

Optima CT520 DoD IB Upgrade Instruction

Service Documentation



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Rev 1

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IMPORTANT PRECAUTIONS

LANGUAGE

警告 (ZH-CN)	<ul style="list-style-type: none">• 本维修手册仅提供英文版本。• 如果维修服务提供商需要非英文版本，客户需自行提供翻译服务。• 未详细阅读和完全理解本维修手册之前，不得进行维修。• 忽略本警告可能对维修人员，操作员或患者造成触电、机械伤害或其他形式的伤害。
VÝSTRAHA (CS)	<ul style="list-style-type: none">• Tento provozní návod existuje pouze v anglickém jazyce.• V případě, že externí služba zákazníkům potřebuje návod v jiném jazyce, je zajištění překladu do odpovídajícího jazyka úkolem zákazníka.• Nesnažte se o údržbu tohoto zařízení, aniž byste si přečetli tento provozní návod a pochopili jeho obsah.• V případě nedodržování této výstrahy může dojít k poranění pracovníka prodejního servisu, obslužného personálu nebo pacientů vlivem elektrického proudu, respektive vlivem mechanických či jiných rizik.
ADVARSEL (DA)	<ul style="list-style-type: none">• Denne servicemanual findes kun på engelsk.• Hvis en kundes tekniker har brug for et andet sprog end engelsk, er det kundens ansvar at sørge for oversættelse.• Forsøg ikke at servicere udstyret medmindre denne servicemanual har været konsulteret og er forstået.• Manglende overholdelse af denne advarsel kan medføre skade på grund af elektrisk, mekanisk eller anden fare for teknikeren, operatøren eller patienten.
WAARSCHUWING (NL)	<ul style="list-style-type: none">• 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.
WARNING (EN)	<ul style="list-style-type: none">• 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.• Do not attempt to service the equipment unless this service manual has been consulted and is understood.• Failure to heed this warning may result in injury to the service provider, operator, or patient, from electric shock or from mechanical or other hazards.

HOIATUS (ET)	<ul style="list-style-type: none">• Käesolev teenindusjuhend on saadaval ainult inglise keeles.• Kui klienditeeninduse osutaja nõuab juhendit inglise keelest erinevas keeles, vastutab klient tõlketeenuse osutamise eest.• Ärge üritage seadmeid teenindada enne eelnevalt käesoleva teenindusjuhendiga tutvumist ja sellest aru saamist.• Käesoleva hoiatuse eiramine võib põhjustada teenuseosutaja, operaatori või patsiendi vigastamist elektrilöögi, mehaanilise või muu ohu tagajärjel.
VAROITUS (FI)	<ul style="list-style-type: none">• Tämä huolto-ohje on saatavilla vain englanniksi.• Jos asiakkaan huoltohenkilöstö vaatii muuta kuin englanninkielistä materiaalia, tarvittavan käännöksen hankkiminen on asiakkaan vastuulla.• Älä yritä korjata laitteistoa ennen kuin olet varmasti lukenut ja ymmärtänyt tämän huolto-ohjeen.• Mikäli tätä varoitusta ei noudateta, seurauksena voi olla huoltohenkilöstön, laitteiston käyttäjän tai potilaan vahingoittuminen sähköiskun, mekaanisen vian tai muun vaaratilanteen vuoksi.
ATTENTION (FR)	<ul style="list-style-type: none">• Ce manuel de service n'est disponible qu'en anglais.• Si le technicien du client a besoin de ce manuel dans une autre langue que l'anglais, c'est au client qu'il incombe de le faire traduire.• Ne pas tenter d'intervenir sur les 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.
WARNUNG (DE)	<ul style="list-style-type: none">• Diese Serviceanleitung existiert nur in Englischer Sprache.• Falls ein fremder Kundendienst eine andere Sprache benötigt, ist es aufgabe des Kunden für eine Entsprechende Übersetzung zu sorgen.• Versuchen Sie nicht diese Anlage zu warten, ohne diese Serviceanleitung gelesen und verstanden zu haben.• Wird diese Warnung nicht beachtet, so kann es zu Verletzungen des Kundendiensttechnikers, des Bedieners oder des Patienten durch Stromschläge, Mechanische oder Sonstige gefahren kommen.
ΠΡΟΕΙΔΟΠΟΙΗΣΗ (EL)	<ul style="list-style-type: none">• Το παρόν εγχειρίδιο σέρβις διατίθεται στα αγγλικά μόνο.• Εάν το άτομο παροχής σέρβις ενός πελάτη απαιτεί το παρόν εγχειρίδιο σε γλώσσα εκτός των αγγλικών, αποτελεί ευθύνη του πελάτη να παρέχει υπηρεσίες μετάφρασης.• Μην επιχειρήσετε την εκτέλεση εργασιών σέρβις στον εξοπλισμό εκτός εάν έχετε συμβουλευτεί και έχετε κατανοήσει το παρόν εγχειρίδιο σέρβις.• Εάν δε λάβετε υπόψη την προειδοποίηση αυτή, ενδέχεται να προκληθεί τραυματισμός στο άτομο παροχής σέρβις, στο χειριστή ή στον ασθενή από ηλεκτροπληξία, μηχανικούς ή άλλους κινδύνους.

<p>FIGYELMEZTETÉS (HU)</p>	<ul style="list-style-type: none"> • Ezen karbantartási kézikönyv kizárólag angol nyelven érhető el. • Ha a vevő szolgáltatója angoltól eltérő nyelvre tart igényt, akkor a vevő felelőssége a fordítás elkészítése. • Ne próbálja elkezdni 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.
<p>AÐVÖRUN (IS)</p>	<ul style="list-style-type: none"> • Þessi þjónustuhandbók er eingöngu fáanleg á ensku. • Ef að þjónustuveitandi viðskiptamanns þarfnast annas tungumáls en ensku, er það skylda viðskiptamanns að skaffa tungumálþjónustu. • Reynið ekki að afgreiða tækið nema að þessi þjónustuhandbók hefur verið skoðuð og skilin. • Brot á sinna þessari aðvörun getur leitt til meiðsla á þjónustuveitanda, stjórnanda eða sjúklings frá raflosti, vélrænu eða öðrum áhættum.
<p>AVVERTENZA (IT)</p>	<ul style="list-style-type: none"> • Il presente manuale di manutenzione è disponibile soltanto in inglese. • Se un addetto alla manutenzione 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 • Il non rispetto della presente avvertenza potrebbe far compiere operazioni da cui derivino lesioni all'addetto, alla manutenzione, all'utilizzatore ed al paziente per folgorazione elettrica, per urti meccanici od altri rischi.
<p>警告 (JA)</p>	<ul style="list-style-type: none"> • このサービスマニュアルには英語版しかありません。 • サービスを担当される業者が英語以外の言語を要求される場合、翻訳作業はその業者の責任で行うものとさせていただきます。 • このサービスマニュアルを熟読し理解せずに、装置のサービスを行わないでください。 • この警告に従わない場合、サービスを担当される方、操作員あるいは患者さんが、感電や機械的又はその他の危険により負傷する可能性があります。
<p>경고 (KO)</p>	<ul style="list-style-type: none"> • 본 서비스 지침서는 영어로만 이용하실 수 있습니다 . • 고객의 서비스 제공자가 영어 이외의 언어를 요구할 경우 , 번역 서비스를 제공하는 것은 고객의 책임입니다 . • 본 서비스 지침서를 참고했고 이해하지 않는 한은 해당 장비를 수리하려고 시도하지 마십시오 . • 이 경고에 유의하지 않으면 전기 쇼크 , 기계상의 혹은 다른 위험으로부터 서비스 제공자 , 운영자 혹은 환자에게 위해를 가할 수 있습니다 .

<p>BRDINJUMS (LV)</p>	<ul style="list-style-type: none">• 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.
<p>ĮSPĖJIMAS (LT)</p>	<ul style="list-style-type: none">• Šis eksploataavimo vadovas yra prieinamas tik anglų kalba.• Jei kliento paslaugų tiekėjas reikalauja vadovo kita kalba – ne anglų, numatyti vertimo paslaugas yra kliento atsakomybė.• Nemėginkite atlikti įrangos techninės priežiūros, nebent atsižvelgėte į šį eksploataavimo vadovą ir jį supratote.• Jei neatkreipsite dėmesio į šį perspėjimą, galimi sužalojimai dėl elektros šoko, mechaninių ar kitų pavojų paslaugų tiekėjui, operatoriui ar pacientui.
<p>ADVARSEL (NO)</p>	<ul style="list-style-type: none">• 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.
<p>OSTRZEŻENIE (PL)</p>	<ul style="list-style-type: none">• Niniejszy podręcznik serwisowy dostępny jest jedynie w języku angielskim.• Jeśli dostawca usług klienta wymaga języka innego niż angielski, zapewnienie usługi tłumaczenia jest obowiązkiem klienta.• Nie próbować serwisować wyposażenia bez zapoznania się i zrozumienia niniejszego podręcznika serwisowego.• Niezastosowanie się do tego ostrzeżenia może spowodować urazy dostawcy usług, operatora lub pacjenta w wyniku porażenia elektrycznego, zagrożenia mechanicznego bądź innego.
<p>ATENÇÃO (PT-BR)</p>	<ul style="list-style-type: none">• Este manual de assistência técnica só se encontra disponível em inglês.• Se qualquer outro serviço de assistência técnica, que não a gems, solicitar estes manuais noutro idioma, é da responsabilidade do cliente fornecer os serviços de tradução.• Não 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.

<p>ATENÇÃO (PT-PT)</p>	<ul style="list-style-type: none">• Este manual de assistência técnica só se encontra disponível em inglês.• Se qualquer outro serviço de assistência técnica, que não a gems, solicitar estes manuais noutra 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 colocar em perigo a segurança do técnico, do operador ou do paciente devido a choques eléctricos, mecânicos ou outros.
<p>ATENȚIE (RO)</p>	<ul style="list-style-type: none">• Acest manual de service este disponibil numai în limba engleză.• Dacă un furnizor de servicii pentru clienți necesită o altă limbă decât cea engleză, este de datoria clientului să furnizeze o traducere.• Nu încercați să reparați echipamentul decât ulterior consultării și înțelegerii acestui manual de service.• Ignorarea acestui avertisment ar putea duce la rănirea depanatorului, operatorului sau pacientului în urma pericolelor de electrocutare, mecanice sau de altă natură.
<p>ОСТОРОЖНО! (RU)</p>	<ul style="list-style-type: none">• Данное руководство по обслуживанию предлагается только на английском языке.• Если сервисному персоналу клиента необходимо руководство не на английском, а на каком-то другом языке, клиенту следует самостоятельно обеспечить перевод.• Перед обслуживанием оборудования обязательно обратитесь к данному руководству и поймите изложенные в нем сведения.• Несоблюдение требований данного предупреждения может привести к тому, что специалист по обслуживанию, оператор или пациент получат удар электрическим током, механическую травму или другое повреждение.
<p>UPOZORENJE (SR)</p>	<ul style="list-style-type: none">• Ovo servisno uputstvo je dostupno samo na engleskom jeziku.• Ako klijentov serviser zahteva neki drugi jezik, klijent je dužan da obezbedi prevodilacke usluge.• Ne pokušavajte da opravite uredaj ako niste procitali i razumeli ovo servisno uputstvo.• Zanemarivanje ovog upozorenja može dovesti do povređivanja servisera, rukovaoca ili pacijenta usled strujnog udara ili mehanickih i drugih opasnosti.
<p>UPOZORNENIE (SK)</p>	<ul style="list-style-type: none">• Tento návod na obsluhu je k dispozícii len v angličtine.• Ak zákazníkovi poskytovateľ služieb vyžaduje iný jazyk ako angličtinu, poskytnutie prekladateľských služieb je zodpovednosťou zákazníka.• Nepokúšajte sa o obsluhu zariadenia skôr, ako si neprečítate návod na obsluhu a neporozumiete mu.• Zanedbanie tohto upozornenia môže vyústiť do zranenia poskytovateľa služieb, obsluhujúcej osoby alebo pacienta elektrickým prúdom, do mechanického alebo iného nebezpečenstva.

<p>ATENCION (ES)</p>	<ul style="list-style-type: none">• Este manual de servicio sólo existe en inglés.• Si el encargado de mantenimiento de un cliente necesita un idioma que no sea el inglés, el cliente deberá encargarse de la traducción del manual.• 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.
<p>VARNING (SV)</p>	<ul style="list-style-type: none">• 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.
<p>DIKKAT (TR)</p>	<ul style="list-style-type: none">• Bu servis kilavuzunun sadece ingilizcesi mevcuttur.• Eğer müşteri teknisyeni bu kilavuzu ingilizce dışında bir başka lisandan talep ederse, bunu tercüme ettirmek müşteriye düşer.• Servis kilavuzunu okuyup anlamadan ekipmanlara müdahale etmeyiniz.• Bu uyarıya uyulmaması, elektrik, mekanik veya diğer tehlikelerden dolayı teknisyen, operatör veya hastanın yaralanmasına yol açabilir.
<p>ПРЕДУПРЕЖДЕН ИЕ (BG)</p>	<ul style="list-style-type: none">• Това упътване за работа е налично само на английски език.• Ако доставчикът на услугата на клиента изиска друг език, задължение на клиента е да осигури превод.• Не използвайте оборудването, преди да сте се консултирали и разбрали упътването за работа.• Неспазването на това предупреждение може да доведе до нараняване на доставчика на услугата, оператора или пациент в резултат на токов удар или механична или друга опасност.
<p>警告 (ZH-HK)</p>	<ul style="list-style-type: none">• 本服務手冊僅提供英文版本。• 倘若客戶的服務供應商需要英文以外之服務手冊，客戶有責任提供翻譯服務。• 除非已參閱本服務手冊及明白其內容，否則切勿嘗試維修設備。• 不遵從本警告或會令服務供應商、網絡供應商或病人受到觸電、機械性或其他危險。
<p>警告 (ZH-TW)</p>	<ul style="list-style-type: none">• 本維修手冊僅有英文版。• 若客戶的維修廠商需要英文版以外的語言，應由客戶自行提供翻譯服務。• 請勿試圖維修本設備，除非 您已查閱並瞭解本維修手冊。• 若未留意本警告，可能導致維修廠商、操作員或病患因觸電、機械或其他危險而受傷。

UPOZORENJE (HR)	<ul style="list-style-type: none">• Ovaj servisni priručnik dostupan je na engleskom jeziku.• Ako davatelj usluge klijenta treba neki drugi jezik, klijent je dužan osigurati prijevod.• Ne pokušavajte servisirati opremu ako niste u potpunosti pročitali i razumjeli ovaj servisni priručnik.• Zanimarite li ovo upozorenje, može doći do ozljede davatelja usluge, operatera ili pacijenta uslijed strujnog udara, mehaničkih ili drugih rizika.
OPOZORILO (SL)	<ul style="list-style-type: none">• Ta servisni priručnik je na voljo samo v angleškem jeziku.• Če ponudnik storitve stranke potrebuje priročnik v drugem jeziku, mora stranka zagotoviti prevod.• Ne poskušajte servisirati opreme, če tega priročnika niste v celoti prebrali in razumeli.• Če tega opozorila ne upoštevate, se lahko zaradi električnega udara, mehanskih ali drugih nevarnosti poškoduje ponudnik storitev, operater ali bolnik.

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.

To file a report:

Fill out a report on <http://egems.med.ge.com/edq/home.jsp>

Contact the local service coordinator.

CERTIFIED ELECTRICAL CONTRACTOR STATEMENT

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

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

IMPORTANT...X-RAY PROTECTION

X-ray equipment if not properly used may cause injury. Accordingly, the instructions herein contained should be thoroughly read and understood by everyone who will use the equipment before you attempt to place this equipment in operation. The General Electric Company, Medical Systems Group, will be glad to assist and cooperate in placing this equipment in use.

Although this apparatus incorporates a high degree of protection against x-radiation other than the useful beam, no practical design of equipment can provide complete protection. Nor can any practical design compel the operator to take adequate precautions to prevent the possibility of any persons carelessly exposing themselves or others to radiation.

It is important that anyone having anything to do with x-radiation be properly trained and fully acquainted with the recommendations of the National Council on Radiation Protection and Measurements as published in NCRP Reports available from NCRP Publications, 7910 Woodmont Avenue, Room 1016, Bethesda, Maryland 20814, and of the International Commission on Radiation Protection, and take adequate steps to protect against injury.

The equipment is sold with the understanding that the General Electric Company, Medical Systems Group, its agents, and representatives have no responsibility for injury or damage which may result from improper use of the equipment.

Various protective materials and devices are available. It is urged that such materials or devices be used.

LITHIUM BATTERY CAUTIONARY STATEMENTS



CAUTION
Risk of
Explosion

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.



ATTENTION
Danger
d'Explosion

Il y a danger d'explosion s'il y a remplacement incorrect de la batterie. Remplacer uniquement avec une batterie du même type ou d'un type recommandé par le constructeur. Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

OMISSIONS & ERRORS

Customers, please contact your GE Sales or Service representatives.

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

Revision History

Revision	Date	Reason for change
1	03/22/2016	Initial release.

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Chapter 1

Upgrade Overview

The **Upgrade Kit** is only available for Optima CT520 DoD IB system with NIO16 Console Z800 Host Computer. The upgrade instruction is to guide FE how to upgrade NIO16 Console Host Computer from Z800 (App version: 12BW31.xx) to Z820 (App version: 14BW25.xx) on CT-only Optima CT520 DoD system.

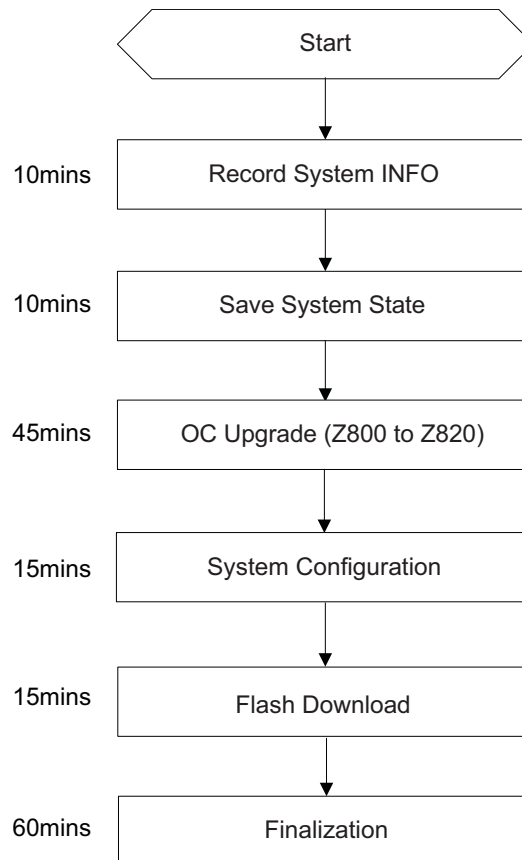


NOTICE

If the Boom-In-Room monitor has been installed on Site, customer **MUST** order B7710AU to match OC upgrade. The Boom-In-Room Upgrade Kit Instruction (5719432-1EN, shipped with B7710AU) also applies to Optima CT520 DoD.

Section 1.0

Flowchart



Section 2.0 Material List

Verify that the contents of upgrade kit are correct according to the material list below.

Description	Number
CT520 TP/SW Collector	B77052CB
NIO Console without Cover	B76992CB
CT520 IB Upgrade Kit	B78442CB

Table 1-1 Optima CT520 DoD IB Upgrade Package (B78432CB)

Description	Number
Upgrade Instruction	5745295-1EN
DP to DVI Cable	5408703

Table 1-2 CT520 IB Upgrade Kit (B78442CB)

Description	Number	
	ASiR	Non ASiR
Console Cover Kit	B77092CB	B70762RT

Table 1-3 Console Cover Kit

Chapter 2

Upgrade Procedure

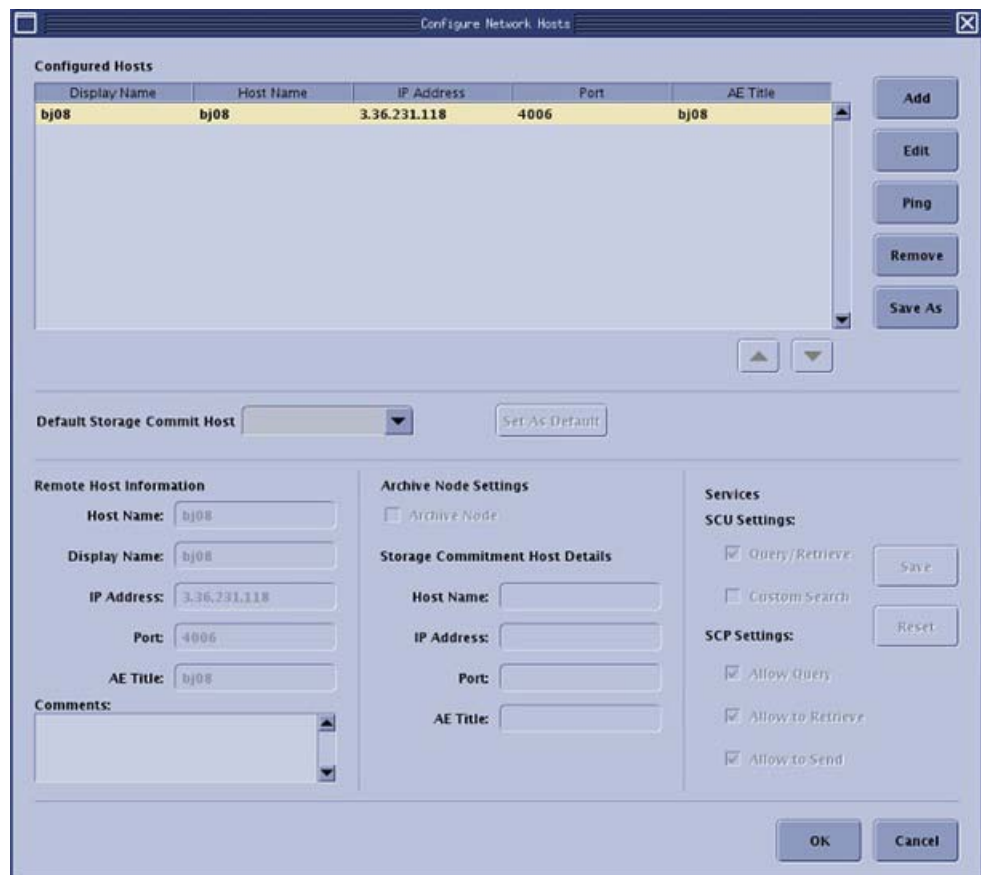
Section 1.0 Preparation in Site

1.1 Record System INFO Information

Write down all of the system INFO information in Console Information Sheets, please refer to the Service Methods CD 5457941-2EN service manual.

1.1.1 Record All Remote Host Network Information

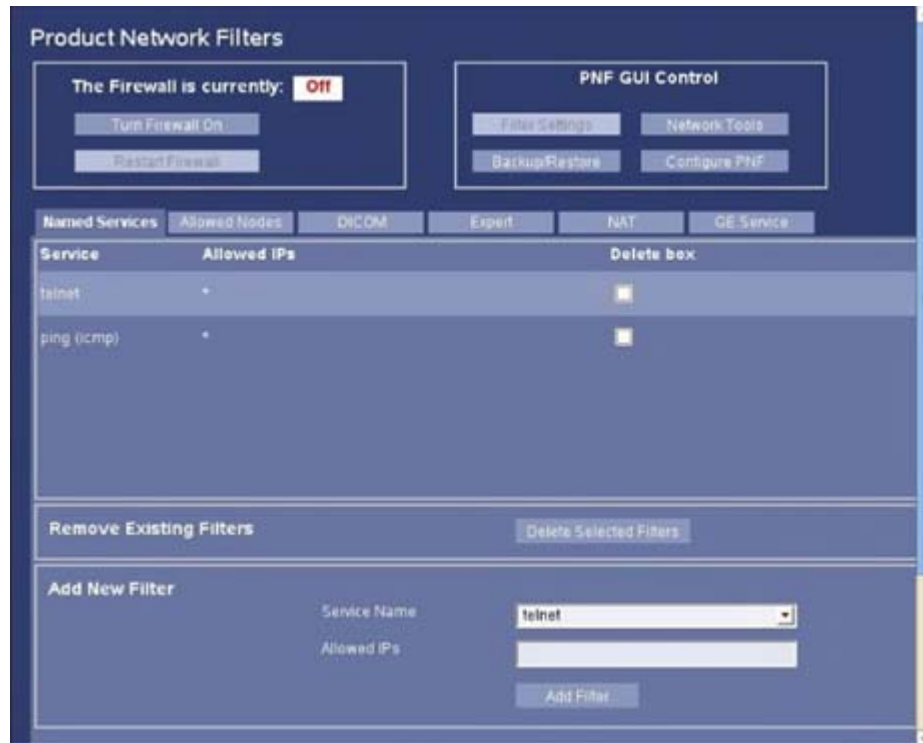
- 1.) Select [ImageWorks] from the desktop.
- 2.) Select in sequence: Tools -> Network Configuration.



- 3.) Select host name to display remote host information.
- 4.) Record the network information.

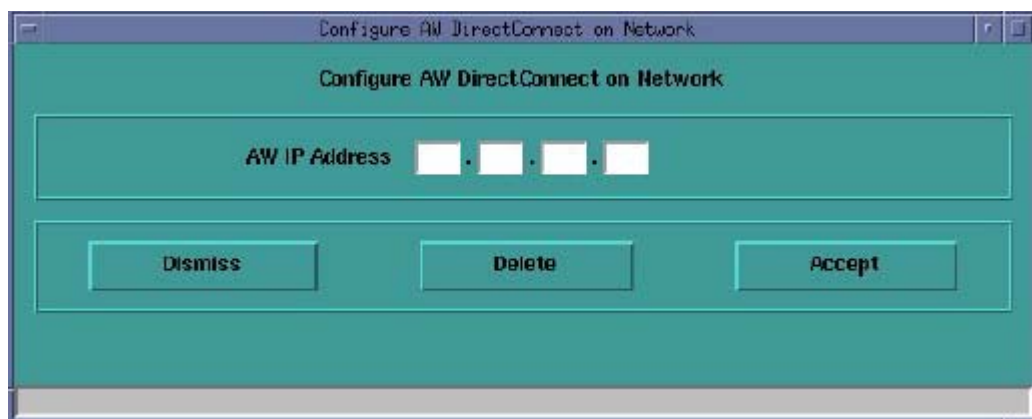
1.1.2 Record Product Network Filters (PNF) Information

- 1.) Select [Service] from the desktop.
- 2.) Select in sequence: Configuration -> Configure PNF.
- 3.) Record PNF information.



1.1.3 Record AW IP for Direct Information

- 1.) Select [Service] from the desktop.
- 2.) Select in sequence: Configuration -> Configure AW DirectConnect and record AW IP address.



- 3.) Select in sequence: Configuration -> Configure AW Server Client and record AW server INFO.



1.2 Save System State

Refer to the latest service methods (5457941-2EN) to understand the detailed Save State Procedure and other information saving procedure.

Note: If a Save State was just completed, it can be omitted here.

Note: When performing Save/Restore System State, make sure there is **ONLY** one USB storage device plugged in USB ports of both Console and Media Tower simultaneously, otherwise it may result in incorrect data storage.

- 1.) Insert the System State DVD-RAM media into the peripheral tower drive or USB media in any of the console's USB ports.
- 2.) Select [Service Desktop] -> [Utilities].
- 3.) Select [System State] for DVD-RAM media or [System State - USB] for USB media. The System State Save/Restore screen appears.
- 4.) Select [All] to select all the calcs, characterization, etc.
- 5.) Select [Save].
- 6.) If DVD-RAM or USB is ready, select [Yes].
- 7.) When completed select [Dismiss].
- 8.) Remove System State DVD-RAM media from the peripheral tower or USB media from USB port.

Section 2.0

NIO16 Console Upgrade

2.1 Old Console (Z800) Removal



NOTICE Make Sure to follow all Lockout/Tagout requirements while performing this procedure.

- 1.) Move the cradle all the way out of the gantry and lower to its lowest point.
- 2.) Shut down the system and power off the Operator Console power switch.
- 3.) Switch OFF the breaker in the Power Distribution Box (hospital supply).

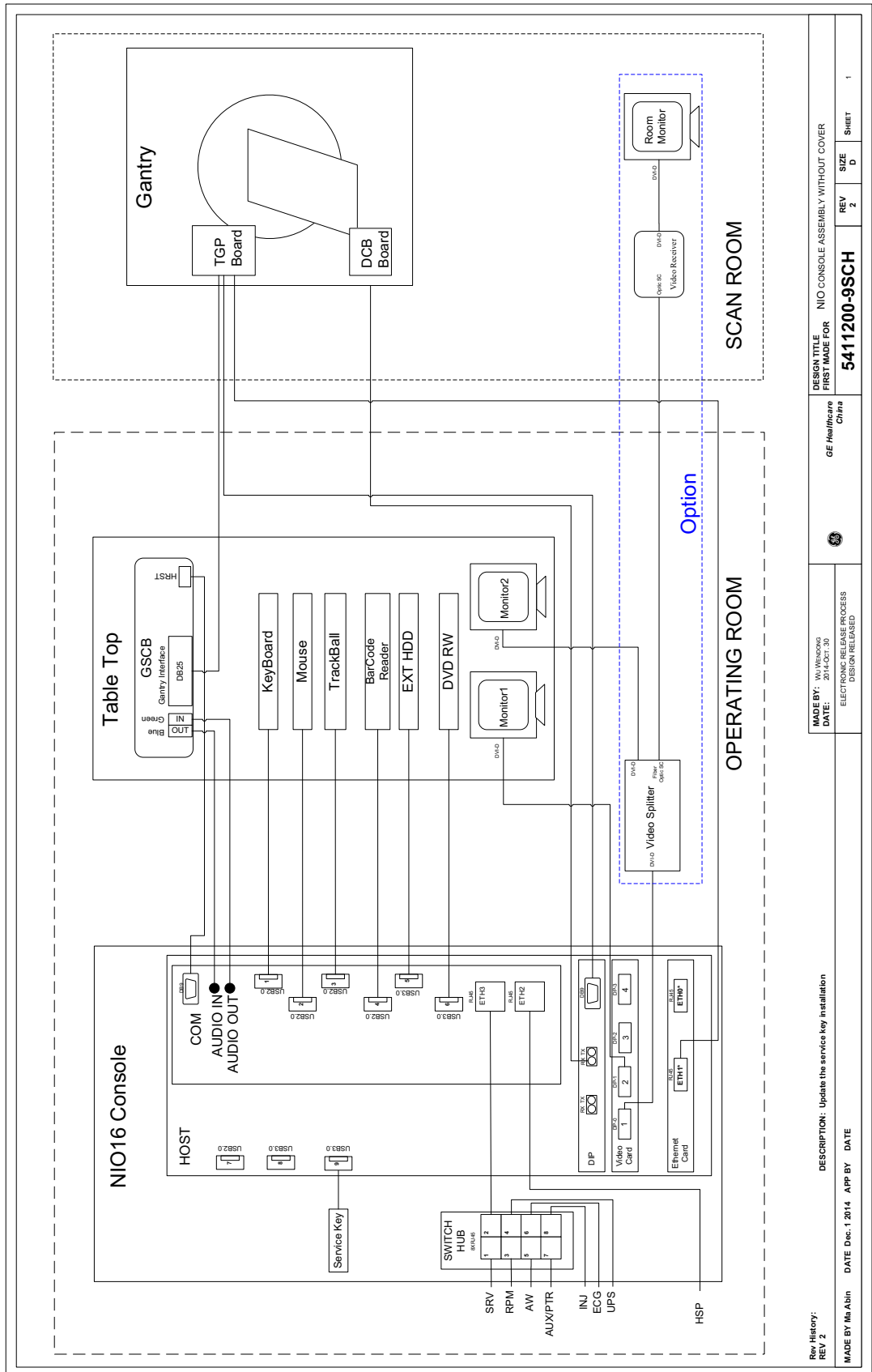
Note: If there is UPS, switch OFF the UPS output.

- 4.) Visually verify proper labeling of each cable and disconnect all console rear cables.
- 5.) Disconnect the cables between the old console and system (Gantry, PDU and local hospital network).
- 6.) Remove the old OC aside.

Table 2-1 System Interconnect Cables for Console

No.	Description	Long Cable	Short Cable
53	LVAC Power Cable - PDU to Operator Console	2343531	2343531-2
56	Ground, Raceway to Console	2371450-3	2371450-4
101	Signal Cable - Gantry to Console	5419981	5419981-2
102	Signal Cable (Ethernet) - Gantry to Console	2373436-2	2373436-3
103	Data Cable (Fiber Optic) - Gantry to Console	5432019	

Figure 2-2 NIO16 OC Interconnect (with Z820)



2.2.2 Unpack NIO16 Console with Z820 PC

Please read details about NIO16 installation procedure in Service Manuals.

- 1.) Unpack console packaging.
 - a.) Remove all items from the console.
 - b.) Remove all packaging and discard per local requirement.
 - c.) Place the step-board under the front edge of the skid and step on it to raise the front edge of the skid as in

Figure 2-3 Step-Board Used to Raise Front Edge of Skid



- d.) Remove the two front cushions from the bottom of the skid.

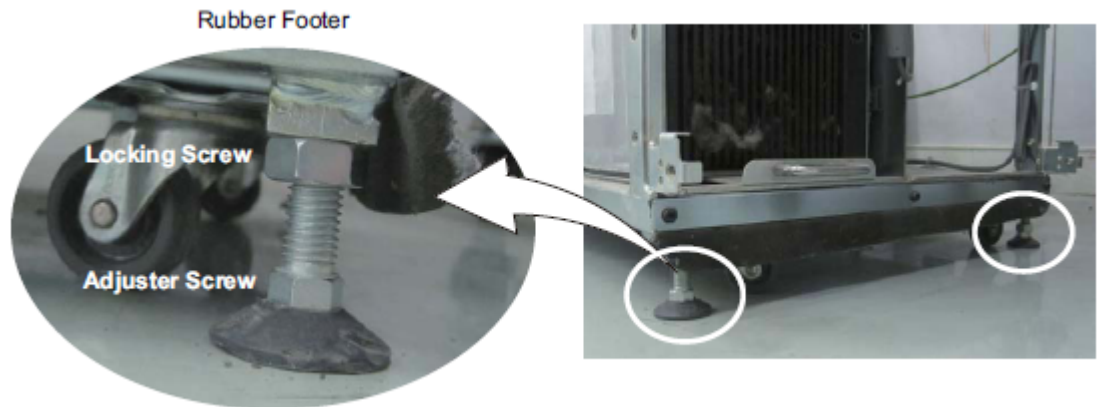
Figure 2-4 Cushion on Bottom of Skid



- e.) Lift up on the strap on the front of the step-board ([Figure 2-3](#)) to lower the skid. Remove the step-board.
- f.) Ensure the console stabilizers are in line with the notched portion at the front of the skid. This will allow enough clearance to smoothly roll the console down the ramps.

- 2.) Move and place the console to the operator room.
- 3.) Adjust two rubber footer to prevent console from sliding.

Figure 2-5 Rubber Footer Adjustment



- 4.) Remove the Host PC support bracket from left side of Z820.

Figure 2-6 Host PC Support Bracket



2.2.3 GPU Card Installation

Note: If customer does not purchase ASiR option, please ignore this section.
Please refer to ASiR Upgrade Installation Manual (5344359-1EN_r5 or later) to install GPU card (shipped with B77092CB) in Z820 Host Computer.

2.2.4 NIO16 Console Cable Connections

Figure 2-7 Z820 Host Computer Connections

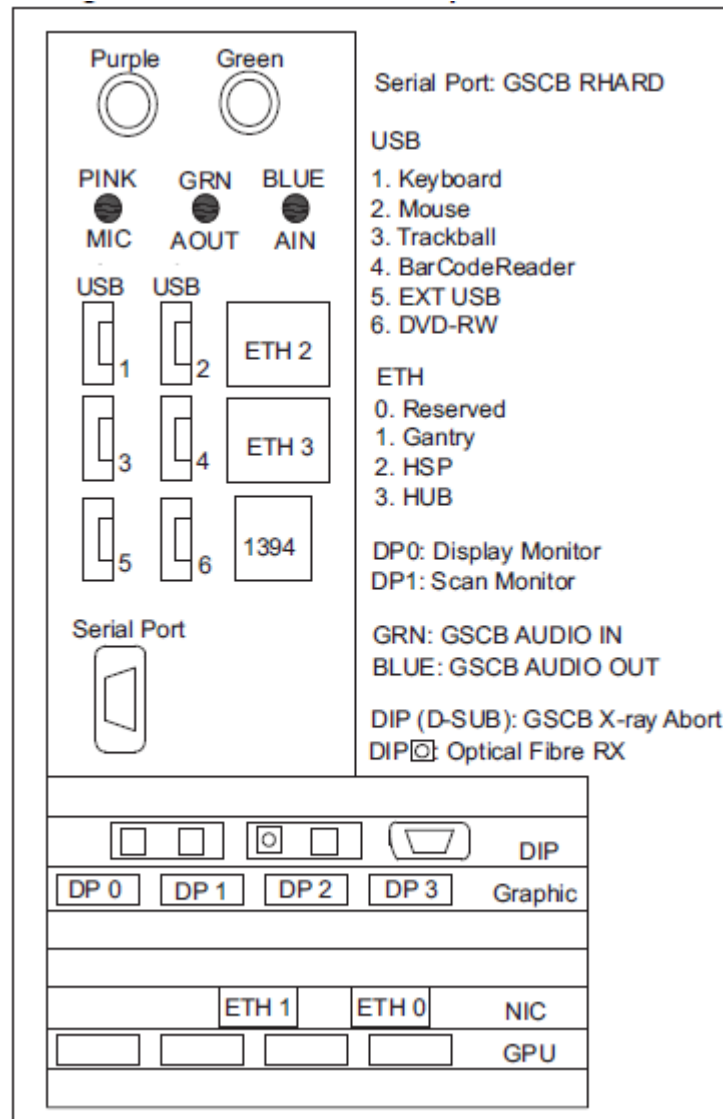
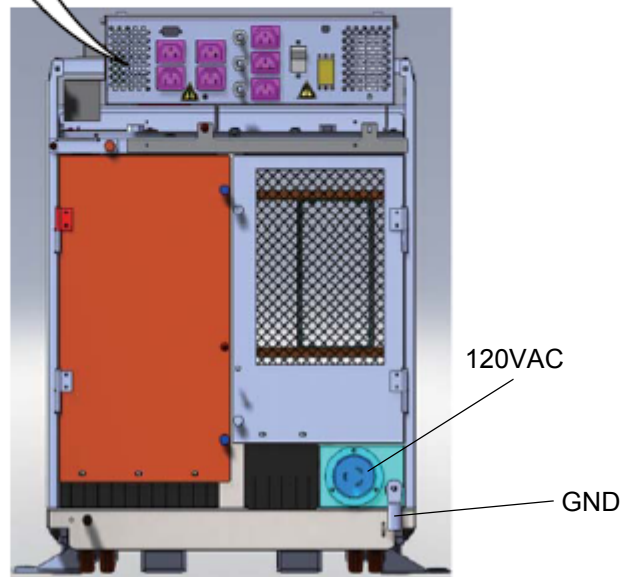
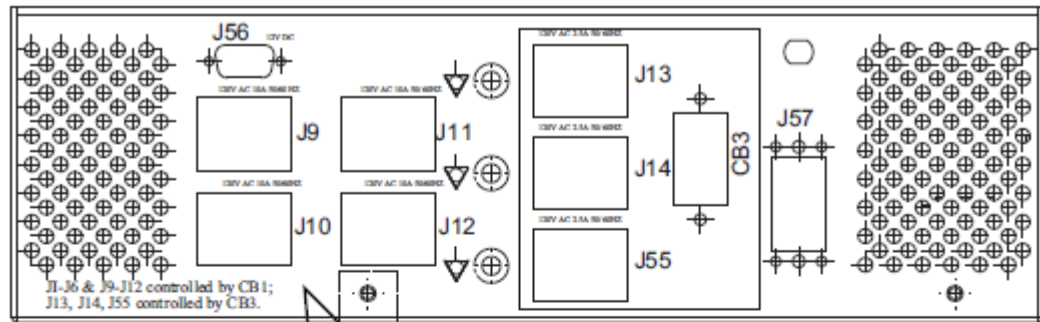


Figure 2-8 NIO16 Console AC Box Assignments



Number	Description
J9	Display Monitor Power Connection
J10	Scan Monitor Power Connection
J11	Peripheral Media Tower Power Connection
J12	In-Room Monitor Connection
J13	Injector Power Connection
J14	RPM Power Connection
J56	GSCB Power Connection

- 1.) Connect the Keyboard and Mouse cables to NIO16 Console Z820 Host Computer.
- 2.) Connect GSCB cable connectors to NIO16 Console AC Box and Z820 Host Computer according to [Figure 2-9](#) and [Table 2-2](#).

Figure 2-9 GSCB and Cable



Table 2-2 GSCB Cable Connectors

PN	Description	From	To
5404262	GSCB Cable	GSCB	DB9/M Black - AC Box J56 Voice Blue - Host Computer Audio In Voice Green - Host Computer Audio Out DB9/F Gray - Host Computer RS232 DB9/F Black - Host Computer DIP

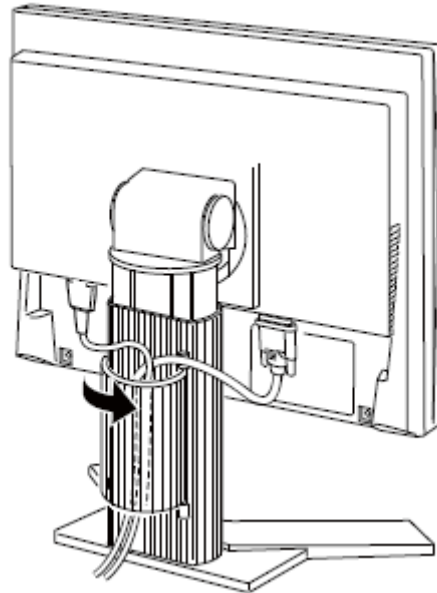
- 3.) Connect Media Tower cable connectors to NIO16 Console AC Box and Z820 Host Computer.
- 4.) Connect the LCD Monitors for Z820 Host Computer.
 - a.) Remove the old Video cable from the LCD Monitors.
 - b.) Connect the new Video cable (5408703, shipped with upgrade kit) between Z820 Host Computer and LCD Monitor.

Figure 2-10 Video Cable and Power Cable for LCD Monitor



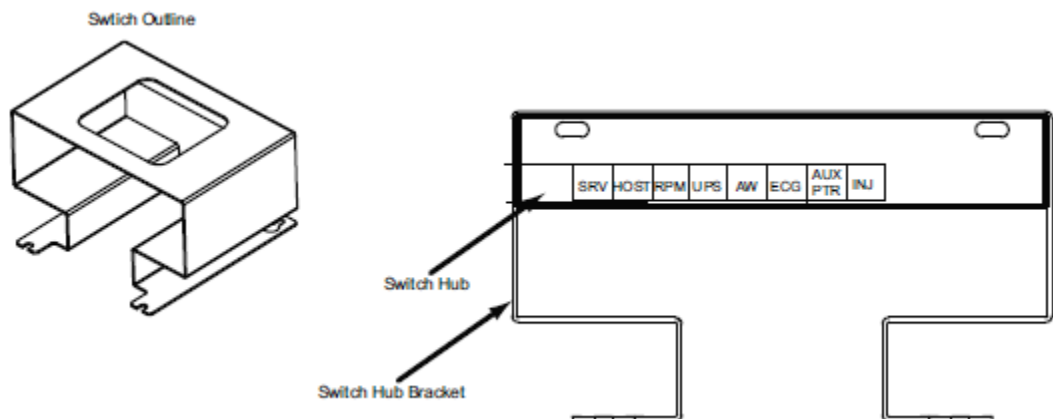
- c.) Connect the LCD Monitor power cables to NIO16 Console AC Box.
 - Scan Monitor
Video Cable: from Console Host DP1 to Monitor DVI
Power Cable: from Console AC Box J10 to Monitor
 - Image Monitor
Video Cable: from Console Host DP0 to Monitor DVI
Power Cable: from Console AC Box J9 to Monitor
- d.) Route LCD video cable and power cable.

Figure 2-11 Cable Routing and Keeper



- 5.) Plug cables into Switch Hub on console if request.
- 6.) Connect other cables to Z820 Host Computer according to [Figure 2-7](#).

Figure 2-12 Switch Hub Connections



- 7.) Connect the NIO16 Console power cable and Ground cable to the Console Power Panel.

2.2.5 Console Cover Installation

Refer to Console Cover Installation procedure in 5350500-2EN rev15 or later service manual.

Note: If customer purchases ASiR option, the Console Covers are black or else they are white.

Section 3.0 System Configuration

3.1 Restore System State

- 1.) Insert a previously saved system state DVD-RAM media into the peripheral tower drive or USB media in any of the console's USB ports.
- 2.) Wait until the media is ready.
- 3.) Select [Service] -> [Utilities].
- 4.) Select [System State] for DVD-RAM media or [System State - USB] for USB media. The System State Save/Restore screen appears.
- 5.) Select [All].
- 6.) Select [Restore]. The Restore System State box appears.
- 7.) Select [Yes]. A message at the end of the System State Log window should display: Restore System State Completed Successfully.

Note: If the site installed 6 options (refer to [Section 1.1.5](#)). Error message will be pop-up during this time, please click [ok] to continue. Option Name is different between CTT system and SUSE system.

- 8.) When completed, select [Cancel].

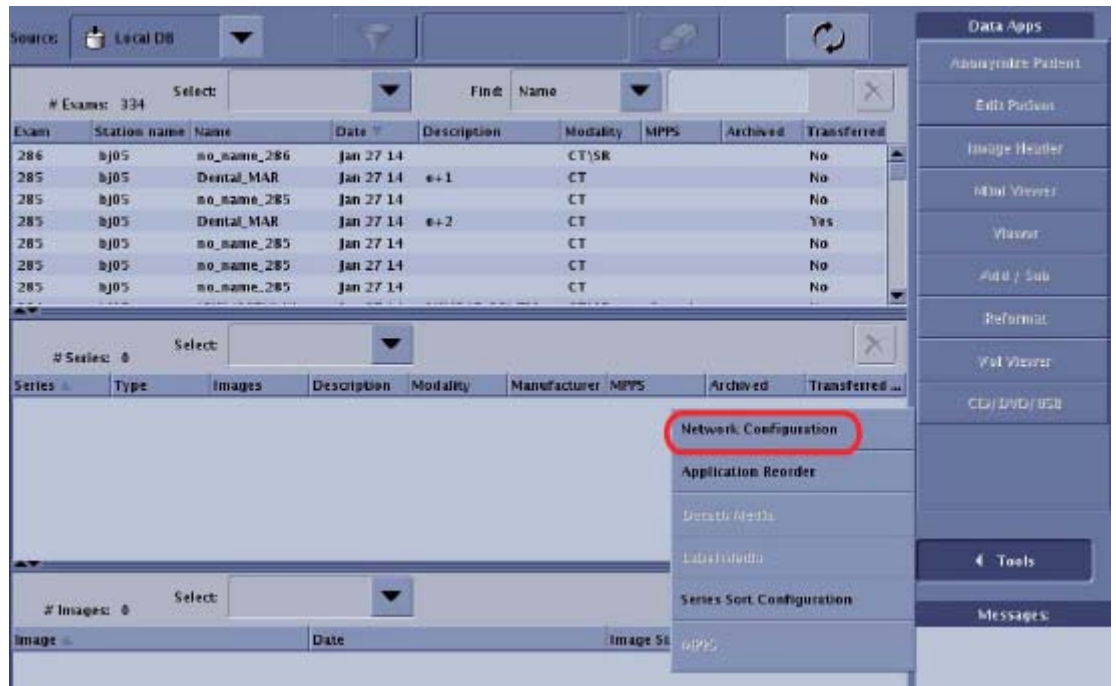
Note: If Does Check option is installed, Dose Audit tool starts up when Reconfig Info or Protocol is selected. That shows configuration and Protocol summary. Press [Quit] to continue.

- 9.) Select [Yes] when the Scan Hardware Reset pop-up appears.
- 10.) When completed, select [Dismiss].
- 11.) Remove System State media and place in a safe location.
- 12.) Verify Restore System State.

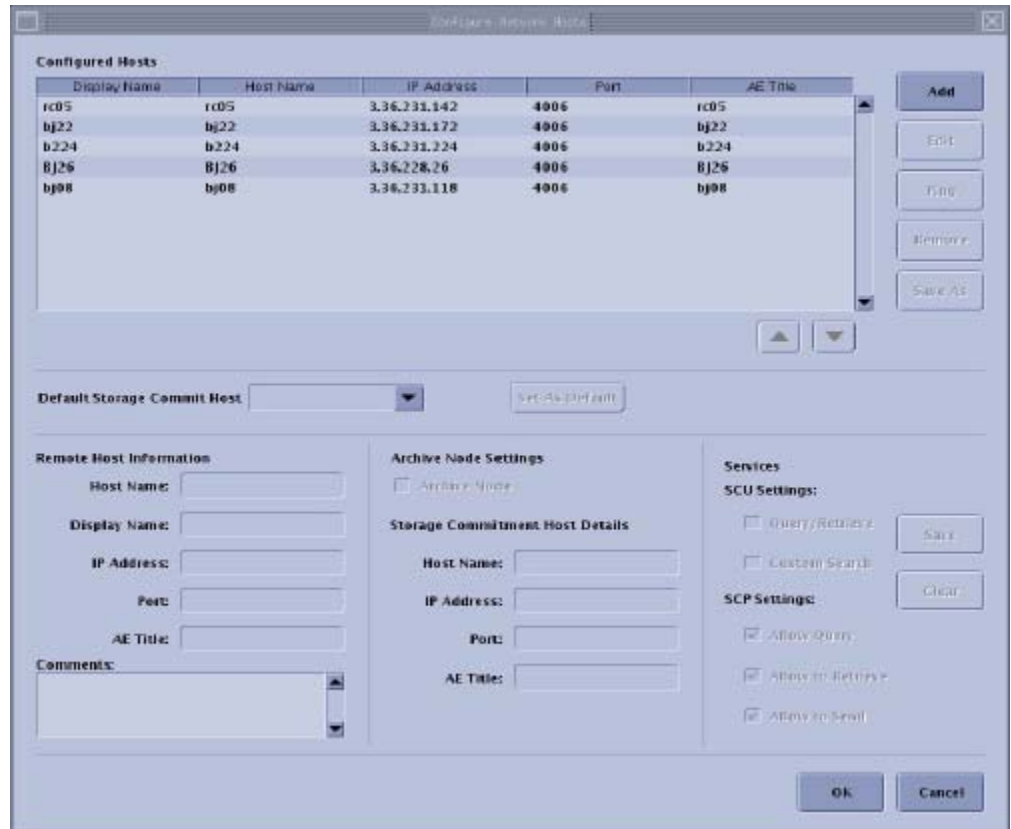
3.2 Configure System Information on Z820 (SUSE)

- 1.) Configure all remote network information.
 - a.) Select [ImageWorks] from the desktop.

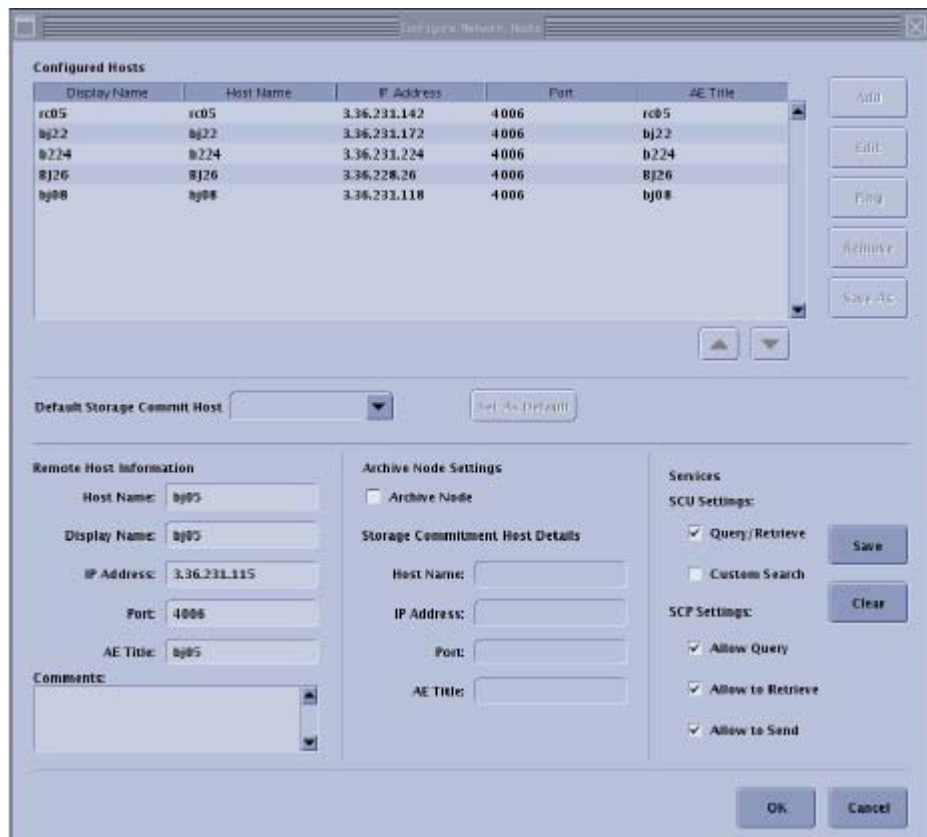
b.) Select in sequence: Tools -> Network Configuration.



c.) Select [Add].



d.) Input the Host Name then press [Enter].



- 2.) Configure PNF information, please refer to [Section 1.1.2](#).
- 3.) Configure AW IP for direct information, please refer to [Section 1.1.3](#).

Section 4.0 Flash Download

Note: The Flash Download takes anywhere from 5-30 minutes, depending on which subsystems require updates.

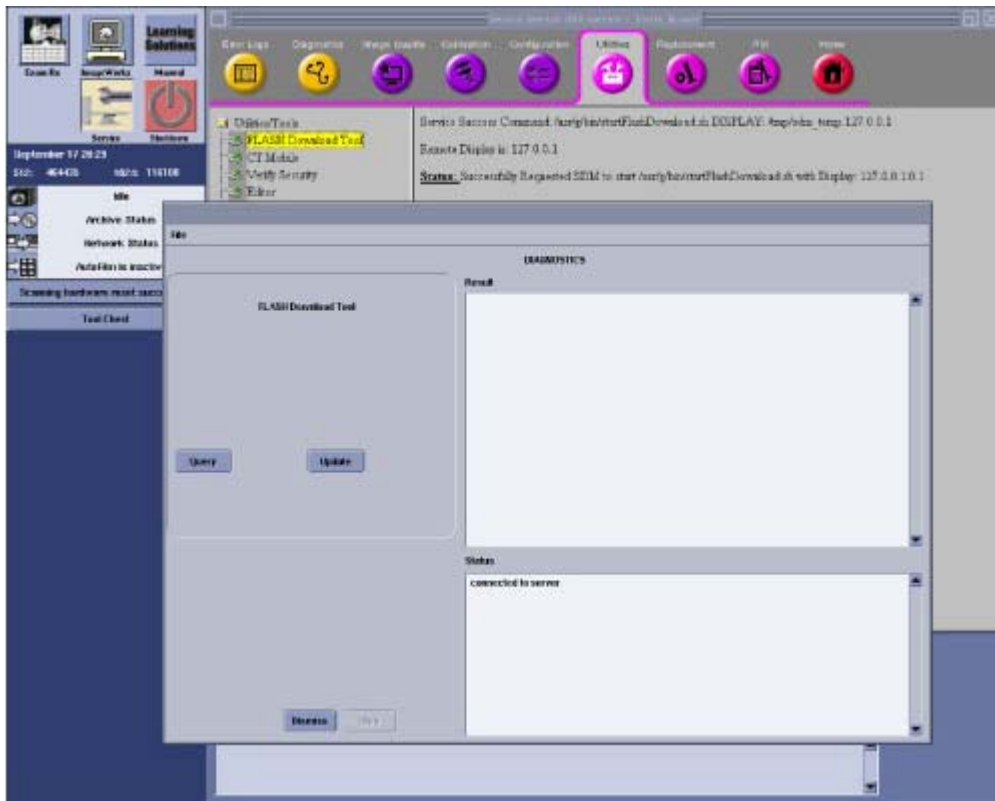
- 1.) Perform the Flash Download Utility found on the Common Service Desktop - Utilities Tab, select [Flash Download].

Figure 13 Common Service Desktop - Utilities Tab, Flash Download



- 2.) When the Flash Download Window opens, Select [Update].

Figure 14 Flash Download Window5



- 3.) Once the Gantry Hardware Flash Downloads successfully, select [Dismiss].
- 4.) Close the Common Service Desktop.

Section 5.0 ASiR Option Installation

Note: If customer does not purchase ASiR option, please ignore this section.

5.1 Check GPU Card

Please refer to ASiR Upgrade Installation Manual (5344359-1EN_r5 or later) to check GPU card.

5.2 Option Installation

- 1.) Un-install Neuro 3D Filter option if needed. (This option conflicts with ASiR Application.)
- 2.) Install ASiR option software (shipped with B77092CB) using Option Install menu.
- 3.) Confirm that system started up normally.
- 4.) Install the Recon Enhancement Option software (shipped with B77092CB) using Option Install menu.

Section 6.0 Finalization

- 1.) Perform *Quality Assurance Test* of Functional Checks on Service Methods (5457941-2EN), make sure all of them pass.
- 2.) Update GIB with the Product Locator Card information. Go to the following address to access the site: http://gib.gehealthcare.com/gib/gib_entry.jsp
- 3.) Insite Check out, refer to 5457941-2EN Service Methods CD.
- 4.) Save System State
 - a.) Insert the Save System State DVD into the Peripheral Tower DVD-RW drive.
 - b.) Select [SERVICE DESKTOP].
 - c.) If reloading software, select [UTILITIES].
 - d.) Select [SYSTEM STATE].
 - e.) Select [ALL] to select all the calcs, characterization, etc.
 - f.) Select [SAVE].
 - g.) If applicable, select [OK] when the following message appears: System State Media Status: Please insert a DVD into the drive and press Save again
 - h.) When completed select [DISMISS].
 - i.) Close the Service Desktop window in the upper left corner of the screen.

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