Dinamap Procare Auscultatory 400 Manual

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Dinamap Procare Auscultatory 400 Manual

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- **dinamap procare auscultatory 400 service manual, 1.0, dinamap procare auscultatory 400 service manual.**

Manual P urpose This manual supplie s tech nical inform ation for se rvice re prese ntative s and techni cal pers onnel s o they can m aintain the equi pment t o the as sembly level. Use it as a guide for mainte nance and elect rical r epairs con sider ed fiel d repaira ble. Wh ere n ecessary the man ual iden tifies addit ional so urces of relev ant inform ation and techn ical ass istan ce. See the ope rators m anual for th e instru ctions ne cessary to ope rate the equipm ent safe ly in a ccordance with it s func tion an d int ended use. Ordering Manuals A pap er copy of t his m anual wil l be prov ided upon requ est. Cont act y our local GE represe ntative an d reques t the part numbe r on the first page o f the manual. Safety Information The in format ion pre sented i n this s ection i s impo rtant fo r the sa fety of both the patient and ope rator. T his chapt er descr ibes ho w the te rms Dang er, War ning, Cautio n, Impo rtant, a nd Note are use d throug hout th e manual. In add ition, standar d equipm ent sym bols a re defined. R e v i s i o n Comment A Init ial Rele ase B Add E MC Complia nce T esting T ables C Upda te specif icatio ns, tests, FRU dra wings, FRU lists, forma t, and a dd erro r log feature infor mati on. D Update CE Mark Notifie d Body and equi pment s ymbols. This de vice is not int ended f or home use. Fe deral law restrict s this d evice to be sold b y or o n the or der of a physi cian. Contact GE for info rmation be fore conne cting any devices to th e equipm ent that are not recomm ended i n this man ual. Periodi cally, and whene ver the integ rity of the devi ce is in doubt, test al l functions. The u se of AC CESSORY e quipmen t not com plying with the equival ent saf ety require ments of this equip ment ma y lead to a re duced lev el of safety of the resu lting syst em. Co nside ratio n rela ting t o the c hoice shall i nclud e.http://detalinternational.com/userfiles/cagiva-mito-evo-2-workshop-manual.xml

If the ins tallation of th e equipmen t, in th e USA, wi ll use 240V rather t han 120V, the sou rce must be a cen tertappe d, 240V, singlephas e circuit. References to Persons, Places, and Institutions Refe rences to persons, places, and inst ituti ons used within th is manual are sol ely inten ded to fa cilitate u ser com prehensi on of th e ProCare M onitor M onitor's use and fun ction s. Extreme care h as been taken to use fict itious names a nd relat ed inform ation in th e exampl es an d illus tration s provi ded h erein. Any s imilar ity of this data to p erson s either living o r dead and to e ither cu rrent or previo usly existin g medic al ins titutions shou ld be re garde d as co incidenta l. H azard i s defin ed as a source of poten tia l injur y to a per son. DANGER in dicates a n immin ent haza rd whi ch, if not avoide d, will r esult in death or ser ious inj ury. WARNING indic ates a potent ial hazar d or unsafe prac tice which, if not avoided, could result in deat h or se rious i njury. NOTE pr ovides ap plica tion tips or other usef ul i nfor mation to assur e th at y ou ge t the most fr om your eq uipment. Product Specific Hazards Warnings. Do not use the ProCare Monit or in the presenc e of magn etic resonanc e ima ging MR I dev ice s. Ther e have be en re ports of sens ors cau sing pa tie nt burns when op erating in an M RI environ ment. Do not use the Monito r in th e presenc e of fla mmable an esthe tics. To help prevent unint ended current return paths with the use of high frequency HF su rgical equi pment, ensure tha t the H F surgical neutral electrode is proper ly conne cted. T o avoid pe rsonal injur y, do not perform any servicing unless qua lif ied to do so. W ARNIN G These Monit ors s hould n ot be used on pat ients who are connect ed to cardiopulmon ary bypas s machines.

If powe ring the Monito r from a n ext ernal po wer adap ter or conve rt er, use only G E Med ica l Sys te ms Informati on T echnol ogies appr ov ed pow er adapt ers an d con vert ers. The Mon itor do es not includ e any user r epl aceab le fus es. Refer servicing to qual if ied ser vice perso nnel. To reduce the r isk of electr ic shock, do not remove th e cover o r the b ack. Refer se rvi cing to a qual if ied ser vice perso n. If the accurac y of any dete rminati on read ing is questio nable, f ir st check the patient ' s vital signs by alt ernat e means and then check the ProCa re Monitor for prop er fun ctioning. The u se of acce ssorie s, trans ducers and cabl es othe r than t hose sp ecified may res ult in increa sed emissi ons or decreas ed imm unity pe rformance of the e quipmen t or syste m. Caut ions Do not use replac ement ba tter ies oth er than the type suppl ied with th e Monit or. Replace ment batt eries are available from GE Medi cal Syst ems Accesso rie s and Supplies. Ensure t hat the d ispl ay is func tioning proper ly before o perating the ProC are Monit or. Do no t immers e the Monitor in water. If th e Monito r is spla shed w ith w ater or become s wet, wi pe it i mmedia tely with a dry clo th. Do not gas st eril ize or aut oclave. Use of por table phones o r other r ad io frequency RF em itting equipme nt near the syst em may cause un expect ed or adverse operati on. The e quipmen t or sy stem should not be used ad jacen t to, o r stacke d with, other e quipmen t. If ad jac ent or s tacked us e is nec essary, the eq uipmen t or syst em sh ould be tes ted t o ver ify norm al operat ion in the conf ig uration in which it is b eing use d. The Pr oCar e Mon itor, when used wi th GE Me dical Syst ems In formati on Techn ologiesa pproved applie d parts and acces sories, is prote cted a gainst defi brilla tor dam age.

NOTE Th e electrom agnetic compati bil ity prof ile of the ProCare Mo nitor may change if access ories o ther th an those spec if ied for u se with the ProCare Monito r are used. Equipment Symbols The fo llowin g symbo ls are associa ted with the P roCare Monito r. Some o f the symbol s may n ot a ppear o n all eq uipment. NOTE Th e mode l of the Monit or det ermi nes w hich sym bols ap pear on it.Europea n auth orized represe ntative. Packagin g label depi cting the tr anspor tation an d stora ge atmosph eric pressure range of 500 to 1060 hPa. WASTE OF ELECTRICAL AND ELECTRONIC EQUIPMENT WEEE This symbo l ind icat es tha t the wa ste of elec trical a nd electronic equip ment mu st not be disposed as un sorted muni cipal w aste an d must b e collec ted s eparat ely. Please co ntact an authorize d representa tive of t he ma nufacturer for inf ormati on concern ing the decommi ssioni ng of your equipment. Service Requirements Foll ow the se rvi ce

req uire ments list ed belo w. Refer eq uipment ser vicin g to G E Med ical S yste ms Informat ion T ech nologie s auth orized service pers onnel only. Any una uthorized atte mpt to repair equ ipme nt under warranty voids that warrant y. It is th e use r ’ s resp onsibil it y to report the n eed for s er vice t o GE M edic al Systems Informat ion Technol ogies or to one of GE’ s autho rized agents. Failure o n the pa rt o f the resp onsible ind ividu al, hospi tal or institu tion us ing this equi pment to imple ment a sa tis factory ma intenan ce sch edul e may cause und ue eq uipment failure and possib le healt h hazards. Regu lar m ainte nan ce, irr esp ectiv e of us age, is esse nti al to en sure that the equipme nt will always be funct ional whe n requir ed. Equipment ID The fol lowing gr aphic ill ustrates the compo nents of th e monitor’s serial nu mber.The ProC are Monito r is int en ded to monit or one p atient a t a time in a cl ini cal setting. Federa l law U.S. A.

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restrict s this d evice t o sal e by or on the order of a phys ician. To ensure pati ent saf ety, use o nly pa rts a nd access ories m anufact ured or recommend ed by G E Med ical S yste ms Informat ion T echnolog ies. Parts and accessor ies used s hall meet the requ ir ement s of IEC 6060111. Dispos able dev ices are in te nded for single use onl y. They shou ld not be reu se d. Peri odica lly, and whe never the int egr ity of the moni tor is in doub t, te st all functions. Related Manuals Service Policy The wa rranty fo r this pro duct is en closed w ith the pr oduct in the shi pper carto n. All re pairs o n produ cts und er warra nty mus t be per forme d or ap proved by Product Service personn el. Una uthoriz ed re pairs wi ll void the warr anty. Onl y qualif ied ele ctron ics serv ice perso nnel sh ould re pair product s not cove red b y warranty. Service Contracts Extended warra nties can be purch ased on most p roducts. Conta ct your Sales Repre sentati ve for details and pri cing. Assistance If the produ ct fails to function pr operly, or if assistanc e, servic e or spare par ts are re quire d, con tact Custome r Suppo rt. Be fore con tact ing Cus tome r Suppor t, it is he lpful t o atte mpt to duplicat e the proble m and to check all acces sories to Manual Title 2009360001 DINAMAP ProC are Operati on Manual Prio r to c alling, please be prepa red t o prov ide.T o faci lita te prompt service in case s wher e the pr oduct ha s exte rnal cha ssis or case damag e, pl eas e advis e the Cu stom er Sup port repres ent ative when yo u cal l. The Cu stom er Sup port repres ent ative will r eco rd all ne ces sary i nform atio n and will p rovi de you with a Ret urn Me rchan dise A uthori zat ion Num ber R MA. Pr ior t o return ing any product f or rep air, yo u must have a RM A numb er. Con tact GE Medical System s I nformation Te chnologie s at 18005587044. Monday th rough Friday, 800 a.m. to 6 00 p.m. EST, excluding holi days.

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Packing In structions Follow these re commen ded pack ing instruc tions. Remove al l hoses, c ables, se nsors, and power cords from th e monit or before packin g. Pack onl y the acce ssorie s you are reque sted to retur n; place t hem in a separat e bag and in sert the bag and the product ins ide the shipping cart on. Use the ori ginal ship ping carto n and packi ng materia ls, if avai lable. If the orig inal shipp ing carton is not availab le. Place the product i n a plas tic bag a nd ti e or ta pe the b ag to prevent lo ose part icles o r mat erials f rom enter ing ope nings su ch as ho se por ts. Use a sturdy co rrugat ed cont ainer to shi p the product; tape secu rely to seal the cont ainer fo r shippi ng. Pack wit h 4 to 6 in.Insurance Insu ranc e is at th e cust omer s dis creti on. The shippe r mus t initi ate claims for damage to the product. Repair Parts Repair parts can be o rdered from G E Medica l Syste ms Informat ion Technol ogie s Via phone 18 005587044, or Via FAX 18004216 841 Exchang e replac ement as sembli es such a s Circui t Board Assemb lies al so are availab le; ask the Cus tomer Support represe ntative for d etails. Please allo w one worki ng day fo r con firmat ion of yo ur order. All or ders mu st inclu de the f ollow ing in formati on. Faci lit ys comple te name, address, a nd phone number. F AX num ber Y our pu rchase order n umber. Your GE Medi cal System s Infor mation Te chnolog ies account nu mber Disposal of Product Waste As yo u use th e Pr oCar e M onito r, you w ill acc umula te so lid was tes that re qui re proper disp osal or r ecycling.

These inclu de batte ries, p atient a pplied parts, a nd packa ging mate rial. Batteries CAUTION Do not incin erate batteries. The seal ed, recha rgeable b ackup bat tery cont ains lead an d can be recy cled. Th e recharge able memory b atter y is of t he Se aled Lead Acid form. D ischarge this battery prior to disp osal.

Pla ce the battery in pack aging wh ich elect rically isolat es its c onten ts. Do not pun cture or place th e batte ry in a trash compact or. Do not incinera te th e batter y or exp ose it to fire or high temp eratures. Dispo se in acco rda nce wi th regi onal body contro lled guide line. Ins pect reusab le applied parts for wea r, replace as necessar y, and d ispose of used product as medi cal waste in accord ance with region al body contro lled gu ideline. Packaging Material Retain o rigina l packag ing m aterials for f uture use in s toring or ship ping the Monitor and a ccessories. This reco mmenda tion incl udes cor rugated shippers and inse rts. Wheneve r possibl e recycle the pa ckaging of accessories and patient app lied parts. Monitor At th e end of its ser vice lif e, the product descr ibed in this ma nual, as well a s its access ories, must be dispo sed of in compli ance w ith the guideli nes regu lating the dispo sal of such produ cts. If you hav e questions co ncerning di sposal of the product, please contact GE Medical System s Information Technologies or its repr esen tat ives. Monit ors are avai lable wi th or wi thou t int egrat ed print ers. Indicato rs fo r externa l DC op eratio n from AC mai ns, bat tery o peration, and battery charg ing are at the fro nt of the unit. At the time o f publi cation, th e ava ilable fu nctioni ng param eters i ncluded t he follow ing.Product Configurations Each ProCare M onitor is suppli ed with an accessor y pack. The con tents o f the pack va ry accor ding to model. Unpack t he it ems care fully, and check them against the c hecklists enclosed within the acces sory boxe s. If an a ccessory is missin g or if an ite m is in a nonwo rking conditi on, con tact GE M edica l System s Info rmatio n Technolo gies Custo mer S ervi ce imme diat ely. It is re commen ded that all the packagi ng be r etain ed, in ca se the ProC are Monito r must be retu rned fo r servi ce in the future.

T he mos t recent entries are dis played fi rst. Pre ss and ho ld the button for 2 seco nds to clear a ll entries stored. Front Pane l 15. Si lence ico n when Silence button is pres sed aft er alarm sounds silence active, silence ico n bell ligh ts to indicat e that audibl e alarms hav e been silenced for 2 minutes. 16. Sys toli c wind ow 3di git red LED indi cates measu red s ysto lic BP in mmHg. 17. Dia stoli c win dow 3 digi t red LED i ndica tes mea sur ed di astoli c BP in mmHg. 18. Alarm vo lume indi cator light s to indicat e you are maki ng a change to the alarm v olume. 19. Pulse vol ume light s to indicate you are making a chan ge to the pulse volume. Tran sportab le For cont inuous operation. Not sui table f or use in the p resence of flamma ble anes thetic s. Not for us e in the p resence of a n oxygenenri ched atm osphere o xygen te nt. T ype BF applied parts. IPX1, deg ree of prot ec tion ag ainst in gress of water. Software is developed in accordance wi th IEC 606011 4. This equipm ent is s uitable for co nnectio n to pub lic main s via po wer adapt ors as def ined in C ISPR 11. The S pO 2 parame ter c onforms to ISO 991920 05. Defibr illatio n protect ed. Whe n used wi th th e recomme nded acces sories, the Monito r is pr otected against the effects of defi brilla tor dis charge. If monito ring i s disrup ted by t he defi brillat ion, t he Moni tor will recover. This product co nforms w ith th e essent ial req uirements of the Medica l Dev ice Dir ectiv e. Acce sso ries with out th e CE mar k ar e not guar anteed to me et the E ssen tial Requi rem ent s of the Me dical Device D irective. 0459 ProCare 100 capable of monitori ng Blood Pressure BP and Puls e. ProCare 200 capable of monitori ng Blood Pressure BP, Pulse, an d T emp erature. ProCare 300 Nellcor capa ble of monitori ng Blood Pressure BP, Pul se and SP O2 Nel lcor t echnolo gy. ProCare 300 Masimo capable of monit oring Blood Pressure BP, Pulse and SPO2 Masim o technol ogy.

ProCare 400 N ellcor c apable o f monit oring B lood Pressure B P, Puls e, SP O2 Nellco r techn ology , and Temperatu re. ProCare 400 Masimo capabl e of monitoring Bl ood Pressure BP, Pulse, SPO2 Masim o techn ology, and Tem pera ture The mo del of your mo nitor d etermi nes which parame ters a re in yo ur mo nitor. Using the ProCa re Monitor, a clinician can vi ew, print and recal

l data that is derived from each par ameter. The Moni tor is also ca pable of alerti ng the clinic ian to change s in the patient s condi tion. All of the ma in ope rations of the ProCare Monitor are eas ytouse and only a button touch aw ay. Plea se revie w the fa ctory defau lt settin gs and, where appli cable, ent er sett ings appr opriate for your us e. Overall Principl es of Op eration The ProCare Monitor i s a por table u nit th at recei ves pow er from an inter nal recharge able Le ad Acid Battery. T he powe r regula tors p rovide conditi oned powe r from the L ead Acid Batter y. The e xtern al DC so urce is used only t o charge the Le ad Acid Batte ry. Once the ProC are Mo nitor i s energi zed, a self tes t is per forme d. The se lf test au tomat ica lly tes ts the ma in func tio ns of th e ProCare Monitor. Fail ure of th e selft est will set th e ProCar e Moni tor into a fail saf e mode wi th an au dio a larm. Unde r normal opera ting condi tions, the ProCare Mo nitor is re ady to record the patient vital signs using th ree exte rnal attachme nts the temper ature pr obe, SPO2 se nsor, a nd cuff. Interfac e with a central station or ot her devi ce is accompl ished th rough t he host communica tion po rt on t he back of the ProCare Monito r. NOTES Prior t o each use, insp ect th e power su pply cord t o ens ure proper connecti on and cond ition. Be sur e to unplug the Mo nitor b efor e transport. The analog sign als ar e rout ed to th e SpO2 PWA Nel lco r or Masi mo. The a nalog sig nals are analyz ed on t he SpO2 PW A.

The results are dig itized an d sent to the Ma in Board via opto couple rs. The cou plers prov ide patie nt isolat ion as well as se rial data inter face. A reset signal to the SpO2 PWA is also p rovide d so th at power u p seq uencing i s cor rect. If th e SpO2 cir cuit q uits commu nica tin g to the Ma in Bo ard, the M ain Board wil l attempt to res et the SpO2 PWA. Cuff Blood Pressure BP and Pulse The B P param eter in the Pr oCare Moni tor is available with two types of DINAM AP BP technolo gies on e calibr ated to intr aarteri al pressur e and one cali brated to the au scul tato ry me thod sp ecif ic tec hnolo gies are a vail able in sel ect mar kets. All user int erfac e option s, instruct ions for use, and alarms wil l be the same fo r bot h techno lo gies. Th e BP pa ramet er is includ ed in al l mode ls. Blood p res sure is monito red nonin vasively in the ProCare Mo nitor by oscillom etric met hod. NOTE Fo r neonat al pop ulation s, the ref erence is a lways the intra art erial pressure mon itoring metho d. When the cuf f and hose are att ached to the ProCare Mo nitor and a NonI nvasive Bloo d Pres sure NI BP determ inati on is in itiat ed, the pum p inflat es the cuff. Pres sur e tra nsduc ers PT1 and P T2 mo nito r pre ssu re inf ormat ion. The pn eumati c manifo ld has one v alve, w hich is used to defl ate the cuff. Va lve c ontrol i s throu gh the Mai n Board. The results are th en disp layed o n the U I Board and sen t to the prin ter if specifi ed. Th e second ary proces sor mo nitors pr essure i nformati on from PT2. If an over inflation conditio n occurs, the OV ERPRESSURE sig nal is rou ted to the PVM to rele ase the air pre ssu re. T he Main Board al so ge nerat es an alarm conditi on with th e spe aker soun ding an d error c ode me ssage o n the UI Board.

Princ iples of Noninv asive B lood Pre ssure Determi nati on The os cillom etric me thod of determi ning NIB P is acco mplishe d by a s ensitiv e transduc er, wh ich meas ures cuff pressur e and mi nute pre ssure o scillatio ns within t he cuff. A fter i nflatin g the cu ff, th e Monito r begins to def late it and mea sures syst olic press ure, me an arteria l pressur e, and diastoli c pressu re. Wh en the diasto lic pres sure has been dete rmined, the Mon itor finish es defl ati ng the cu ff and up dat es the s creen. The Mo nitor d eflates t he cuff o ne step each tim e it de tects two pulsat ions of relat ive ly equa l amp litud e. Th e time betwe en defl atio n steps depe nds on the frequen cy of these ma tched pulse s pulse rat e of the patie nt. Howev er, if the NIBP Det ermination Sequence At each step the micro processor stores cuff p ressure, th e matc hed pul se amplit ude, and the tim e betwe en success ive pul ses. Th e steppe d defla tion an d match ed pulse detectio n conti nues unti l diasto lic pre ssure is determi ned or t otal cuff pr essure fa lls b elow 7 mm Hg. Th e Moni tor then deflates the cuff to zero detec ted pres sure, ana lyzes t he stor ed da ta, and updates the scree n. The op erating cycle is compos ed of four p arts inf lation time, d eflatio n time, evaluat ion tim e, and wait ti me. Wai t time, whi ch varies from m ode to mode, is affect ed by th e cycle t ime a uto mo de or operat or inte rvent ion man ual mod e. The fi gure sho ws the b asic op erating cycle. NIBP Ope rati

ng Cycl e Th e maxi mum pressu re allow ed in systolic search is limit ed by t he norm al range for cu ff pressu res. In any op erating mo de, if a patient s systol ic pressu re exceeds the inflat ion pre ssure, the pa rameter will be gin a no rmal def lation sequence, detect the ab sence of a sy stolic v alue, sto p defla tion, rein flate to a cuff press ure highe r than the init ial inf lation pr essur e, and r esume t he norm al defl ation sequence.

In any o peratin g mode, if a patient s systo lic pres sure exce eds t he infl ation pressur e of th e moni tor, the M onito r will beg in norm al def lation sequence, detec t the ab sence o f a sy stolic value, stop deflat ion, r einflat e to a higher than initial inflation pressure 290 m mHg max imum, an d resume n ormal defl ation sequ ence. This ad diti onal in flat ion wil l occu r only on ce pe r dete rminat ion. The ref erenc e blood pr essures m ay be obtaine d by invas ive press ure monitor ing at the centra l aortic reg ion or at the rad ial sites. The re feren ce bl ood pres sure s may als o be obt ained by non invas ive method s like a uscult atory me thod using c uff and stetho scope. For neon atal popul ations, the refere nce is th e invasi ve b lood pres sure obtaine d at the c entra l aort ic regi on.Th e heatin g functi on is co ntroll ed by the Main Board. The T urbo T emp pr obe al so con tains a thermi stor t hat in dicates the tempera ture. W hen the probe i s attach ed to t he tempe rature c onnecto r and patie nt, the s ignal gener ated by th e therm isto r is ro ute d to the Ma in Bo ard. The Main B oard conver ts the ther mistor sign al alon g wit h stat us infor mati on i.e., ORAL or RECTA L prob e indic ators to a DIGI TAL si gna l. The Ma in Bo ard the n process es th e DIGITA L sign al and d isplays the p atient tempera ture on the UI Board and prin ter in Celsiu s or Fahr enhei t. Host Communication Port The Ho st Comm Port is used to interf ace the ProCare Monitor with ot her elec tronic devi ces a ce ntral nurs es sta tion or r emote alarm de vice. Sign als can be sent to the ProCare Monito r to ini tiate bl ood pr essure d etermi nations and other f unctio ns. Patie nt data can also be ret rieved t hrough this po rt. For furth er inform ation, r eference the DINA MAP Host C ommuni cation manual. Functional Description The fo llowin g paragr aphs provide t he fu nctional interfac e rel ationsh ip. T hese ass emblies a re.

Main Board P WA User In te rface UI Board P W A. SP O 2 P WA op tional. Prin ter optio nal . Opti cal S witc h opt iona l Main Board PWA The ProCar e Main Boar d is based on the Moto rola MMC210 7 integrate d microp rocessor. This microp rocessor is the primary processo r for the ProCa re Monit or. It servic es and contro ls the Patient Parameter Inter face PPI dev ices, prin ter, UI Board, Real Time Clock, audio c ircui t, an d hos t commu nicat ion. The sec ondar y pro cessor contro ls the wa tchdog, pneuma tic sa fety in terlock, timing check, primary process or reset, and pow er supply contro l. The sec ondary p rocesso r is powe red at all times. Indep endent sof tware i n the primary and sec ondary processo r peri odicall y commun icate whe n the software system s are o perating properly. Wh en eithe r system stops p rocessi ng or d etects a n error, it stops commu nicatin g with the other. Either s ystem, upon de tecting a failu re, can a ssert a safe st ate he rein called FAILSAFE of th e hardware. Alarm t one sound ing from spe aker. Pneu matic F AILSAF E def late the cu ff, pump o ff . Normal communicati ons int erface d isabl ed. Remot e alar m control inactive. The FAILSAF E condi tion wi ll term inate au tomatical ly aft er 10 minut es to p reserve battery power. All regul ated DC powe r, isolat ed and non isolate d is generate d on the Main Board from B attery supply. The ext ernal DC input is used to char ge the b atter y via chargi ng circuitry on the Main Board. User Interface UI Bo ard PWA The UI Board i s used a s a mes sage center. I t displ ays pati ent vit al signs, alarm s status, monit or setup, limi t violati on, BP cycle and the tim e the d ata was receive d. The primar y proces sor on the Main Board cont rols th e UI Boa rd. Whe n the p rimary pr ocess or reads t he pa rameter signals, it de codes th e signal s and routes the display inf ormat ion to the UI Boar d.

The UI assembly also provi des hard key swit ches for the Pro Care Mai n Board. SPO 2 PWA The ProCar e Monitor can be co nfigure d for use with eithe r a Nellcor or Masi mo SPO2 PWA. The SPO2 PWA pro vides continuous reading s of oxy gen satu ration and p ulse rat e. Additi onal ci

rcuitry on the M ain Bo ard pro vides p ower, d ata commun ication s, and iso lation be tween SPO2 PWA and prim ary pro cessor. Patient data rece ived from the finge r sensor is filt ered, am plified, and analyzed on the SPO2 PWA. The inf ormatio n is sen t to th e Main Board v ia the opt ically coupled electri cally iso lated se rial conne ction. The pri mary pr ocessor receive s the d ata and routes it to t he UI bo ard for display. The d ata is a lso sen t to th e printe r if s pecifi ed The printer has a b uiltin s ensor to monit or the printer paper p resence. When t he printer is out of pap er, it sends a PAPER OUT signal to the p rimary process or. Du ring norm al operat ion the PVM is c ontrolled by the primar y proc essor. If a fails afe mo de or overpr essure co nditio n occurs, the se condary proc essor pro vides t he approp riate co ntrol s ignals to insure a safe condition, where the cuff vents to ambient atmosphe re pr essure. Optical Switch The op tical switch i ndicates whether the t emperat ure probe is in serted i n the probe h older or not. The Ma in Boa rd power s the switch. Battery Charging The Mo nitor c harges t he Lead Acid bat tery whe never t he AC po wer sup ply is i n use. Th e Monit or auto matica lly sen ses if the batt ery need s recharg ing. NOTE Be fore the ProCare Monit or is used fo r the f irst time, the batter y shou ld be ch arge d in the Moni tor for at leas t 8 hour s. Wit h exte rnal DC powe r conn ected, the gr een CHARGING indicator will ligh t to indicate that the bat tery is charging. When the M onitor i s oper ating o n batt ery po wer and the BATT ERY LOW alar m is not active, the BATTERY indica tor is back lit gre en.