Title : Computer Assembly Operation Manual	Doc. No.	PD-W-01
	Rev.	A
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Computer Assembly Operation Manual

1.0 Purpose

To outline the procedure in assembly of personal & server computer. It is a guideline to help operator work in proper way follows by quality and productivity of product.

2.0 Scope

This scope to cover assembly, testing, inspection & packaging of personal & server computer of   Computer (Thailand) Co., Ltd.

3.0 Equipment/ tools/ Materials/ Usage

3.1 Assembly work station table with shelf (210*90*80 cm).

3.2 Test work station table with shelf (210*60*80 cm).

3.3 QC work station table with shelf (210*90*80 cm).

3.4 Material table used in work station (150*60*80 cm).

3.5 Electrical screwdriver

3.6 Run-In cart (131*65*173cm).

3.7 Label printer (for carton & spec/ barcode s/n printing).

3.8 CodeSoft Software installed on PC for label printing.

3.9 FDD copy machine (12 targets)

3.10 HDD copy machine (11 targets + 1 master).

3.11 Semi-auto carton sealing machine

3.12 Standard VGA Monitor

3.13 Standard power cord

3.14 Standard keyboard

Approved by		Prepared by	John P.

3.15 Metal holder for K/B

3.16 Standard mouse

3.17 COM1 terminator

3.18 COM2 terminator

3.19 Parallel port terminator

3.20 Rack for bulk purchasing materials

3.21 Pallet

3.22 Non-ESD plastic material box

3.23 ESD tote box

3.24 ESD cloth

3.25 ESD table mat

3.26 ESD wrist strap

3.27 ESD checker

3.28 ESD Smock

3.29 Cable tie

3.30 Scissors

3.31 Cutter knife

3.32 Sealing tape

3.33 Scotch tape

3.34 Carton label

3.35 Warranty label

3.36 Stickers - Window, Intel

3.37 Acc/rej stickers.

3.38 Warranty card

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3.39 Assembly record forms

3.40 Cleaning cloths

3.41 Cleaning Detergent

3.42 3.5" Diskette

3.43 Speakers

3.44 Multimeter

3.45 Screwdriver

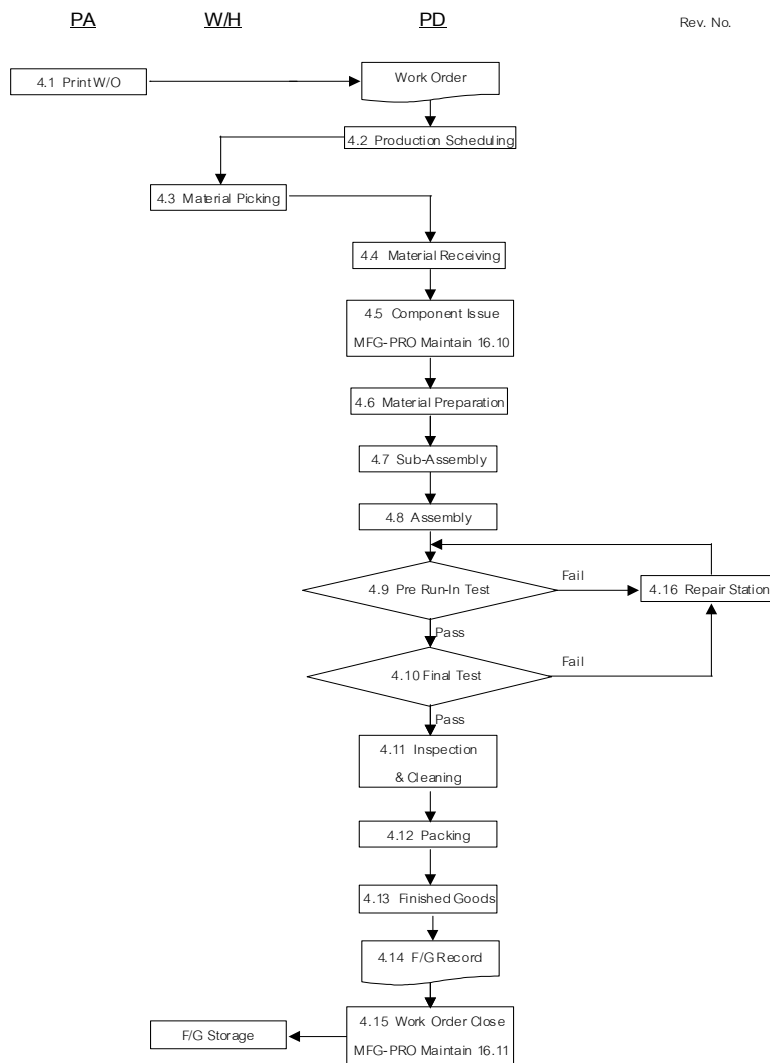3.46 Pliers

3.47 screws

3.48 Marker pen

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4.0 Procedure

Doc. No. Flow 1 (Computer Assembly Operation Flow)

Issued Date : 10/10/00

Doc. No. : Flow 1

Rev. No. : A

PA	W/H	PD

- 4.1 Print W/O → Work Order
- 4.2 Production Scheduling
- 4.3 Material Picking
- 4.4 Material Receiving
- 4.5 Component Issue MFG-PRO Maintain 16.10
- 4.6 Material Preparation
- 4.7 Sub-Assembly
- 4.8 Assembly
- 4.9 Pre Run-In Test — Fail → 4.16 Repair Station
- Pass
- 4.10 Final Test — Fail → 4.16 Repair Station
- Pass
- 4.11 Inspection & Cleaning
- 4.12 Packing
- 4.13 Finished Goods
- 4.14 F/G Record
- 4.15 Work Order Close MFG-PRO Maintain 16.11 → F/G Storage

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4.1 Print W/O

4.1.1 PA prints work order out at production printer names PRODPRN1 (a work order has 3 copies).

4.1.2 Assistant Production Manager to review work order and ensure the w/o correct.

Sample of work order print out

woworl.p v01.01   16.6 Work Order Release/ Print   Date : 12/6/2000

Page : 1   Acer Computer Co., Ltd.   Time : 8:42:32

WORK ORDER PICKLIST

Work Order   : 30001698   Issue Date   :   12/4/2000

ID   : 40037804   Release Date   :   12/4/2000

Item Number : AT.39J01.020XT   Rev :   Work Order Due Date: 12/7/2000

       Power Sx C700, 64M, 20G, 52X, 56K (Askey), W98   P-L   :

Remarks   :   Sales/Job   :   BTS

Qty Order   : 30.0   Deliver To   :

Item Number	Site	Bin No.	Req-Qty	UM	Loc	Issued	Receiver
01.ICLON.70C	1000		30	PC	1220	(0)	
CPU C700 (128KB) FC-PGA							
40.00060.081	1000		30	PC	1220	(0)	
LABEL Celeron Intel (Housing)							

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40.000B5.001	1000	30	PC	1220	(0)	
STICKER WIN98/NT LOGO (SMALL) FOR HOUSING						
40.00040.031	1000	30	PC	1220	(0)	
LABEL Celeron Intel (Carton)						
45.00050.001	1000	30	PC	1220	(0)	
COA LABEL FOR WIN98SERCD						
45.09551.052	1000	30	PC	1220	(0)	
FAX MODEM 56K (S58M) For Veriton & APSx						
56.02B34.121	1000	30	PC	1220	(0)	
HDD 20G ATA-100 SEAGATE ST320413A U5						
58.01522.E32	1000	30	PC	1220	(0)	
SLCD ACERPOWER SX						
58.02222.007	1000	30	PC	1220	(0)	
WIN98 SE OS-Locked CDKITw/I manual Thai						
5T.14528.001	1000	30	PC	1220	(0)	
Telephone Cord						

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5T.14528.001	1000	30	PC	1220	(0)
Telephone Cord					

5T.14529.001	1000	60	PC	1220	(0)
CORD FOR DESKTOP 110V					

5T.49067.001	1000	30	PC	1220	(0)
WARRANTY CARD ACERPUT IN ALL BOX					

5T.85227.001	1000	30	PC	1220	(0)
CABLE 40 PIN FOR HDD					

71.63350.114	1000	30	PC	1220	(0)
MEM 64MB PC 133 INFINEONAPACER					

90.00028.632	1000	30	PC	1220	(0)
HSINK SOCKET370/SOCKET7w/oTDM 3PIN FOR APSx, VT					

90.35G26.001	1000	30	PC	1220	(0)
MOUSE Logitech 2 botton/wheel 48A Ind.pack					

91.39D37.207	1000	30	PC	1220	(0)
CD-ROM 52 AOPEN, Acer color Ind.pack CD-952E/TKU					

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91.39J01.Z01	1000	30	PC	1220	(0)

Power Sx S57M, H61, Sound, VGA, LAN, SIS630E, PC133

91.62C07.043	1000	30	PC	1220	(0)

K/B 6511-CX43, Thai 104key w/palmrest, Gift pack

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4.2 Production Schedule

4.2.1 Assistant Production Manager to review work order for priority and then schedule for production.

4.2.2 Assistant Production Manager gives work order to sub-assy staff to record work order number, quantity, model, date, time on white board (see attached Doc. No. PD-F-01). Then give work order to warehouse staffs for picking materials.

Doc. No. PD-F-01 (Work Order Tracking and Status Update)

Issue date : 10/10/00
Doc. No. : PD-F-01
Rev. : A

Doc. No. PD-F-01 Work Order Tracking and Status Update

Item	Date	Time	W/O	Customer	Model	Qty	Mat'l Pick	Sub-Assy	Assy	Pre- Run-In	Final Test	QC Ins	Pack	F/G	Remark
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															

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4.3 Material Picking

4.3.1 Warehouse staffs to pick materials as work order states and deliver materials to production line and put at material preparation area.

4.4 Material Receiving

4.4.1 Sub-assy staff to check materials as work order states, count quantity, inspect component item number. Make sure to have no materials damage before signing work order material receipt.

4.4.2 Sub-assy staff keeps the 2nd copy of work order for production & QC staffs reference, gives the 1st copy of work order to warehouse staff for reference and return the original work order to Assistant Production Manager for component issue (MFG-Pro Maintain 16.10).

4.5 Component Issue (MFG-Pro Maintain 16.10)

4.5.1 Assistant Production Manager to perform MFG-PRO.

4.5.2 Put the user ID & Password then enter.

4.5.3 MFG-Pro system shows the main Mann as below.

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Main Menu   12/04/00

DISTRIBUTION	MANUFACTURING	FINANCIAL
1. Items/Sites	13. Product Structures	25. General Ledger
2. Addresses/Taxes	14	26. Multiple Currency
3. Inventory Control	15	27. Accounts Receivable
4. Physical Inventory	16. Work Orders	28. Accounts Payable
5. Purchasing	17	29
6	18	30
7. Sales Orders/Invoice	19	31
8. Configured Products	20	32
9. Sales Analysis	21. New Sales Forecast	33
10	22	34
11	23	35
12	24. Key Component	36. Manager Functions

4.5.4 Put 16.10 (MFG-Pro Maintain for work order component issue) then enter.

wowois.p h   16.10 Work Order Component Issue   12/04/00

Work Order:	ID:	T#:	Effdate: 12/04/00
Item Number:	Status:		Issue Alloc: no
			Issue Picked: yes

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4.5.5 Put work order number (example : 30001697) then enter.

```
   wowois.p h          16.10 Work Order Component Issue          12/04/00
  ┌──────────────────────────────────────────────────────────────────┐
  │ Work Order : 30001697       ID: 40037797  T#:      Effdate: 12/04/00 │
  │                                                                    │
  │ Item Number: AT.38H01.519XE     Status: R        Issue Alloc: no   │
  │                                                                    │
  │     Veriton5100 C600,64M,52X                Issue Picked: yes      │
  │                                                                    │
  │                                                                    │
  │ Item Number      Qty Open  Qty Alloc  Qty Picked  Qty to Iss   Qty B/C │
  │                                                                    │
  │ 58.02222.007        -2.0      0.0        0.0        0.0       -2.0 │
  │                                                                    │
  │ 90.35G39.441         2.0      2.0        0.0        0.0        2.0 │
  │                                                                    │
  │ AT.38H01.519XT       2.0      0.0        2.0        2.0        0.0 │
  └──────────────────────────────────────────────────────────────────┘
```

4.5.6 To deduct component by item number with carefulness and make sure Qty Open = Qty Issue.

4.5.7 After finished the component issue (MFG- Pro Maintain 16.10). To make sure that all deducted

components are corrected by re-check at 16.13.2 work order bill inquiry.

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4.5.8 Put work order number (example : 30001678) then enter.

```
wowaiq.p V2.00I     16.13.2 Work Order Bill Inquiry         12/04/00

Work Order      ID      Component Item          Output
30001678                                         terminal
```

```
Work Order   ID       Component Item Loc  Qty Req Qty Allo Qty Pick Qty Iss

-------------  ----------  --------------------   -----   ------  -------  -------  -----

30001678   40037512   01.COPRM.86B 1220    20      0       0      20

30001678   40037512   40.00060.111  1220    20      0       0      20

30001678   40037512   45.00040.061  1220    20      0       0      20

30001678   40037512   45.00050.121  1220    20      0       0      20

30001678   40037512   53.30K04.001  1220    20      0       0      20

30001678   40037512   54.09551.052  1220    20      0       0      20

30001678   40037512   56.02B34.121  1220    20      0       0      20

30001678   40037512   58.02254.005  1220    20      0       0      20

30001678   40037512   5T.14528.001  1220    20      0       0      20

30001678   40037512   5T.14529.001  1220    40      0       0      40

30001678   40037512   5T.49067.001  1220    20      0       0      20

30001678   40037512   71.63350.364  1220    20      0       0      20
```

4.5.9 To check and make sure Qty Required = Qty Issued before exit from MFG-Pro.

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4.6 Material Preparation operation

4.6.1 Product spec record and work order control

4.6.1.1 Sub-assy staff to check the update Eng & BIOS versions from label of Z-box carton and prepare for serial number label printing.

4.6.1.2 Sub-assy staff to adhere warranty label on keyboard & mouse.

4.6.1.3 Sub-assy staff to write work order number, date, model, part number, quantity, run-in cart number and material types on work order control form (see attached Doc. No. PD-F-02) and attach the conplete form on prepared material cartons. For example Z-box carton, accessories (key board & mouse cartons), etc..

Doc. No. PD-F-02 (Work Order Control Form)

Doc. No. PD-F-02 Work Order Control Form

Issue date : 10/10/00

Doc. No. : PD-F-02

Rev. : A

1. Work Order No _____

2. Date _____

3. Ouantity _____

4. Model _____

5. Part Number _____

6. Cart No. _____

7. Material Type _____

Prepared by _____ Date _____

Remark _____

_____

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4.6.2 Z-Box

4.6.2.1 Unpack carton and take Z-Box to put on run-in cart . Care should be taken not to put Z-Box

too close to each other to avoid scratching.

4.6.2.2 Replace the plastic bag and system end cap into the system box.

4.6.2.3 Remove all the accessories from the system box and prepare them ready for packing.

4.7 Sub assembly

4.7.1 Label Preparation

4.7.1.1 Turn on the printer and align printer label.

4.7.1.2 Open a file related to the product name & p/n as w/o states.

4.7.1.3 Check the file of the said part number against the work order.

4.7.1.4 Record details (Product name, Product number, Spec., Eng version, BIOS version

Serial number, Work order number, date in S/N label printing control form (see attached Doc. No. PD-F-03).

4.7.1.5 Fill up the necessary information (Product name, Product number, Spec., Eng version, BIOS

version, Serial no., w/o no., Warranty , Mfg. date) and assign an unused sequential serial number.

Then process printing product serial number label. After finished printing, to check and

ensure there is no errors, duplicate and complete details then save the latest file.

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Doc. No. PD-F-03 (Serial Number Label Printing Control Form)

Issued date : 10/10/00
Doc. No. : PD-F-03
Rev. : A

Doc. No. PD-F-03 Serial Number Label Printing Control Form

Item	Date	W/O	Product Name	Product Number	Specification	Eng. Version	BIOS Version	S/N Number	Qty	Checked by/ Date
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

4.7.2 Warranty label sticking

4.7.2.1 Pick all components as required per work order. Re-check correctness of components.

4.7.2.2 Mark by ticking on the warranty label the year and month when the said component is

being used for assembly.

4.7.2.3 Adhere warranty label to prepared CD-ROM, HDD, CPU with converter (slot form factor), Memory,

Add on Card and make sure warranty labels do not cause short circuit of components.

4.7.2.4 Prepare warranty label for assembly operation to adhere on components inside Z-box such as

PS, M/B, FDD, CPU without converter (socket form factor).

Approved by		Prepared by	John P.

4.7.3 FDD duplication

4.7.3.1 Use the 3.5" master diskette of PQAF software as the Doc. No. PD-F-04 (Master PQAF Creation Control List) to be copier and insert it into drive #1 of FDD copy machine.

Issue date : 10/10/00

Doc. No. PD-F-04 Master PQAF Creation Control List

Doc. No. : PD-F-04

Rev. : A

Doc. No. PD-F-04 Master PQAF Creation Control List

Item	Date	Model	Software load/ Version	Virus check	Created by	Remark
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

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4.7.3.2 Insert 3.5" diskettes which require to be copied into drive #2-12 of FDD copy machine.

4.7.3.3 Then process copying. After complete copying to take diskettes out from drives.

4.7.3.4 Record failed copying diskette into form of Doc. No. PD-F-05 (PQAF Diskette Copying Failure Record).

4.7.3.5 Discard failed copying or damaged diskettes.

Doc. No. PD-F-05 PQAF Diskette Copying Failure Record

Issue date : 10/10/00
Doc. No. : PD-F-05
Rev. : A

Doc. No. PD-F-05 PQAF Diskette Copying Failure Record

Item	Date	W/O no.	Qty	Model	Item no.	Disk s/n	Disk Item no.	Description	symptom	Target No.	Copied by	Remark
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

Approved by		Prepared by	John P.

4.7.4 HDD duplication

4.7.4.1 Master HDD Creation

4.7.4.1.1   Assemble a master set of computer as work order specifications state.

4.7.4.1.2   Connect power cord, mouse, keyboard and monitor to computer.

4.7.4.1.3   Use the original master HDD connects to IDE2 of M/B.

4.7.4.1.4   Insert 3.5" diskette with Ghost software into A drive.

4.7.4.1.5   Turn on power and check BIOS version versus work order states. If BIOS does not match,

to do afflash by using aflash software with 3.5" diskette insert into drive A. After finished

Aflash then to setup BIOS again and update date, month, year after that save it.

4.7.4.1.6   Machine is automatically started and go to DOS (drive A) then run program Ghost.

4.7.4.1.7   Go to Local ---> Disk ---> From Image ---> File Name Local Image From

4.7.4.1.7.1 A : Local Drive

4.7.4.1.7.2 C : Local Drive

4.7.4.1.7.3 D : Local Drive

4.7.4.1.8   Select Local Drive C or D if has drive D.

4.7.4.1.9   Select file from current master HDD list to conform as work order item number states,

to select 1 then click OK.

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4.7.4.1.10 Select required drive to be copied then click OK.

4.7.4.1.11 Process with disk load, select yes answer then enter.

4.7.4.1.12 When finished HDD creation to turn off power then take off original master HDD

and Ghost 3.5" disk.

4.7.4.1.13 If work order states to have CD-ROM, Connect IDE2 to CD-ROM.

4.7.4.1.14 Turn on power and go to Windows to detect new hardware.

4.7.4.1.15 If the new hardware is detected, to load driver for new hardware which can search from

C:\ Acer\ Driver or D:\ driver of SLCD. Notify to TSD & PM if the driver is not available.

4.7.4.1.16 When finished driver installation to check at \Ghost Panal\ System\ Device Manager

to make sure that new hardware is completely installed the driver.

4.7.4.1.17 If new hardware is not completely installed the driver. It will present question mark (?).

4.7.4.1.18 To install driver with hardware with question mark (?). Go to remove then refresh.

4.7.4.1.19 Windows to detect new hardware again. To complete driver installation by

repeating item 4.7.4.1.15 again.

4.7.4.1.20 When complete driver installation to use start menu to shutdown computer.

Avoid to shutdown at OEM Reset Reminder by answer NO.

4.7.4.1.21 All master HDD after creation must adhere with the name of master and the date of creation,

see the attached Doc. No. PD-F-06 (Master HDD Creation Tracking Form).

4.7.4.1.22 All master HDD created must be written on the control lists with all the software that were loaded.

see the attached Doc. No. PD-F-07 (Master HDD Creation Control List).

4.7.4.1.23 Give the new created master HDD to sub-assy staff for HDD copying.

Approved by		Prepared by	John P.

Doc. No. PD-F-06 Master HDD Creation Tracking Form

Doc. No. PD-F-06	Issue date	: 10/10/00
Master HDD Creation Tracking Form	Doc. No.	: PD-F-06
	Rev.	: A

Work order   :

Quantity

Model   :

Item number   :

Software load   :

Created by   :

Date   :

Approved by		Prepared by	John P.

Doc. No. PD-F-07 Master HDD Creation Control List

Issue date : 10/10/00

Doc. No. : PD-F-07

Rev. : A

Doc. No. PD-F-07 Master HDD Creation Control List

Item	Date	Work order	Qty	Model	Item number	Software load	Created by	Remark
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

Approved by		Prepared by	John P.

4.7.4.2 HDD Copy

4.7.4.2.1　Refer to respective HDD copy machine for procedure Machine.

4.7.4.2.2　Check and ensure all cables are connected.

4.7.4.2.3　Remove HDD from its respective box and packaging. Hold the HDD is proper manner without touching the circuit board.

4.7.4.2.4　Place the master created HDD (copier) on the target position #1 and each HDD which required to be copied on the target position #2-12 of the HDD machine then process.

4.7.4.2.5　Take the correct master HDD from the cabinet. Refer to configuration on the Work Order in choosing the correct master.

4.7.4.2.6　Record failed copy HDD into HDD copying failure record (see attached Doc. No. PD-F-08).

Doc. No. PD-F-08 HDD Copying Failure Record

Issue date　: 10/10/00
Doc. No.　　: PD-F-07
Rev.　　　　: A

Doc. No. PD-F-08 HDD Copying Failure Record

Item	Date	W/O no.	Qty	Model	Item no.	HDD s/n	HDD Item no.	Description	symptom	Target No.	Copied by	Remark
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

Approved by		Prepared by	John P.

4.7.5 Work order control preparation

4.7.5.1 Sub-assy staff to write work order number, date, model, item number, quantity, run-in cart number and material types on work order control form (see attached Doc. No. PD-F-02) and attach on the prepared components such as HDD, CPU, memory, add on cards, CD-ROM etc.

4.8 Assembly operation

4.8.1 Prepare materials which provided by material preparation and sub-assy.

4.8.2 Unscrew and open the casing.

4.8.3 Adhere Product Spec label and Serial Number label at rear of machine.

4.8.4 Install the CD-ROM drive and tighten the screws, ensure the cables are properly connected. Tie the cables nicely with cable tie and cut the excess of cable tie using scissors.

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4.8.5 Remove FDD cable and take off FDD drive, adhere warranty label & s/n on FDD drive. Also adhere s/n label on HDD, CD-ROM, PS, M/B and warranty label on PS, M/B, then re-install FDD drive back to frame, install HDD to frame and tighten the screws both sides. To ensure relevant HDD cables are properly connected. Tie the cables nicely to wire cable tie. Cut the excess of cable tie using scissors.

4.8.6 Install the CPU and attach heatsink on CPU then adhere warranty label on CPU heatsink. Ensure all wires are properly connected and not touching the fans of the heatsink.

4.8.7 Install the memory. Ensure memory are properly installed. Installer should be able to hear the "clicking" sound if memory is proper sit into its slot.

4.8.8 Unscrew and remove the bracket of each relevant slot for add on card.

4.8.9 Install the add on cards and tighten the screw.

4.8.10 Install other components such as Lan Card etc as required. Ensure all screws are properly secured, all cables and wires are properly connected and nicely tied by cable tie and nicely trimmed.

4.8.11Close the casing and tighten the respective screws.

4.8.12 Put the rest labels on top of case and stick by clear plastic tape.

4.8.13 Insert the prepared PQAF diskette into FDD drive then perform pre run-in test.

Approved by		Prepared by	John P.

4.9 Pre run-in test operation

4.9.1 Connect the power cord, monitor cable and K/B cord to computer then turn on power.

4.9.2 To test computer hardware basically for system board, memory, K/B, Video, HDD, co processor, cache, PnP BIOS.
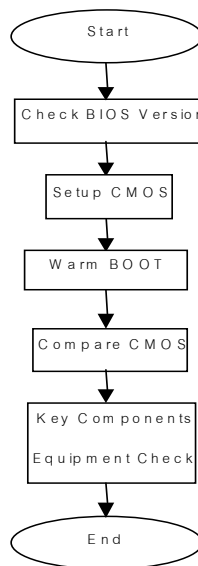
4.9.3 The pre run-in phase is as followings

Doc. No. Flow 2 (Pre run-in test flow)

Issue date : 10/10/00
Doc. No. : Flow 2
Doc. No. Flow 2 (Pre run-in test flow)   Rev. : A

```
        ( Start )
            |
  [ Check BIOS Version ]
            |
     [ Setup CMOS ]
            |
     [ Warm BOOT ]
            |
    [ Compare CMOS ]
            |
   [ Key Components
     Equipment Check ]
            |
         ( End )
```

4.9.4 Record failed computer in pre run-in failure report (see attached Doc. No. PD-F-09) and send to repair station.

4.9.5 Send passed computer to final test operation.

Approved by		Prepared by	John P.

Doc. No. PD-F-09 Pre Run-In Failure Report

Issued date : 10/10/00
Doc. No.   : PD-F-09
Rev.   : A

Doc. No. PD-F-09 Pre Run-In Failure Report

Item	Date	W/O	Qty	Model	Part number	Symptom/ Description	Problem solving	Checked by	Remark
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

Approved by		Prepared by	John P.

4.10 Final test operation

4.10.1   Move computer from run-in cart and place it on workstation.

4.10.2   Use K/B & mouse to conform its model.

4.10.3   Connect the power cord, monitor cable, K/B & mouse cords to computer then turn on power.

4.10.4   Check/ update BIOS to conform as spec states.

4.10.5   Connect loop back to test serial port & parallel port.

4.10.6   Computer system check by PQAF (Product Quality Assurance Program for Factory) to ease troubleshooting of PC system.

4.10.7   Proceed to do the DMI registration with system serial number.

4.10.8   Turn off computer power and remove PQAF diskette.

4.10.9   Turn on computer and check windows operating, CD-ROM sound, check noise and abnormalities.

4.10.10   Record final test result in final test test status record (see attached Doc. No. PD-F-10).

4.10.11   If computer failed test, record failure mode/ symptom & description in the final test failure report (see attached Doc. No. PD-F-11) and adhere test failed sticker at the top of computer then send to repair station.

4.10.12   Computer passed test is identified by test passed sticker at the rear of computer.

4.10.13   Turn off computer power, remove power cord, monitor cable, K/B & mouse cords.

4.10.14   Put on run-in cart and move to cleaning & inspection operation.

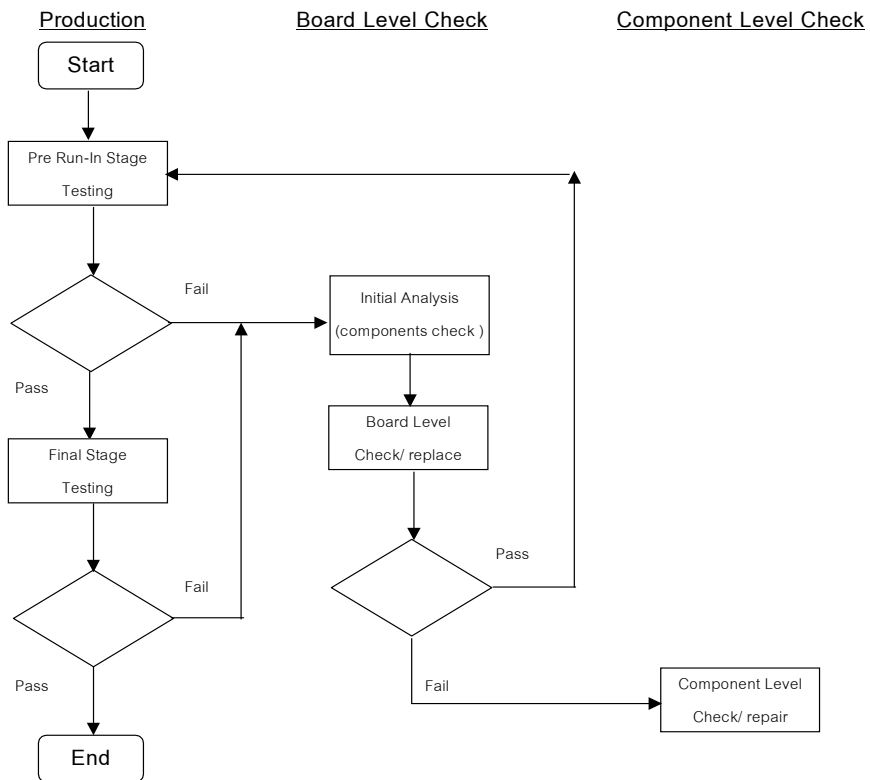| Approved by		Prepared by	John P.

Doc. No. Flow 3 (Functional Test/ Repairing Flow)

Issued date : 10/10/00
Doc. No.   : Flow 3
Rev.   : A

Doc. No. Flow 3 (Functional Test & Repairing Flow)

Production	Board Level Check	Component Level Check

Start → Pre Run-In Stage Testing → (decision) Fail → Initial Analysis (components check) → Board Level Check/ replace → (decision) Pass → Pre Run-In Stage Testing; Fail → Component Level Check/ repair

(decision) Pass → Final Stage Testing → (decision) Fail → Initial Analysis; Pass → End

Doc. No. PD-F-10 (Final Test Status Record)

Issue date : 10/10/00

Doc. No. : PD-F-10

Rev. : A

Doc. No. PD-F-10 (Final Test Status Record)

Item	Date	Work order	Qty	Model	Item number	Test status		Tested by	Remark
						Pass	Fail		
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

Approved by		Prepared by	John P.

Doc. No. PD-F-11 (Final Test Failure Report)

Issued date : 10/10/00
Doc. No. : PD-F-11
Rev. : A

Doc. No. PD-F-11 (Final Test Failure Report)

Item	Date	W/O	Qty	Model	Part number	Serial No.	Symptom/ Description	Problem solving	Checked by	Remark
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

Approved by		Prepared by	John P.

4.11 Cleaning & inspection operation

4.11.1 Move computer from run-in cart and put on cleaning table.

4.11.2 Wipe and clean casing with cleaning agent and soft cloth.

4.11.3 Adhere windows license (COA) label & warranty label on left side of m/c as spec states.

4.11.4 Inspect to ensure that labels & stickers are adhered on correct location without missing & damage, inspect at front panel for nameplate and at the rear of m/c for test passed sticker and make sure that no scratching & damage on casing.

4.11.5 Record rejected computer in cleaning & inspection abnormality report (see attached Doc. No. PD-F-12) and adhere QC rejected sticker at the top of computer then send to repair.

4.11.6 Adhere QC passed sticker at rear of computer for computer passed inspection and move to packing operation.

Doc. No. PD-F-12(Cleaning & Inspection Abnormality Report)

Issued date : 10/10/00
Doc. No.   : PD-F-12
Rev.   : A

Doc. No. PD-F-12 (Cleaning & Inspection Abnormality Report)

Item	Date	W/O	Qty	Model	Part number	Serial No	Abnormality/ Defect Found	Problem solving	Checked by	Remark
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

Approved by		Prepared by	John P.

4.12 Packing operation

4.12.1   Before packing, to prepare cartons of computer, accessories and re-check for quantity of accessories.

4.12.2   Put the computer into the plastic bag. Fold the bag nicely and tape it with scotch tape.

4.12.3   Insert the end cap to the computer and put the computer into the system box.

4.12.4   Put accessories such as keyboard, power cord, mouse, warranty card, and a set plastic bag of " telephone cord, mouse pad , manual, windows manual and SLCD " into the system box as work order states.

4.12.5   Seal the carton using auto taping machine.

4.12.6   Adhere Product Serial Number label on both sides of carton and also stick the CPU label such as Pentium III/Celeron label on carton refers to CPU type states in work order.

4.13 Finished goods

4.13.1 When completed packing to take finished goods to put on pallet then deliver finished goods to put at finished goods area.

4.14 Finished goods record

4.14.1 When completed w/o, QC staff to record details such as work order number, part number, product description, work order quantity, done quantity, complete date & checked by into finished goods report (see attached Doc. No. PD-F-13).

4.14.2 Bring the finished goods report to request for signature from production, warehouse and logistics for their acknowledgement.

4.14.3 After complete signature on finished goods report then give original copy to warehouse staff, duplicate copy to logistics staff and triplicate to production staff.

Approved by		Prepared by	John P.

Doc. No. PD-F-13 (Finished Goods Report)

Issued date : 10/10/00

Doc. No.   : PD-F-13

Rev.   : A

Doc. No. PD-F-13 (Finished Goods Report)

Finished Goods Report No. ....

W/O Number	Part Number	Product Description	W/O Qty	Done Qty	Completed On	Checked By

Issued by : .... Received by : .... Maintained by : .... Date : ....

Production   Warehouse   Logistic

(Triplicate)   (Original)   (Duplicate)

Approved by		Prepared by	John P.

4.15 Work order close (MFG-Pro Maintain 16.11)

4.15.1 Assistant Production Manager to perform MFG-PRO.

4.15.2 Put the user ID & Password then enter.

4.15.3 MFG-Pro system shows the main Mann as below.

Main Menu   12/04/00

DISTRIBUTION	MANUFACTURING	FINANCIAL
1. Items/Sites	13. Product Structures	25. General Ledger
2. Addresses/Taxes	14	26. Multiple Currency
3. Inventory Control	15	27. Accounts Receivable
4. Physical Inventory	16. Work Orders	28. Accounts Payable
5. Purchasing	17	29
6	18	30
7. Sales Orders/Invoice	19	31
8. Configured Products	20	32
9. Sales Analysis	21. New Sales Forecast	33
10	22	34
11	23	35
12	24. Key Component	36. Manager Functions

Approved by		Prepared by	John P.

4.15.4 Put 16.11 (MFG-Pro Maintain for work order close) then enter.

woworc.p g   16.11 Work Order Receipt   12/15/00

Work Order: ID: Status:

   Remarks:

Item Number: L/S: UM:

Description: Auto Lot Numbers:

   Open Qty:

   Quantity: Site:

   UM: Location:

Conversion: **Lot/Serial:**

Reject Qty: Ref:

   UM: Multi Entry:

Conversion: Total Units:

   Ticket#:

   Effective:

Close:

Approved by		Prepared by	John P.

4.15.5 Put work order number (example : 30001758) then enter.

woworc.p g   16.11 Work Order Receipt   12/15/00

Work Order: **30001758**   ID: 40038752 Status: R

Remarks: FOR FULFILL BACKORDER

Item Number: AT.39J01.020LE   L/S: UM: PC

Description: Power Sx C700,64M,20G,   Auto Lot Numbers: no

Open Qty: 32.0

Quantity: 0.0   Site: 1000

UM: PC   Location: 1120

Conversion: 1.0000   Lot/Serial:

Reject Qty: 0.0   Ref:

UM: PC   Multi Entry: no

Conversion: 1.0000   Total Units:

Ticket#:

Effective:

Close:

4.15.6 Put quantity which requires to close and make sure open quantity = close quantity then enter.

4.15.7 Make sure that site, location and ticket number are correct before answering "YES" to close work order.

Approved by		Prepared by	John P.

4.15.8 After finished the work order close (MFG- Pro Maintain 16.11). To make sure that the work order

is completely closed by checking at 16.1 work order maintenance.

wowomt.p i   16.1 Work Order Maintenance   12/15/00

Work Order: ID:

Item Number:

Type:

Site:

Qty Ordered: Order Date:

Qty Completed: Release Date:

Qty Reject: Due Date:

Status: Site:

Sales/Job: Routing Code:

Supplier: Bill of Material:

Yield:

Remarks:

Comments: Post variances at SFC:

Approved by		Prepared by	John P.

4.15.9 Put work order number (example : 30001713) then enter.

wowomt.p i   16.1 Work Order Maintenance   12/15/00

Work Order: 30001713   ID: 40038119

Item Number: AT.39J01.021LE   Power Sx PIII800,64M,20G

Type: 52X,56K(Askey)

Site: 1000

Qty Ordered: 20.0   Order Date: 12/07/00

Qty Completed: 20.0   Release Date: 12/07/00

Qty Reject: 0.0   Due Date: 12/10/00

Status: C   Site: 1000

Sales/Job: BTS   Routing Code:

Supplier: Bill of Material:

Yield: 100.00%

Remarks:

Comments: yes   Post variances at SFC: yes

4.15.10 To check and make sure that quantity ordered = quantity completed and Status : C (closed).

4.15.11 Ask warehouse staff to deliver finished goods to store in warehouse.

Approved by		Prepared by	John P.

4.16 Repair Station

4.16.1   When receive failed computer from pre run-in or final test operation. record the failure mode with details such as date, w/o, qty, model, p/n in the form of production mini-repair station report (see attached Doc. No. PD-F-14).

4.16.2   Diagnoses at board/ component level is performed first, swapping is done to troubleshoot the problem. The failed component will be claimed to vendor via repair center department.

4.16.3   If computer can not be troubleshot the problem as board/ component level, it will be sent to repair center department for further failure analysis.

4.16.4   After computer is already troubleshot the problem, record cause/symptom and problem solving into the form of production mini-repair station report (see attached Doc. No. PD-F-14).

4.16.5   Send computer back to re-start testing again since pre run-in, through final test respectively.

Doc. No. PD-F-14 (Production Mini- Repair Station Report)

Issued date : 10/10/00
Doc. No.   : PD-F-14
Rev.   : A

Doc.No PD-F-14 (Production Mini Repair Station Report)

Item	Date	W/O	Qty	Model	P/N	Serial number	Symptom	Cause	Troubleshooting	Component P/N	Component S/N	Check by	Remark
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

Approved by		Prepared by	John P.