, are in good condition, installed tightly without skew or stress. Proper installation following all comments noted in this service manual is required in order to achieve full EMC performance.***

1-6-3 Electrostatic Discharge (ESD) Prevention

⚠ **WARNING** ***DO NOT TOUCH ANY BOARDS WITH INTEGRATED CIRCUITS PRIOR TO TAKING THE NECESSARY ESD PRECAUTIONS:***

FOLLOW GENERAL GUIDELINES FOR HANDLING OF ELECTROSTATIC SENSITIVE EQUIPMENT.

Section 1-7
Customer Assistance

1-7-1 Contact Information

If this equipment does not work as indicated in this service manual or in the User Manual, or if you require additional assistance, please contact the local distributor or appropriate support resource, as listed below.

Prepare the following information before you call:

- System ID serial number.
- Software version.
- Date and time of occurrence
- Sequence of events leading to issue
- Is the issue reproducible?
- Imaging mode, probe, application
- Media brand, speed, capacity, type
- Save image capture, cine loop

Table 1-11 Phone Numbers for Customer Assistance

Location	Phone Number	
USA GE Medical Systems Ultrasound Service Engineering 9900 Innovation Drive Wauwatosa, WI 53226	Service: On-site Service: Parts Applications support	1-800–437–1171 1-800-558-2040 1-800-682-5327 or 1-262-524-5698
Canada		1-800-668-0732
Latin America	Service Applications support	1-800-321-7937 1-262-524-5698
Europe (OLC EMEA) GE Ultraschall Deutschland GmbH& Co. KG Beethovenstrasse 239 Postfach 11 05 60, D-42665 Solingen Germany	Phone: +49 (0)212 2802 - 652 (English/German) +33 1 3083 1300 (English/German all segments incl. training) +43 (0) 7682-3800-26 (Volunson-Logiqbook) Fax: +49 (0)212-2802-431	
Online Services Ultrasound Asia Australia China India Japan Korea Singapore	Phone: +(61) 1-8---647-855 +(86) 800-810-8188 +(91) 1-800-11-4567 +(81) 42-648-2924 +(82) 2620 13585 +(95) 6277-3444	

1-7-2 System Manufacturer

Table 1-12 System Manufacturer

Manufacturer	Phone Number
GE Medical Systems (China) Co., Ltd. No.19, Changjiang Road, Wuxi National Hi-Tech Dev. Zone, Jiangsu, P.R.China 214028	TEL: +86 510-85225888 FAX: +86 510-85226688

Chapter 2
Site Preparation

Section 2-1
Overview

2-1-1 Purpose of this chapter 2

This chapter provides the information required to plan and prepare for the installation of a Venue 40. Included are descriptions of the facility and electrical needs to be met by the purchaser of the unit.

2-1-2 Chapter Contents

Table 2-1 Contents in Chapter 2

Section 2-2
General Console Requirements

2-2-1 Console Environmental Requirements

Table 2-2 Environmental Requirements for Venue 40 Scanners

	Operational	Storage	Transport
Temperature	10 - 40 degree C	-5 - 50 degree C	-5 - 50 degree C
Humidity	30 - 75% non-condensing	10 - 90% non-condensing	10 - 90% non-condensing
Pressure	700 - 1060hPa	700 - 1060hPa	700 - 1060hPa
Temperatures in degree C, conversion to degree F =(degree C*(9/5) + 32)			

2-2-1-1 Lighting

Bright light is needed for system installation, updates and repairs. However, operator and patient comfort may be optimized if the room light is subdued and indirect. Therefore a combination lighting system (dim/bright) is recommended. Keep in mind that lighting controls and diameters can be a source of EMI which could degrade image quality. These controls should be selected to minimize possible interface.

2-2-2 Electrical Requirements

NOTE: GE Medical Systems requires a dedicated power and ground for the proper operation of its Ultrasound equipment. This dedicated power shall originate at the last distribution panel before the system.

Sites with a mains power system with defined Neutral and Live:

The dedicated line shall consist of one phase, a neutral (not shared with any other circuit), and a full size ground wire from the distribution panel to the Ultrasound outlet.

Sites with a mains power system without a defined Neutral:

The dedicated line shall consist of one phase (two lines), not shared with any other circuit, and a full size ground wire from the distribution panel to the Ultrasound outlet.

Please note that image artifacts can occur, if at any time within the facility, the ground from the main facility's incoming power source to the Ultrasound unit is only a conduit.

2-2-2-1 Venue 40 Power Requirements

Table 2-3 Electrical Specifications for Venue 40

Voltage	Power	Current	Frequency
100-240 V	180VA max.	1.3 A (max.)	50/ 60HZ

Table 2-4 Electrical Specification for Docking Cart

Voltage	Power	Current	Frequency
100-240 V	380VA max.	2.7 A (max.)	50/ 60HZ

2-2-2-2 Inrush Current

Table 2-5 Inrush Current

Voltage	Inrush Current
100V	75A(max)
240V	120A(max)

2-2-2-3 Site Circuit Breaker

It is recommended that the branch circuit breaker for the machine be readily accessible.

2-2-2-4 Site Power Outlets

A dedicated AC power outlet must be within reach of the unit without extension cords. Other adequate outlets for the external peripherals, medical and test equipment needed to support this unit must also be present within 1 m (3.2 ft.) of the unit. Electrical installation must meet all current local, state, and national electrical codes.

2-2-2-5 Unit Power Plug

If the unit arrives without a power plug, or with the wrong plug, you must contact your GE dealer or the installation engineer must supply what is locally required.

2-2-3 EMI Limitations

Ultrasound machines are susceptible to Electromagnetic Interference (EMI) from radio frequencies, magnetic fields, and transient in the air wiring. They also generate EMI. The Venue 40 complies with limits as stated on the EMC label. However there is no guarantee that interface will not occur in a particular installation.

Possible EMI sources should be identified before the unit is installed.

Electrical and electronic equipment may produce EMI unintentionally as the result of defect.

These sources include:

- medical lasers,
- scanners,
- cauterizing guns,
- computers,
- monitors,
- fans,
- gel warmers,
- microwave ovens,
- light dimmers,
- portable phones.

The presence of a broadcast station or broadcast van may also cause interference.

See Table 2-6 for EMI Prevention tips.

Table 2-6 EMI Prevention/abatement

EMI Rule	Details
Be aware of RF sources	Keep the unit at least 5 meters or 15 feet away from other EMI sources. Special shielding may be required to eliminate interference problems caused by high frequency, high powered radio or video broadcast signals.
Ground the unit	Poor grounding is the most likely reason a unit will have noisy images. Check grounding of the power cord and power outlet.
Replace all screws, RF gaskets, covers, cores	After you finish repairing or updating the system, replace all covers and tighten all screws. Any cable with an external connection requires a magnet wrap at each end. Install the shield over the front of card cage. Loose or missing covers or RF gaskets allow radio frequencies to interfere with the ultrasound signals.
Replace broken RF gaskets	If more than 20% or a pair of the fingers on an RF gasket are broken, replace the gasket. Do not turn on the unit until any loose metallic part is removed.
Do not place labels where RF gaskets touch metal	Never place a label where RF gaskets meet the unit. Otherwise, the gap created will permit RF leakage. Or, if a label has been found in such a position, move the label.
Use GE specified harnesses and peripherals	The interconnect cables are grounded and require ferrite beads and other shielding. Also, cable length, material, and routing are all important; do not change from what is specified.
Take care with cellular phones	Cellular phones may transmit a 5 V/m signal; that could cause image artifacts.
Properly dress peripheral cables	Do not allow cables to lie across the top of the card cage or hang out of the peripheral bays. Loop the excess length for peripheral cables inside the peripheral bays. Attach the monitor cables to the frame.

2-2-4 Scan Probe Environmental Requirements

Operation:10° to 40° C

Storage:-10° to 60° C

*NOTE: Temperature in degrees C. Conversion to Degrees F = (Degrees C * (9/5) + 32).*

NOTICE SYSTEMS AND ELECTRONIC PROBES ARE DESIGNED FOR STORAGE TEMPERATURES OF -10 TO + 60 degrees C. WHEN EXPOSED TO LARGE TEMPERATURE VARIATIONS, THE PRODUCT SHOULD BE KEPT IN ROOM TEMPERATURE FOR 10 HOURS BEFORE USE.

Section 2-3
Facility Needs

2-3-1 Recommended Ultrasound Room Layout

2-3-1-1 Purchaser Responsibilities

The work and materials needed to prepare the site is the responsibility of the purchaser. Delay, confusion, and waste of manpower can be avoided by completing pre installation work before delivery. Use the Pre Installation checklist to verify that all needed steps have been taken,
Purchaser reasonability includes:

- Procuring the materials required.
- Completing the preparations before delivery of the ultrasound system.
- Paying the costs for any alternations and modifications not specifically provided in the sales contract.

NOTE: All electrical installation that are preliminary to the positioning of the equipment at the site prepared for the equipment must be performed by licensed electrical contractors. Other connections between pieces of electrical equipment, products involved (and the accompanying electrical installations) are highly sophisticated and special engineering competence is required. All electrical work on these product must comply with the requirements of applicable electrical codes. The purchaser of GE equipment must only utilize qualified personnel to perform electrical servicing on the equipment.

The desire to use a non-listed or customer provided product or to place an approved product further from the system than the interface kit allows presents challenges to the installation team. To avoid delays during installation, such variances should be made known to the individuals or group performing the installation at the earliest possible date (preferable prior to purchase).
The ultrasound suite must be clean prior to delivery of the machine. Carpet is not recommended because it collects dust and creates static. Potential sources of EMI (electromagnetic interference) should also be investigated before delivery. Dirt, static, and EMI can negatively impact system.

2-3-2 Required Features

NOTE: GE Medical Systems requires a dedicated power and ground for the proper operation of its Ultrasound equipment. This dedicated power shall originate at the last distribution panel before the system.

Sites with a mains power system with defined Neutral and Live:

The dedicated line shall consist of one phase, a neutral (not shared with any other circuit), and a full size ground wire from the distribution panel to the Ultrasound outlet.

Sites with a mains power system without a defined Neutral:

The dedicated line shall consist of one phase (two lines), not shared with any other circuit, and a full size ground wire from the distribution panel to the Ultrasound outlet.

Please note that image artifacts can occur, if at any time within the facility, the ground from the main facility's incoming power source to the Ultrasound unit is only a conduit.

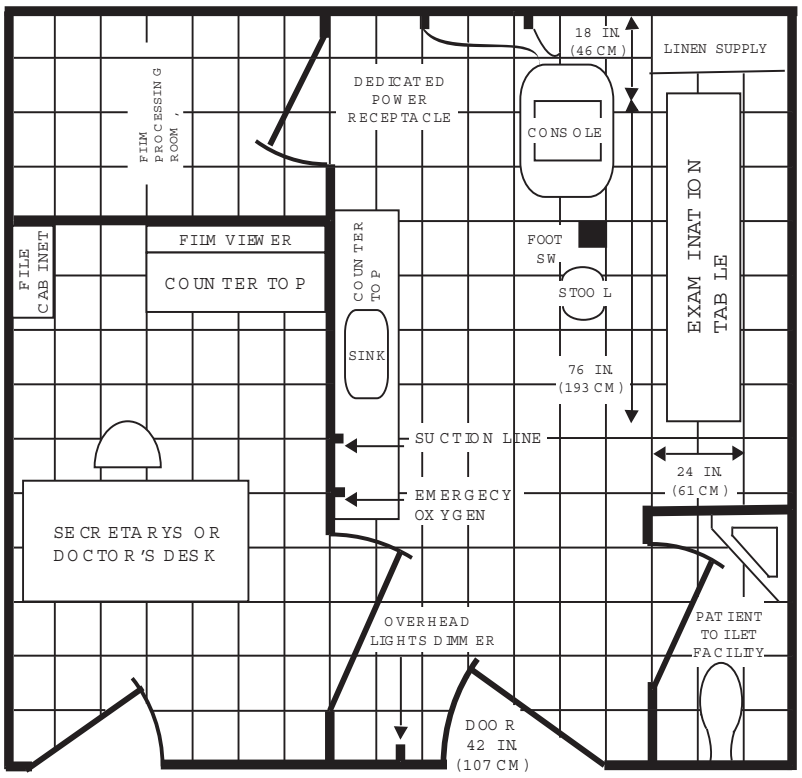
- Dedicated single branch power outlet of adequate amperage meeting all local and national codes which is located less than 2.5 m (8 ft.) from the unit's proposed location
- Door opening is at least 76 cm (30 in) wide
- Proposed location for unit is at least 0.2m (0.67 ft.) from the wall for cooling
- Power outlet and place for any external peripheral are within 2 m (6.5 ft.) of each other with peripheral within 1 m of the unit to connect cables.
- Power outlets for other medical equipment and gel warmer
- Power outlets for test equipment and modem within 1 m (3.2 ft.) of unit
- Clean and protected space to store transducers (in their cases or on a rack)
- Material to safely clean probes (done with a plastic container, never metal)

2-3-3 Desirable Features

- Circuit breaker for dedicated power outlet is easily accessible
- Sink with hot and cold water
- Receptacle for bio–hazardous waste, like used probe sheaths
- Emergency oxygen supply
- Storage for linens and equipment
- Nearby waiting room, lavatory, and dressing room
- Dual level lighting (bright and dim)
- Lockable cabinet ordered by GE for its software and proprietary manuals.

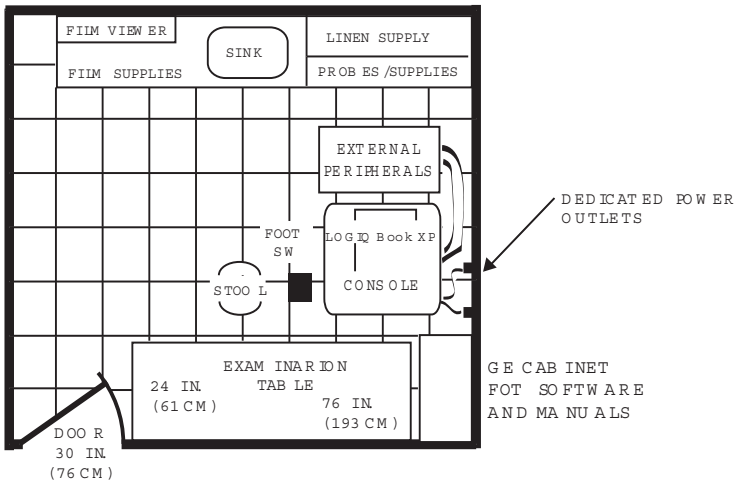
2-3-3-1 Recommended and Alternate Ultrasound Room Layout

Recommended standard floor plan and a minimal floor plan for ultrasound equipment:



A 14 by 17 foot Recommended Floor Plan

Scale: Each square equals one square foot



An 8 by 10 foot Minimal Floor Plan

Figure 2-1 RECOMMENDED ULTRASOUND ROOM LAYOUT

2-3-4 Networking Pre-installation Requirements

2-3-4-1 Stand Alone Scanner (without Network Connection)

None.

2-3-4-2 Scanner Connected to Hospital's Network

Supported networks:

Wireless LAN

2-3-4-3 Purpose of DICOM Network Function

DICOM services provide the operator with clinically useful features for moving images and patient information over a hospital network. Examples of DICOM services include the transfer of images to workstations for viewing or transferring images to remote printers. As an added benefit, transferring images in this manner frees up the on-board monitor and peripherals, enabling viewing to be done while scanning continues. With DICOM, images can be archived, stored, and retrieved faster, easier, and at a lower cost.

2-3-4-4 DICOM Option Pre-installation Requirements

To configure the Venue 40 to work with other network connections, the site's network administrator must provide some necessary information.

Information must include:

- A host name, local port number, AE Title, IP address and Net Mask for the Venue 40.
- The IP addresses for the default gateway and other routers at the site for ROUTING INFORMATION.
- The host name, IP address, port and AE Title for each device the site wants connected to the Venue 40 for DICOM APPLICATION INFORMATION. A field for the make (manufacturer) and the revision of the device, is also included. This information may be useful for solving errors.

2-3-4-4 DICOM Option Pre-installation Requirements (cont'd)

.

Venue 40
Host Name _____ **Local Port** _____ **IP Address** ___.___.___.___

AE Title _____ **Net Mask** ___.___.___.___

ROUTING INFORMATION

	Destination IP Addresses	GATEWAY IP Addresses
		Default ___.___.___.___
ROUTER1	___.___.___.___	___.___.___.___
ROUTER2	___.___.___.___	___.___.___.___
ROUTER3	___.___.___.___	___.___.___.___

DICOM APPLICATION INFORMATION

	NAME	MAKE/REVISION	AE TITLE	IP ADDRESSES	PORT
Store 1				___.___.___.___	
Store 2				___.___.___.___	
Store 3				___.___.___.___	
Store 4				___.___.___.___	
Store 5				___.___.___.___	
Store 6				___.___.___.___	
Worklist				___.___.___.___	
Storage Commit				___.___.___.___	
MPPS				___.___.___.___	

Figure 2-2 Worksheet for DICOM Network Information

Chapter 3
System Setup

Section 3-1
Overview

3-1-1 Purpose of Chapter 3

This chapter contains information needed to install the unit. Included are references to a procedure that describes how to receive and unpack the equipment and how to file a damage or loss claim.
How to prepare the facility and unit of the actual installation, and how to check and test the unit, probes, and external peripherals for electrical safety are included in this procedure. Also included in this section are guidelines for transporting the unit to a new site.

Table 3-7 Contents in Chapter 3

3-1-2 Average Setup Time

Table 3-8 Average Installation Time

Description	Average Installation Time	Comments
Unpacking the scanner	20 minutes	
Scanner wo/options	30 minutes	Dependent on the configuration that is required

The Venue 40 installation and functional checkout will take approximately one hour. Venue 40 consoles with optional equipment may take slightly longer.

3-1-3 Installation Warnings

8.) There are no operator serviceable components. To prevent shock, do not remove any covers or panels. Should problems or malfunctions occur, unplug the power cord. Only qualified service personnel should carry out servicing.

NOTE: For information regarding packing labels, refer to LABELS ON PACKAGE.

9.) After being transported, the unit may be very cold or hot. If this is the case, allow the unit to acclimate before you turn it on. It requires one hour for each 2.5 degrees C increment it's temperature is below 10 degrees C or above 40 degrees C.

⚠ **DANGER Equipment damage possibility. Turning the system on without acclimation after arriving at site may cause the system to be damaged.**

Table 3-9 Time for Settlement

°C	60	55	50	45	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40
°F	140	131	122	113	104	95	86	77	68	59	50	41	32	23	14	5	-4	-13	-22	-31	-40
hrs	8	6	4	2	0	0	0	0	0	0	0	2	4	6	8	10	12	14	16	18	20

3-1-4 Safety Reminders

⚠ **DANGER WHEN USING ANY TEST INSTRUMENT THAT IS CAPABLE OF OPENING THE AC GROUND LINE (I.E., METER'S GROUND SWITCH IS OPEN), DON'T TOUCH THE UNIT!**

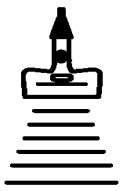
⚠ **CAUTION If the unit is very cold or hot, do not turn on its power until it has had a chance to acclimate to its operating environment.**

⚠ **DANGER To prevent electrical shock, connect the unit to a properly grounded power outlet. Do not use a three to two prong adapter. This defeats safety grounding.**

⚠ **DANGER Do not operate this unit unless all board covers are securely in place.**

⚠ **DANGER OPERATOR MANUAL(S)**
The User Manual(s) should be fully read and understood before operating the Venue 40 and kept near the unit for quick reference.

⚠ **DANGER ACOUSTIC OUTPUT HAZARD**
Although the ultrasound energy transmitted from the Venue 40 probe is within FDA limits, avoid unnecessary exposure. Ultrasound energy can produce heat and mechanical damage



Section 3-2
Receiving and Unpacking the Equipment

When a new system arrives, check that any components are not damaged and are not in short supply. If shipping damage or shortage occurs, contact the address shown in Chapter 1.

3-2-1 Unpacking Venue 40

1.) Cut the four PLASTIC BANDs.

2.) Cut the adhesive tape and open top covers of paper carton.

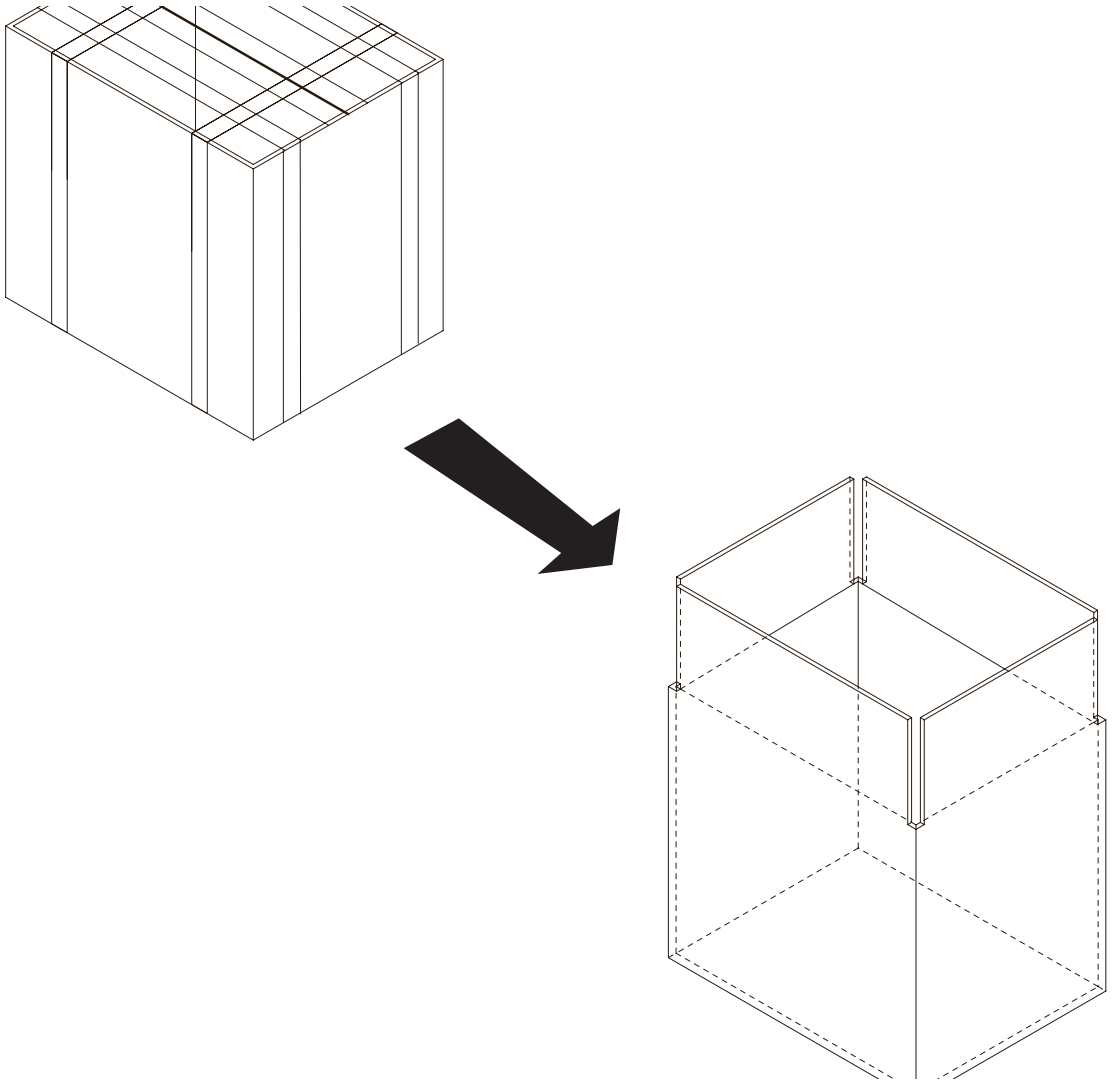


Figure 3-3 Open top covers of paper carton.

3-2-1 Unpacking Venue 40 (cont'd)

3.) Take out the paper pad on the side. Refer to Figure 3-4 on page 3-5

4.) Take out the Accessories Package and Console Package. Refer to Figure 3-4 on page 3-5

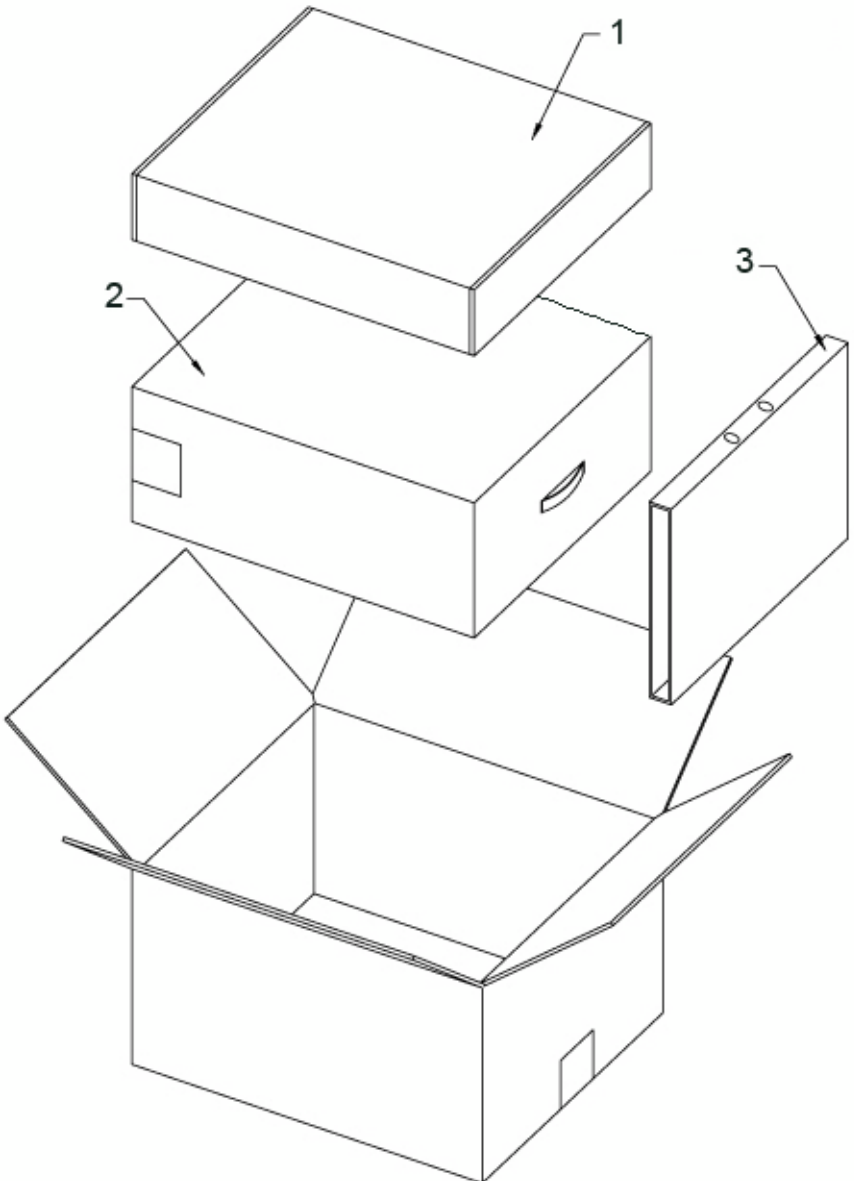


Figure 3-4 Unpacking Venue 40

Item	Description
1	Accessories Package
2	Console Package
3	Paper pad

3-2-1 Unpacking Venue 40 (cont'd)

5.) Open the Console Package, remove the pad. Take out stylus and battery package. Take out the console. Take off the protective bag and the PE bag. Refer to Figure 3-5 on page 3-6

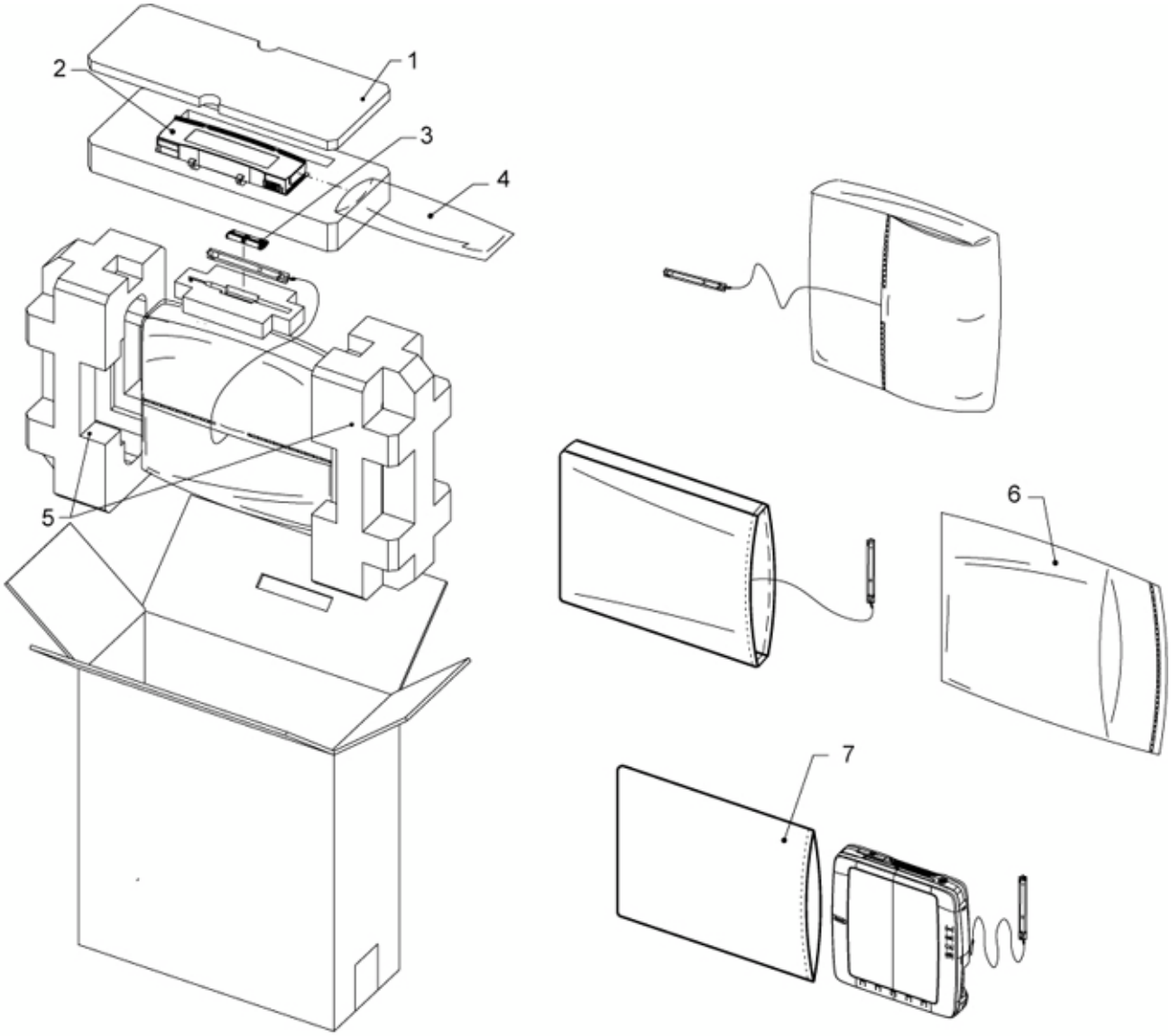


Figure 3-5 Taking out the system

3-2-1 Unpacking Venue 40 (cont'd)

Item	Description
1	Paper pad
2	Battery
3	Stylus Package
4	Battery Bag
5	Foam
6	Venue 40 Protective bag
7	PE bag

3-2-1 Unpacking Venue 40 (cont'd)

6.) Open the Accessories Package,

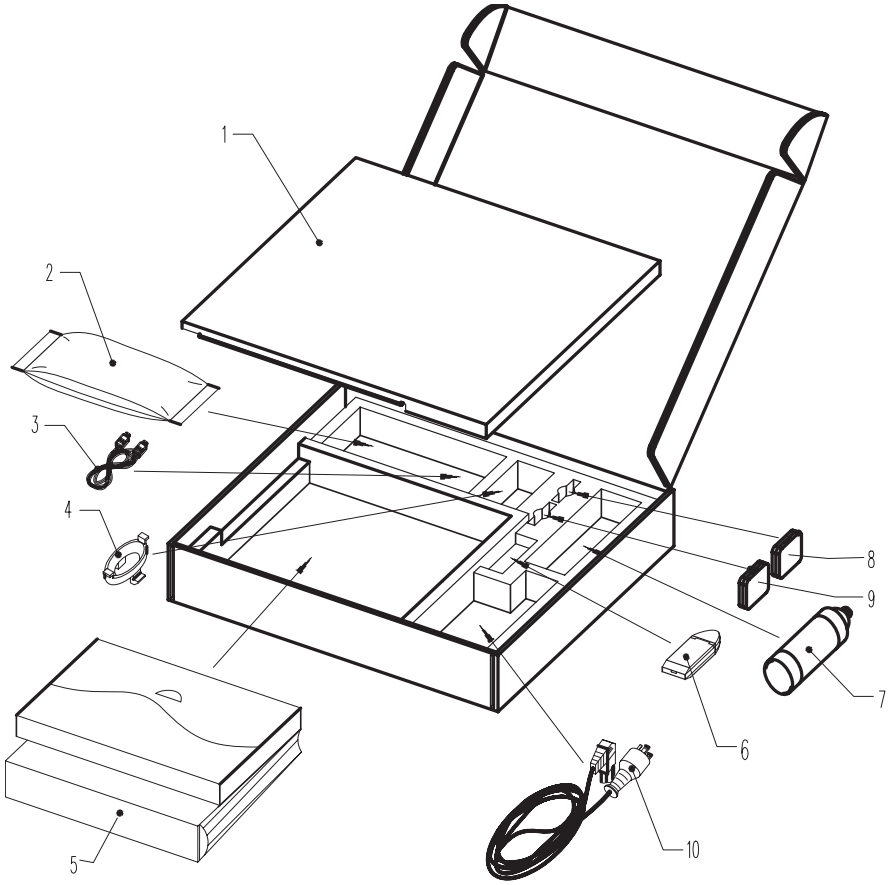


Figure 3-6 Opening Accessories box

Item	Description
1	Cover pad
2	Biopsy kit (option)
3	USB cable with miniB
4	Probe bracket for needle guide (option)
5	Manuals (option)
6	SD Card Reader
7	Aquasonic gel
8	SD Card for data storage
9	Software SD Card - for re-loading software as needed
10	Power Cable (option)

NOTE: Make sure all the items in the checklist are in the Accessories box, contact GE Service if any problem.

3-2-2 Unpacking Docking Station

1.) Cut the four PLASTIC BANDs.

2.) Cut the adhesive tape and open top covers of paper carton

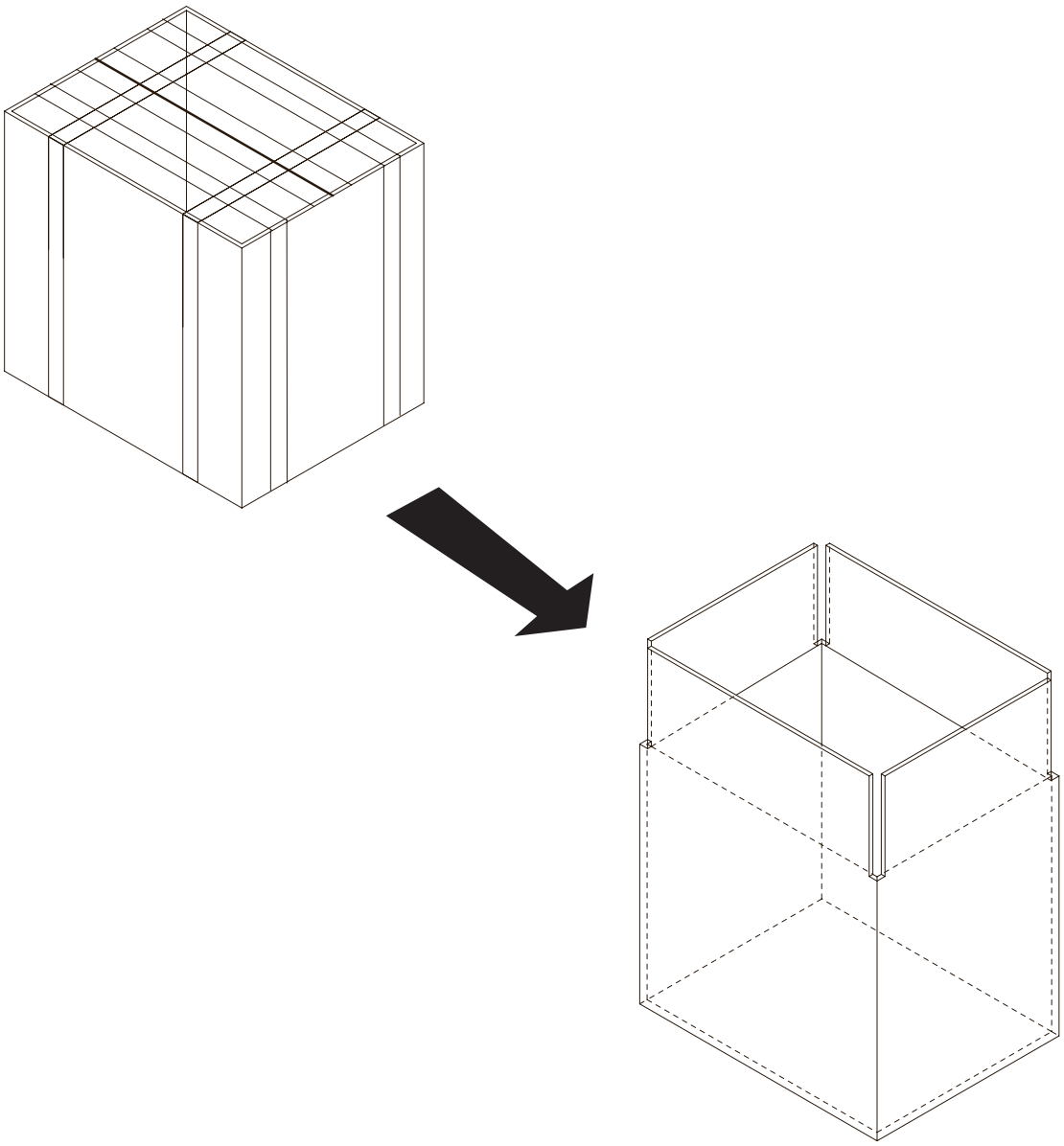


Figure 3-7 Open top covers of paper carton.

3-2-2 Unpacking Docking Station (cont'd)

3.) Remove top foam, take out the Docking Station Module and probe holders.

4.) Take out the Base support module.

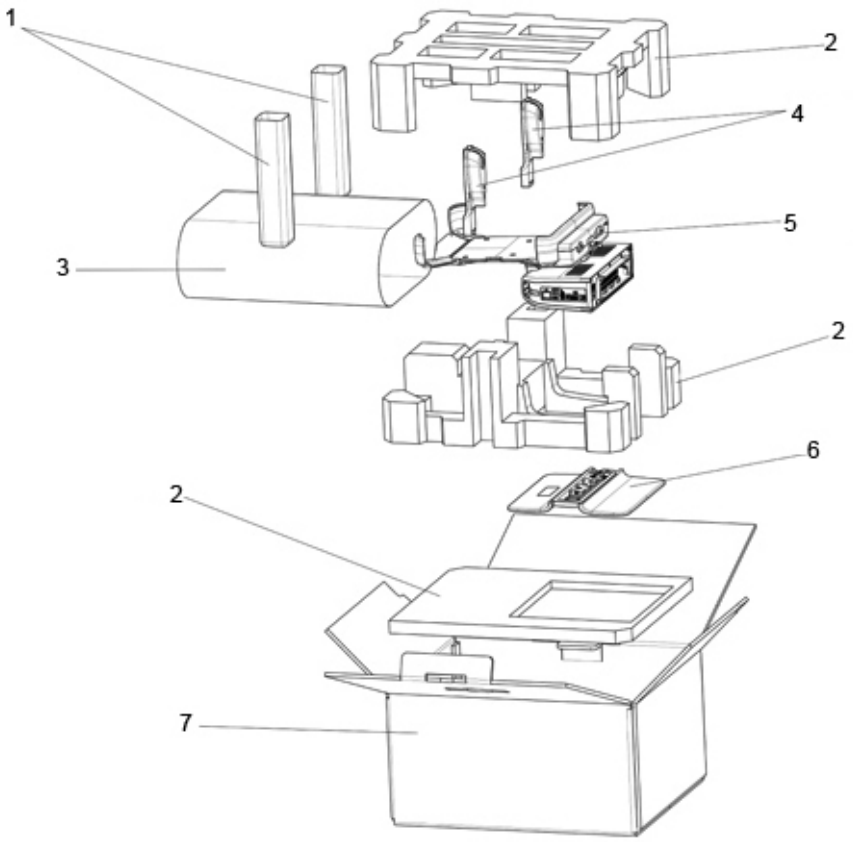


Figure 3-8 Unpacking the Docking Station

Item	Description
1	Probe holder bag
2	Foam
3	Docking Station bag
4	Probe holders
5	Docking Station module
6	Docking Station desk support module
7	Carton
	Power cord

3-2-2 Unpacking Docking Station (cont'd)

5.) Place the Docking Station Module on track of Base Support Module starting from the left, and slowly move it to the right till it clicks:

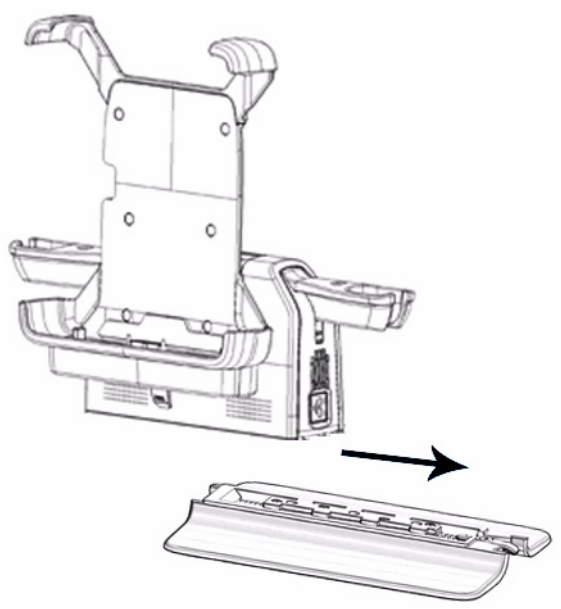


Figure 3-9 Install the Docking Station

3-2-3 Unpacking Docking Cart

If the package of the Docking Cart is a wooden box,

1.) Cut the tape and take off the tool attached to the box.
2.) Insert the ending head of the tool to the hole of the tongue.
3.) Pull the tongue to the limit.
4.) Insert the plain head of the tool to the hole of the tongue.
5.) Pull the tongue until it ends up
6.) After all the tongues end up, separate the profile from tongue to open the whole box.

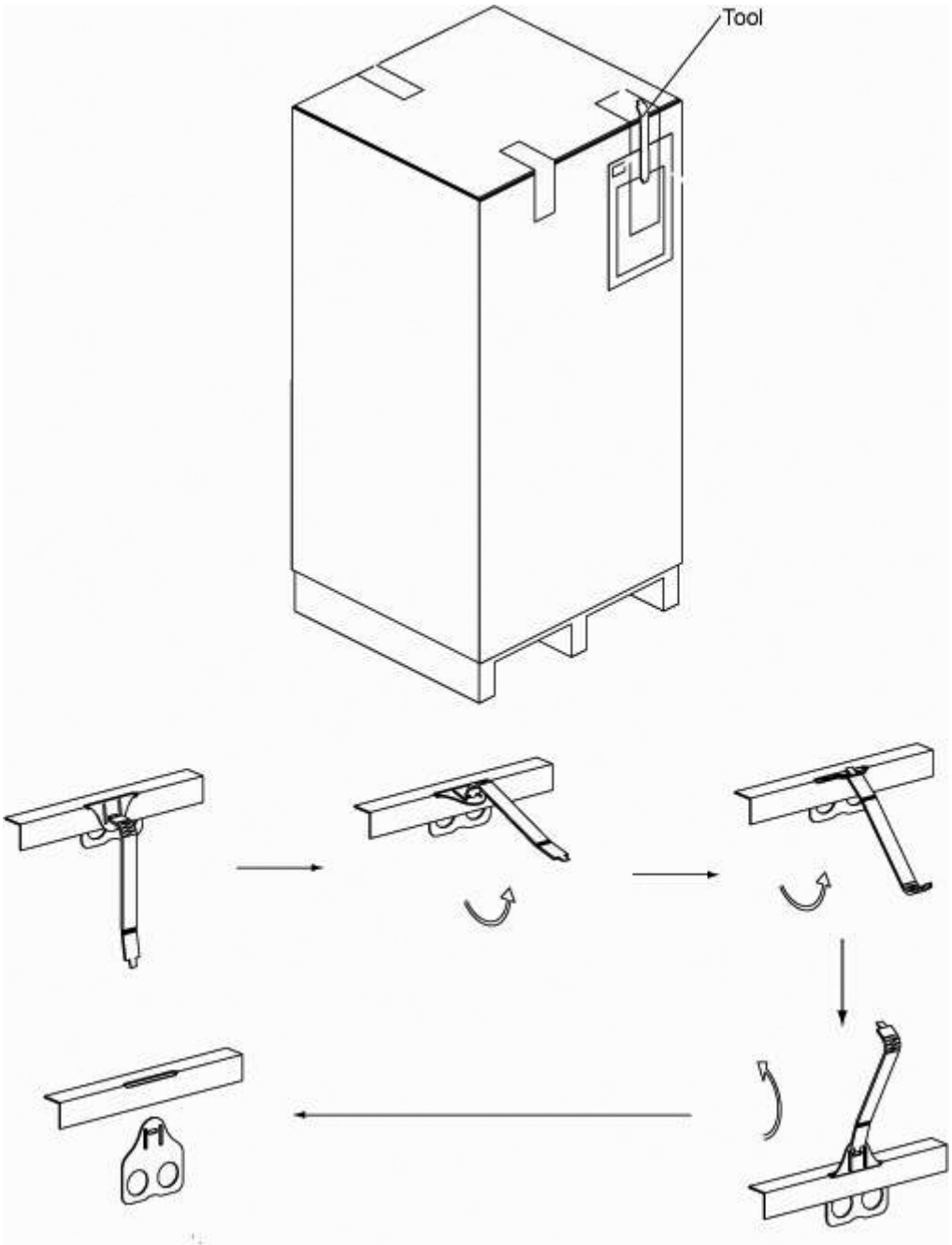


Figure 3-10 Open the box of Docking Cart (wooden box)

3-2-3 Unpacking Docking Cart (cont'd)

7.) Open the box, remove all the foam, cut the wire ties on the chassis. Take out the Docking Cart.

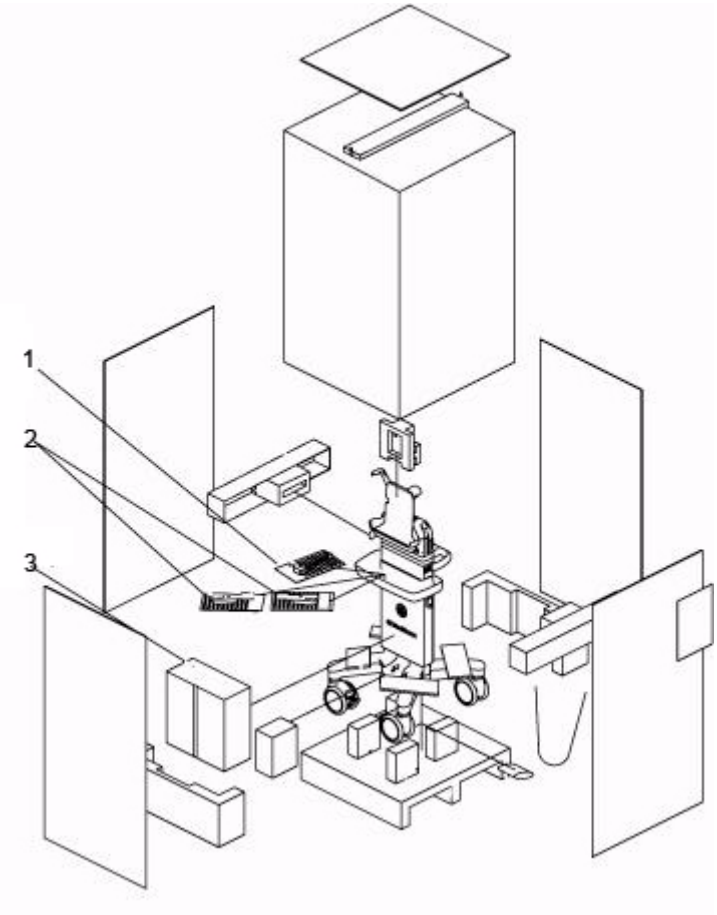


Figure 3-11 Unpacking Docking Cart (wooden box)

Item	Description
1	Power cord bag
2	Probe holder bag and power cord
3	Printer Shelf kit (option)

3-2-3 Unpacking Docking Cart (cont'd)

If the package of the Docking Cart is paper carton,

1.) Cut the adhesive tape
2.) Open the top cover of paper carton.
3.) Rotate the plastic locker counter clockwise and pull it out. Unlock all the four plastic lockers.
4.) Remove the carton frames on both sides.
5.) Remove all the foam and the ESD bag, cut the wire ties on the chassis. Take out the Docking Cart.

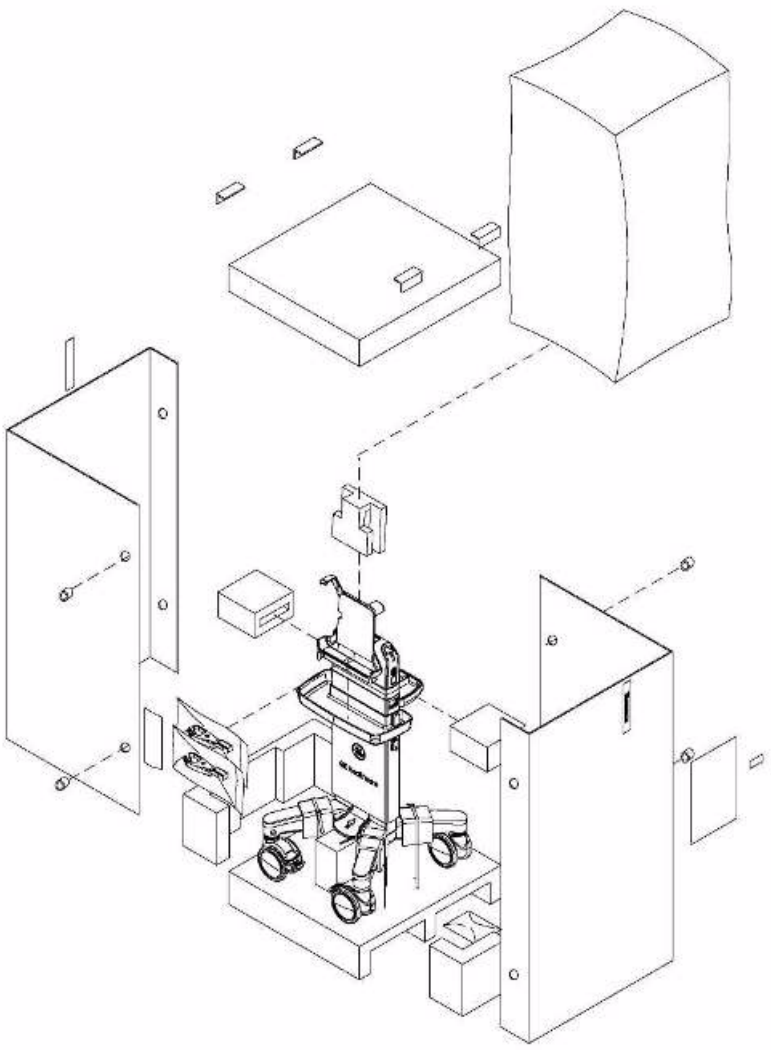


Figure 3-12 Unpack the Docking Cart (paper carton)

3-2-4 Unpacking 3-probe Port Box

NOTE: 3-probe Port Box is not available in China, Japan or Korea.

1.) Cut the four PLASTIC BANDs.
2.) Cut the adhesive tape and open top covers of paper carton.

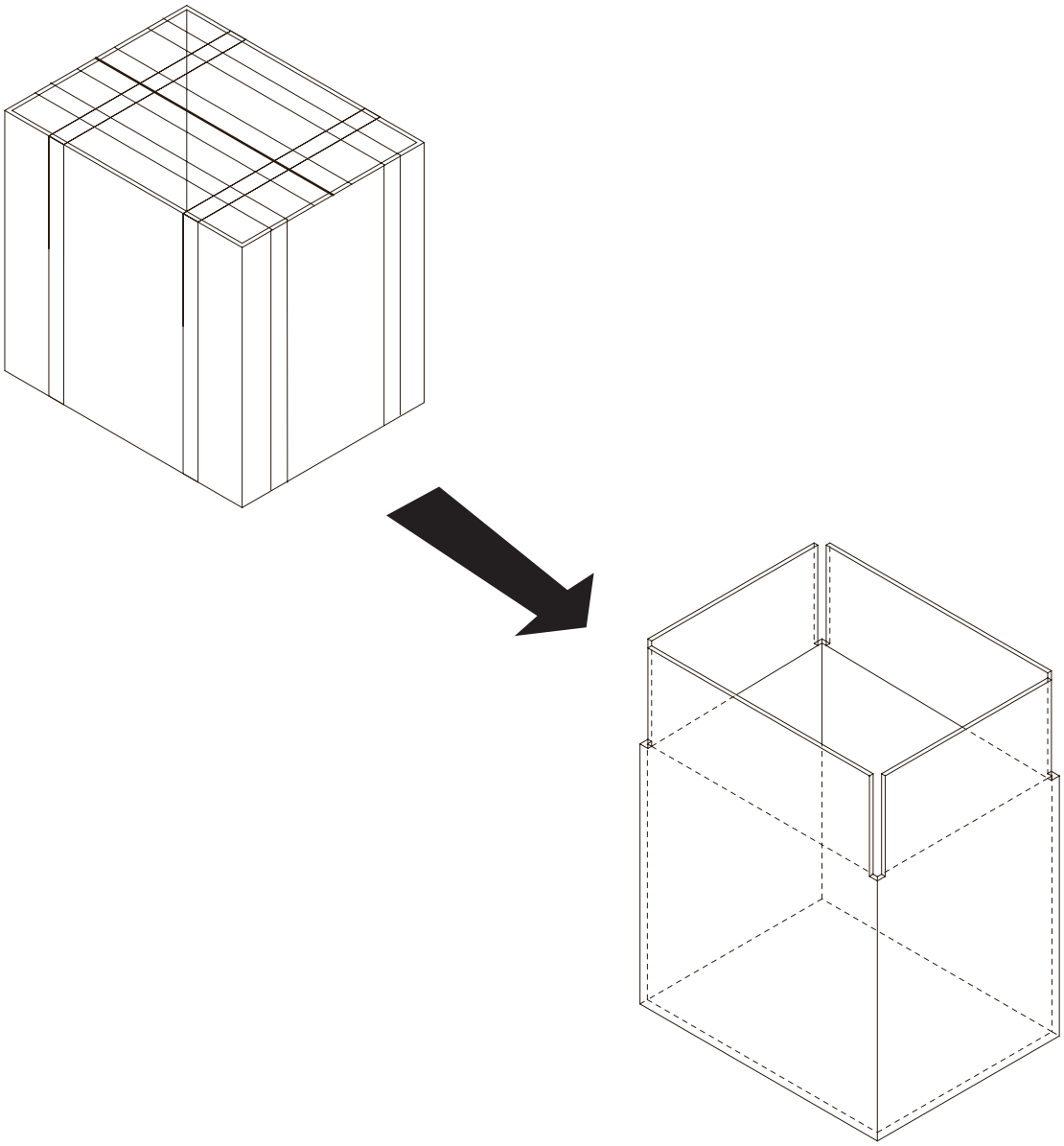


Figure 3-13 Open top covers of paper carton

3-2-4 Unpacking 3-probe Port Box (cont'd)

3.) Remove the top foam, and take out the 3-probe Port Box, multi-probe holders, E8CS-SC probe holder and gel holder.

4.) Continue to remove the foam, and take out the printer shelf and the drawer.

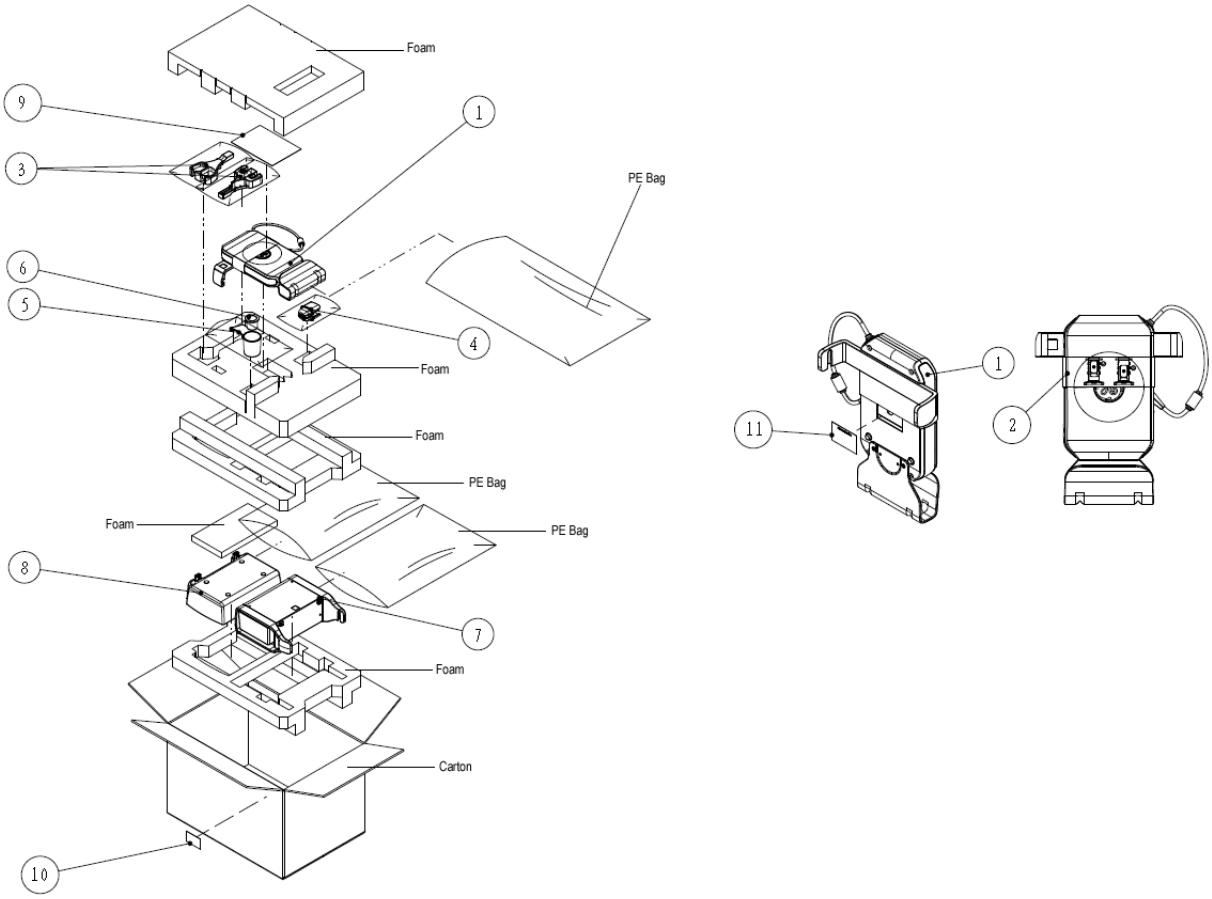


Figure 3-14 Unpacking the 3-probe Port Box

Item	Description
1	3-probe Port Box
2	Installation Instructions
3	Multi-probe Holder
4	E8CS-SC Probe Holder
5	Gel Holder
6	Gel Holder
7	Printer Shelf with Drawer ASSY
8	On Shelf Basket ASSY
9	Venue 40 3-probe Port Box User Instructions
10	Rating Plate Label for 3-probe Port Box Option
11	Rating Plate Label for 3-probe Port Box

Section 3-2 Receiving and Unpacking the Equipment (cont'd)

NOTE: Check the shipping container for special instructions. Verify that the container is intact. In some cases a secondary container may be used. If so, ask the carrier for unpacking instructions.

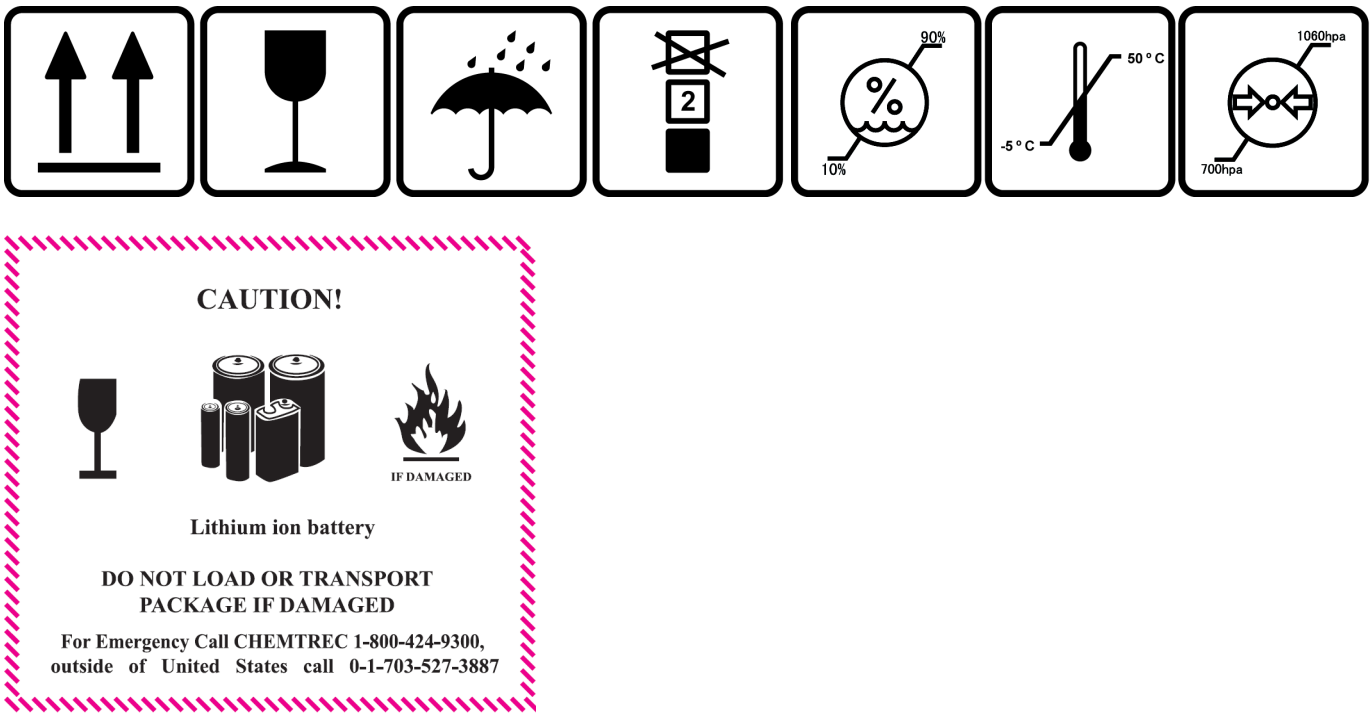


Figure 3-15 Labels on Package

CAUTION **Please carefully unpack the system, and do not dispose the package of Venue 40, so that it can be reused for service.**

CAUTION **Please keep the protective bag of Venue 40 in box, so that it can be used for shipping or transportation.**

3-2-5 Moving into Position

CAUTION **Equipment Damage Possibility. Do not lift the unit by stylus.**

In general, a single adult can move the Venue 40. Before moving, store all loose parts in original accessory box or in back pack. Return probes to original box.

Section 3-3 Packing the Equipment

Please pack Venue 40 in the reverse order of unpacking.

Section 3-4
Preparing for Installation

3-4-1 Verify Customer Order

Compare items received by the customer to that which is listed on the delivery order. Report any items that are missing, back ordered or damaged.

3-4-2 Physical Inspection

3-4-2-1 System Voltage Settings

- Verify that the Docking Station/Docking Cart is set to the correct voltage. The Voltage settings for the system is found on the rating plate.
- 220-240VAC(China); 100-120VAC(USA/Japan); 220-240VAC(Europe, Latin America).

NOTE: Check your local grid and confirm the voltage.

⚠ **WARNING** ***Connecting Docking Station/Cart to the wrong voltage level may destroy the system.***

3-4-3 EMI Protection

This Unit has been designed to minimize the effects of Electro Magnetic Interference (EMI). Many of the covers, shields, and screws are provided primarily to protect the system from image artifacts caused by this interference. For this reason, it is imperative that all covers and hardware are installed and secured before the unit is put into operation.

Section 3-5
Completing the Installation

3-5-1 Power On / Boot Up

3-5-1-1 Mount the system to Docking Station/Docking Cart

To Mount the system to Docking Station or Docking Cart:

1.) Place the Docking Station and system on a stable surface.

2.) Carefully pickup the system. Align the port on the box with the docking port and carefully push into place.

Figure 3-16 Mount system onto Docking Station/Docking Cart

3-5-1-1 Mount the system to Docking Station/Docking Cart (cont'd)

3.) Press the locking lever down to the right position

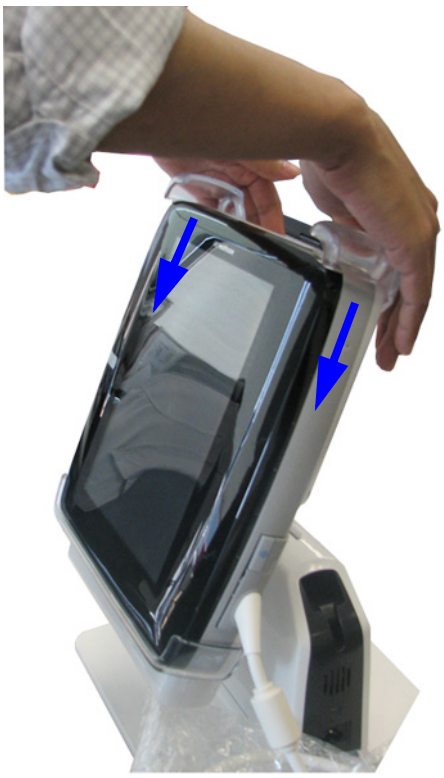


Figure 3-17 Press the locking lever

3-5-1-2 System Power on

1.) If the Docking Cart is like the following figure A, connect the power cord between Docking module and Cart.

OR

If the Docking Cart is like the following figure B, go to step 2.

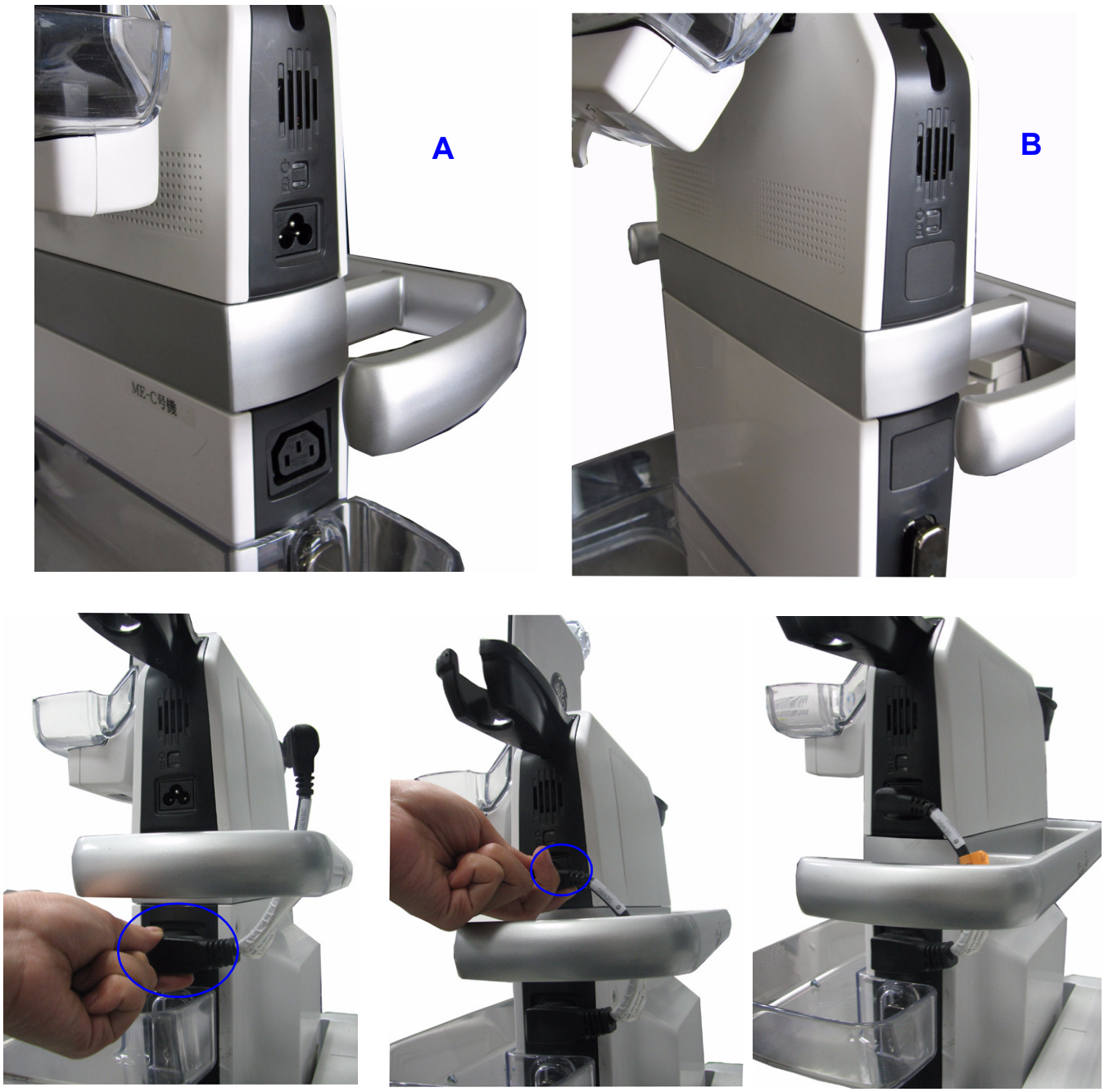


Figure 3-18 Connect power cord between Docking module and Cart

3-5-1-2 System Power on (cont'd)

2.) Plug the AC output connector into the rear panel of Docking Cart. Plug the AC power cord into a grounded, protective earth outlet.

Figure 3-19 Connect AC power cord

For Docking Station, plug the AC output connector into the AC power input socket, plug the other end into a grounded, protective earth outlet.

3-5-1-3 Turn on the system

Press the **Power On/Off** switch on top of the system once.

Figure 3-20 Power On/Off Switch

NOTE: The system can be used immediately after mounting to Docking Station/Cart.

NOTE: Docking Station/Cart charges battery if it is plugged into power source.

NOTE: It's better to disconnect all the peripherals before the system is powered on, including SD card and USB memory stick.

NOTE: Once the system is failed to boot up with SD card inserted, please remove the SD card from the system, back up the data, format the SD card and restore the data to it.

3-5-1-4 Attach the stylus to system

There is a stylus for touch panel operation. To attach the stylus to system:

1.) Thread the looped end of the stylus strap through the stylus strap post on side of the Venue 40.

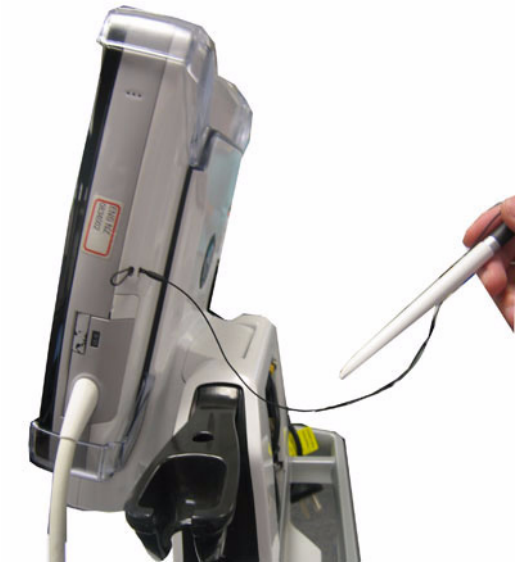


Figure 3-21 Connect stylus to Venue 40

3-5-1-4 Attach the stylus to system (cont'd)

2.) Thread the stylus through the loop.

Figure 3-22 Thread the loop

3.) Place the stylus on the top of the system or in the hole of probe holder.

Figure 3-23 Stylus attached to Venue 40

3-5-2 Power Off/ Shutdown

NOTE: After turning off a system, wait at least ten seconds before turning it on again. The system may not be able to boot if power is recycled too quickly.

3-5-2-1 Back-end Processor Power Down

To power down the system:

1.) Press the ***Power On/Off*** switch on top of the system once.

2.) The System-Exit window is displayed.

Figure 3-24 System Exit Window

3.) The system will shut down in 30 seconds automatically. Use the stylus to select Shutdown to shut down the system or Cancel to cancel the process.

4.) The shutdown process takes a few seconds and is complete when the power status LED is turned off.

5.) Disconnect the probes.Clean or disinfect all probes as necessary. Store them in their shipping cases to avoid damage.

3-5-3 Transducer Connection

To connect the probe:

1.) Place the probe's carrying case on a stable surface and open the case.
2.) Carefully remove the probe and unwrap the probe cable.
3.) DO NOT allow the probe head to hang free. Impact to the probe head could result in irreparable damage.
4.) Plug the probe connector into the probe port on right side of Venue 40 with the label facing the front.

Figure 3-25 Connect the probe

5.) Carefully position the probe cord so it is free to move and is not resting on the floor.

NOTE: It is not necessary to turn OFF power

3-5-3 Transducer Connection (cont'd)

To disconnect the probe:

1.) Press the locking lever with blue mark to pop up the connector.

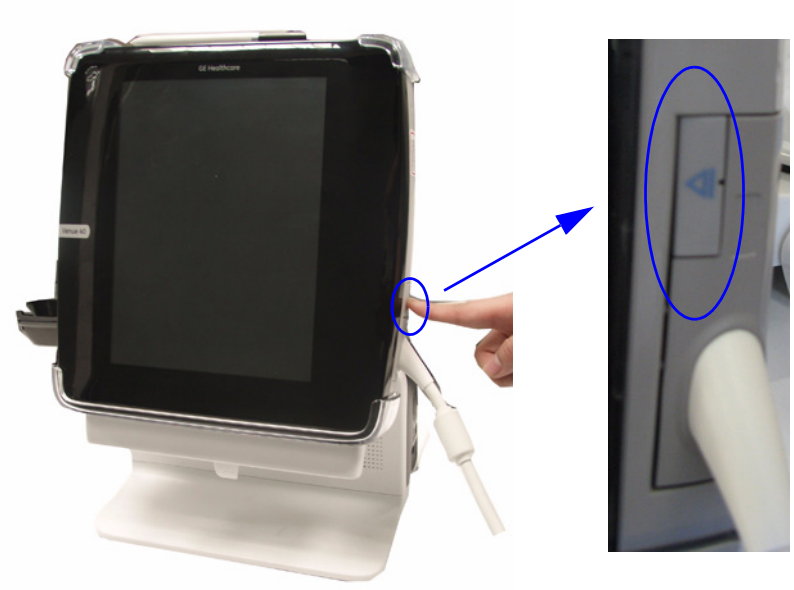


Figure 3-26 Pop up the locking lever

2.) Pull the probe and connector straight out of the probe port.

Figure 3-27 Disconnect the probe

NOTE: Please do not drag the probe cable in order to avoid cable damage.

Section 3-6
System Configuration

3-6-1 System Specifications

3-6-1-1 Physical Dimensions

The physical dimensions of the Venue 40 console are summarized in Figure 3-28 on page 3-28 .

Table 3-10 Physical Dimensions of Venue 40

Height	Width	Depth	Unit
282	274	56	mm
11.1	10.8	2.2	inches

NOTE: Length is in mm

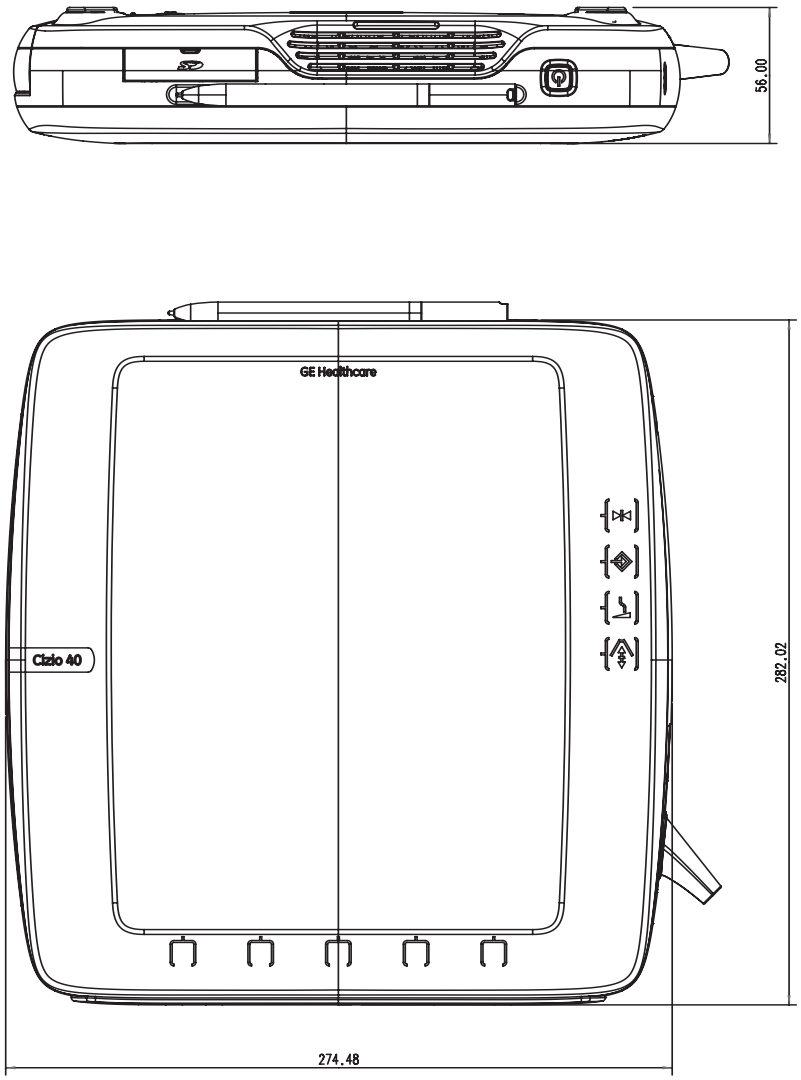


Figure 3-28 Overall Dimensions

3-6-2 Electrical Specifications

Table 3-11 Electrical Specifications for Venue 40

Voltage	Tolerances	Current	Frequency
100-240 VAC	+/-10%	1.6A (max)	50/60Hz

3-6-3 Approved on-board peripherals

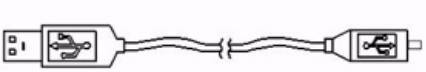
Table 3-12 Approved on-board peripherals

Device	Manufacturer	Model	Interface
B/W Printer	SONY	UP-D897	USB
USB Memory	SanDisk	SanDisk 4G	USB
High Capacity SD Card	KINGSTON	KINGSTON 4G/8G	
SD Card	Transcend	Transcend Class 6 SD Card 8G	
SD Card Reader	Transcend	Transcend P5	USB
Wireless Network Card	Edimax	Edimax	USB
Footswitch	Steute	MKF 2 1S/1S -MED HID GP26	USB
Note: Wireless Network Card is not available on software version R1.x.x. Note: Footswitch is not available on software version R1.x.x and R2.x.x.			

3-6-4 Connecting Cables

WARNING Equipment damage possibility. Be sure to use the following recommended connecting cables to connect recording devices and a network with Venue 40 console.

Table 3-13 List of Connecting Cables

Name	Part No.	Figure	NOTE
Printer USB Cable	5317527		For USB Printer
Docking USB Cable	5329083		For miniB USB port

3-6-5 Peripherals/Accessories Connector Panel

Venue 40 peripherals and accessories can be properly connected using the side connector panel.

3-6-5-1 Docking Station/Docking Cart Connector Panel

Located on the two sides of Docking Station/Docking Cart are input and output connectors.

Figure 3-29 Docking Station/Docking Cart Connector Panel

1.) Probe holder
2.) LED indicator: indicating AC Power, when there is AC Power, it is lit. Color: Green.
3.) LED indicator: indicating battery charging, when the battery is being charged, it is lit. Color: Green.
4.) AC power input socket
5.) MiniB USB port
6.) USB 2.0 port
7.) DVI port
8.) LAN port (not available for R1.x.x)

NOTE: Each outer (case) ground line of peripheral/accessory connectors are protectively grounded. Signal ground lines are not isolated.

3-6-5-2 This section indicates the pin assignment for each connector.

1. Pin Assignment of AC input

Table 3-14 Pin Assignments of AC input

Pin No.	Signal	Pin No.	Signal
1	+20V	3	GND
2	+20V	4	GND

2. Pin Assignment of USB

Table 3-15 Pin assignment of USB1-A

Pin No.	Signal	Pin No.	Signal
1	+5VDC	3	DATA+
2	DATA-	4	GND

Table 3-16 Pin assignment of USBminiB

Pin No.	Signal	Pin No.	Signal
1	+5VDC	3	DATA+
2	DATA-	4	GND

3. Pin assignment of DVI port

Table 3-17 Pin Assignments of DVI

Pin No.	Signal	Pin No.	Signal
1	DATA2-	13	DATA3+
2	DATA2+	14	+5VDC
3	GND	15	GND
4	DATA4-	16	DETECT
5	DATA4+	17	DATA0_
6	DDC_CLOCK	18	DATA0+
7	DDC_DATA	19	GND
8	NC	20	DATA5-
9	DATA1-	21	DATA5+
10	DATA1+	22	GND
11	GND	23	CLOCK+
12	DATA3-	24	CLOCK_

3-6-5-3 Connect peripherals

1.) Insert SD Card to system.

Pull the SD Socket cover towards the back of the Venue 40 to make it easy to open. Open the SD Card Socket cover.

Figure 3-30 Open SD Card Socket cover

Insert the SD Card into the SD Card Socket on top of the system with the labeled side facing the front of the Venue 40

Figure 3-31 Insert SD Card to system

3-6-5-3 Connect peripherals (cont'd)

2.) Connect B/W printer to the system.

B/W Printer can be properly connected to the USB port of the Docking Station/Cart.

Figure 3-32 Connect B/W printer

3.) Connect USB Memory to the system. USB Memory stick can be properly connected using USB Port on the Docking Station/Cart.

Figure 3-33 Connect USB Memory Stick

3-6-5-3 Connect peripherals (cont'd)

4.) Connect external LCD to the DVI port of Docking Station/Docking Cart.

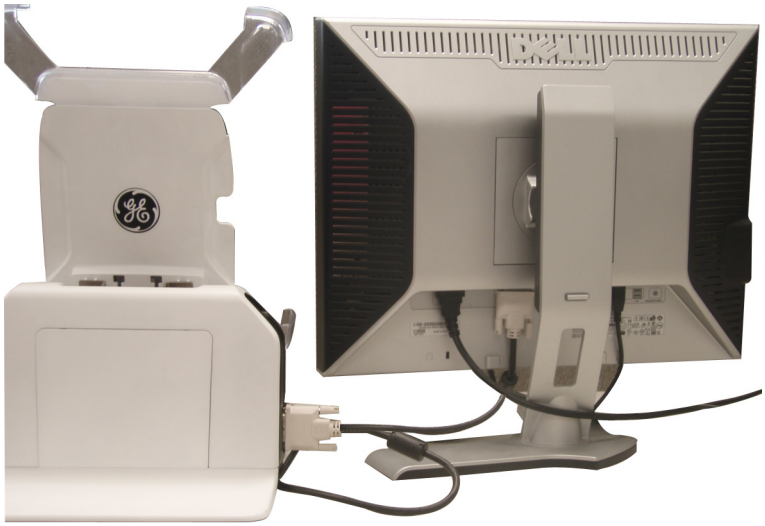


Figure 3-34 Connect external LCD

5.) Connect the Wireless Network Card to the USB port of the Docking Station/Cart.

Figure 3-35 Connect the Wireless Network Card

3-6-5-3 Connect peripherals (cont'd)

6.) Connect the footswitch to the USB port of the Docking Station/Cart.

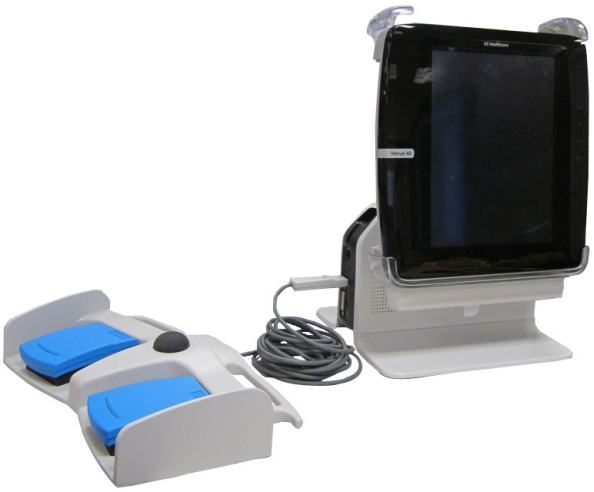


Figure 3-1. Connect the footswitch

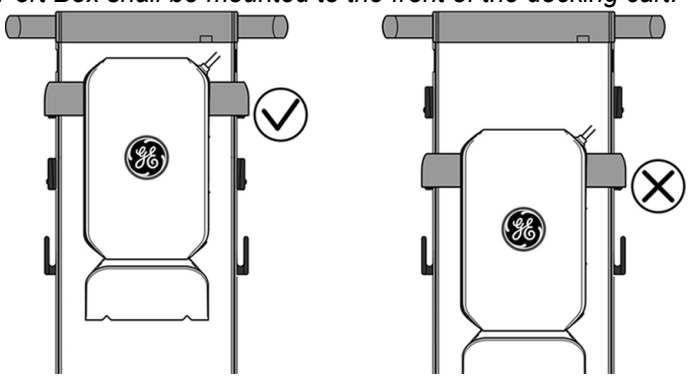
7.) Connect the 3-probe port box to the Docking Cart.

NOTE: 3-probe Port Box is not available in China, Japan or Korea.

a.) Remove any storage trays from the front of the Docking Cart. Mount the 3 probe port box on the Docking Cart.

NOTE: Be sure to fully inset the grooves into the top side slides.

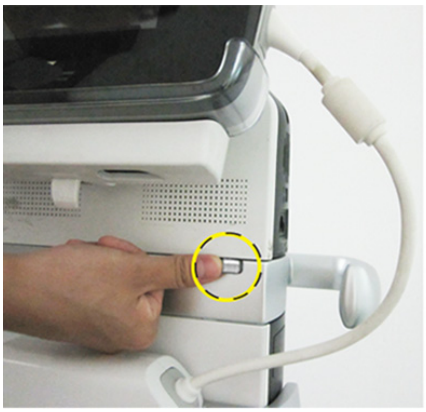
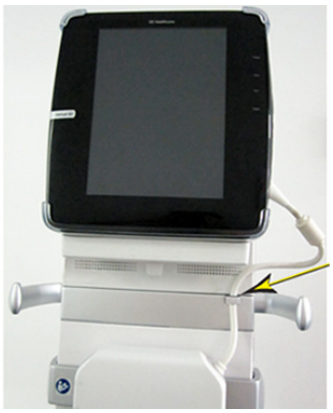
NOTE: The 3-probe Port Box shall be mounted to the front of the docking cart.



3-6-5-3 Connect peripherals (cont'd)

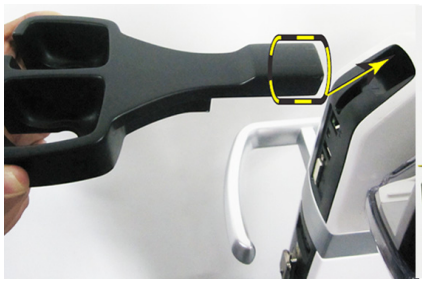
b.) Connect the 3-probe Port Box to the Venue 40


c.) Press the Cable Hook and Put the Cable into the Hook

NOTE: Pull the cable hook if it does not pop out completely.

d.) Connect the Probe Holders to the Docking Cart



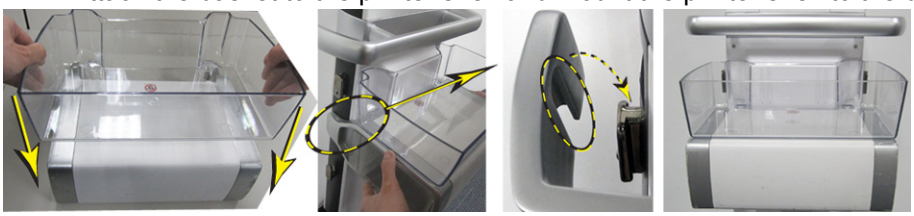

3-6-5-3 Connect peripherals (cont'd)

e.) Connect the E8CS-SC Probe Holder and Gel Holder to the Probe Holders

f.) Connect the Probes to the 3-probe Port Box

g.) Mount the Printer Shelf to the Docking Cart

Attach the basket to the printer shelf and mount the printer shelf to the docking cart.



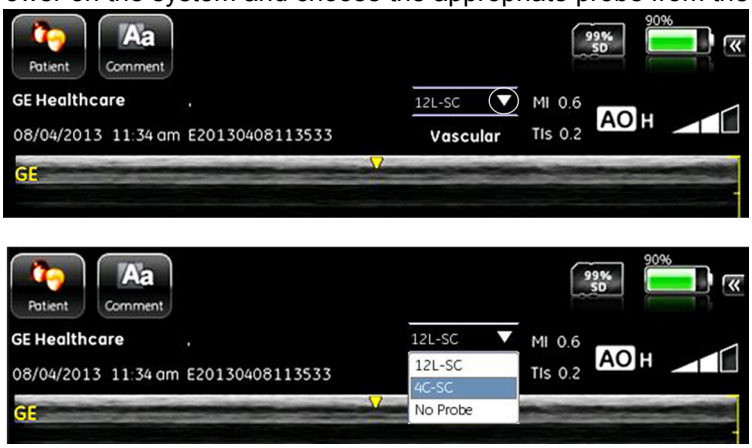
NOTE: Be sure to fully inset the grooves into the second side slides.

NOTE: The printer shelf shall be mounted to the back of the docking cart.

3-6-5-3 Connect peripherals (cont'd)

h.) Choose Probes

Power on the system and choose the appropriate probe from the pull-down menu.



NOTE: The order of the probes shown on the screen is the same as that of the probes connected to the 3-probe Port Box.

If "**No Probe**" is shown in the pull-down menu, the following may have happened.

1.) No probe is connected to the relevant 3-probe box port.

2.) The probe may not be fully inserted into the slot. Recheck the connection to insure proper connection.

3.) The probe is connected to the 3-probe box port, but the software option key for this probe hasn't been activated. If this is the case, the operator may need to contact the local GE representative and place an order for the additional software option. See *"Add new software option keys"* in Basic User Manual for more information.

NOTE: 3-probe Port Box is only available for Venue 40 software R3.2.0 and above.

3-6-6 Available Probes

For different software versions, please see in specification in the Venue 40 Basic User Manual for Probes and intended use.

Table 3-18 List of Probes for Venue 40

Probe Name	Material of Headshell	Area of Using	TYPE	Catalog Number	Part Number
3S-SC	VALOX	ABDOMINAL, FETAL/OB, ADULT CEPHALIC, CARDIAC, THORACIC/ PLEURAL, INTRAOPERATIVE, TISSUE BIOPSY/FLUID DRAINAGE, TRANSCRANIAL	SECTOR	H40452LD	5309652
12L-SC	NORYL	ABDOMINAL, PERIPHERAL VASCULAR, PEDIATRIC, SMALL ORGAN, NEONATAL CEPHALIC, CONVENTIONAL MUSCULOSKELETAL, SUPERFICIAL MUSCULOSKELETAL, THORACIC/ PLEURAL, INTRAOPERATIVE, TISSUE BIOPSY/FLUID DRAINAGE, VASCULAR ACCESS, NONVASCULAR	LINEAR	H40452LB	5304023
4C-SC*	NORYL	ABDOMINAL, FETAL/OB, CONVENTIONAL MUSCULOSKELETAL, THORACIC/ PLEURAL, INTROPERATIVE, TISSUE BIOPSY/FLUID DRAINAGE	CONVEX	H40452LM	5337604
L8-18i-SC*	VALOX	PERIPHERAL VASCULAR, SMALL ORGAN, CONVENTIONAL MUSCULOSKELETAL, SUPERFICIAL SKELETAL, NONVASCULAR	LINEAR	H40452LZ	5384872
E8CS-SC*	VALOX	FETAL/OB, GYN, UROLOGY, TRANSVAGINAL	CONVEX	H40462LL	5413888

*Note: 4C-SC is not available on software version R1.0.x.
*Note: L8-18i-SC is not available on software version R1.x.x.
*Note: E8CS-SC is not available on software version R1.x.x and R2.x.x.

Section 3-7
Software/Option Configuration

Refer to the Venue 40 Basic User Manual, Chapter 4, Customizing Your System for information on configuring items like Hospital, Department, Language, Date and Time

For information on configuring Software Options, Refer to the Venue 40 Basic User Manual, Chapter 4, Customizing Your System.

Section 3-8
Loading Base Image Software

This information has been moved, please refer to:

Section 8-3 "Loading Base Image Software" on page 8-7

Section 3-9
Software version check-out

1.) Power on Venue 40 scanner and wait until system booting to main screen.
2.) Click **Patient** using the stylus, press **Utility**.
3.) Select About in the left column.
4.) Check whether "Software version" is the right version for use.

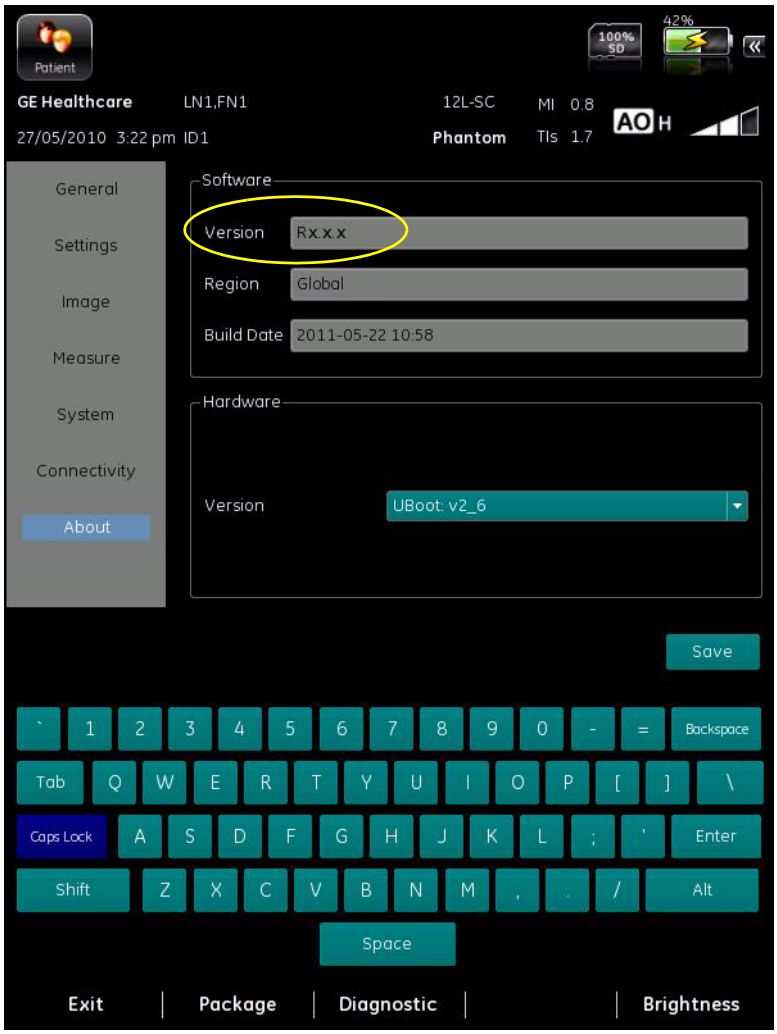


Figure 3-36 Software version

Section 3-10
Paperwork

NOTE: During and after installation, the documentation (i.e. User Manuals, Installation Manuals...) for the peripheral units must be kept as part of the original system documentation. This will ensure that all relevant safety and user information is available during the operation and service of the complete system.

3-10-1 Product Locator Installation

NOTE: The Product Locator Installation Card shown may not be same as the provided Product Locator card.

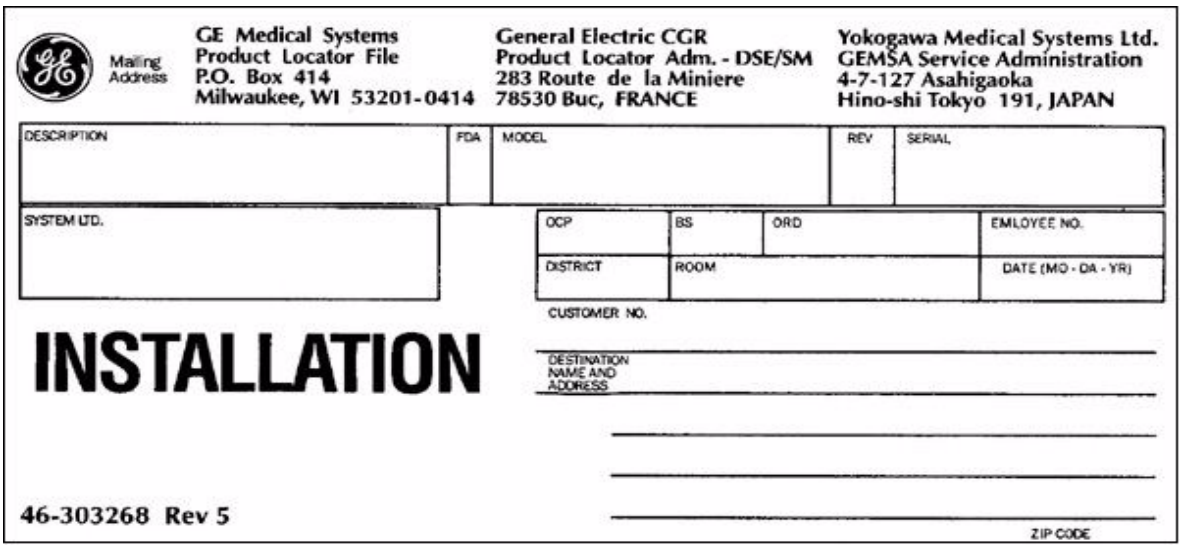


Figure 3-37 Product Locator Installation Card

3-10-2 User Manual(s)

Check that the correct User Manual(s) for the system and software revision, is included with the installation. Specific language versions of the User Manual may also be available. Check with your GE Sales Representative for availability.

Chapter 4
Functional Checks

Section 4-1
Overview

4-1-1 Purpose for Chapter 4

This chapter provides procedures for quickly checking major functions of the Venue 40 console, diagnostics by using the built-in service software, and power supply adjustments.

Table 4-19 Contents in chapter 4

Section 4-2
Required Equipment

To perform these tests, you'll need any of the sector or linear transducers.

(normally you should check all the transducers used on the system)

Section 4-3
General Procedure

CAUTION **SYSTEM REQUIRES ALL COVERS**
Operate this unit only when all board covers and frame panels are securely in place. The covers are required for safe operation, good system performance and cooling purposes.

4-3-1 Power On/Boot Up

Press **Power On/Off** key once, the System starts.

4-3-2 Power Off/ Shutdown

NOTE: After turning off a system, wait at least ten seconds before turning it on again. The system may not be able to boot if power is recycled too quickly.

To power down the system:

1.) Slightly press the **Power On/Off** switch once.
2.) The System-Exit window is displayed.

Figure 4-1 System Exit Window

3.) Select **OK** using the stylus.
4.) The shutdown process takes 15 seconds and the power off sequence is complete when the power status LED is turned off.
5.) Disconnect the probes. Clean or disinfect all probes as necessary. Store them in their shipping cases to avoid damage.

CAUTION **DO NOT transport the unit until after the power off sequence has been completed. Failure to do so may result in corrupted patient files.**

4-3-3 Adjusting the Display Monitor

Please refer to Section 6-2 "Monitor Adjustments" on page 6-2.

4-3-4 System Features

4-3-4-1 Control Panel

Figure 4-2 Control Panel Tour

1. Freeze
2. Save
3. Gain
4. Depth
5. Function keys located at the bottom of the system, vary according to different operation modes.

NOTE: There is only one depth key on R1.x.x system, except R1.1.1 (Global (CHN)).

4-3-4-2 Monitor Display

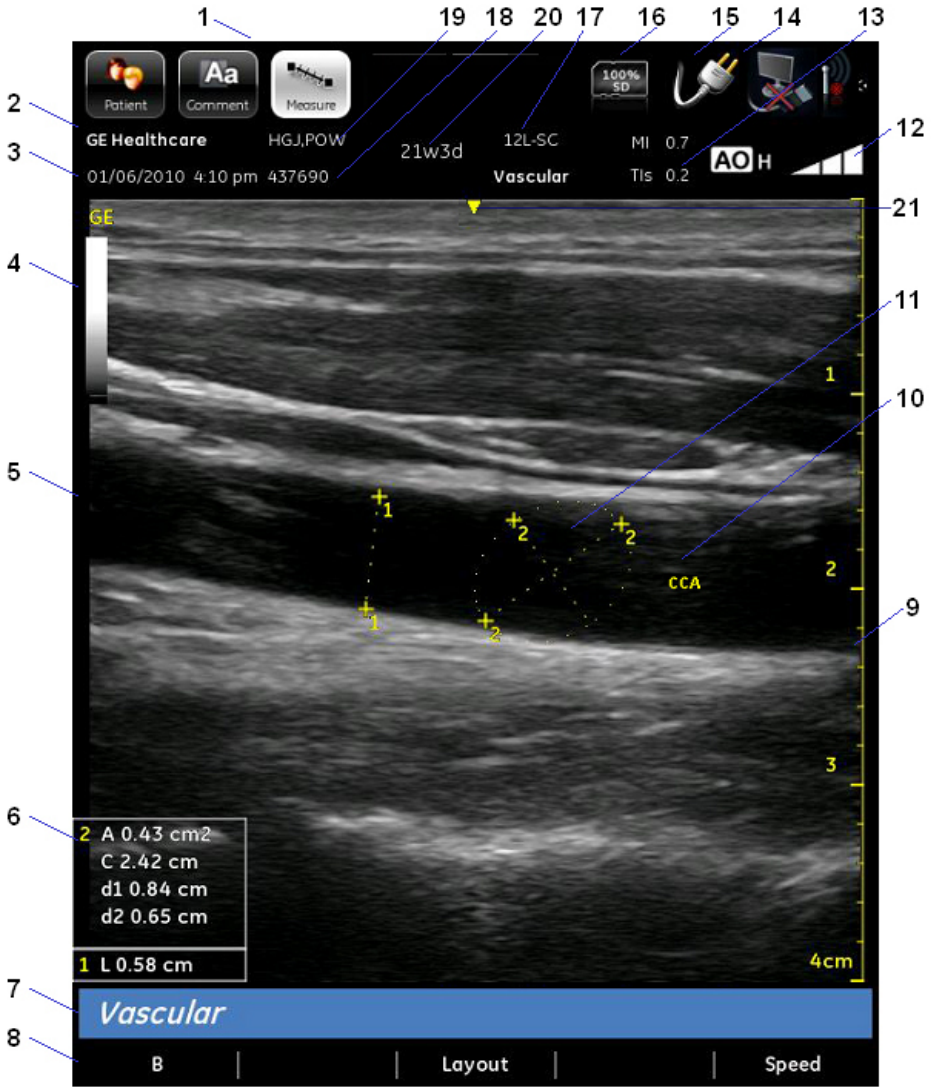


Figure 4-3 Monitor Display Tour

Table 4-20 Monitor Display Features

1. Hospital/Institute Name	12. Gain
2. Date and Time	13. Acoustic output readout
3. Function selection icons	14. Network status (R2.x.x, R3.x.x only)
4. Gray/Color bar	15. Battery/AC power status
5. Image	16. Storage device status
6. Measurements result window	17. Probe and application
7. Package name	18. Patient ID
8. Controls	19. Patient Name
9. Depth scale	20. Gestational age (R2.1.x, R3.x.x only)
10. Annotation	21. Center line mark (R3.x.x only)
11. Measurement calliper	

4-3-5 B Mode Checks

4-3-5-1 Preparations

1.) Connect one of the probes listed in 3-6-6 "Available Probes" on page 3-40 to the System.

2.) Turn ON the scanner (if it isn't turned on already)

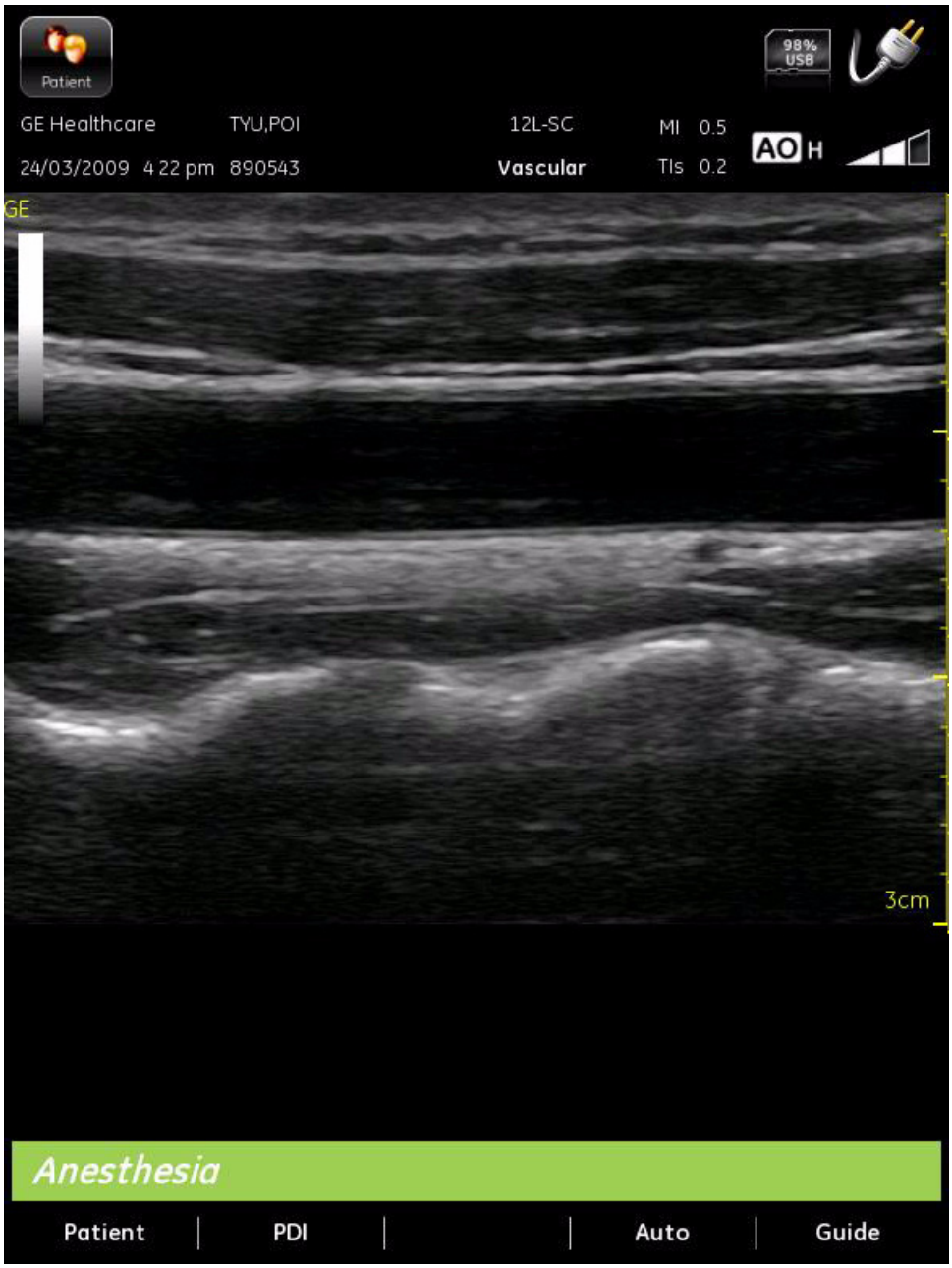


Figure 4-4 B Mode Screen Picture Example

4-3-5-2 B Mode Control Panel Controls

Table 4-21 B Mode Control Panel Controls (on the right side of the Venue 40)

Step	Task	Expected Result(s)
1	Switch to B mode	B Mode Starts
2	Adjust Depth	Adjust the field of view. Increasing the depth may view larger/deeper structures rates, and decreasing the depth may view near the skin line. Press Depth to adjust Depth. Depth displays on the monitor in cm.
3	Adjust Gain	Controls the amount of echo information displayed in an image. Press Gain to adjust.

4-3-5-3 B Mode Function Controls

Table 4-22 B Mode Function Controls

Item	Task	Expected Result(s)
1	Press Patient	Go into patient screen
2	Press PDI (only for R1.x.x and R2.x.x)	Switch to PDI mode
3	Press Auto	Auto tissue optimization
5	Press Guide	Show needle guides
6	Press Mode (only for R3.x.x)	Switch to mode selection menu
7	Press B-Steer+ (only for linear probes on software version R3.x.x)	Press to slant the B-Mode linear image left or right to get more information without moving the probe.

4-3-6 Color Flow Mode Checks

4-3-6-1 Preparations

1.) Connect one of the probes listed in 3-6-6 "Available Probes" on page 3-40 to the System.

2.) Turn ON the scanner (if it isn't turned on already).

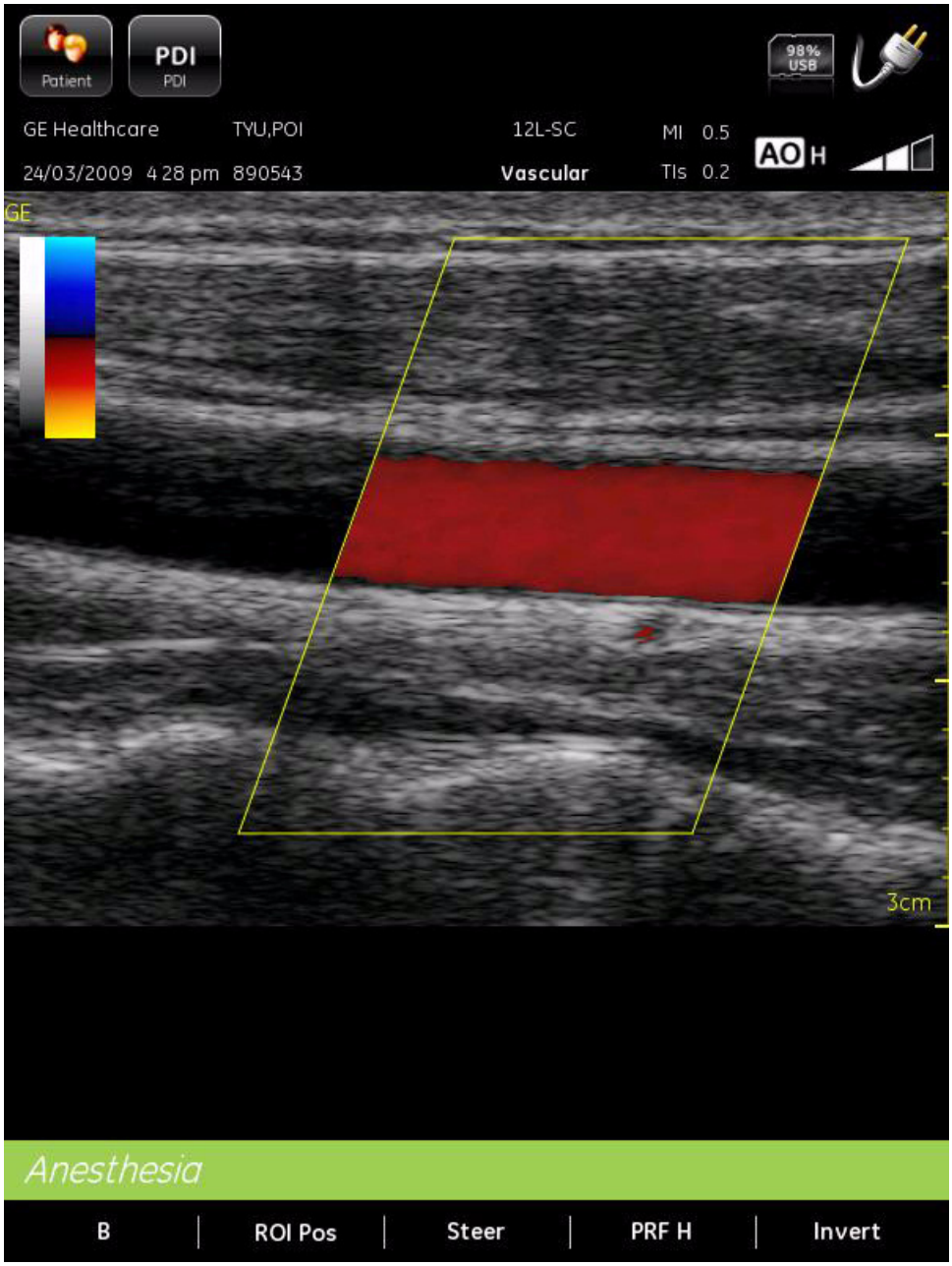


Figure 4-5 CFM Mode Screen Picture Example

4-3-6-2 Color Flow Mode Control Panel Controls

Table 4-23 Color Flow Mode Control Panel Controls (on the right side of the Venue 40)

Step	Task	Expected Result(s)
1	Switch to PDI mode	PDI Mode Starts
2	Adjust Gain	Amplifies the overall strength of the echoes processed in the Color Flow window. Turn the Gain dial (CFM Mode key) to the left/right to increase/decrease Gain.

4-3-6-3 Color Flow Mode Function Controls

Table 4-24 Color Flow Mode Function Controls

Item	Task	Expected Result(s)
1	Press B	Switch to B mode
2	Press ROI Pos	Adjust ROI position
3	Press Steer	Slant the image to left/center/right
4	Press PRF H/M/L	Increases/decreases the PRF on the color bar
5	Press Invert	Lets you view blood flow from a different perspective
NOTE: ROI Pos is not available on software version R1.x.x, except R1.1.1 (Global (CHN)).		

4-3-7 Power Doppler Imaging (PDI) Mode Checks

4-3-7-1 Preparations

1.) Connect one of the probes listed in 3-6-6 "Available Probes" on page 3-40 to the System.

2.) Turn ON the scanner (if it isn't turned on already).

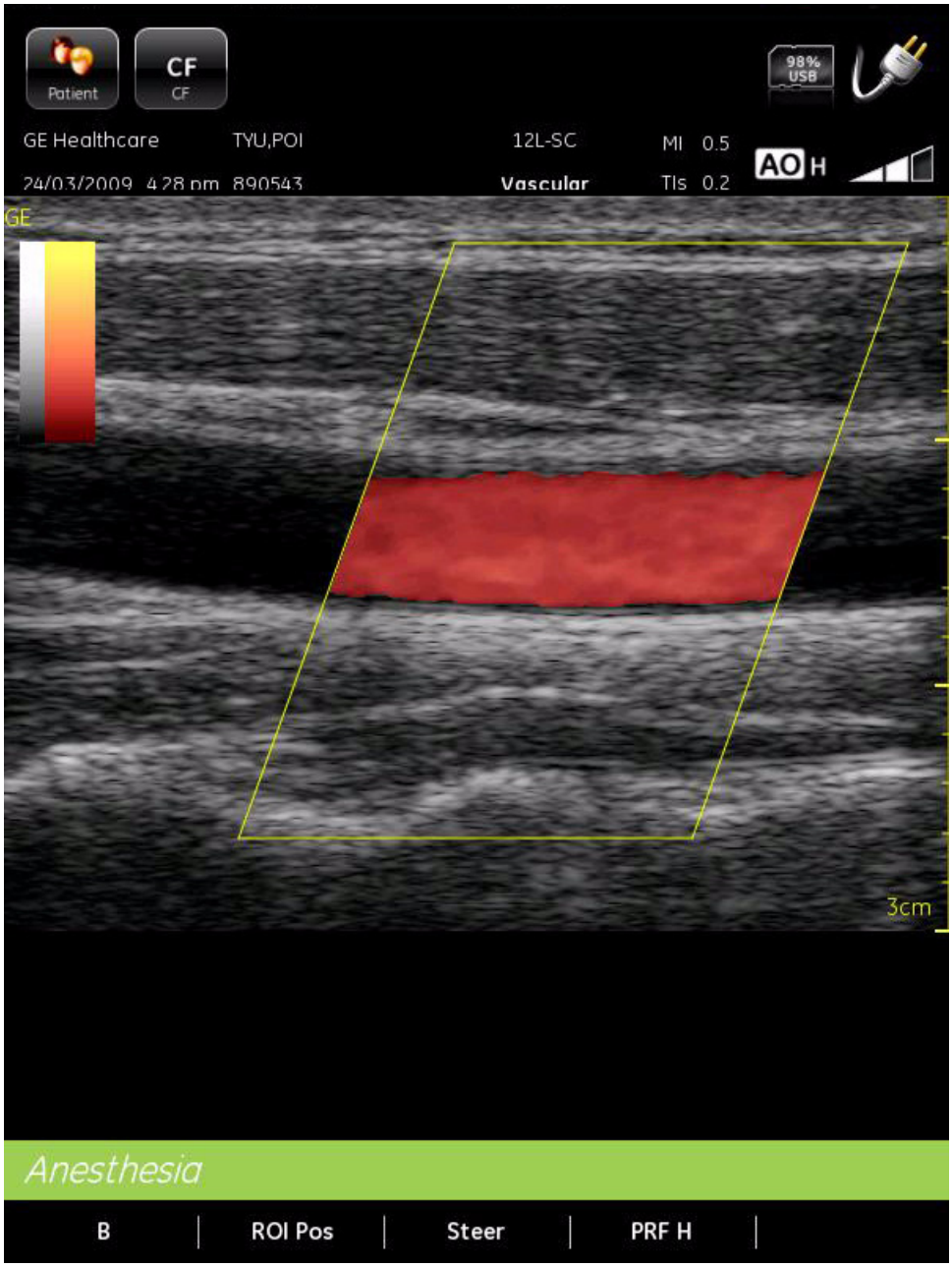


Figure 4-6 Power Doppler Mode Screen Picture Example

4-3-7-2 PDI Control Panel Controls

Table 4-25 PDI Mode Control Panel Controls (on the right side of the Venue 40)

Step	Task	Expected Result(s)
1	Switch to CF mode	CF Mode Starts
2	Adjust Gain	Amplifies the overall strength of the echoes processed in the Color Flow window. Turn the Gain dial (PW Mode key) to the left/right to increase/decrease Gain.

4-3-7-3 PDI Mode Function Controls

Table 4-26 PDI Mode Function Controls

Item	Task	Expected Result(s)
1	Press B	Switch to B mode
2	Press ROI Pos	Adjust ROI position
3	Press Steer	Slant the image to left/center/right
4	Press PRF H	Increases/decreases the PRF on the color bar

4-3-8 M Mode Checks (R2.x.x, R3.x.x only)

4-3-8-1 Preparations

1.) Connect one of the probes listed in 3-6-6 "Available Probes" on page 3-40 to the System.

2.) Turn ON the scanner (if it isn't turned on already).

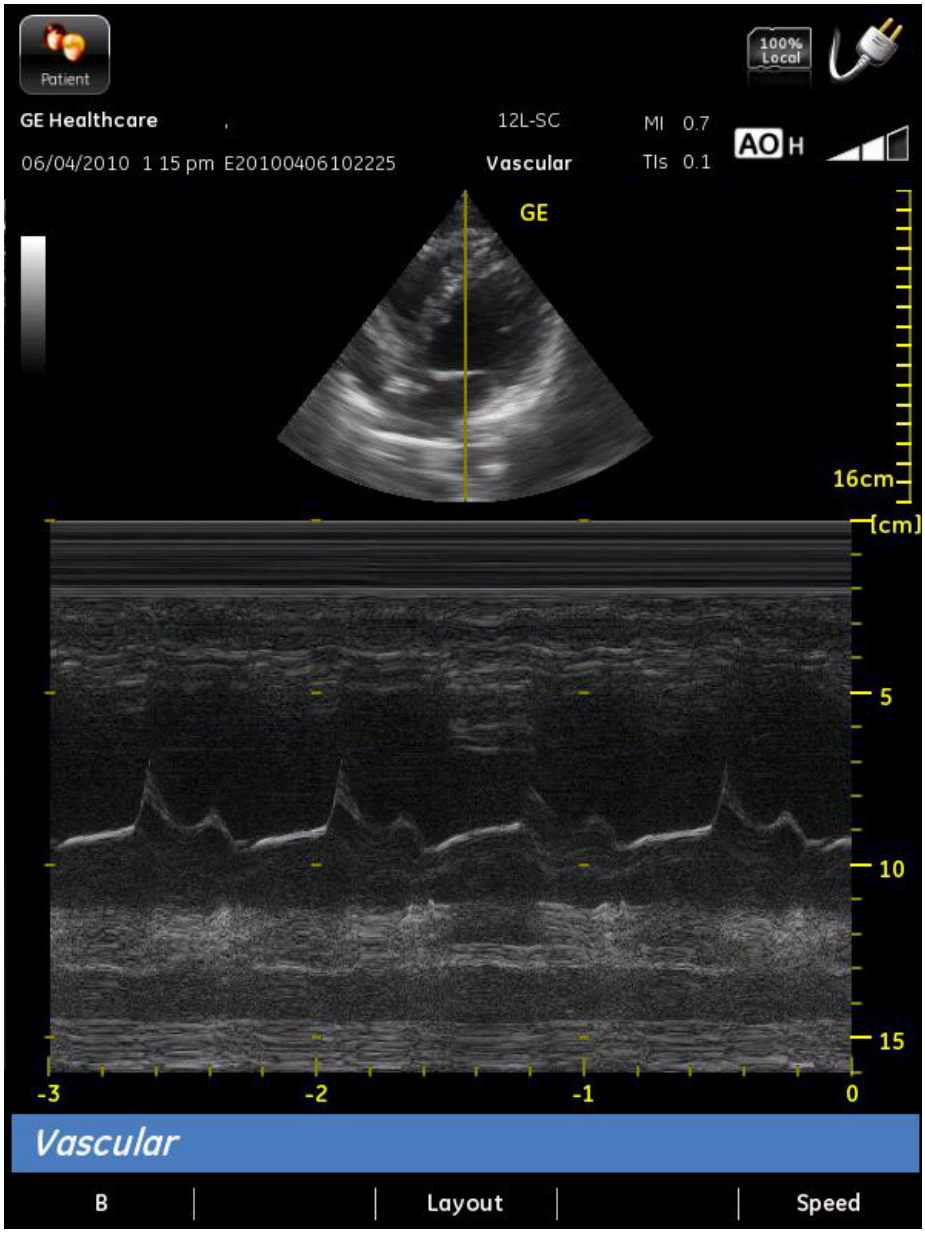


Figure 4-7 M Mode Screen Picture Example

4-3-8-2 M-Mode Control Panel Controls

Table 4-27 M-Mode Control Panel Controls (on the right side of the Venue 40)

Step	Task	Expected Result(s)
1	Switch to B mode	B Mode Starts
2	Adjust Gain	Amplifies the overall strength of the echoes processed in the Color Flow window. Turn the Gain dial (PW Mode key) to the left/right to increase/decrease Gain.

4-3-8-3 M-Mode Function Controls

Table 4-28 M-Mode Function Controls

Item	Task	Expected Result(s)
1	Press B	Switch to B mode
2	Press Layout	Adjust the layout between B Mode and M Mode
3	Press Speed	Adjust the sweep speed

4-3-9 Basic Measurements

*NOTE: The following instructions assume that you acquired an image and then selected **Freeze**.*

4-3-9-1 Distance Measurements

1.) Use the stylus, select **Measure**, select **Distance**.
2.) Click on the screen to place the first caliper.
3.) Click to place the second caliper, the results will display in the measurement result window in the measurement result window.

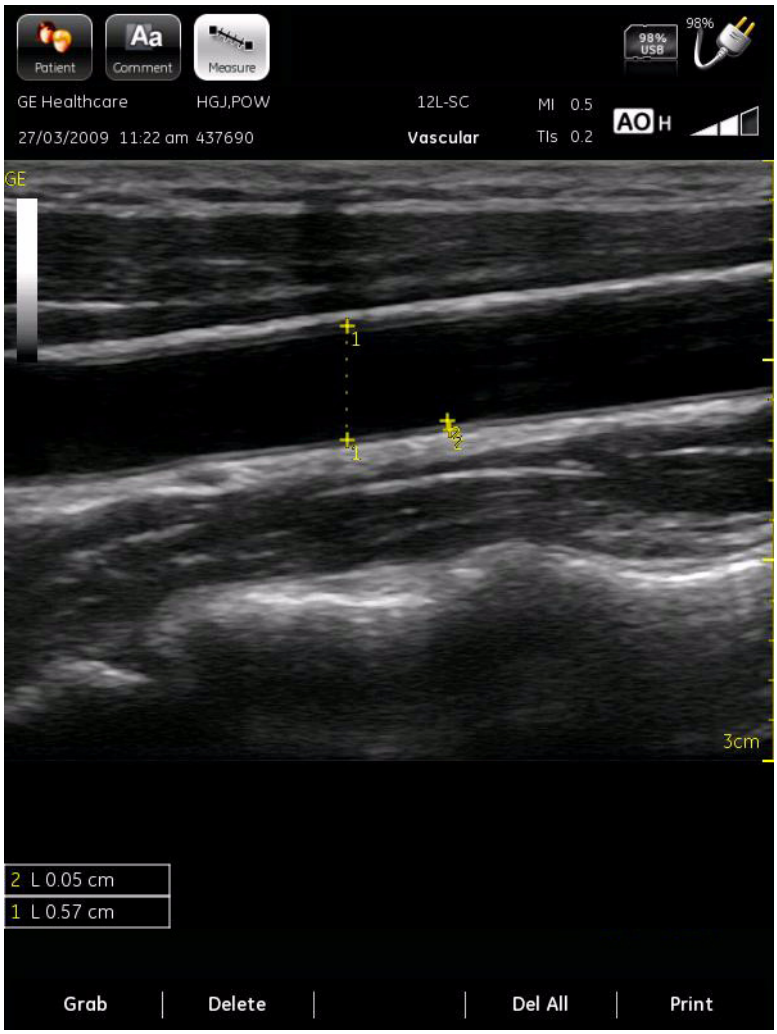


Figure 4-8 Distance measurement screen

4-3-9-2 Area (Ellipse) Measurements (R2.x.x, R3.x.x Only)

1.) Use the stylus, select **Measure**, select **Ellipse**.
2.) Click on the screen to place the first caliper.
3.) Click to place the second caliper, the results will display in the measurement result window in the measurement result window.

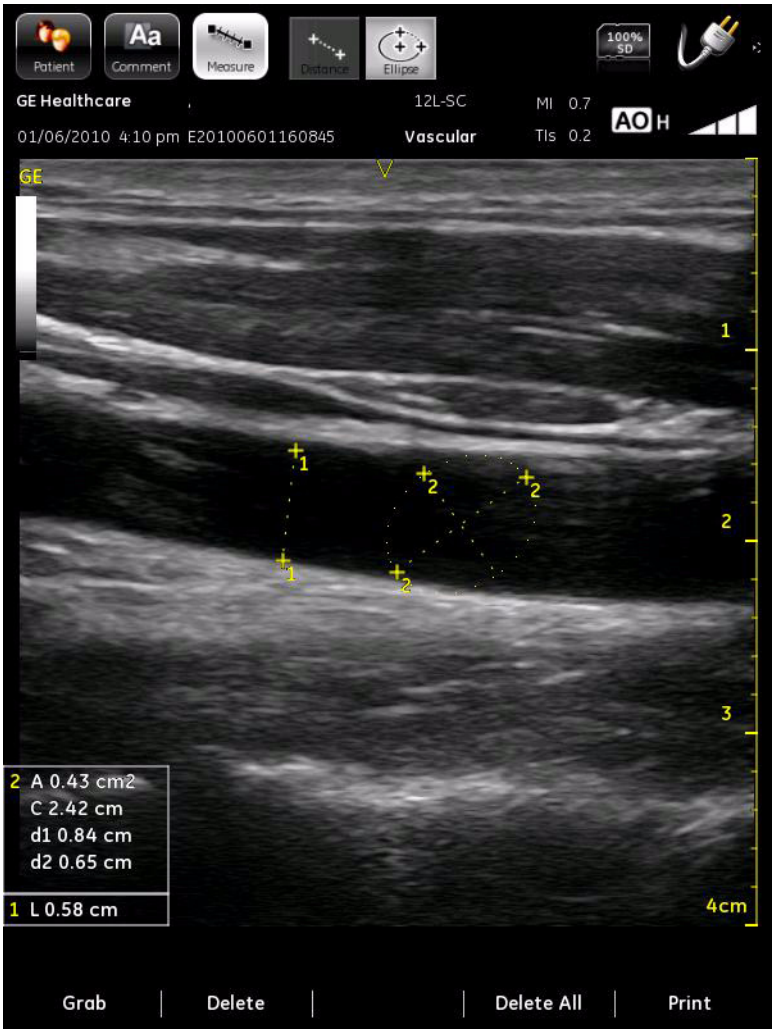


Figure 4-9 Area measurement screen

4-3-9-3 M-Mode Measurements (R2.x.x, R3.x.x Only)

1.) For R2.0.x:

Use the stylus, select **Measure**, select  to perform Tissue Depth measurement

Or

Use the stylus, select **Measure**, select  to perform Heart Rate measurement

For R2.1.x and R3.x.x:

Use the stylus, select **Measure**, select **General** tab, select **Depth**

Or

Use the stylus, select **Measure**, select **General** tab, select **Heart Rate**

2.) Click on the screen to place the first caliper.

3.) Click to place the second caliper, the results will display in the measurement result window in the measurement result window.

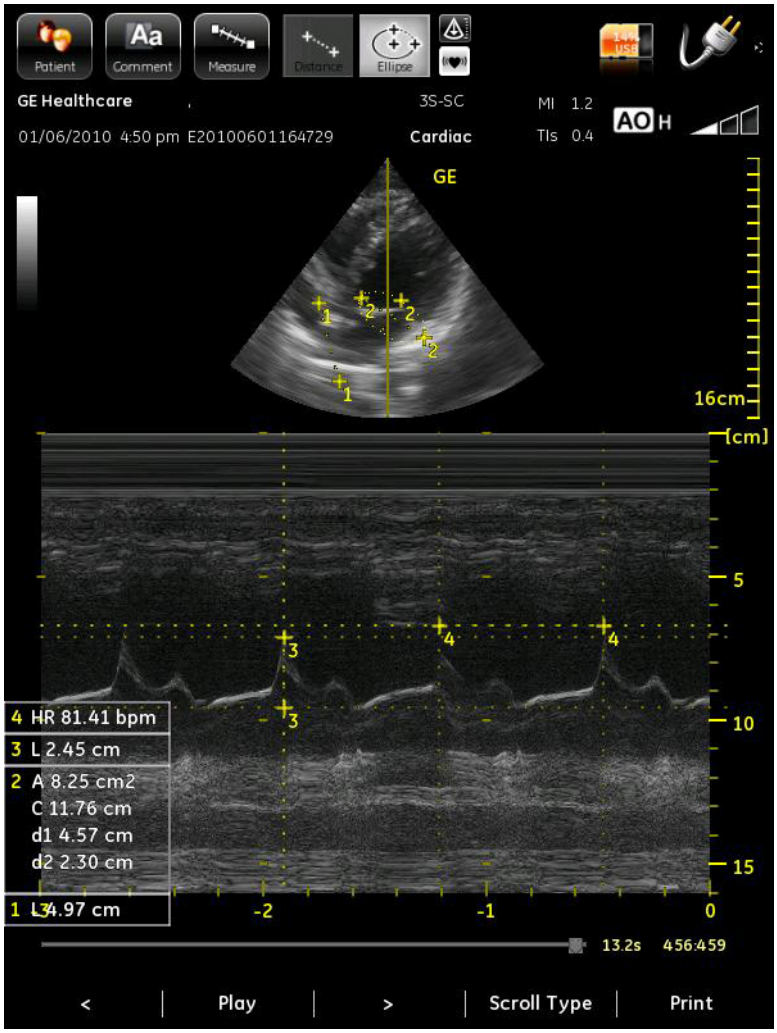


Figure 4-10 M-Mode measurements screen

4-3-10 Probe/Connectors Usage

4-3-10-1 Connecting a probe

1.) Place the probe's carrying case on a stable surface and open the case.
2.) Carefully remove the probe and unwrap the probe cable.
3.) DO NOT allow the probe head to hang free. Impact to the probe head could result in irreparable damage.
4.) Align the connector with the probe port and carefully push into place.
5.) Carefully position the probe cord so it is free to move and is not resting on the floor.

4-3-10-2 Activating the probe

The probe activates in the currently-selected operating mode. The probe's default settings for the mode and selected exam are used automatically.

4-3-10-3 Deactivating the probe

When deactivating the probe, the probe is automatically placed in standby mode.

1.) Press the **Freeze** key.
2.) Gently wipe the excess gel from the face of the probe. (Refer to the Basic User Manual for complete probe cleaning instructions.)
3.) Carefully slide the probe around the right side of the keyboard, toward the probe holder. Ensure that the probe is placed gently in the probe holder.

4-3-10-4 Disconnecting the probe

Probes can be disconnected at any time. However, the probe should not be selected as the active probe.

1.) Press to pop up the probe connector locking lever.
2.) Pull the probe and connector straight out of the probe port.
3.) Carefully slide the probe and connector away from the probe port.
4.) Ensure the cable is free.
5.) Be sure that the probe head is clean before placing the probe in its storage box.

WARNING ***Take the following precautions with the probe cables: Do not bend. If you have purchased the cart option, be sure to keep probe cables free from the wheels.***

WARNING ***Be careful not to trip on the probe cables if using the device without the optional cart.***

4-3-11 Using Cine

4-3-11-1 Activating CINE

Press **Freeze**, to activate **CINE**.

4-3-11-2 Moving through a CINE Loop Frame By Frame

Press < or > to move through CINE memory one frame at a time.

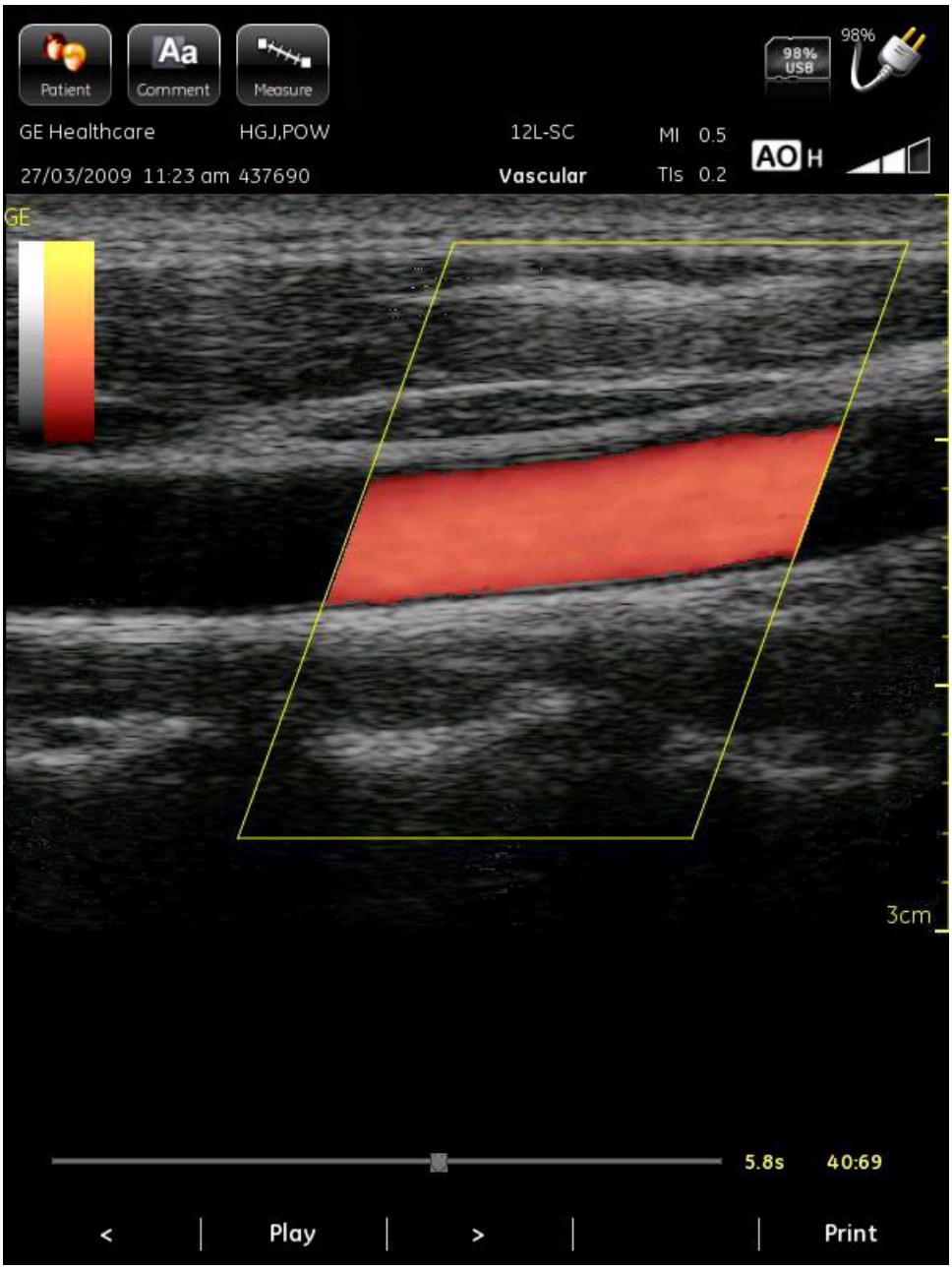


Figure 4-11 CINE screen example

Section 4-4
Software Configuration Checks

Table 4-29 Software Configuration Checks

Step	Task to do	Expected Result(s)
1.	Check Date and Time setting	Date and Time are correct
2.	Check that Location (Hospital Name) is correct	Location Name is correct
3.	Check Language settings	Desired Language is displayed
4.	Check that all of the customer's options are set up correct	All authorized functions are enabled

Section 4-5
Peripheral Checks

NOTE: It's better to disconnect all the peripherals before the system is powered on, including SD card and USB memory stick.

NOTE: Once the system is failed to boot up with SD card inserted, please remove the SD card from the system, back up the data, format the SD card and restore the data to it.

4-5-1 High capacity SD Card checks

Table 4-30 SD Card Checks

Step	Task to do	Expected Result(s)
1.	Select Patient - Utility- Setting, select SD_Card in the drop down menu of Storage location.	
2.	Insert SD card to the SD card socket on top of the system.	The storage device status icon will display the SD Card capacity on screen.

4-5-2 USB Memory Stick checks

Table 4-31 USB Memory Stick Checks

Step	Task to do	Expected Result(s)
1.	Select Patient - Utility- Setting, select USB Memory Stick in the drop down menu of Storage location.	
2.	Connect USB Memory Stick to Docking Station/Docking Cart. *Note: Make sure the USB switch is at Master USB Port.*	The storage device status icon will display the USB Memory Stick capacity on screen.

4-5-3 B/W Printer checks

Table 4-32 B/W printer Checks

Step	Task to do	Expected Result(s)
1.	Select Patient - Utility- Setting, select Yes in the drop down menu of Enable Printer.	
2.	Connect Printer to Docking Station/Docking Cart, plug power cord into wall outlet. Power on the printer.	The printer turned on.
3.	Press Freeze, select Print,	The image is printed.

4-5-4 Slave USB Port checks

Table 4-33 Slave USB port Checks

Step	Task to do	Expected Result(s)
1.	Switch the USB switch to miniB USB port	
2.	Connect PC to the miniB USB port using a USB cable.	
3.	Check the PC can identify system data	PC can identify data from system

4-5-5 Wireless Network Card checks

Table 4-34 Wireless Network Card Checks

Step	Task to do	Expected Result(s)
1.	Connect the wireless network card to the standard USB port	
2.	Configure or scan the wireless network in Patient - Utility- Connectivity	
3.	Connect to the desired wireless network	The wireless network status icon will display as “connected” or “connecting” on the screen.

4-5-6 Footswitch checks (only for R3.x.x)

Table 4-35 Wireless Network Card Checks

Step	Task to do	Expected Result(s)
1.	Connect the footswitch to the standard USB port	
2.	Configure footswitch in Patient - Utility- Settings	
3.	Press the configured pedal of the footswitch	The system will response as the configured function for the footswitch.

This page was intentionally left blank.

Chapter 5
Components and Functions (Theory)

Section 5-1
Overview

This chapter explains Venue 40's system concepts, component arrangement, and subsystem function. It also describes the Power Distribution System (PDS) and probes.

Table 5-36 Contents in Chapter 5

Section 5-2
Block Diagrams and Theory

5-2-1 Block Diagram of Venue 40 and Docking Station/Cart

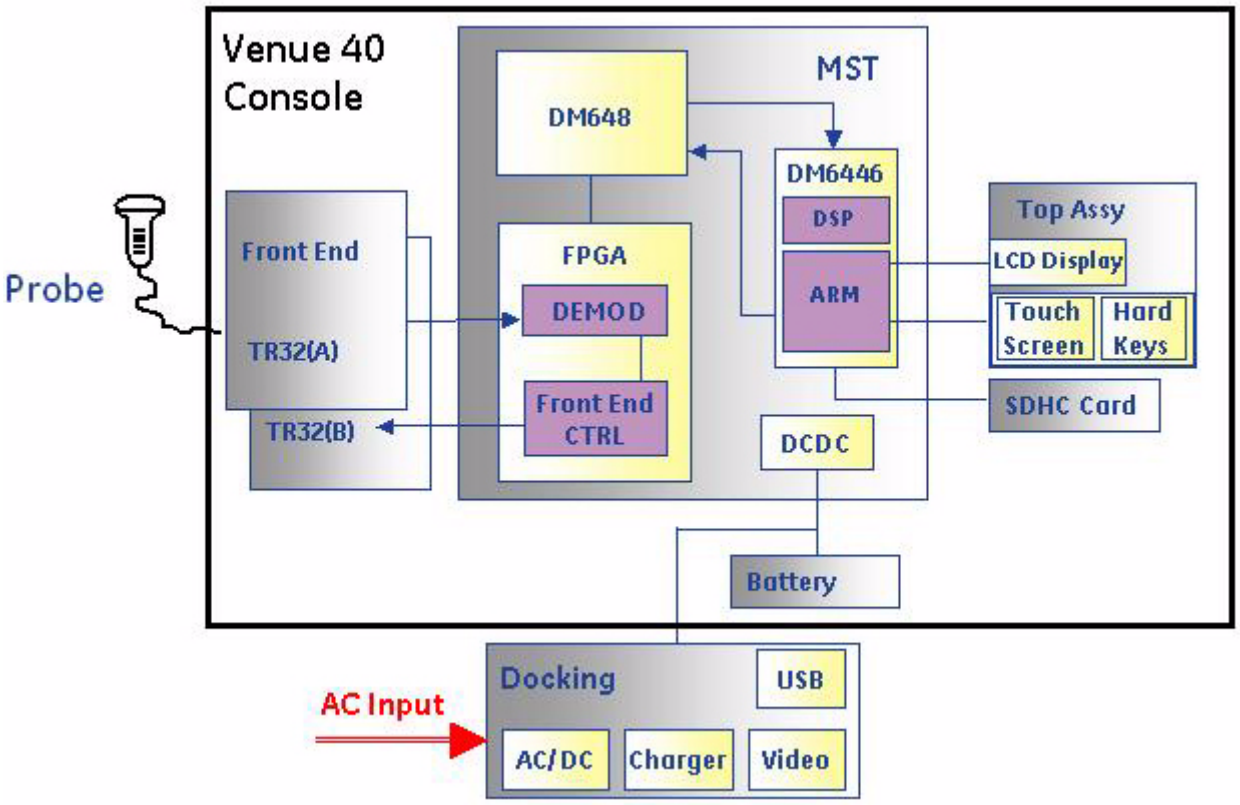


Figure 5-1 Venue 40 and Docking Station System Block Diagram

5-2-2 Block Diagram of Venue 40

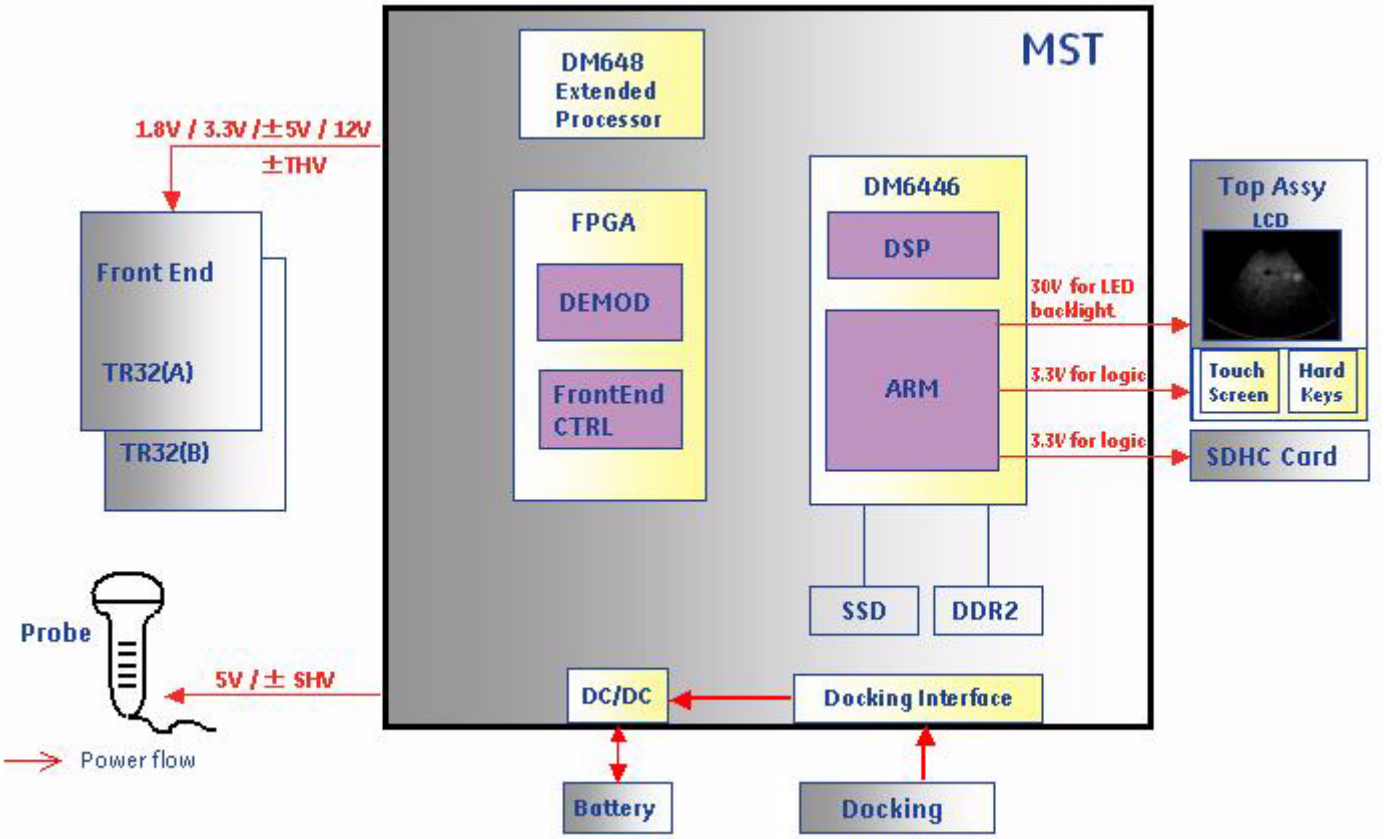


Figure 5-2 Diagram of the Venue 40 (Power flow)

When the Venue 40 is running:

- If the Venue 40 is running from the battery, the power will go from the battery to the DC/DC Module on the MST Board.
- If the Venue 40 is mounted to the Docking Station/Cart, the power will go from the Docking Station/Cart to the DC/DC Module through the Docking interface.
- When the Venue 40 is mounted to the Docking Station/Cart while charging the battery, the power will go from the DC/DC Module to the battery.
- *When the Venue 40 is running from the battery, only the USB port on Docking Station/Cart can work.

NOTE: ** It is only available on R2.x.x system.*

After the DC/DC Module is powered on, it will supply:

- 1.8V, 3.3V, ± 5V and 12V to both TR32 boards as logic power for normal work and transmission of high voltage.
- 30V goes to the LED backlight of the LCD and 3.3V are sent to the LCD as logic power.
- For the probes, 5V goes to the 3S-SC probe add 5V/±SHV goes to the 12L-SC probe.

5-2-2 Block Diagram of Venue 40 (cont'd)

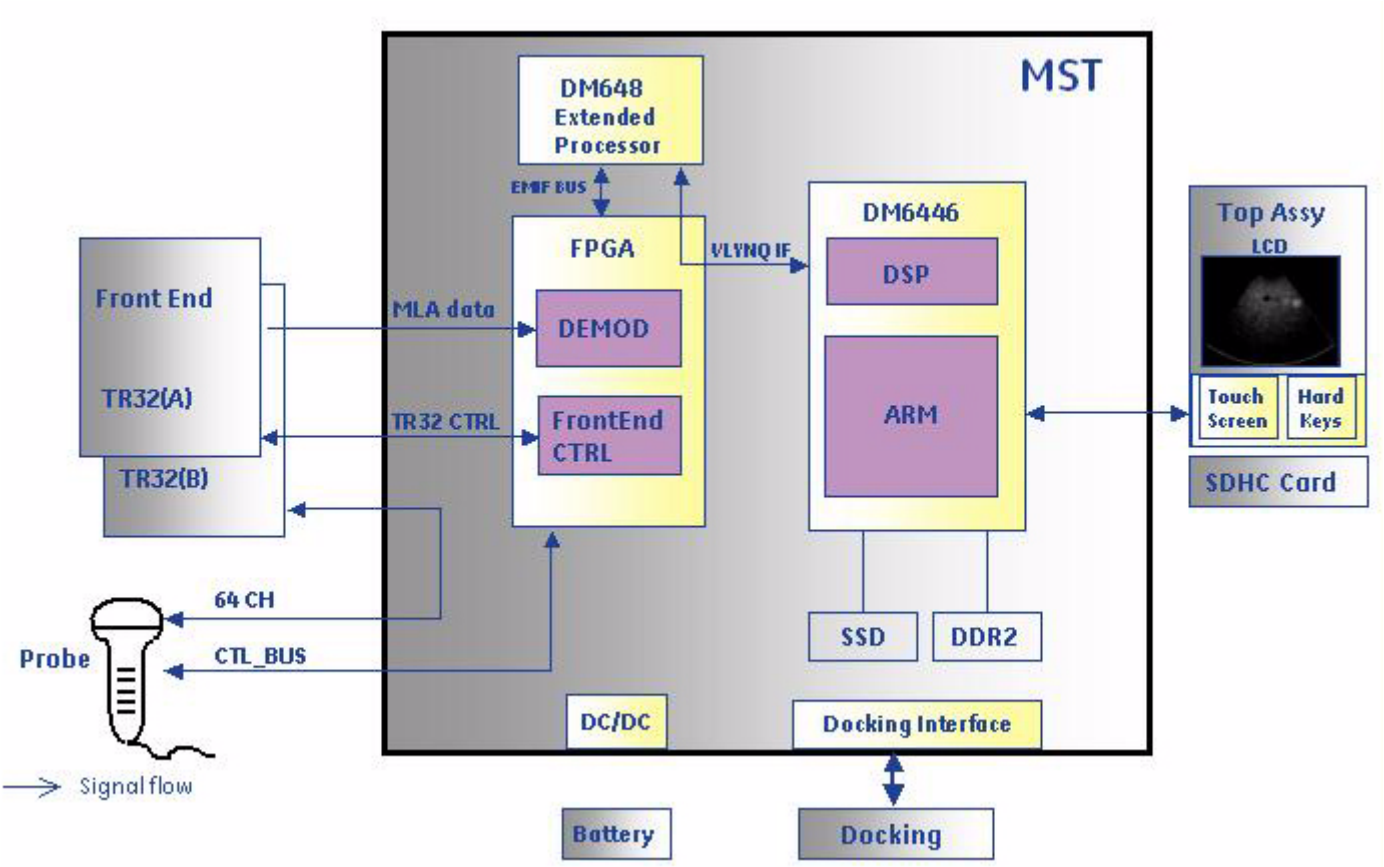


Figure 5-3 Diagram of the Venue 40 (Signal flow)

- During boot up, the DM6446 gets the FPGA firmware and DM648 software code from the Solid State Drive (SSD) and downloads to them via VLYNQ IF (interface).
- During scanning, the DM6446 sends control data to the FPGA and DM648 via VLYNQ IF (interface) and to the FPGA via the EMIF bus.
- The FPGA transfers pre-processed data to the DM648 for mid-processing via EMIF bus.
- The DM648 transfers mid-processed data to DM6446 for post-processing via VLYNQ IF (interface).
- The Front End Controller downloads the control signal and the delay data to the TR32 and then reads the status from TR32.
- The TR32 transmits an electrical pulse to the probe element via 64 channels.
- The Front End Controller controls the MUX of the 12L-SC probe and reads the probe ID of both the 3S-SC and 12L-SC probes.
- The TR32 receives the echo from the probe via 64 channels and sends the MLA (multi-line acquisition) data back the demodulate.
- Video signals and USB signals communicate between the Venue 40 and the Docking Station/Cart via the Docking port.

5-2-3 Block Diagram of Docking Station

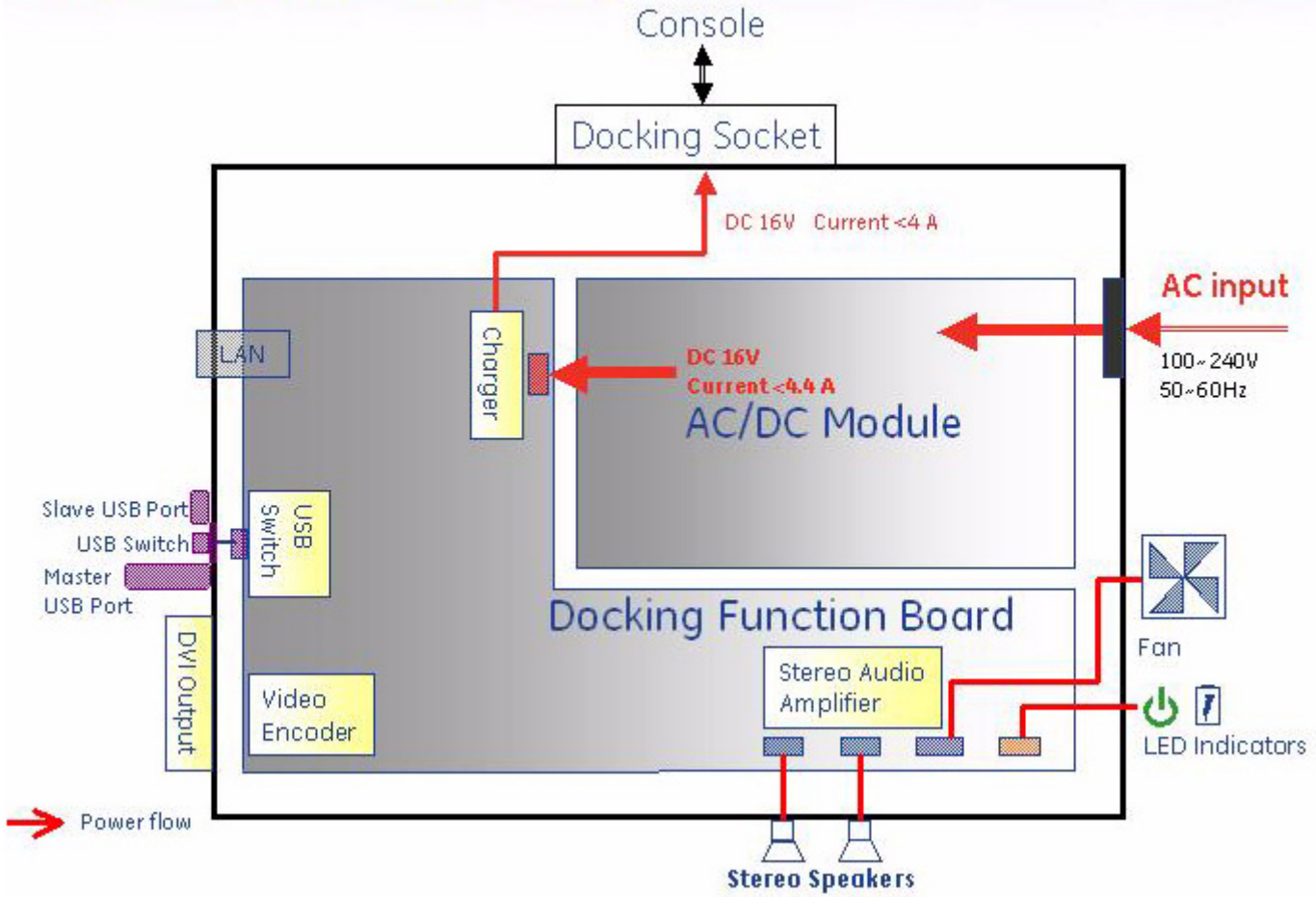


Figure 5-4 Docking Station Block Diagram

- When the Docking Station/Cart is plugged into the power outlet, AC goes into the AC/DC Module. Power flows from the AC/DC Module to the Docking Function Board, then to the Console through the Docking Port. This is a 16V DC and the current will be less than 4.4.A. The current depends on the battery condition and working status of the console.
- When the Docking Function Board is powered on, the Fan, LED indicators and the speakers will have power.

5-2-3 Block Diagram of Docking Station (cont'd)

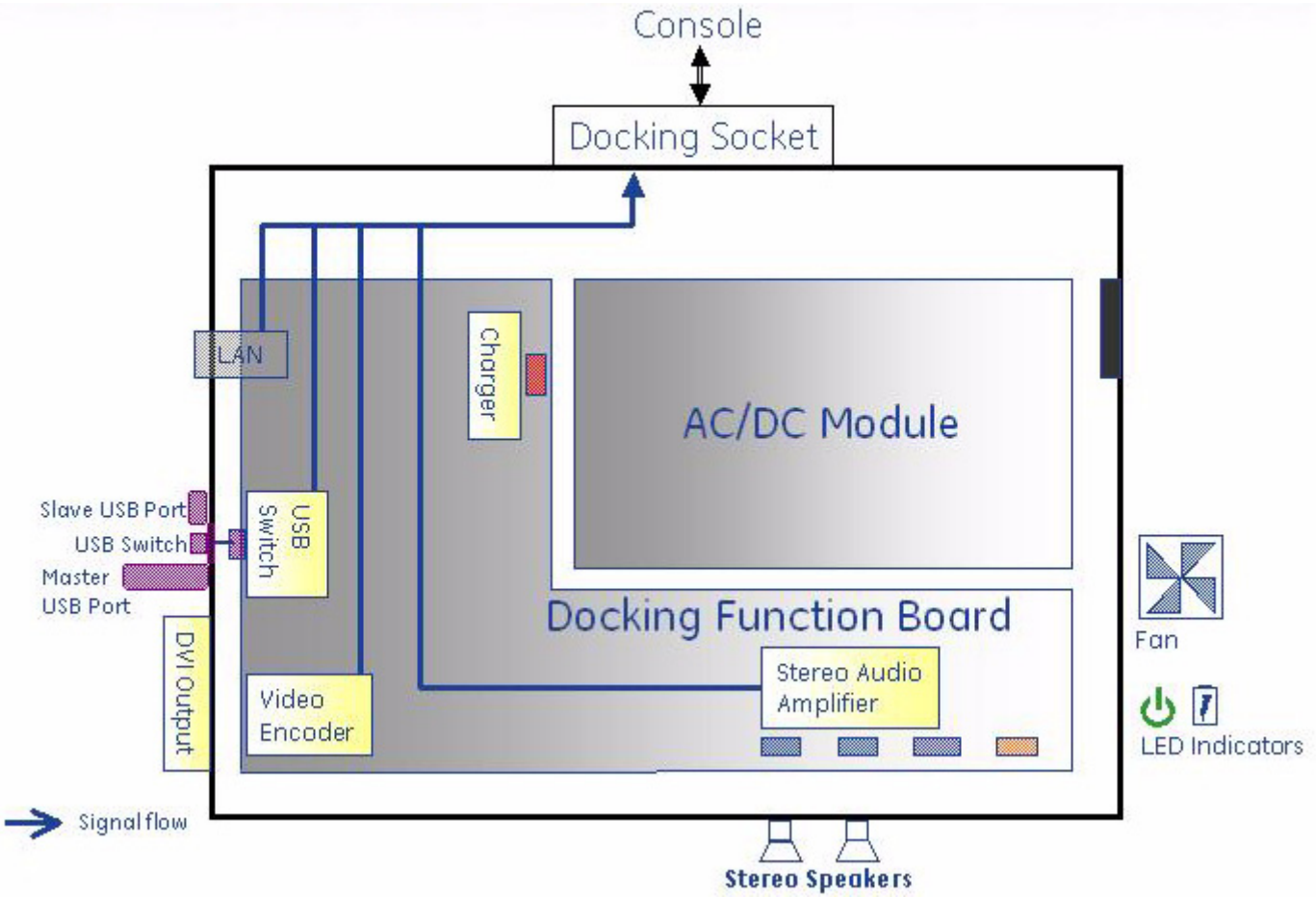


Figure 5-5 Diagram of the Venue 40 (Signal flow)

- The USB, DVI and audio signals communicate withe the Venue 40 through the Docking port. The image on the Venue 40 is displayed in the portrait orientation. When connecting to an external monitor through the DVI port, the image will be rotated to the landscape orientation by video rotation board.

Section 5-3
Power Diagrams

5-3-1 Overview

The AC Power assy's main tasks are to isolate and output to the DC/DC unit which is inside the system console. The input of AC power pack will be the AC outlet and it's universal, the range is AC 90V-264V, 47-63Hz. And no main power switch located on this power pack.

5-3-2 AC Power

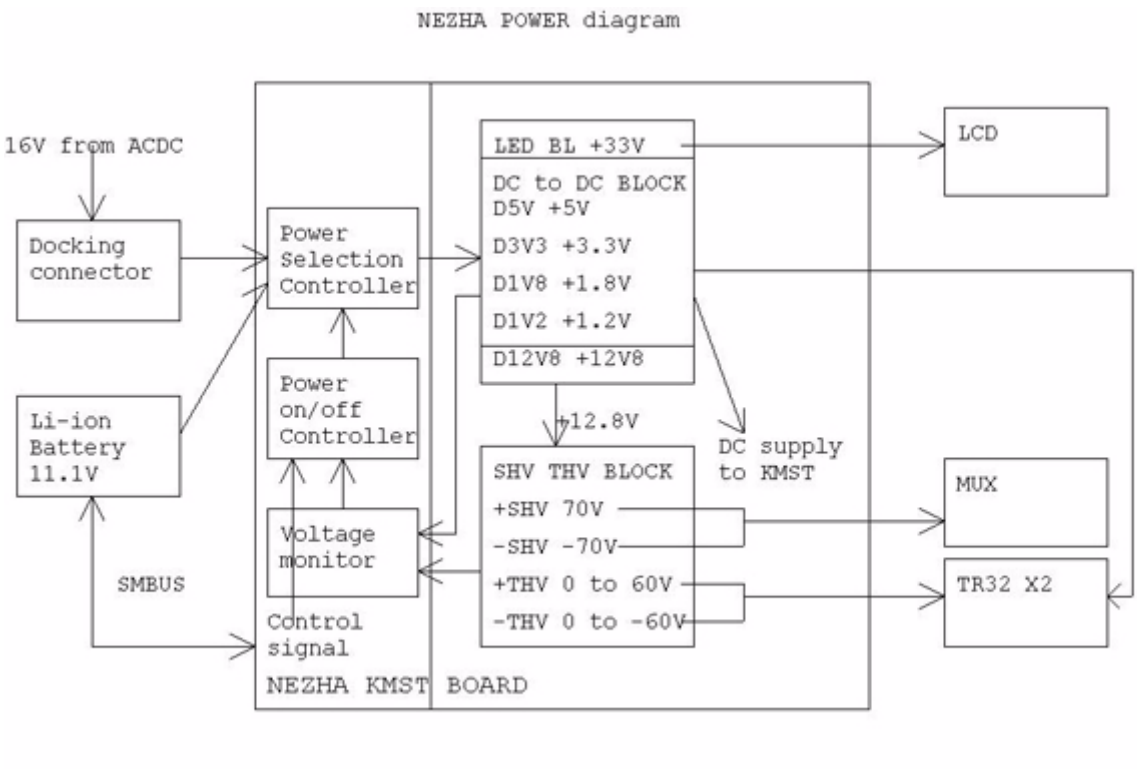


Figure 5-6 AC Power Distribution Block Diagram

5-3-3 Battery charging

The charging circuit is lithium-Ion battery charge and discharge controller. This block is part of the Docking Station and this charging circuit takes power from ACDC Module inside the Docking Station.If the AC source is available and battery is installed in the Venue 40, the battery will be charged if not full. This block will also be worked as a battery charging monitor to avoid over heat and over charging of the battery. Battery charging will be shut off if battery is charged fully. The battery will start providing power to the Venue 40 when released from Docking Station or out of AC source if mounted on the Docking Station.

This page was intentionally left blank.

Chapter 6
Service Adjustments

Section 6-1
Overview

6-1-1 Purpose of this chapter 6

This section describes how to test and adjust the scanner. These tests are optional. You may use them to check the system for errors.

Table 6-37 Contents in chapter

Section 6-2
Monitor Adjustments

6-2-1 Adjust brightness

To adjust the brightness:

1.) Select **Patient**, select **Utility**, press **Brightness** on lower left control panel to adjust brightness.

6-2-2 Adjust volume

To adjust the volume:

1.) Select **Patient**, select **Utility**, select **Miscellaneous** tab in **Setting**.
2.) Select Mute, Low, Med or High for Venue 40 speaker and Docking Station/Cart speaker.

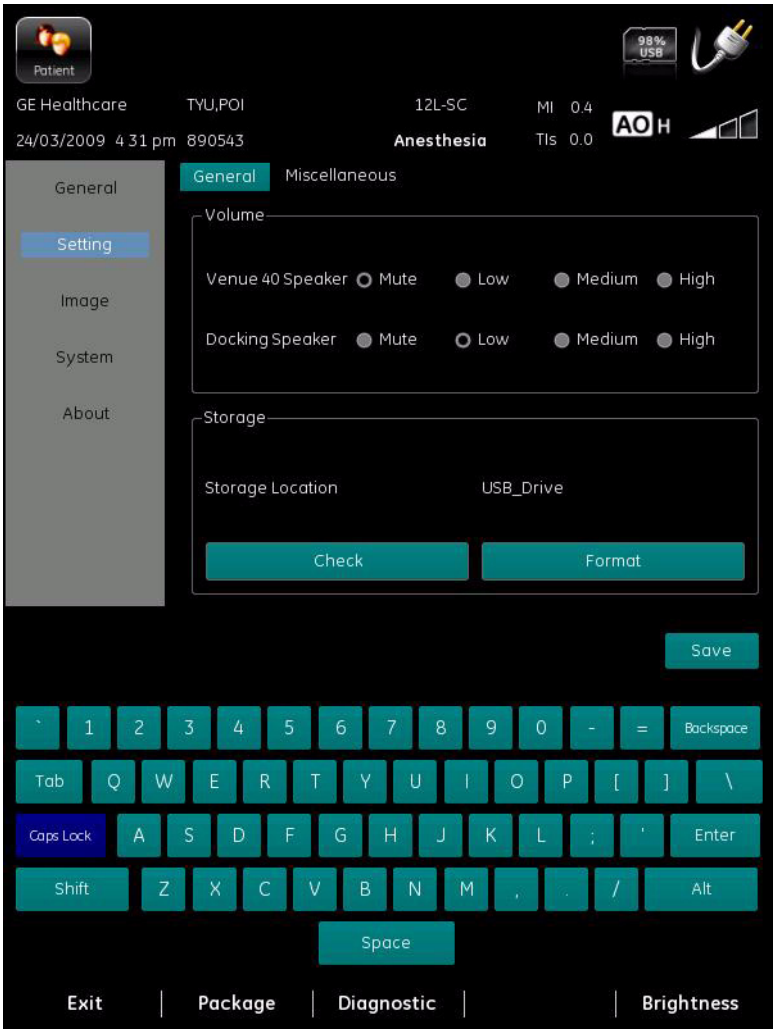


Figure 6-7 Adjust volume

6-2-3 Adjust monitor on Docking Station/Docking Cart

To adjust the monitor on Docking Station/Docking Cart.

1.) Tilt the LCD monitor for the optimum viewing angle. The maximum angle is 45.

Figure 6-8 Tilt the LCD monitor

6-2-3 Adjust monitor on Docking Station/Docking Cart (cont'd)

To adjust the height of Docking Cart.

1.) Hold the cart handle by both hands, step on the pedal, push or lift to adjust the height.

Figure 6-9 Cart height adjustment

⚠ **CAUTION** **When the cart handles are used for power cable management, the sudden raising of the cart to a higher position may cause the AC plug to break.**

⚠ **CAUTION** **When adjusting the cart while scanning, the power cord and wheels may become entangled causing cable damage.**

⚠ **CAUTION** **Damage to the probe cable may result if the brake pedal catches the cable and pulls it tight against the base leg. This puts stress on the probe and connector while in the holder.**

Section 6-3Stylus

Stylus tips can be replaced when it becomes dull.

To replace the stylus tips:

1.) Use the grooved stylus tip tool in stylus package, grasp and pull out the stylus tip.
2.) To insert a new stylus tip, insert the flat end into the stylus securely using the grooved stylus tip tool.

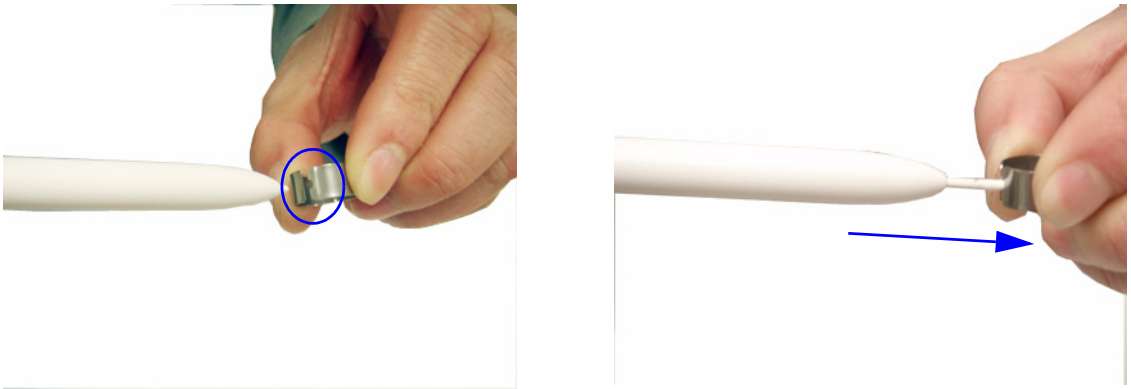


Figure 6-10 Stylus tips replacement

This page was intentionally left blank.

Chapter 7
Diagnostics/Troubleshooting

Section 7-1
Overview

7-1-1 Purpose of Chapter 7

This section describes how to setup and run the tools and software that help maintain image quality and system operation. Very basic host, system and board level diagnostics are run whenever power is applied. Some Service Tools may be run at the application level. However most software tests are required.

Table 7-38 Contents in Chapter 7

Section 7-2Diagnostics

7-2-1 Diagnostic Tools

The diagnostic tools are provided for checking the system which includes the power supply, temperature, fan operation, board functions, keyboard operation, peripherals and so on.

Before performing diagnostics, please check the software and hardware version in **Utility** - **About**.

Section 7-3Troubleshooting

7-3-1 Console Troubleshooting Trees

7-3-1-1 System Doesn't Boot

This is an overall diagram showing a recommended sequence for troubleshooting at no-boot situation.

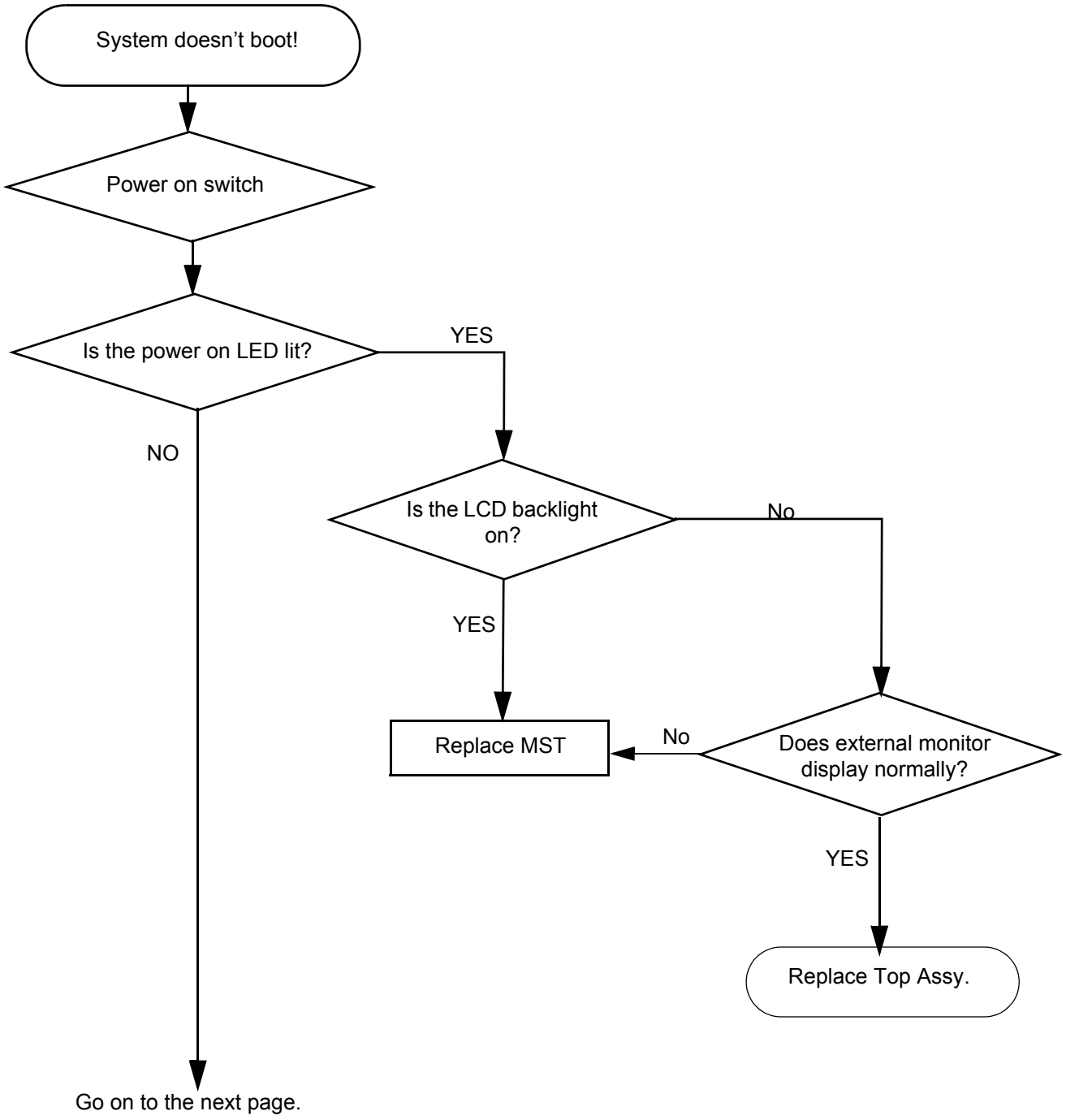


Figure 7-11 System Doesn't Boot

7-3-1-1 System Doesn't Boot (cont'd)

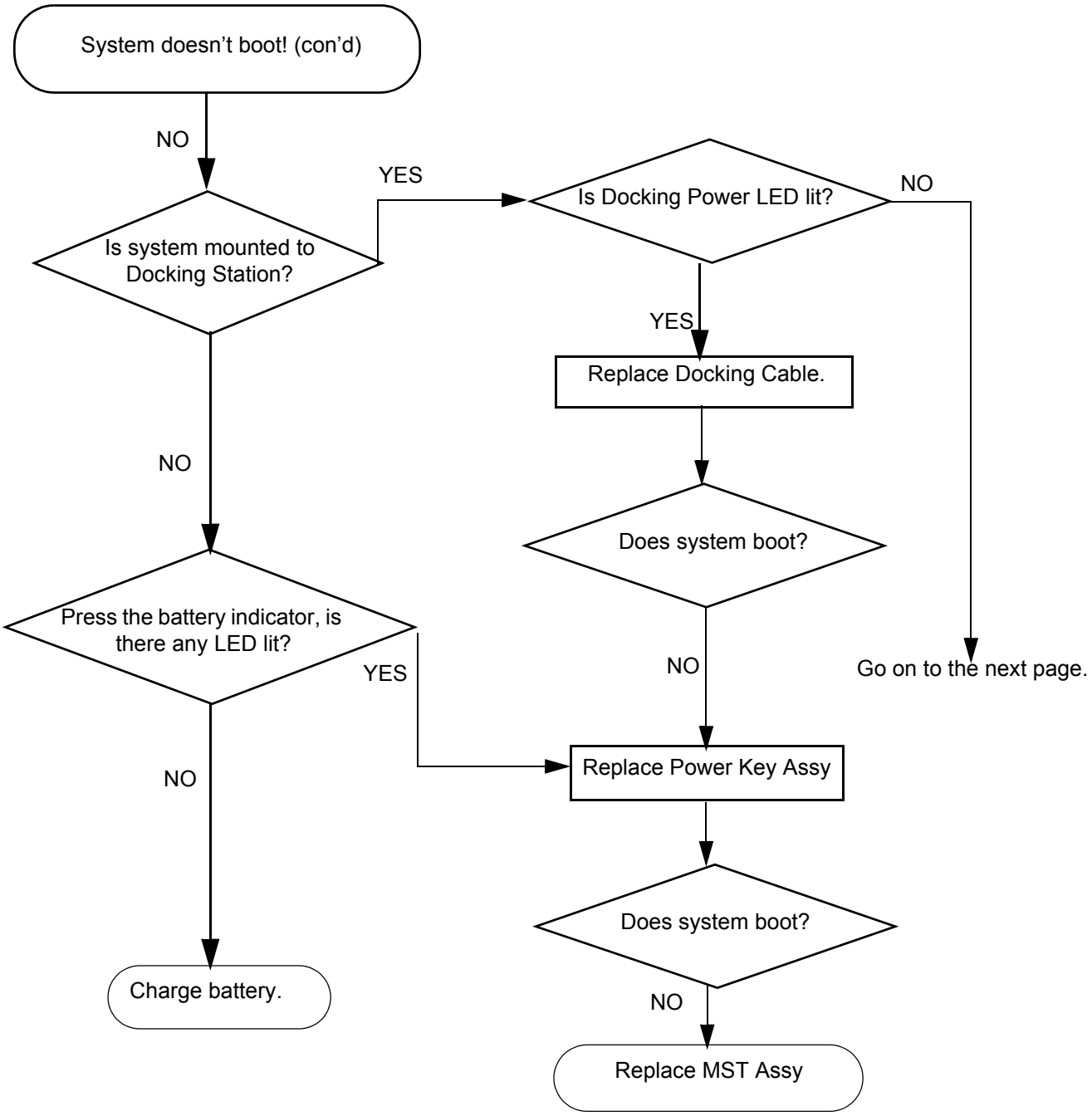


Figure 7-12 System Doesn't Boot (cont'd)

7-3-1-1 System Doesn't Boot (cont'd)

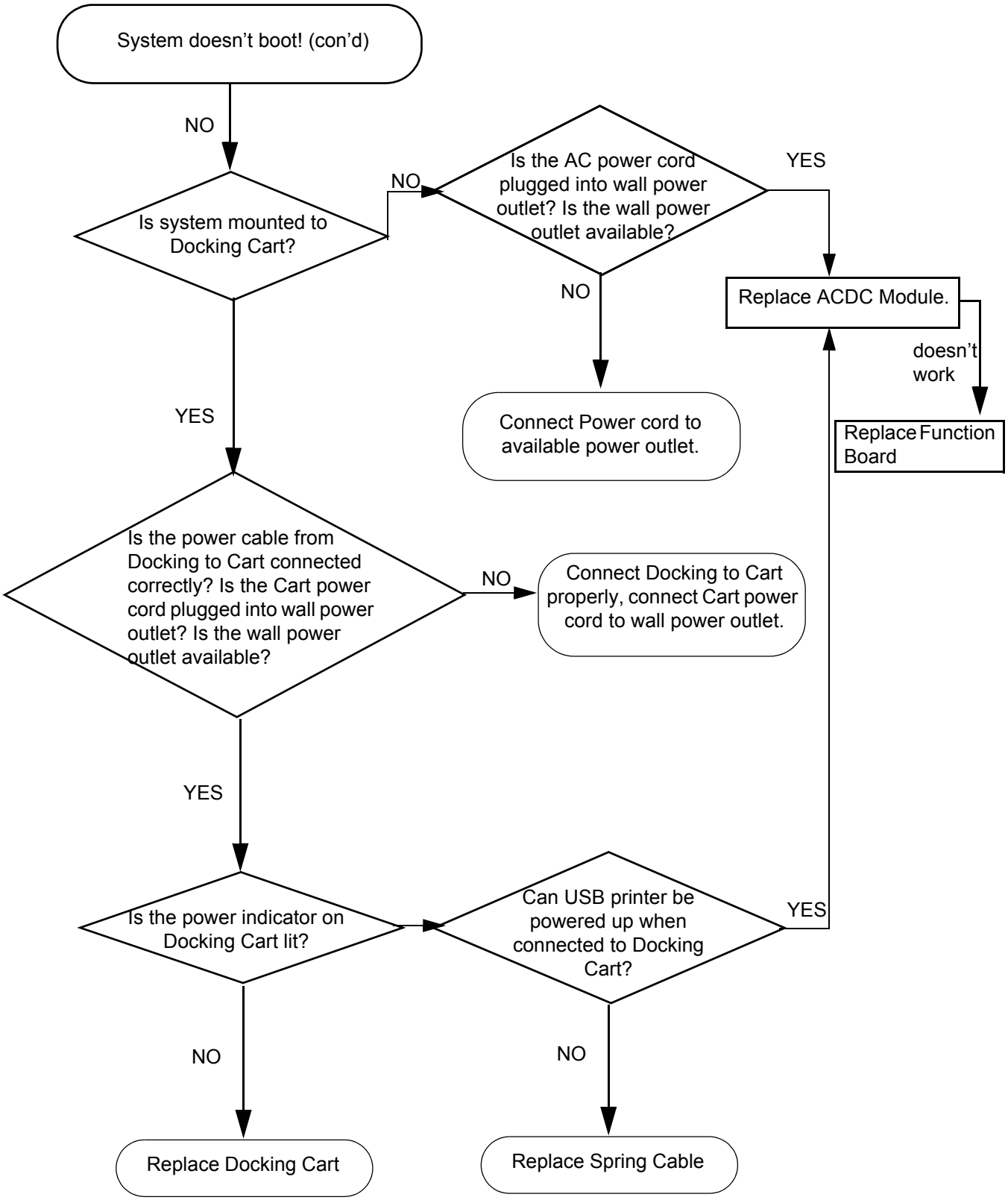


Figure 7-13 System Doesn't Boot (cont'd)

7-3-1-2 Hard Key Low Sensitivity

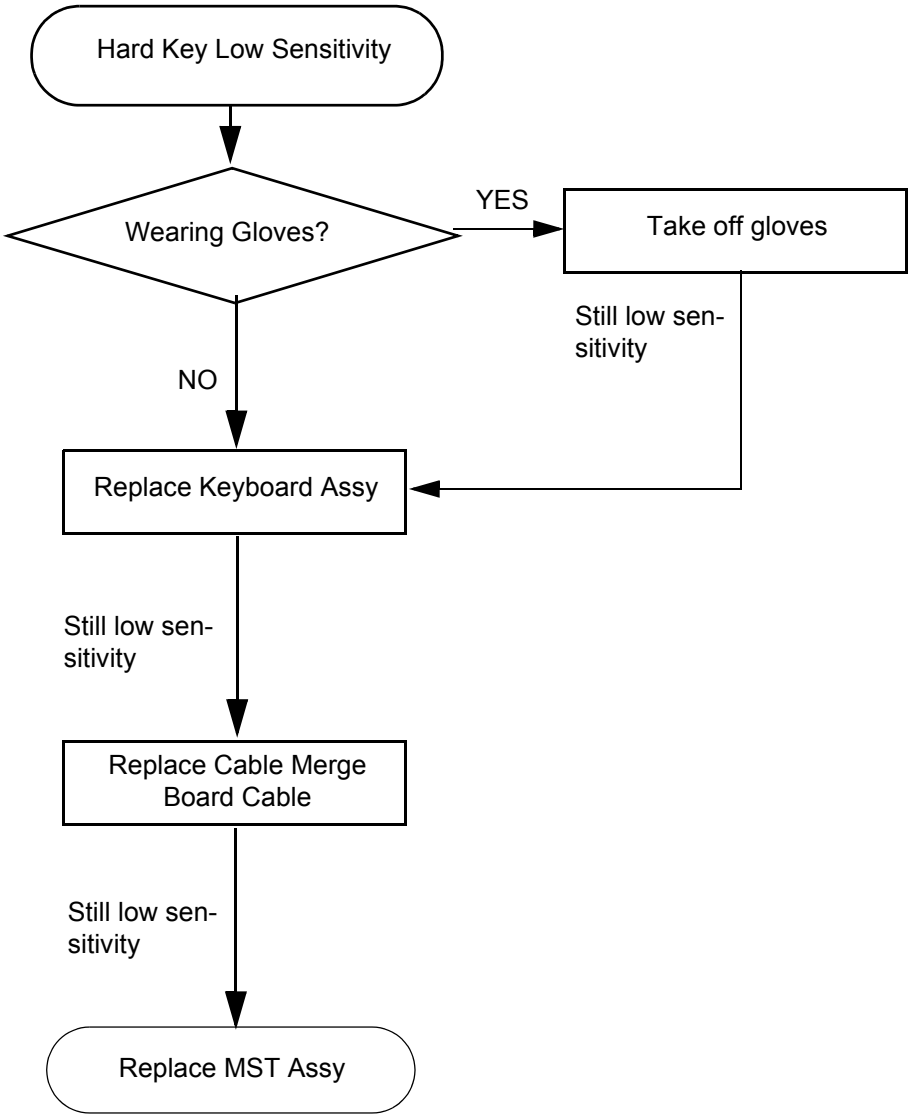


Figure 7-14 Hard Key Low sensitivity

7-3-1-3 Structured Artifact in the image

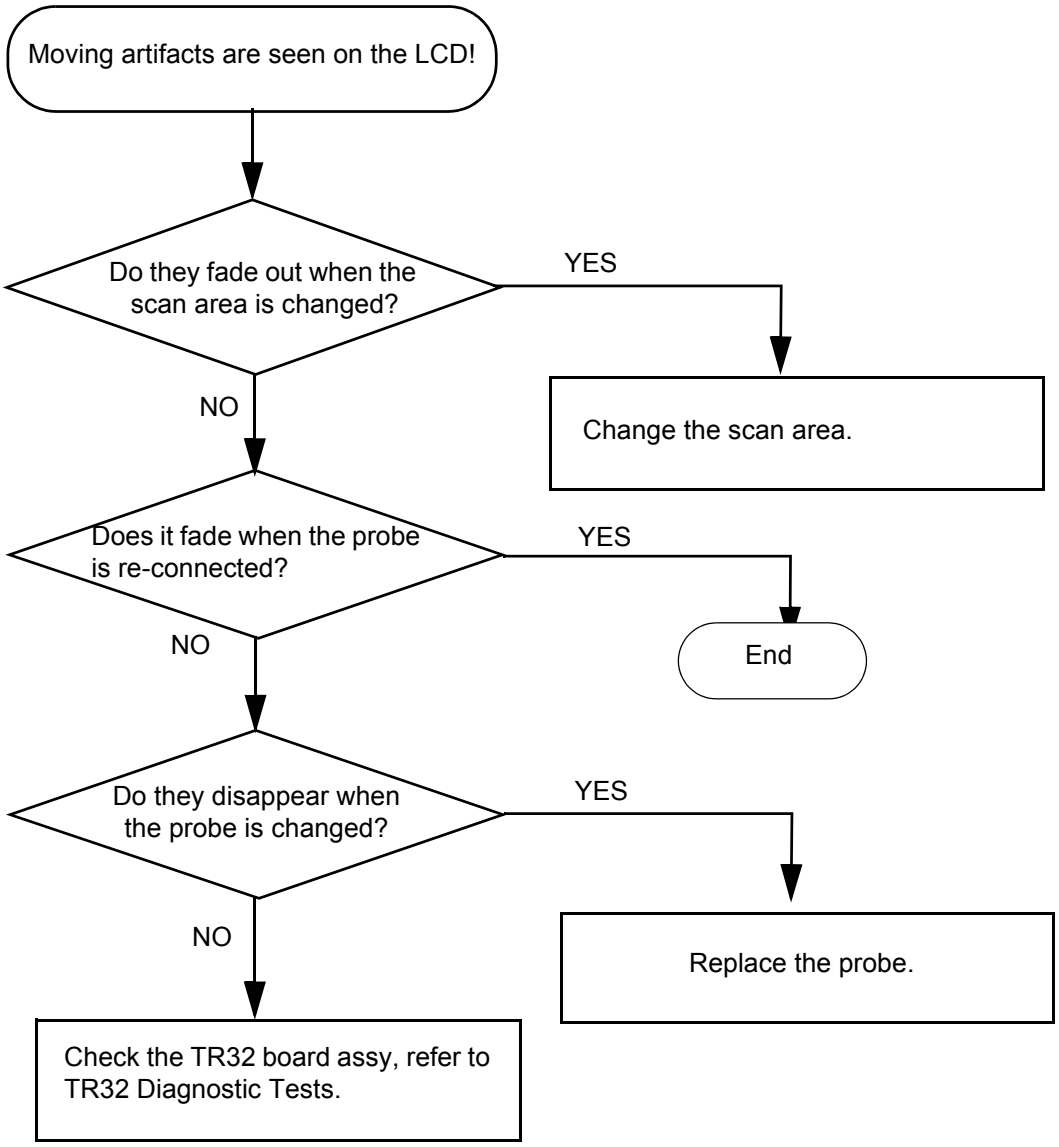


Figure 7-15 Structured Artifact in the image

7-3-1-3 Structured Artifact in the image (cont'd)

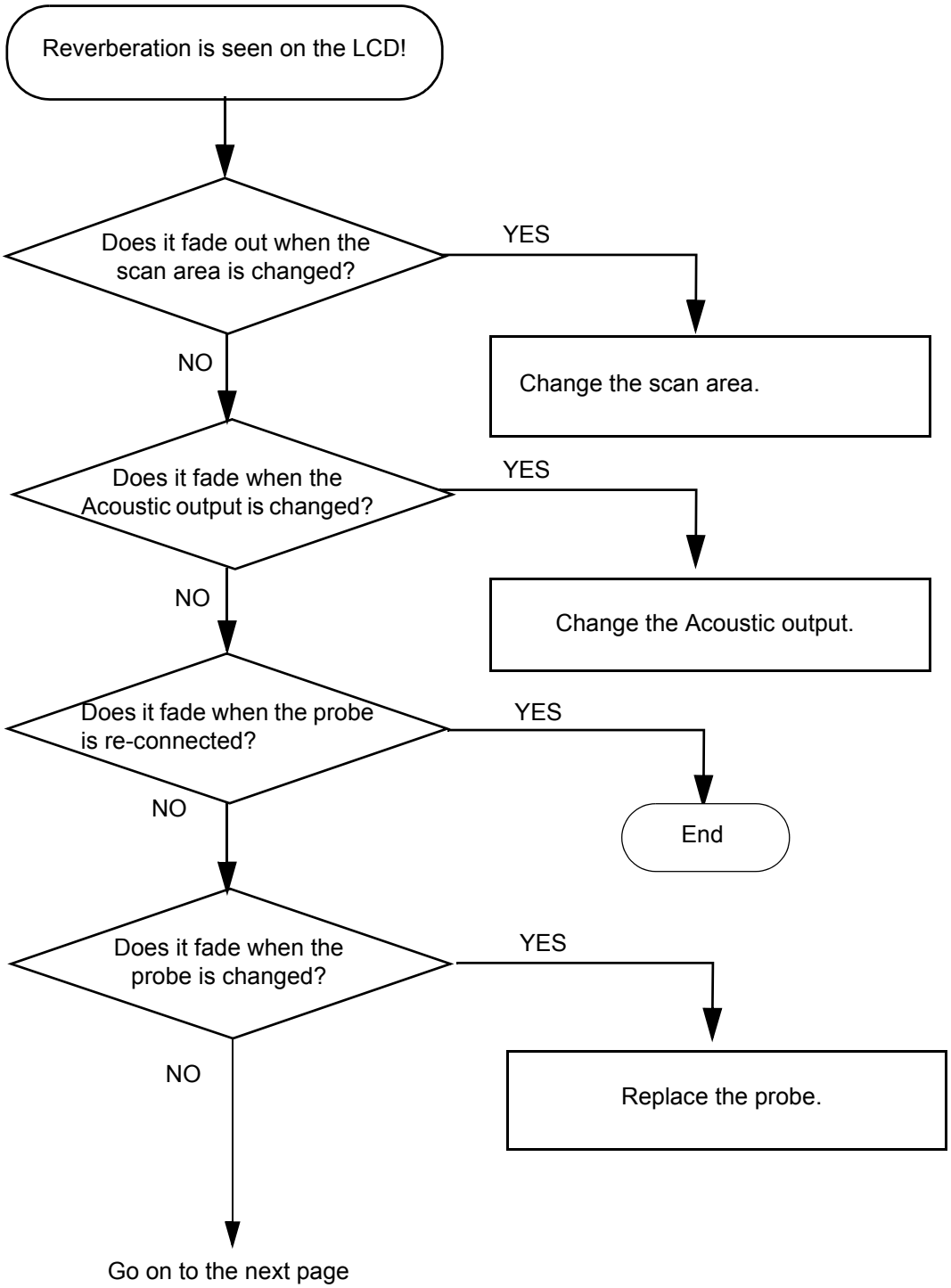
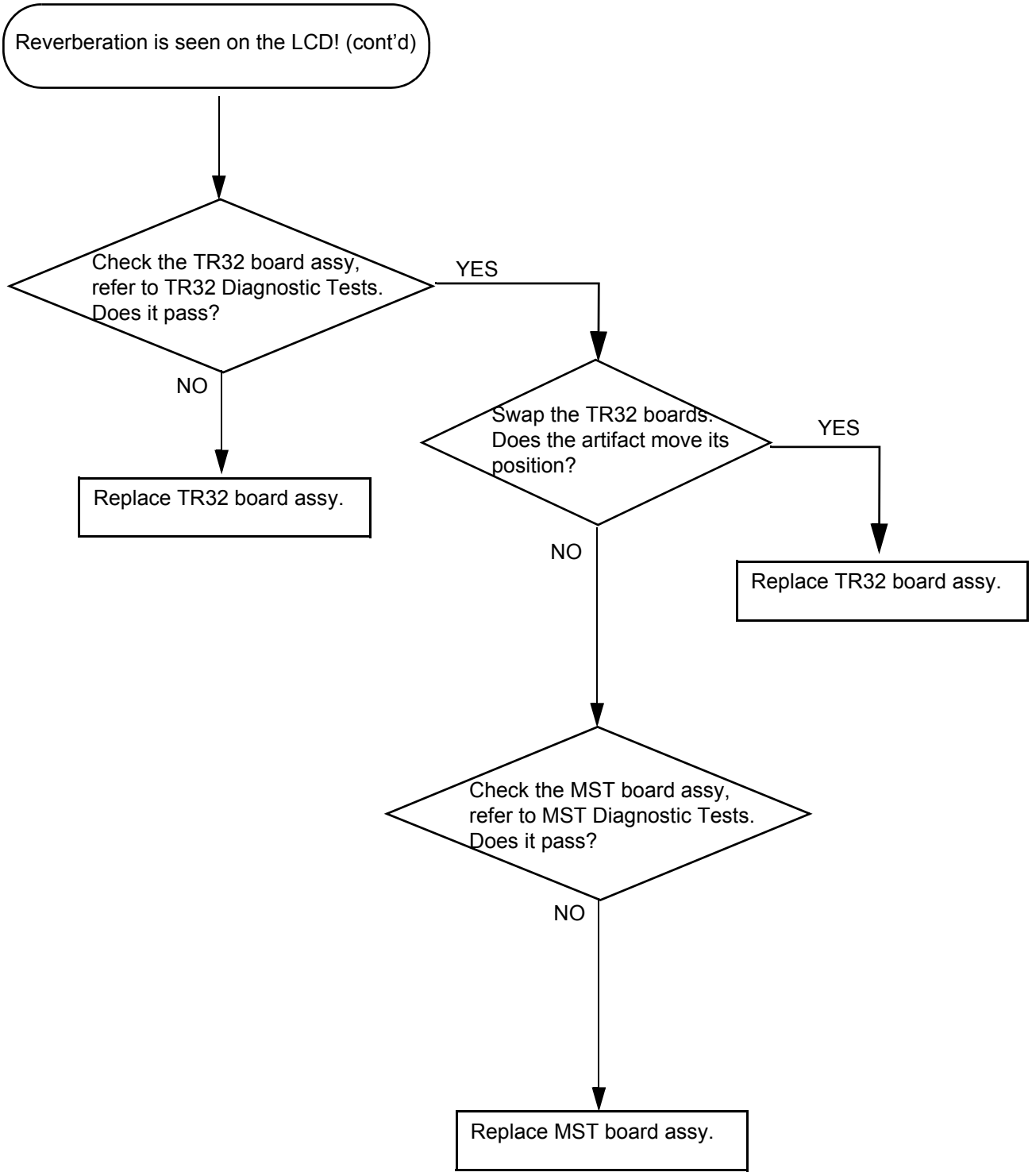


Figure 7-16 Structured Artifact in the image (cont'd)

7-3-1-3 Structured Artifact in the image (cont'd)



7-3-1-4 B Mode Low Sensitivity

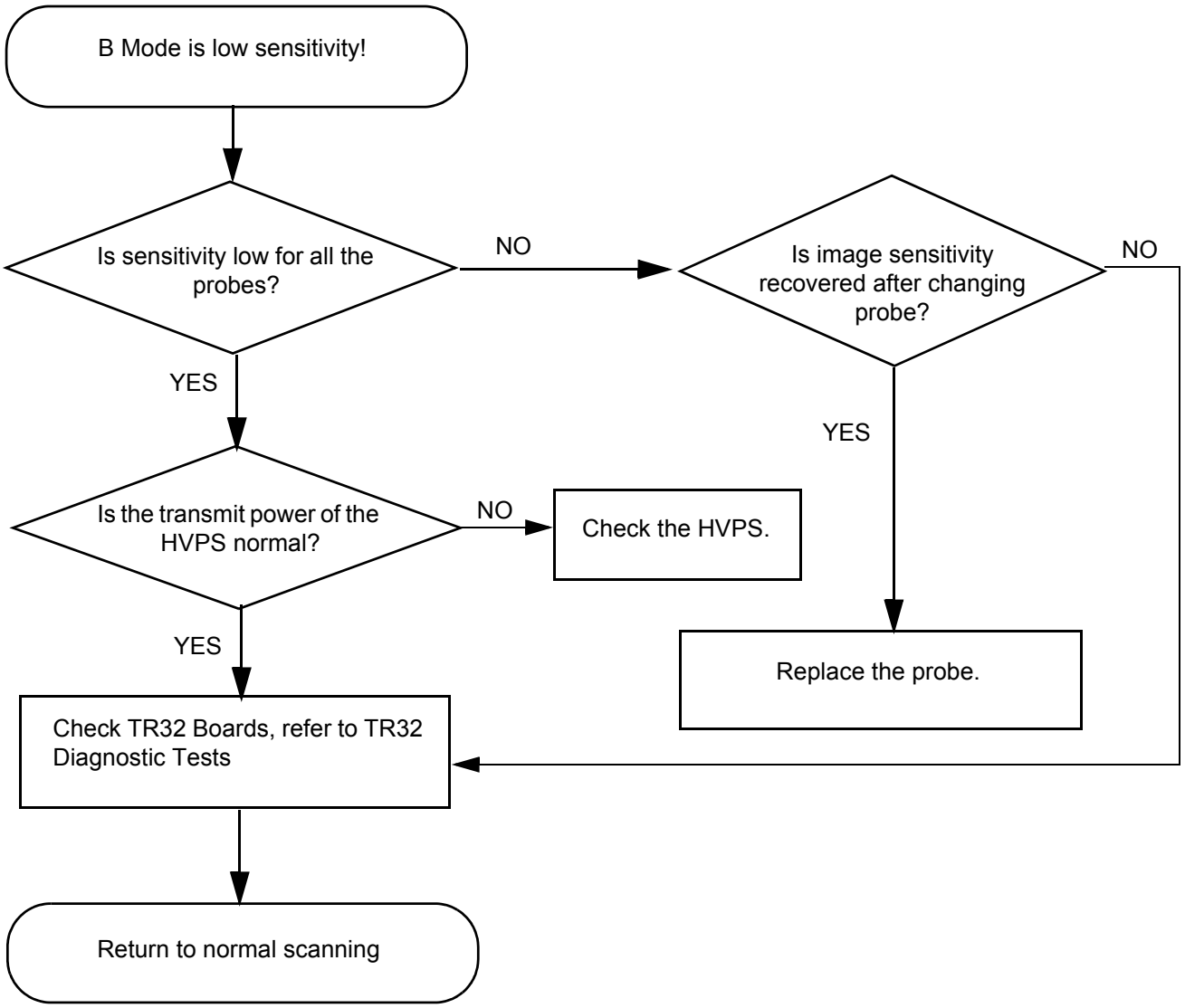


Figure 7-17 B Mode Low Sensitivity

7-3-1-5 B Mode Low Image Quality

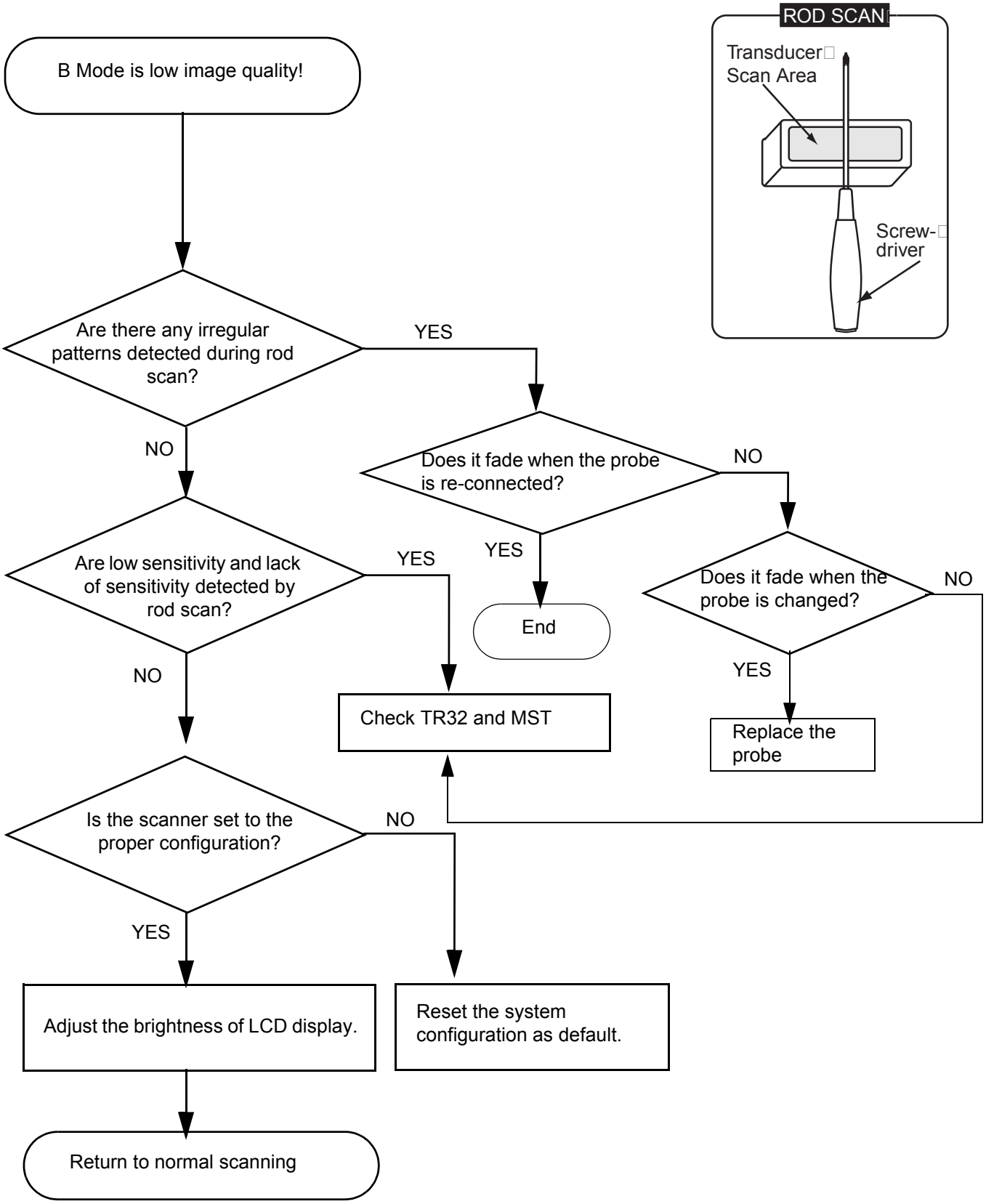


Figure 7-18 B Mode Low Image Quality

7-3-1-6 Noise in B Mode

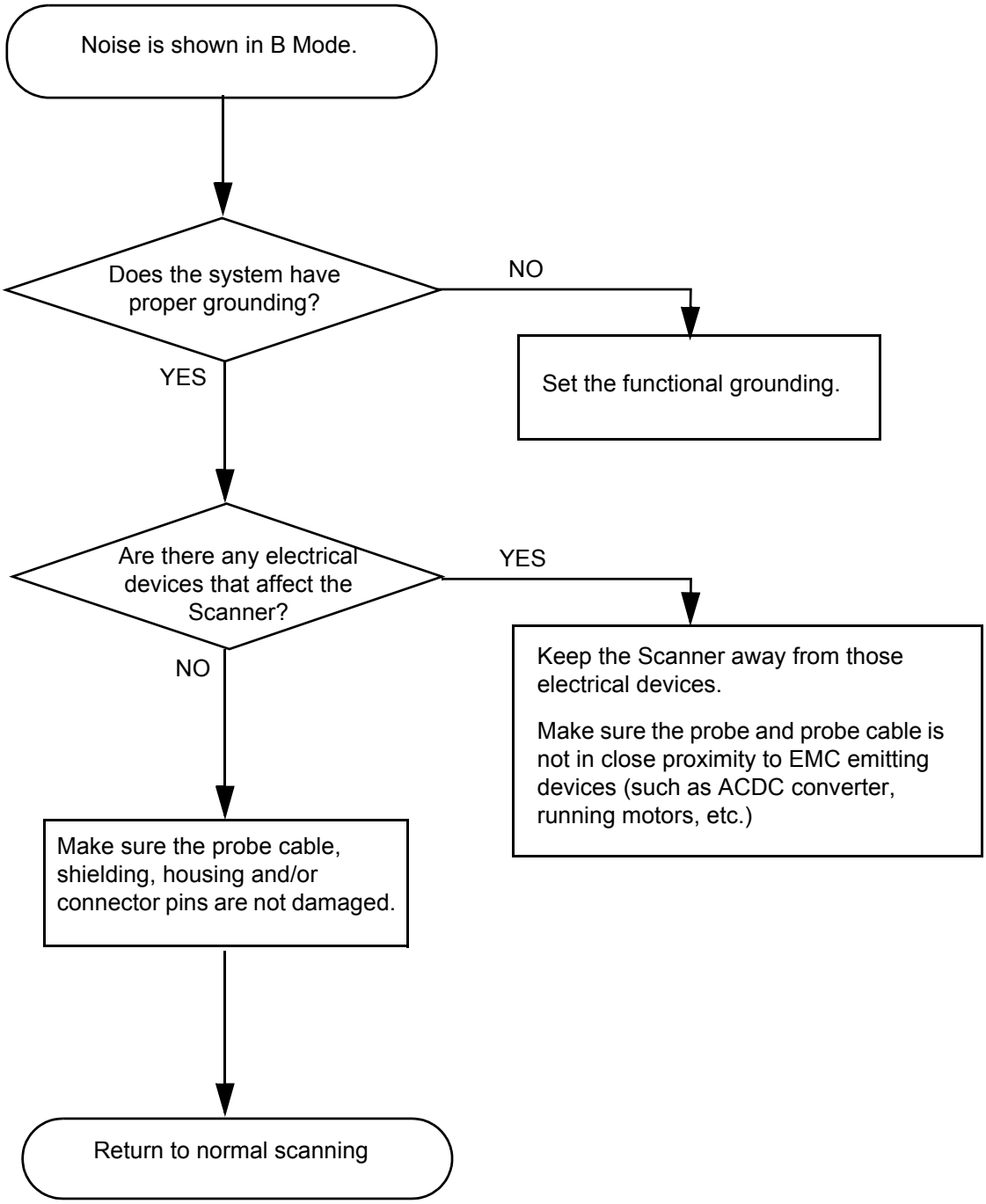


Figure 7-19 Noise in B Mode

7-3-1-7 Color Flow Low Sensitivity

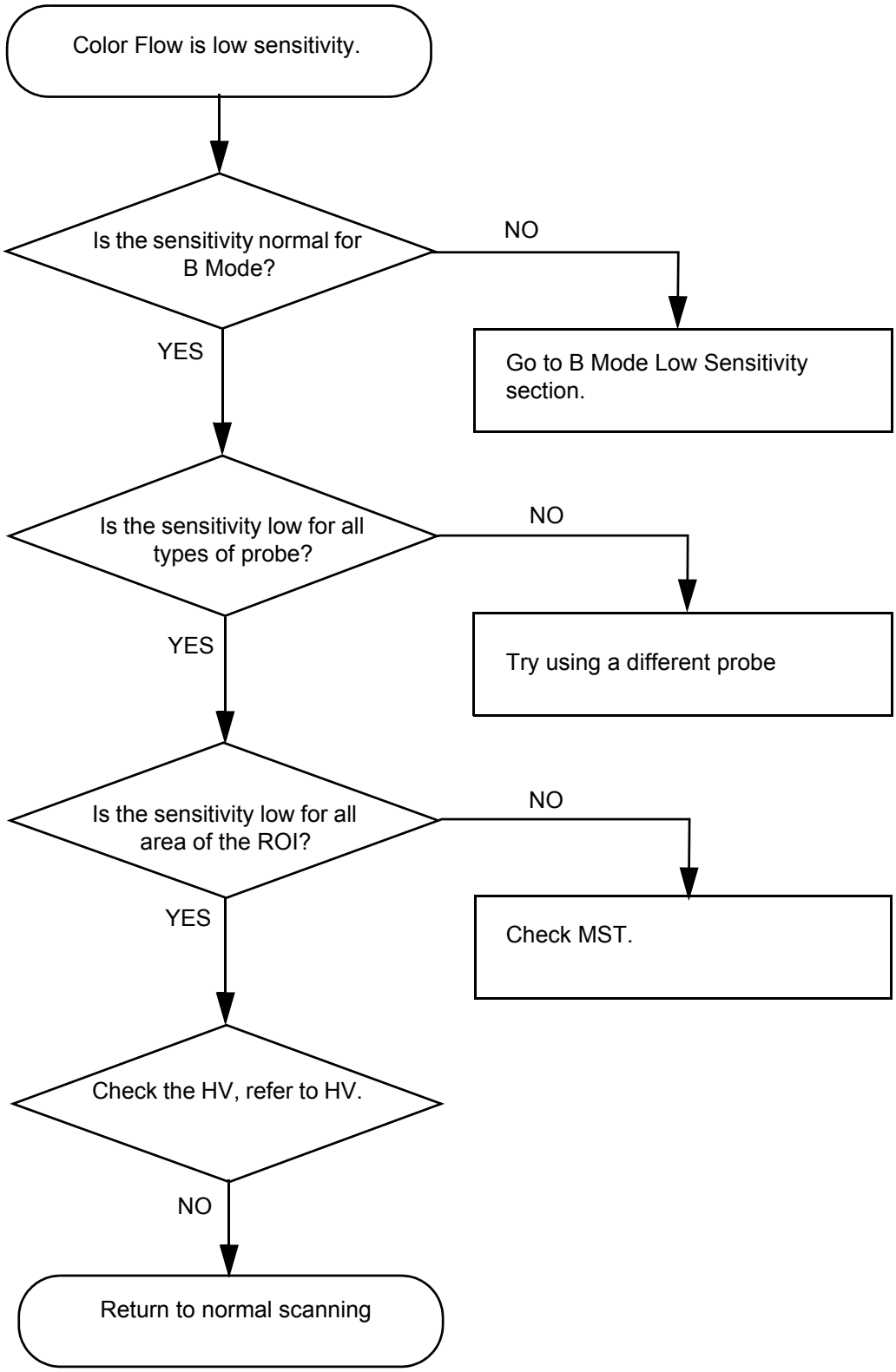


Figure 7-20 Color Flow Low Sensitivity

7-3-1-8 Noise in Color Flow

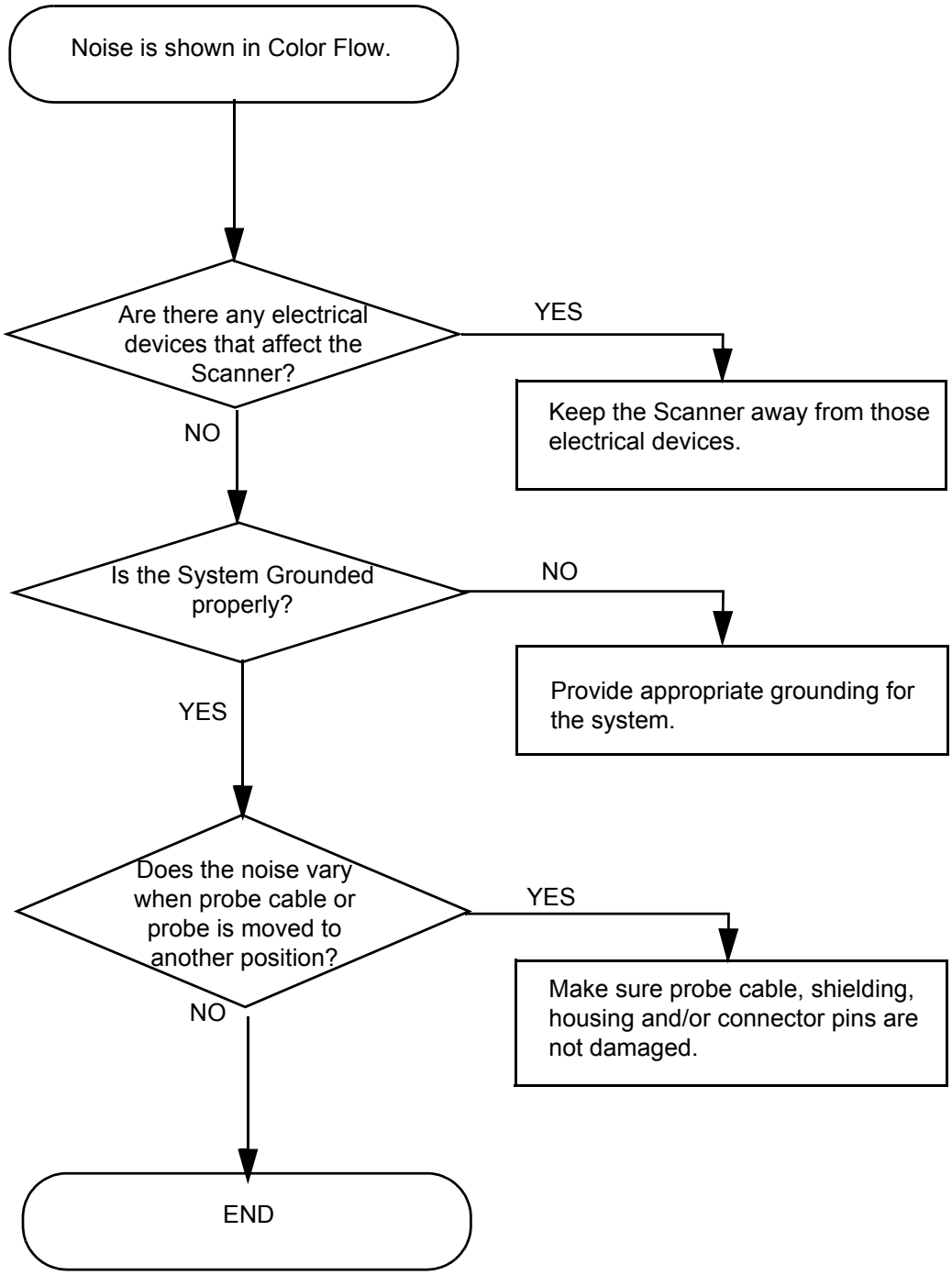


Figure 7-21 Noise in Color Flow

7-3-1-9 Stylus - Impaired Sensitivity

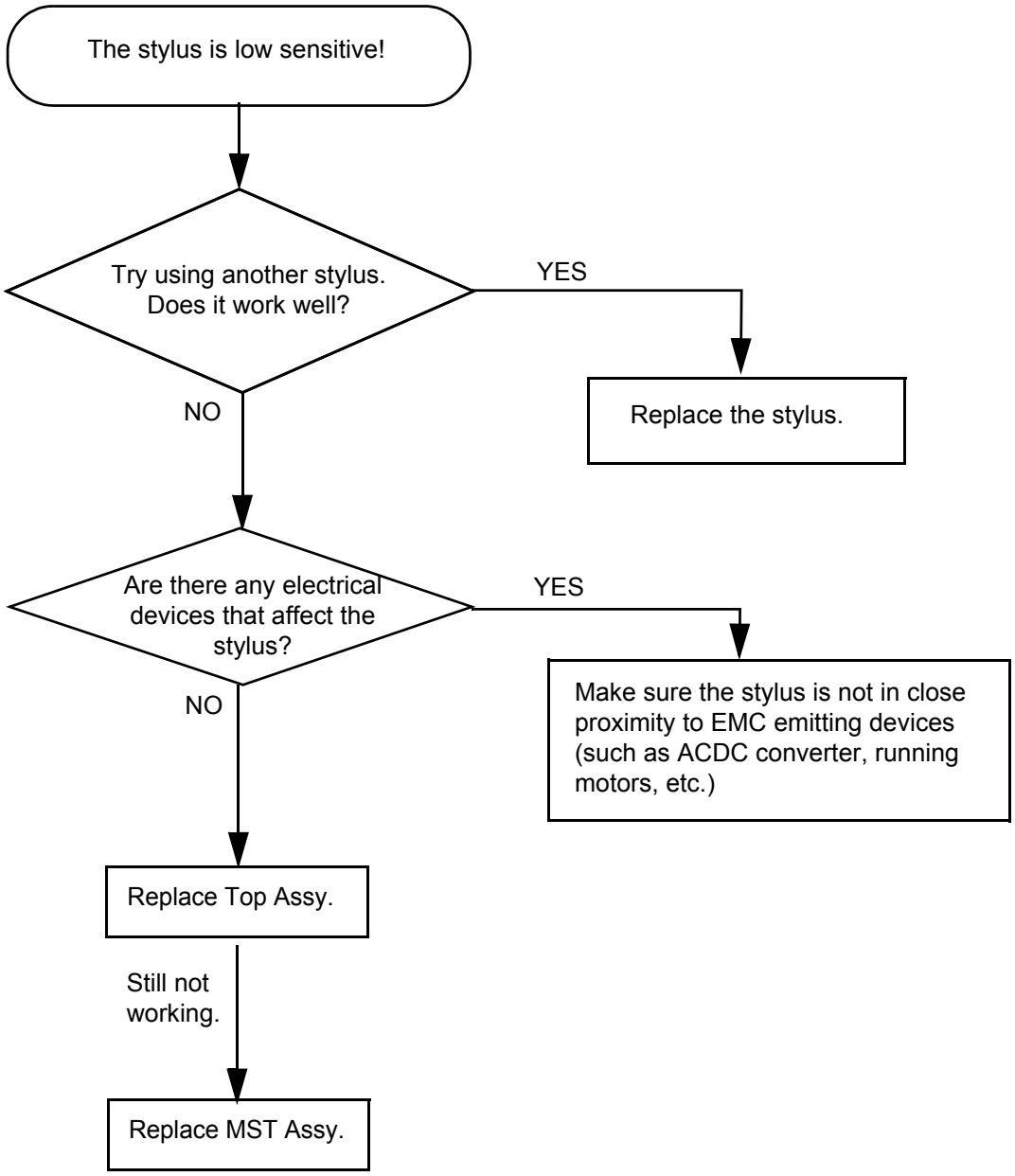


Figure 7-22 Stylus

7-3-1-10 LCD Display - Impaired Function

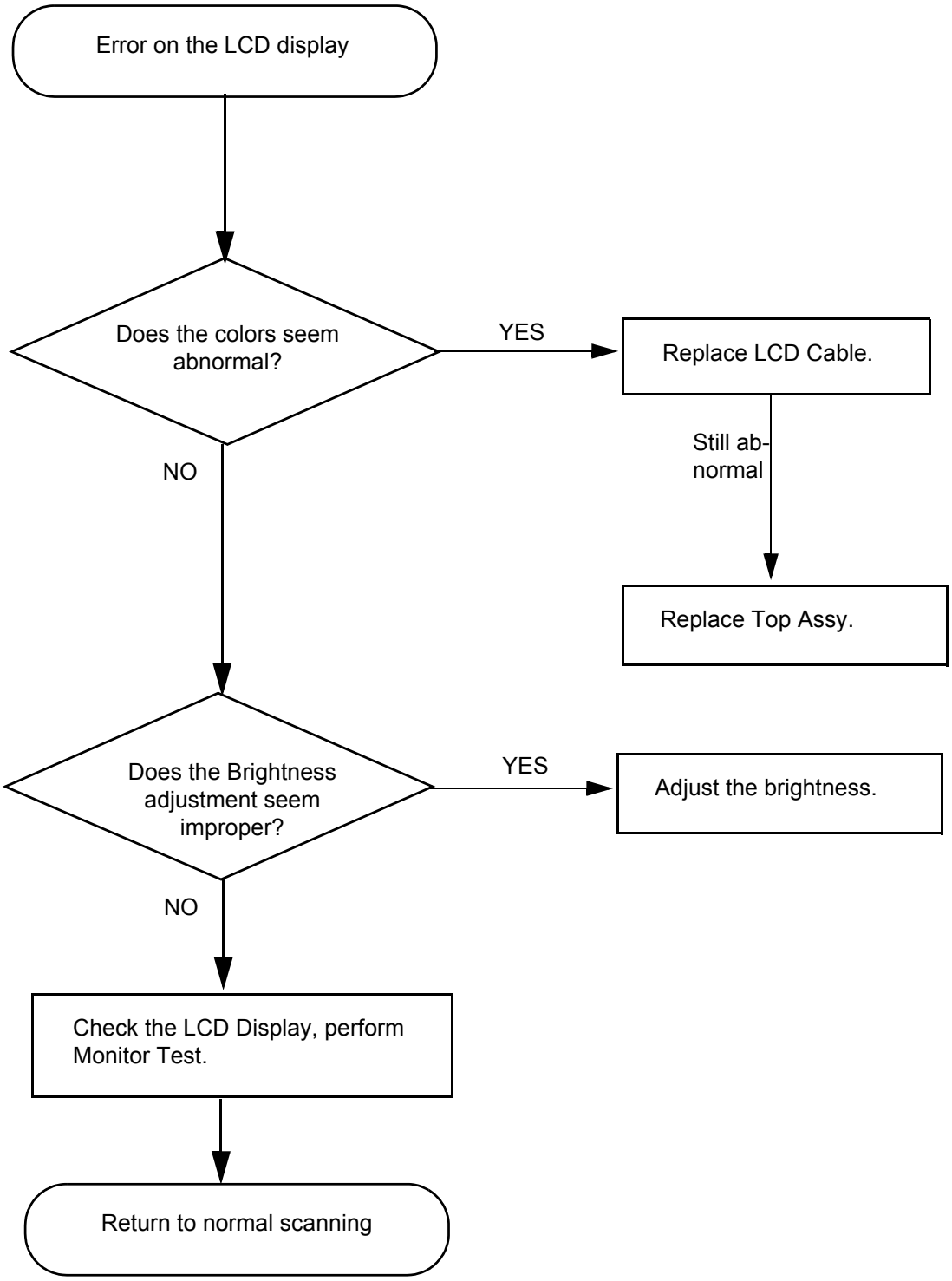


Figure 7-23 LCD Display

7-3-2 Peripheral Troubleshooting Trees

7-3-2-1 Unable Recording by Printer

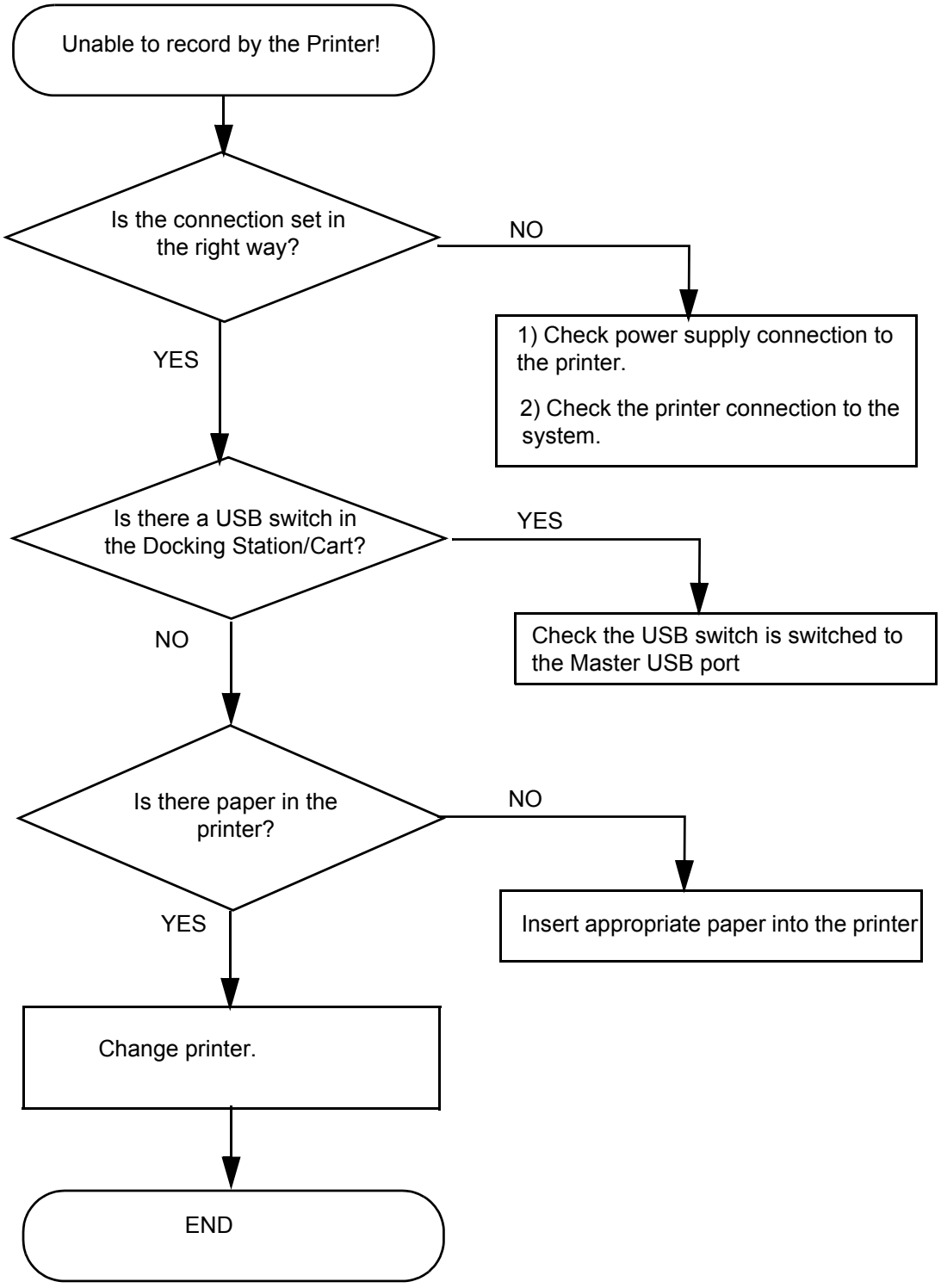


Figure 7-24 Unable Recording by Printer

7-3-2-2 SD Card

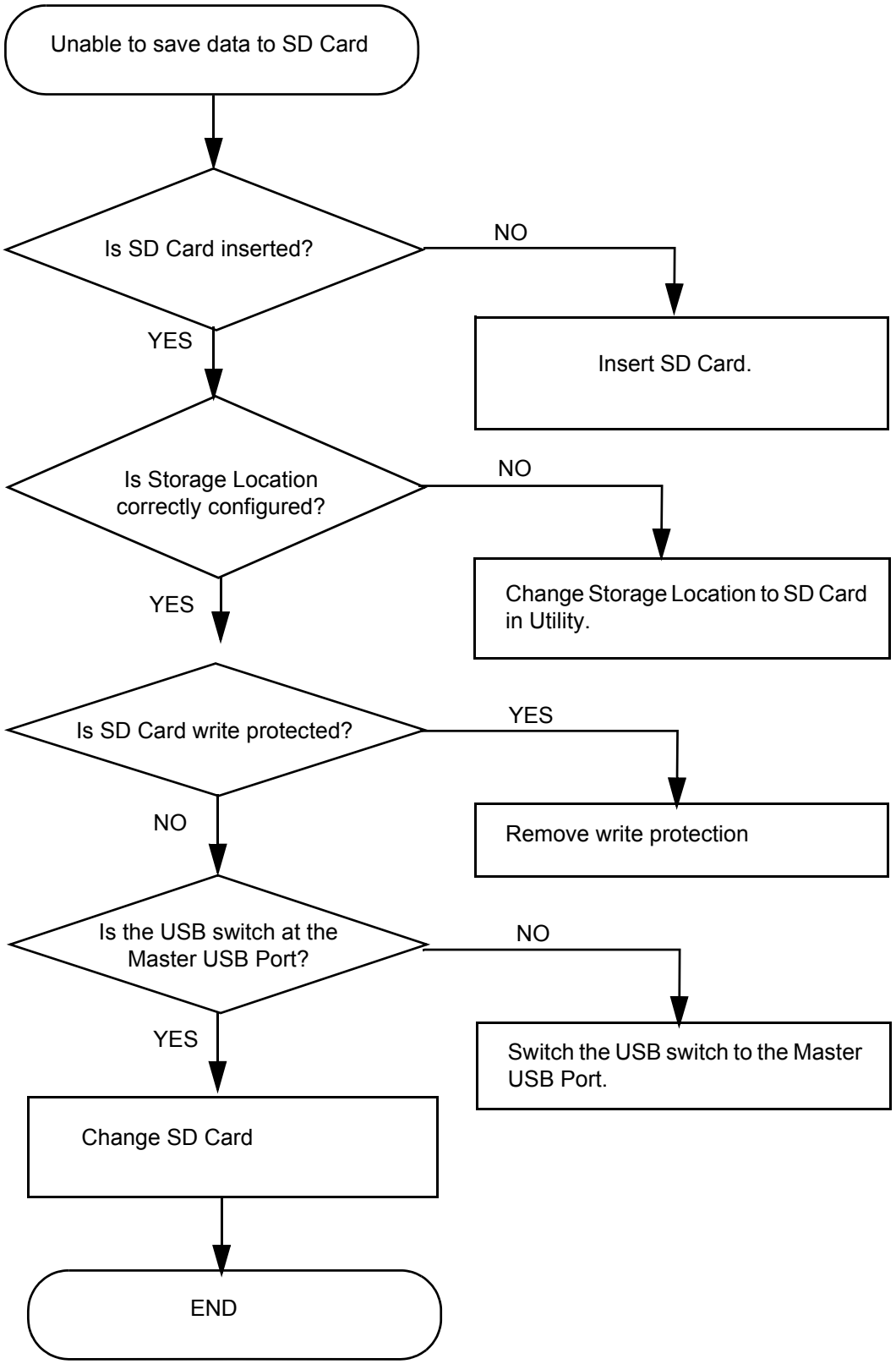


Figure 7-25 Unable to save data to SD Card

7-3-2-3 USB Memory Stick

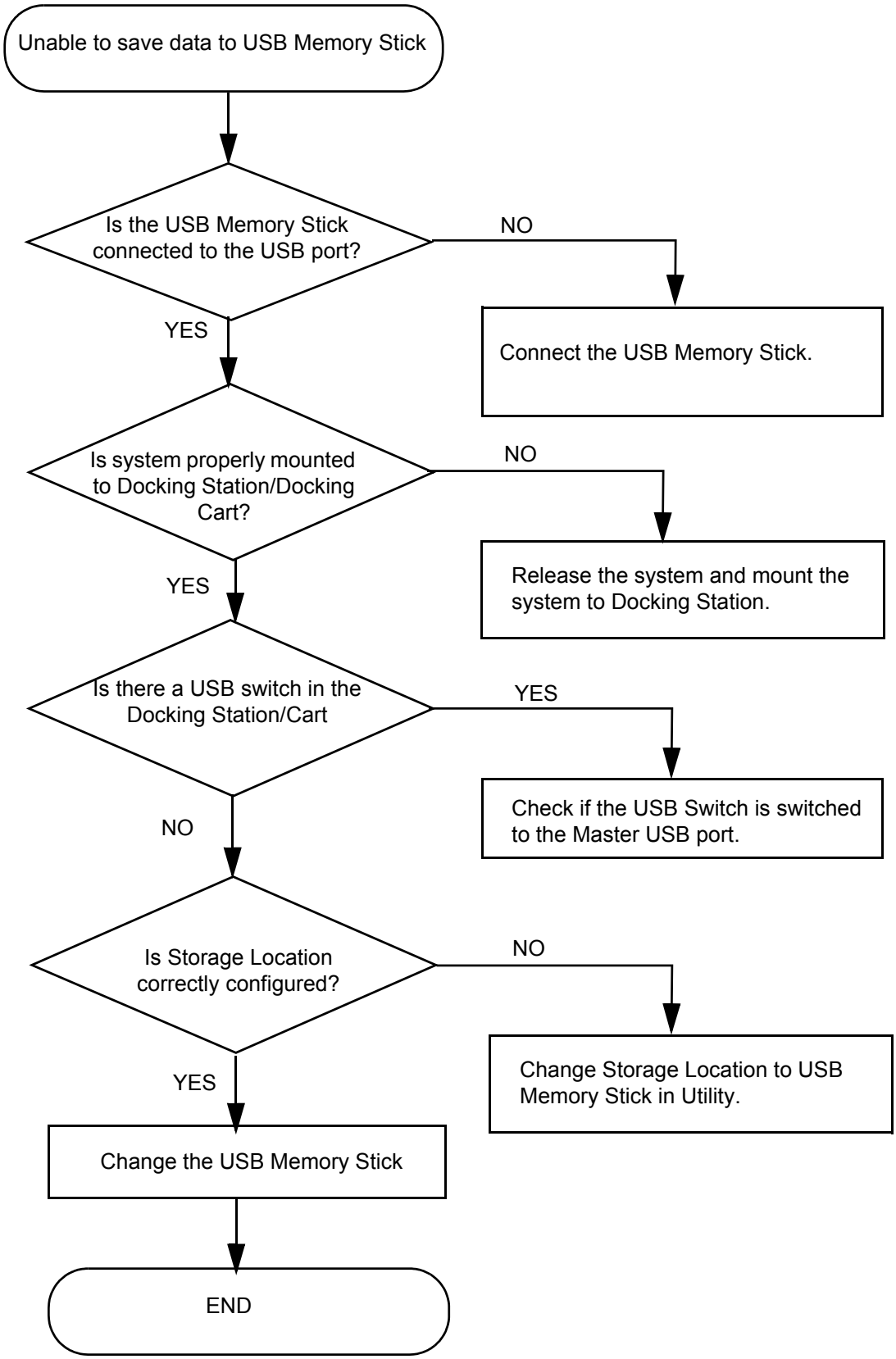


Figure 7-26 Unable to save data to USB Memory Stick

This page was intentionally left blank.

Chapter 8
Replacement Procedures

Section 8-1
Overview

8-1-1 Purpose of Chapter 8

This chapter describes replacement procedures for the following modules and subsystems.

Table 8-1 Contents in Chapter 8

Section 8-2
Disassembly/Re-assembly of Venue 40

8-2-1 Warning and Caution

WARNING ***ONLY QUALIFIED SERVICE PERSONNEL SHOULD REMOVE ANY COVERS OR PANELS. ELECTRICAL HAZARDS EXISTS AT SEVERAL POINTS INSIDE. BECOME THOROUGHLY FAMILIAR WITH ALL HAZARDOUS VOLTAGES AND HIGH CURRENT LEVELS TO AVOID ACCIDENTAL CONTACT***

CAUTION **Do not wear the ESD wrist strap when you remove a part of power supply unit. Turn OFF power and unplug the power cord before removing a part of power supply unit.**

8-2-2 Returning/Shipping for repairs

Equipment being returned must be clean and free of blood and other infectious substances.

GEHC policy states that body fluids must be properly removed from any part or equipment prior to shipment. GEHC employees, as well as customers, are responsible for ensuring that parts/equipment have been properly decontaminated prior to shipment. Under no circumstance should a part or equipment with visible body fluids be taken or shipped from a clinic or site (for example, body coils or an ultrasound probe). The purpose of the regulation is to protect employees in the transportation industry, as well as the people who will receive or open this package.

NOTE: The US Department of Transportation (DOT) has ruled that "items that were saturated and/or dripping with human blood that are now caked with dried blood; or which were used or intended for use in patient care" are "regulated medical waste" for transportation purposes and must be transported as a hazardous material.

If the Venue 40 needs to be sent for repair, ensure that any patient information is erased from the storage device, or that the storage device is removed from the Venue 40 before shipping. In case that any patient information is still residing on the Venue 40, GE will contact the customer and request for urgent collection of that patient information. GE will keep this patient information in a secure environment for a maximum period of 1 month. All patient information will be permanently deleted at that point.

If PHI (Patient Healthcare Information) data needs to be sent to GE employees for service purposes, GE will ascertain agreement from the customer. The patient information shall only be transferred by approved service processes, tools and devices restricting access, protecting or encrypting data where required, and providing traceability in the form of paper or electronic documents at each stage of the procedure while maintaining compliance with cross-border restrictions of patient information.

8-2-3 Standard tools list for Venue 40

Table 8-2 Standard tools list for Venue 40

No	Part Name	Part No.	QTY	Screw Description	Screwdriver Description
1	screw	5162727	5	Screw M3x25(NL)	TORX#10
2	screw	5308509	2	Screw M3x15(NL)	TORX#10
3	screw	2327793	18	Screw SJ2836-87 M3x8(I)	Phillips #2
4	screw	5307883	8	Screw M2.5x4 OD 3.60	Phillips #1
5	screw	5307880	5	Screw SJ2836-87 M3x825(I)	Phillips #2
6	screw	5307881	9	Screw M2x3 OD 7.80	Phillips #1
7	screw	5307887	6	Screw M2.5x15 (NL)	Phillips #1
8	screw	5138465	19	Screw FH M2.5x5(NL)	Phillips #1
9	screw	5144212	6	Screw FH M2X3.5 (NL)	Phillips #0

NOTICE This is ultra-portable device in small size, please carefully keep all the screws, cables aside during service activities.

NOTICE When servicing Top Assy, please make sure to lay it on soft and stable surface to avoid scratching the LCD.

8-2-4 Docking Station Desk Support Assy (FRU No. 405)

8-2-4-1 Tools

- NA

8-2-4-2 Needed Manpower

- 1 person, 1 minute

8-2-4-3 Preparations

- Cut off the AC Power input.

8-2-4-4 Removal Procedure

1.) Remove probe holders.

2.) Push the trigger to the other side, use the other hand to take the Docking module off track. Refer to Figure 8-1 on page 8-4 .

2)

Figure 8-1 Docking Station Desk Support Assy disassembly

8-2-4-5 Mounting procedure

1.) Install the new parts in the reverse order of removal.

8-2-5 Docking Cart Plastic Shelf (FRU No. 510)

8-2-5-1 Tools

- NA

8-2-5-2 Needed Manpower

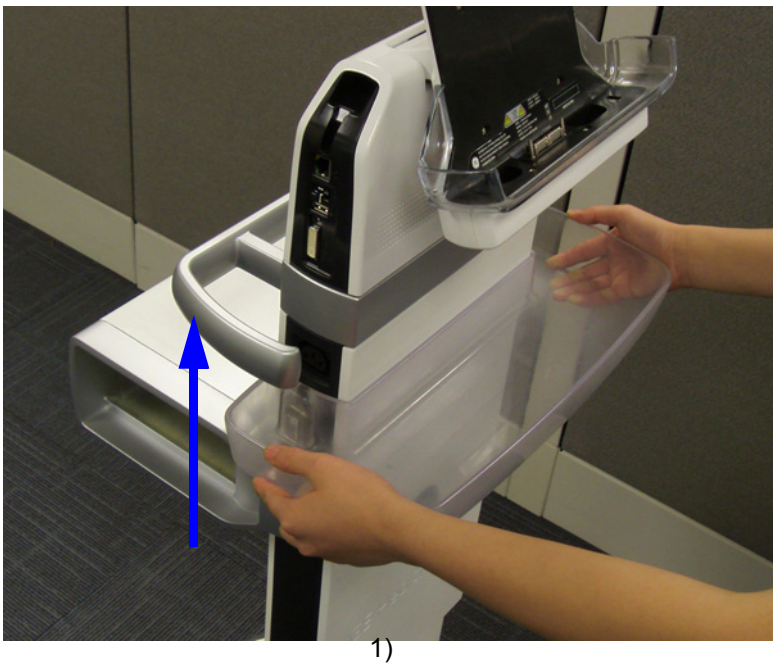
- 1 person, 1 minute

8-2-5-3 Preparations

- NA

8-2-5-4 Removal Procedure

1.) Lift the Plastic Shelf and remove it from Docking Cart. Refer to Figure 8-2 on page 8-5



1)

Figure 8-2 Docking Cart Plastic Shelf replacement

8-2-5-5 Mounting procedure

1.) Install the new parts in the reverse order of removal.

8-2-6 Docking Cart Printer Shelf (FRU No. 511)

8-2-6-1 Tools

- Common philips screwdriver

8-2-6-2 Needed Manpower

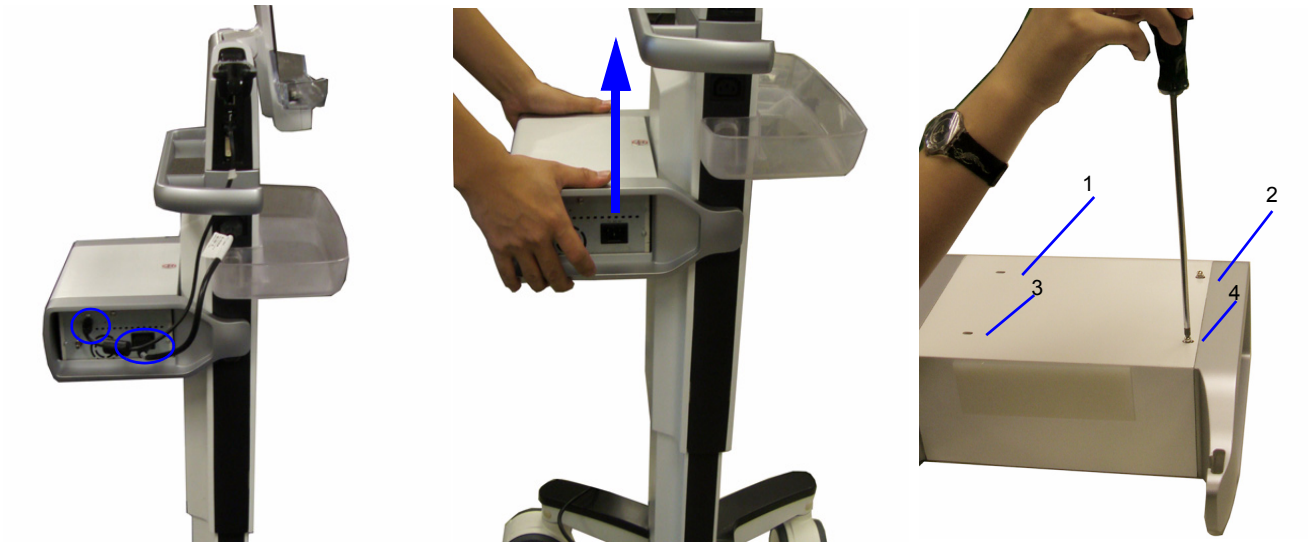
- 1 person, 2 minutes

8-2-6-3 Preparations

- NA

8-2-6-4 Removal Procedure

1.) Disconnect the printer power cable and USB cable from Docking module.
2.) Lift the Printer Shelf and remove it from Docking Cart. Refer to Figure 8-3 on page 8-6
3.) Reverse the printer shelf with printer, unscrew 4 screws [M3*8], take out the printer. Refer to Figure 8-3 on page 8-6



1) 2) 3)

Figure 8-3 Docking Cart Printer Shelf replacement

8-2-6-5 Mounting procedure

1.) Install the new parts in the reverse order of removal.

Section 8-3
Loading Base Image Software

NOTE: While it is believed to be unnecessary, It would not hurt to remove all transducers.

⚠ **NOTICE** The touch panel is disabled during the upgrading process, do not use stylus to select controls on the screen, always press corresponding hard keys to control the process.

8-3-1 Preparations

Following user presets will be lost after software upgrade, if any modification has been made to system default settings. Please record current user presets in below tables and re-config the system after the upgrade is complete.

8-3-1-1 Utility - General

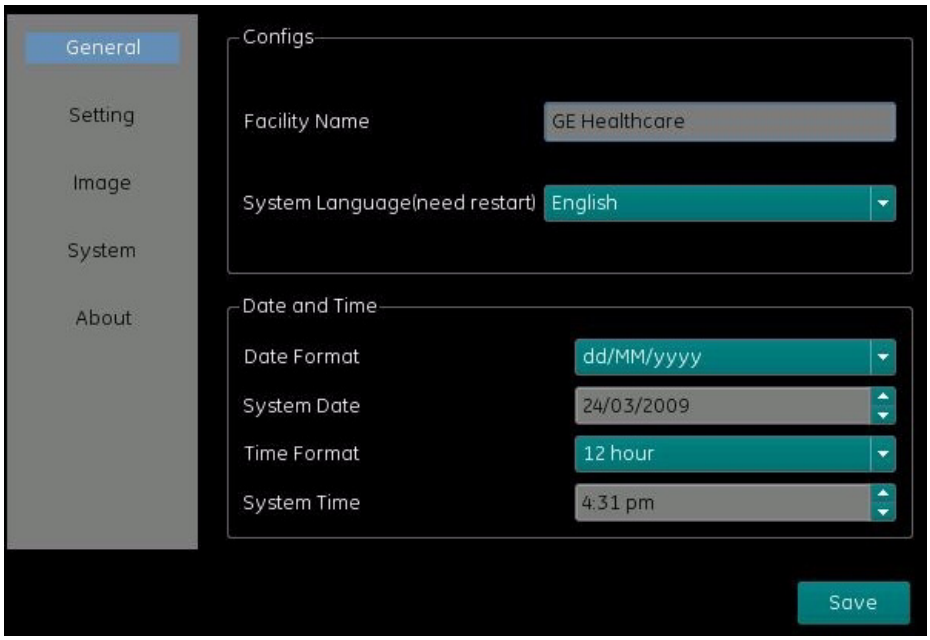


Figure 8-4 Utility - General

Table 8-3 Record settings in Utility - General

General					
Facility Name	**System Language**	**Date Format**	**System Date**	**Time Format**	**System Time**

8-3-1-2 Utility - Setting

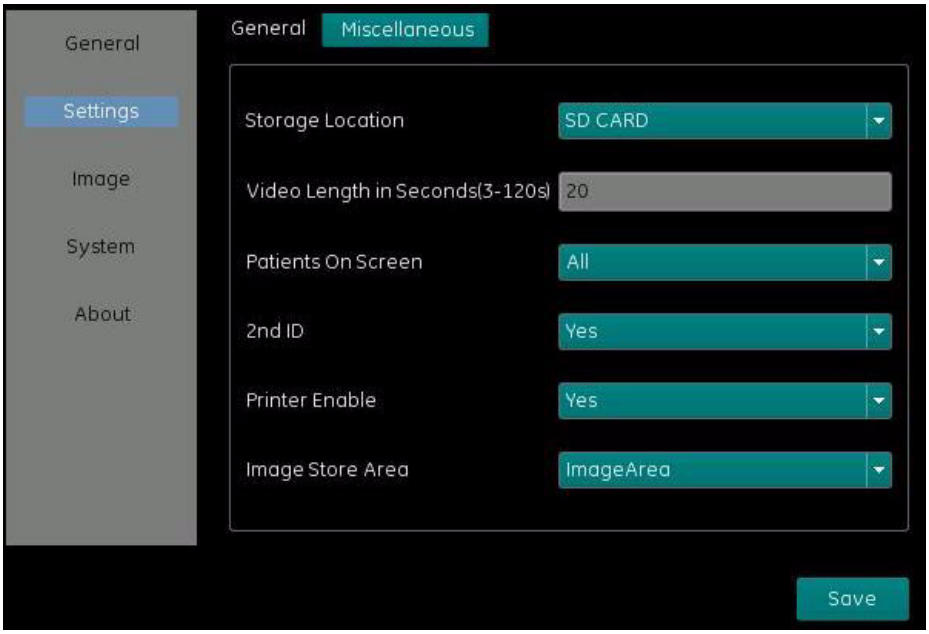


Figure 8-5 Utility - Setting

Table 8-4 Record settings in Utility - Setting

Setting								
General							Miscellaneous	
Storage Location	Video Length in Seconds	Patients On Screen	2nd ID	Printer Enable	Image Store Area	Live Scan Save	Venue 40 Speaker	Docking Speaker
Footswitch								
Left Key		Middle Key		Right Key				

NOTE: Live Scan Save and Footswitch is only available for software version R3.x.x only.

8-3-1-3 Utility - Image

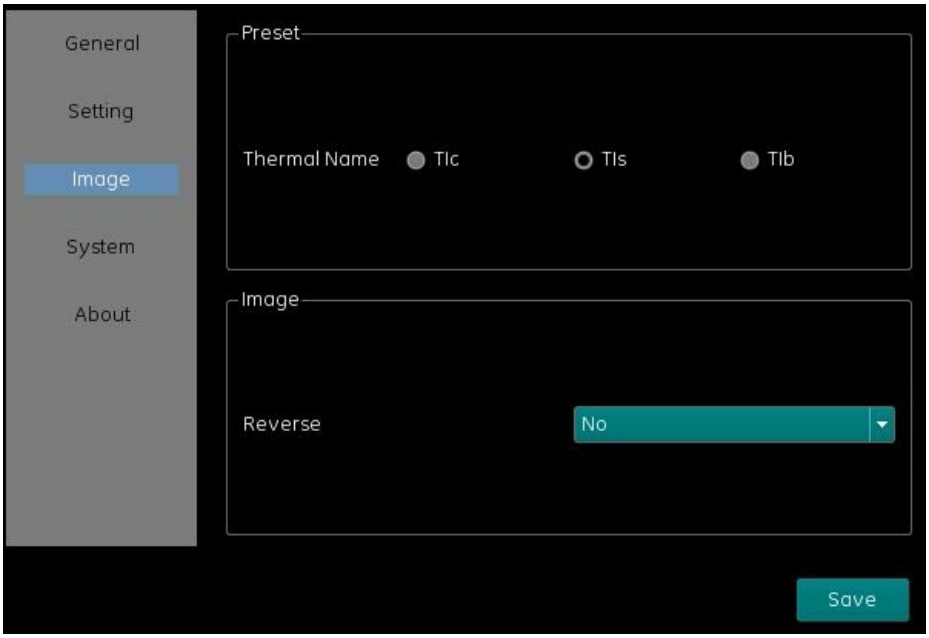


Figure 8-6 Utility - Image

Table 8-5 Record settings in Utility - Image

Image		
Thermal Name	**Image Reverse**	**B-Steer+Default**

NOTE: B-Steer+Default is only available for software version R3.x.x only.

8-3-1-4 Utility - Measure (R3.x.x only)

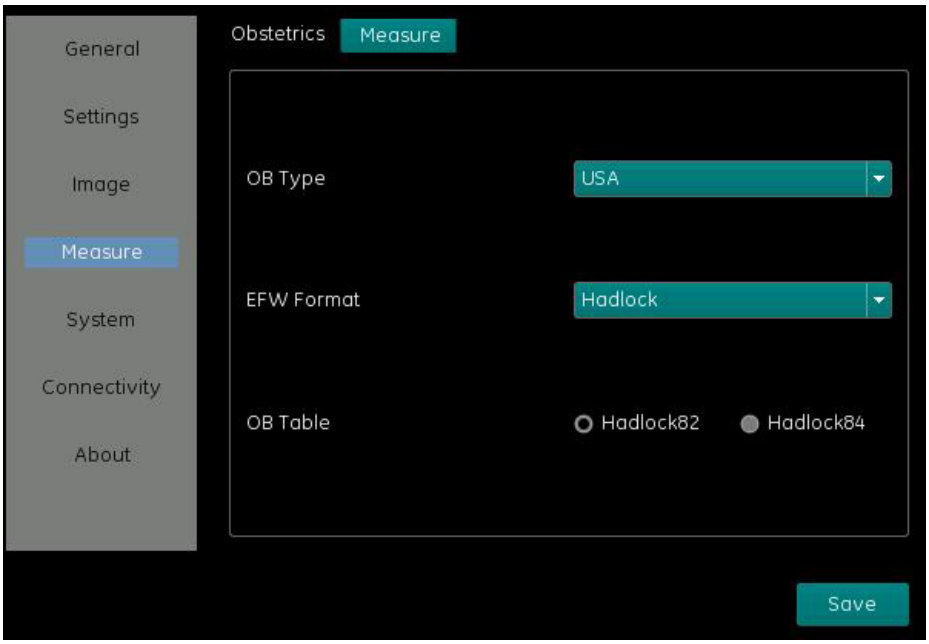


Figure 8-7 Utility - Measure

Table 8-6 Record settings in Utility - Measure

Measure			
Obstetrics			Measure
OB Type	EFW Format	OB Table	Measure Study

8-3-1-5 Utility - Connectivity (R2.x.x, R3.x.x only)

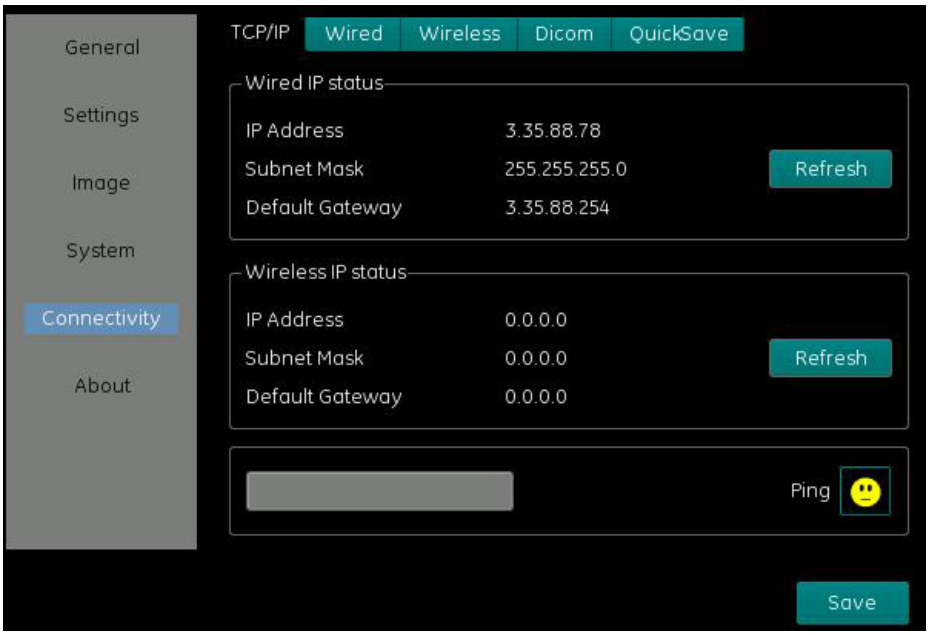


Figure 8-8 Utility - Connectivity

Table 8-7 Record settings in Utility - Connectivity

Connectivity							
Wired				Wireless			
IP Address	Subnet Mask	Default Gateway	Enable DHCP	SSID	Network Anthentication	Data Encryption	Network Key
DICOM				Quicksave			
IP Address	AE Title	Port	Dicom Local AE Title	IP Address	User Name	Password	Shared Folder

8-3-1-6 Upgrade process for software R1.x.x, R2.0.x and R3.0.x

NOTICE The touch panel is disabled during the upgrading process, do not use stylus to select controls on the screen, always press corresponding hard keys to control the process.

NOTICE Please make sure the battery is installed and fully charged.
Do not plug and unplug the probe, mount to or release from the Docking Station/Cart during the upgrading process.

1.) Insert the SD card labeled “VENUE Software” into SD Card Socket with the labeled side facing the front.
2.) Power on the system, software upgrading startup screen displays. Time in the upper right corner shows system time, and the time in the lower right corner shows the time of upgrading process.
3.) Select **Semi** or **Full** for the installation type. Select Semi to install the software partially and preserve log information. Select Full to format the disk and start the installation.
4.) Press **Confirm** to confirm the selection. Press **Exit** to cancel.

WARNING ***Full installation will clear all the user data. If you are going to preserve the log information, select Semi to start partial installation.***

NOTE: Step 3 is not applicable for software version R1.0.3.

Figure 8-9 Select installation type

8-3-1-6 Upgrade process for software R1.x.x, R2.0.x and R3.0.x (cont'd)

5.) For different software versions, select **USA/Global**, **Euro** or **JPN** for the preset.

Figure 8-10 Select preset

NOTE: Japan preset is not available on software version R1.0.X.

8-3-1-6 Upgrade process for software R1.x.x, R2.0.x and R3.0.x (cont'd)

Figure 8-11 Select preset

8-3-1-6 Upgrade process for software R1.x.x, R2.0.x and R3.0.x (cont'd)

6.) Press **Confirm** to confirm the preset. Press **Exit** to cancel.

Figure 8-12 Confirm preset

8-3-1-6 Upgrade process for software R1.x.x, R2.0.x and R3.0.x (cont'd)

Figure 8-13 Confirm preset

8-3-1-6 Upgrade process for software R1.x.x, R2.0.x and R3.0.x (cont'd)

7.) Press **Start** to start the upgrading process. Press **Exit** to cancel this process.

Figure 8-14 Startup screen for upgrading process

8-3-1-6 Upgrade process for software R1.x.x, R2.0.x and R3.0.x (cont'd)

8.) Before the process is started, the system will count down 10 seconds, the following figure displays the upgrading process.

⚠ **CAUTION** **It is not recommended to press Abort during the upgrading process, system crash may occur. Shut down the system and restart the upgrading process again.**

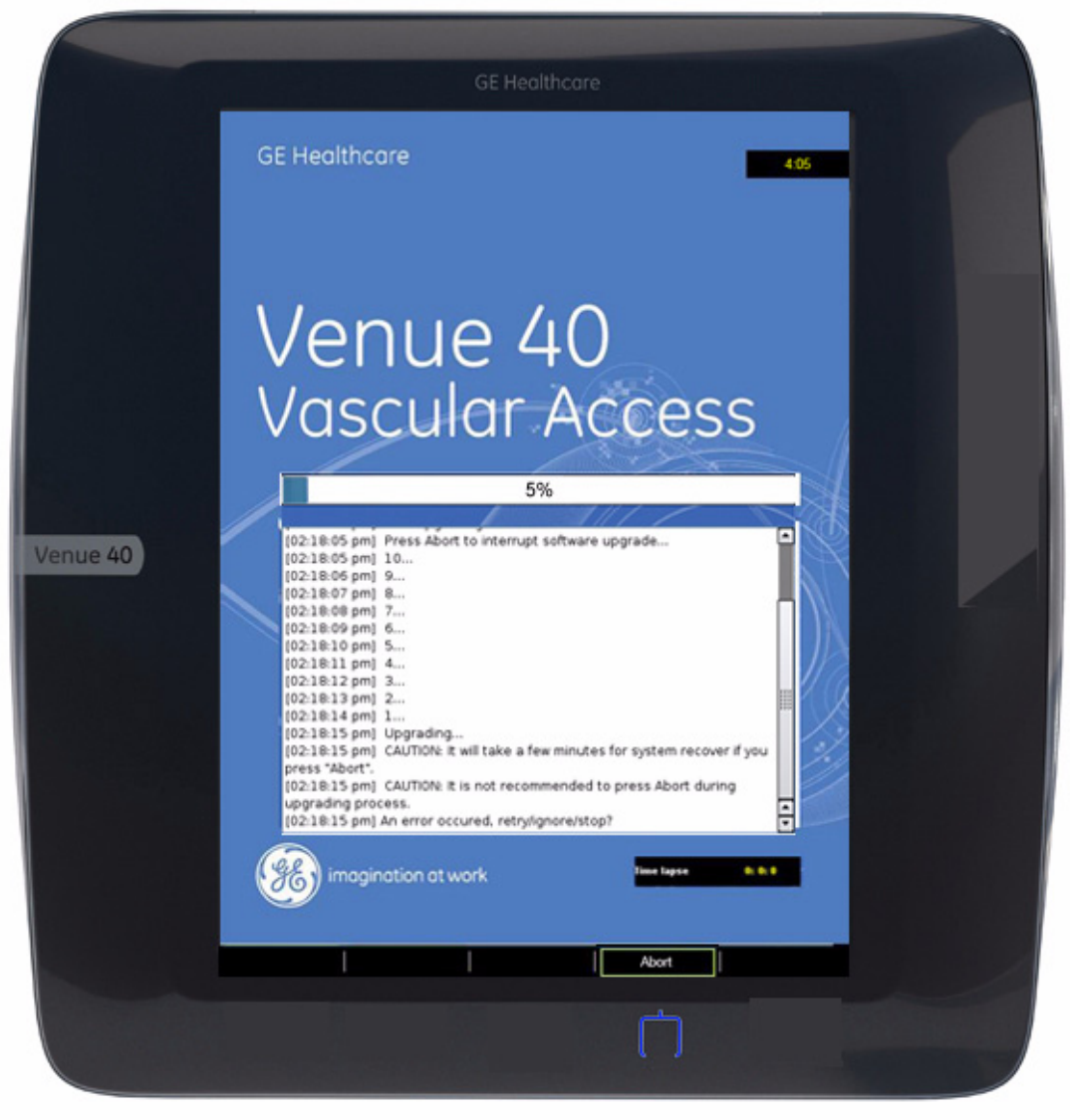


Figure 8-15 During upgrading process

8-3-1-6 Upgrade process for software R1.x.x, R2.0.x and R3.0.x (cont'd)

9.) If need to pause the upgrade process, press **About**.

10.) When the process is paused, press **Continue** to go back to the upgrading, press **Exit** to cancel the upgrading.

Figure 8-16 Upgrading process paused

8-3-1-6 Upgrade process for software R1.x.x, R2.0.x and R3.0.x (cont'd)

11.) After the process is completed, press **Shutdown** to shut down the system. Take out the SD card and reboot the system.

CAUTION **If take out the SD card before the system shutdown, system crash may occur. Press and hold down the On/Off switch until the system shutdown.**

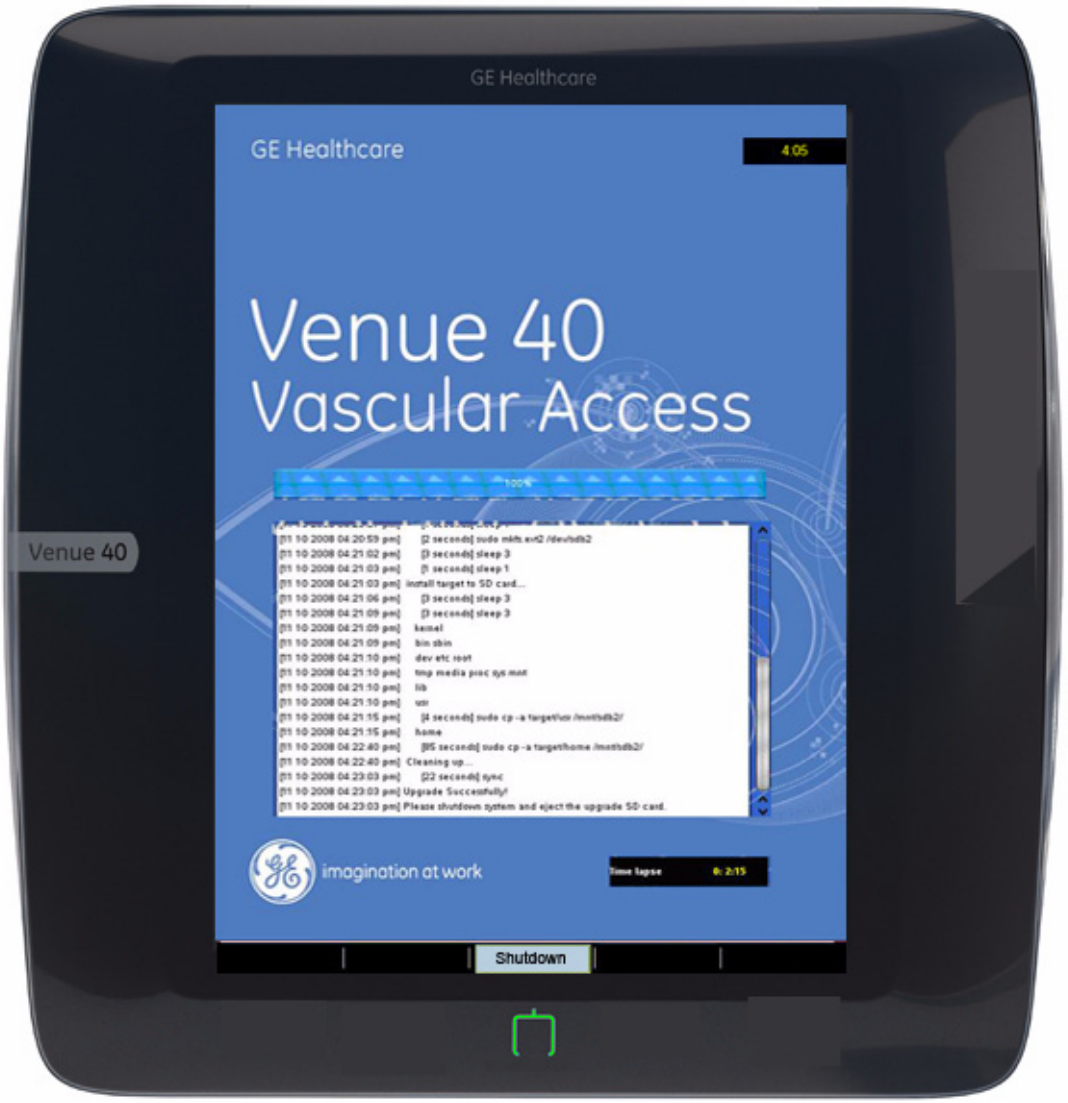


Figure 8-17 Upgrading process complete

8-3-1-6 Upgrade process for software R1.x.x, R2.0.x and R3.0.x (cont'd)

12.) Select **Patient** with stylus, select **Utility**, select About in the left column, check whether the software version is the right version for use.

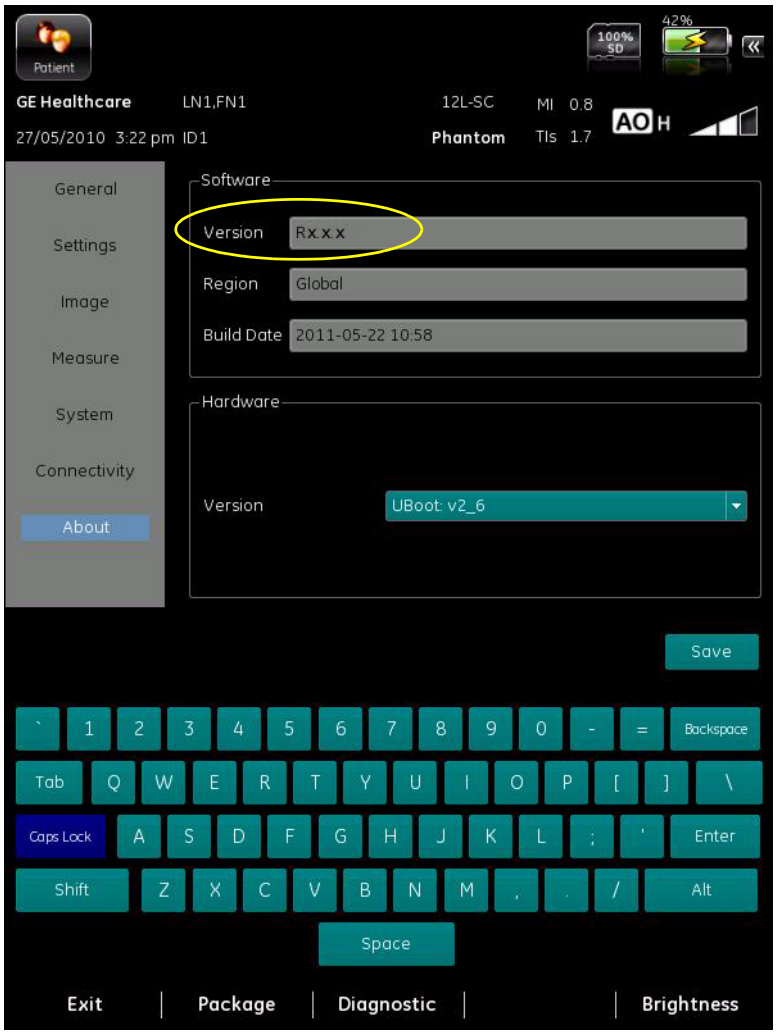


Figure 8-18 Upgrading process complete

13.) Perform Touch Screen Calibration: go to Patient - Utility - Diagnostic - Miscellaneous, execute touch screen calibration.

8-3-1-7 Upgrade process for software R2.1.x and R3.1.x

NOTICE The touch panel is disabled during the upgrading process, do not use stylus to select controls on the screen, always press corresponding hard keys to control the process.

NOTICE Please make sure the battery is installed and fully charged.
Do not plug and unplug the probe, mount to or release from the Docking Station/Cart during the upgrading process.

1.) Insert the SD card labeled “VENUE Software” into SD Card Socket with the labeled side facing the front.
2.) Power on the system, software upgrading startup screen displays. Time in the upper right corner shows system time, and the time in the lower right corner shows the time of upgrading process.
3.) Select **Semi** or **Full** for the installation type. Select Semi to install the software partially and preserve log information. Select Full to format the disk and start the installation.
4.) Press **Confirm** to confirm the selection. Press **Exit** to cancel.

WARNING ***Full installation will clear all the user data. If you are going to preserve the log information, select Semi to start partial installation.***

Figure 8-19 Select installation type

8-3-1-7 Upgrade process for software R2.1.x and R3.1.x (cont'd)

5.) Press **Start** to start the upgrading process. Press **Exit** to cancel this process.

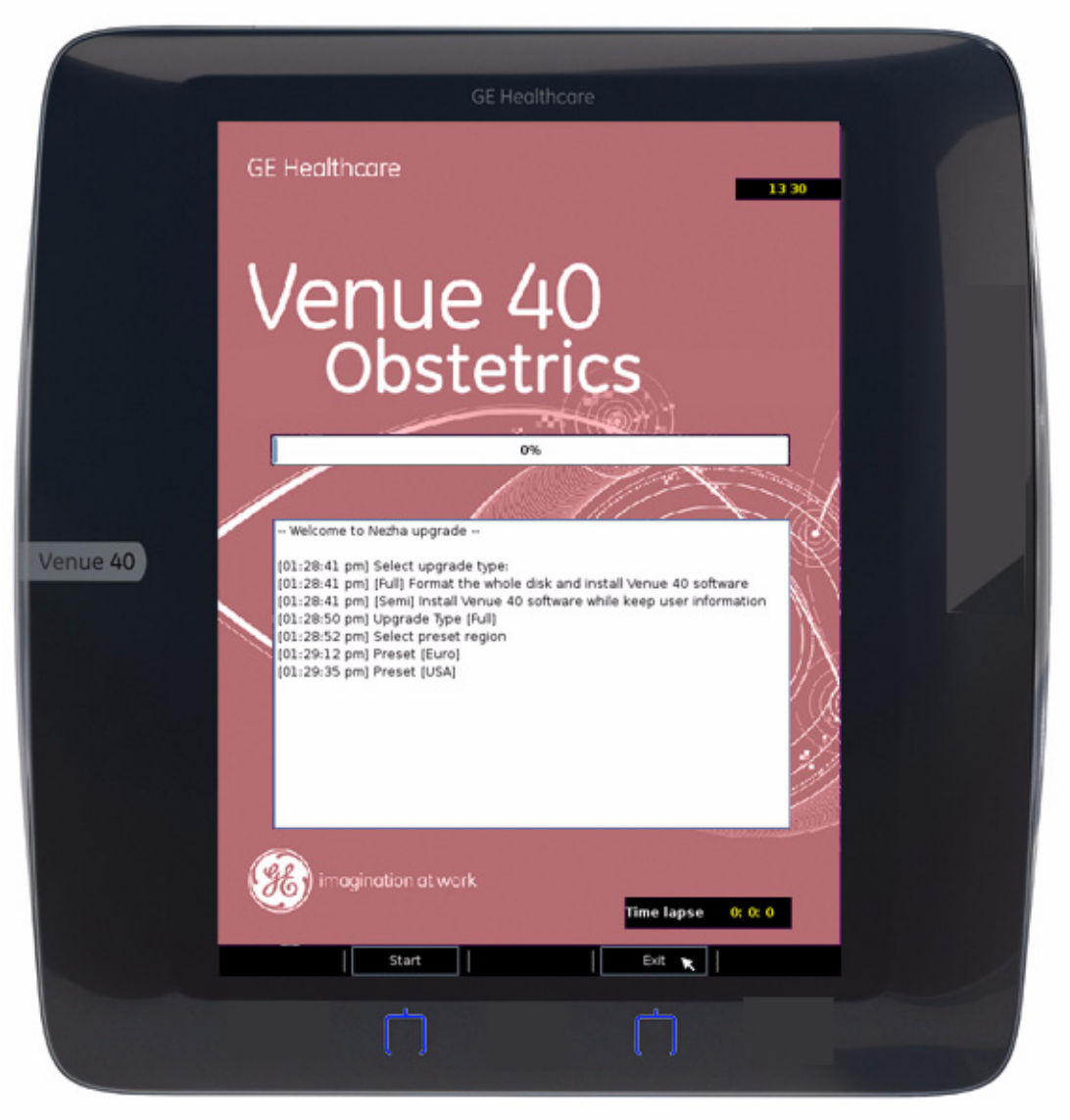


Figure 8-20 Startup screen for upgrading process

8-3-1-7 Upgrade process for software R2.1.x and R3.1.x (cont'd)

6.) Before the process is started, the system will count down 10 seconds, the following figure displays the upgrading process.

⚠ **CAUTION** **It is not recommended to press Abort during the upgrading process, system crash may occur. Shut down the system and restart the upgrading process again.**

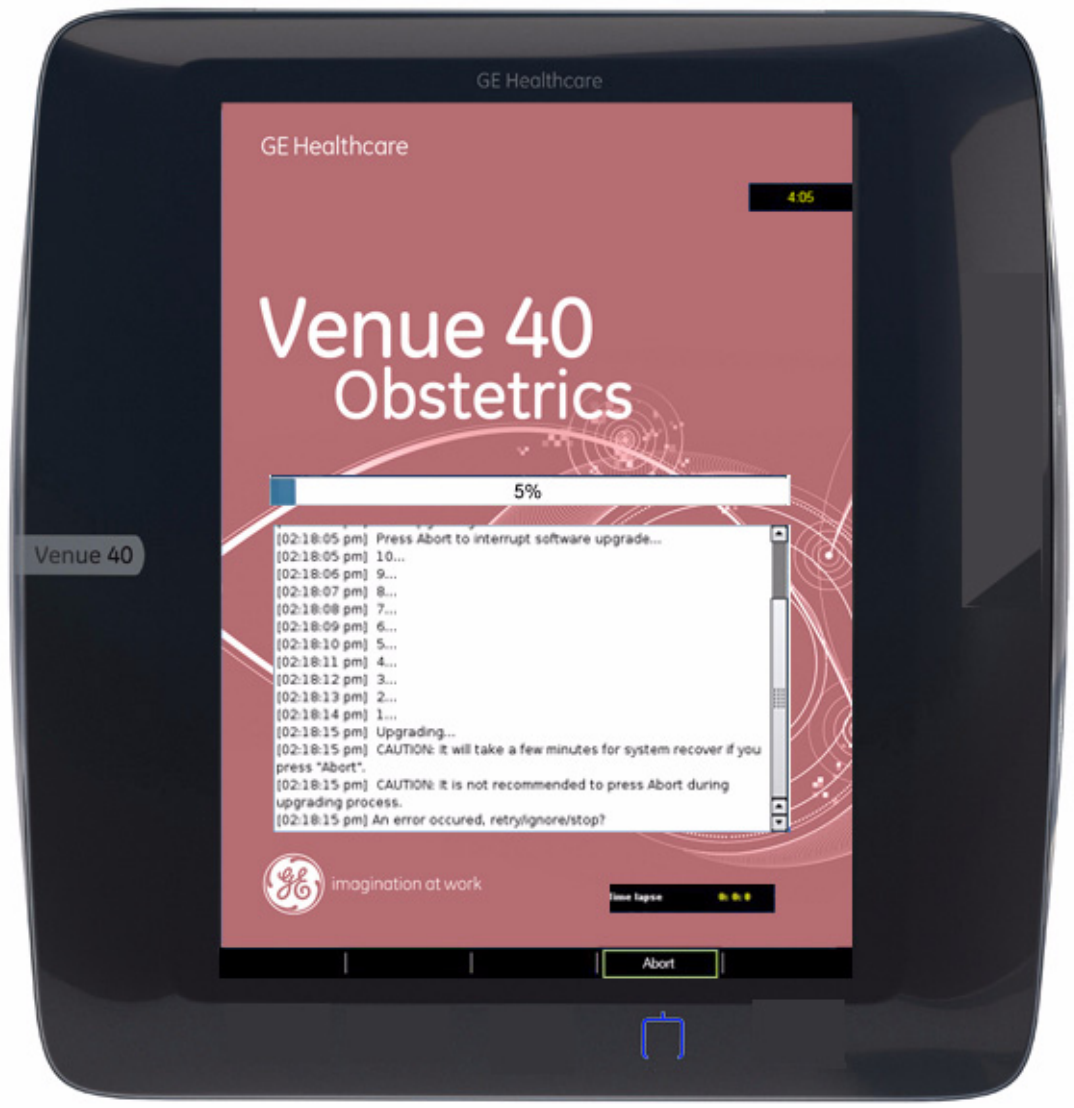


Figure 8-21 During upgrading process

8-3-1-7 Upgrade process for software R2.1.x and R3.1.x (cont'd)

7.) If need to pause the upgrade process, press **About**.

8.) When the process is paused, press **Continue** to go back to the upgrading, press **Exit** to cancel the upgrading.

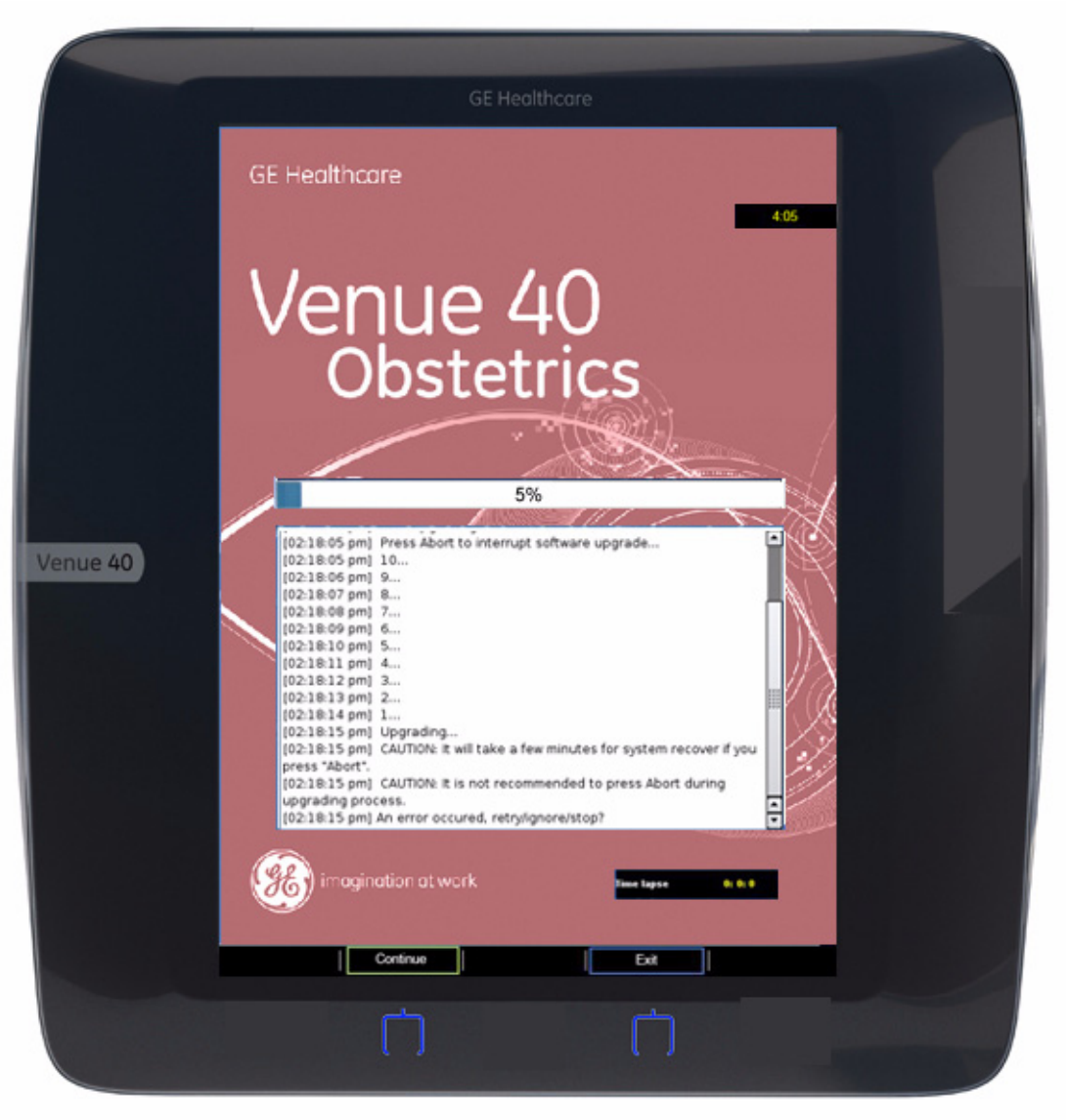


Figure 8-22 Upgrading process paused

8-3-1-7 Upgrade process for software R2.1.x and R3.1.x (cont'd)

9.) After the process is completed, press **Shutdown** to shut down the system. Take out the SD card and reboot the system.

⚠ **CAUTION** **If take out the SD card before the system shutdown, system crash may occur. Press and hold down the On/Off switch until the system shutdown.**

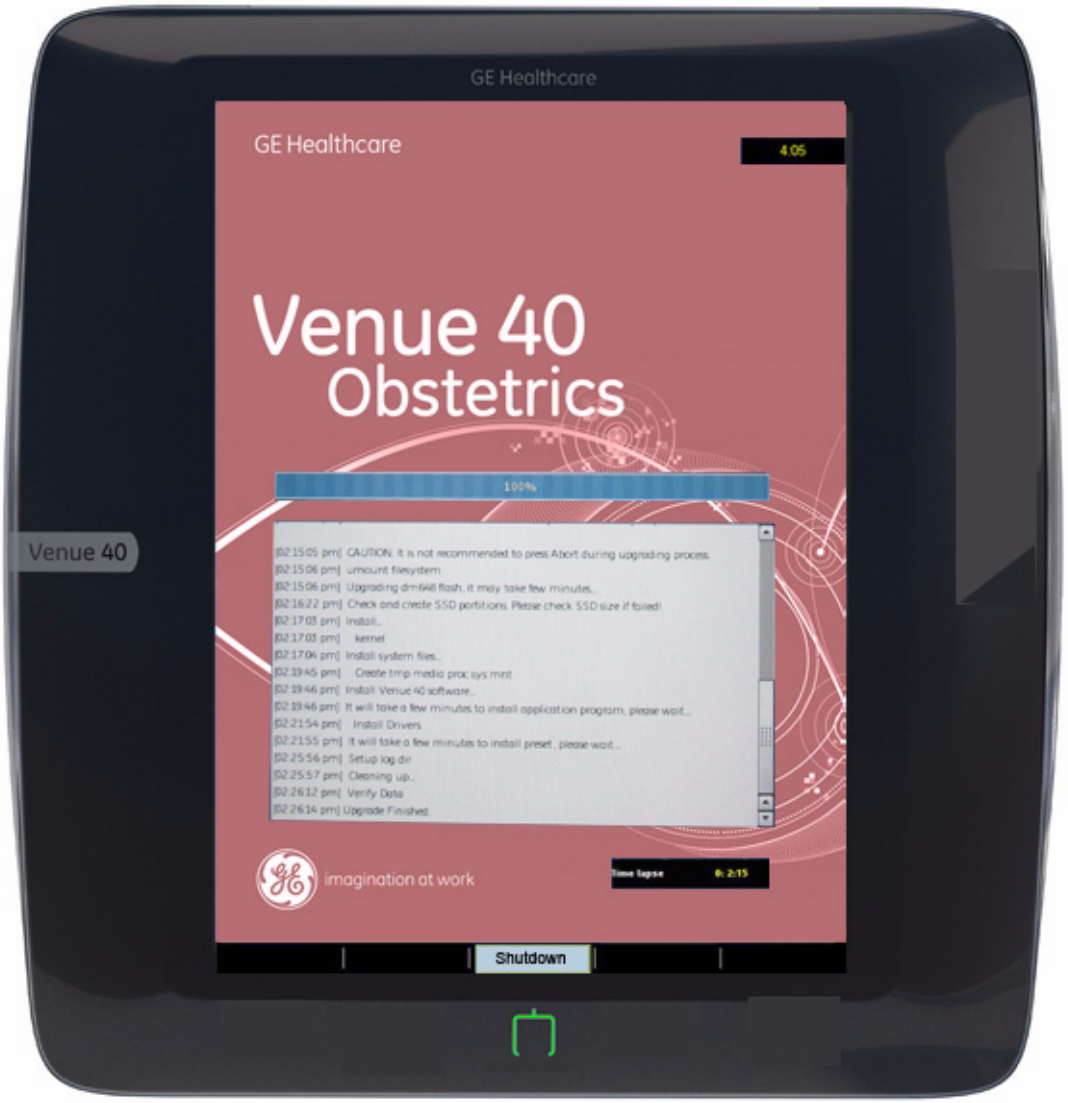


Figure 8-23 Upgrading process complete

8-3-1-7 Upgrade process for software R2.1.x and R3.1.x (cont'd)

10.) Select **Patient** with stylus, select **Utility**, select About in the left column, check whether the software version is the right version for use.

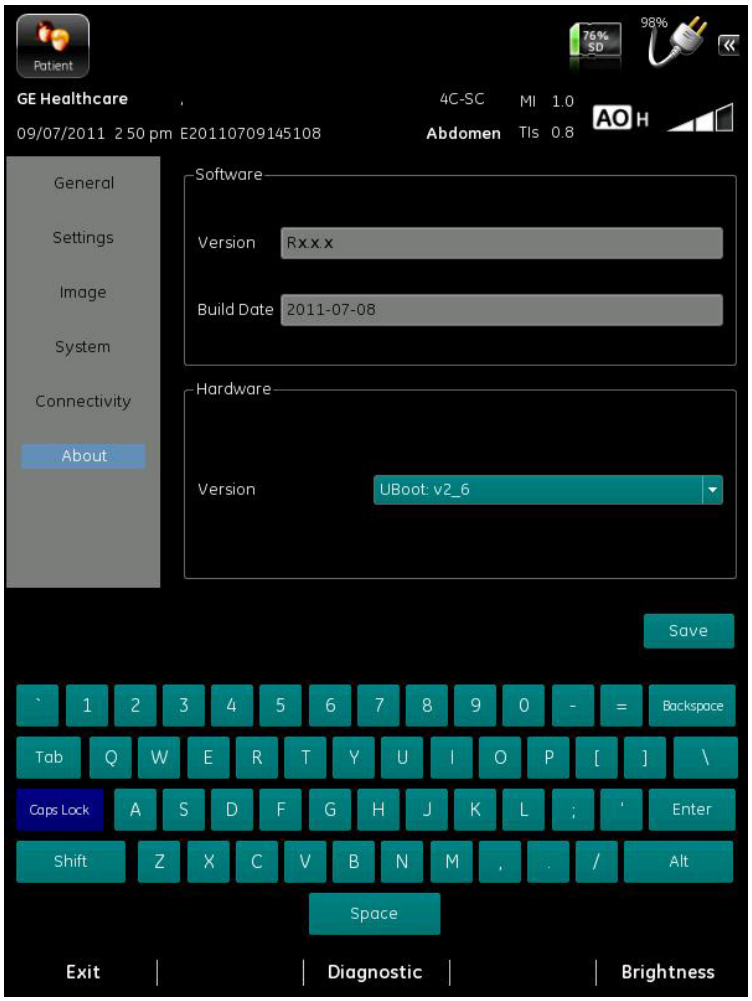


Figure 8-24 Upgrading process complete

11.) Perform Touch Screen Calibration: go to Patient - Utility - Diagnostic - Miscellaneous, execute touch screen calibration.

This page was intentionally left blank.

Chapter 9
Renewal Parts

Section 9-1
Overview

9-1-1 Purpose of Chapter 9

This chapter gives you an overview of Spare Parts available for the Venue 40.

Table 9-1 Contents in Chapter 9

Section 9-2
List of Abbreviations

- Assy - Assembly
- Ctrl - Control
- FRU 1 - Replacement part available in part hub
- FRU 2 - Replacement part available from the manufacturer (lead time involved)
- LCD - Liquid Crystal Display

Section 9-3Renewal Parts Lists

The part replacement is shown by the item numbers. If the part is replaced by a new version, the item number for the new version will have a letter in the alphabetical order after the Arabic numerals. For example, item 300B is to replace item 300A, and item 300A is to replace item 300. So please refer to the item numbers for the latest version of the parts.

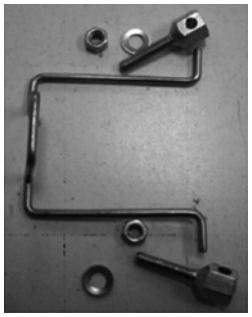
9-3-1 Power cables

9-3-1-1 Power cables of Docking Cart

Table 9-2 Power Cord of Docking Cart

Part Name	Part Number	Remark	Description	Quantity	FRU
ACDC Power Cable	5177146-2	Replace 5177146 when it becomes obsolete	ACDC Power Cable for USA	1	1
ACDC Power Cable	5177123-2	Replace 5177123 when it becomes obsolete	ACDC Power Cable for Europe	1	1
ACDC Power Cable	5176304-2	Replace 5176304 when it becomes obsolete	ACDC Power Cable for China	1	1
ACDC Power Cable	5177126-2	Replace 5177126 when it becomes obsolete	ACDC Power Cable for Japan	1	1
ACDC Power Cable	5177187-3	Replace 5177187-2 when it becomes obsolete	ACDC Power Cable for Australia and New Zealand	1	1
ACDC Power Cable	5176907-2	Replace 5176907 when it becomes obsolete	ACDC Power Cable for United Kingdom and Ireland	1	1
ACDC Power Cable	5176773-2	Replace 5176773 when it becomes obsolete	ACDC Power Cable for India/South Africa	1	1
ACDC Power Cable	5177195-2	Replace 5177195 when it becomes obsolete	ACDC Power Cable for Argentina	1	1
ACDC Power Cable	5177153-2	Replace 5177153 when it becomes obsolete	ACDC Power Cable for Denmark	1	1
ACDC Power Cable	5176753-2	Replace 5176753 when it becomes obsolete	ACDC Power Cable for Israel	1	1
ACDC Power Cable	5177154-2	Replace 5177154 when it becomes obsolete	ACDC Power Cable for Switzerland	1	1
ACDC Power Cable	5400868-2	Replace 5400868 when it becomes obsolete	ACDC Power Cable for Brazilian	1	1

Table 9-3 Accessory parts for Docking Cart Power cable

Part Name	Part Number	Description	Quantity	FRU
Retaining clip KT0006	5317638	Retaining clip for AC inlet 	1	1

9-3-1-2 Power cables of Docking Station

Table 9-4 Power Cord of Docking Station

Part Name	Part Number	Description	Quantity	FRU
ACDC Power Cable	5314913	ACDC Power Cable for USA	1	1
ACDC Power Cable	5314914	ACDC Power Cable for Europe	1	1
ACDC Power Cable	5120439	ACDC Power Cable for China	1	1
ACDC Power Cable	5120440	ACDC Power Cable for Japan	1	1
ACDC Power Cable	5125218	ACDC Power Cable for Australia	1	1
ACDC Power Cable	5125219	ACDC Power Cable for United Kingdom	1	1
ACDC Power Cable	5125221	ACDC Power Cable for India/South Africa	1	1
ACDC Power Cable	5125223	ACDC Power Cable for Argentina	1	1
ACDC Power Cable	5125220	ACDC Power Cable for Denmark	1	1
ACDC Power Cable	5125227	ACDC Power Cable for Israel	1	1
ACDC Power Cable	5125228	ACDC Power Cable for Switzerland	1	1
ACDC Power Cable	5400793	ACDC Power Cable for Brazilian	1	1

Section 9-4Operator Console Assy

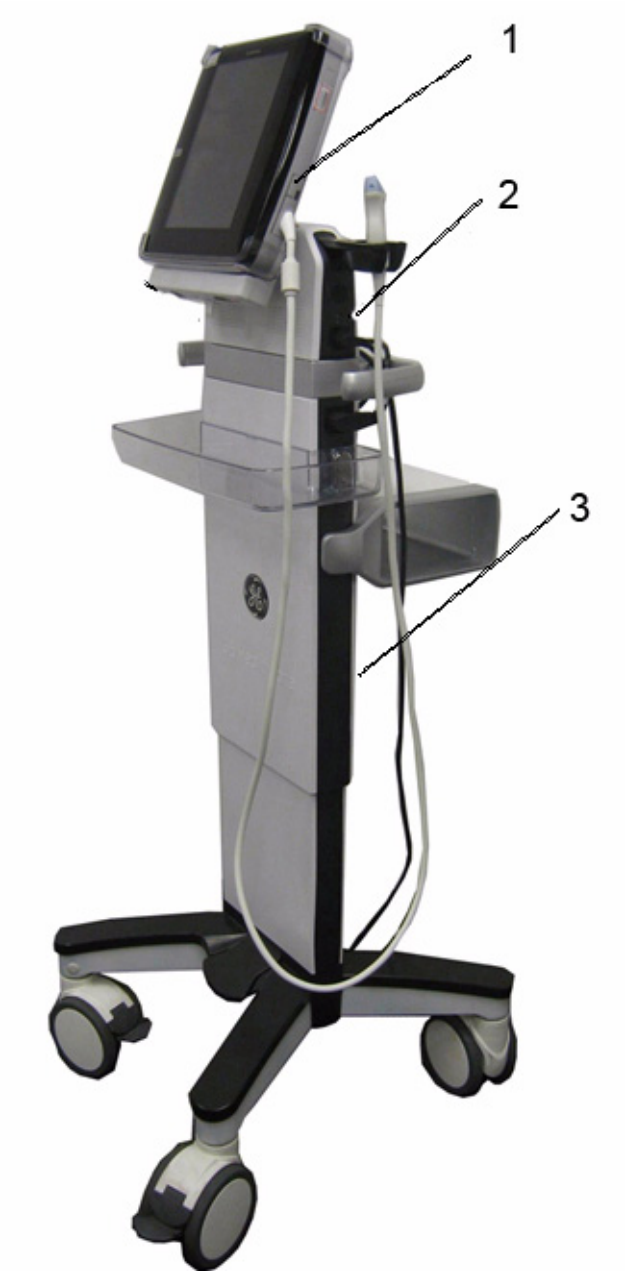


Figure 9-1 OPERATOR CONSOLE ASSY

1.) Venue 40
2.) Docking Station
3.) Docking Cart

Section 9-5 Top Assy

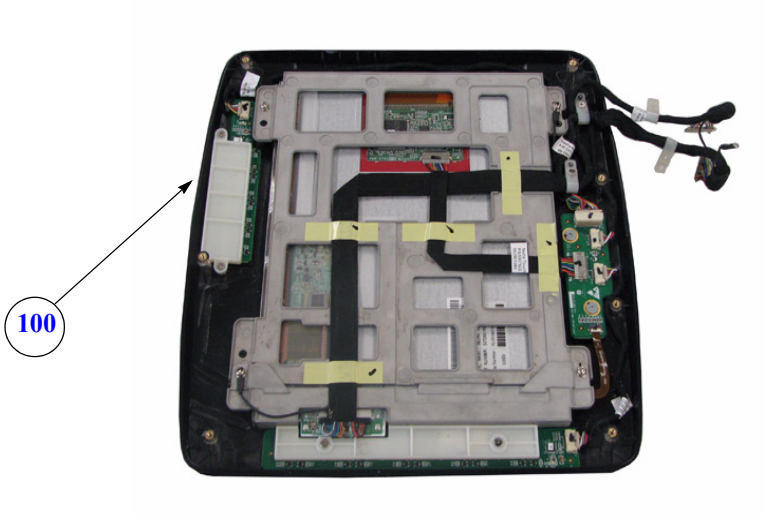


Figure 9-2 Top Assy

Table 9-5 Top Assy

Item	Part Name	Part Number	Description	R1.x.x	R1.1.1 (Global (CHN))	R2.x.x	R3.x.x	Quantity	FRU
100	Top assy	5308023	Venue 40 Top Assy with LCD, touch screen, front cover, 4 hard keys	X				1	1
100A	Top assy	5308023-2	Venue 40 Top Assy with LCD, touch screen, front cover, 5 hard keys	only available for SW R1.1.2	X	X	X	1	1

Section 9-6Middle Cover Assy

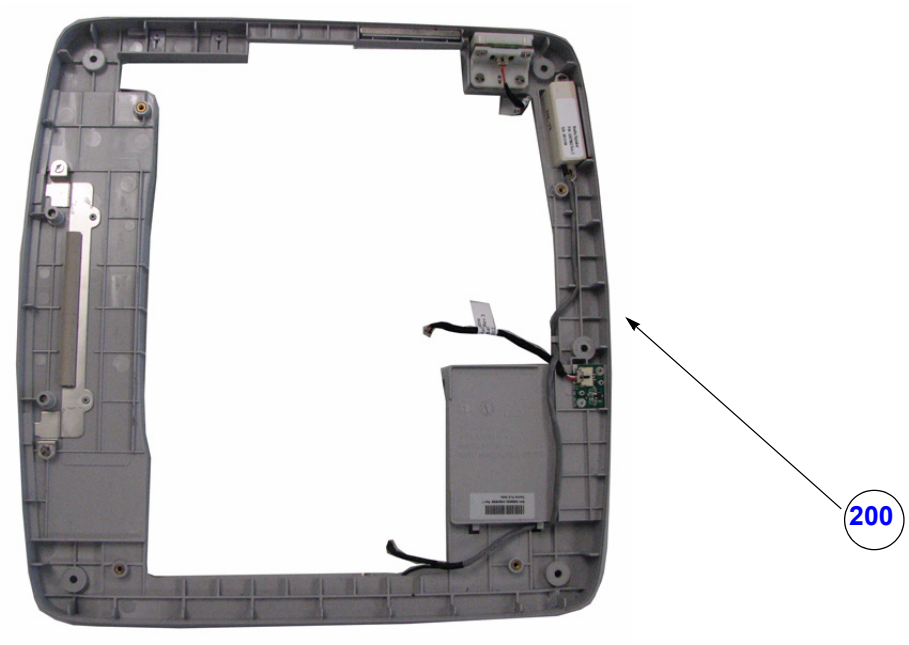


Figure 9-3

Table 9-6 Keyboard Assy

Item	Part Name	Part Number	Description	R1.x.x	R1.1.1 (Global (CHN))	R2.x.x	R3.x.x	Quantity	FRU
200	Middle Cover Assy	5321407	Middle Cover Assy with power key, SD card socket and speaker	X	X	X	X	1	1

Section 9-7Bottom Assy

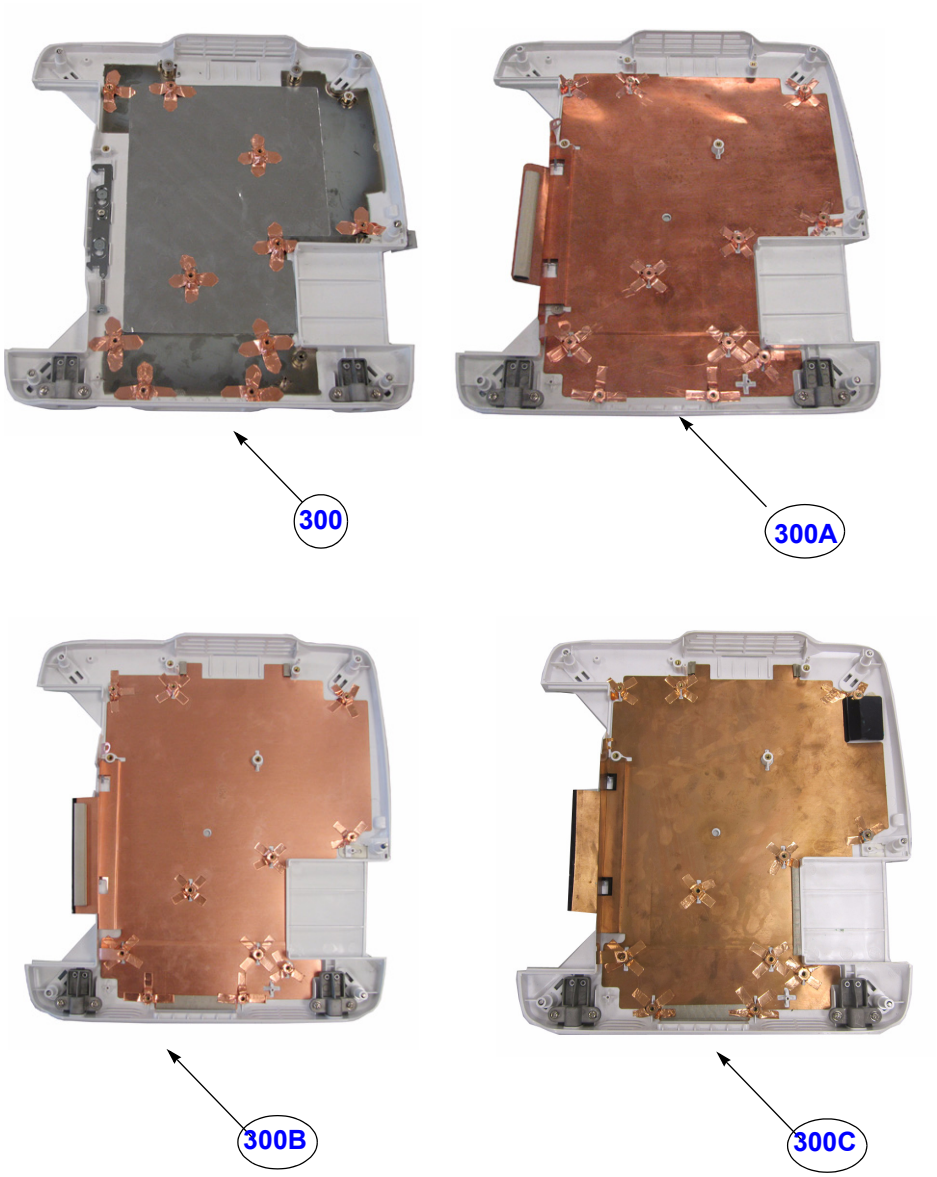


Figure 9-4 Bottom Assy

Table 9-7 Bottom Assy

Item	Part Name	Part Number	Description	R1.x.x	R1.1.1 (Global (CHN))	R2.x.x	R3.x.x	Quantity	FRU
300	Bottom Cover Assy	5315438	Bottom Cover Assy	X				1	1

Table 9-7 Bottom Assy

Item	Part Name	Part Number	Description	R1.x.x	R1.1.1 (Global (CHN))	R2.x.x	R3.x.x	Quantity	FRU
300A	Bottom Cover Assy	5315438-2	Bottom Cover Assy	X				1	1
300B	Bottom Cover Assy	5364195	Bottom Cover Assy	X				1	1
300C	Bottom Cover Assy	5395760	Bottom Cover Assy		X	X	X	1	1

Section 9-8Docking Station Assy

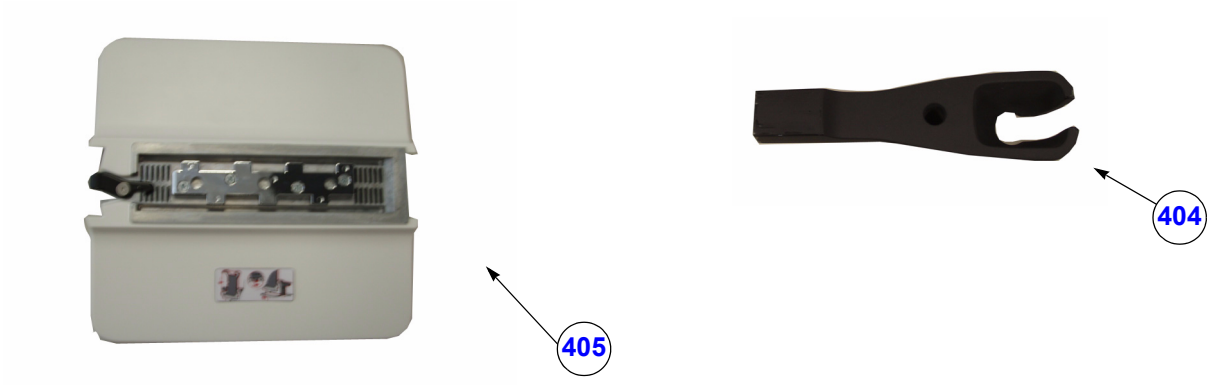


Figure 9-5 Docking Station Assy

Table 9-8 Docking Station Assy

Item	Part Name	Part Number	Description	R1.x.x	R1.1.1 (Global (CHN))	R2.x.x	R3.x.x	Quantity	FRU
404	Docking Probe Holder	5316922	Docking Probe Holder	X	X	X	X	1	1
404A	Docking Probe Holder	5316922-2	Docking Probe Holder		X	X	X	1	1
405	Docking Desk Support	5316130	Docking Desk Support Assy	X	X	X	X	1	1

Section 9-9Docking Cart Assy

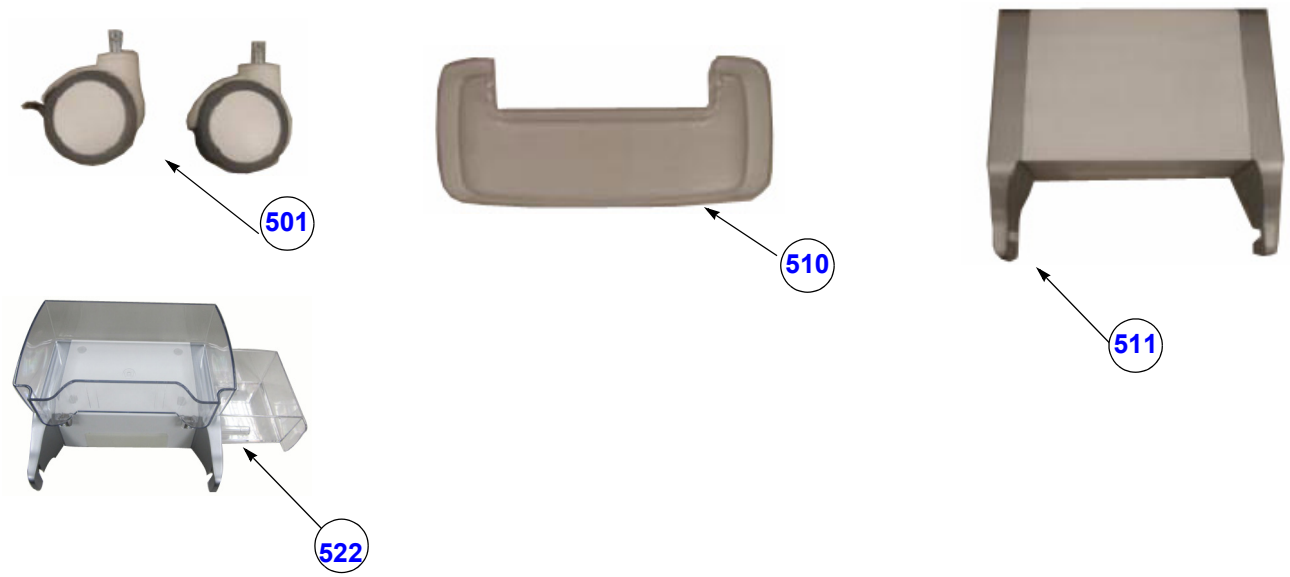


Figure 9-6 Docking Cart

Table 9-9 Docking Cart Assy

Item	Part Name	Part Number	Description	R1.x.x	R1.1.1 (Global (CHN)	R2.x.x	R3.x.x	Quantity	FRU
501	Wheels	5321852	2 front wheels and 2 back wheels	X	X	X	X	1	1
510	Plastic Shelf	5321901	Plastic Shelf	X	X	X	X	1	1
511	Printer Shelf	5321853	Printer Shelf	X				1	1
511A	Printer Shelf	5321853-2	Printer Shelf	X				1	1
511B	Printer Shelf	5321853-3	Printer Shelf	X	X	X	X	1	1
522	Printer Shelf with drawer and on shelf basket	5491956	Printer Shelf with drawer and on shelf basket				X	1	1

Section 9-10
Accessories and Kits

Table 9-10 Accessories and Kits

Item	Part Name	Part Number	Description	R1.x.x	R1.1.1 (Global (CHN)	R2.x.x	R3.x.x	Quantity	FRU
601	Stylus Kit	5323661	Stylus Kit	X	X	X	X	1	1
602	SD Card for software	5315797-2	SD Card for software R1.0.3	X				1	1
602A	SD Card for software	5315797-3	SD Card for software R1.0.4	X				1	1
602B	SD Card for software	5315797-4	SD Card for software R1.1.0	X				1	1
602C	SD Card for software	5315797-5	SD Card for software R1.1.1	X				1	1
602D	SD Card for software	5315797-9	SD Card for software R1.1.2	X				1	1
618	SD Card for software	5315797-6	SD Card for software for CHN R1.1.1		X			1	1
618A	SD Card for software	5315797-8	SDHC Card for software R1.1.1 for CHN Patch3		X			1	1
603	High capacity SD Card for data storage	5315798	High capacity SD Card for data storage - 4GB	X	X	X	X	1	1
603A	High capacity SD Card for data storage	5315798-2	High capacity SD Card for data storage - 8GB	X	X	X	X	1	1
603B	High capacity SD Card for data storage	5315798-3	Transcend Class 6 SDHC card - 8GB	X	X	X	X	1	1
603C	Kingston Class10 G2 8GB SDHC card as Venue40 storage card	5315798-4	Kingston Class10 G2 8GB SDHC card as Venue40 storage card	X	X	X	X	1	1
603D	Kingston Class10 G2 8GB SDHC card as Venue40 storage card	5315798-5	Kingston Class10 G2 8GB SDHC card as Venue40 storage card	X	X	X	X	1	1
604	SD Card Reader	5315799	SD Card Reader	X	X	X	X	1	1
605	USB Cable Kits	5329083	USB Cable with miniB	X	X	X	X	1	1
606	Probe cable hook kit	5344868	Probe cable hook kit	X	X	X	X	1	1
607	SD Card for software	5393484-3	SD Card for software R2.0.2			X		1	1
607A	SD Card for software	5393484-4	SD Card for software R2.0.3			X		1	1
607B	SD Card for software	5393484-5	SD Card for software R2.0.4			X		1	1
607C	SD Card for software	5393486-6	SD Card for software R2.0.5			X		1	1
607D	SD Card for software	5393486-7	SD Card for software R2.0.6			X		1	1

Table 9-10 Accessories and Kits

Item	Part Name	Part Number	Description	R1.x.x	R1.1.1 (Global (CHN)	R2.x.x	R3.x.x	Quantity	FRU
607E	SD Card for software	5393486-8	SD Card for software R2.0.7			X		1	1
607F	SD Card for software	5393486-10	SD Card for software R2.0.8			X		1	1
608	USB wireless adapter	5396398	USB wireless adapter			X	X	1	1
608A	USB wireless adapter	5396398-2	USB wireless adapter			X	X	1	1
609	SD Card for software	5419054	SD Card for software R2.1.0			X		1	1
609A	SD Card for software	5419054-3	SD Card for software R2.1.1			X		1	1
609B	SD Card for software	5419054-4	SD Card for software R2.1.2			X		1	1
609C	SD Card for software	5419054-5	SD Card for software R2.1.3			X		1	1
610	SD Card for software	5419184-2	SD Card for software R3.0.1				X	1	1
610A	SD Card for software	5419184-3	SD Card for software R3.0.2				X	1	1
610B	SD Card for software	5419184-4	SD Card for software R3.0.3				X	1	1
610C	SD Card for software	5419184-5	SD Card for software R3.0.4				X	1	1
610D	SD Card for software	5419184-6	SD Card for software R3.0.5				X	1	1
610E	SD Card for software	5419184-7	SD Card for software R3.0.6				X	1	1
610F	SD Card for software	5419184-8	SD Card for software R3.0.7						
610G	SD Card for software	5419184-9	SD Card for software R3.0.8				X	1	1
611	SD Card for software	5444685	SD Card for software R3.1.0				X	1	1
612	SD Card for software	5486566	SD Card for software R3.2.0				X	1	1
612A	SD Card for software	5486566-2	SD Card for software R3.2.1				X	1	1
613	USB Footswitch	5420425	Steute MKF 2 1S/1S -MED HID GP26 Footswitch				X	1	1
614	UP-D897 Digital B/W Printer (USA)	5151259	UP-D897 Digital B/W Printer (USA)	X	X	X	X	1	1
615	UP-D897 Digital B/W Printer (EU)	5151261	UP-D897 Digital B/W Printer (EU)	X	X	X	X	1	1
616	3-probe Port Box for Venue program	5440423-S	3-probe Port Box for Venue program				X	1	1
617	multi-probe holder, gel holder and E8CS holder	5491955	multi-probe holder, gel holder and E8CS holder				X	1	1

Section 9-11Manuals

Table 9-11 MANUALS

Item	Part Name	Part Number	Description	Quantity	FRU
System User Manuals					
	Basic User Manual English	5265930-100	Basic User Manual English	1	1
	Basic User Manual French	5265930-101	Basic User Manual French	1	1
	Basic User Manual Spanish	5265930-106	Basic User Manual Spanish	1	1
	Basic User Manual German	5265930-108	Basic User Manual German	1	1
	Basic User Manual Italian	5265930-111	Basic User Manual Italian	1	1
	Basic User Manual Dutch	5265930-121	Basic User Manual Dutch	1	1
	Basic User Manual Portuguese-Brazilian	5265930-127	Basic User Manual Portuguese-Brazilian	1	1
	Basic User Manual Estonian	5265930-129	Basic User Manual Estonian	1	1
	Basic User Manual Japanese	5265930-140	Basic User Manual Japanese	1	1
	Basic User Manual Chinese	5265930-141	Basic User Manual Chinese	1	1
	Basic User Manual Swedish	5265930-142	Basic User Manual Swedish	1	1
	Basic User Manual Korean	5265930-144	Basic User Manual Korean	1	1
	Basic User Manual Russian	5265930-145	Basic User Manual Russian	1	1
	Basic User Manual Polish	5265930-150	Basic User Manual Polish	1	1
	Basic User Manual Greek	5265930-151	Basic User Manual Greek	1	1
	Basic User Manual Hungarian	5265930-153	Basic User Manual Hungarian	1	1
	Basic User Manual Slovakian	5265930-154	Basic User Manual Slovakian	1	1
	Basic User Manual Czech	5265930-155	Basic User Manual Czech	1	1
	Basic User Manual Turkish	5265930-159	Basic User Manual Turkish	1	1
	Basic User Manual Danish	5265930-160	Basic User Manual Danish	1	1
	Basic User Manual Norwegian	5265930-161	Basic User Manual Norwegian	1	1
	Basic User Manual Finnish	5265930-162	Basic User Manual Finnish	1	1
	Basic User Manual Romanian	5265930-165	Basic User Manual Romanian	1	1
	Basic User Manual Bulgarian	5265930-167	Basic User Manual Bulgarian	1	1
	Basic User Manual Croatian	5265930-168	Basic User Manual Croatian	1	1
	Basic User Manual Lithuanian	5265930-174	Basic User Manual Lithuanian	1	1
	Basic User Manual Latvian	5265930-175	Basic User Manual Latvian	1	1
	Basic User Manual Serbian	5265930-176	Basic User Manual Serbian	1	1
	Basic User Manual Portuguese-Iberian	5265930-177	Basic User Manual Portuguese-Iberian	1	1

Table 9-11 MANUALS

Item	Part Name	Part Number	Description	Quantity	FRU
	Basic User Manual Ukrainian	5265930-180	Basic User Manual Ukrainian		
	Basic User Manual Indonesian	5265930-181	Basic User Manual Indonesian	1	1
	Basic User Manual English for R2.1.x and R3.1.x	5419428-100	Basic User Manual English for R2.1.x and R3.1.x	1	1
	Basic User Manual Indonesian for R3.1.x	5419428-181	Basic User Manual Indonesian for R3.1.x	1	1
System Quick Card					
	Quick Card English	5305270-100	Quick Card English	1	1
	Quick Card French	5305270-101	Quick Card French	1	1
	Quick Card Spanish	5305270-106	Quick Card Spanish	1	1
	Quick Card German	5305270-108	Quick Card German	1	1
	Quick Card Italian	5305270-111	Quick Card Italian	1	1
	Quick Card Dutch	5305270-121	Quick Card Dutch	1	1
	Quick Card Portuguese-Brazilian	5305270-127	Quick Card Portuguese-Brazilian	1	1
	Quick Card Estonian	5305270-129	Quick Card Estonian	1	1
	Quick Card Japanese	5305270-140	Quick Card Japanese	1	1
	Quick Card Chinese	5305270-141	Quick Card Chinese	1	1
	Quick Card Swedish	5305270-142	Quick Card Swedish	1	1
	Quick Card Korean	5305270-144	Quick Card Korean	1	1
	Quick Card Russian	5305270-145	Quick Card Russian	1	1
	Quick Card Polish	5305270-150	Quick Card Polish	1	1
	Quick Card Greek	5305270-151	Quick Card Greek	1	1
	Quick Card Hungarian	5305270-153	Quick Card Hungarian	1	1
	Quick Card Slovakian	5305270-154	Quick Card Slovakian	1	1
	Quick Card Czech	5305270-155	Quick Card Czech	1	1
	Quick Card Turkish	5305270-159	Quick Card Turkish	1	1
	Quick Card Danish	5305270-160	Quick Card Danish	1	1
	Quick Card Norwegian	5305270-161	Quick Card Norwegian	1	1
	Quick Card Finnish	5305270-162	Quick Card Finnish	1	1
	Quick Card Romanian	5305270-165	Quick Card Romanian	1	1
	Quick Card Bulgarian	5305270-167	Quick Card Bulgarian	1	1
	Quick Card Croatian	5305270-168	Quick Card Croatian	1	1
	Quick Card Lithuanian	5305270-174	Quick Card Lithuanian	1	1

Table 9-11 MANUALS

Item	Part Name	Part Number	Description	Quantity	FRU
	Quick Card Latvian	5305270-175	Quick Card Latvian	1	1
	Quick Card Serbian	5305270-176	Quick Card Serbian	1	1
	Quick Card Portuguese-Iberian	5305270-177	Quick Card Portuguese-Iberian	1	1
	Quick Card Ukrainian	5305270-180	Quick Card Ukrainian	1	1

Section 9-12Probe

Table 9-12 Probes for Venue 40

Item	Part Name	Part Number	Description	Quantity	FRU
701	3S-SC	5309652	Probe (Center Frequency: 2.0 ± 20% MHz)	1	1
702	12L-SC	5304023	Probe (Center Frequency: 7.5 ± 20% MHz)	1	1
703	4C-SC*	5337604	Probe (Center Frequency: 3.1 ± 10% MHz)	1	1
704	L8-18i-SC*	5384872	Probe (Center Frequency: 9.5 ± 20% MHz)	1	1
705	E8CS-SC*	5413888	Probe (Center Frequency: 6.5 ± 20% MHz)	1	1

Note: 4C-SC is not available on software version R1.0.x.
Note: L8-18i-SC is not available on software version R1.x.x.
Note: E8CS-SC is not available on software version R1.x.x and R2.x.x.

CAUTION All the service parts after replacement or end of life must not be disposed of as unsorted waste and must be collected separately according to local laws.

This page was intentionally left blank.

Chapter 10
Care & Maintenance

Section 10-1
Overview

10-1-1 Periodic Maintenance Inspections

It has been determined by engineering that your Venue 40 system does not have any high wear components that fail with use, therefore no Periodic Maintenance Inspections are mandatory. Some Customers Quality Assurance Programs may require additional tasks and or inspections at a different frequency than listed in this manual.

10-1-2 Purpose of Chapter 10

This chapter describes **Care & Maintenance** on the scanner and peripherals. These procedures are intended to **maintain the quality** of the ultrasound **systems performance**. Read this chapter completely and familiarize yourself with the procedures before performing a task.

Table 10-1 Contents in Chapter 10

CAUTION **Practice good ESD prevention. Wear an anti–static strap when handling electronic parts and even when disconnecting/connecting cables.**

DANGER **BE SURE TO DISCONNECT THE SYSTEM POWER PLUG BEFORE YOU REMOVE ANY PARTS. BE CAUTIOUS WHENEVER POWER IS STILL ON AND COVERS ARE REMOVED.**

CAUTION **Do not pull out or insert circuit boards while power is ON.**

CAUTION **Do not operate this unit unless all board covers and frame panels are securely in place. System performance and cooling require this.**

Section 10-2
Why do Maintenance

10-2-1 Keeping Records

It is good business practice that ultrasound facilities maintain records of periodic and corrective maintenance. The Ultrasound Periodic Maintenance Inspection Certificate provides the customer with documentation that the ultrasound scanner is maintained on a periodic basis.

A copy of the Ultrasound Periodic Maintenance Inspection Certificate should be kept in the same room or near the scanner.

10-2-2 Quality Assurance

In order to gain accreditation from organizations such as the American College of Radiology (USA), it is the customer's responsibility to have a quality assurance program in place for each scanner. The program must be directed by a medical physicists, the supervising radiologist/physician or appropriate designee.

Routine quality control testing must occur regularly. The same tests are performed during each period so that changes can be monitored over time and effective corrective action can be taken.

Testing results, corrective action and the effects of corrective action must be documented and maintained on the site.

Your GE service representative can help you with establishing, performing and maintaining records for a quality assurance program. Please contact us for coverage information and/or price for service.

Section 10-3
Maintenance Task Schedule

10-3-1 How often should care & maintenance tasks be performed?

The Care & Maintenance Task Schedule (provided on page 10-3) specifies how often your Venue 40 should be serviced and outlines items requiring special attention.

NOTE: It is the customer's responsibility to ensure the Venue 40 care & maintenance is performed as scheduled in order to retain its high level of safety, dependability and performance.

Your GE Service Representative has an in-depth knowlegde of your Venue 40 ultrasound scanning system and can best provide competent, efficient service. Please contact us for coverage information and/or price for service.

The service procedures and recommended intervals shown in the Care & Maintenance Task Schedule assumes that you use your Venue 40 for an average patient load (10-12 per day) and use it as a primary mobile unit which is transported between diagnostic facilities.

NOTE: If conditions exist which exceed typical usage and patient load, then it is recommended to increase the maintenance frequencies.

Table 10-2 Customer Care Schedule

Service at Indicated Time	Daily	Weekly	Monthly	Per Facilities QA Program	Notes
Clean Probes	•*				* or before each use
Inspect AC Mains Cable			•		Mobile Unit Check Weekly
Inspect Cables and Connectors			•		
Clean Console			•		
Clean LCD			•		
Console Leakage Current Checks				**See Note**	**Twice Annually**
Peripheral Leakage Current Checks				**See Note**	**Twice Annually**
Surface Probe Leakage Current Checks				**See Note**	**Twice Annually**
Measurement Accuracy Checks				**See Note**	**Twice Annually**

NOTE: May require specialized equipment to complete

NOTE: PMs are not mandatory, the table above is for reference only.

Section 10-4
Tools Required

10-4-1 Standard GE Tool Kit

The following is a description of the “Standard” GE tool kit in the USA. Not all tools are required for PMs.

Table 10-3 Overview of GE-1 Tool Kit Contents

Tool ID	Description	Tool ID	Description
9-45358	Pliers Retaining Ring	9-XL9971MM	Xcelite-hex Blade 1.27mm
9-4078	Scribe	9-XL9972MM	Xcelite-hex Blade 1.5mm
9-44572	Wrench Open End 3/8 - 7/16	9-XL9973MM	Xcelite-hex Blade 2 mm
9-44579	Wrench Open End 1/2 - 9/16	9-XL9974MM	Xcelite-hex Blade 2.5mm
9-44579	Wrench Open End 1/2 - 9/16	9-XL9975MM	Xcelite-hex Blade 3mm
9-45385	Pliers, Arc Joint 7 inch	9-XL9976MM	Xcelite-hex Blade 4mm
9-45378	Pliers, Slip Joint	9-XL9977MM	Xcelite-hex Blade 5mm
9-4518	Pliers, Long Nose, Miniature	9-XL991CM	Handle
9-4518	Pliers, Long Nose, Miniature	C2356E	Screw starter - Kedman Quick Wedge
9-44776	Ignition Wrench Set, 10 pc.	BLBO	Box - 18 Compartment
9-44601	Wrench, Adj., 4 inch	DWL4283T	Box - 5 Compartment
9-4151	Screwdriver, Blade, Stubby	9-41322	Pickup Tool, Claw type
9-41421	Screwdriver, Blade, Pocket clip	9-6757	6 pc Needle File Set
9-41594	Screwdriver, Blade 1/8 in. x 4 in.	9-9487	Utility Knife
9-41581	Screwdriver, Blade 3/16 in. x 4 in.	9-45341	Pliers Vice Grip 10 inch
9-39451	20' Steel Tape, locking Spring load	9-3001	Xacto Pen Knife
9-GH807	Ratchet, Offset, Slotted	9-HT62002	Solder Aid, Fork and Hook
68-412	Ratchet, Offset, Phillips	9-4099	Mirror, Round, Telescoping
9-GH130	Tapered Reamer	9-GH3001	Steel Rule Decimal 6 inch
9-41584	Screwdriver, slotted 1/4 in.X 6 in.	9-GH300ME	Steel Rule Metric 6 inch
9-4118	Screwdriver, Phillips #2, Stubby	9-XL9920	Xcelite-hex Blade.050 inch
9-41293	Screwdriver, Phillips #0	9-XL9921	Xcelite-hex Blade 1/16 inch
9-41294	Screwdriver, Phillips #1	9-XL9922	Xcelite-hex Blade 5/16 inch
9-41295	Screwdriver, Phillips #2	9-XL9923	Xcelite-hex Blade 3/32 inch
9-46677	Hex Keys, 20 pc., Metric	9-XL9924	Xcelite-hex Blade 1/8 inch
9-34701	1/4 in. Standard.Socket set (19 pc)	9-XL9925	Xcelite-hex Blade 5/32 inch
9-43499	1/2 inch Socket 1/4 inch drive	9-XL9926	Xcelite-hex Blade 3/16 inch
9-4355	Flex Spinner	9-XL99764	Xcelite-hex Blade 7/64
9-43523	Breaker	9-XL99964	Xcelite-hex Blade 9/64
9-43531	6 inch Ext.	9-XLM60	Mini-screwdriver kit

Table 10-3 Overview of GE-1 Tool Kit Contents (Continued)

Tool ID	Description	Tool ID	Description
9-65283	Case 8.5 in. x 4.5 in. x 2 in. Deep	9-45072	Pliers 6 inch Diagonal
9-46696	Hex Keys	9-XL100X	Wire Stripper/Cutter 5 inch - 100X
9-39829	Torpedo Level, Magnetic	9-XL87CG	Pliers - very fine needle nose-87CG
9-38461	Hammer, Ball Peen, 4 oz	9-WEWDT-07	Weller-Soldering-Replacement Tip(1)
9-4280	Universal Joint 1/4 inch	9-WS175-E	Wiss - Surgical Scissors
9-WEW60P3	Weller - Soldering Iron, 3 wire	KH174	Hemostat 5 inch Straight
9-WECT5B6	Weller - Soldering Iron Tip	KH175	Hemostat 5 inch curved
9-WEWDP12	Weller - Desoldering Pump	9-Z9480121	Alignment tool (red)
93383	Flashlight Mini-Mag Lite (AAA Bat.)		
9-GH408	Tweezers		
21576	Brush - Bristle		
9-4516	Pliers 4 1/4 inch Diagonal		

Table 10-4 Overview of GE-2 Tool Kit Contents

GE-2 Sears Kit (#99034)			
Tool ID	**Description**	**Tool ID**	**Description**
9-45381	Pliers, Arc Joint 9 1/2 inch	9-44067	Socket 1 1/16 in. for 1/2 in. drive
9-45092	Pliers, Linesman 8 1/2 inch	9-42679	Socket 10MM Hex for 1/2 in. drive (2273333)
9-42882	Punch, Pin 3/32 inch	9-44262	Extension 10 inch for 1/2 in. drive (2273405)
9-42884	Punch, Pin 5/32 inch	9-4258	3/8 inch to 1/2 inch Adapter
9-42886	Punch, Pin 1/4 inch	9-34374	3/8 inch Metric Socket Set - 12 PT
9-42973	Cold Chisel 1/2 inch	9-44311	16mm Socket 12 pt.
9-GH77	Center Punch Automatic	9-33485	Metal Socket Tray
9-GH890	File Handle, Adj.	9-33484	Metal Socket Tray
9-31276	File, Round, Bastard 8 inch	9-33484	Metal Socket Tray
9-31277	File, Half Round, Bastard 8 inch	9-52068	Tap and Drill Set
9-31263	File, Flat Mill 8 inch	9-52722	#6 Tap
21045C	Close Quarter Saw	9-52723	#8 Tap
9-44604	Wrench, Adj 10 inch		High Speed Drill Set
9-41587	Screwdriver 5/16 inch x 8 inch		#36 Drill
9-41586	Screwdriver, Stubby 5/16 inch		#29 Drill
9-GH19512	Countersink 1/2 inch	9-44046	3/8 inch Socket Set
9-44741	12 PC Combination Wrench Set		

10-4-2 Special Tools, Supplies and Equipment

10-4-2-1 Specific Requirements for Care & Maintenance

Table 10-5 Overview of Requirements for Care & Maintenance

Tool	Part Number	Comments
Digital Volt Meter (DVM)		
Leakage Current Ultrasound Kit	2113015	For 120V and 220V Units
Anti Static Kit	46–194427P231 46–194427P279 46–194427P369 46–194427P373 46–194427P370	Kit includes anti–static mat, wrist strap and cables for 200 to 240 V system 3M #2204 Large adjustable wrist strap 3M #2214 Small adjustable wrist strap 3M #3051 conductive ground cord
Anti Static Vacuum Cleaner	46–194427P278 46–194427P279	120V 230V
Safety Analyzer		The Safety Analyzer tool should be calibrated and compliant with AAMI/ESI 1993 or IEC 60601 or AS/NZS 3551
QIQ Phantom	E8370RB	RMI Grayscale Target Model 403GS
B/W Printer Cleaning Sheet		See printer user manual for requirements
Color Printer Cleaning Sheet		See printer user manual for requirements
Disposable Gloves		

Section 10-5
System Maintenance

10-5-1 Preliminary Checks

The preliminary checks take about 15 minutes to perform. Refer to the system user documentation whenever necessary.

Table 10-6 System Checks

Step	Item	Description
1	Ask & Listen	Ask the customer if they have any problems or questions about the equipment.
2	Paperwork	Fill in the top of the Ultrasound Inspection Certificate (see page 10- 21). Note all probes and system options.
3	Power up	With AC input. Turn the system power on and verify that all fans and peripherals turn on. Watch the displays during power up to verify that no warning or error messages are displayed. Check the Battery recharging. Without AC input, use internal battery.
4	Probes	Verify that the system properly recognizes all probes.
5	Displays	Verify proper display on the LCD.

10-5-2 Functional Checks (See Also Chapter 4)

The functional checks take about 60 minutes to perform. Refer to the system user documentation whenever necessary.

10-5-2-1 System Checks

Table 10-7 System Functional Checks

÷	Step	Description
	B-Mode	Verify basic B-Mode (2D) operation. Check the basic system controls that affect this mode of operation.
	CF-Mode	Verify basic CF-Mode (Color Flow Mode) operation. Check the basic system controls that affect this mode of operation.
	*Applicable Software Options	Verify the basic operation of all optional modes such as Multi-Image, 3D, Harmonics, Cine,... etc. Check the basic system controls that affect each options operation.
	Xmit/Recv Elements	Use the Visual Channel Utility on the loop connect to verify that all system xmit/recv channels are functional.
	Keyboard Test	Perform the Keyboard Test Procedure to verify that all keyboard controls are OK.
	LCD	Verify basic LCD display functions. Refer to Chapter 2 of the User Manual.
	Software Menu check	Verify Software Menu display functions. Refer to Chapter 2 of the User Manual.
	Measurements	In measurement mode, make distance measurement, get result in result window. Verify the distance by graduated rule. Distance Accuracy should be within ±5%. (Name result from result window Result A, result from graduated rule Result B; Distance Accuracy=(Result B-Result A)/Result A)

*NOTE: * Some software may be considered standard depending upon system model configuration.*

10-5-2-2 Peripheral/Option Checks

If any peripherals or options are not part of the system configuration, the check can be omitted. Refer to the User Manual for a list of approved peripherals/options. Please refer to Section 4-5 "Peripheral Checks" on page 4-18.

Table 10-8 GE Approved Peripheral/Hardware Option Functional Checks

Step	Item	Description
1	B/W Printer	Verify hardcopy output of the B/W video page printer. Clean heads and covers if necessary.

10-5-3 Input Power

10-5-3-1 Docking Station/Docking Cart Inspection

Table 10-9 AC/DC cable Inspection

Step	Item	Description
1	Unplug Cord	Disconnect the mains cable from the wall and Docking Station/Docking Cart.
2	Inspect	Inspect it and its connectors for damage of any kinds.
3	Verify	Verify that the LINE wires are properly attached to the terminals, and that no strands may cause a short circuit.

10-5-4 Cleaning

10-5-4-1 General Cleaning

Table 10-10 General Cleaning

Step	Item	Description
1	Console	Remove the battery. Use a fluid detergent in warm water on a soft, damp cloth to carefully wipe the entire system. Be careful not to get the cloth too wet so that moisture does not enter the console.
2	Probe Holder	Clean probe holders. (they may need to be soaked to remove excess gel).
3	Control Panel	Use PDI sani-cloth Plus Germicidal Disposable Cloth, PDI Super Sani-Cloth Germicidal Disposable Cloth or PDI Sani-Cloth HB. Gently wipe the LCD face. DO NOT use a glass cleaner that has a hydrocarbon base (such as Benzene, Methy Alcohol or Methy Ethyl Ketone) on LCD with the filter (anti-glare shield).

10-5-5 Physical Inspection

Table 10-11 Physical Checks

Step	Item	Description
1	Labeling	Verify that all system labeling is present and in readable condition. Refer to User Manual,..... for details.
2	Scratches & Dents	Inspect the console for dents, scratches or cracks.
3	Control Panel	Inspect keyboard and control panel. Note any damaged or missing items.
4	Cables & Connectors	Check all internal cable harnesses and connectors for wear and secure connector seating. Pay special attention to footswitch assembly and probe strain or bend reliefs.
5	Shielding & Covers	Check to ensure that all EMI shielding, internal covers, air flow panels and screws are in place. Missing covers and hardware could cause EMI/RFI problems while scanning.
6	External I/O	Check all connectors for damage.
7	Op Panel Lights	Check for proper operation of all operator panel and Freeze Key light.

10-5-6 Optional Diagnostic Checks

Optionally you can access the diagnostic software as described in Chapter 5 or 7. View the error logs and run desired diagnostics.

10-5-6-1 View the Logs

1.) Review the system error log for any problems.

2.) Check the temperature page to see if there are any trends that could cause problems in the future.

10-5-7 Probe Maintenance

10-5-7-1 Probe Related Checks

Table 10-12 Probe Related Checks

Step	Item	Description
1	Probe Holder	Clean probe holders (they may need to be soaked to remove excess gel).
2	Probes	Thoroughly check the system probe connectors and remove dust from inside the connector sockets if necessary. Visually check for bent, damaged or missing pins

10-5-7-2 Basic Probe Care

The system user manuals and various probe handling cards provide a complete description of probe care, maintenance, cleaning and disinfection. Ensure that you are completely familiar with the proper care of GE probes.

Ultrasound probes can be easily damaged by improper handling. See the User Manual and probe care cards for more details. Failure to follow these precautions can result in serious injury and equipment damage. Failure to properly handle or maintain a probe may also void its warranty.

Any evidence of wear indicates the probe cannot be used.

Do a visual check of the probe pins and system sockets before plugging in a probe.

10-5-7-3 Basic Probe Cleaning

Refer to the User's Manual for details on probe cleaning.

NOTE: To help protect yourself from blood borne diseases, wear approved disposable gloves. These are made of nitrile derived from vegetable starch to prevent allergic latex reactions.

NOTE: Failure to follow the prescribed cleaning or disinfection procedures will void the probe's warranty. DO NOT soak or wipe the lens with any product not listed in the User Manual. Doing so could result in irreparable damage to the probe. Follow care instructions that came with the probe.

NOTE: Disinfect a defective probe before you return it. Be sure to tag the probe as being disinfected.

10-5-8 Battery Performance Maintenance

It is recommended to do battery performance maintenance once every year.

Please follow the flow chart below to carry out battery performance maintenance.

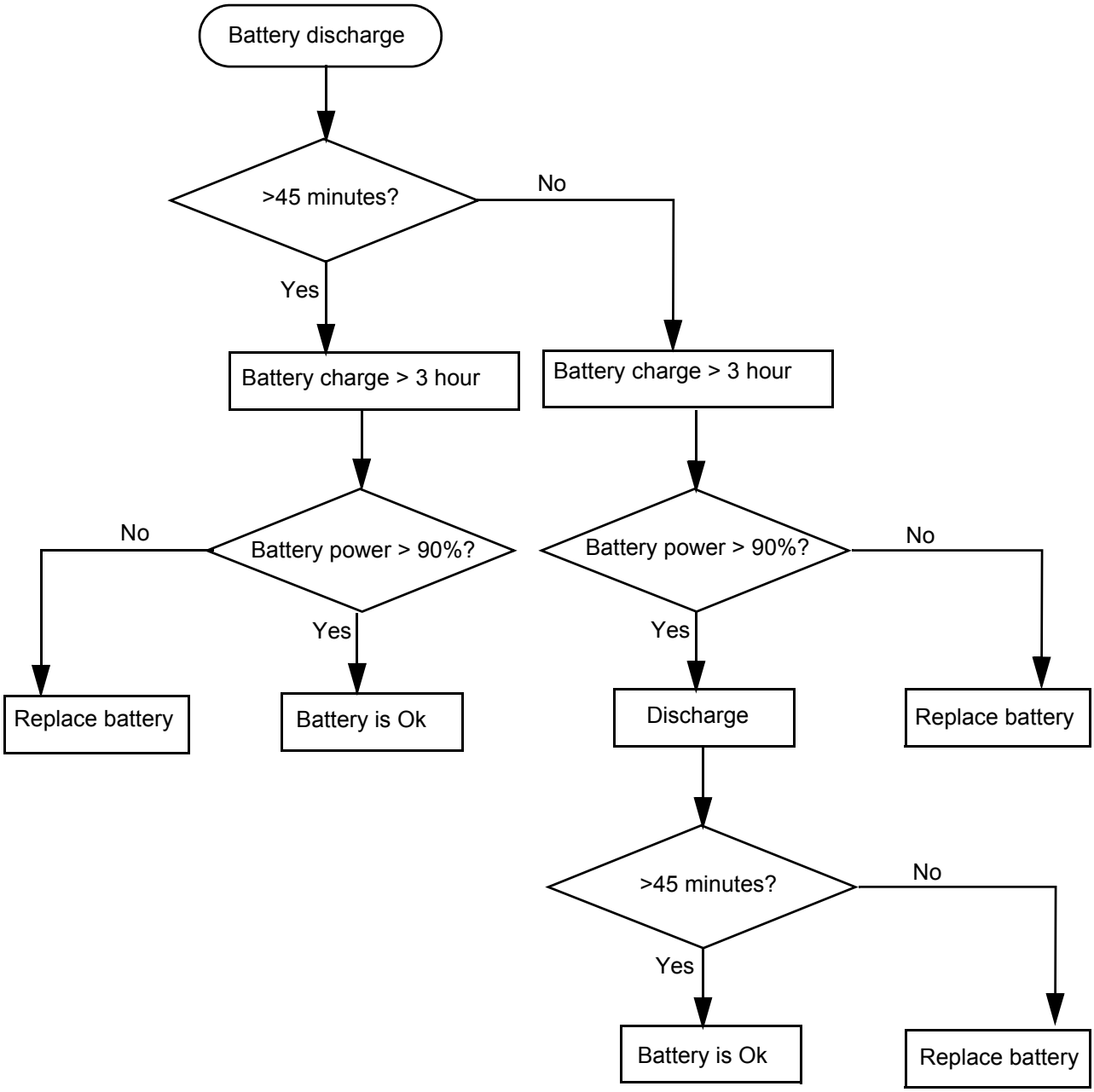


Figure 10-1 Flow chart of Battery Performance Maintenance

NOTE: Disconnect all probes when discharge battery.

NOTE: Discharge the battery to let the system automatically shut down.

Section 10-6
Electrical Safety Tests

10-6-1 Safety Test Overview

The electrical safety tests in this section are based on and conform to IEC 60601-1 Medical Equipment Safety Standards. They are intended for the electrical safety evaluation of cord-connected, electrically operated, patient care equipment. If additional information is needed, refer to the IEC 60601-1 documents.

⚠ **WARNING** ***THE USER MUST ENSURE THAT THE SAFETY INSPECTIONS ARE PERFORMED AT LEAST EVERY 6 MONTHS ACCORDING TO THE REQUIREMENTS OF THE PATIENT SAFETY STANDARD IEC-EN 60601-1. ONLY TRAINED PERSONS ARE ALLOWED TO PERFORM THE SAFETY INSPECTIONS MENTIONED ABOVE.***

⚠ **CAUTION** **To avoid electrical shock, the unit under test must not be connected to other electrical equipment. The unit under test must not be contacted by users or patients while performing these tests.**

⚠ **CAUTION** **Possible risk of infection. Do not handle soiled or contaminated probes and other components that have been in patient contact. Follow appropriate cleaning and disinfecting procedures before handling the equipment.**

Test the system, peripherals and probes for leakage current. Excessive leakage current can cause injury or death in sensitive patients. High leakage current can also indicate degradation of insulation and a potential for electrical failure. Do not use probes or equipment having excessive leakage current.

To minimize the risk that a probe may shock someone the customer should:

- Not use a probe that is cracked or damaged in any way
- Check probe leakage current:
    * Based on your facilities QA program for surface probes
    * Based on your facilities QA program for endocavitary probes
    * whenever probe damage is suspected

10-6-2 GEMS Leakage Current Limits

The following limits are summarized for IEC 60601-1 Medical Equipment Safety Standards. These limits are GEMS standards and in some cases are lower than the above standards listed.

Table 10-13 Chassis Leakage Current Limits—Accessible Metal Surfaces

Country	Normal Condition	Open Ground	Reverse Polarity	Open Neutral
All (Except USA & Canada)	0.1 mA	0.5 mA	0.5 mA	0.5 mA
USA & Canada	0.1 mA	0.3 mA	0.3 mA	0.3 mA

Table 10-14 Type BF Applied Part Leakage Current Limits - Probes surface

Country	Normal Condition	Open Ground	Reverse Polarity	Open Neutral	*Mains Applied
All	0.1 mA	0.5 mA	0.5 mA	0.5 mA	5.0 mA

Table 10-15 Type CF Applied Part Leakage Current Limits - ECG Connections

Country	Normal Condition	Open Ground	Reverse Polarity	Open Neutral	*Mains Applied
All	0.01 mA	0.05 mA	0.05 mA	0.05 mA	0.05 mA

*NOTE: *Mains Applied refers to the sink leakage test where mains (supply) voltage is applied to the part to determine the amount of current that will pass (or sink) to ground if a patient contacted mains voltage.*

The following tests are performed at the factory and should be performed at the site. These tests are: chassis leakage current, and probe leakage current. All measurements are made with an electrical safety analyzer which should be calibrated and compliant with AAMI/ESI 1993 or IEC 60601 or AS/NZS 3551.

10-6-3 Outlet Test - Wiring Arrangement

Test all outlets in the area for proper grounding and wiring arrangement by plugging in the neon outlet tester and noting the combination of lights that are illuminated. Any problems found should be reported to the hospital immediately and the receptacle should not be used.

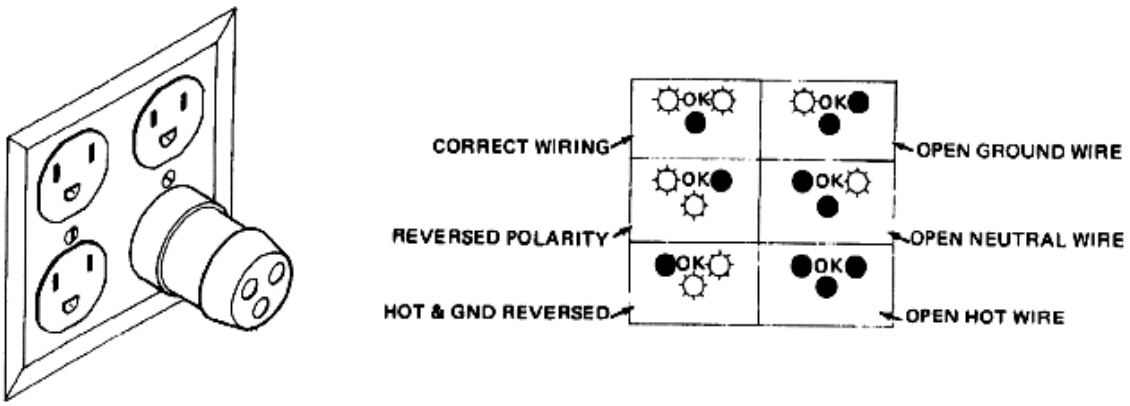


Figure 10-2 Typical Alternate Outlet Tester

NOTE: No outlet tester can detect the condition where the Neutral (grounded supply) conductor and the Grounding (protective earth) conductor are reversed. If later tests indicate high leakage currents, this should be suspected as a possible cause and the outlet wiring should be visually inspected.

10-6-4 Chassis Leakage Current Test

10-6-4-1 Definition

This test measures the current that would flow in a grounded person who touched accessible metal parts of the bedside station if the ground wire should break. The test verifies the isolation of the power line from the chassis. The meter is connected from accessible metal parts of the case to ground. Measurements should be made with the unit On and Off, with the power line polarity Normal and Reversed. Record the highest reading.

CAUTION Electric Shock Hazard. When the meter's ground switch is OPEN, don't touch the unit!

CAUTION Equipment damage possibility. Never switch the Polarity and the status of Neutral when the unit is powered ON. Be sure to turn the unit power OFF before switching them using the POLARITY switch and/or the NEUTRAL switch. Otherwise, the unit may be damaged.

10-6-4-2 Generic Procedure

The test verifies the isolation of the power line from the chassis. The testing meter is connected from accessible metal parts of the case to ground. Measurements should be made with the unit ON and OFF, with the power line polarity Normal and Reversed. Record the highest reading of current.

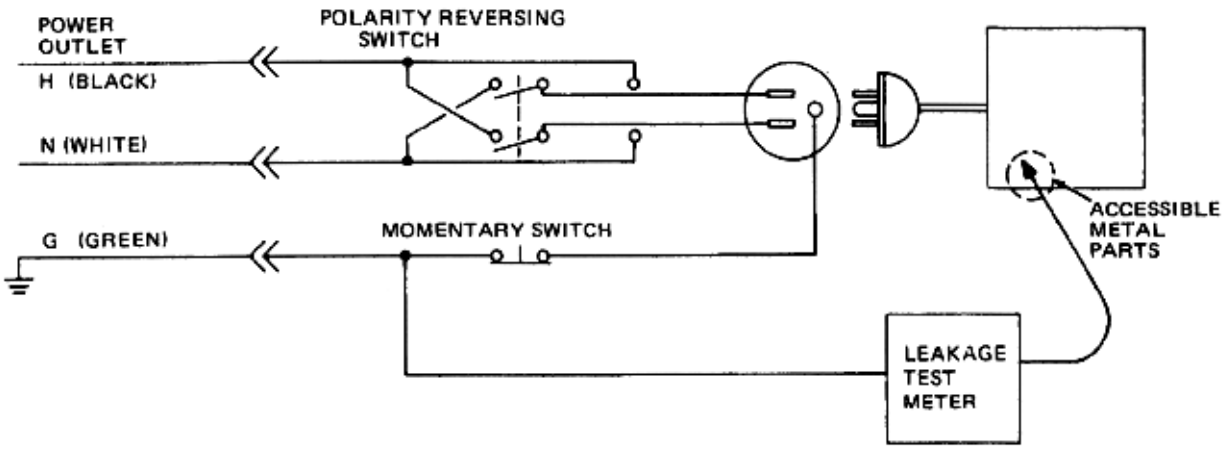


Figure 10-3 Set Up for Chassis Source Leakage Current, IEC 601-1 Clause 19 - Continuos Leakage Currents and Patient, Auxiliary Currents

When using the Microguard or a similar test instrument, its power plug may be inserted into the wall outlet and the equipment under test is plugged into the receptacle on the panel of the meter. This places the meter in the grounding conductor and the current flowing from the case to ground will be indicated in any of the current ranges. The maximum allowable limit for chassis source leakage is shown in Table 10-13.

10-6-4-3 Data Sheet for enclosure Source Leakage Current

The test passes when all readings measure less than the value shown in Table 10-13. Record all data on the PM Inspection Certificate.

Table 10-16 Typical Data Sheet for enclosure Source Leakage Current

Unit Power	Tester Polarity Switch	Tester Neutral or Ground Switch	Test 1 Speaker Cover	Test 2 Real Panel Metal Parts	Optional Test 3	Optional Test 4
Enter Name of tested peripheral here:						
ON	NORM	OPEN				
ON	NORM	CLOSED				
ON	REV	OPEN				
ON	REV	CLOSED				
OFF	NORM	OPEN				
OFF	NORM	CLOSED				
OFF	REV	OPEN				
OFF	REV	CLOSED				

10-6-5 Probe Leakage Current Test

10-6-5-1 Definition

This test measures the current that would flow to ground from any of the probes through a patient who is being scanned and becomes grounded by touching some other grounded surface.

10-6-5-2 Generic Procedure

Measurements should be made with the ground open and closed, with power line polarity normal and reversed, and with the unit Off and On. For each combination, the probe must be active to find the worst case condition.

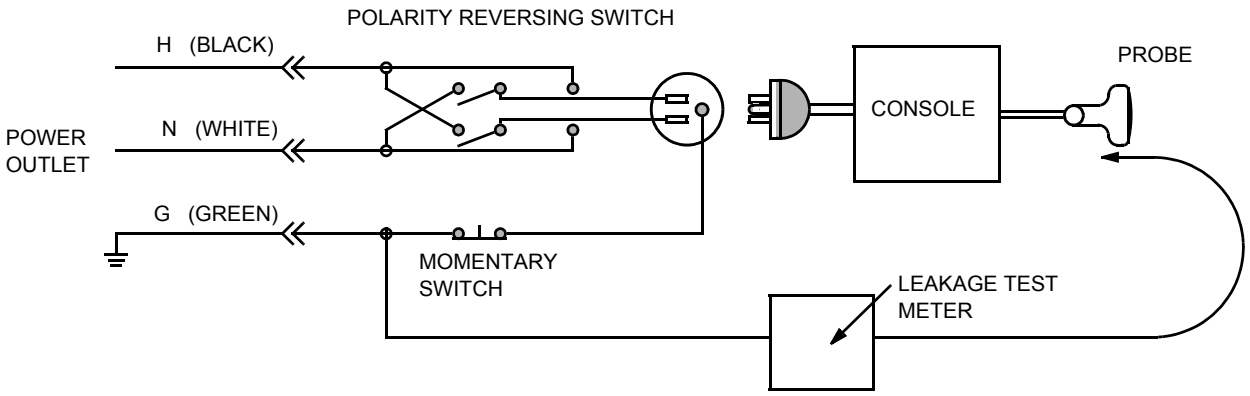


Figure 10-4 Set Up for Probe Leakage Current

NOTE: Each probe will have some amount of leakage current, dependent on its design. Small variations in probe leakage currents are normal from probe to probe. Other variations will result from differences in line voltage and test lead placement.

10-6-5-3 Meter Procedure Using Probe Adapter

Follow the Safety Analyzer tool instruction to test each transducer for leakage current.

The electrical Safety Analyzer tool should be calibrated and compliant with AAMI/ESI 1993 or IEC 60601 or AS/NZS 3551.

10-6-5-4 No Meter Probe Adapter Procedure

Follow the Safety Analyzer tool instruction to test each transducer for leakage current.

The electrical Safety Analyzer tool should be calibrated and compliant with AAMI/ESI 1993 or IEC 60601 or AS/NZS 3551.

10-6-5-5 Data Sheet for Transducer Source Leakage Current

The test passes when all readings measure less than the values shown in Table 10-13. Record all data on the PM Inspection Certificate.

CAUTION **Equipment damage possibility. Never switch the Polarity and the status of Neutral when the unit is powered ON. Be sure to turn the unit power OFF before switching them using the POLARITY switch and/or the NEUTRAL switch. Otherwise, the unit may be damaged**

Table 10-17 Typical Data Sheet For Transducer Source Leakage Current

Transducer Tested:			
Unit Power	**Tester Power Polarity Switch**	**Tester GROUND or NUETRAL Switch**	**Measurement**
ON	NORM	OPEN	
ON	NORM	CLOSED	
ON	REV	OPEN	
ON	REV	CLOSED	
OFF	NORM	OPEN	
OFF	NORM	CLOSED	
OFF	REV	OPEN	
OFF	REV	CLOSED	

Section 10-7
When There's Too Much Leakage Current...

AC/DC FAILS

Check any broken of the AC/DC cable. Replace with a new one if any portion is defective.

ENCLOSURE FAILS

Check for any damage to the enclosure. Replace any defective part.

Inspect wiring for bad crimps, poor connections, or damage.

Test the wall outlet; verify it is grounded and is free of other wiring abnormalities. Notify the user or owner to correct any deviations. As a work around, check the other outlets to see if they could be used instead.

NOTE: No outlet tester can detect the condition where the white neutral wire and the green grounding wire are reversed. If later tests indicate high leakage currents, this should be suspected as a possible cause and the outlet wiring should be visually inspected.

PROBE FAILS

Change another probe to confirm if the fail is caused by console.

NOTE: Each probe will have some amount of leakage, dependent on its design. Small variations in probe leakage currents are normal from probe to probe. Other variations will result from differences in line voltage and test lead placement. The maximum allowable leakage current for a body-surface-contact-probe differs from inter-cavity probe. Be sure to enter the correct probe type in the appropriate space on the check list.

If excessive leakage current is slot dependent, inspect the system connector for bent pins, poor connections, and ground continuity.

If the problem remains with the probe, replace the probe.

PERIPHERAL FAILS

Inspect wiring for bad crimps, poor connections, or damage.

STILL FAILS

If all else fails, begin isolation by removing the probes, external peripherals, then the on board ones, one at a time while monitoring the leakage current measurement.

NEW UNIT

If the leakage current measurement tests fail on a new unit and if situation can not be corrected, submit a Safety Failure Report to document the system problem. Remove unit from operation.

ULTRASOUND INSPECTION CERTIFICATE

Customer Name:		System ID:	Dispatch Number / Date Performed:	Warranty/Contract/HBS
System Type		Model Number:	Serial Number:	Manufacture Date:
Probe 1:	Frequency:	Scan Format*:	Model Number:	Serial Number:
Probe 2:	Frequency:	Scan Format*:	Model Number:	Serial Number:
Probe 3:	Frequency:	Scan Format*:	Model Number:	Serial Number:
Probe 4:	Frequency:	Scan Format*:	Model Number:	Serial Number:
Probe 5:	Frequency:	Scan Format*:	Model Number:	Serial Number:

* Scan Format: Phased Array, Linear Array, Curved Array, Mechanical Array or Other

FUNCTIONAL CHECKS

Functional Check (if applicable)	OK? or N/A
B-Mode Function	
Doppler Modes Function	
CF-Mode Function	
M-Mode Function	
Applicable Software Options	
Applicable Hardware Options	
Control Panel	
LCD	
Measurement Accuracy	
GE Approved Peripherals	

PHYSICAL INSPECTION AND CLEANING

Physical Inspection and Cleaning (if applicable)	Inspect	Clean
Console		
LCD		
External I/O		
Cables and Connectors		
GE Approved Peripherals (DVD-RW, Printer)		
Labeling (see User Manual for Labeling)		

COMMENTS:

ELECTRICAL SAFETY

Electrical Test Performed	Max Value Allowed	Value Measured	OK?	Comments
Outlet (correct ground &wiring config.)				
Type BF Applied Part Leakage Current Limits- Probe				
enclosure Source Leakage Current - Chassis Leakage Current Limits				
Peripheral 1 Leakage Current				
Peripheral 2 Leakage Current				

PROBES

Probe Number (from previous page)	Max Value Allowed	Max Value Measured	OK?	Comments
Probe 1:				
Probe 2:				
Probe 3:				

Final Check. All system covers are in place. System scans with all probes as expected.

Accepted by: _____

INDEX

GE Healthcare - GE Medical System Ultrasound
9900 Innovation Drive
Wawautosa, Wisconsin 53226
USA

www.gehealthcare.com