AMV-1606-080531 V1.0

AGFA

Technical Manual

(:ANAPURNA MV)

Content

MODEL : ANAPURNA MV

1.How to Install

How to Install I-1

The below is important information that should be checked during installation.

1. The recommended work space for printing is 5M*5M.
   (Actual Machine size => 3.5M*1.52M*1.6M)

2. The room in which the printer shall be installed should be easy to clean, dust-free space, Electromagnetic-free space.
   Reasonable temperature in 68 ~ 85˚F(20~29℃) should be kept. Humidity in 20%~80% as well.

   ※ Requirement for installation

Temperature	68˚F to 85˚F (20℃ to 29℃)
Humidity	20% to 80% Non-condensing

3. This equipment should be installed on horizontal surface in order to get the printing in the best quality.

4. The equipment should be run with single grounding.

5. In case the safety of working space is required, gas ventilation system will be asked, and the exhaust duct and ventilation fan should be installed

How to Install I-2

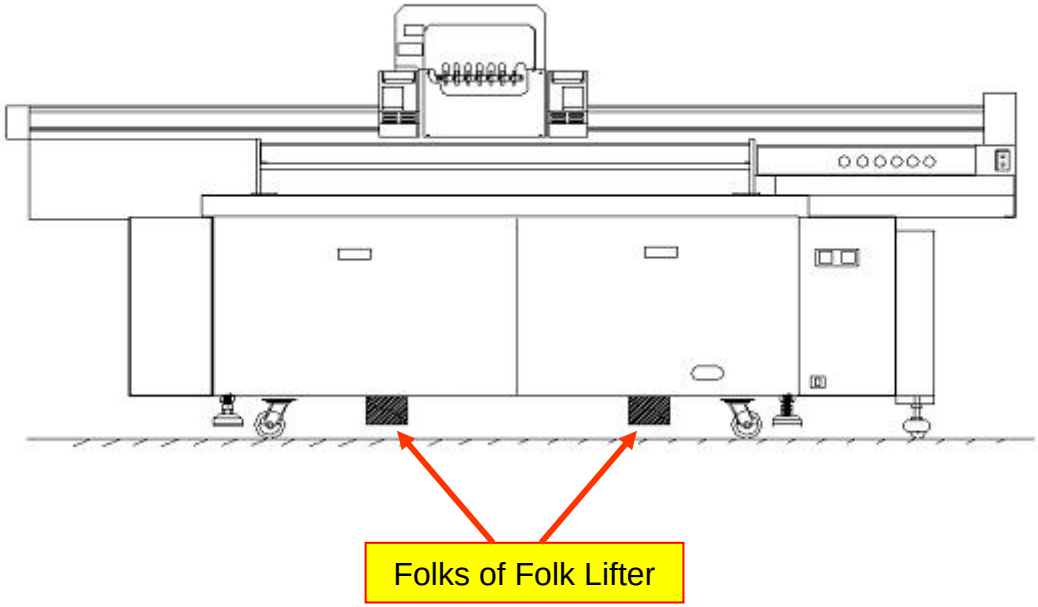
1. Dismantle the front and the upper of WOODEN BOX.
   (Remove the screw on the Front and Upper with a driver or electric tool.)

2. After dismantling the packing box, the equipment is relocated by Folk Lifter.

※ List of Notice in relocating the printer.

- As shown in below, the equipment should be lifted up at the marked position.
- When forks of lifter are inserted, be aware not to damage (scratch) the equipment !!
- After checking the left & right balance of equipment, the equipment should be lifted up slowly.
  (Please attention that it is sensitive device for impact.)
- Please check a relocating route before carrying by Lifter.

How to Install I-2



How to Install II

3. After relocating to desire place, should make a machine balance by using high & low controlling bolts and level checker.
   The position of level checker should be based on box beam, connecting bar and side panel (left, right).

4. ANAPURNA MV is a device that needs compressed air.
   Air line connected to Air-compressor or installation place should be mounted on right side of equipment.

   -The diameter of Air Inlet Tube is Φ6.
   -The pressure of Compressor is 4~8kgf/㎠, Capacity of above 2HP.
   (640 kcal/hr,760W) Air production is over 6 LPM.
   ★ The Compressor must be Oil-less product.
   ★ It is recommended that the compressor should be run independently.

5. Besides the standard power grounding, the print in good quality can be obtained by connecting grounding line to controller panel in the middle of Machine rear side.

How to Install III

6. After connecting with AC-Line and grounding, connect with machine power code (220V ±10%, Grounding : Less than 5V)

: ANAPURNA MV consists of power part of main body and that of sub-body.

- 1 st circuit breaker (main S/W) : ON / OFF for power source of main body.
- 2 nd Circuit breaker (main breaker S/W) : ON / OFF for Main Power.
- 3 rd START S/W : Operation of printer.

Warning

After printer installation, please supply the ink in accordance with How To Install IV. In case of not following the procedure or skip, some problems related to head block & printing error would happen.

In order for personnel protection in operation of printing, must understand the printer by studying thoroughly working guide described in the MSDS.

***APPENDIX: MSDS attached.**

How to Install IV-1 (HEAD CLEANING & INK SYPPLY)

STEP 1. After removing the cap of ink tube in refill connecting part, push the solution which remains in ink tube into sub ink tank by using tubing pump including filter.

Warning

Be careful that a solution should not be smeared on the printer while carrying out solution or ink handing work.

If smeared on the printer, its surface will be discolored**.**

STEP 2. Connect ink supplying tube in refill system with tube connector of printer.

Warning

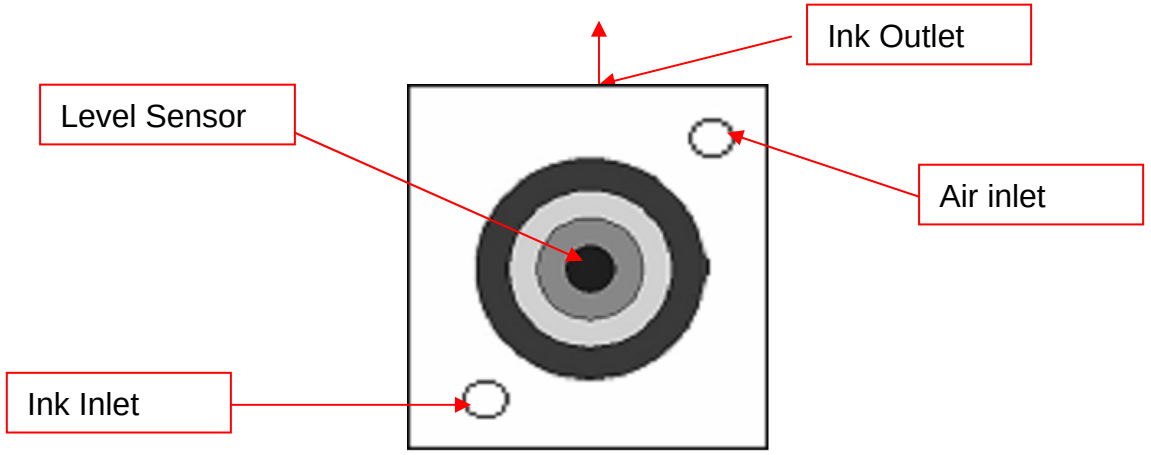
Make sure that the ink tube and connector of printer are tightly connected by the NUT in end of supplying tube. Impact can cause of tubing-out problem.

How to Install IV-2 (HEAD CLEANING & INK SUPPLY)

STEP 3. Fill 500ml of ink in a main refill ink tank.

→ Be sure to deflate the air from ink filter of refill part and fill with the ink after being finished automated refill.

→ If ink is supplied in the condition that the air in Ink filter is not completely removed, overflowing from secondary ink tank will take place due to excess of air quantity.

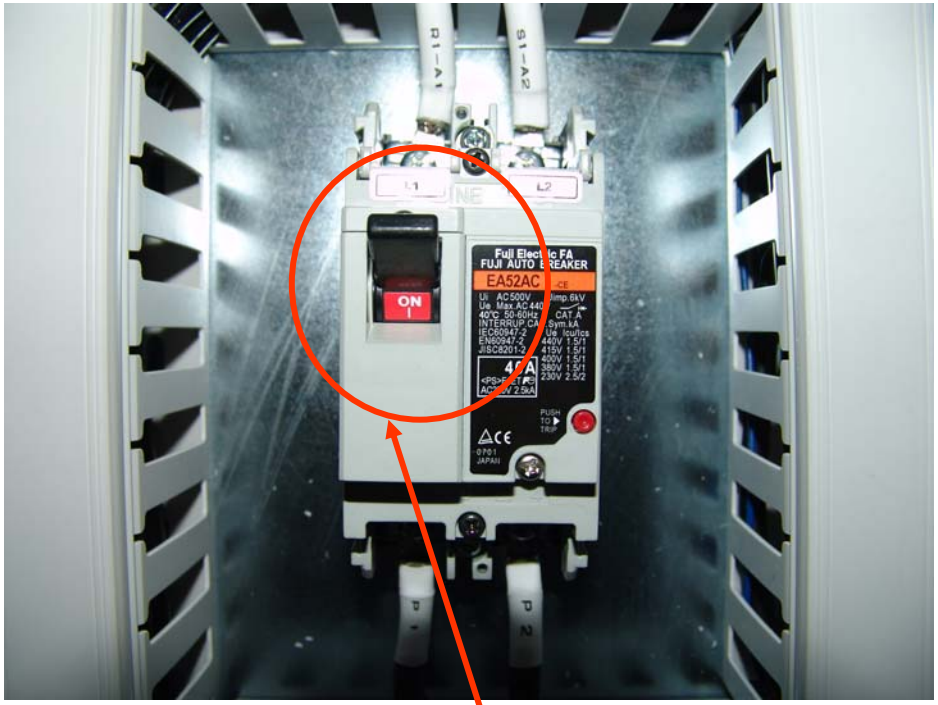


Structure of Sub Ink Tank

How to Install IV-3 (HEAD CLEANING & INK SUPPLY)

STEP 4. Check the status of printer by turning ON S/W of 1st and 2nd circuit breaker.

S/W of 1st
Circuit Breaker



S/W of 2nd
Circuit Breaker

How to Install IV-4 (HEAD CLEANING & INK SUPPLY)

STEP 5. (1) When powered on firstly, the headbase will be in very high position for HOME CHECKING by lifting up headbase.

(2) After being sucked and fixed by putting a Media on and turn on VACUUM, then press CALIB. Key.

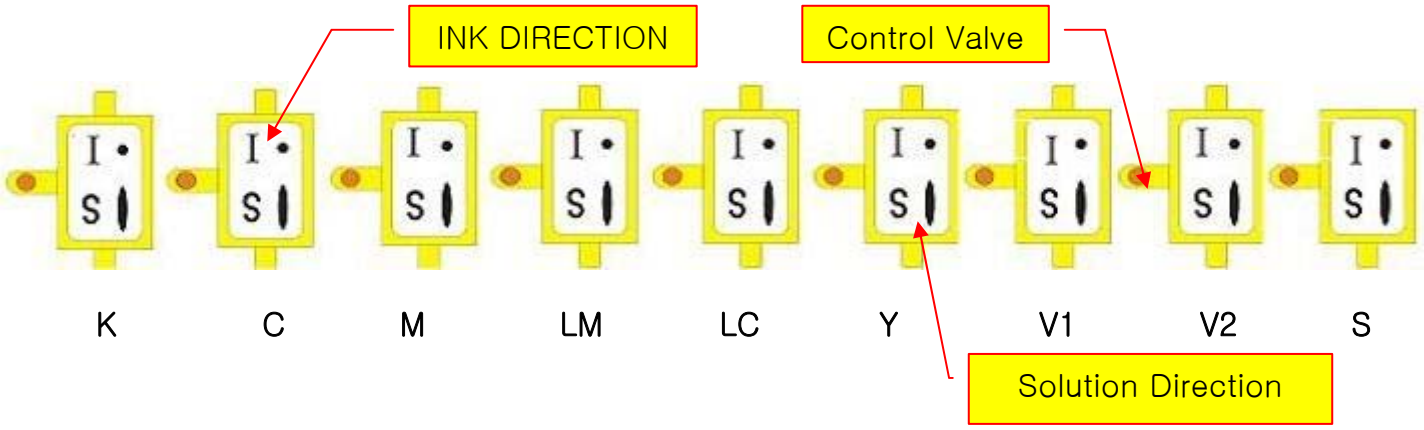
(3) By selecting F6 HEAD GAP, the height of head can be set less than 2mm from Media.

(The closer the head is set to the media, the better the quality will be)

→ When completing the adjustment of head height, move carriage to HOME Position.

STEP 6. Solution cleaning

1) Make the 6 mini values turn to S direction.
2) Also make solution valve turn to S direction.
3) Discharge the solution toward the head by pressing purge button.



How to Install IV-5 (HEAD CLEANING & INK SUPPLY)

STEP 7. Make ink supply to the head after supplying the ink in refill system to sub-ink tank. (Before auto refill, make ink 50cc discharge through head.)

→ Supply the ink in sub ink tank to the head by pressing purging S/W twice for 3 ~ 4 sec located in the upper right in Carriage rear side, then check the ink dropping in HEAD Nozzle.

→ If ink dropping takes place in the Head Nozzle, set the value of pressure to between –0.028 ~ -0.038 by turning Knob of Pressure Control to UP direction (right). (Standard Pressure is normally measured in the condition of no ink dropping from Nozzle. The unit is Kg/㎠.)

→ The surface of each head is cleaned two or three times with Head Cleaner. Or use the best cleaner for Konica Head to clean.

→ Move the Carriage to HOME Position by pressing ESC key in the control panel, then with F1 PRIME, check the status of Head Nozzle.

* If the Nozzle is in imperfect condition, check the status of Head Nozzle by repeating STEP 7 in order.

How to Install IV-6 (HEAD CLEANING & INK SUPPLY)

STEP 8. After checking machine setting, make RTL FILE from image file for printing.

→ Create a desire image in RTL FILL by using RIP PROGRAM.

→ Print out RPL FILE in RIP Program.

* Check the trouble shooting if there is any trouble in the quality of printing.

MODEL : :ANAPURNA MV

2. Exterior Appearance & Specification

:ANAPURNA MV FRONT VIEW

Exterior Size (3,500mm*1,520mm*1,600mm) MAX PRINT WIDTH: 1,597mm

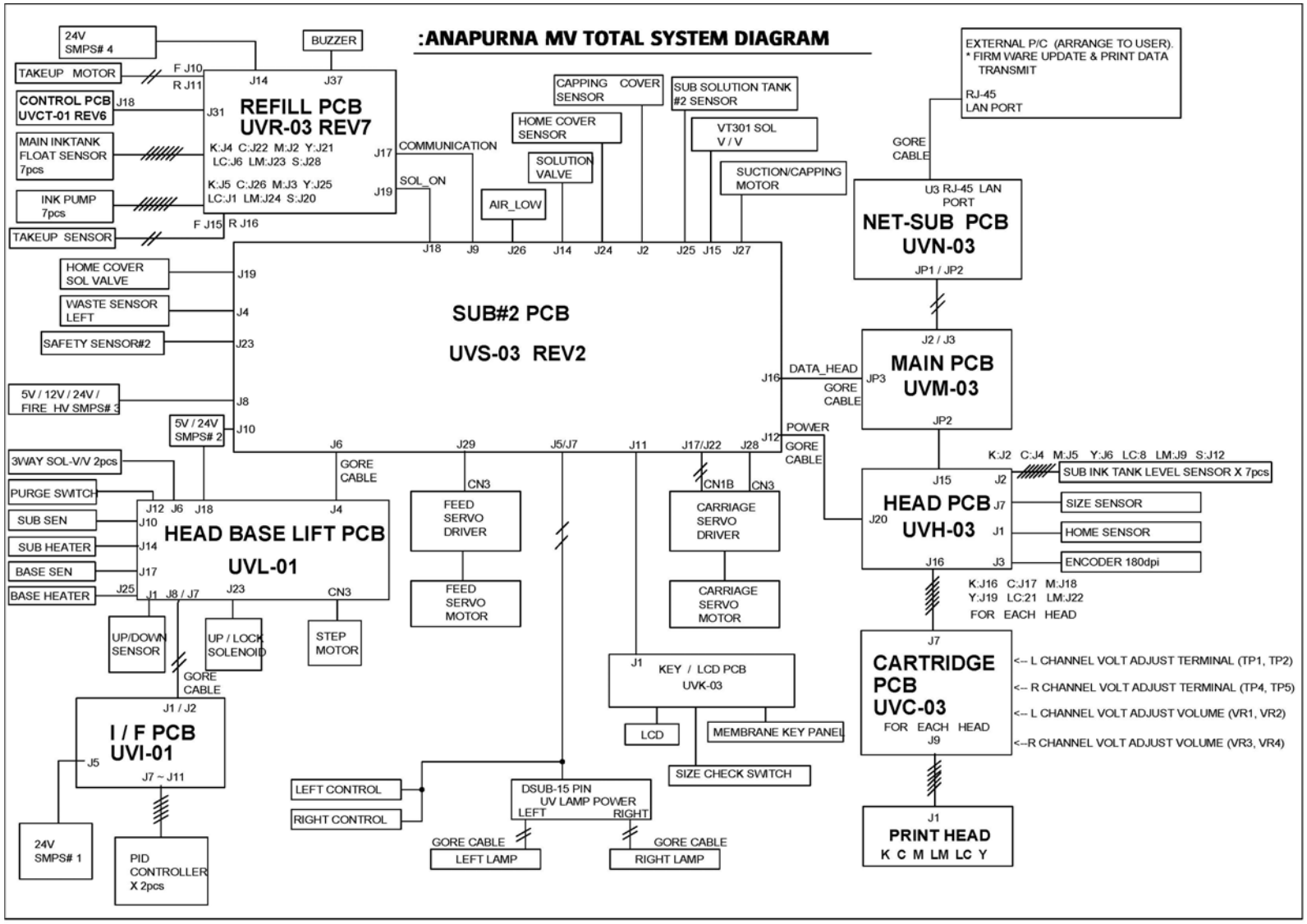
:ANAPURNA MV FEATURE

- ☐ Size (3,500mm*1,520mm*1,600mm) Max Print : 1.597mm
- ☐ UV Lamp Shutter System in accordance with printing signal.
- ☐ Auto lifting System : Max Media : 50mm
- ☐ High Resolution in Printing : KONICA HEAD INSTALLED (KM512 / 14PL)
- ☐ Stable Ink Supplying System
- ☐ Ink Jetting Control by Voltage Controller in Head Jet
- ☐ Auto Heating Device / Auto Ink Supplying Device / Auto Media Feeding Device / Auto Suction System / Auto Capping System
- ☐ Flat Bed / Roll to Roll Hybrid Printer

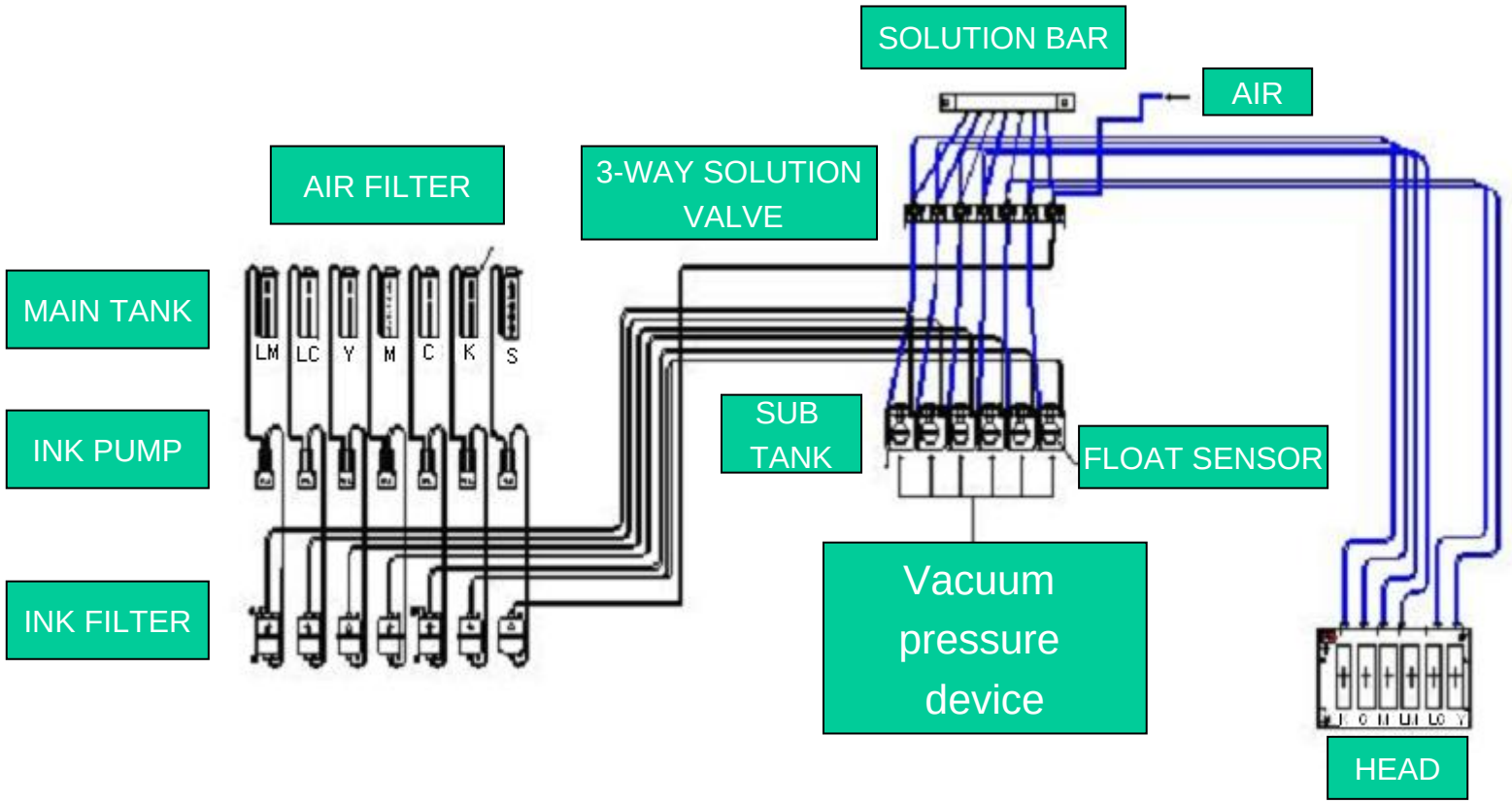
:ANAPURNA MV SPECIFICATION

Model	:ANAPURNA MV	
Printing Technology	DOD PIEZO ELECTRIC TECHNOLOGY	
Number of Print Head	6 HEADS [KONICA / 512 / 14PL]	
Print Speed	NORMAL MODE	QUALITY MODE
	13-17 sqm/hr	6-10 sqm/hr
CPU	32BIT RISC	
Memory	256MB	
Command Language	SP-RTL, HP-RTL, EMULATION	
Interface	TCP / IP	
Ink Type	UV BASED PIGMENT	
Dimensions [W X D X H]	3,500 X 1,520 X 1,600 (mm)	
Weight	ABOUT 620 KG	
Max Printing Width	1,600 mm	
Input Voltage	SINGLE PHASE 220V ±10 % [50/60Hz, AC]	
Media Thickness	50mm	
Media Type	HYBRID TYPE [FLATBED & ROLL TO ROLL]	
Motor Type	CARRIAGE : AC SERVO MOTOR / FEED : AC SERVO MOTOR	

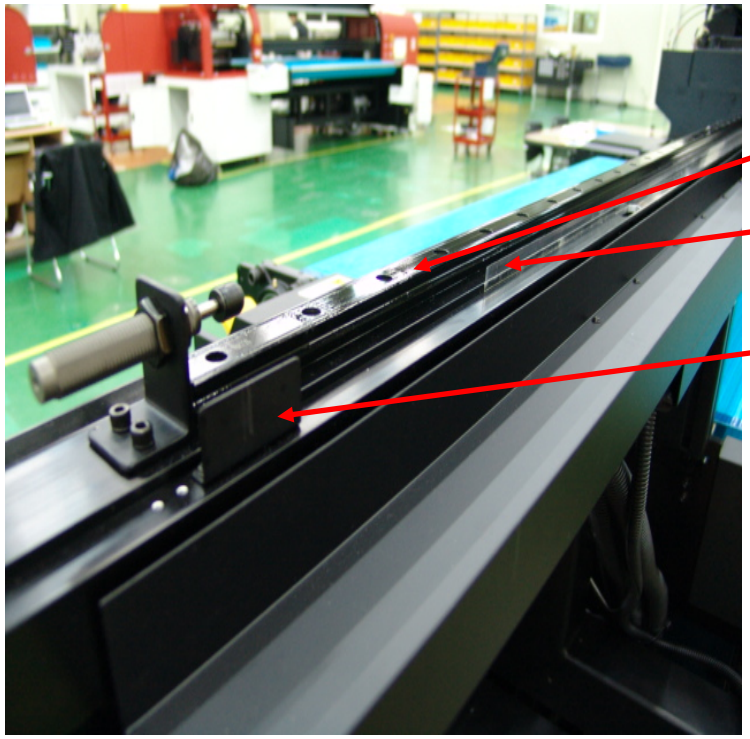
:ANAPURNA MV BLOCK DIAGRAM



INK SUPPLY FLOW DIAGRAM



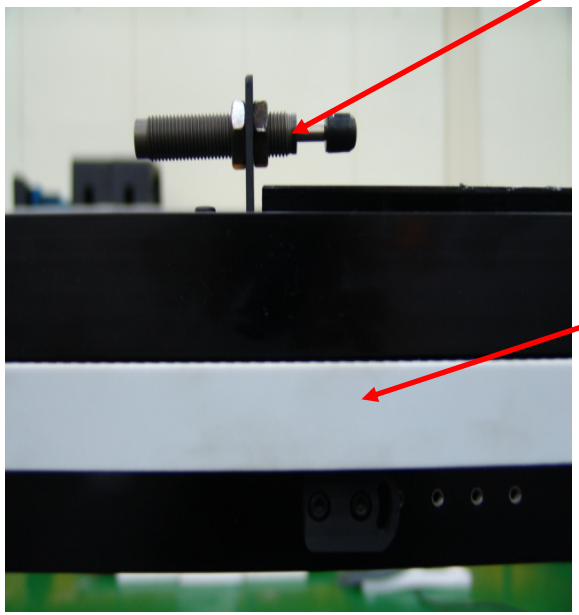
CODE STRIP



The Print Resolution was improved by CODE STRIP (180 dpi).

STRUCTURE OF BOX BEAM

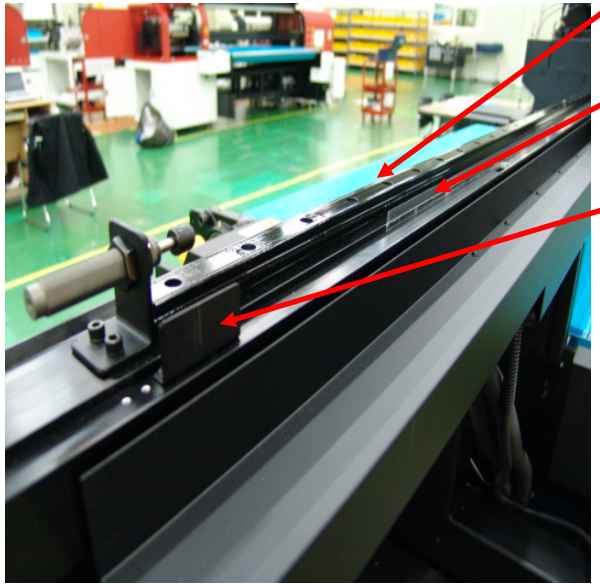
Box Beam (L)



Shock absorber

Timing belt

Box Beam (R)



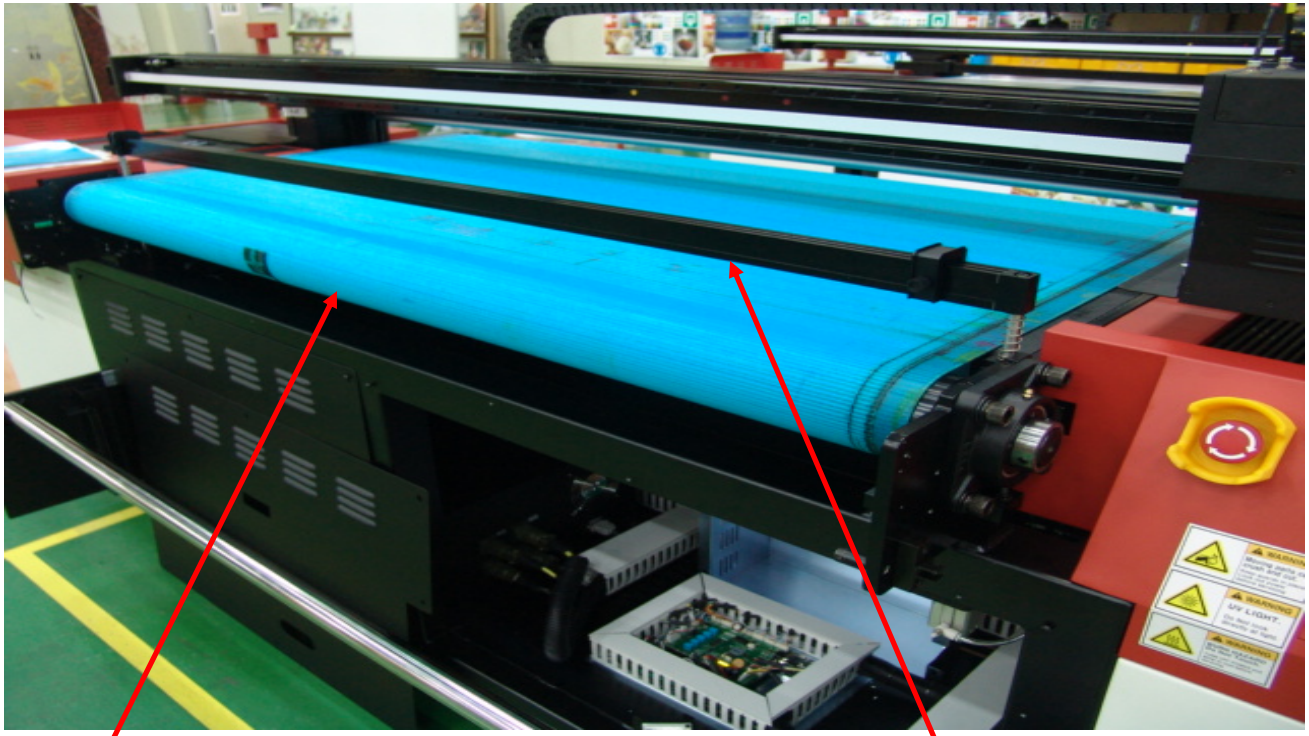
LM Rail

Code Strip

Home Sensor B/K

Easy Moving Carriage Structure in Box Beam (LM GUIDE 2EA USE)

STRUCTURE OF PLATEN

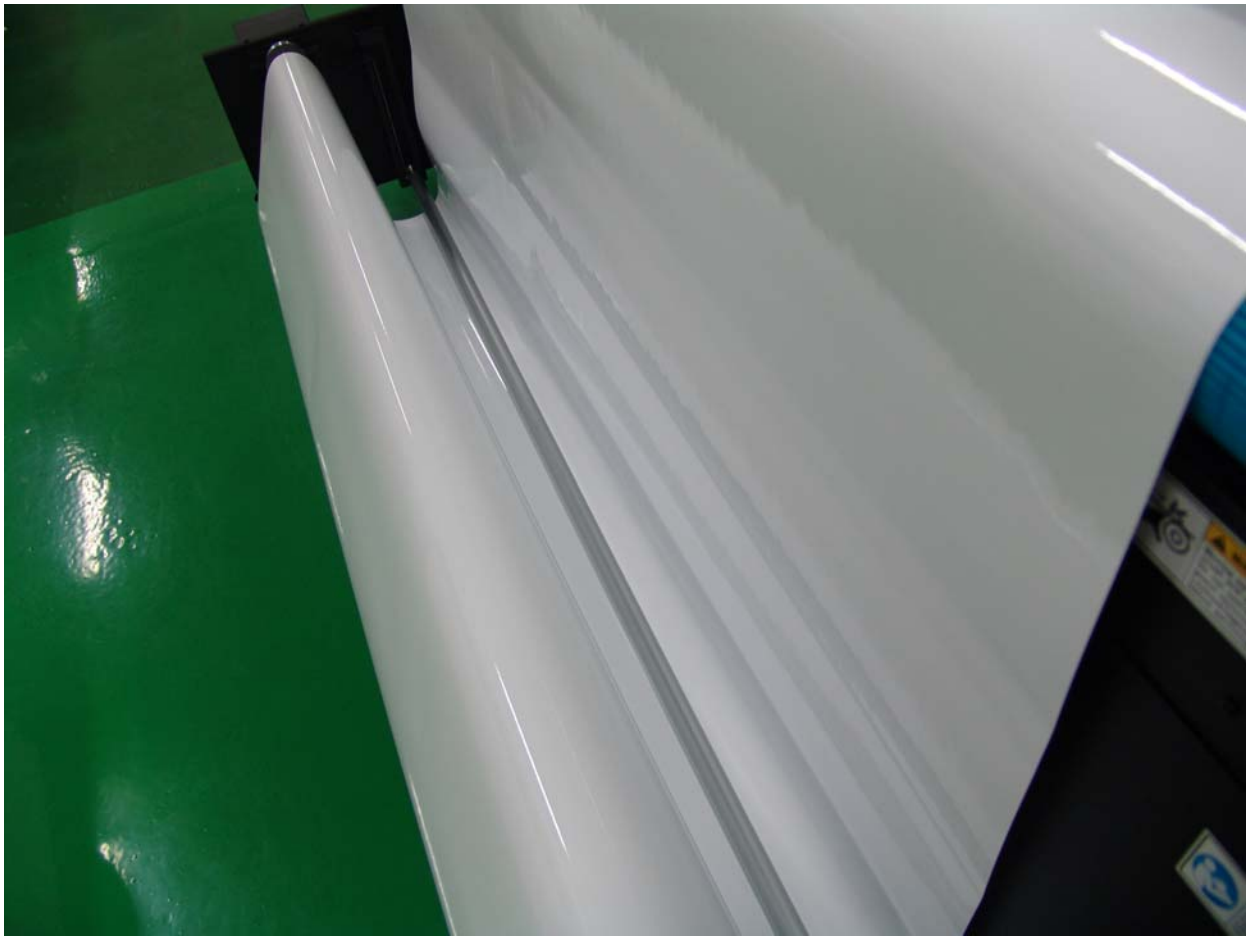


Platen for Flat/Roll Type

BAR for Origin Point Fixing

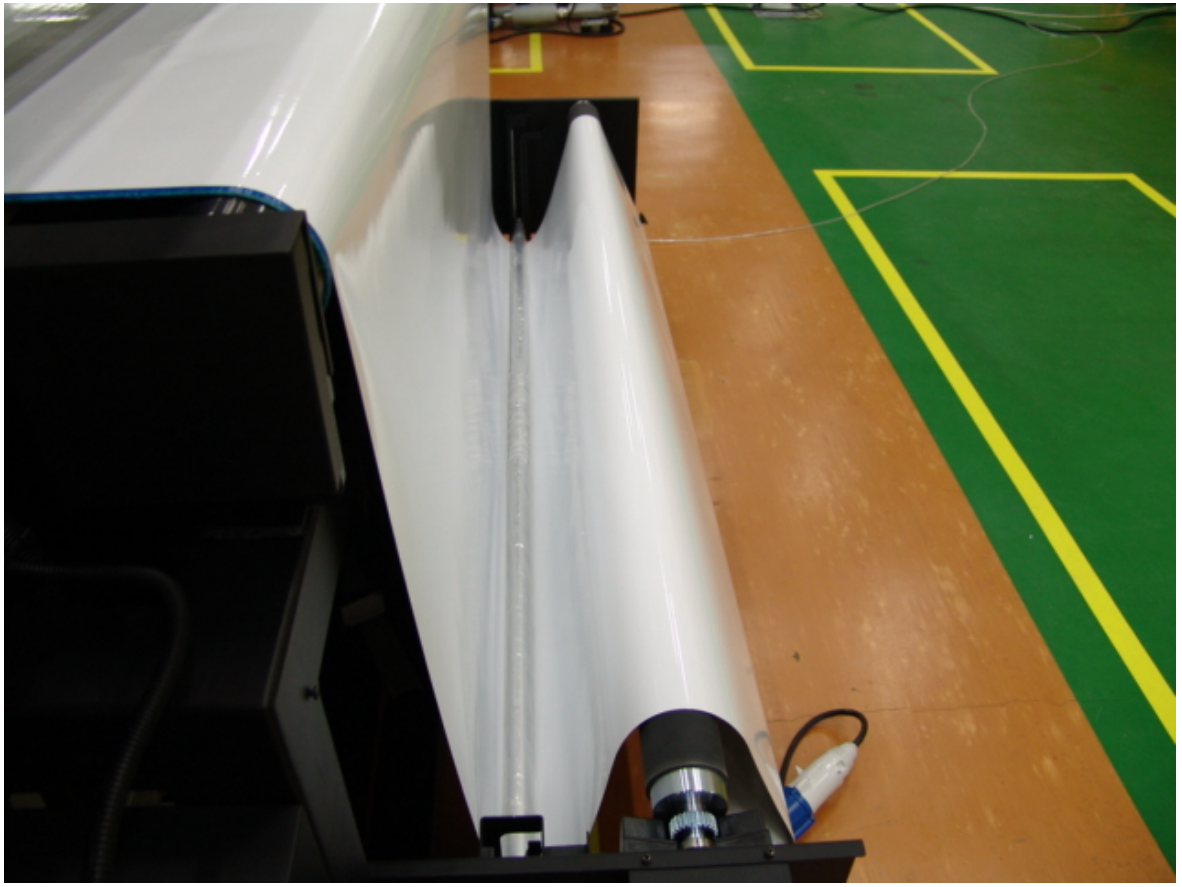
Designed for easily using the Plate. (Origin Point Fix Air Cylinder attached)

STRUCTURE OF FRONT ROLL BAR



ROLL BAR IN FRONT MEDIA

STRUCTURE OF REAL ROLL BAR



The tension of media should be maintained equally with the roll bar in the rear.

STRUCTURE of CONTROL BOX

The PCB assembled with three SUB PCBs was designed for easy to attach and detach.

MODEL : **:ANAPURNA MV**

3. How to Use and List of Notice in Use

GENERAL KEEPING (GENERAL LIST OF NOTICE)

1. Keep the horizontality : Required for accurate printing
   → Should be checked during the first installation in order to keep the printer in stable condition.

2. Maintain the grounding : Required for stable system maintenance.
   → Should be checked during the first installation in order to keep the printer in stable system.

3. Code Strip → Once a week, need to be cleaned with head cleaner to secure stable printing.

GENERAL KEEPING(GENERAL LIST OF NOTICE)

4. Check the Terminal of UV LAMP POWER.

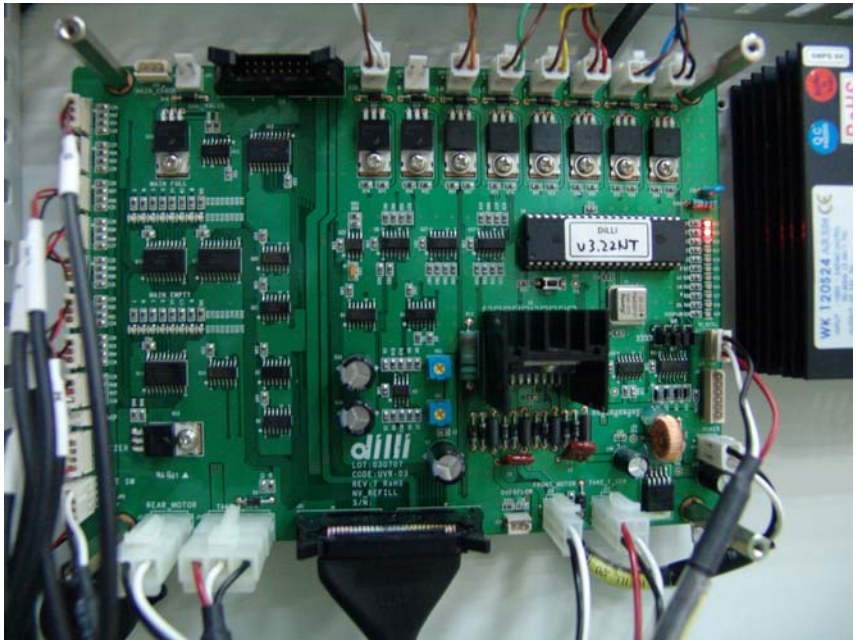
→ Check voltage/frequency(230V/60Hz)

A-1(203V/50Hz),A-2(203V/60Hz)

B-1(230V/50Hz),B-2(230V/60Hz)

5. Check the sensor sensitivity of MAIN TANK.

→ When ink is short, BUZZER beeps.



GENERAL KEEPING(GENERAL LIST OF NOTICE)

6. Check INK FILTER

→ After filling the ink into MAIN INK TANK, deflate the air in the filter.

7. Check INK SUPPLYING HOSE

→ Check ink supplying hose for each color.

GENERAL KEEPING(GERNAL LIST OF NOTICE)

8. Check the sensor in Waste Ink Tank

→ The message of Waste Full (purge) will be displayed on the LCD, and also check the Buzzer.

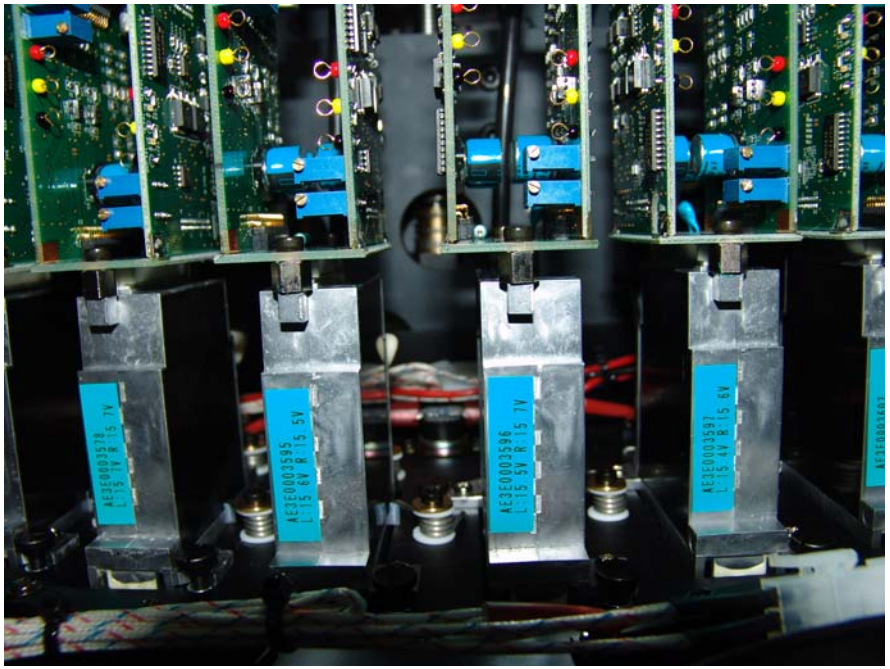
9. Check the SOLUTION TANK

→ Check amount of solution in the tank of MAIN/SUB SOLUTION.

GENERAL KEEPING(GENERAL LIST OF NOTICE)

10. Check the voltage of CARRIAGE PCB.

→ Check accurate setting of voltage at each head.



11. Check the pressure in air tank.

→ Check the pressure of 4 ~6 kgf/㎠ in Air Tank.

GENERAL KEEPING(GENERAL LIST OF NOTICE)

12. Check the Parameter of SERVO MOTOR DRIVER.

→ Check the value of FEED/CARRIAGE SERVO MOTOR DRIVER.

13. Check the Temperature controller.

→ Check the Temperature of SUB INK TANK(45C), HEADBASE(49C) & VANISH (40C).

GENERAL KEEPING(GENERAL LIST OF NOTICE)

14. Beware of accurate ink supply for each color and ink spilling.

→ Make sure not to confuse Magenta with Light Magenta, and Cyan with Light Cyan.

→ Also please make sure SOLUTION and VANISH INK not to mix to use.

→ If the ink is spilled on the surface of machine, first clean with a small amount of solution, and then clean again with alcohol.

Alignment

There are three ways for Alignment.

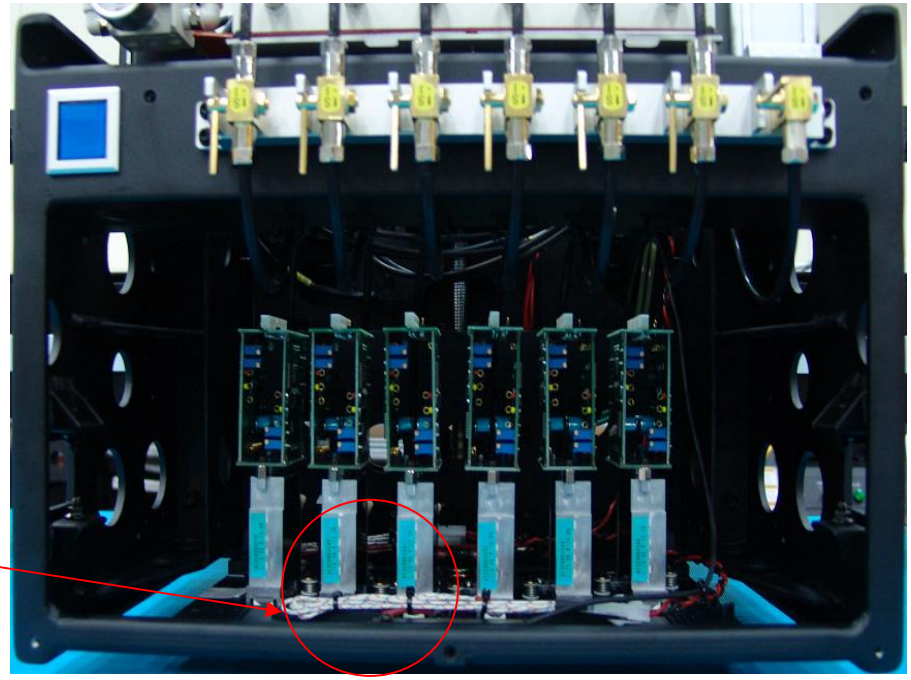
- Head Alignment
- Head Base Alignment
- Lamp House Alignment

Head Alignment

1) Control right & left slope of print head
2) Control up & down alignment of print head
3) Use two adjusting bolts and two fixing bolts.

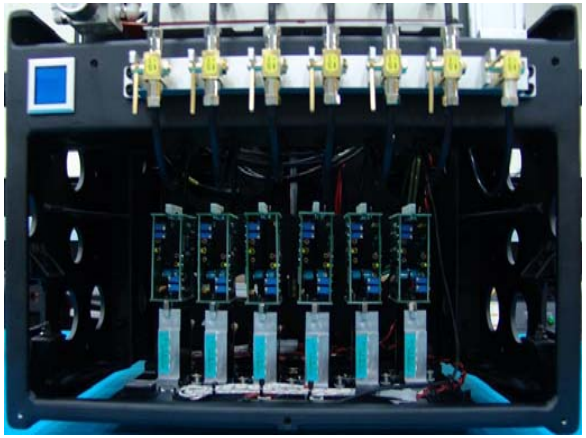
There are M3 bolt and fix bolt

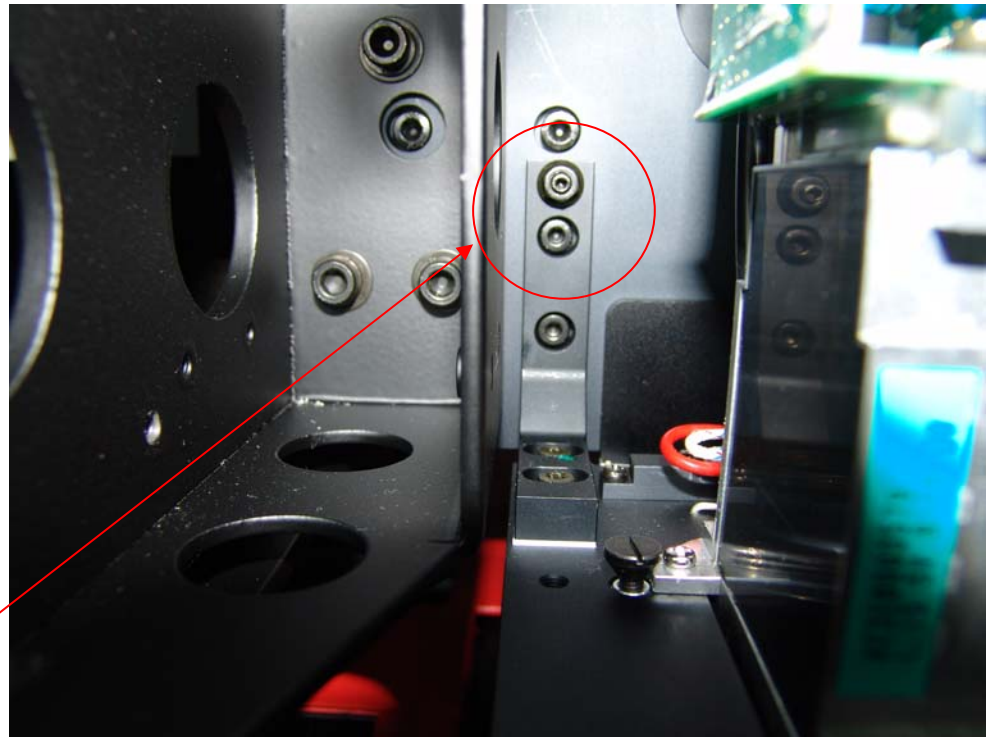
on both front side and back side.



Alignment

2) Alignment of Head Base
   1) Control right & left alignment of head base.
   2) Control front & rear alignment of head base.
   3) Use two adjustment blocks.





There is an adjustment block in the left and right side.

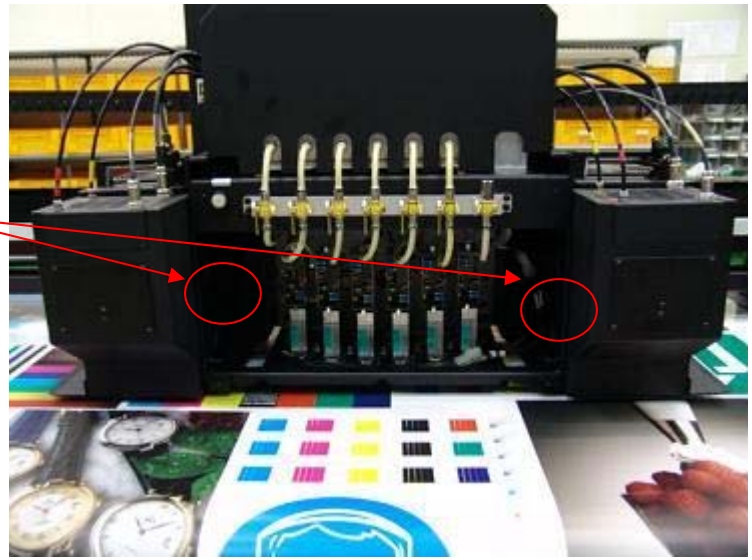
Alignment

3) Alignment of Lamp House

1) Control device for left, right alignment of Lamp House.
2) Use two adjusting bolts for the left, right control.

Adjustment bolt

in the Right & Left



ABSOLUTELY KEEPING

1. Vacuum pressure checking: If the power of printer is on, the supply of compressed air should be available. (The value required for controlling each part should be aligned within the values written in the Sticker mentioned on each part.)

2. While the printer is not in use, clean the head and install the capping device.
   - → Protect the head by cleaning head solution. (once or more a day)
   - → If machine is on, if print in operation more than 1 hr and if run for 20㎡/h, the pursing process will help the head nozzle to protect.
   - → If power is off in operating, the solution must be filled in within a short time in order to protect the Head.
   - → If power is OFF, should do capping after cleaning the head solution.

3. Before turning on the power of printer, should check ON status of COMPRESSOR and then turn on the power. On the contrary, when the power of printer is turned off, after cleaning the head and completing the capping, then turn off the power of COMPRESSOR.

LIST OF NOTICE WHEN TURNING THE POWER ON

1. Dismantle all the power cables. (Shut down the Main Breaker.)

2. Verify the voltage short after dismantling all the cables.
   - Tester is adjusted at the position of measuring the resistance. When measuring the power cable and grounding, must have O.L value (unlimited).

3. After short test, verify the chassis between AC LINE and MAIN BODY.

4. After shutting down all the breaker (C/B), turn on the S/W of main breaker (C/B).

5. Verify the status by turning ON/FF the S/W of each breaker.

6. Take out DC connector going to the Main and the Head.

7. Verify the status of printer by supplying power to each part.
   (Turn on head power, motor power and the power of main body in sequence.)

8. Verify whether the DC Power is normal or not by turning ON/OFF the power of controller.

9. Connect with DC connector going to the Main and the Head.
   - Verify the status of connecting, and also verify 24V of Main & Head PCB, GND, frame grounding.

10 Turn on all the breakers.

11. Check the status of printer after turning on the main power.

ENCODER & CODE STRIP CHECK

1. Verify the status of red light on the encoder after turning the powder on.

2. If CALIB. key is pressed down right after pressing down F2 Carriage Release, the carriage can be relocated by hand.

☞ When you push the carriage forward, check whether Code Strip is stuck or bent while the encoder is passing thru code strip.

- The incorrect assembly can cause an jetting problem in printing or abnormal output.
  Must verify correctness of the height & angle of encoder.

3. Wipe away dust, water, oil etc on the Code Strip with clean cloth or flannelette.

☞ For cleaning, do not use acetone, benzene, solvent or thinner because they can erase the graduations printed on code strip.

4. If there is nothing wrong, F1 SERVO ON and HOME CHECK is pressed down. Then the Carriage will be servo-on and check the Home.

5. In case the Code Strip needs to be changed due to serious scratch and contamination, should check it by A/S engineer by contacting **AGFA**.

6. When it is changed, verify whether the Code Strip is in 180 dpi or not.

*Cautions

Since the Code Strip is sensitive to shock, please be careful not to put any stuff on it and to touch, and keep it clean. Manage It carefully.

NEGATIVE PRESSURE CHECK

1. Verify the operational condition of air compressor.

2. Verify the gauge of vacuum pressure.
- Set the pressure value as written on the sticker.
- If you got any trouble on vacuum pressure, it can cause series trouble for printing as falling-off of nozzle and ink dropping.

3. Remove the water in the filter when the water level reaches upto ½ in the filter of panel of compressor.
  - Be cautious that the water should keep away from electric part.

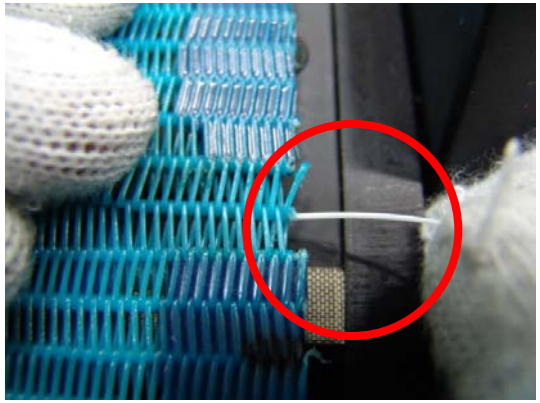
4. Remove waste ink that was supplied from sub ink tank.

5. Should remove the water by opening the drain valve of air tank at least every other day.

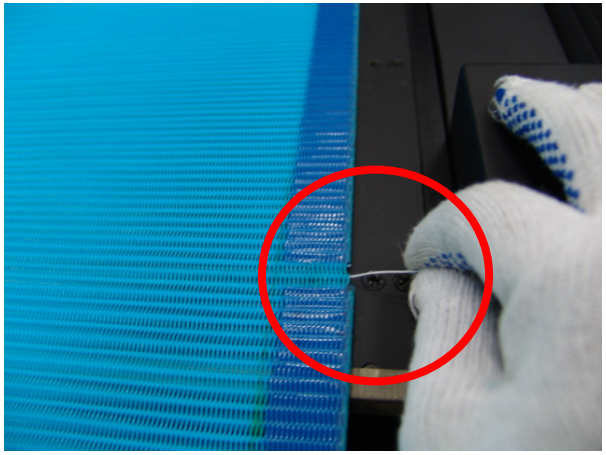
*Cautions

If nothing is changed even if the pressure in the regulator is changed, should check the hose linking with setting valve and regulator.

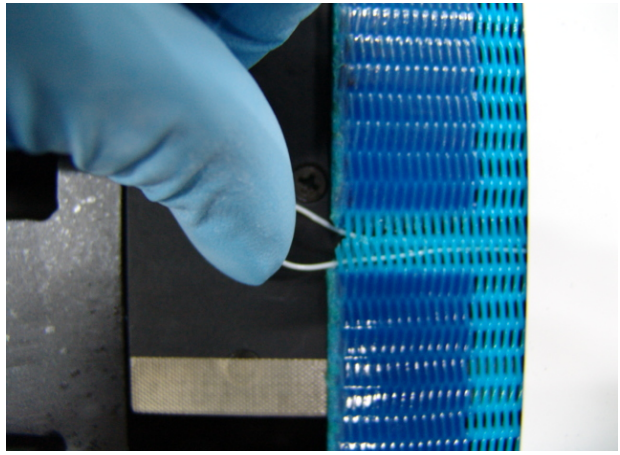
ASSENBLY & DISASSEMBLY OF CONVEYOR BELT



① Separate the valve after removing the pin linking between belts.



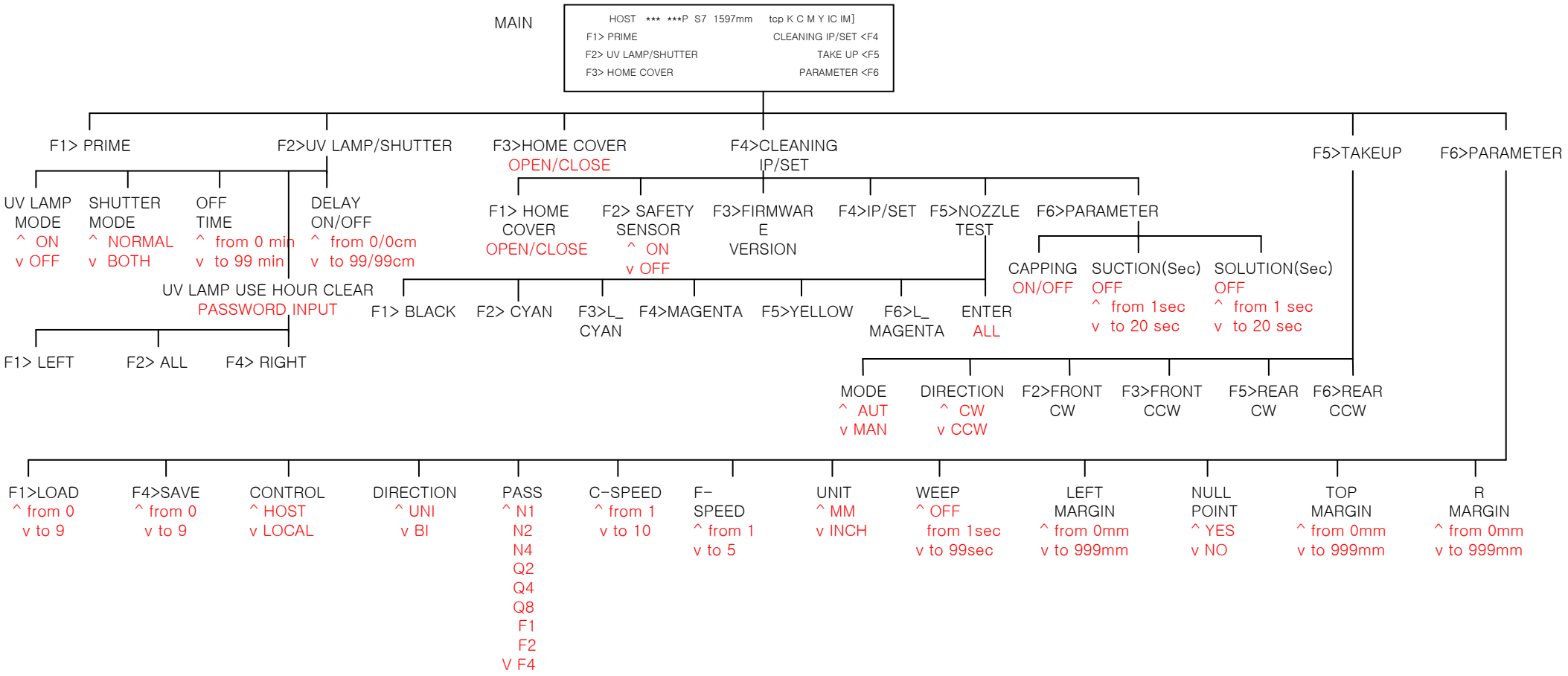
② Connect the belts by inserting a pin between them.
(Two persons needs for this work.)



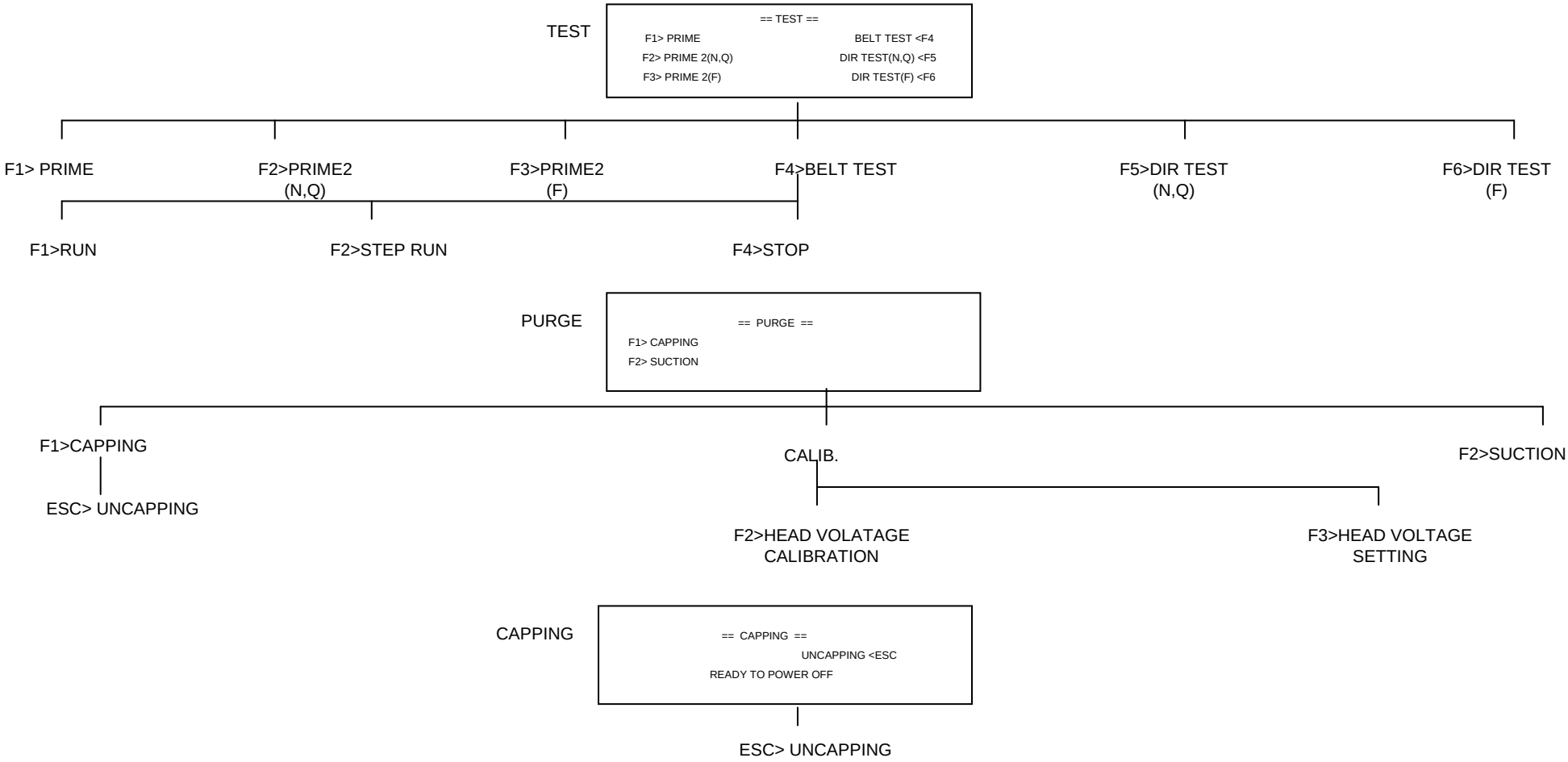
③ Insert the pin to the end. the remain section is fold and then insert into the belt.

Designed for easy assembly and disassembly of the Conveyor Belt.

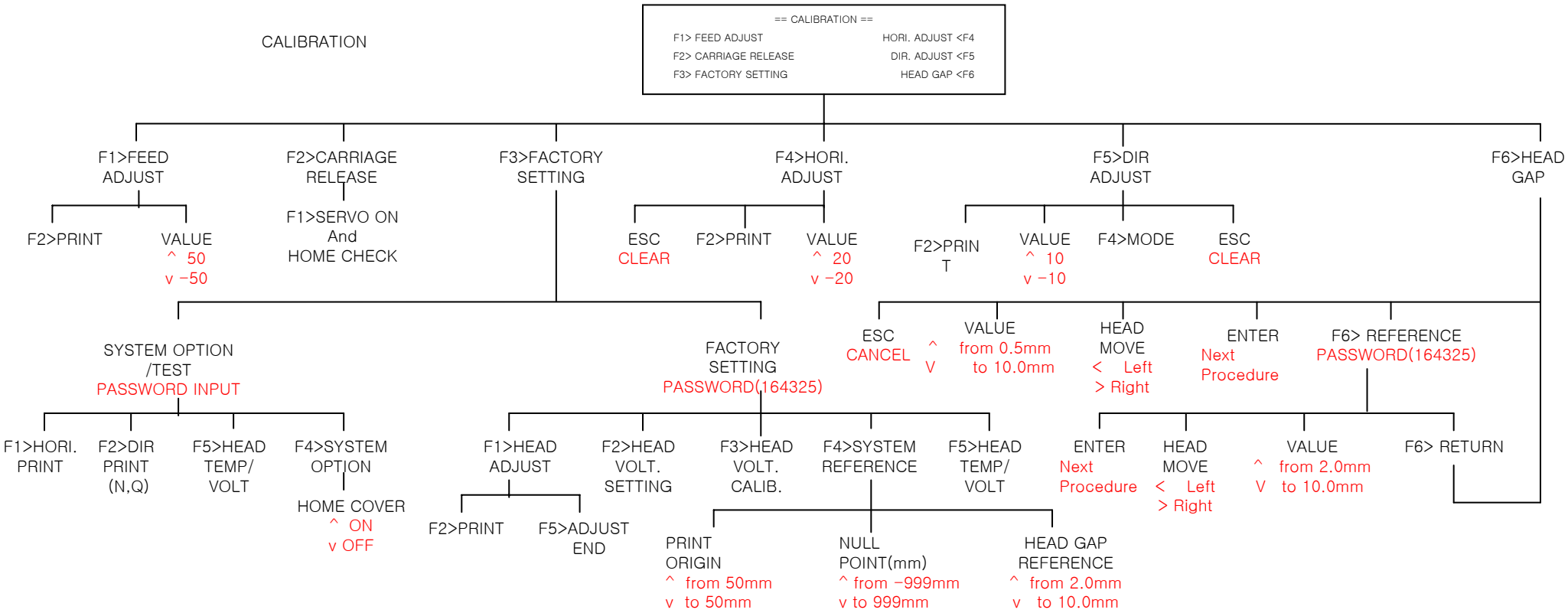
TREE MENU-1


MAIN
HOST *** ***P S7 1597mm tcp K C M Y IC IM]
F1> PRIME
F2> UV LAMP/SHUTTER
F3> HOME COVER
CLEANING IP/SET <F4
TAKE UP <F5
PARAMETER <F6
F1> PRIME
F2>UV LAMP/SHUTTER
F3>HOME COVER
OPEN/CLOSE
F4>CLEANING
IP/SET
F5>TAKEUP
F6>PARAMETER
UV LAMP
MODE
^ ON
v OFF
SHUTTER
MODE
^ NORMAL
v BOTH
OFF
TIME
^ from 0 min
v to 99 min
DELAY
ON/OFF
^ from 0/0cm
v to 99/99cm
UV LAMP USE HOUR CLEAR
PASSWORD INPUT
F1> LEFT
F2> ALL
F4> RIGHT
F1> HOME
COVER
OPEN/CLOSE
F2> SAFETY
SENSOR
^ ON
v OFF
F3>FIRMWAR
E
VERSION
F4>IP/SET
F5>NOZZLE
TEST
F6>PARAMETER
CAPPING
ON/OFF
SUCTION(Sec)
OFF
^ from 1sec
v to 20 sec
SOLUTION(Sec)
OFF
^ from 1 sec
v to 20 sec
F1> BLACK
F2> CYAN
F3>L_
CYAN
F4>MAGENTA
F5>YELLOW
F6>L_
MAGENTA
ENTER
ALL
MODE
^ AUT
v MAN
DIRECTION
^ CW
v CCW
F2>FRONT
CW
F3>FRONT
CCW
F5>REAR
CW
F6>REAR
CCW
F1>LOAD
^ from 0
v to 9
F4>SAVE
^ from 0
v to 9
CONTROL
^ HOST
v LOCAL
DIRECTION
^ UNI
v BI
PASS
^ N1
N2
N4
Q2
Q4
Q8
F1
F2
V F4
C-SPEED
^ from 1
v to 10
F-
SPEED
^ from 1
v to 5
UNIT
^ MM
v INCH
WEEP
^ OFF
from 1sec
v to 99sec
LEFT
MARGIN
^ from 0mm
v to 999mm
NULL
POINT
^ YES
v NO
TOP
MARGIN
^ from 0mm
v to 999mm
R
MARGIN
^ from 0mm
v to 999mm

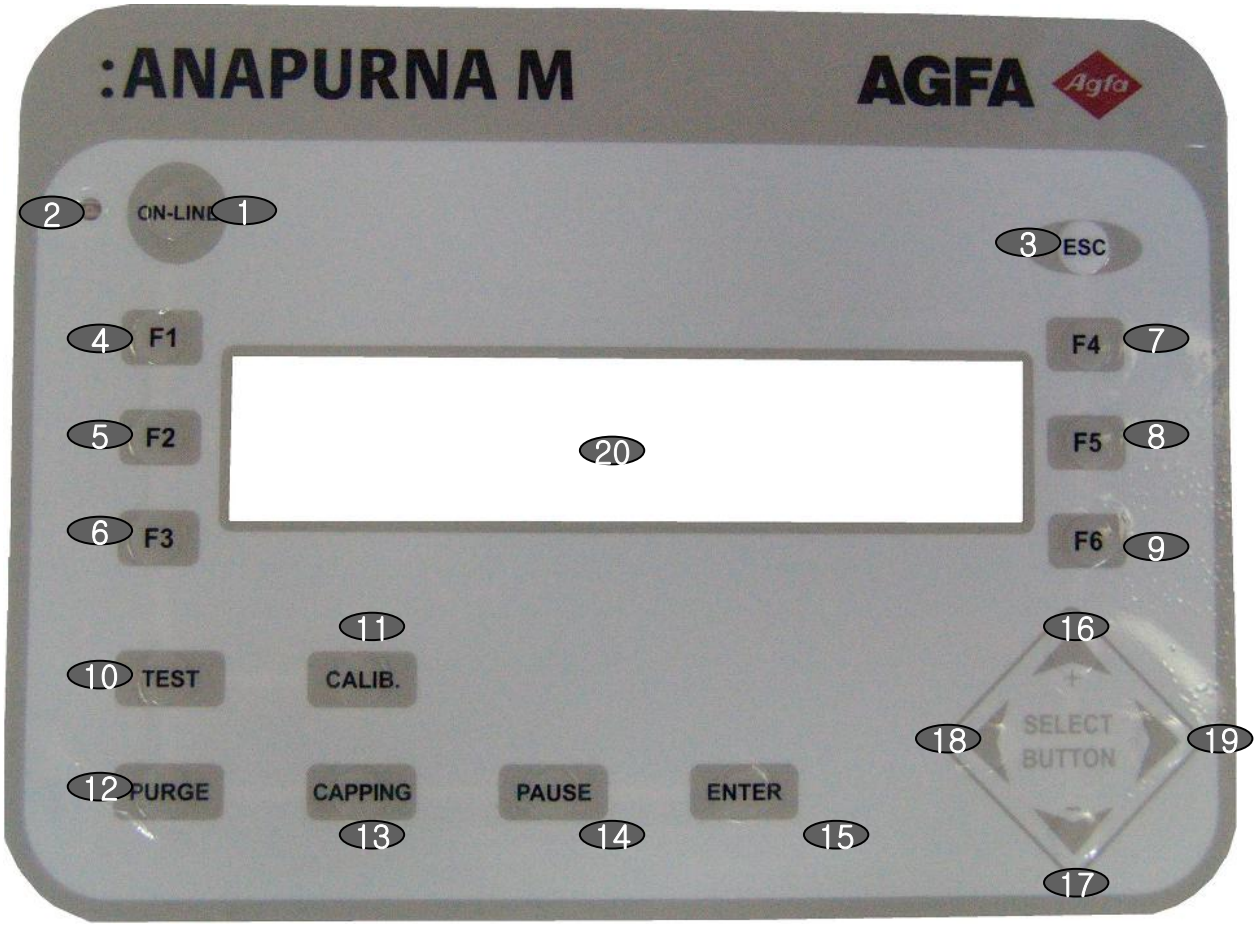
TREE MENU-2


TEST
== TEST ==
F1> PRIME
F2> PRIME 2(N,Q)
F3> PRIME 2(F)
BELT TEST <F4
DIR TEST(N,Q) <F5
DIR TEST(F) <F6
F1> PRIME
F2>PRIME2 (N,Q)
F3>PRIME2 (F)
F4>BELT TEST
F5>DIR TEST (N,Q)
F6>DIR TEST (F)
F1>RUN
F2>STEP RUN
F4>STOP
PURGE
== PURGE ==
F1> CAPPING
F2> SUCTION
F1>CAPPING
ESC> UNCAPPING
CALIB.
F2>SUCTION
F2>HEAD VOLATAGE CALIBRATION
F3>HEAD VOLTAGE SETTING
CAPPING
== CAPPING ==
UNCAPPING <ESC
READY TO POWER OFF
ESC> UNCAPPING

TREE MENU-3


CALIBRATION
== CALIBRATION ==
F1> FEED ADJUST
F2> CARRIAGE RELEASE
F3> FACTORY SETTING
HORI. ADJUST <F4
DIR. ADJUST <F5
HEAD GAP <F6
F1>FEED ADJUST
F2>PRINT
VALUE ^ 50 v -50
F2>CARRIAGE RELEASE
F1>SERVO ON And HOME CHECK
F3>FACTORY SETTING
F4>HORI. ADJUST
ESC CLEAR
F2>PRINT
VALUE ^ 20 v -20
F5>DIR ADJUST
F2>PRINT
VALUE ^ 10 v -10
F4>MODE
ESC CLEAR
F6>HEAD GAP
SYSTEM OPTION /TEST
PASSWORD INPUT
F1>HORI. PRINT
F2>DIR PRINT (N,Q)
F5>HEAD TEMP/ VOLT
F4>SYSTEM OPTION
HOME COVER ^ ON v OFF
FACTORY SETTING
PASSWORD(164325)
F1>HEAD ADJUST
F2>PRINT
F5>ADJUST END
F2>HEAD VOLT. SETTING
F3>HEAD VOLT. CALIB.
F4>SYSTEM REFERENCE
PRINT ORIGIN ^ from 50mm v to 50mm
NULL POINT(mm) ^ from -999mm v to 999mm
F5>HEAD TEMP/ VOLT
HEAD GAP REFERENCE ^ from 2.0mm v to 10.0mm
ESC CANCEL
^ V
VALUE from 0.5mm to 10.0mm
HEAD MOVE < Left > Right
ENTER Next Procedure
F6> REFERENCE
PASSWORD(164325)
ENTER Next Procedure
HEAD MOVE < Left > Right
^ V
VALUE from 2.0mm to 10.0mm
F6> RETURN

CONTROL PANEL-1

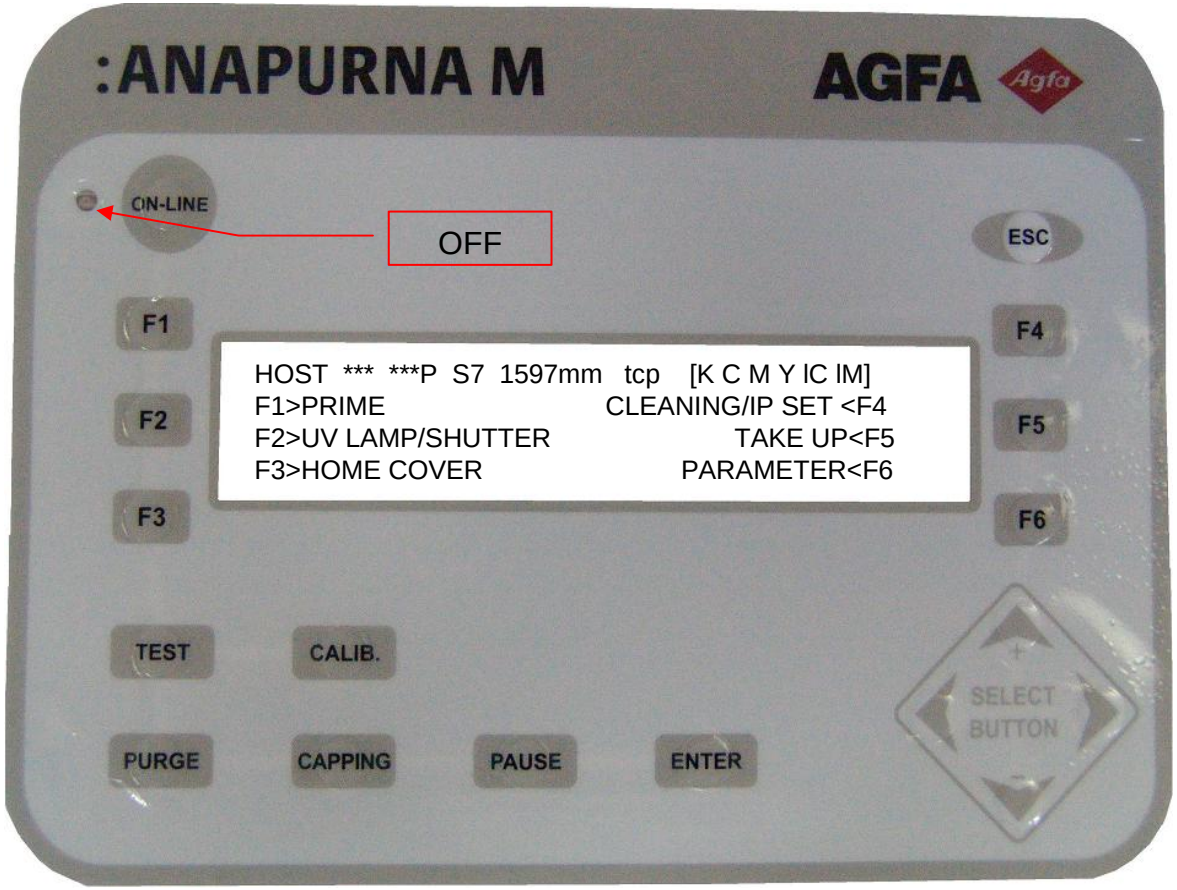


1. ON - LINE Key
2. ON - LINE Indicator
3. ESC Key
4. F1 Key
5. F2 Key
6. F3 Key
7. F4 Key
8. F5 Key
9. F6 Key
10. TEST Key
11. CALIB. Key
12. PURGE Key
13. CAPPING Key
14. PAUSE Key
15. ENTER Key
16. UP Key
17. DOWN Key
18. LEFT Key
19. RIGHT Key
20. LCD DISPLAY

CONTROL PANEL-2

1. ON - LINE Key : Used to change the status of OFF LINE to that of ON LINE.
2. ON - LINE Indicator : Light is on in ON-LINE MODE, if OFF, will shut down after showing up the data of print shortly.
3. ESC Key : Use it when function is cancelled.
4. F1 Key : Perform Function 1.
5. F2 Key : Perform Function 2.
6. F3 Key : Perform Function 3.
7. F4 Key : Perform Function 4.
8. F5 Key : Perform Function 5.
9. F6 Key : Perform Function 6.
10. TEST Key : Key accessed for TEST Menu.
11. CALIB. Key : Key accessed for CALIBRATION Menu.
12. PURGE Key : key accessed for PURGE Menu. Move Carriage to PURGE side.
13. CAPPING Key : Key accessed for CAPPING Menu.
14. PAUSE Key : Key for Temporary Function Stop.
15. ENTER Key : Key for Function Performance & Various Parameter Saving.
16. UP Key : Key for Value up when entering Parameter.
17. DOWN Key : Key for Value down when entering Parameter.
18. LEFT Key : Key for moving Article to right when entering Parameter, Key for moving Carriage to left when doing Gap Test.
19. RIGHT Key : Key for moving article to left when inputt Parameter, Key for moving carriage to right when performing Gap Test.
20. LCD DISPLAY : Display on-going & current status information.

DECRIPTION OF OFF-LINE MENU (MAIN)



Operation of Each Function Key

F1> PRIME: The function of PRIME is to check status of Nozzle Jetting and to get print-out in a decent quality

F2>UV LAMP SHUTTER : In printing, set ON/OFF of LAMP,
Mode of shutter (standard, 2 at a time),
Delay distance of Lamp Shutter,
Lamp Off Time.
Display Using Time for left or right Lamp.

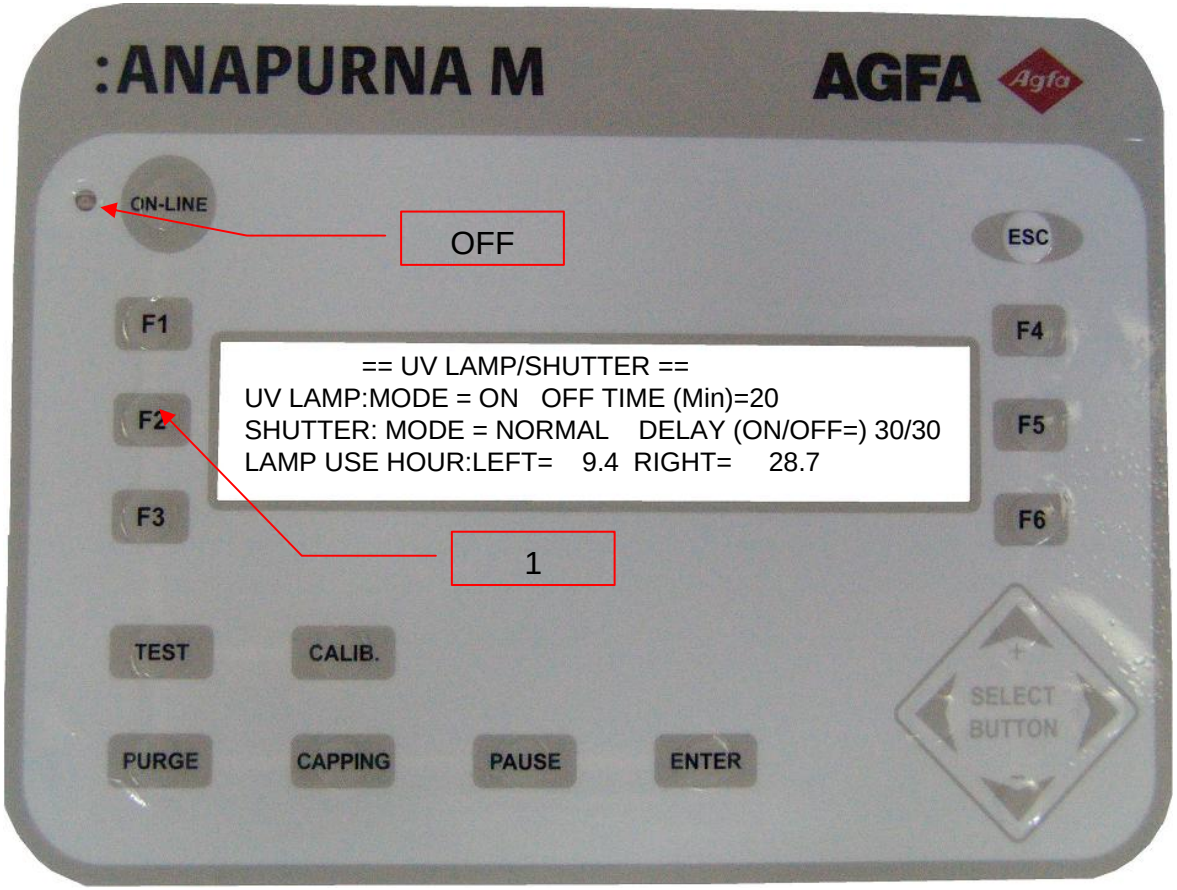
F3> HOME COVER : If once, open and if press once again, close.

F4> CLEANING/IP SET: Use it when setting nozzle test and cleaning parameter. Should enter IP Address.

F5> TAKE UP : Set the mode by operating the TAKE UP MOTOR manually.

F6> PARAMETER: Use it when setting Printer parameter.

SCRIPTION OF OFF-LINE MENU (UV LAMP/SHUTTER) -



Operation of Each Function Key

UP Key ,DOWN Key : Value Change

LEFT Key ,RIGHT Key : Movement of Article

ENTER Key : Terminate after saving.

ESC Key : Terminate without saving.

UV LAMP:MODE = ON, OFF : ON, OFF of Lamp Mode

OFF TIME (Min)=0~99 : OFF TIME of LAMP is 0Min ~ 99Min.

SHUTTER MODE = NORMAL, BOTH :

Shutter mode : Normal, turned ON at the same time

DELAY(ON/OFF) 0~99 : Position of Shutter Open/Close – 0~99CM

LAMP USE HOUR: LEFT:9.4

USE HOUR OF LEFT LAMP 9.4HR=9Hr 24Min

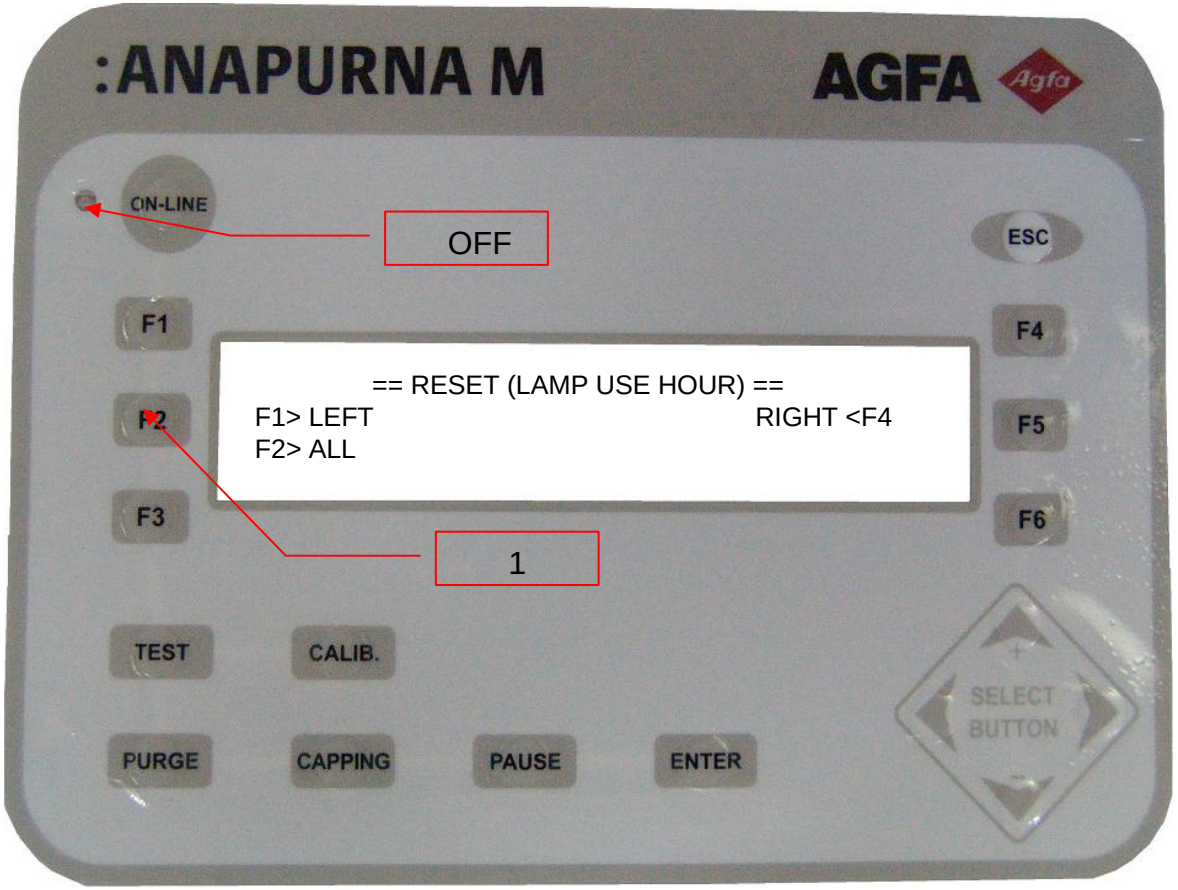
RIGHT:28.7

USE HOUR OF RIGHT LAMP 28.7HR

=28Hr 42Min

USE HOUR of LAMP can be initialized only by engineer when the Lamp is changed.

ESCRIPTION OF OFF-LINE MENU (UV LAMP/SHUTTER)

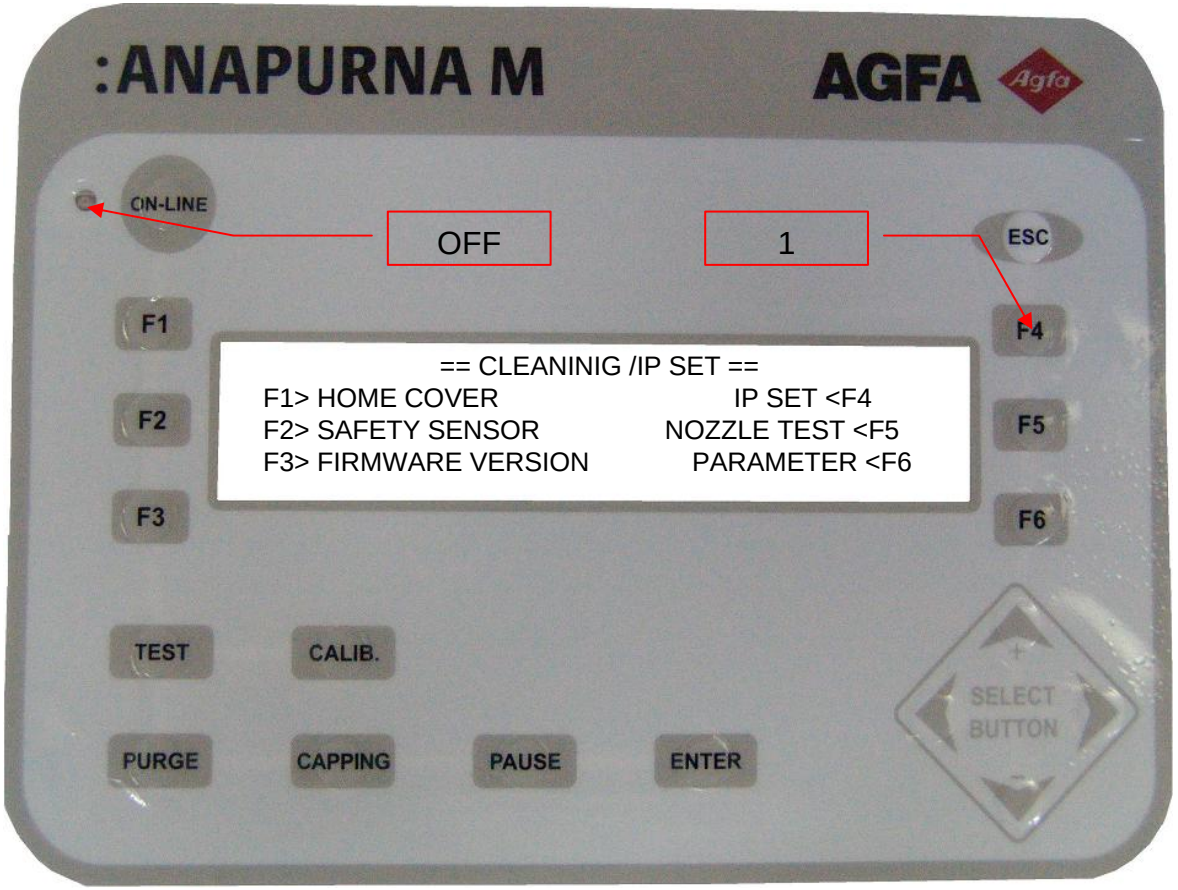


Operation of each function key

Delete : If entering 6142513 in the UV LAMP/SHUTTER MODE, the LCD window like left will be displayed.
F1> LEFT : Delete accumulated Use Time Of Left Lamp.
F2> ALL : Delete accumulated Use Time of Both Lamp.
F4> RIGHT : Delete accumulated Use Time of Right Lamp.

After deleting Accumulated Use Time of Lamp, returned to MAIN MENU.

DESCRIPTION OF OFF-LINE MENU (CLEANING / IP SET) -



Operation of each function key

F1> HOME COVER : If pressing once, open. Then if pressing again, close

F2> SAFETY SENSOR : Decide whether use of safety sensor or not.

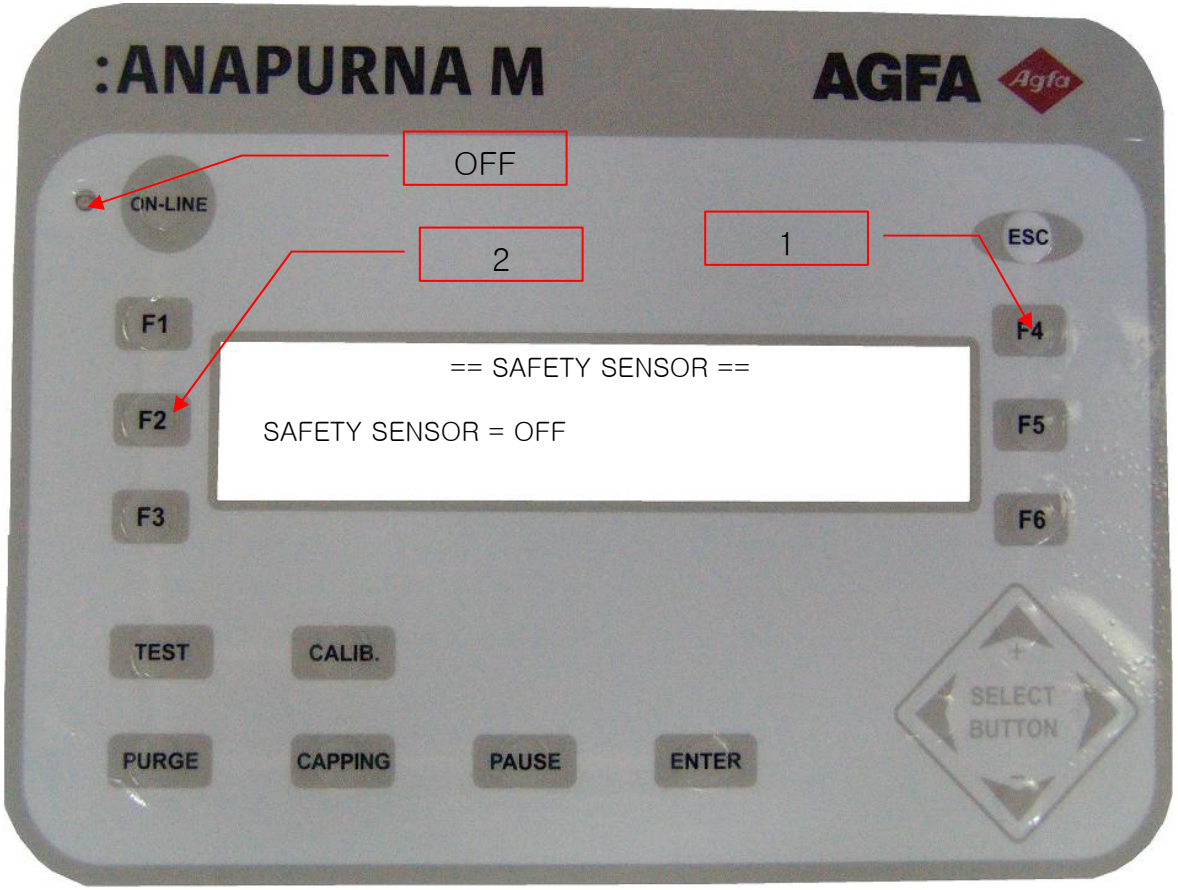
F3> FIRMWARE VERSION : After showing current firmware version for 3 sec, It will return to the previous mode, the mode of CLEANING/IP SET.

F4> IP SET : Enter IP address of printing. (for example 192.168.1.5)

F5> NOZZLE TEST : If possible to check jetting of each color, if is also possible to check the jetting of all the colors simultaneously.

F6> PARAMETER : Possible to select whether use or not of capping motor, section time and operation time of solution capping motor.

ESCRIPTION OF OFF-LINE MENU (CLEANING / IP SET) -



Operation of each function key

UP Key ,DOWN Key : Value Change.

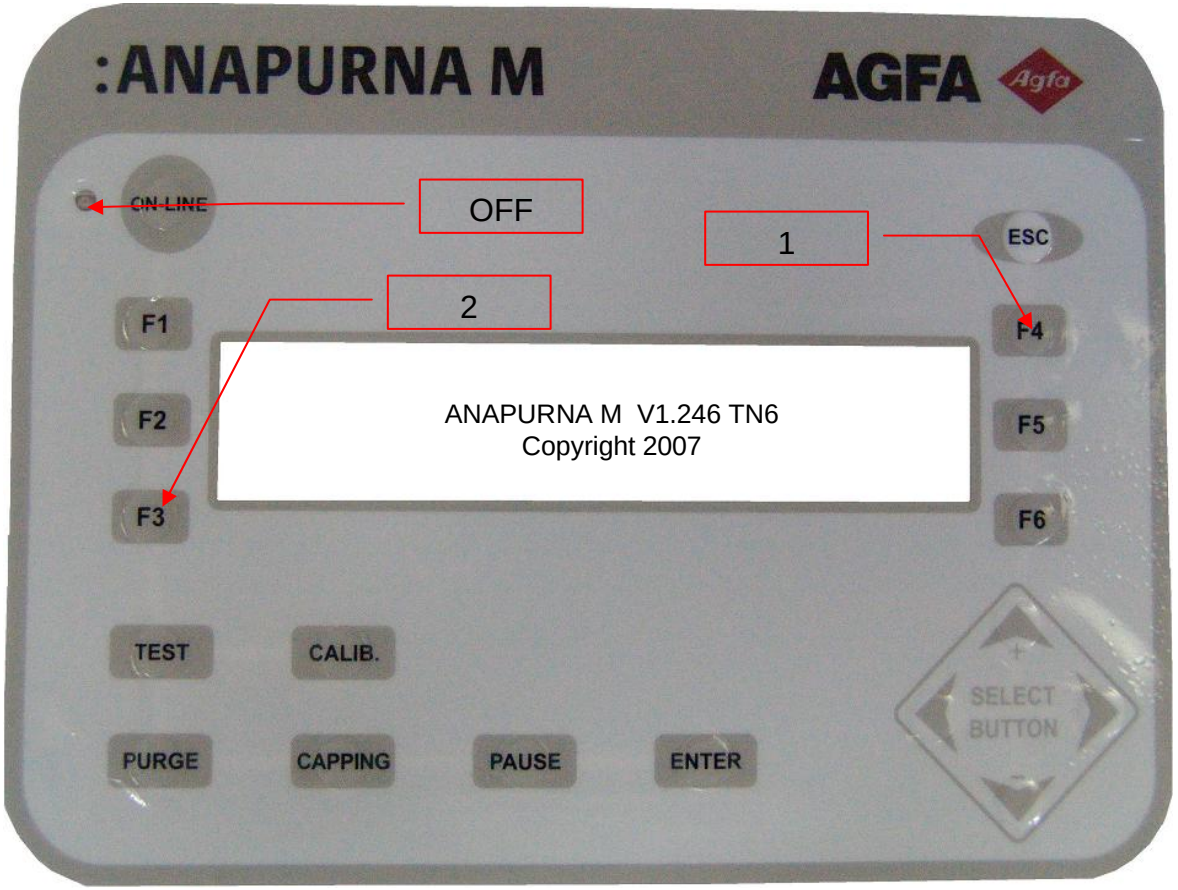
ENTER Key : Terminate after saving.

ESC Key : Terminate without saving.

SAFETY SENSOR = ON, OFF :

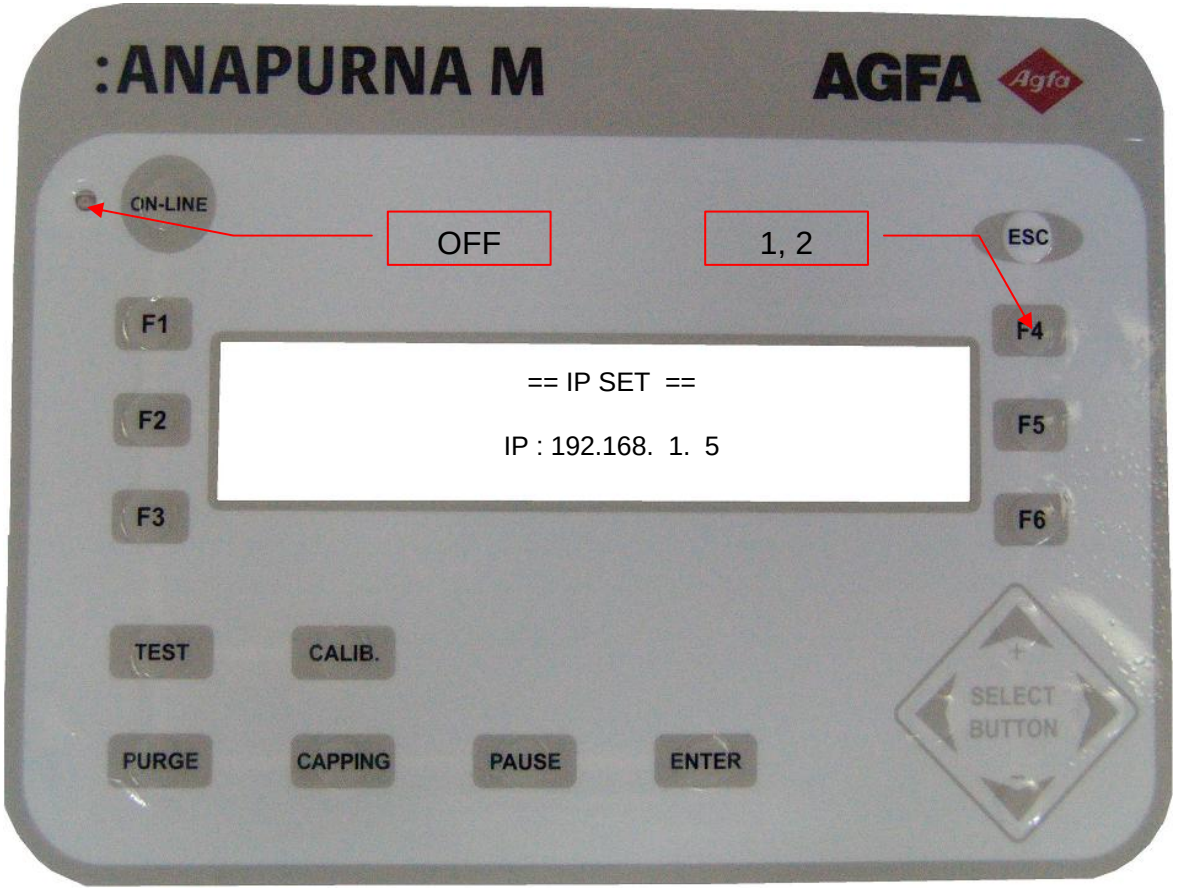
ON. OFF of USER MODE OF SAFETY SENSOR.

DESCRIPTION OFF-LINE MENU (CLEANING / IP SET) – 3



After showing up the current firmware version for 3 second.
It will return to SET MENU OF CLEANING/IP, previous mode.

DESCRIPTION OF OFF-LINE MENU (CLEANING / IP SET) -



Operation of each function key

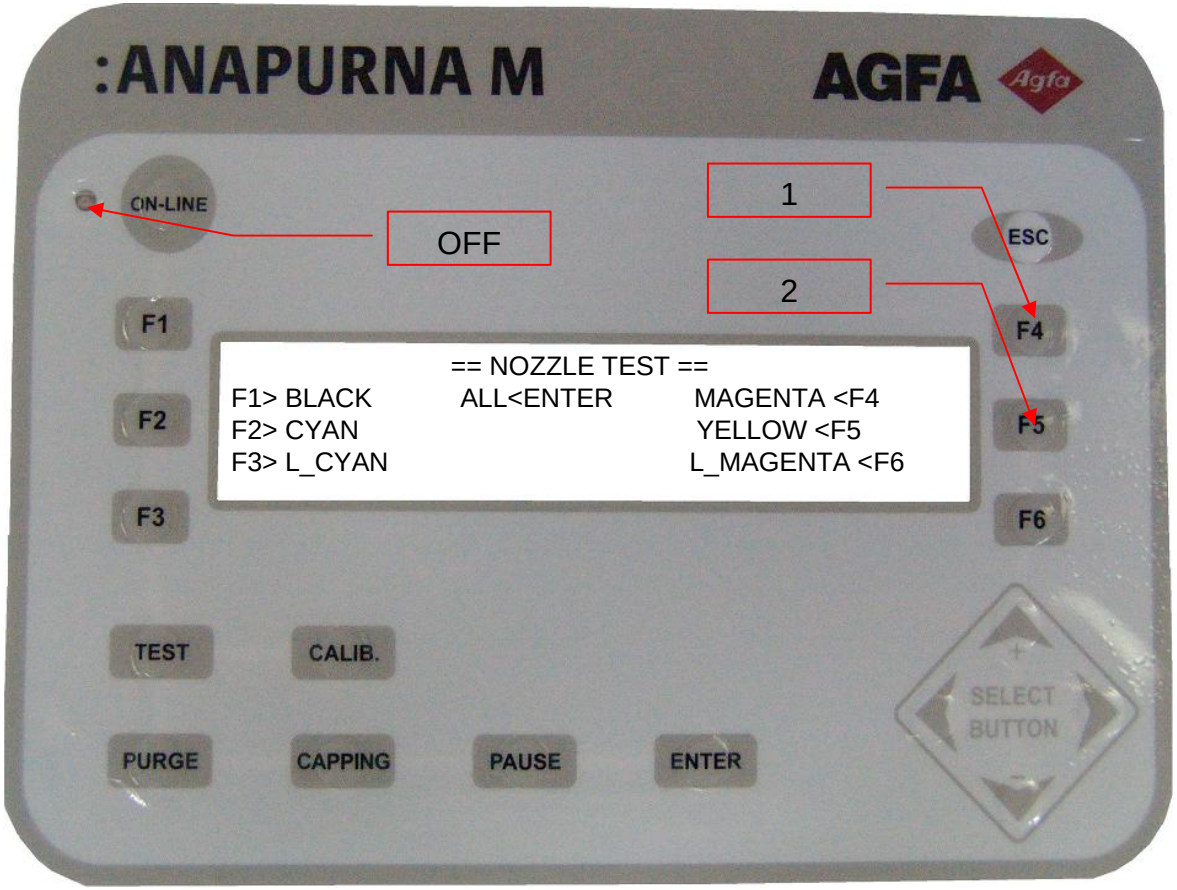
UP Key ,DOWN Key : Value Change.

LEFT Key ,RIGHT Key : Shift of item.

ENTER Key : Terminate after saving.

ESC Key : Terminate without saving.

ECRIPTION OF OFF-LINE MENU (CLEANING / IP SET) –

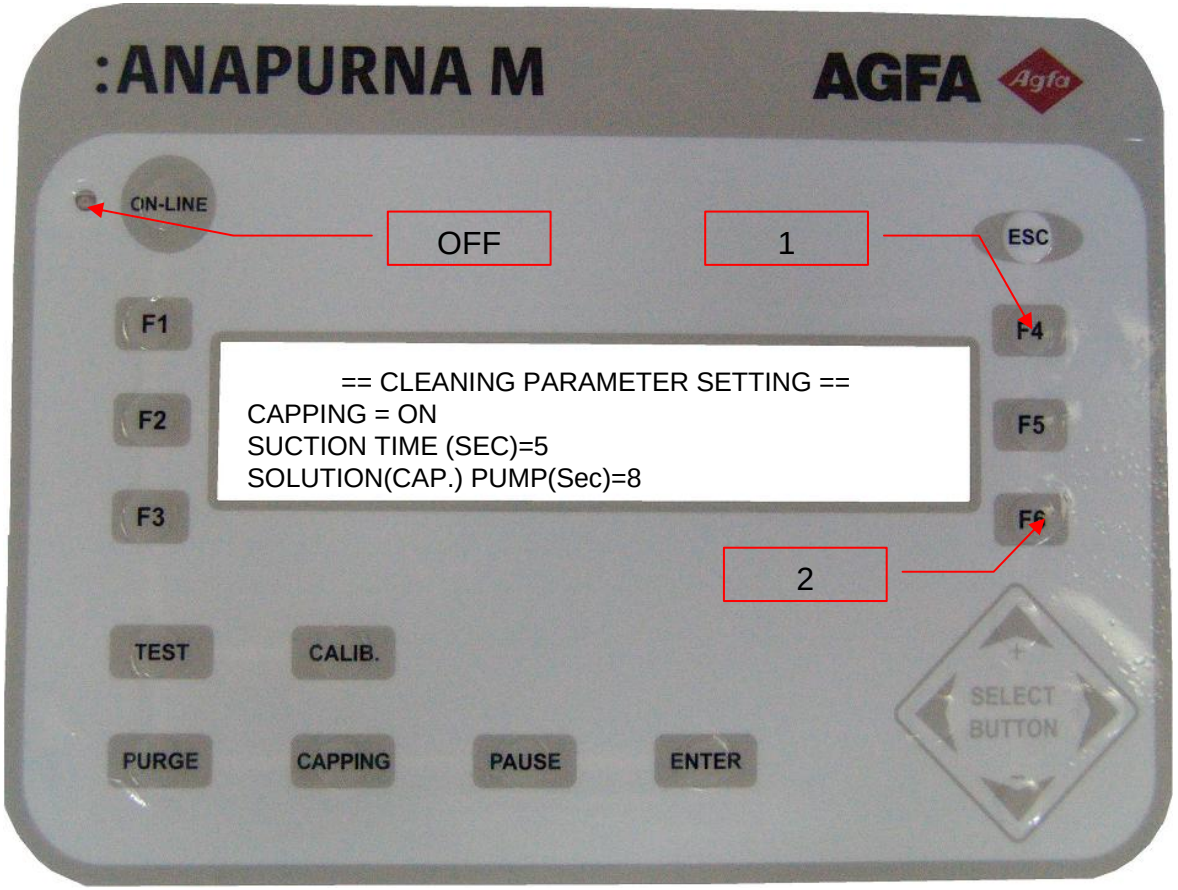


Operation of each function key

F1> BLACK : Jetting all the nozzles of black head.
F2> CYAN : Jetting all the nozzles of CYAN head.
F3> L_CYAN : Jetting all the nozzles of Light CYAN head.
F4> MAGENTA : Jetting all the nozzles of Magenta head
F5> YELLOW : Jetting all the nozzles of Yellow head
F6> L_MAGENTA : Jetting all the nozzles of Light Magenta head
ENTER> ALL : Jetting all the nozzles of all heads.
ESC> Use it when terminating Nozzle Jetting.
(Will return to CLEANING /IP SET MENU, previous mode.)

• After jetting for 3 sec nozzle jetting, it will return to the screen like above.

DESCRIPTION OF OFF-LINE MENU (CLEANING / IP SET)



Operation of each function key

UP Key ,DOWN Key : Value change.

LEFT Key ,RIGHT Key : Shift of item.

ENTER Key : Terminate after saving.

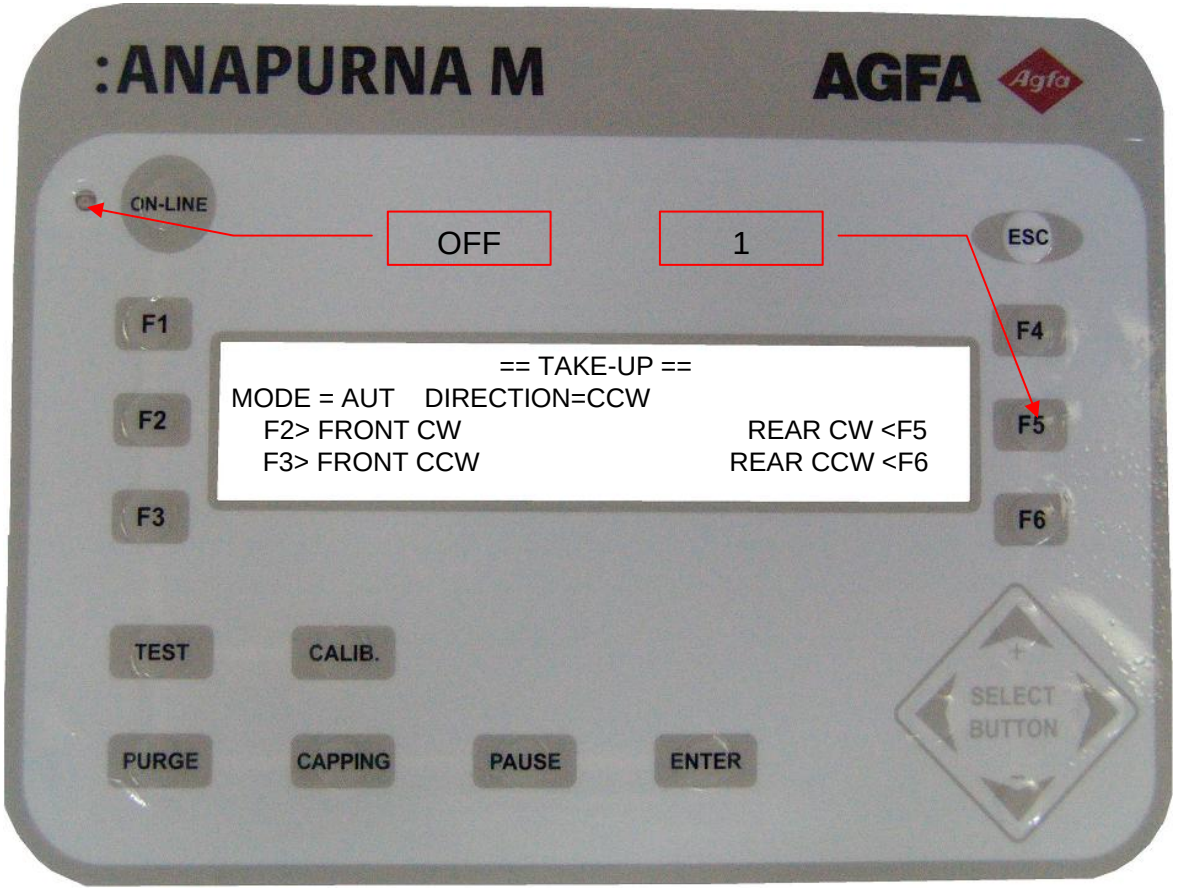
ESC Key : Terminate without saving.

CAPPING = ON, OFF : ON, OFF of CAPPING MOTOR

SUCTION TIME (Sec)=OFF,1~20 : SUCTION OPERATION TIME, OFF for 1 sec upto 20 sec

SOLUTION(CAP.) PUMP(Sec)= OFF,1~20 : Operation Time of Solution Capping Motor OFF for 1sec upto 20sec

DESCRIPTION OF OFF-LINE MENU (TAKE UP)



Operation of each function key

UP Key ,DOWN Key : Value Change.

LEFT Key ,RIGHT Key : Shift of Item.

ENTER Key : Terminate after saving.

ESC Key : Terminate without saving.

MODE = AUT, MAN : AUTO, MANUAL OF TASKUP MODE.

DIRECTION = CW, CCW : When in Auto Mode, rotation direction of front motor. CW: Clockwise, CCW: Counter Clockwise

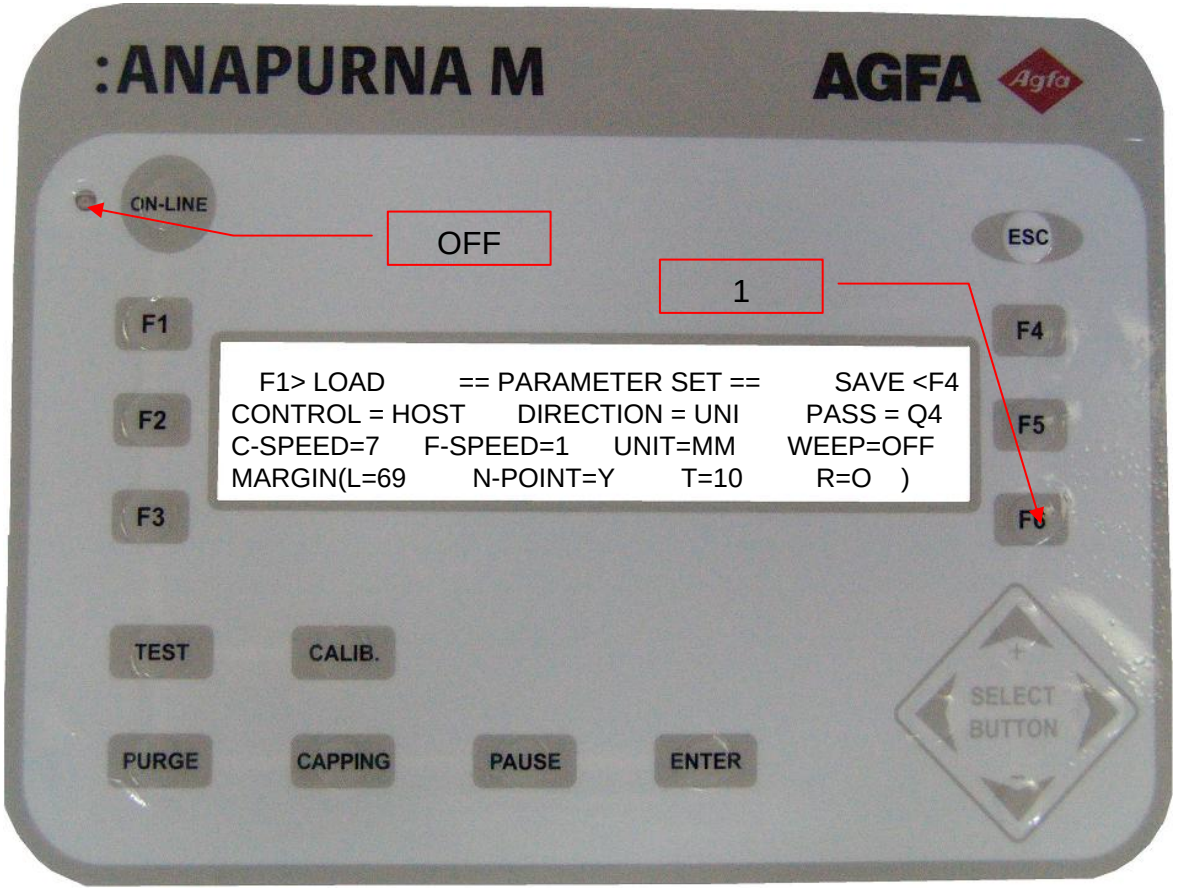
F2> FRONT CW : Only for the time in pressing down, the front motor will be rotated In clockwise.

F3> FRONT CCW : Only for the time in pressing down, the front motor will be rotated in counter clockwise.

F5> REAR CW : Only for the time in pressing down, the rear motor will be rotated In clockwise.

F6> REAR CCW : Only for the time in pressing down, the rear motor will be rotated in counter clockwise.

DESCRIPTION OF OFF-LINE MENU (PARAMETER)



Operation of each function key

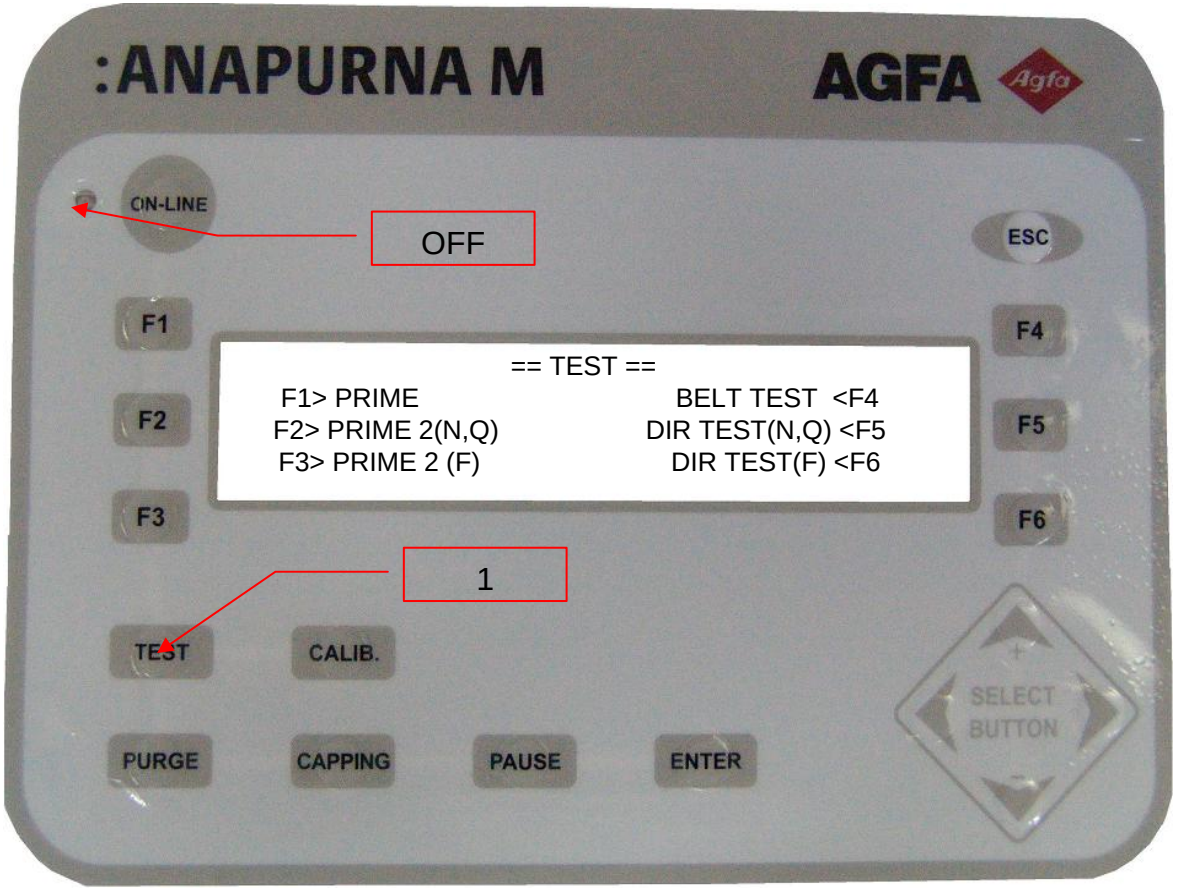
UP Key ,DOWN Key : Value Change, LEFT Key ,RIGHT Key : Shift of item ENTER Key : Terminate after saving.

ESC Key : Terminate without saving.
CONTROL = HOST, LOCAL Print Control Mode
HOST: Host Setting Control LOCAL: Local Setting Control
DIRECTION = UNI,BI Printing direction UNI: UNI-Direction Printing.
BI: Bi-Direction Printing.
PASS=N1, N2, N4, Q2, Q4, Q8, F1, F2, F4 : A number of Pass in printing.
N1: 360 X 360 dpi N2: 360 X 720 dpi N4: 360 X 1440 dpi
Q2: 720 X 360 dpi Q4: 720 X 720 dpi Q8: 720 X 1440 dpi
F1: 720 X 360 dpi F2: 720 X 720 dpi F4: 720 X 1440 dpi
Printing in the above modes.

C-SPEED= 1 upto 10 (standard 7) : Speed of Carriage
F-SPEED=1 upto 5 (Standard 1) : Speed of feed
UNIT=MM,INCH Unit : Inch, MM

WEEP=OFF,1~99 Weeping Time : OFF, 1 Sec upto 99
MARGIN (L=0~999 : Margin of Left : 0 ~ 999 MM
N-POINT: Y,N :Use N-Point (Use, not use)
T=0~999 : Upper Margin : 0 ~ 999 MM
R=0~999 : Lamp Shift Margin : 0 ~ 999 MM
F1> LOAD : Possible to load the parameter upto 10.
F4> SAVE : Possible to save the parameter upto 10.

DESCRIPTION OF TEST MENU – 1



Operation of each function key

F1 => PRIME: The function of PRIME is to lead the printing in good quality by checking whether the jetting of Nozzle is normal or not.

F2 => PRIME 2(N,Q) : Print the PRIME Pattern of 360dpi in length Resolution.

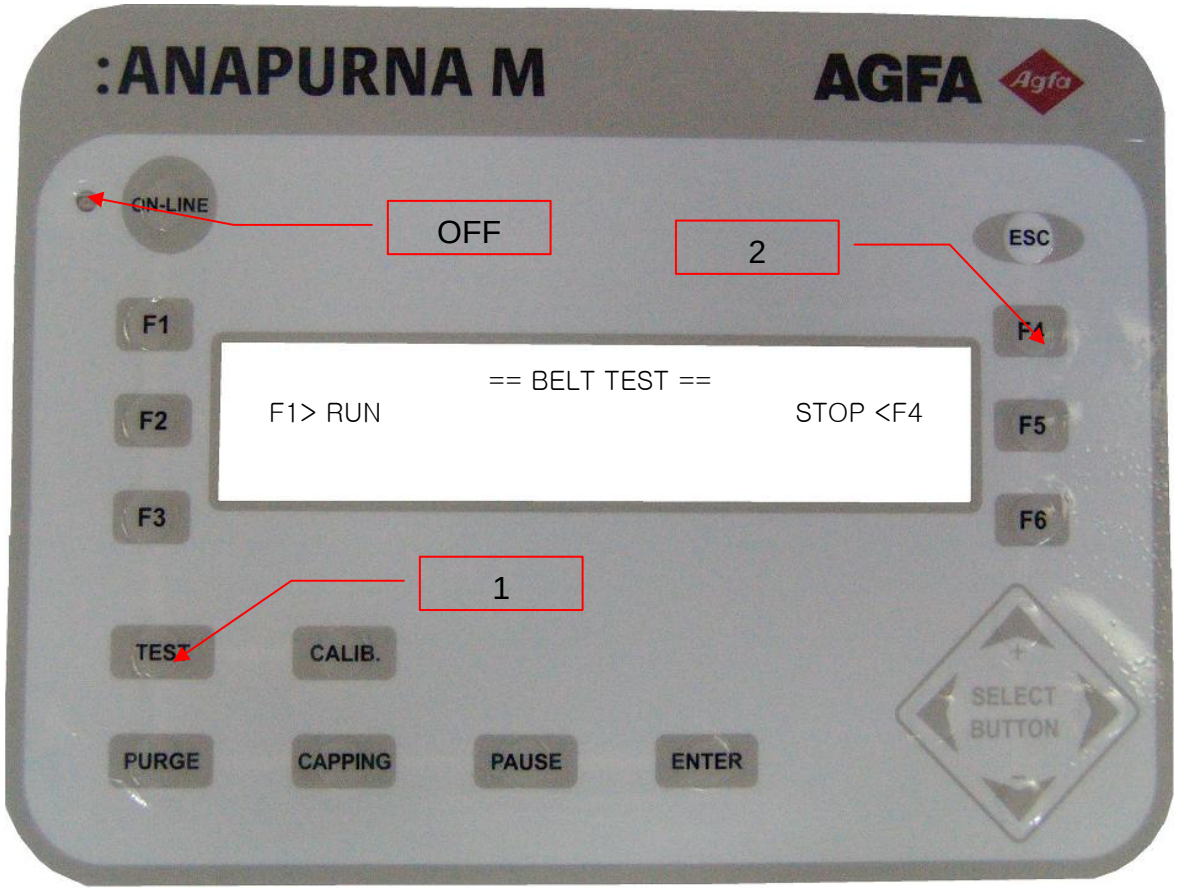
F3 => PRIME 2(F) : Print PRIME pattern in 720dpi of length Resolution.

F4 => BELT TEST : Use it when controlling tension of conveyor belt by rotating.

F5 => DIR TEST(N,Q) : Print Bi-direction pattern in 320dpi of length resolution.

F6 => DIR TEST(F) : Print bi-direction pattern in 720 dpi of length resolution.

DESCRIPTION OF TEST MENU - 2



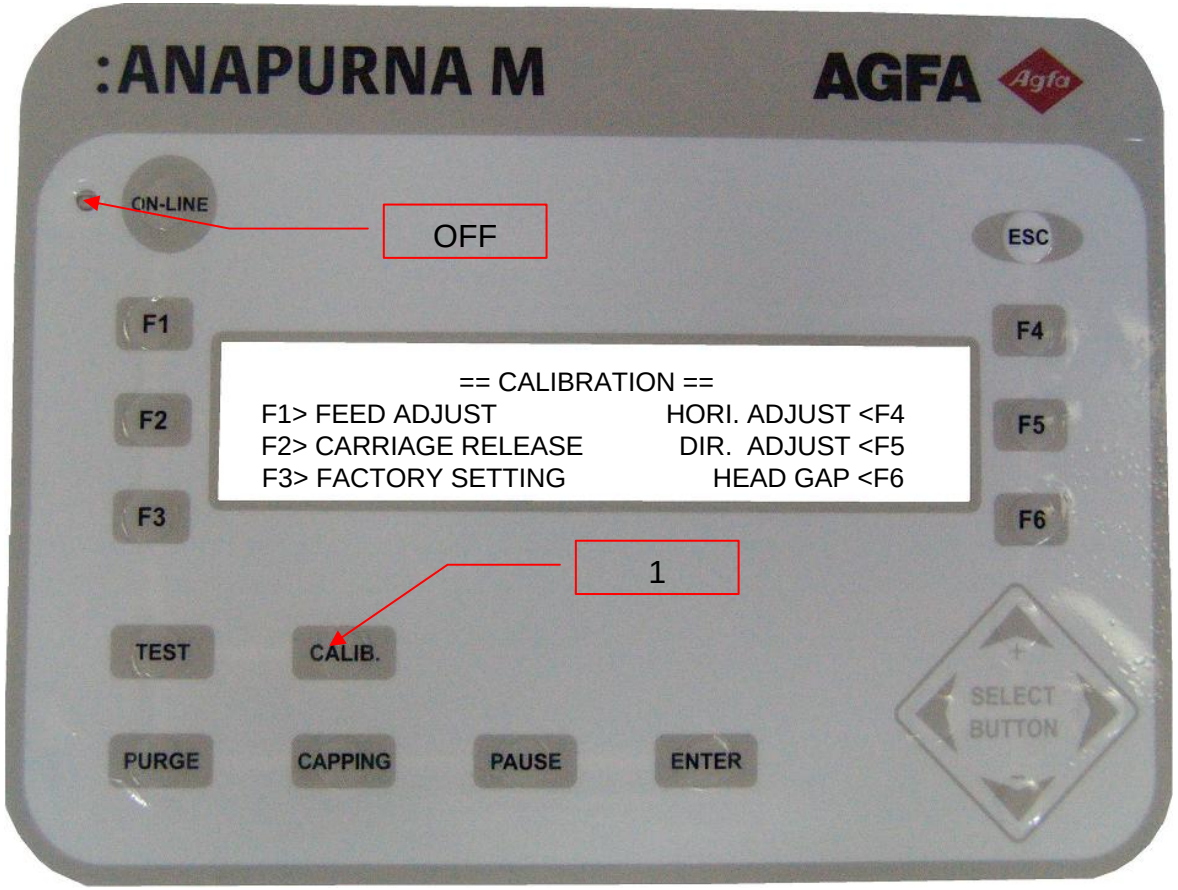
Operation of each function key

F1 => RUN : The conveyor belt is rotated forward.

F4 =>STOP : Use it when stopping the rotation of conveyor.

* The conveyor belt keeps rotated until pressing STOP.
* Must press down ESC after pressing STOP <F4
* Otherwise, even if pressing down ESC, the belt will keep rotating.

DESCRIPTION OF CALIBRATION MENU - 1



Operation of each function key

F1 => FEED ADJUST : Use it when checking or changing current feeding value.

F2 => CARRIAGE RELEASE : Able to move the carriage by hand after servo-off.

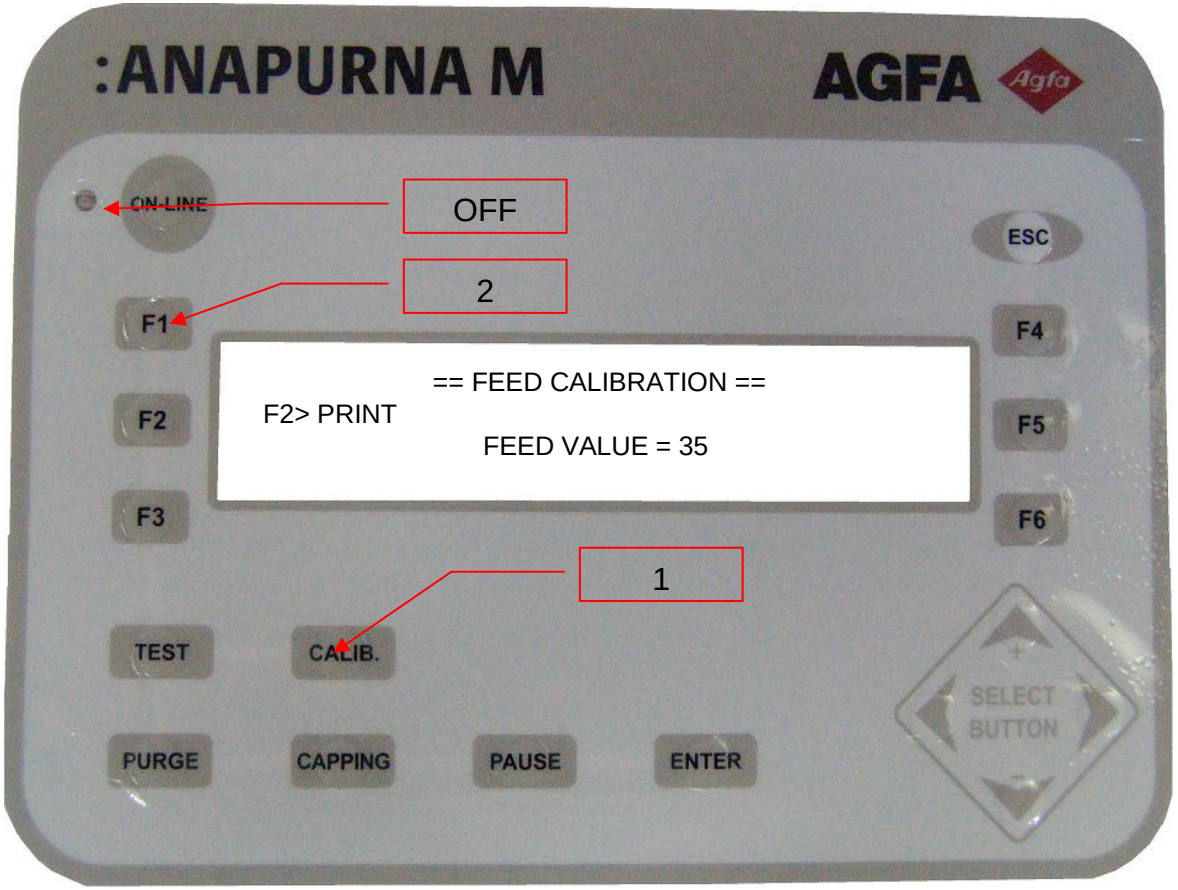
F3 => FACTORY SETTING : USERS should not be changed after factory setting.
The incorrect setting can cause serious damage to the printer.
(It is the mode that can be accessed after entering password.)

F4 => HORI. ADJUST : Use it when checking or changing the Horizontal Adjustment of the Head.

F5 => DIR. ADJUST : Use it when checking and changing the direction value in Bi-direction printing.

F6 => HEAD GAP : Use it when setting the gap between the Media and the Head.

DESCRIPTION OF CALIBRATION MENU – 2



Operation of each function key

UP Key ,DOWN Key : Value Change

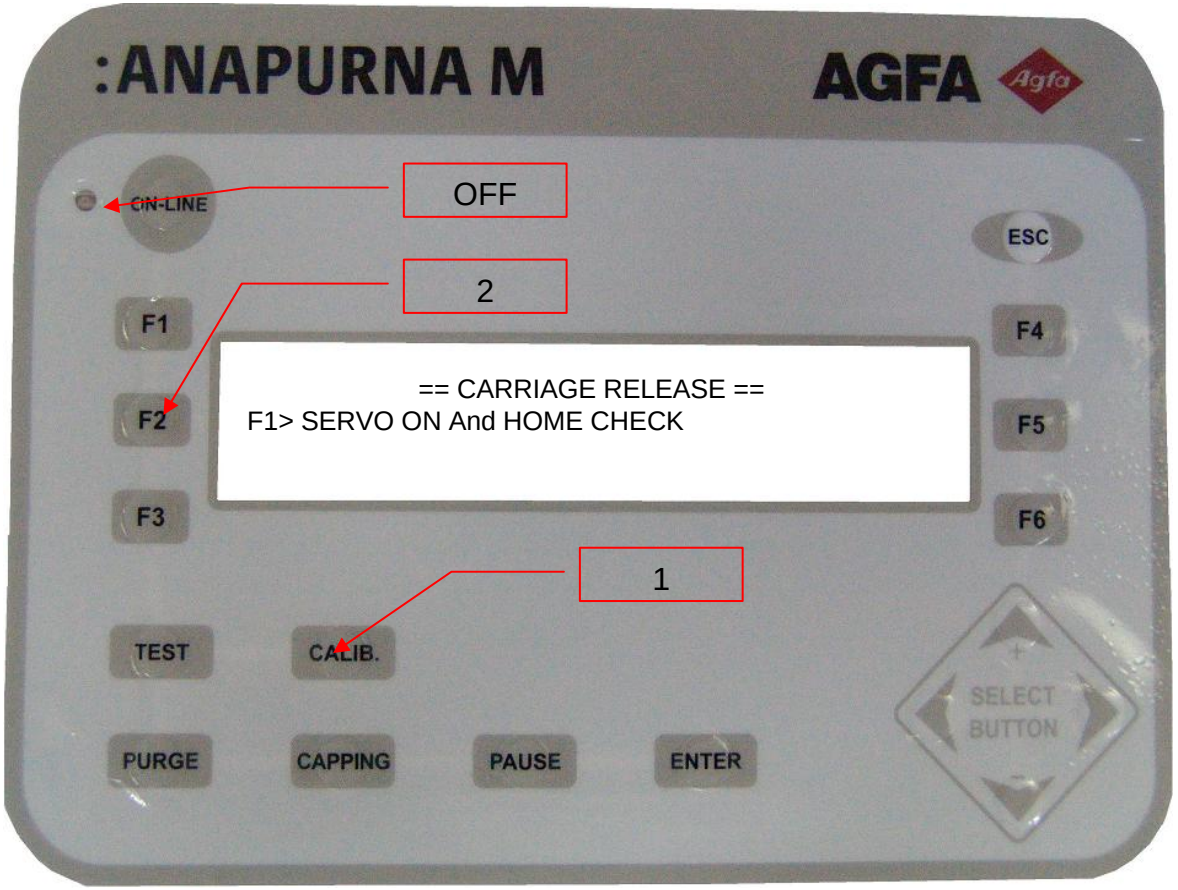
ENTER Key : Terminate after saving

ESC Key : Terminate without saving

F2> PRINT : Print feeding pattern set in current feeding value.

* The range of setting value is -50 upto 50.
  If increasing setting value, the image will be wider.
  If decreasing, the image will overlap.
* If setting with correct feeding value, will be able to get the print in a good quality.

DESCRIPTION OF CALIBRATION MENU – 3



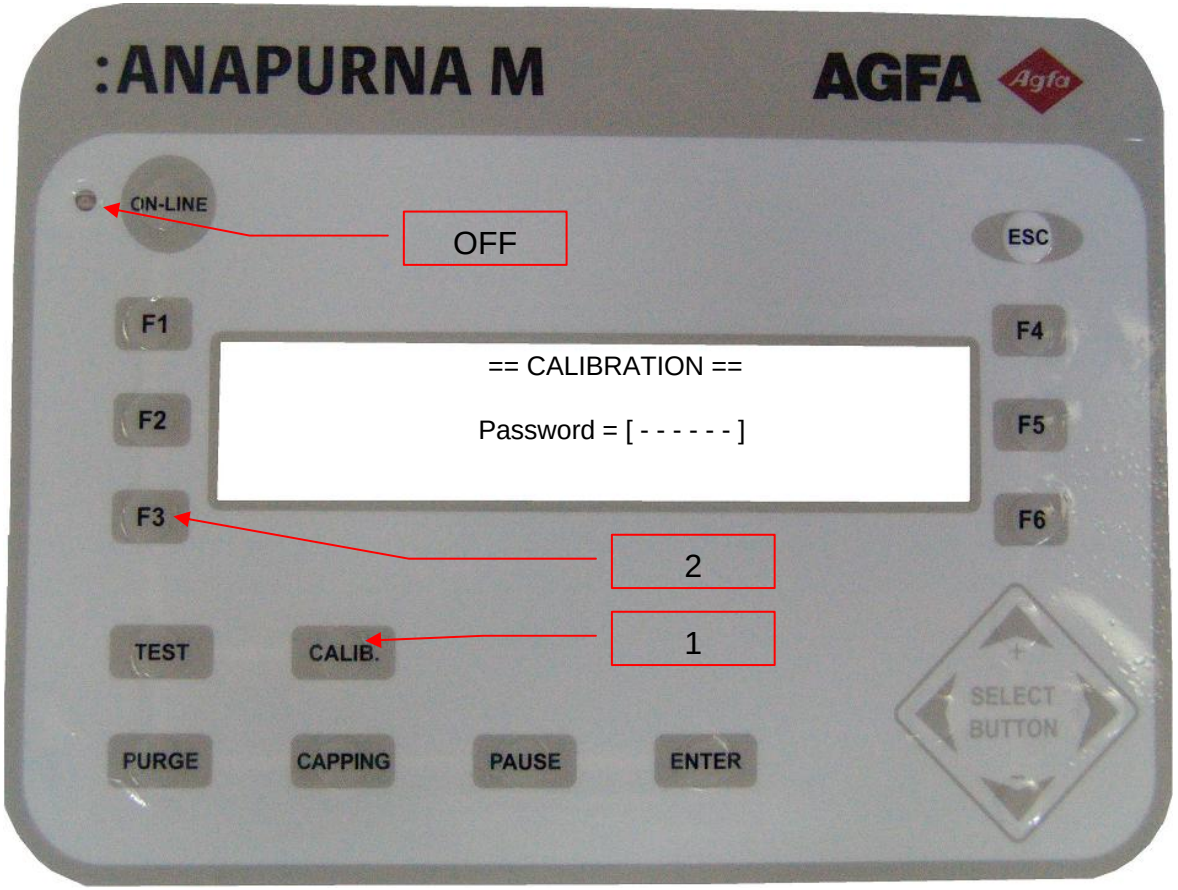
Operation of each function key

F1> SERVO ON And HOME CHECK :

After Carriage is servo-on, do the HOME CHECK

Then the carriage will be moved without changing the height of headbase, be cautious while in motion.

DESCRIPTION OF CALIBRATION MENU – 4



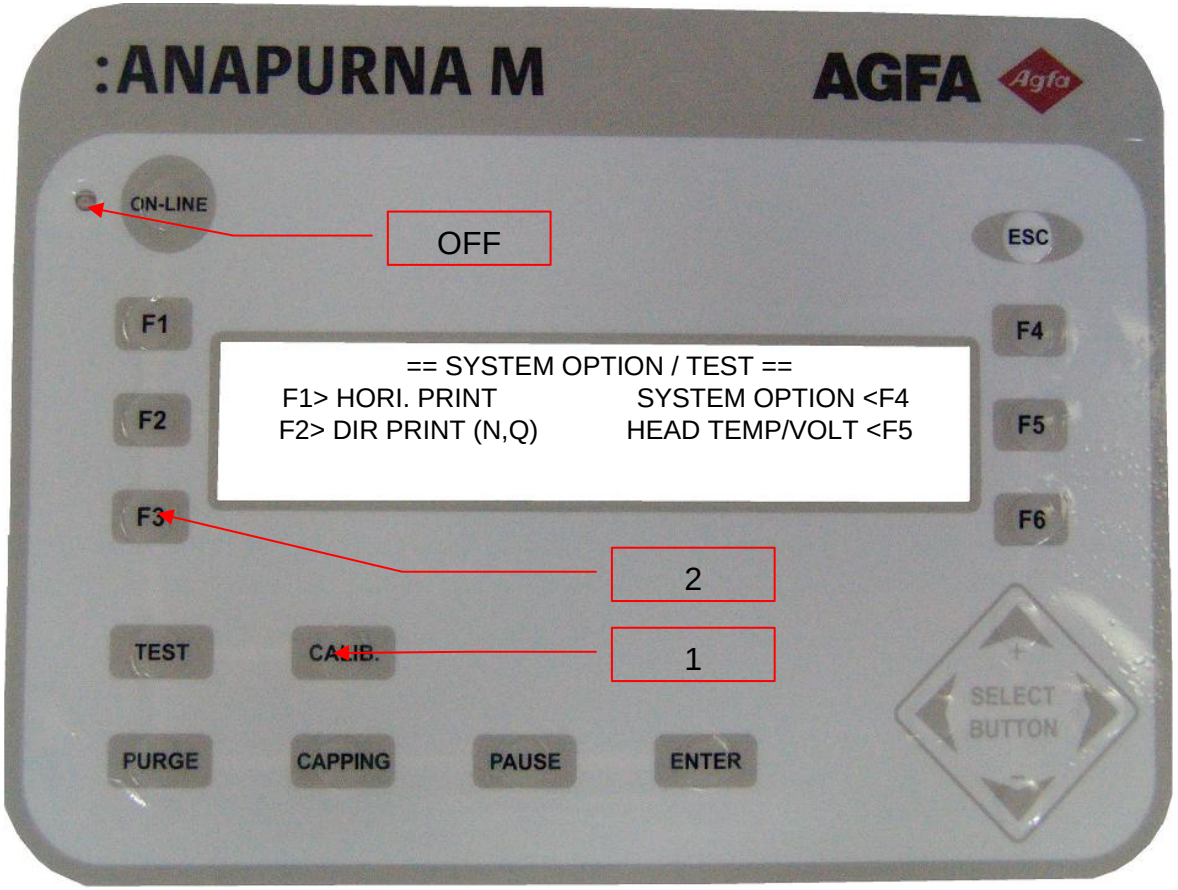
Operation of each function key

Enter two different passwords in the entrance space of password

First password is to access SYSTEM OPTION/TEST MENU.
(PASSWORD: INPUT)

The other password is to access FACTORY SETTING MENU.
(PASSWORD : 164325)

DESCRIPTION OF CALIBRATION MENU - 5



Operation of each function key

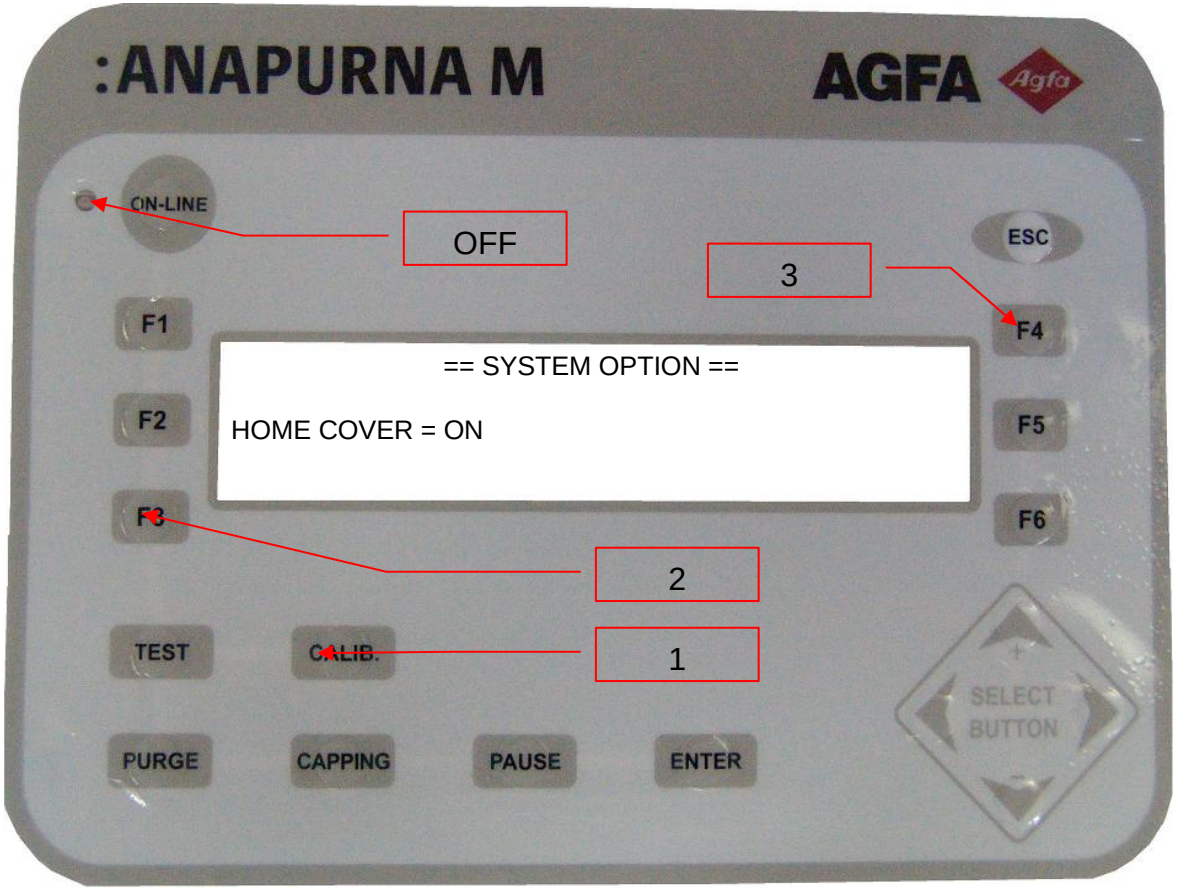
F1> HORI. PRINT : Print the horizontal adjustment pattern in full size.

F2> DIR PRINT(N,Q) : Print bi-direction pattern in 360dpi of horizontal resolution.

F4> SYSTEM OPTION : Setting whether or not the use of HOME COVER while factory setting.

F5> HEAD TEMP/VOLT : Use it when checking status of voltage and temperature of current head.

DESCRIOTION OF CALIBRATION MENU- 6



Operation of each function key

UP Key ,DOWN Key : Value Change

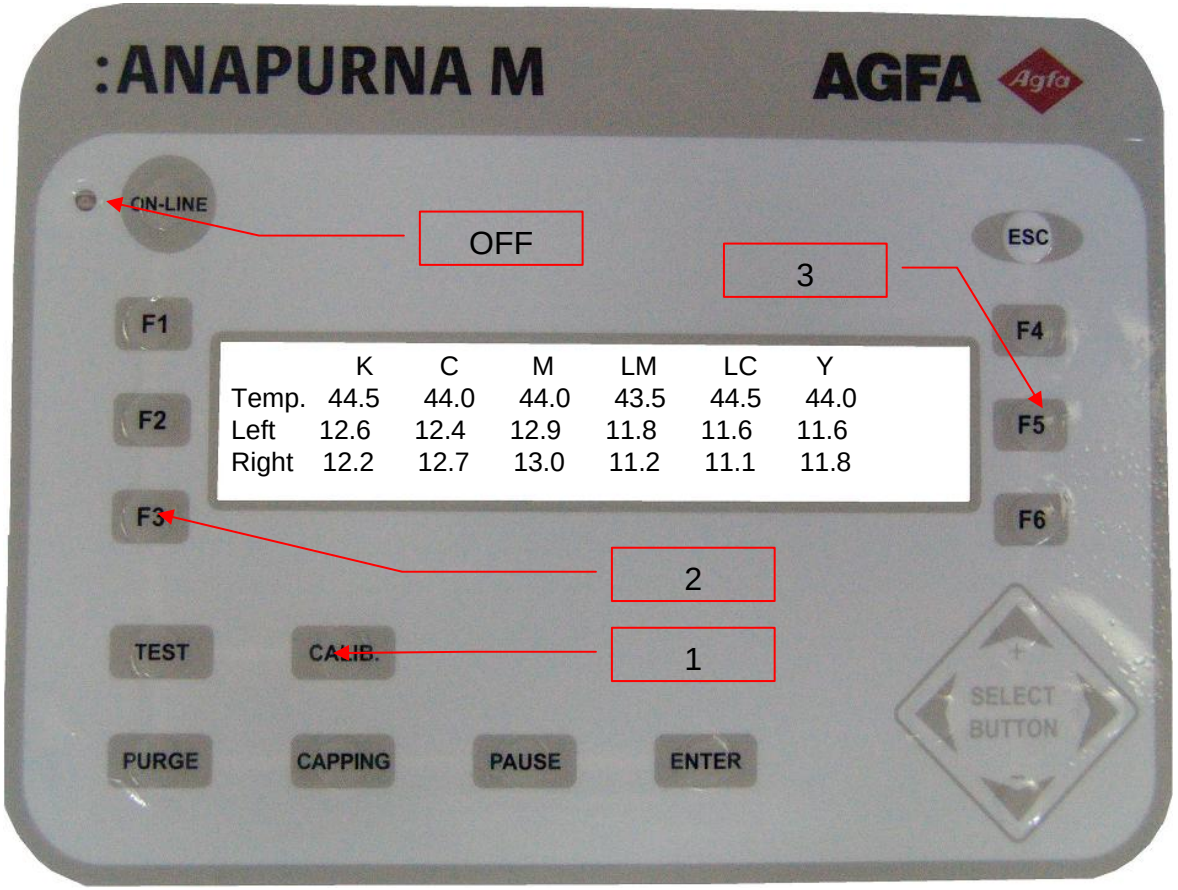
ENTER Key : Terminate after saving

ESC Key : Terminate without saving

HOME COVER = ON,OFF : If HOME COVER is air cylinder type, and only if sensor is attached, set ON.
If HOME COVER is manual type, and if there is not sensor, set OFF.

* HOME COVER will either be opened or not be closed if OFF Setting. Please make sure it.

DESCRIPTION OF CALIBRATION MENU- 7



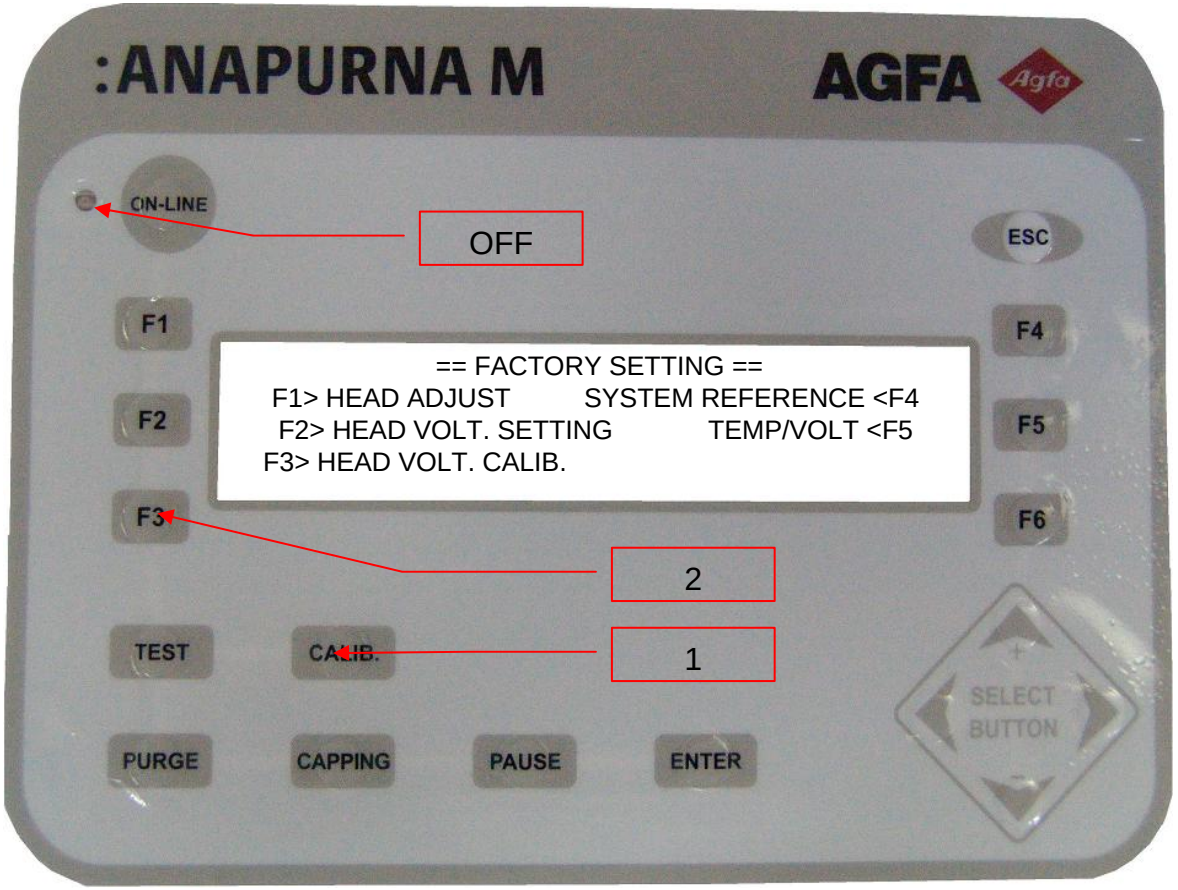
Impossible to change if marking in here.

Temp : Display current temperature of each head.

LEFT: The currently permitted voltage is displayed in the left column of each head

RIGHT: The currently permitted voltage is displayed In the right column of each head.

DESCRIPTION OF CALIBRATION MENU- 8



If entering password (1643259) that can access to FACTORY SETTING MODE, the contents like shown in the left LCD screen will be displayed.

Operation of each function key

F1> HEAD ADJUST : It is the mode for adjusting HEAD ALIGMENT ANGLE.

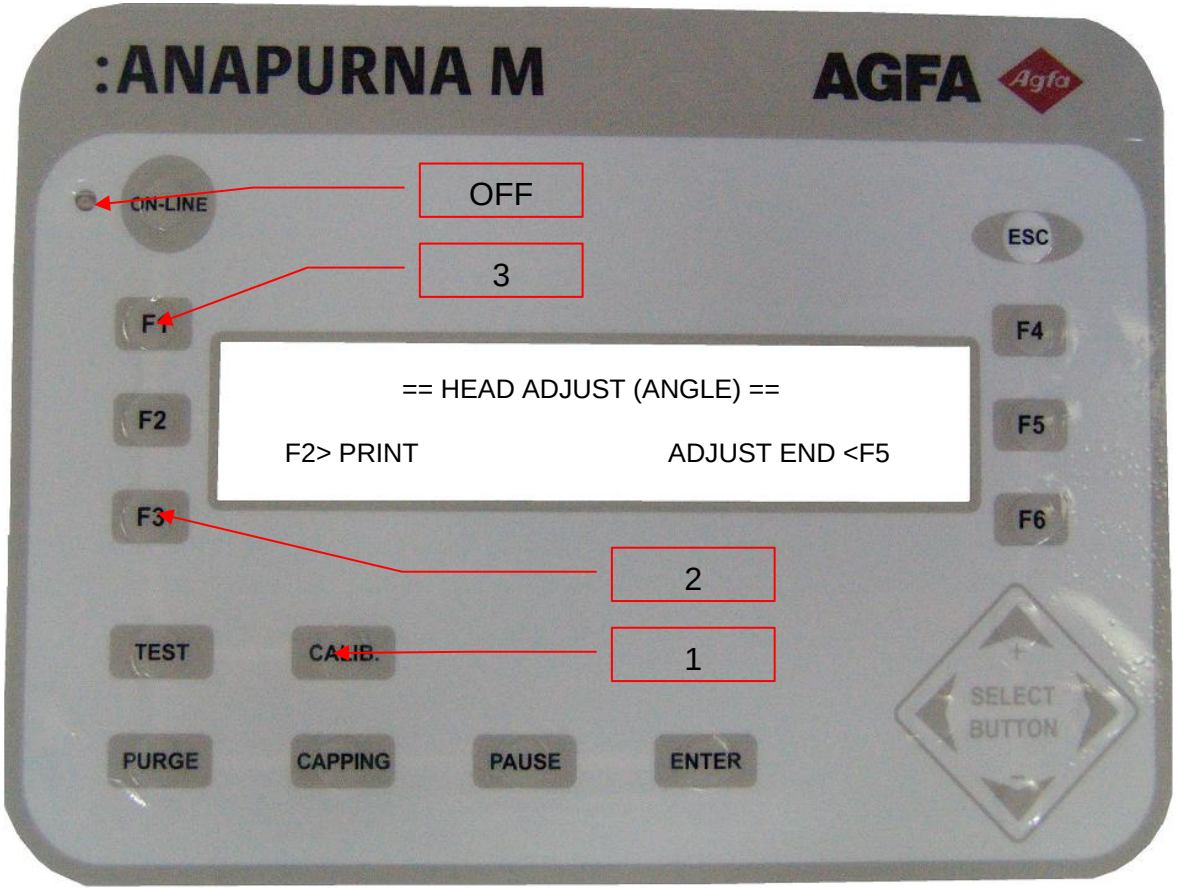
F2> HEAD VOLT. SETTING : Set HEAD VOLTAGE.

F3> HEAD VOLT. CALIB. : It is the mode for adjusting REFERENCE VOLTAGE of CARTRIDGE PCB.

F4> SYSTEM REFERENCE : It is the mode to set reference value of head cap and setting value of printing point and N-point.

F5> TEMP/VOLT : Use it when checking Temperature of current head and Permitted voltage status.

DESCRIPTION OF CALIBRATION MENU – 9



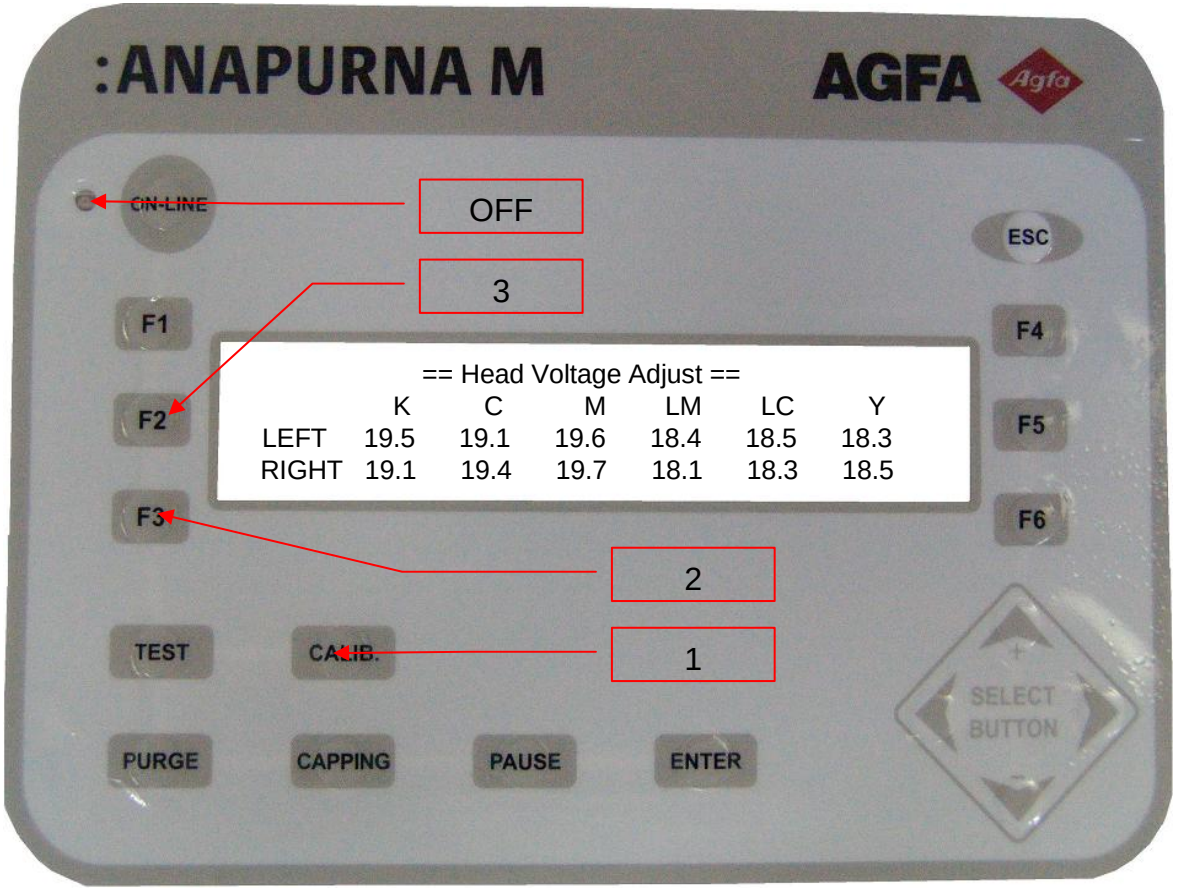
Operation of each function key

F1> PRINT: Print the pattern of HEAD ALIGNMENT ANGLE.

F5> ADJUST END: Use it when ending HEAD ALINMENT.

ESC : Use it when ending HEAD ALIGNMENT.

DESCRIPTION OF CALIBRATION MENU- 10



== Head Voltage Adjust ==

	K	C	M	LM	LC	Y
LEFT	19.5	19.1	19.6	18.4	18.5	18.3
RIGHT	19.1	19.4	19.7	18.1	18.3	18.5

Operation of each function key

UP Key, DOWN Key : Value Change

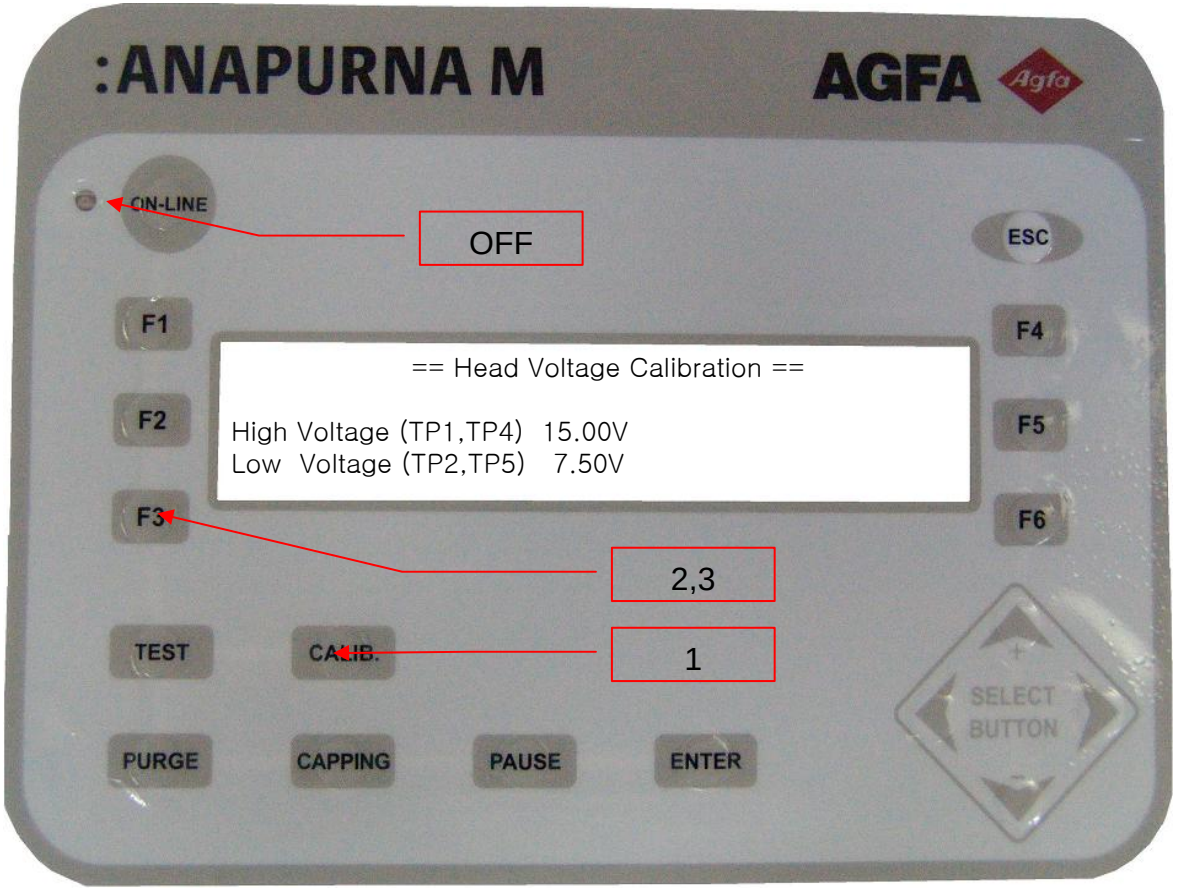
LEFT Key, RIGHT Key : Shift of time

ENTER Key : Terminate after saving

ESC Key : Terminate without saving

* After checking the label stuck on the head,
  Set the voltage that is higher than 3.2V.

DECRIPTION OF CALIBRATION MENU - 11

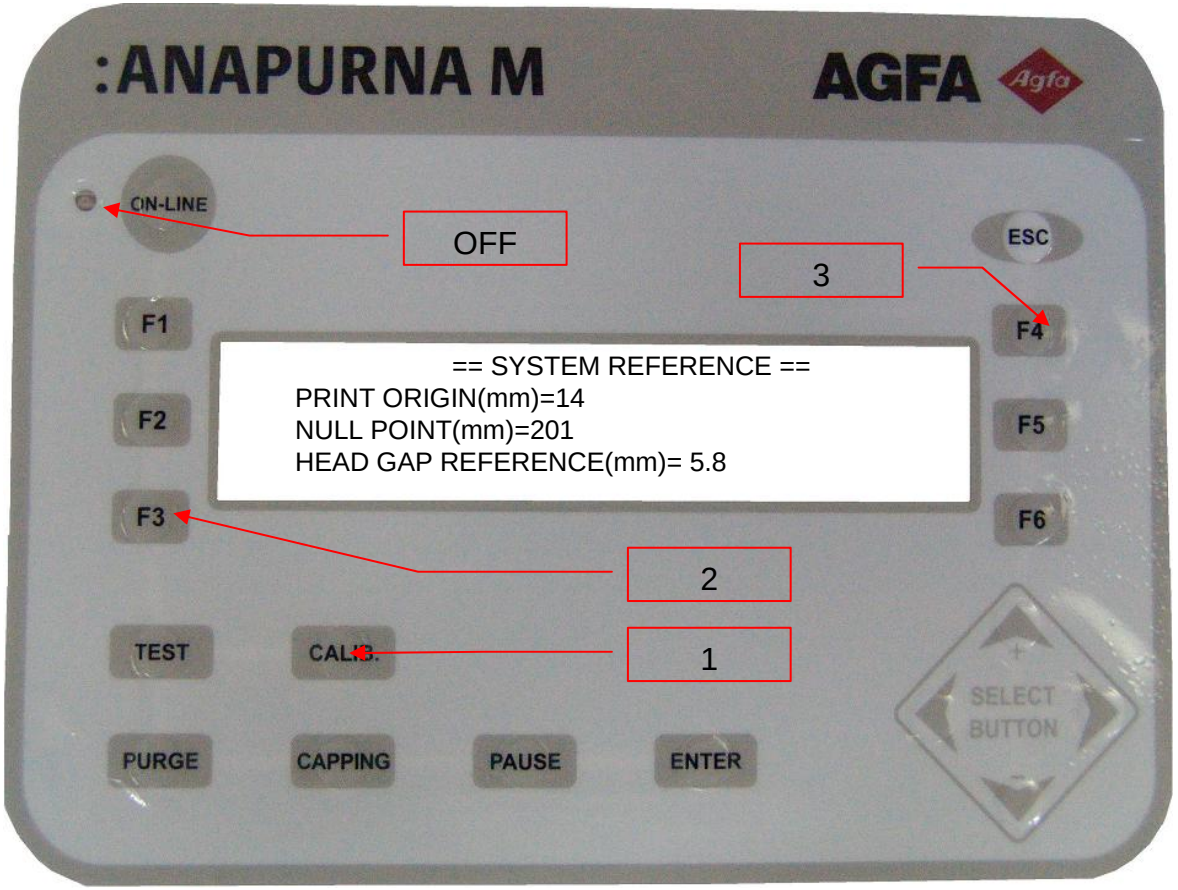


It is the mode for adjusting REFERENCE VOLTAGE of CARRIGE PCB.

Matching the LOW and HIGH of standard voltage in the left and right channel to 15V and 7.5V by changing variable resistance.

→ Entered into setting Mode of voltage.			
High Voltage(TP1,TP4) 15.00V			
Low Voltage(TP2, TP5) 7.50V			
LH ; The voltage in TP1 is set to 15.00V by rotating VR1.			
LL ; The voltage in TP2 is set to 7.50V by rotating VR2.			
LH ; The voltage in TP4 is set to 15.00V by rotating VR3.			
LL ; The voltage in TP5 is set to 7.50V by rotating VR4.			
2. After completing the setting, press ESC.			
→ changed to the Mode of SYSTEM OPTION/TEST.			

DESCRIPTION OF CALIBRATION MENU- 12



Operation of each function key

UP Key ,DOWN Key : Value Change
LEFT Key ,RIGHT Key : Shift of item
ENTER Key : Terminate after saving
ESC Key : Terminate without saving

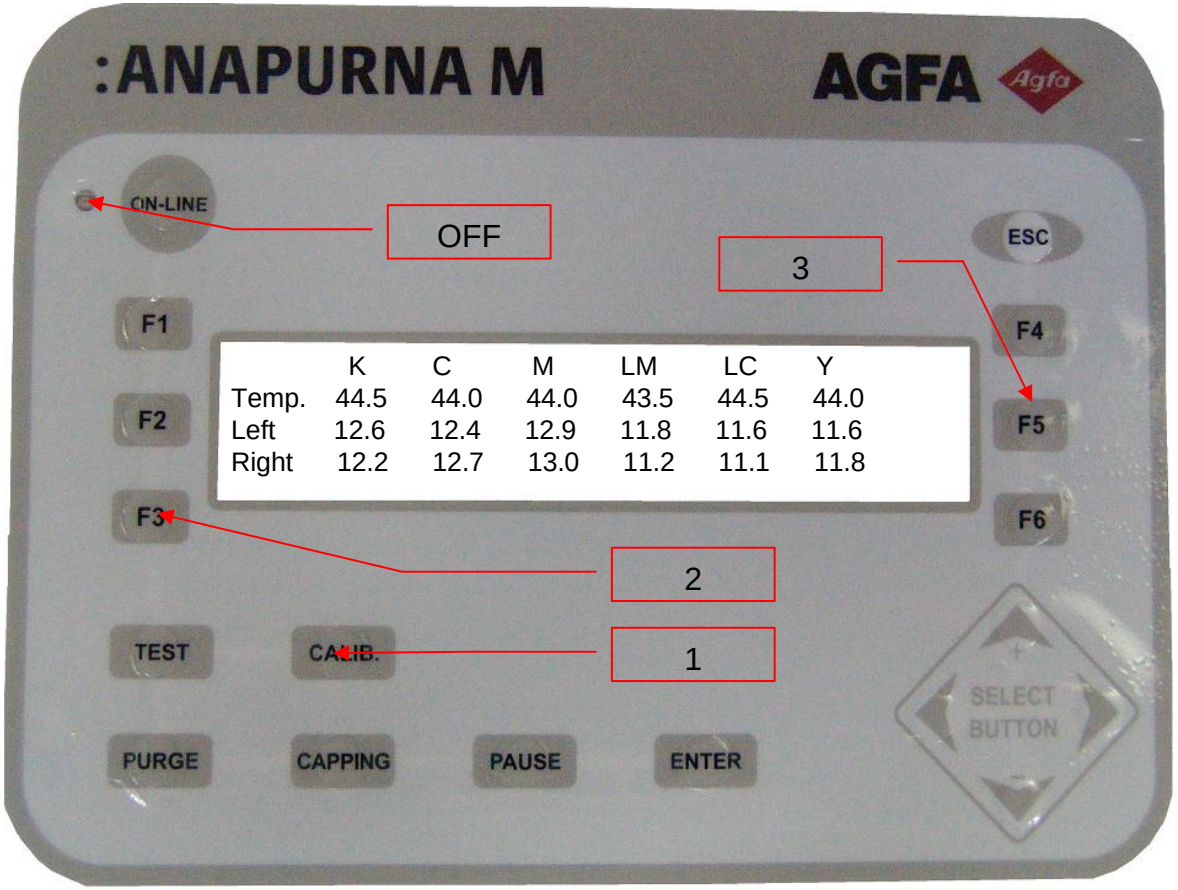
PRINT ORIGIN(mm) = -50 upto 50 : Decide position of printing 0 point
NULL-POINT =-999 upto 999 : After feeding the media in the location of media setting.
Use it when setting print start position.

If set value is +, feeding upward,
If -. feeding downward.
If setting 0mm, won't feed.

HEAD GAP REFERENCE = 2.0mm upto 10.0mm :
When setting headcap and sensing the media by the media sensing bracket, it is the distance between media and headbase.

Based on this value, adjust the distance between media and headbase.

DESCRIPTION OF CALIBRATION MENU - 13



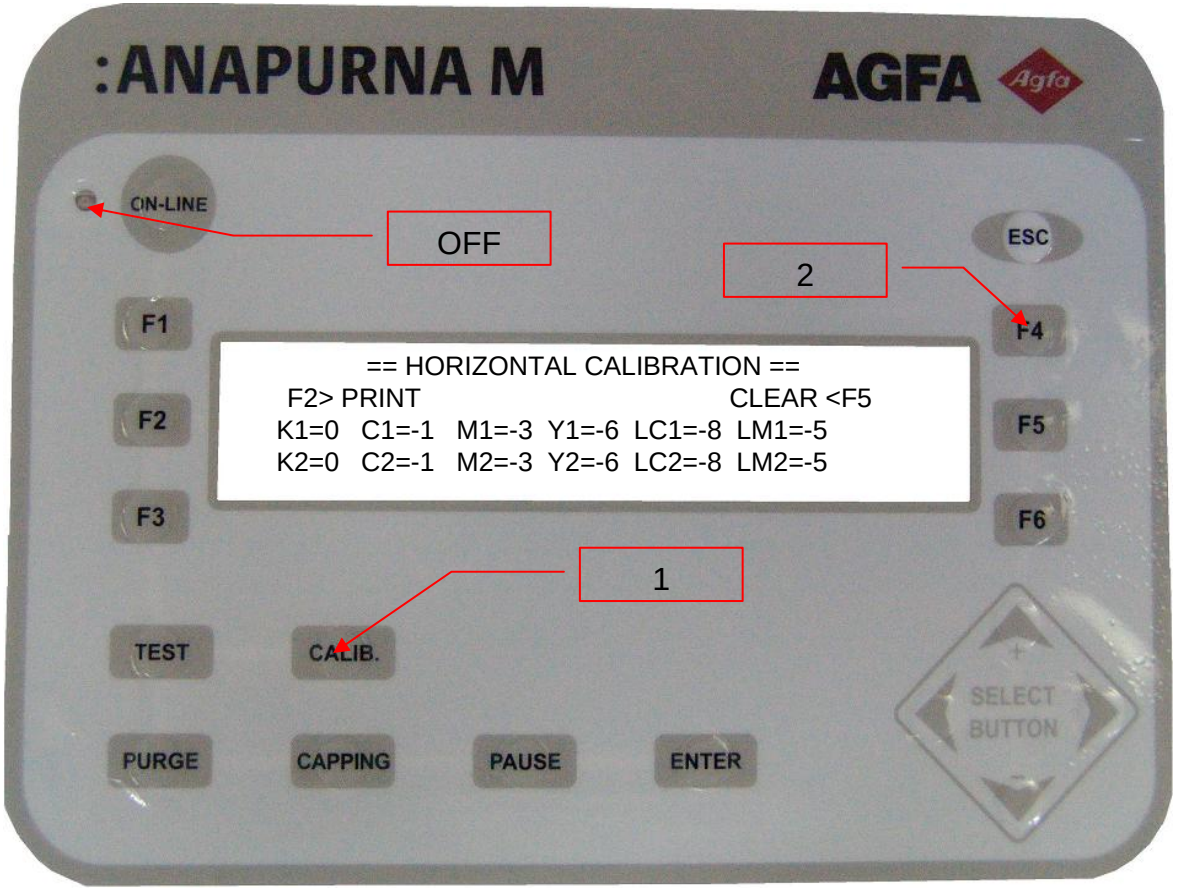
It is impossible to change if making a mark in here.

Temp : Display the current temperature of each head.

LEFT: Display the permitted voltage in the left column of each head

RIGHT: Display the permitted voltage in the right column of each head

DESCRIPTION OF CALIBRATION MENU - 14



Operation of each function key

UP Key ,DOWN Key : Value Change

ENTER Key : Terminate after saving

ESC Key : Terminate without saving .

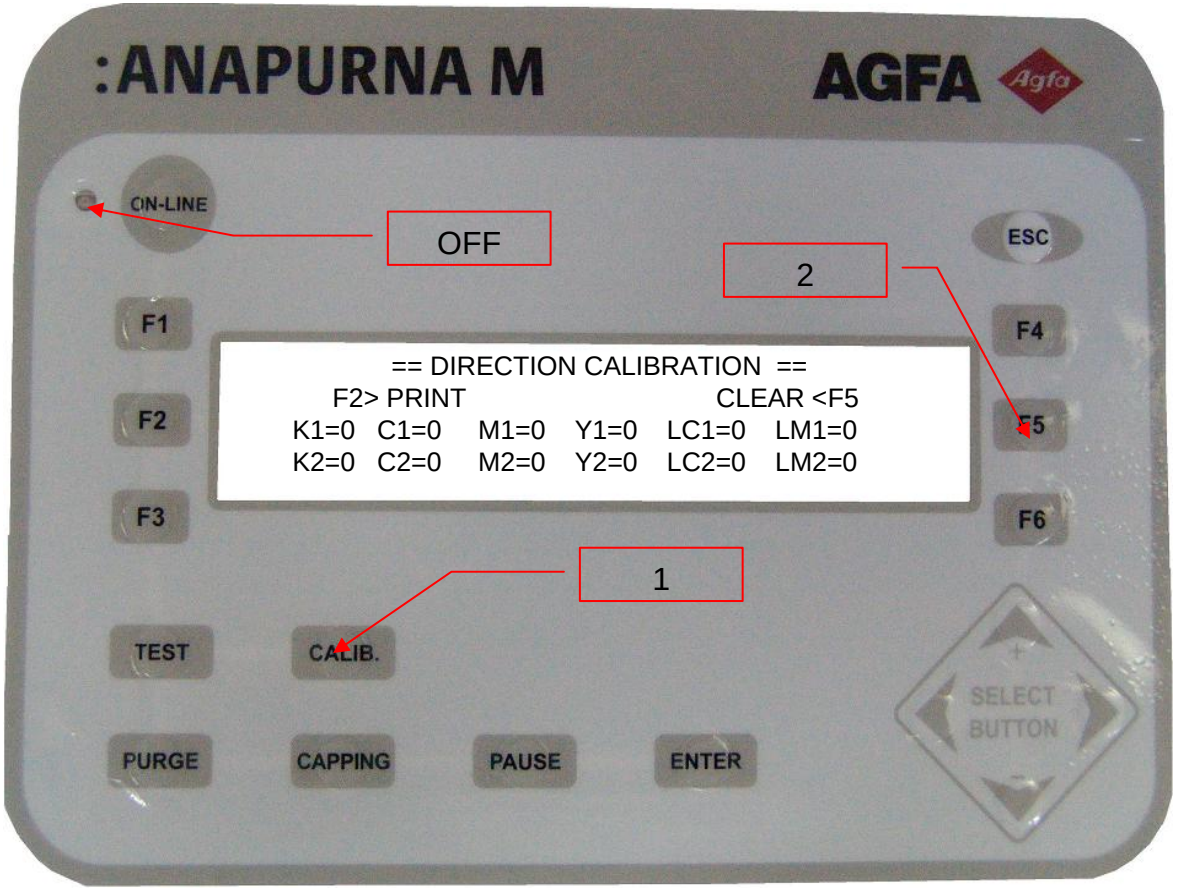
F2> PRINT : Print feeding pattern set in current feeding value.

F5> CLEAR : Initialize all the data. (set to 0 for all the data)

* The range of setting value is -20 upto 20.
  If set value is increased, the image will be wider to the right.
  If set value is decrease, the image will be wider to the left.

  If setting horizontal alignment value correctly,
  can get the print in a good quality.

DESCRIPTION OF CALIBRATION MENU - 15



Operation of each function key

UP Key ,DOWN Key : Value Change

ENTER Key : Terminate after saving

ESC Key : Terminate without saving

F2> PRINT : Print feeding pattern set in current feeding value.

F4> MODE : N,Q mode and FINE mode will be displayed alternatively.

F5> CLEAR : Initialize all the data.
(set to 0 for all the data)

* The range of setting value is -10 upto 10

If set value is increased, the image will be pushed to the left.

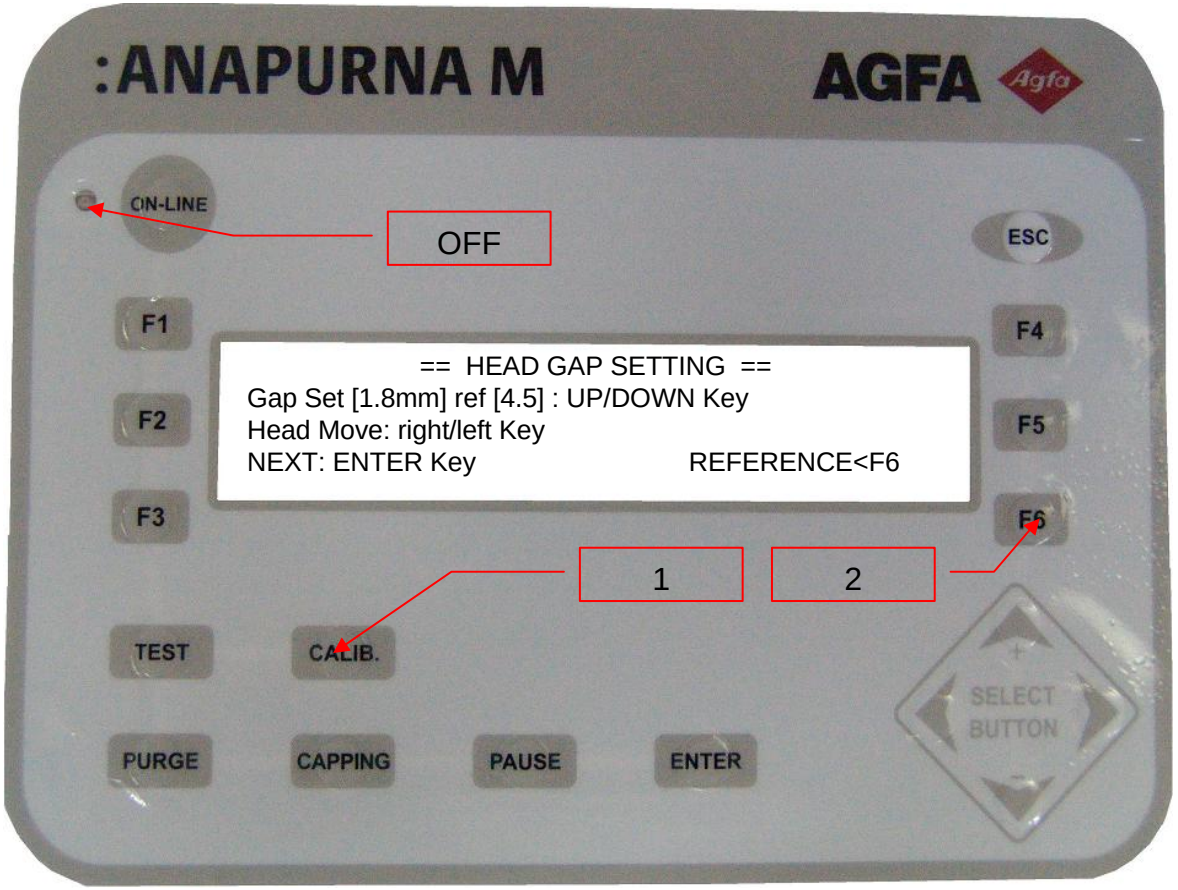
If set value is decrease, the image will be pushed to the right.

IF setting bi-direction alignment value correctly,

Can get the print in a good quality.

Only, when print out in uni-direction, won't apply for this value.

DESCRIPTION OF CALIBRATION MENU - 17



Operation of each function key

LEFT Key , RIGHT Key : The carriage is moved to left, right of HEAD MOVE.
Move to left 10 times.
UP Key , DOWN key : GAP Value Change

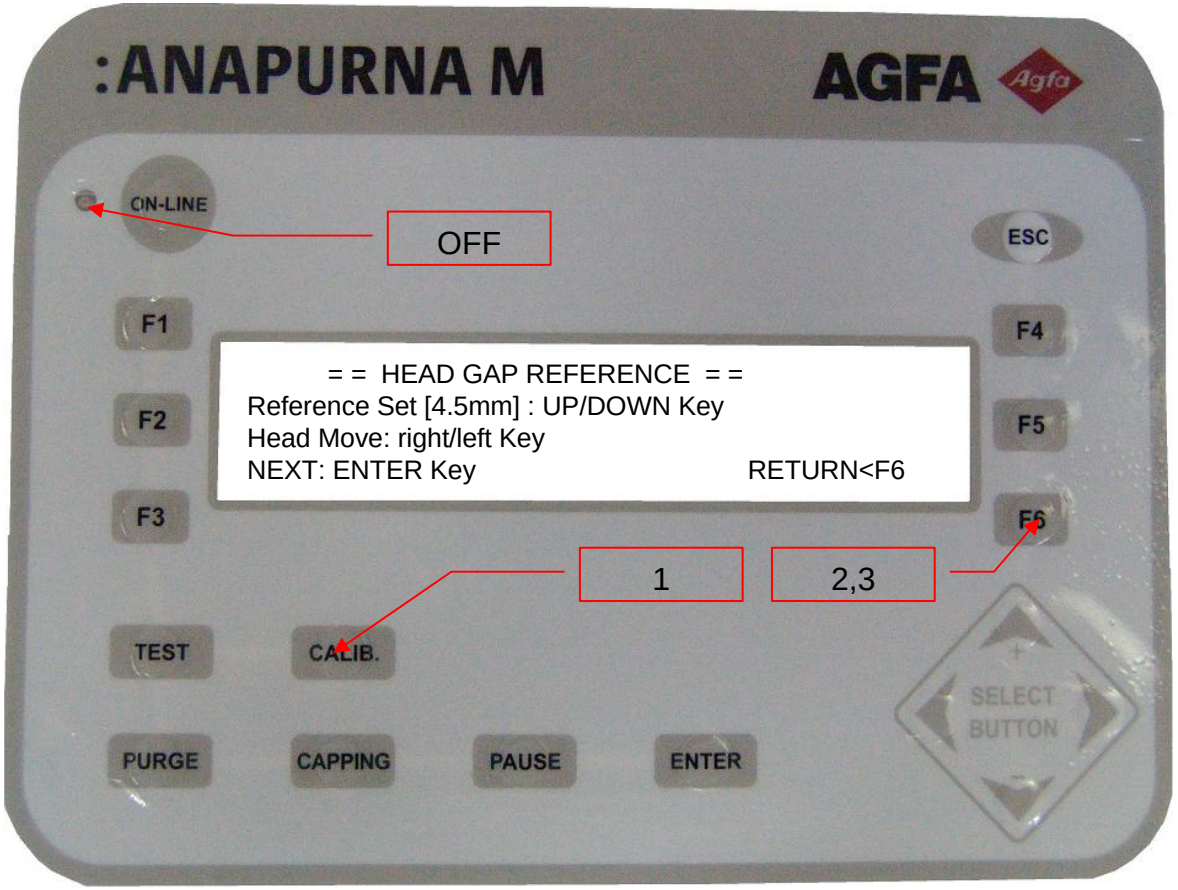
F6 => REFERENCE : It is the mode for setting the BRACKET REFERENCE VALUE sensing the media.
(password : 164325)
The value is 0.5mm uptp 10 mm.
Up / down in the unit of 0.1mm.

ENTER : Move to next step.

If canceling all the procedure, the head will return to HOME POISTION.

Only, since the head base will keep the height set at the last procedure, please push down after double checking that there will not be any trouble even if returned to HOME.

DESCRIPTION OF CALIBRATION MENU - 18



Operation of each function key

LEFT Key , RIGHT Key : The carriage is moved to left, right of HEAD MOVE.

Move to left 10 times.

UP Key , DOWN key : REFERENCE Value Change

F6 => RETURN : Return to HEAH GAP SETTING MODE.

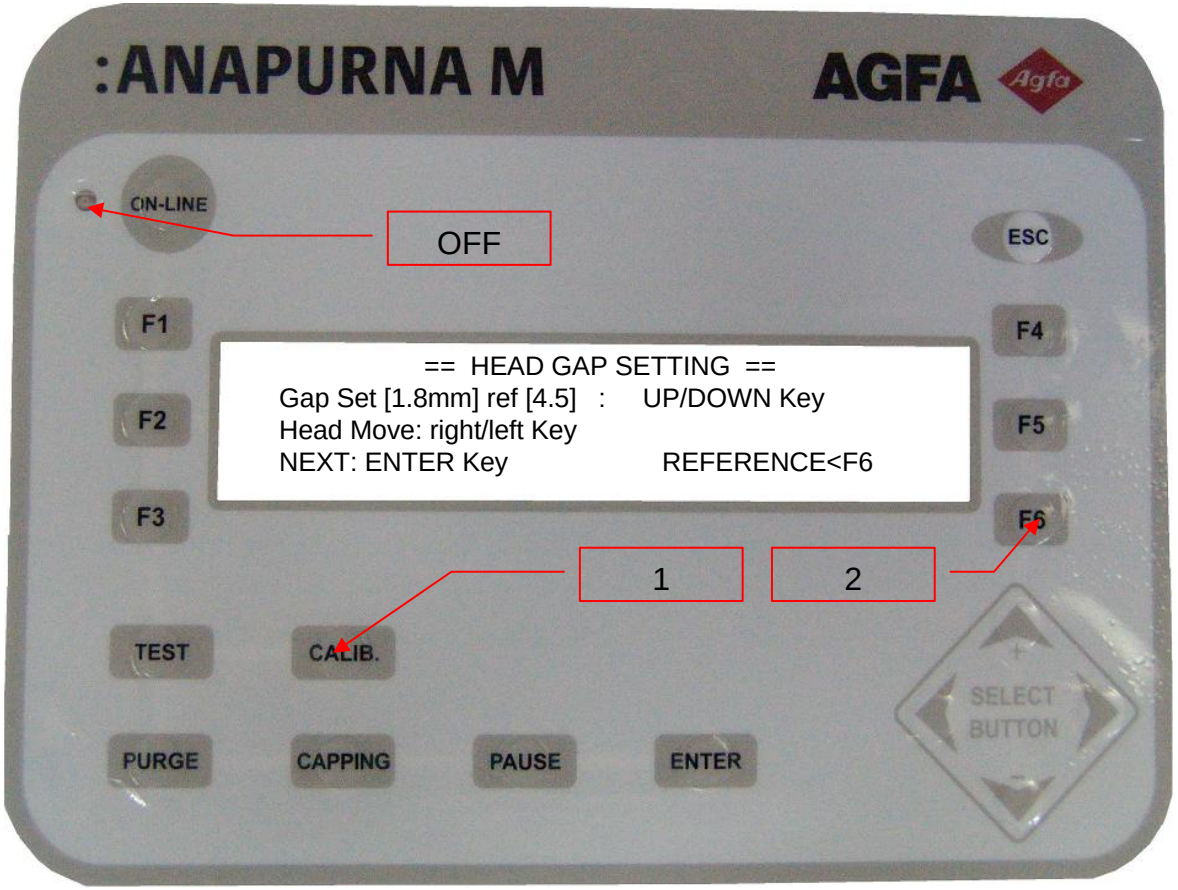
The VALUE is 2.0mm upto 8.0mm.
Up / down in the unit of 0.1mm.

ENTER : Move to next step.

ESC : If canceling all the procedure, the head will return to HOME POISTION.

Only, since the head base will keep the height set at the last procedure, please push down after double checking that there will not be any trouble even if returned to HOME.

DESCRIPTION OF CALIBRATION MENU- 19



*** Order of Operation ***

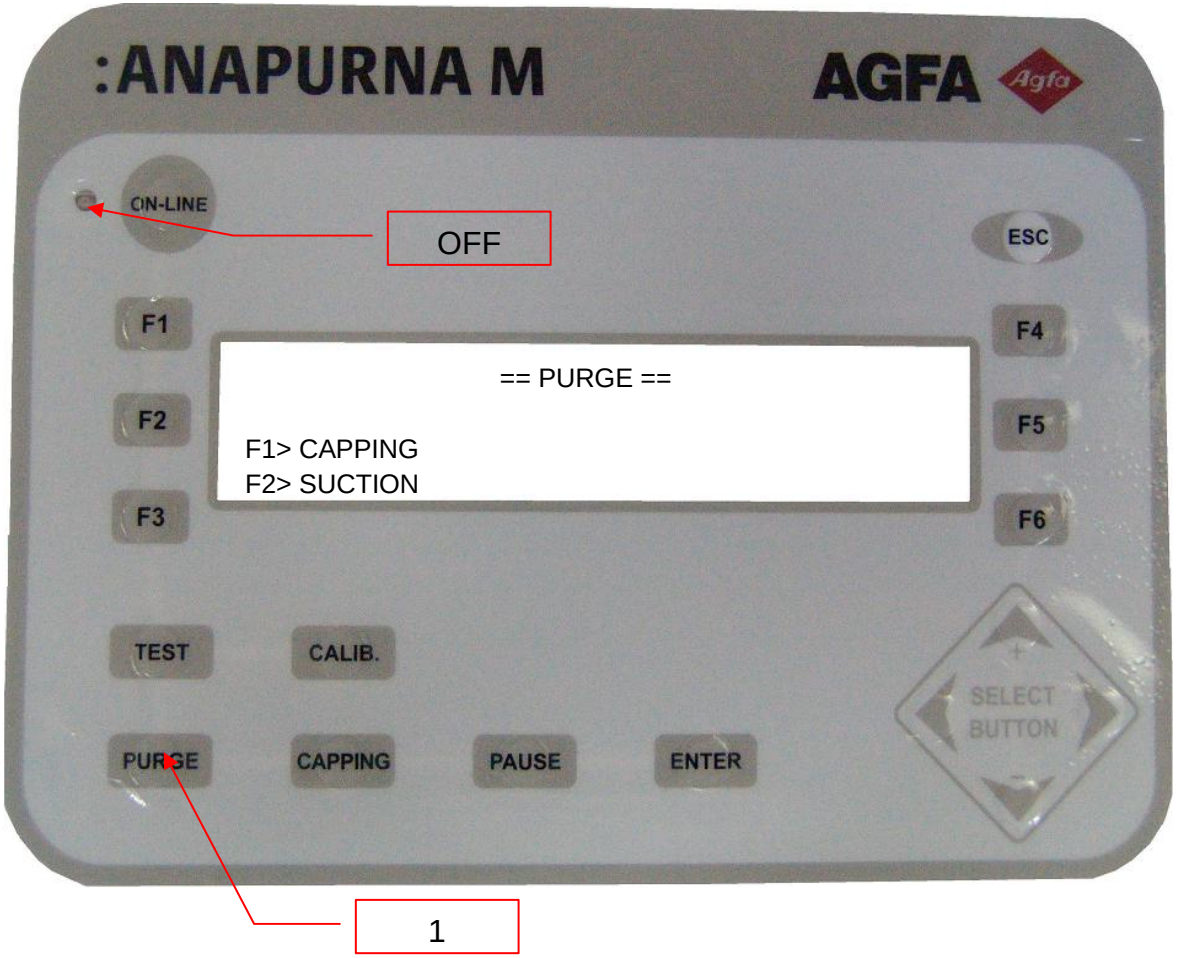
Keep pressing down <-- until the head reaches to Top. And then move it to left.
Press ← several times in order to move the carriage to the position in which you want to measure.

If pressing down the ENTER Key, L bracket is down, and the Head is also down with rotating stepping motor.
It will stop when L bracket reach the ground.

Since this position is the height of reference. Set this height. (password : 164325)
Then by pressing F6 Key, switch to HEAD GAP MODE.
Set the height of media and head by pushing ENTER KEY.

<It is recommended to keep the height less than 2mm>

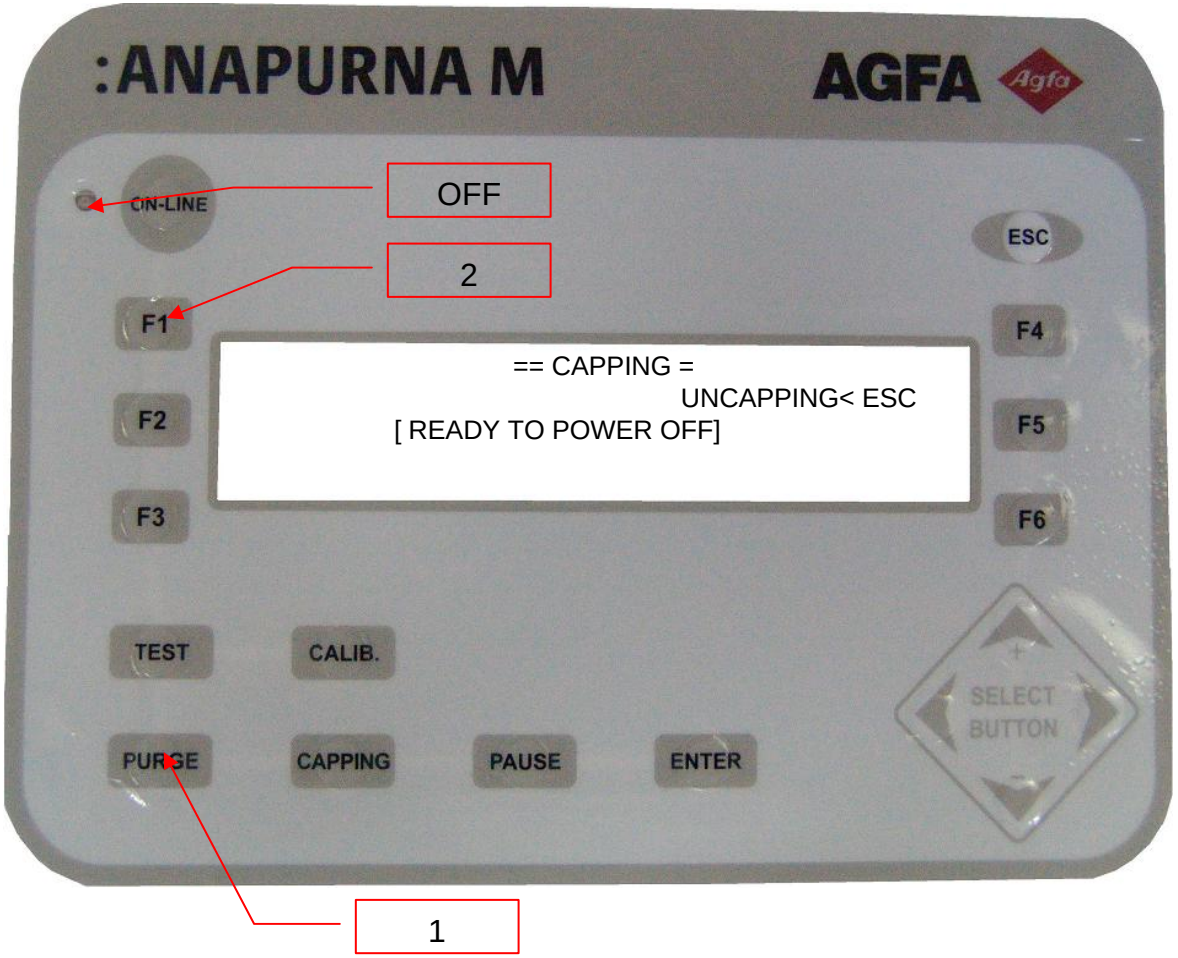
DESCRIPTION OF PURGE MENU – 1



Operation of each function key

F1 : Run the head capping.
F2 : Run the SUCTION.

DESCRIPTION OF PURGE MENU - 2



Once the carriage reaches the highest position, the bracket in L type is moved down.

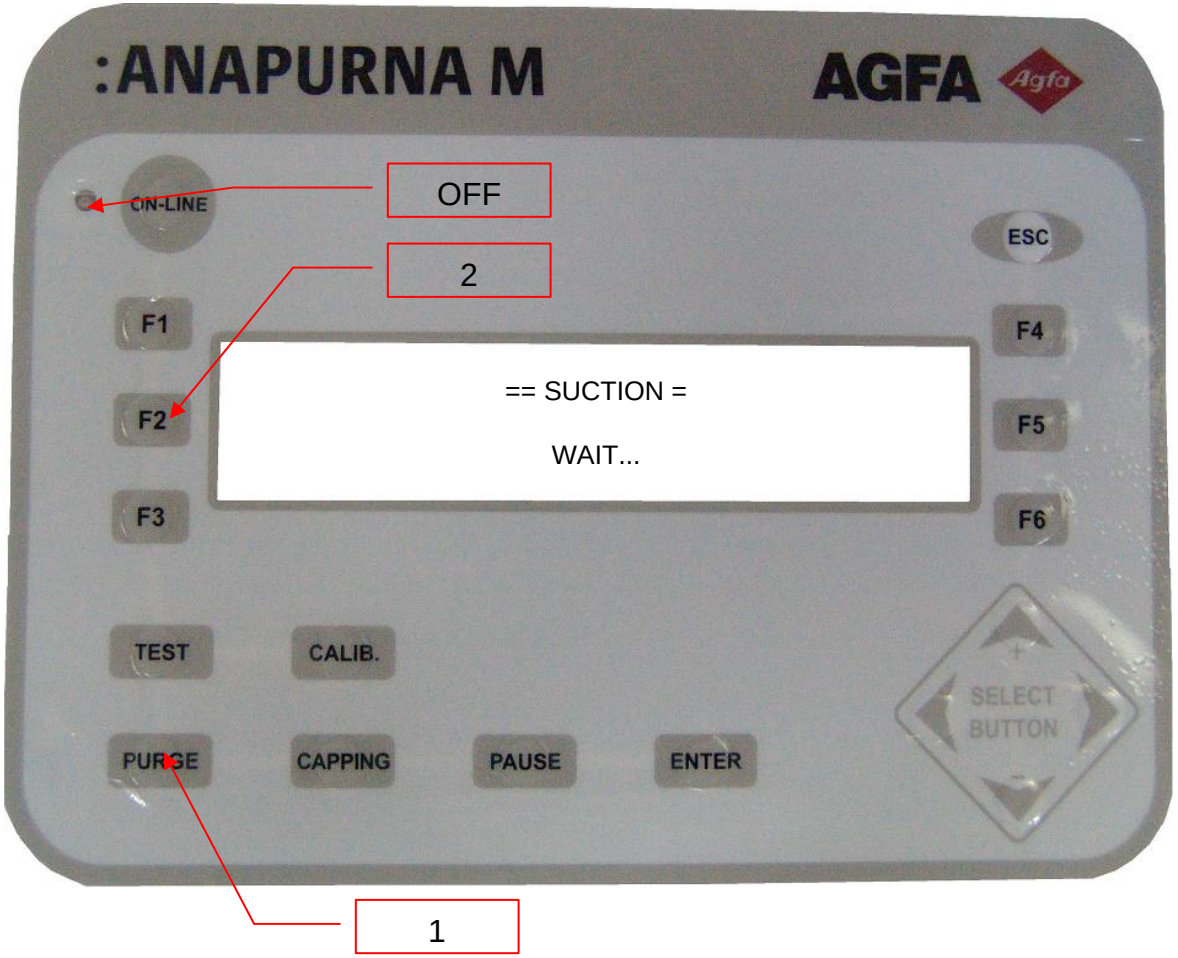
After the carriage is lowered and after the Bracket in L type senses the cover of capping, the bracket again is moved up.

After the carriage stops, the carriage again moves down to the capping pad and adhered closely. After that. By making capping pump run for a setting time, The function of filling in capping pad with cleaning solution is carried out.

With completeness of capping, the message in the LCD window will be displayed.

If the power is off or the capping wants to be cancelled in this status. press the ESC key.

DESCRIPTION OF PURGE MENU - 3



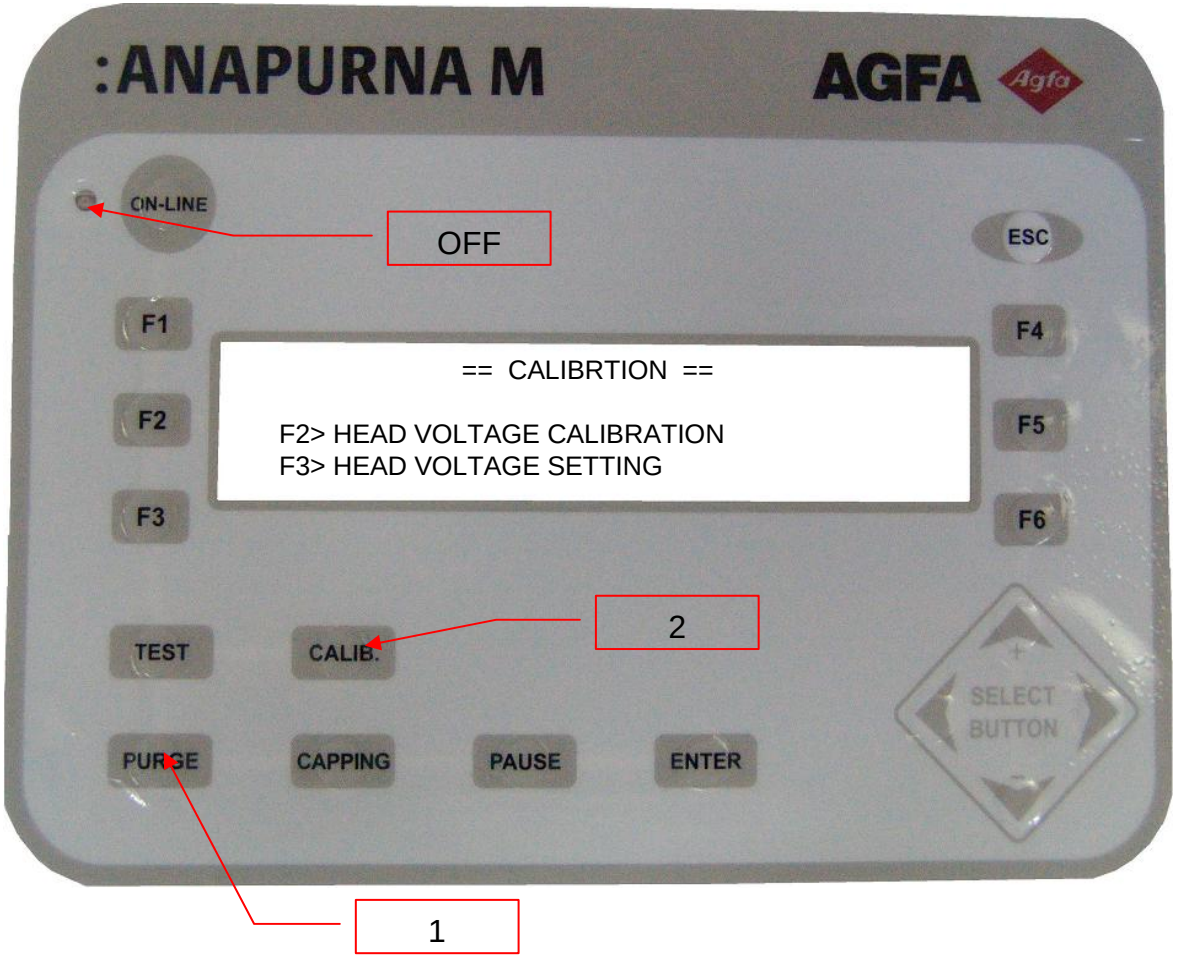
Once the carriage reaches the highest position,
the bracket in L type is moved down.

After the Bracket in L type senses the cover of capping,
the bracket again is moved up.

After the carriage stops, the carriage again moves down to
the capping pad and adhered closely. After that.
By making capping pump run for a setting time,
The function of filling out cleaning solution smeared on
the capping pad and head is carried out.
While the function of suction is performed,
The message in the left LCD window will be displayed.

With completeness of suction, return to the PURGE Menu,
previous mode.

DESCRIPTION OF PURGE MENU – 4

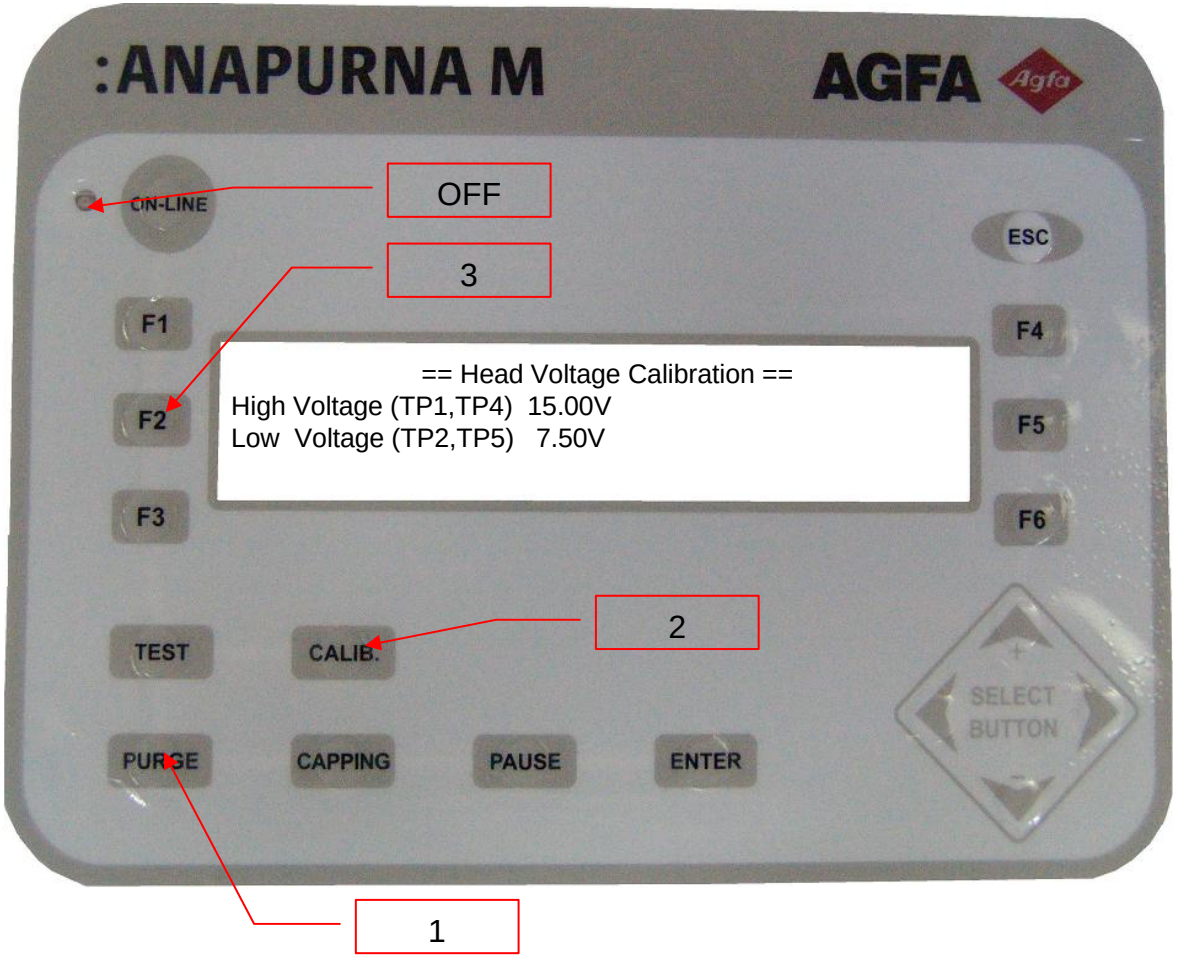


Operation of each function key

F1 : Run the head capping.

F2 : Run the SUCTION.

DESCRIPTION OF PURGE MENU - 5

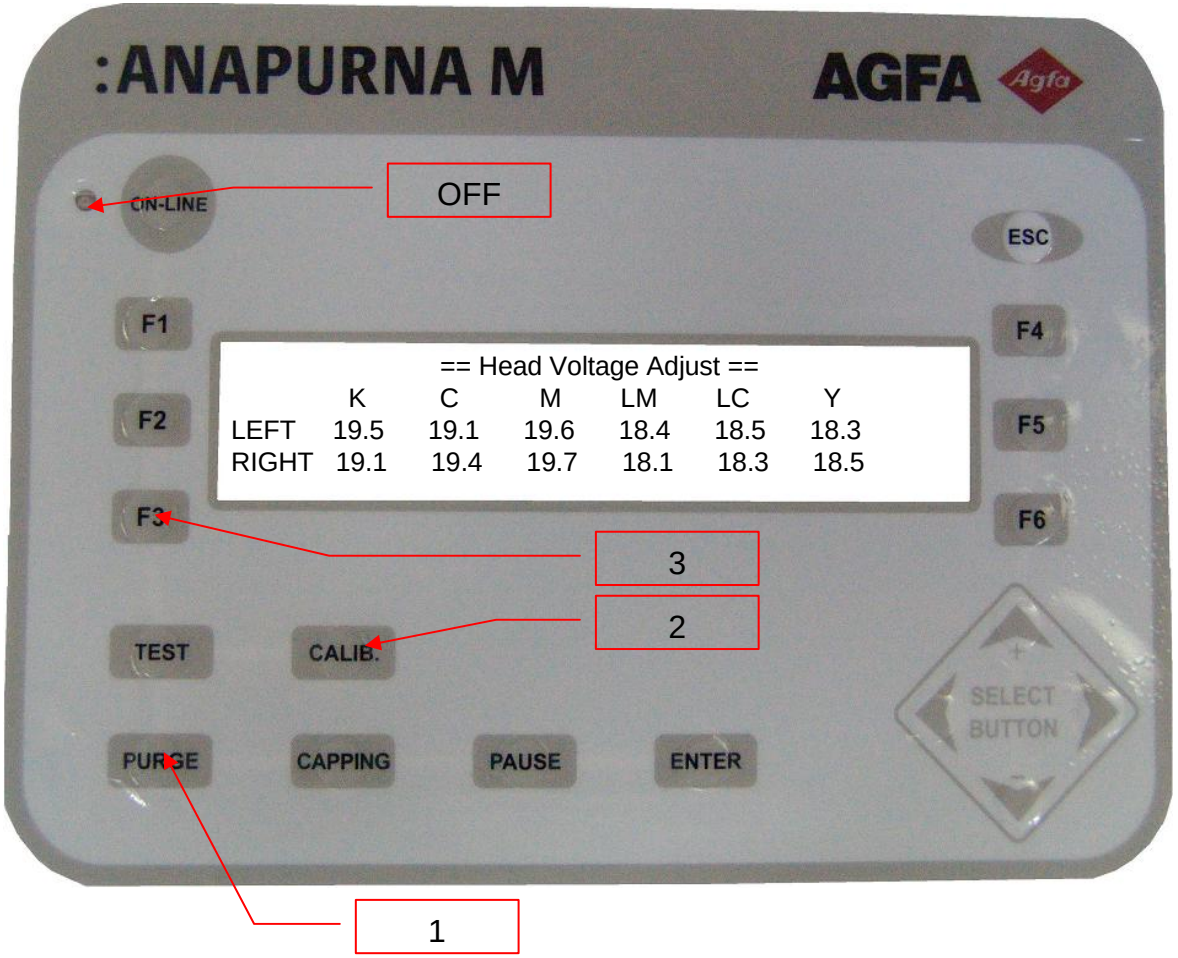


It is the mode to adjust REFERENCE VOLTAGE OF CARRIGE PCB.

By changing the variable resistance, match Low & High Standard Voltage in the left and right channel to 15V and 7.5V

*PCB Voltage Adjustment <H/W>
1. Press Purge Key →The Carrige will be relocated to the position of purge.
2. Press Carib Key → Entered into Calibration Menu.
3. Press F2>Head Voltage Calibration
→ Entered into Setting Mode of Voltage.
High Voltage(TP1,TP4) 15.00V
Low Voltage(TP2, TP5) 7.50V
LH ; The voltage in TP1 is set to 15.00V by rotating VR1.
LL ; The voltage in TP2 is set to 7.50V by rotating VR2.
LH ; The voltage in TP4 is set to 15.00V by chaning VR3.
LL ; The voltage in TP5 is set to 7.50V by rotating VR4.
4. After completing the setting, press ESC.
→ Changed to mode of Calibration.
5. Press ESC. → Changed to the mode of Purge.
6. Press ESC. → The carrige will be relocated to the Home.

DESCRIPTION OF PURGE MENU – 6



Operation of each function key

UP Key, DOWN Key : Value Change

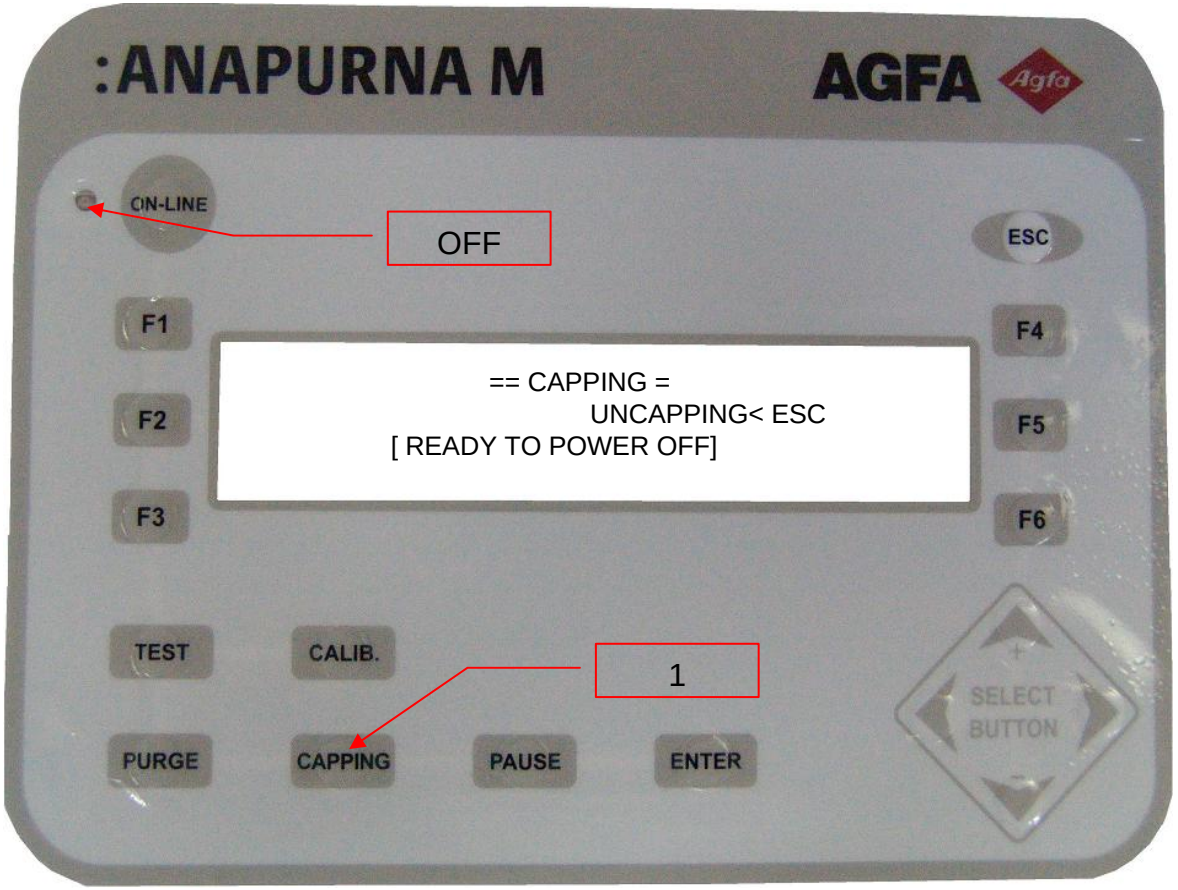
LEFT Key, RIGHT Key : shift of item

ENTER Key : Terminate after saving

ESC Key : Terminate without saving

* Set the voltage higher than 3.2V by checking the label in Blue color attached on the head.

DESCRIPTON OF CAPPING MENU

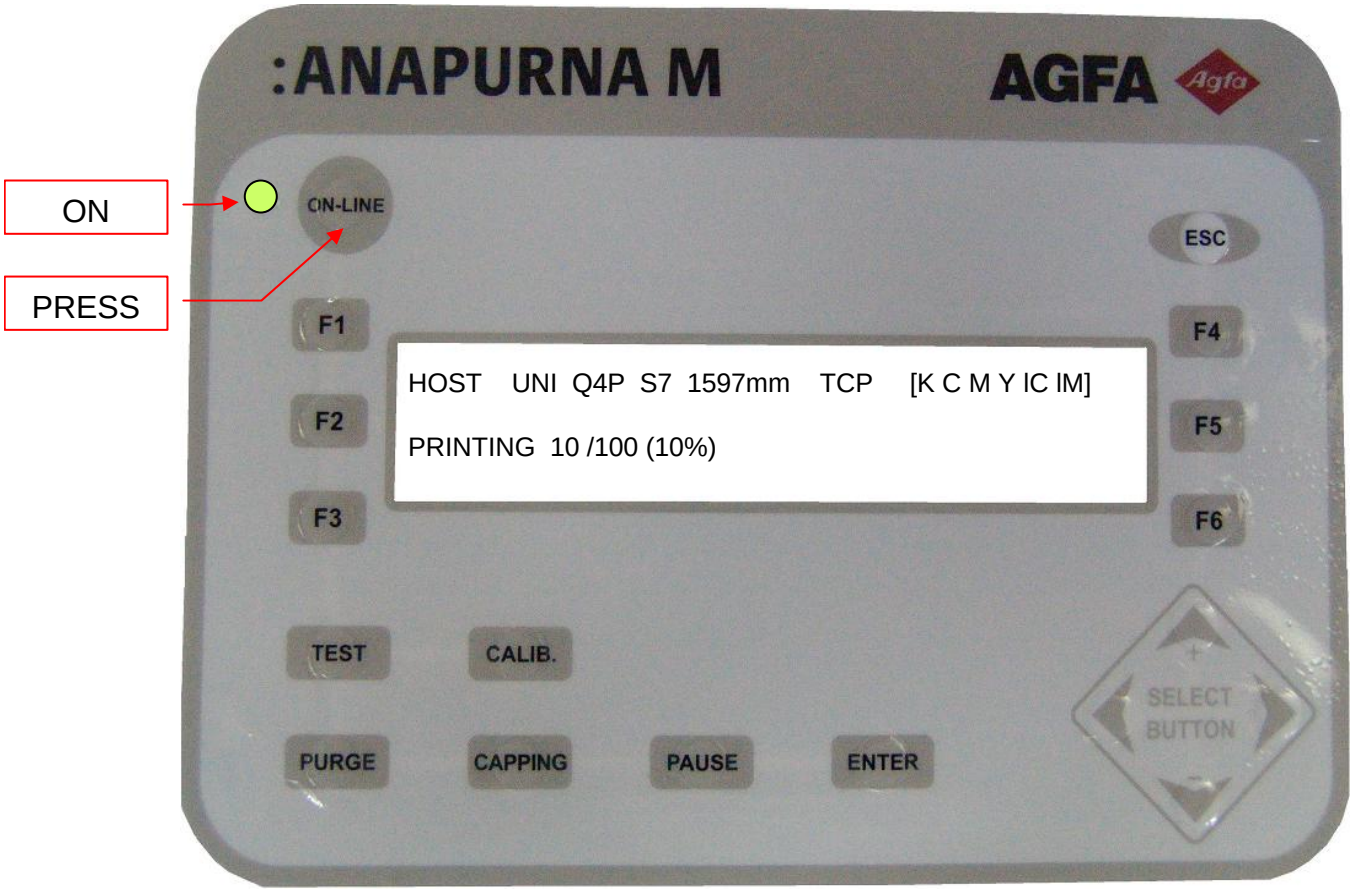


After moving the carriage to purge direction.
Carrying out the function of capping shortly.

If you want either to turn off the power or to cancel the capping,

Press down ESC key.

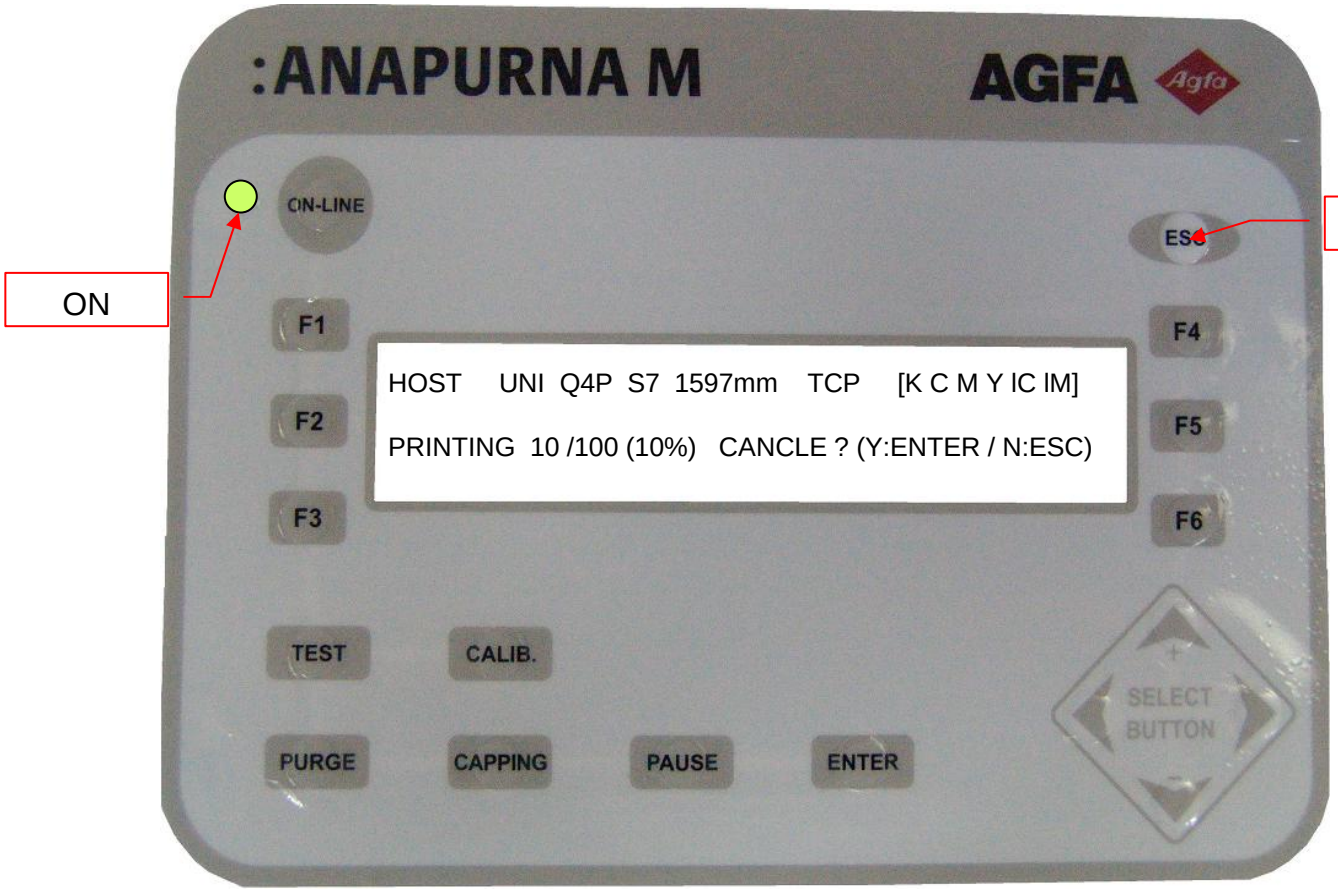
IMAGE PRINTING OUT (PRINT)



1. Once pressing ON-LINE Button, transfer the image file to be output from RIP. (In the RIP program, in case of RIP AND PRINT, RIP will be also printed out.)

2. If START button in the RIP is pressed down, printing begins and printing image will be shown up in the LAP program.

CANCELLATION OF PRINTING



1. After pressing down ESC in the Keyboard, if selecting the ENTER button, the printing will be cancelled.

SELECT SWITCH-1

1. Lamp Control<Left, Right> (1)
   1)MODE: OFF, LO, HI 3
   OFF: In the OFF position, can not turn Lamp on.
   LO : In the LO position, Lamp work as LO.
   HI : In the HI position, Lamp work as HI.
   ※ If there is no signal from UV LAMP
   even if Lamp select switch position in HI or LO, the LAMP won't be on.

   2) If pressing down F2>UV LAMP/SHUTTER in the MENU of OFF-LINE,
   == UV LAMP/SHUTTER ==
   UV LAMP:MODE = ON OFF TIME (Min)=20
   SHUTTER: MODE = NORMAL DELAY (ON/OFF=) 30/30
   LAMP USE HOUR:LEFT= 9.4 RIGHT= 28.7
   Here, if UV LAMPMODE= ON, when doing all the prints including Prime and Calibration, print with Lamp on.

   If OFF, then when printing out all the prints including Prime or Calibration, print with Lamp OFF.
   The meaning of OFF-TIME (MIN)=30 is that UV LAMP will be OFF if next printing order is not entered within 30 min after finishing print.
   SHUTTER MODE = NORMAL - Operation of Normal shutter (Operation of right shutter.)
   BOTH - two shutters will be operated at the same time. (right, left)
   ex) In BI-DIRECTION printing
   NORMAL : When printing out from HOME to PURGE, the right shutter will be opened, When printing out from PURGE to HOME, the left shutter will be closed.
   BOTH : When printing out from HOME(right) to PURGE(left), two opened and closed at the same time. Again when printing out from PURGE(left) to HOME(right), two closed and opened at the same time.

   In accordance with type and thickness of media the mode will be selected by adjusting amount of Light. LO will be selected for thin Acryl or film (soft material type)
   HI is selected for glass or tile.

SELECT SWITCH-2

⇒ DELY(ON/OFF) 20/20 DELY (ON/FFF) means that the shutter will be turned ON 20cm right from location of Image and OFF 20cm left from the location of image.

Unit is (㎝). Able to set between 0 and 99㎝.
※ The printing should wait until UV Lamp Ready Signal comes out. When Ready signal comes out, then the printing starts. Ready wait_sec will be counted in the Display. Normally, in case of first printing, the printing will begin in 30 sec.

2. VACUUM (2)
Mode : OFF, ON 2
OFF : RING BLOWER won't work.<LED OFF>
ON : RING BLOWER works.<LED ON>
※ When printing, Ring Brower should be turned on.

4. CAPPING COVER (3)
Mode : OFF, ON 2
CLOSE : Capping cover is being closed.
OPEN : Capping cover is being opened.

Capping cover is closed. Error message will show up in the CAPPING COVER CLOSE. Headbase won't be down.

Capping cover should be opened, then headbase will be down.

CHECKING LIST RELATED TO POWER

1. Cut off MAIN BRAKER.

2. Check the power short in the OFF state of all the brakers.
   - The resistance between power source and grounding: O.L is normal.

3. Check all the short situation with equipment including AC Line and chassis.

4. Separate connector of DC power for main PCB + HEAD PCB.

5. Separated power is supplied into each part and its operation is checked.
   (UV lamp-servo motor-ring blower-controller checked)

6. If main power is ON/OFF, able to check whether DC main power is normal or not.

7. Connect with connector of DC power source for MAIN PCB+HEAD PCB.
   - **Check connecting 24V GND of MAIN, HEAD PCB with chassis GND.**

8. Main Power is ON --> check the operation status of machine.

ENCORDER CHECKING

1. Press CALIB button.
2. Press Key of F2> CARRIAGE SELEASE.
3. Move the carriage slowly to the right or the left by hand.
4. Check the ON/OFF of ENC A, ENC B LED for HEAD PCB.
5. Whenever finishing the encoder checking, press down the key of F1> SERVO ON And HOME CHECK
6. If the servo is ON again, the carriage moves to the HOME and then the HOME is checked.
7. PRIME TEST.
8. Check normal status while printing out.
9. Keep the cleanness of CODE STRIP. (wipe out with clean close)

*List of Notice

When you clean, never try to use solution, solvent, thinner, acetone, other chemicals, the scale on the code strip can be erased.

Check of Negative Pressure

1. Check the movement of COMPRESSOR.
2. Check the pressure in the vacuum pressure gauge
   - Setting with pressure value indicated in the sticker for each part.
   - If the negative pressure do not match, the serious problem like nozzle exclusion, ink dropping etc may occur.
3. Remove if there is any water left in the inside filter.
   - Beware that water should keep away from power supplying part.
4. Remove waste ink if waste ink fill in the Sub Air-Tank.
5. Moisture should be drained off from the air tank every other day by opening the drain valve.

* List of Notice

When adjusting the regulator, if there is not any change on pressure, please verify pressure setting value of regulator and hose connecting.

MODEL : **:ANAPURNA MV**

4. ABNORMAL PRINTING/DECLINE OF PRINTING QUALITY

PRINTING ERROR

1. No Printing Image – Encoder error

→ Cleaning of Code Strip (Use clean cloth)
→ Check the gap between Encoder and Code Strip.
→ Check the status of ON/OFF of LED for Encoder A.B of HEAD PCB
→ Check the angle between encoder and code strip.

POOR PRINTING QUALITY

1. Check the negative air pressure: Regulating within the range of graduation in the sticker of each part.
2. Check the voltage of head jetting : Check and regulate each head voltage.
3. CALIBRATION CHECKING (BI, FEED)
4. CARRIAGE SPEED CHECKING: It is possible to have printing deterioration in a speed that is faster than setting speed. (Max speed 10, Quality speed 7)
5. Adjust height of HEAD BASE and check the evenness of platen
6. If the ink is not curing, it is caused by LV Lamp.

→ Check the power of UV Lamp and check the cooling time.

* List of Notice:
Since the UV Lamp generate a heat, any media that is weak
to the heat can cause the serious damage to the Head by waving of media.
Therefore, when printing out, should set setting interval between each media.

OVERFLOW OF INK

1. Verify the ink filter in the refill area. (main reason to overflow)
   - Should remove the air in the air filter.

2. Error of level sensor in sub-ink tank.

3. Error in negative pressure and connecting tube.
   (Check the gauge of negative pressure in -0.028 ~ -0.038kgf/ ㎠)

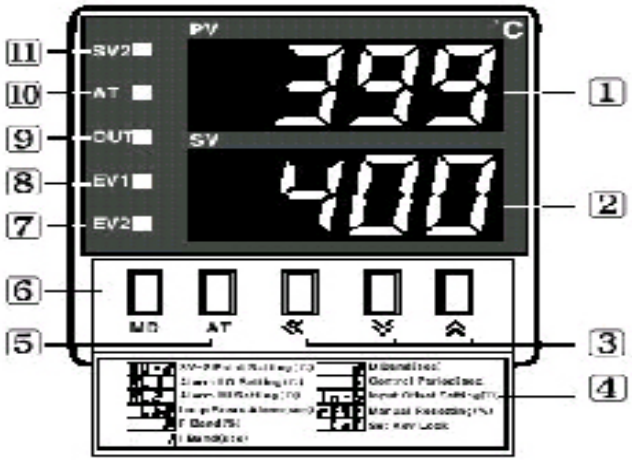
4. Check whether there is the ink left in the Sub Air Tank or not.
   → Regularly remove the remaining ink after checking.
   → If the sensor of level begins operating due to the ink filled. lamp of tower and buzzer as well.

MODEL : **:ANAPURNA MV**

5. DRIVER PARAMETER

TEMPERTURE CONTROLLER SETTING

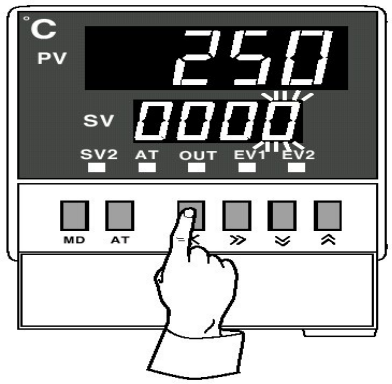
※ Please refer the homepage of Autonic for below contents.



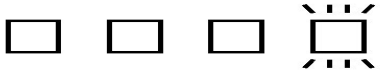
1 PV : Display of value(RED)
2 SV : Display fo setting value(Green)
3 ≪ ≫ ≫: Control key of setting value
4 Chart of control key
5 AT Key : Key of autotunning
6 MD Key : Mode key
7 EV2 : EVENT2 Output display lamp
8 EV1 : EVENT1 Output display lamp
9 OUT : Output display lamp
10 AT : Autotunning play display lamp
11 SV2 : SV2 Play display lamp

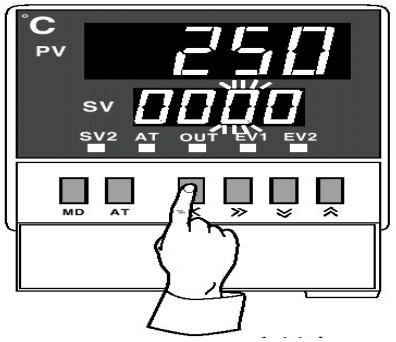
■ How to Set and Change the Setting Value (SV) **Name of each part (TZ4ST)**

※ The scope of temperature regulation is set for 0~ 45 ℃ originally.

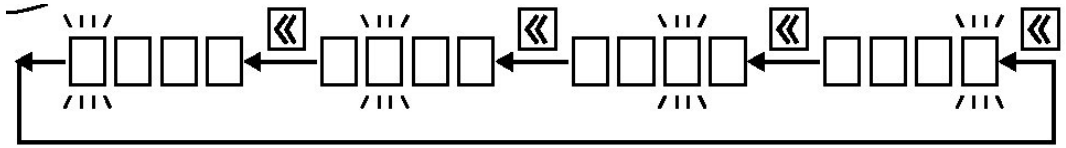


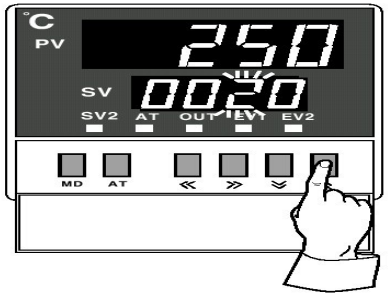
1) Switch on the power of heater controller.
(Red Switch in the front)
2 If setting (resetting) the Temperature setting value, press down << key.
The 1 st lamp in SW blinks.



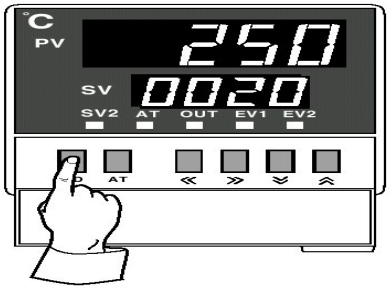


2) Press << key to move to next digit on the left





3) Press UP and Down keys to change the value during blinking.



4) Press the MD key when you have finished
the temperature setting. It will stop blinking.

※ This setting method is for TZ4M.
The method for TZ4ST, which is installed
in our printer, same with different external covering.

Caution

Do not change voluntarily because of the controller settings done.

DESCRIPTION OF DRIVER PARAMETER OF SERVO MOTOR -1

NO.	Symbol	Name and Function	Initial Value	Unit	Customer setting	
					Feed	Carriage
0	*STY	Command system/regenerative brake option selection	0000		0010	0310
1	*FTY	Feeding function selection	0000		0011	0010
2	*OP1	Function selection 1	0002		0002	0002
3	ATU	Auto tuning	0105		040B	0406
4	*CMX	Electronic gear numerator	1		13107	13107
5	*CDV	Electronic gear denominator	1		8000	8000
6	FED	Movement complete output range	100	㎛	100	100
7	PGI	Position loop gain	35	rad/s	150	30
8	*ZTY	Home position return type	0010		0014	0014
9	ZRF	Home position return speed	500	r/min	500	500
10	CRF	Creep speed	10	r/min	10	10
11	ZST	Home position shift distance	0	㎛	0	0
12		For manufacturer setting	0		0	0
13	JOG	JOG Jog speed	100	r/min	2000	100
14	*STC	S-pattern acceleration/deceleration time constant	0	ms	0	0
15	*SNO	Station number setting	0	station	1	2
16	*BPS	Communication baudrate selection, alarm history clear	0000		0100	0100
17	MOD	Analog monitor outpu	0100		0100	0100
18	*DMD	Status display selection	0000		0000	0005
19	*BLK	Parameter block	0000		000E	000E

DESCRIPTION OF DRIVER PARAMETER OF SERVO MOTOR-2

20	*OP2	Function selection	0000		0000	0000
21		For manufacturer setting	0002		0002	0002
22	*OP4	Function selection	0000		0000	0000
23	SIC	Serial communications time-out selection	0		0	0
24	FFC	Feed forward gain	0	%	0	0
25	VCO	Override offset	0	mV	0	0
26	TLO	Torque limit offset	0	mV	0	0
27	*ENR	Encoder output pulses	4000	pulse/rev	4000	4000
28	TL1	Internal torque limit	100	%	100	25
29	TL2	Internal torque limi	100	%	100	100
30	*BKC	Backlash compensation	0	pulse	0	0
31	MO1	Analog monitor 1 offset	0	mV	0	0
32	MO2	Analog monitor 2 offset	0	mV	0	0
33	MBR	Electromagnetic brake sequence output	100	ms	100	100
34	GD2	Ratio of load inertia moment to Servo motor inertia moment	70	0.1 times	10	135
35	PG2	Position loop gain	35	rad/s	200	35
36	VG1	Speed loop gain	177	rad/s	600	750
37	VG2	Speed loop gain	817	rad/s	1200	1500
38	VIC	Speed integral compensation	48	ms	4	20
39	VDC	Speed differential compensation	980		980	980
40	JTS	JOG operation acceleration/deceleration time constant	100	ms	0	0
41	ZTS	Home position return operation acceleration/deceleration time constant	100	ms	0	0
42	*ZPS	Home position return position data	0	$\times 10^{STM\ \mu m}$	0	0
43	DCT	Moving distance after proximity dog	1000	$\times 10^{STM\ \mu m}$	1000	1000
44	ZTM	Stopper type home position return stopper time	100	ms	100	100
45	ZTT	Stopper type home position return torque limit value	15	%	15	15

DESCRTION OF DIRVER PARAMETER OF SERVO MOTOR-3

46 47	*LMP	Software limit +	0	$\times 10^{STM\ \mu m}$	0	0
48 49	*LMN	Software limit -	0	$\times 10^{STM\ \mu m}$	0	0
50 51	*LPP	Position range outpot address +	0	$\times 10^{STM\ \mu m}$	0	0
52 53	*LNP	Position range outpot address -	0	$\times 10^{STM\ \mu m}$	0	0
54		For manufacturer setting	0000		0000	0000
55	*OP6	Function selection 6	0000		0000	0000
56		For manufacturer setting	0000		0000	0000
57	*OP8	Function selection 8	0000		0000	0000
58	*OP9	Function selection 9	0000		0000	0000
59	*OPA	Function selection A	0000		0000	0000
60		For manufacturer setting	0000		0000	0000
61	NH1	Machine resonance suppression filter 1	0000		0000	0000
62	NH2	Machine resonance suppression filter 2	0000		0000	0000
63	LPF	Low-pass filter, adaptive vibration suppression control	0000		0000	0000
64	GD2B	Ratio of load inertia moment to Servo motor inertia moment	70	0.1 times	70	70
65	PG2B	Position control gain 2 changing ratio	100	%	100	100
66	VG2B	Speed control gain 2 changing ratio	100	%	100	120
67	VICB	Speed integral compensation changing ratio	100	%	100	100
68	*CDP	Gain changing selection	0000		0000	0000
69	CDS	Gain changing condition	10	(Note)	10	10

DESCRITION OF DRIVER PARAMETER OF SERVO MOTOR-4

70	CDT	Gain changing time constant	1	ms	1	1
71		For manufacturer setting	100		100	100
72			10000		10000	10000
73			10		10	10
74	OUT1	OUT1 output time selection	0	10ms	10	10
75	OUT2	OUT2 output time selection	0	10ms	100	100
76	OUT3	OUT3 output time selection	0	10ms	100	100
77	*SYC1	Selected to program input polarity selection	0000		100	100
78		For manufacturer setting	0001		0000	0000
79			0209		0009	0009
80			060A		080A	080A
81			1918		0706	0706
82			030B		020B	020B
83			0504		0504	0504
84			0102		0002	0002
85			0000		0000	0000
86			0005		0005	0005
87			120E		0D04	0D04
88			0102		0102	0102
89			0		0	0
90			0		0	0

ERROR TABLE OF SERVO MOTOR DRIVER -1

No.	Start-up sequence	Fault	Investigation	Possible cause	Reference
1	Power on	▪ LED is not lit. ▪ LED flickers.	Not improved if connectors CN1A, CN1B, CN2 and CN3 are disconnected.	1. Power supply voltage fault 2. Servo amplifier is faulty.	
			Improved when connectors CN1A and CN1B are disconnected.	Power supply of CNP1 cabling is shorted.	
			Improved when connector CN2 is disconnected.	1. Power supply of encoder cabling is shorted. 2. Encoder is faulty.	
			Improved when connector CN3 is disconnected.	Power supply of CN3 cabling is shorted.	
		Alarm occurs.	Refer to Section 11.2 and remove cause.		Section 11.2
2	Switch on servo-on signal.	Alarm occurs.	Refer to Section 11.2 and remove cause.		Section 11.2
		Servo motor shaft is not servo-locked (is free).	1. Check the display to see if the servo amplifier is ready to operate. 2. Check the external I/O signal indication to see if the servo-on (SON) signal is ON.	1. Servo-on signal is not input. (Wiring mistake) 2. 24VDC power is not supplied to COM.	Section 7.3.2
3	Gain adjustment	Rotation ripples (speed fluctuations) are large at low speed.	Make gain adjustment in the following procedure: 1. Increase the auto tuning response level. 2. Repeat acceleration and deceleration several times to complete auto tuning.	Gain adjustment fault	Chapter 7
		Large load inertia moment causes the servo motor shaft to oscillate side to side.	If the servo motor may be run with safety, repeat acceleration and deceleration several times to complete auto tuning.	Gain adjustment fault	Chapter 7

ERROR TABLE OF SERVO MOTOR DRIVER - 2

4	Cyclic operation	Position shift occurs	Confirm the cumulative command pulses, cumulative feedback pulses and actual servo motor position.	Pulse counting error, etc. due to noise.	

ERROR TABLE OF SERVO MOTOR DRIVER -3

	Display	(Note 2) Alarm code			Name	Alarm deactivation		
		CN1B-19 pin	CN1A-18 pin	CN1A-19 pin		Power OFF→ON	Press "SET" on current alarm screen.	Alarm reset (RES) signal
Alarms	AL.10	0	1	0	Undervoltage	○	○	○
	AL.12	0	0	0	Memory error 1	○		
	AL.13	0	0	0	Clock error	○		
	AL.15	0	0	0	Memory error 2	○		
	AL.16	1	1	0	Encoder error 1	○		
	AL.17	0	0	0	Board error	○		
	AL.19	0	0	0	Memory error 3	○		
	AL.1A	1	1	0	Motor combination error	○		
	AL.20	1	1	0	Encoder error 2	○		
	AL.24	1	0	0	Main circuit error	○		
	AL.25	1	1	0	Absolute position erase	○		
	AL.30	0	0	1	Regenerative error	○ (Note 1)	○ (Note 1)	○ (Note 1)
	AL.31	1	0	1	Overspeed	○	○	○
	AL.32	1	0	0	Overcurrent	○	○	○
	AL.33	0	0	1	Overvoltage	○		
	AL.35	1	0	1	Command pulse frequency error	○	○	○
	AL.37	0	0	0	Parameter error	○		
	AL.39	0	0	0	Program error	○		
	AL.45	0	1	1	Main circuit device overheat	○	○	○
	AL.46	0	1	1	Servo motor overheat	○	○	○
	AL.50	0	1	1	Overload 1	○ (Note 1)	○ (Note 1)	○ (Note 1)
	AL.51	0	1	1	Overload 2	○ (Note 1)	○ (Note 1)	○ (Note 1)
	AL.52	1	0	1	Error excessive	○	○	○
	AL.63	1	0	1	Home position return incomplete	○	○	○
	AL.64	1	0	1	Home position setting error	○	○	○
	AL.8A	0	0	0	Serial communication time-out error	○	○	○
	AL.8E	0	0	0	Serial communication error	○	○	○
	88888	0	0	0	Watchdog	○		

ERROR TABLE OF SERVO MOTOR DRIVER -4

Warnings	AL.92		Open battery cable warning	Removing the cause of occurrence deactivates the alarm automatically.
	AL.97		Program operation disable	
	AL.98		Software limit warning	
	AL.9F		Battery warning	
	AL.E0		Excessive regenerative warning	
	AL.E1		Overload warning	
	AL.E3		Absolute position counter warning	
	AL.E6		Servo emergency stop warning	
	AL.E9		Main circuit off warning	

Note: 1. Deactivate the alarm about 30 minutes of cooling time after removing the cause of occurrence.
2. 0: Pin-SG off (open)
1: Pin-SG on (short)

ERROR TABLE OF SERVO MOTOR DRIVER -5

Display	Name	Definition	Cause	Action
AL.10	Undervoltage	Power supply voltage dropped. MR-J2S-□CL: 160VAC or less MR-J2S-□CL1: 83VAC or less	1. Power supply voltage is low.	Review the power supply.
			2. There was an instantaneous control power failure of 60ms or longer.	
			3. Shortage of power supply capacity caused the power supply voltage to drop at start, etc.	
			4. Power was restored after the bus voltage had dropped to 200VDC. (Main circuit power switched on within 5s after it had switched off.)	
			5. Faulty parts in the servo amplifier Checking method Alarm (AL.10) occurs if power is switched on after disconnection of all cables but the control circuit power supply cables.	Change the servo amplifier.
AL.12	Memory error 1	RAM, memory fault	Faulty parts in the servo amplifier Checking method Alarm (any of AL.11 and 13) occurs if power is switched on after disconnection of all cables but the control circuit power supply cables.	Change the servo amplifier.
AL.13	Clock error	Printed board fault		
AL.15	Memory error 2	EEP-ROM fault	1. Faulty parts in the servo amplifier Checking method Alarm (AL.15) occurs if power is switched on after disconnection of all cables but the control circuit power supply cables.	Change the servo amplifier.
			2. The number of write times to EEP-ROM exceeded 100,000.	

ERROR TABLE OF SERVO MOTOR DRIVER -6

AL.16	Encoder error 1	Communication error occurred between encoder and servo amplifier.	1. Encode connector (CN2) disconnected.	Connect correctly.
			2. Encoder fault	Change the servo motor.
			3. Encoder cable faulty (wire breakage or short)	Repair or change the cable.
AL.17	Board error	CPU/parts fault	Faulty parts in the servo amplifier Checking method Alarm (A.17 or A.18) occurs if power is switched on after disconnection of all cables but the control circuit power supply cables.	Change the servo amplifier.
AL.19	Memory error 3	ROM memory fault		
AL.1A	Motor combination error	Wrong combination of servo amplifier and servo motor.	Wrong combination of servo amplifier and servo motor connected.	Use correct combination.
AL.20	Encoder error 2	Communication error occurred between encoder and servo amplifier.	1. Encoder connector (CN2) disconnected.	Connect correctly.
			2. Encoder fault	Cange the servo motor.
			3. Encoder cable faulty (wire breakage or shorted)	Repair or change the cable.
AL.24	Main circuit error	Ground fault occurred at the servo motor outputs (U,V and W phases) of the servo amplififer.	1. Power input wires and servo motor output wires are in contact at main circuit terminal block (TE1).	Connect correctly.
			2. Sheathes of servo motor power cables deteriorated, resulting in ground fault.	Change the cable.
			3. Main circuit of servo amplifier failed. Checking method AL.24 occurs if the servo is switched on after disconnecting the U, V, W power cables from the servo amplifier.	Change the servo amplifier.

ERROR TABLE OF SERVO MOTOR DRIVER -7

AL.25	Absolute position erase	Absolute position data in error	1. Reduced voltage of super capacitor in encoder	After leaving the alarm occurring for a few minutes, switch power off, then on again. Always make home position setting again.
			2. Battery voltage low	Change battery.
			3. Battery cable or battery is faulty.	Always make home position setting again.
		Power was switched on for the first time in the absolute position detection system.	4. Super capacitor of the absolute position encoder is not charged	After leaving the alarm occurring for a few minutes, switch power off, then on again. Always make home position setting again.
AL.30	Regenerative alarm	Permissible regenerative power of the built-in regenerative brake resistor or regenerative brake option is exceeded.	1. Wrong setting of parameter No. 0	Set correctly.
			2. Built-in regenerative brake resistor or regenerative brake option is not connected.	Connect correctly
			3. High-duty operation or continuous regenerative operation caused the permissible regenerative power of the regenerative brake option to be exceeded. Checking method Call the status display and check the regenerative load ratio.	1. Reduce the frequency of positioning. 2. Use the regenerative brake option of larger capacity. 3. Reduce the load.
			4. Power supply voltage is abnormal. MR-J2S-□CL:260VAC or more MR-J2S-□CL1:135VAC or more	Review power supply
			5. Built-in regenerative brake resistor or regenerative brake option faulty.	Change servo amplifier or regenerative brake option.
		Regenerative transistor fault	6. Regenerative transistor faulty. Checking method 1) The regenerative brake option has overheated abnormally. 2) The alarm occurs even after removal of the built-in regenerative brake resistor or regenerative brake option.	Change the servo amplifier.

ERROR TABLE OF SERVO MOTOR DRIVER -8

Display	Name	Definition	Cause	Action
AL.31	Overspeed	Speed has exceeded the instantaneous permissible speed.	1. Input command pulse frequency exceeded the permissible instantaneous speed frequency.	Set command pulses correctly.
			2. Small acceleration/deceleration time constant caused overshoot to be large.	Increase acceleration/deceleration time constant.
			3. Servo system is instable to cause overshoot.	1. Re-set servo gain to proper value. 2. If servo gain cannot be set to proper value: 1) Reduce load inertia moment ratio; or 2) Reexamine acceleration/ deceleration time constant.
			4. Electronic gear ratio is large (parameters No. 4, 5)	Set correctly.
			5. Encoder faulty.	Change the servo motor.
AL.32	Overcurrent	Current that flew is higher than the permissible current of the servo amplifier.	1. Short occurred in servo amplifier output phases U, V and W.	Correct the wiring.
			2. Transistor (IPM) of the servo amplifier faulty. Checking method Alarm (AL.32) occurs if power is switched on after U,V and W are disconnected.	Change the servo amplifier.
			3. Ground fault occurred in servo amplifier output phases U, V and W.	Correct the wiring.
			4. External noise caused the overcurrent detection circuit to misoperate.	Take noise suppression measures.

ERROR TABLE OF SERVO MOTOR DRIVER -9

AL.33	Overvoltage	Converter bus voltage exceeded 400VDC.	1. Lead of built-in regenerative brake resistor or regenerative brake option is open or disconnected.	1. Change lead. 2. Connect correctly.
			2. Regenerative transistor faulty.	Change servo amplifier
			3. Wire breakage of built-in regenerative brake resistor or regenerative brake option	1. For wire breakage of built-in regenerative brake resistor, change servo amplifier. 2. For wire breakage of regenerative brake option, change regenerative brake option.
			4. Capacity of built-in regenerative brake resistor or regenerative brake option is insufficient.	Add regenerative brake option or increase capacity.
			5. Power supply voltage high.	Review the power supply.
AL.35	Command pulse frequency error	Input pulse frequency of the command pulse is too high.	1. Pulse frequency of the manual pulse generator is too high.	Change the pulse frequency to a proper value.
			2. Noise entered the pulses of the manual pulse generator.	Take action against noise.
			3. Manual pulse generator failure	Change the manual pulse generator.

ERROR TABLE OF SERVO MOTOR DRIVER -10

AL.37	Parameter error	Parameter setting is wrong.	1. Servo amplifier fault caused the parameter setting to be rewritten.	Change the servo amplifier.
			2. Regenerative brake option not used with servo amplifier was selected in parameter No.0.	Set parameter No.0 correctly.
			3. Value outside setting range has been set in some parameter.	Set the parameter correctly.
			4. Value outside setting range has been set in electronic gear.	Set parameters No. 4, 5 correctly.
			5. Opposite sign has been set in software limit increasing side (parameters No. 46, 47). Similarly, opposite sign has been set in software limit decreasing side (parameters No. 48, 49).	Set parameters No. 46 to 49 correctly.
			6. Opposite sign has been set in position range output address increasing side (parameters No. 50, 51). Similarly, opposite sign has been set in position range output address decreasing side (parameters No. 52, 53).	Set parameters No. 50 to 53 correctly.
			7. The number of write times to EEP-ROM exceeded 100,000 due to parameter write, program write, etc.	Change the servo amplifier.
AL.39	Program error	Program data is abnormal	1. Servo amplifier fault caused the program data to be rewritten.	Change the servo amplifier.
			2. Command argument is out of the setting range.	Programming correctly.
			3. The number of write times to EEP-ROM exceeded 100,000 due to parameter write, program write, etc.	Change the servo amplifier.

ERROR TABLE OF SERVO MOTOR DRIVER -11

AL.45	Main circuit device overheat	Main circuit device overheat	1. Servo amplifier faulty.	Change the servo amplifier.
			2. The power supply was turned on and off continuously by overloaded status.	The drive method is reviewed.
			3. Air cooling fan of servo amplifier stops.	1. Exchange the cooling fan or the servo amplifier. 2. Reduce ambient temperature.
AL.46	Servo motor overheat	Servo motor temperature rise actuated the thermal protector.	1. Ambient temperature of servo motor is over 40℃.	Review environment so that ambient temperature is 0 to 40℃.
			2. Servo motor is overloaded.	1. Reduce load. 2. Review operation pattern. 3. Use servo motor that provides larger output.
			3. Thermal protector in encoder is faulty.	Change servo motor.

ERROR TABLE OF SERVO MOTOR DRIVER -12

AL.50	Overload 1	Load exceeded overload protection characteristic of servo amplifier.	1. Servo amplifier is used in excess of its continuous output current.	1. Reduce load. 2. Review operation pattern. 3. Use servo motor that provides larger output.
			2. Servo system is instable and hunting.	1. Repeat acceleration/ deceleration to execute auto tuning. 2. Change auto tuning response setting. 3. Set auto tuning to OFF and make gain adjustment manually.
			3. Machine struck something.	1. Review operation pattern. 2. Install limit switches.
			4. Wrong connection of servo motor. Servo amplifier's output terminals U, V, W do not match servo motor's input terminals U, V, W.	Connect correctly.
			5. Encoder faulty. Checking method When the servo motor shaft is rotated with the servo off, the cumulative feedback pulses do not vary in proportion to the rotary angle of the shaft but the indication skips or returns midway.	Change the servo motor.

ERROR TABLE OF SERVO MOTOR DRIVER - 13

AL.51	Overload 2	Machine collision or the like caused max. output current to flow successively for several seconds. Servo motor locked: 1s or more During rotation: 2.5s or more	1. Machine struck something.	1. Review operation pattern. 2. Install limit switches.
			2. Wrong connection of servo motor. Servo amplifier's output terminals U, V, W do not match servo motor's input terminals U, V, W.	Connect correctly.
			3. Servo system is instable and hunting.	1. Repeat acceleration/deceleration to execute auto tuning. 2. Change auto tuning response setting. 3. Set auto tuning to OFF and make gain adjustment manually.
			4. Encoder faulty. Checking method When the servo motor shaft is rotated with the servo off, the cumulative feedback pulses do not vary in proportion to the rotary angle of the shaft but the indication skips or returns midway.	Change the servo motor.
AL.52	Error excessive	The droop pulse value of the deviation counter exceeded 2.5 rotations.	1. Acceleration/deceleration time constant is too small.	Increase the acceleration/deceleration time constant.
			2. Internal torque limit 1 (parameter No.28) is too small.	Increase the torque limit value.
			3. Motor cannot be started due to torque shortage caused by power supply voltage drop.	1. Review the power supply capacity. 2. Use servo motor which provides larger output.
			4. Position control gain 1 (parameter No.7) value is small.	Increase set value and adjust to ensure proper operation.
			5. Servo motor shaft was rotated by external force.	1. When torque is limited, increase the limit value. 2. Reduce load. 3. Use servo motor that provides larger output.
			6. Machine struck something.	1. Review operation pattern. 2. Install limit switches.
			7. Encoder faulty	Change the servo motor.
			8. Wrong connection of servo motor. Servo amplifier's output terminals U, V, W do not match servo motor's input terminals U, V, W.	Connect correctly.

ERROR TABLE OF SERVO MOTOR DRIVER -14

AL.63	Home position return incomplete	In incremental system: 1. Positioning operation was performed without home position return. 2. Home position return ended abnormally.	1. Positioning operation was performed without home position return. 2. Home position return speed could not be decreased to creep speed. 3. Limit switch was actuated during home position return starting at other than position beyond dog.	1. Perform home position return. 2. Review home position return speed/creep speed/moving distance after proximity dog.
		In absolute position detection system: 1. Positioning operation was performed without home position setting. 2. Home position setting ended abnormally.	1. Positioning operation was performed without home position setting. 2. Home position setting speed could not be decreased to creep speed. 3. Limit switch was actuated during home position setting starting at other than position beyond dog.	1. Perform home position setting. 2. Review home position setting speed/creep speed/moving distance after proximity dog.
AL.64	Home position setting error	Home position setting could not be made.	1. Droop pulses remaining are greater than the in-position range setting.	Remove the cause of droop pulse occurrence
			2. Command pulse entered after clearing of droop pulses.	Do not enter command pulse after clearing of droop pulses.
			3. Creep speed high.	Reduce creep speed.
AL.8A	Serial communication time-out error	RS-232C or RS-422 communication stopped for longer than the time set in parameter No.23.	1. Communication cable breakage.	Repair or change communication cable
			2. Communication cycle longer than parameter No. 23 setting.	Set correct value in parameter.
			3. Wrong protocol.	Correct protocol.

ERROR TABLE OF SERVO MOTOR DRIVER -15

AL.8E	Serial communication error	Serial communication error occurred between servo amplifier and communication device (e.g. personal computer).	1. Communication cable fault (Open cable or short circuit)	Repair or change the cable.
			2. Communication device (e.g. personal computer) faulty	Change the communication device (e.g. personal computer).
88888	Watchdog	CPU, parts faulty	Fault of parts in servo amplifier Checking method Alarm (88888) occurs if power is switched on after disconnection of all cables but the control circuit power supply cables.	Change servo amplifier.

ERROR TABLE OF SERVO MOTOR DRIVER -16

Display	Name	Definition	Cause	Action
AL.92	Open battery cable warning	Absolute position detection system battery voltage is low.	1. Battery cable is open.	Repair cable or changed.
			2. Battery voltage dropped to 2.8V or less.	Change battery.
AL.97	Program operation disable	Program was started in a program operation disable status.	After a program change, the program was started without the servo amplifier being powered off/on.	Power off/on the servo amplifier.
AL.98	Software limit warning	Software limit set in parameter is reached.	1. Software limit was set within actual operation range.	Set parameter No. 48 to 51 correctly.
			2. Program of position data in excess of software limit was executed.	Set program correctly.
			3. Software limit was reached during JOG operation or manual pulse generator operation.	Perform operation within software limit range.
AL.9F	Battery warning	Voltage of battery for absolute position detection system reduced.	Battery voltage fell to 3.2V or less.	Change the battery.
AL.E0	Excessive regenerative warning	There is a possibility that regenerative power may exceed permissible regenerative power of built-in regenerative brake resistor or regenerative brake option.	Regenerative power increased to 85% or more of permissible regenerative power of built-in regenerative brake resistor or regenerative brake option. Checking method Call the status display and check regenerative load ratio.	1. Reduce frequency of positioning. 2. Change regenerative brake option for the one with larger capacity. 3. Reduce load.

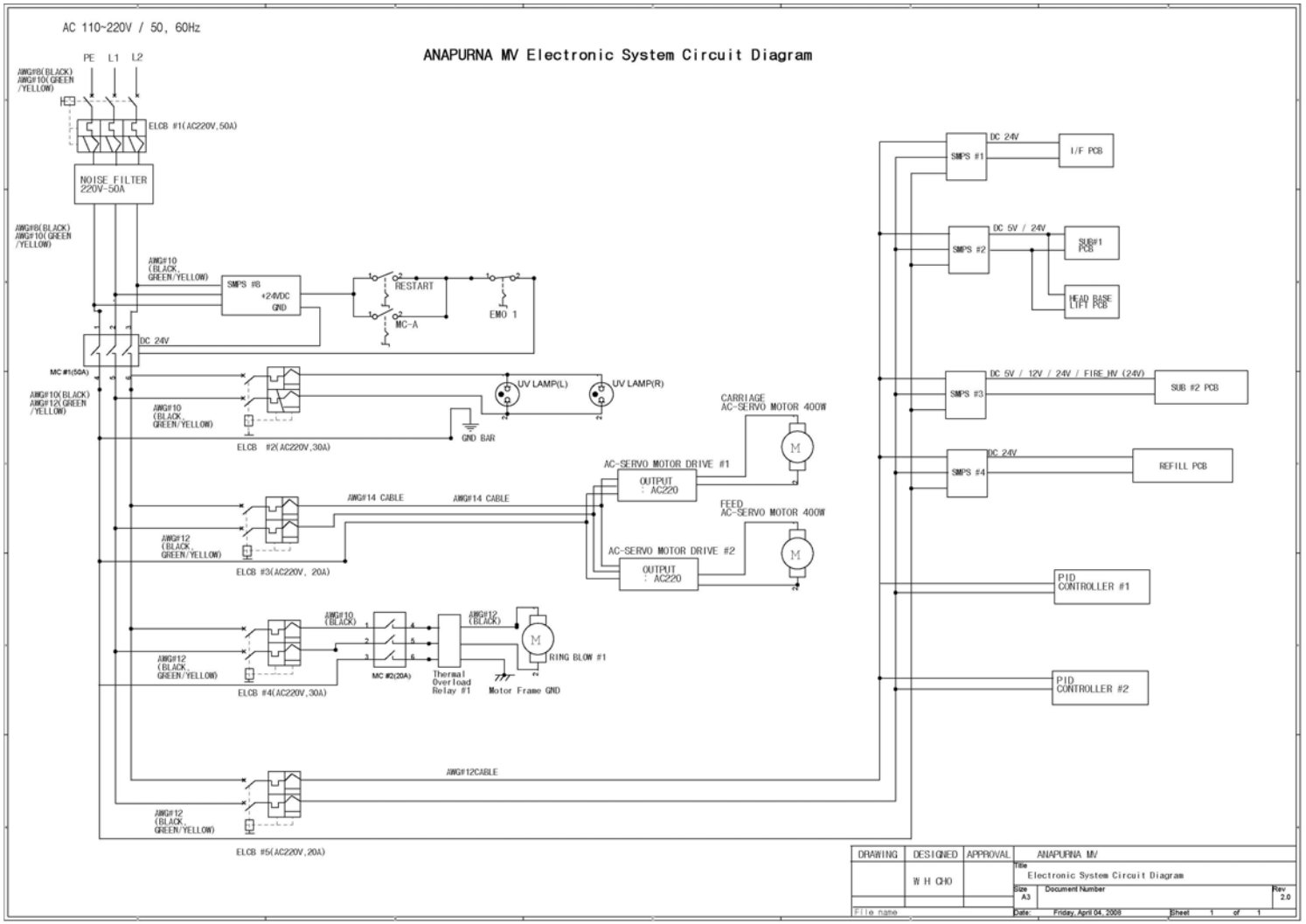
ERROR TABLE OF SERVO MOTOR DRIVER -17

AL.E1	Overload warning	There is a possibility that overload alarm 1 or 2 may occur.	Load increased to 85% or more of overload alarm 1 or 2 occurrence level. Cause, checking method Refer to AL.50,51.	Refer to AL.50, AL.51.
AL.E3	Absolute position counter warning	Absolute position encoder pulses faulty.	1. Noise entered the encoder.	Take noise suppression measures.
			2. Encoder faulty.	Change servo motor.
AL.E6	Servo forced stop warning	EMG-SG are open.	External forced stop was made valid. (EMG-SG opened.)	Ensure safety and deactivate forced stop.
AL.E9	Main circuit off warning	Servo was switched on with main circuit power off.		Switch on main circuit power.

MODEL : **:ANAPURNA MV**

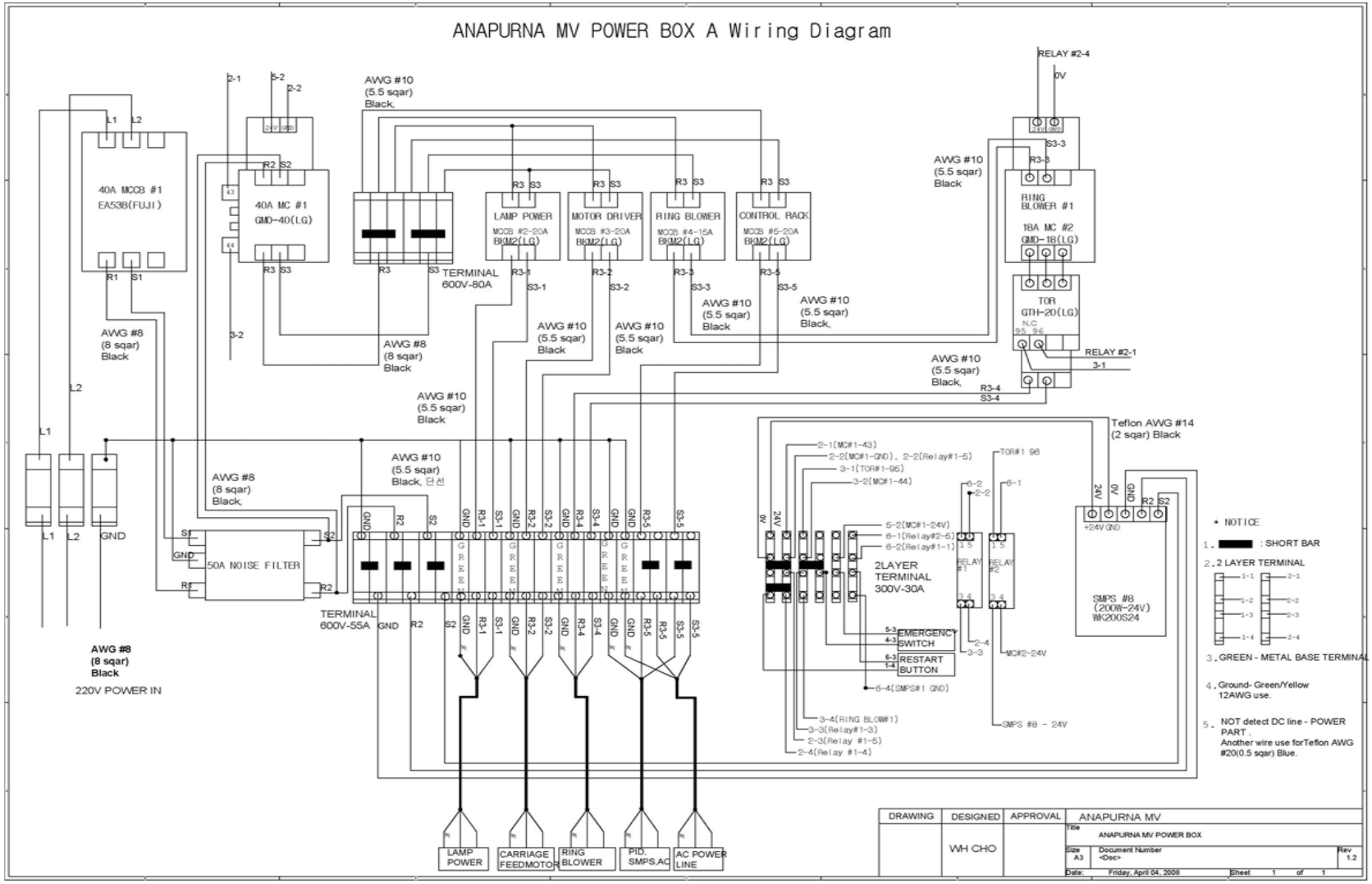
6.ELECTRIC DIAGRAM/PCB DESCRIPTION

TOTAL ELECTRONIIC SYSTEM CIRCUIT DIAGRAM



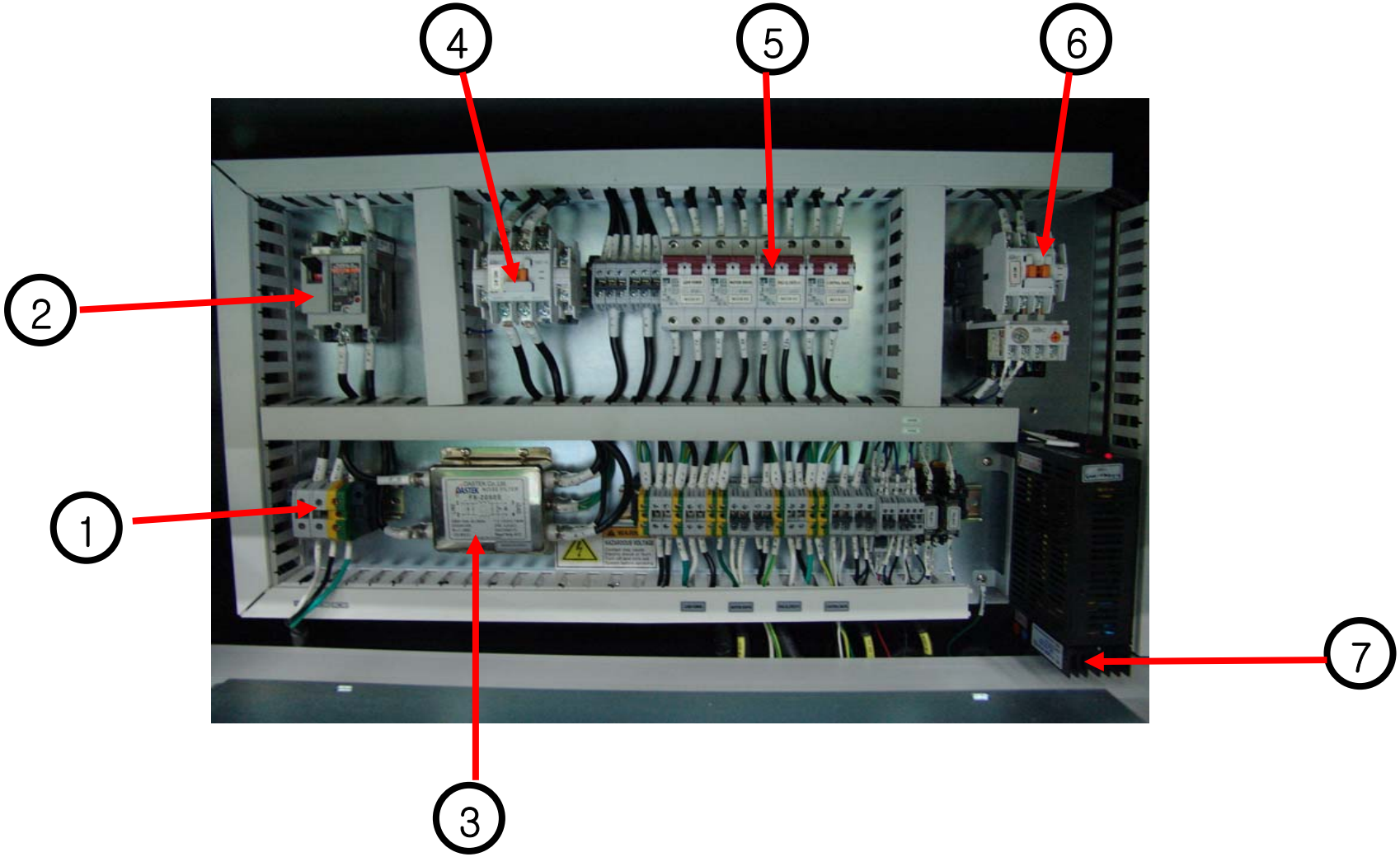
*** Bigger original circuit diagram is attached for understanding.**

POWER BOX ELECTRIC SYSTEM WIRING DIAGRAM



*** Bigger original circuit diagram is attached for understanding.**

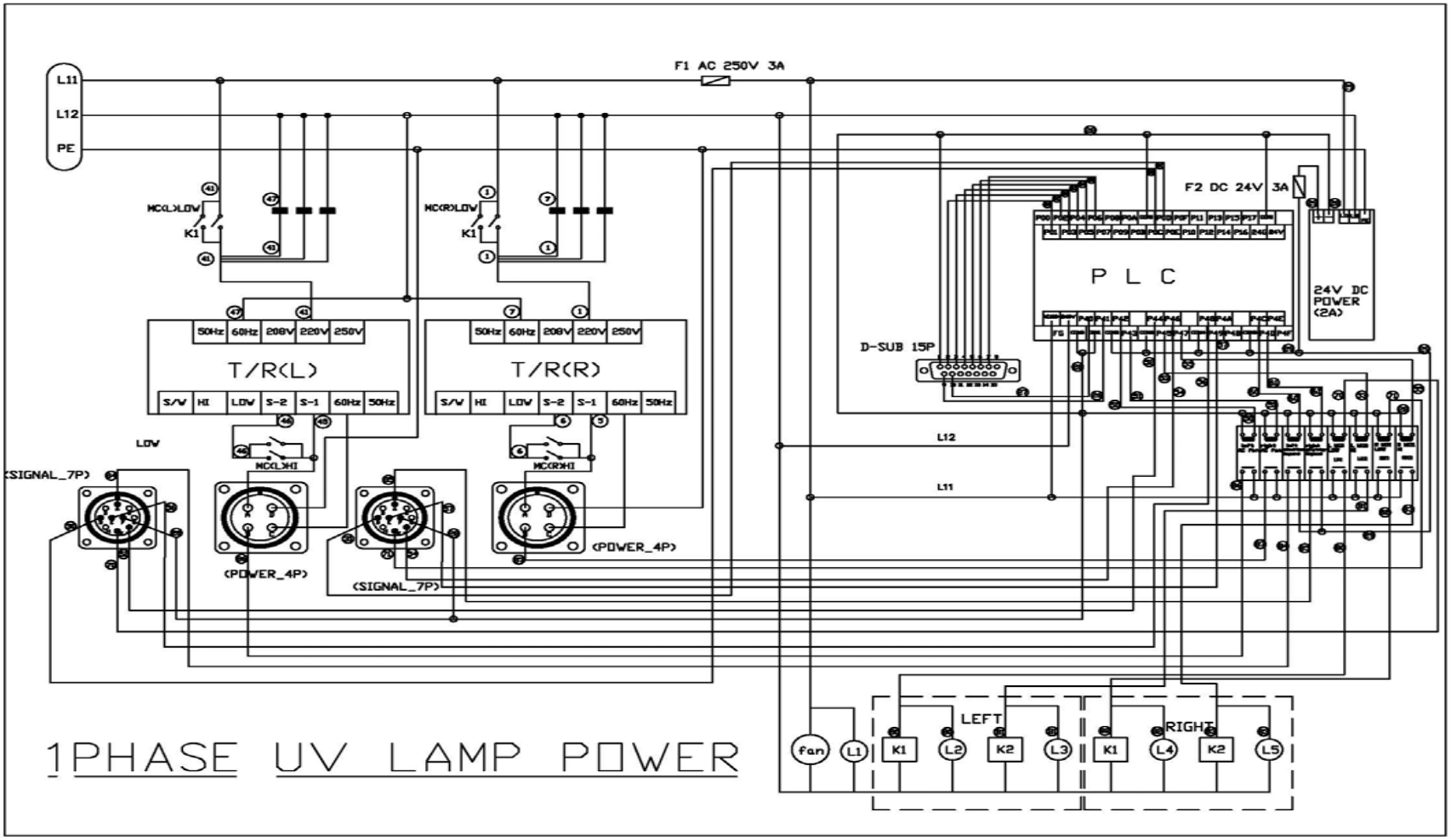
SWITCHBOARD



SWITCHBOARD – DESCRIPTION OF EACH PART

1. Input terminal block for main power
2. Initial short circuit breaker, MCCB, Main short circuit breaker
3. Noise filter
4. If Main MC-START button is pressed, begin to work.
5. 2nd short circuit breaker(MCCB) – UV Lamp, Motor driver power, Ring blower, Controller rack.
6. MC for Ring Blow Operation – Ring Blower Select Switch is turned on, begin to operate.
7. SMPS – supply the power to both main MC of circuit board and FAN.

LAMP POWER SYSTEM CIRCUIT DIAGRAM

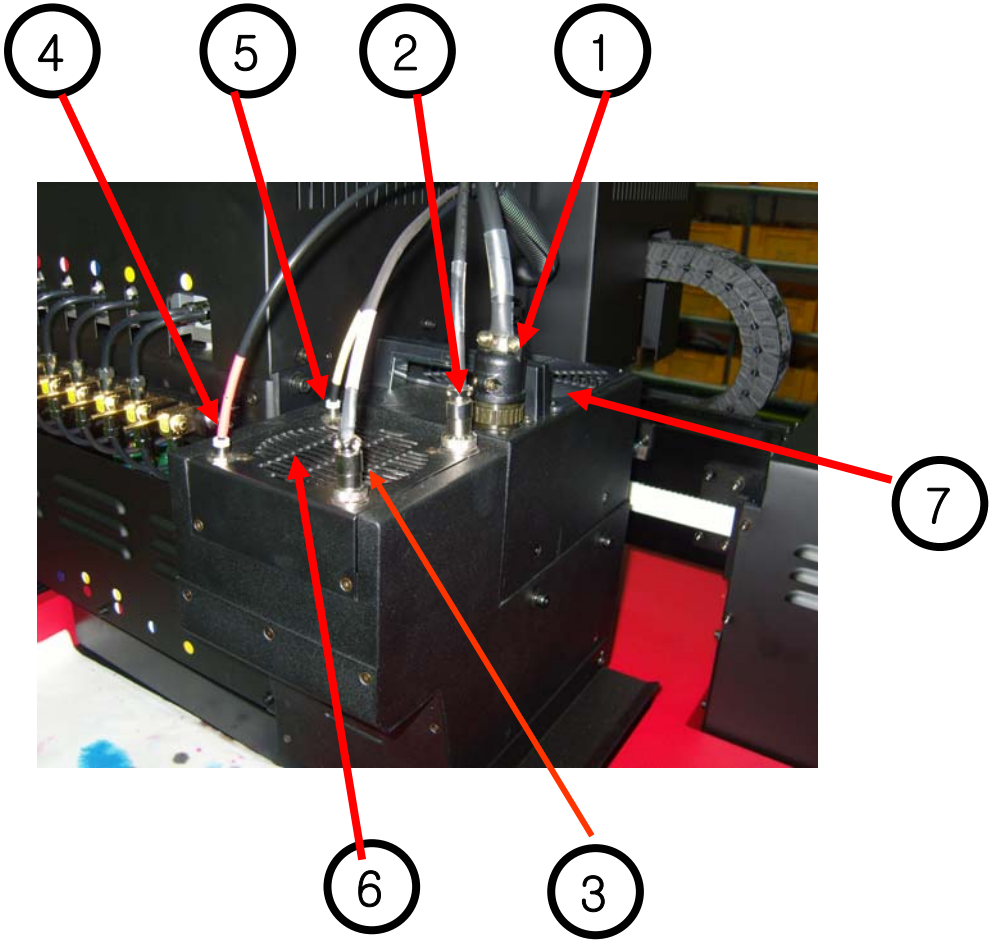


*** Bigger original circuit diagram is attached for understanding.**

UV LAMP AND LMAP CASE

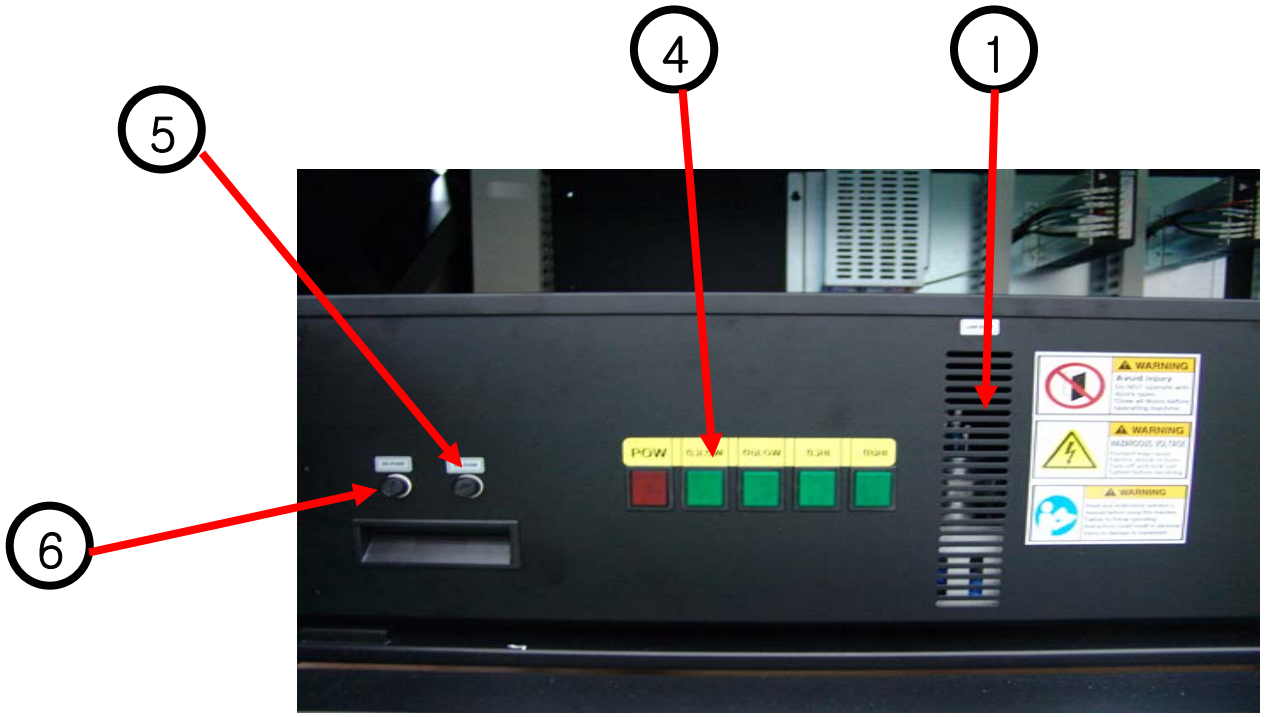
85, 120w/cm

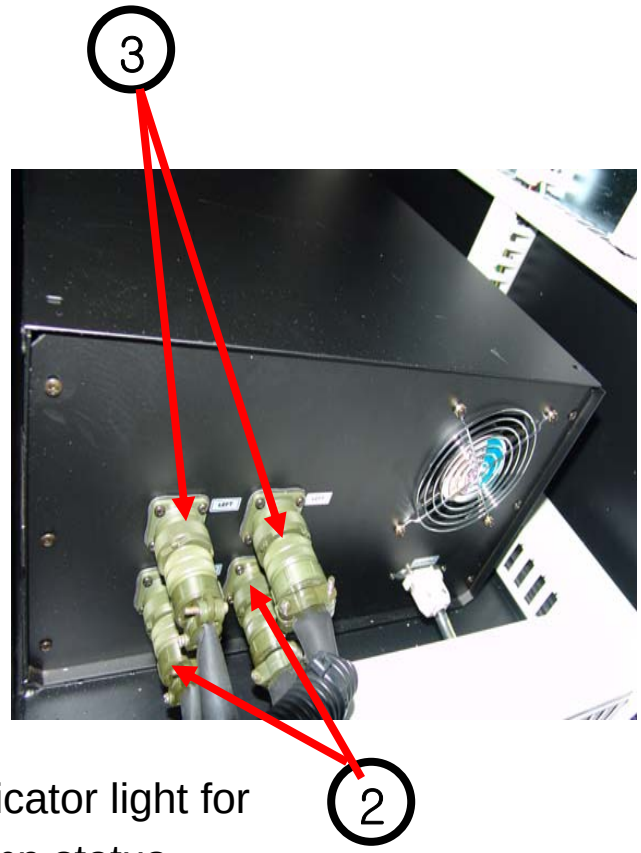
UV LAMP – PART DESCRIPTION



1. **Lamp power connector (4P)**
2. **Lamp Signal Connector (7P)**
3. **Lamp shutter signal connector(2P)**
4. **Lamp shutter closing air compressor tube.**
5. **Lamp shutter opening air compressor tube**
6. **Lamp House Exhaust DC FAN**
7. **Lamp case induction AC FAN**

NAME OF EACH PART FOR LAMP POWER





1 Air penetration hole

2 Right Lamp Connector

3 Left Lamp Connector

4 Indicator light for Lamp status

5 AC fuse holder

6 DC fuse holder

INNER STRUCTURE OF LAMP POWER

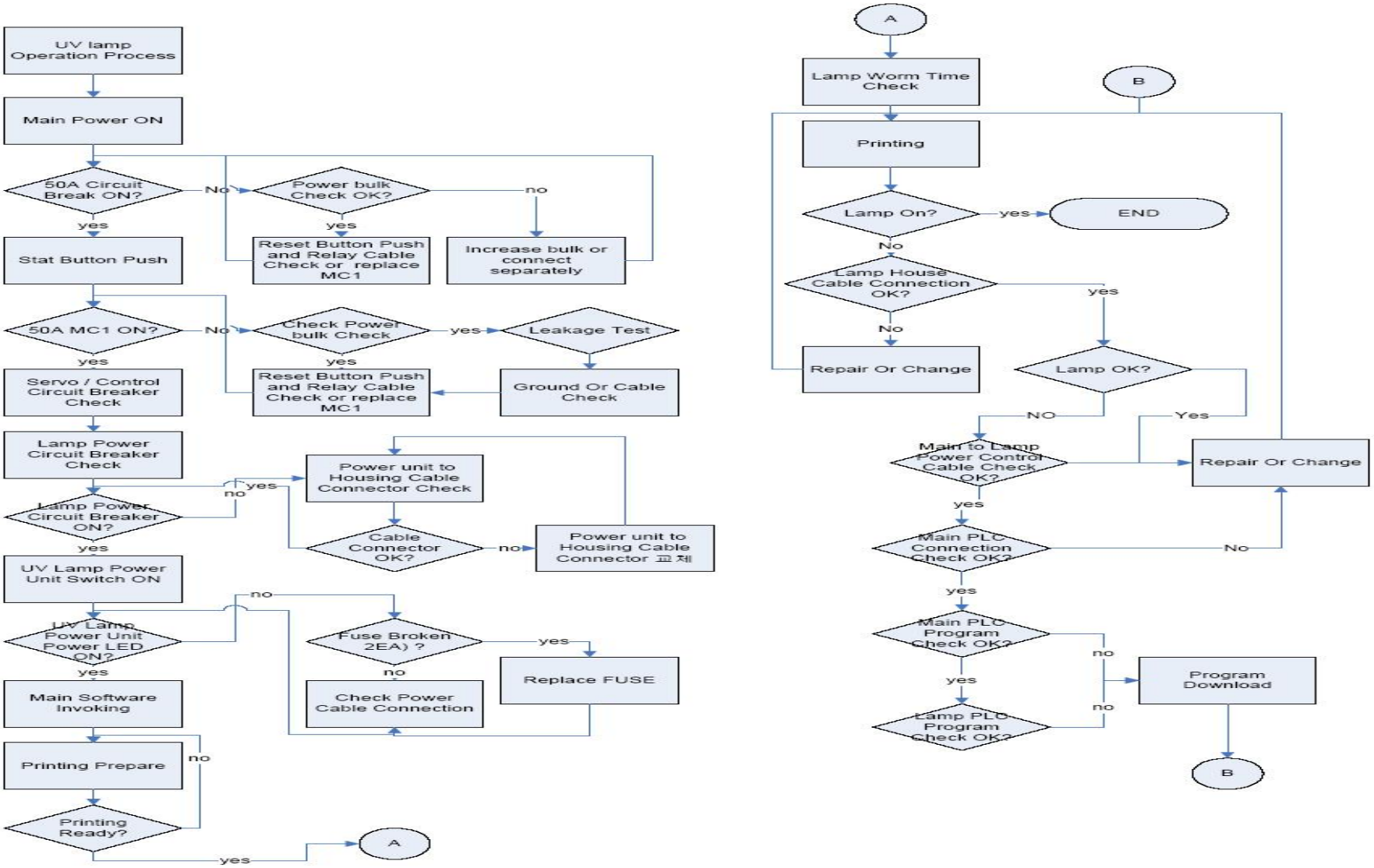
HOW TO SET POWER LAMP

- Power Input Voltage Tap Setting (ex: 220V, 60Hz.)

DESCRIPTION OF TAB

Power	204V	230V
Frequency	50Hz	60Hz

DIAGRAM – TROUBLE CHECK CHART



*** Bigger original circuit diagram is attached for understanding.**

INK SUPPLY FLOW DIAGRAM

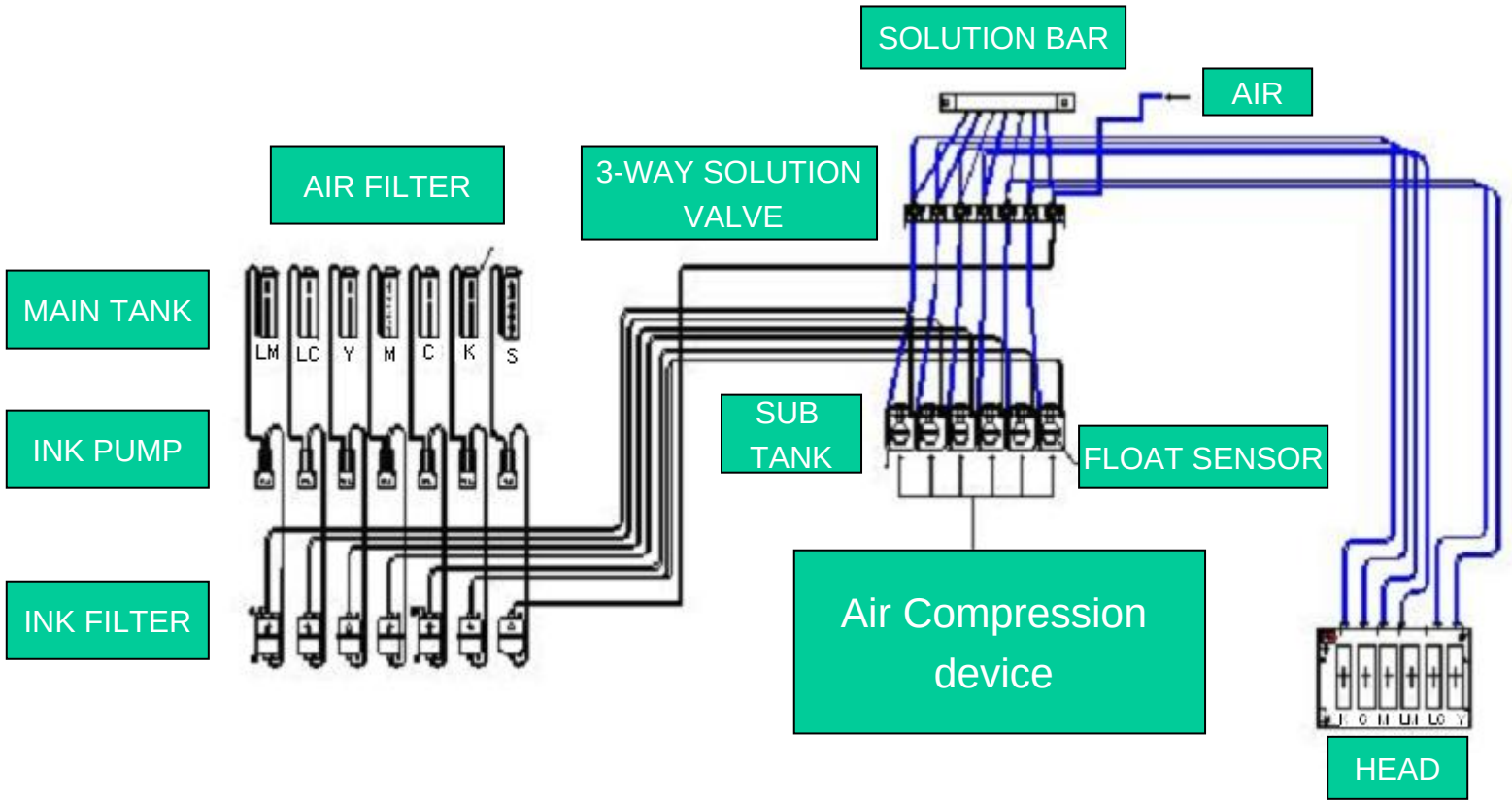


DIAGRAM – MAIN INK SUPPLY PART

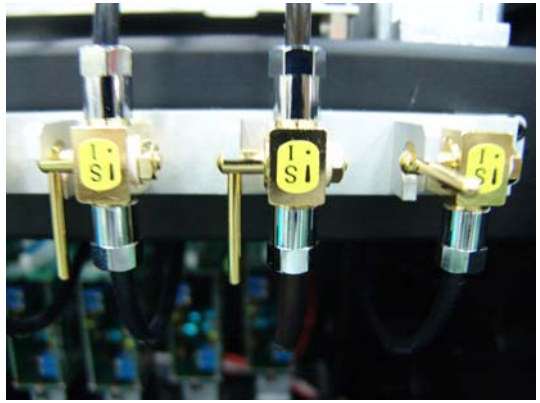
1. Main Refill Motor

2. Refill motor

3. Ink Filter

4. Ink Hose Fixing part, up, down

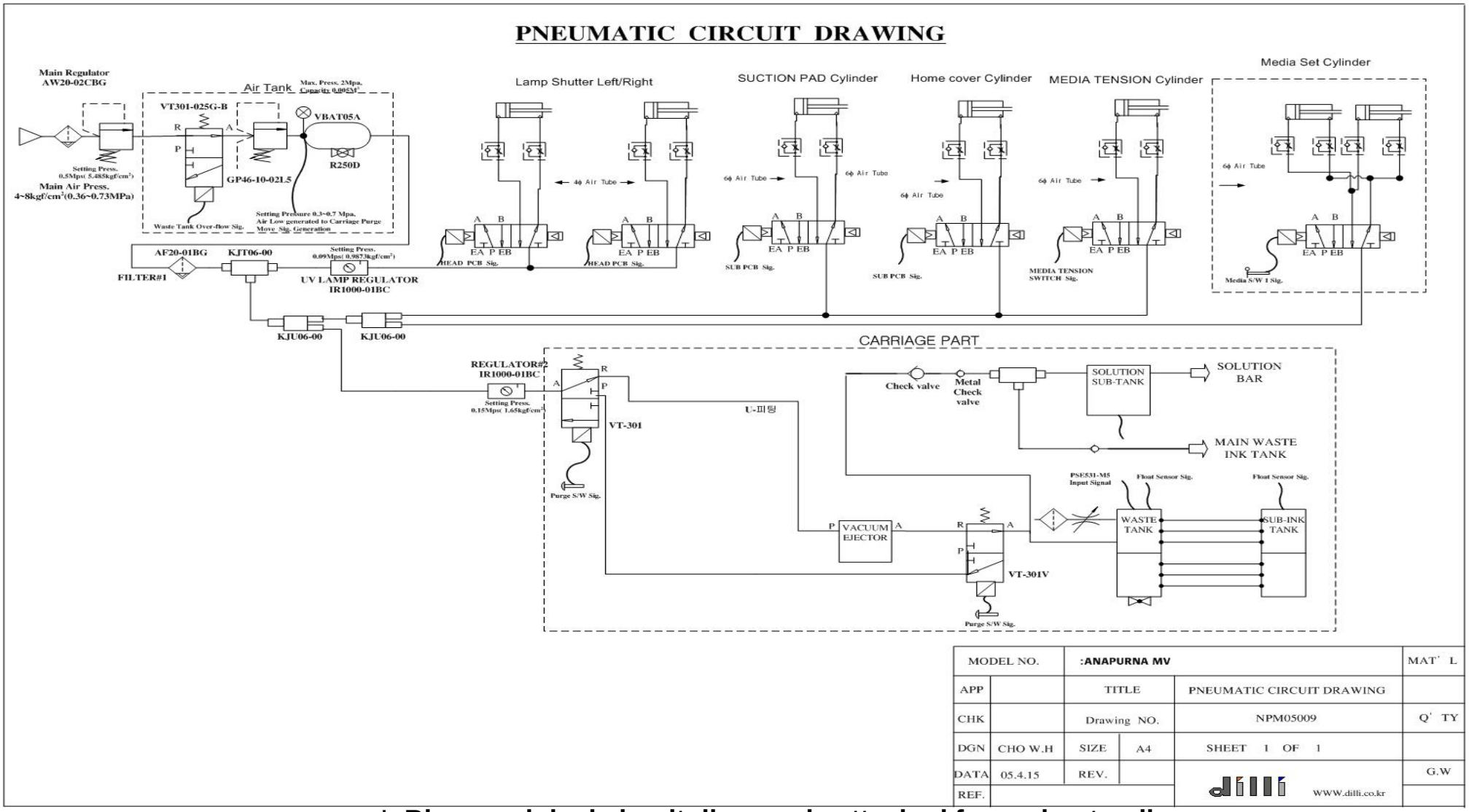
5. Sub Ink Tank



6. Solution Mini Valve

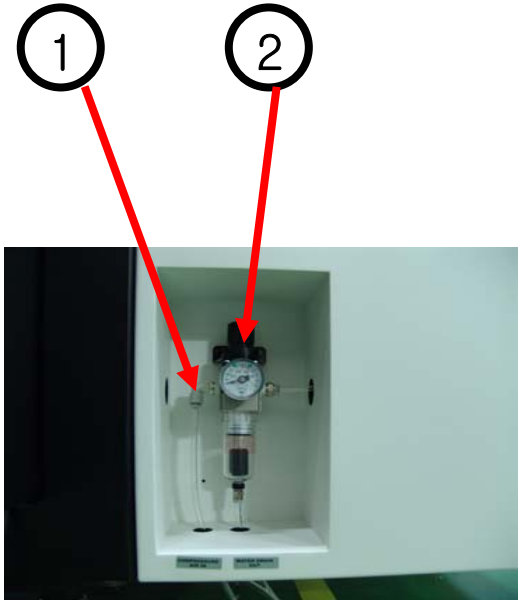
7. Head

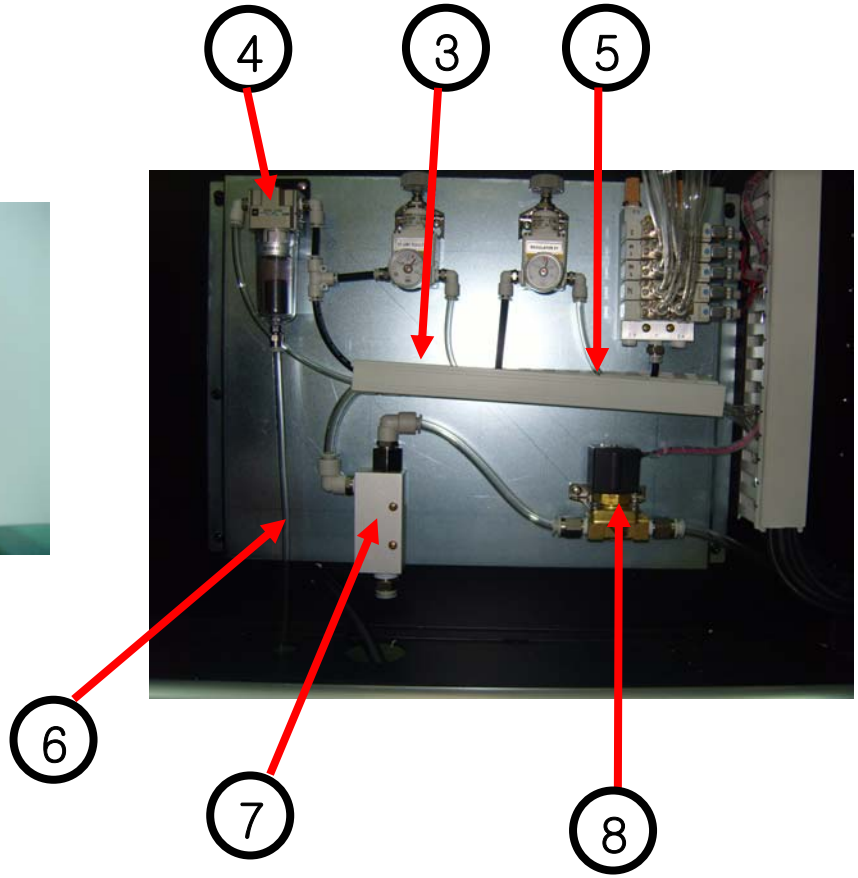
DIAGRAM – Pneumatic flow chart&circuit



*** Bigger original circuit diagram is attached for understanding.**

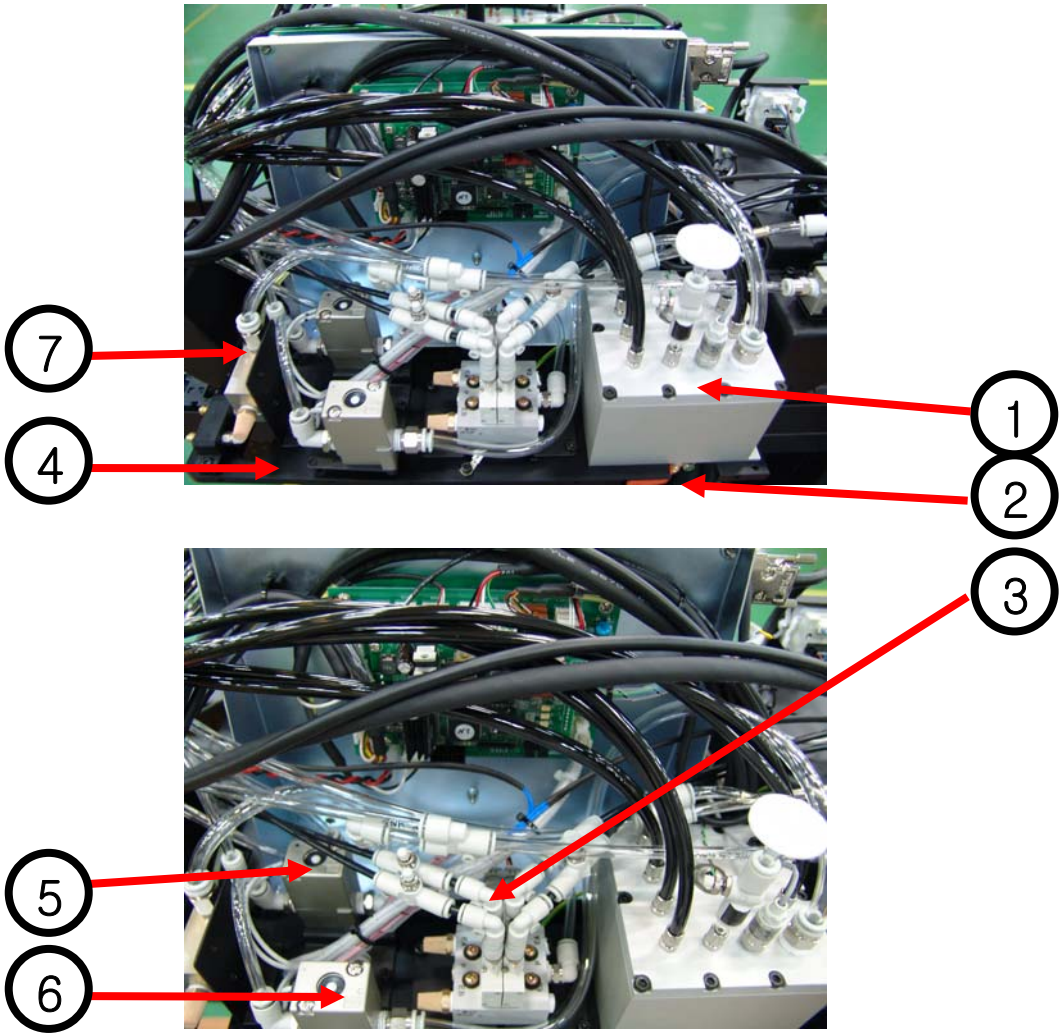
DIAGRAM – KEY PART OF AIR COMPRESSION (1)





1. Inlet port of main air compression
2. Main Regulator Scale (0.4~0.6MPa)
3. Lamp Shutter Regulator Scale (0.1MPa)
4. Air Filter
5. Regulator #2 Scale.(0.1MPa)
6. Water Drain Hose
7. SUCTION VACUUM EJECTOR
8. SUCTION SOLENOID

DIAGRAM – KEY PARTS OF AIR COMPRESSION (2)



1 Sub Air Tank and Ink Reverse Tank

2 Drain valve when overflowing

3 Lamp shutter solenoid valve

4 Carriage #4

5 ITV2010(Electro-Pneumatic Regulator)

6 8 VT301, when purging, “on” operate

7 ZM072H(Vacuum Ejector)

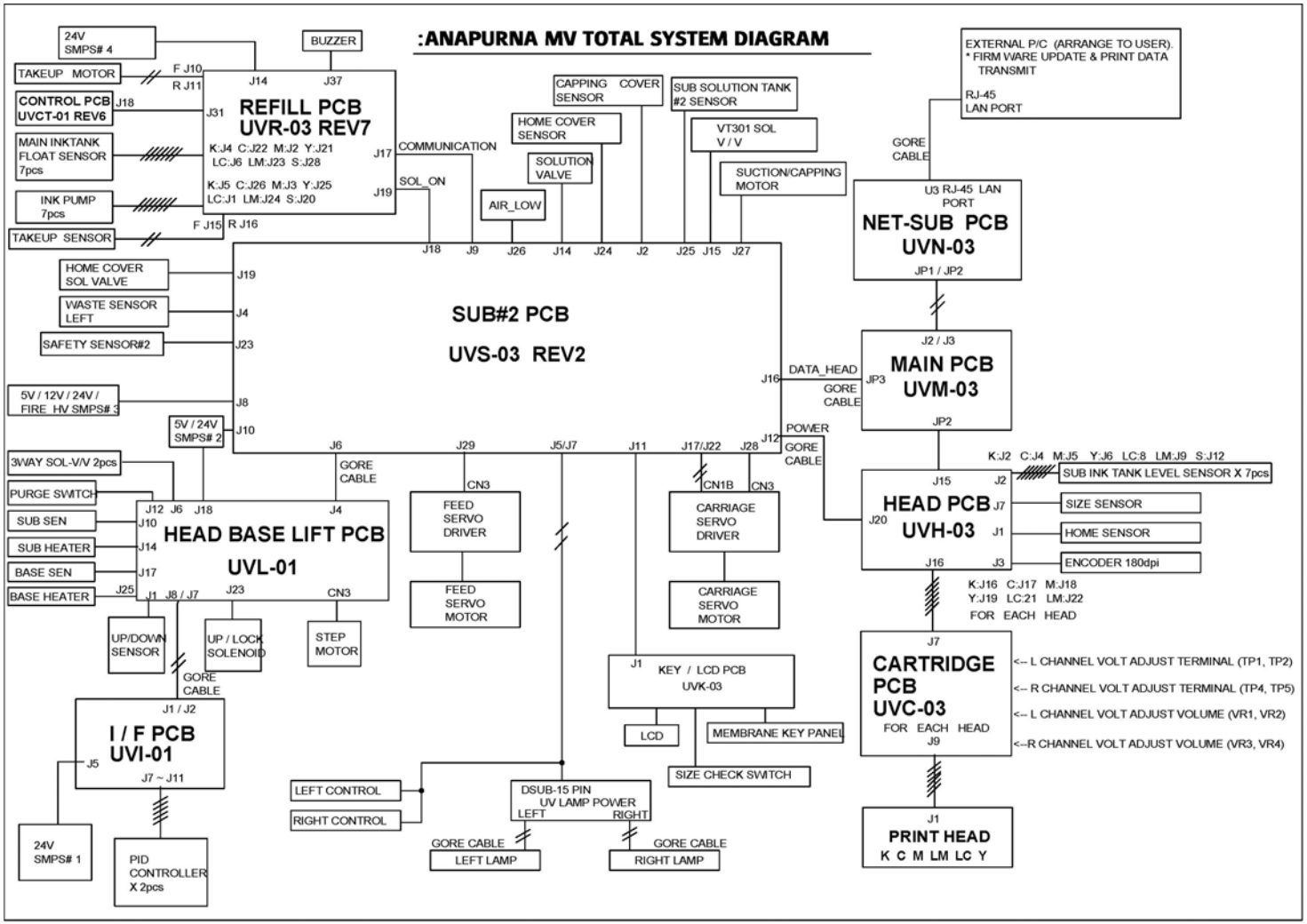
DIAGRAM – KEY PARTS OF AIR COMPRESSION (3)

1. Purge Switch

2. Regulator of Air Compression

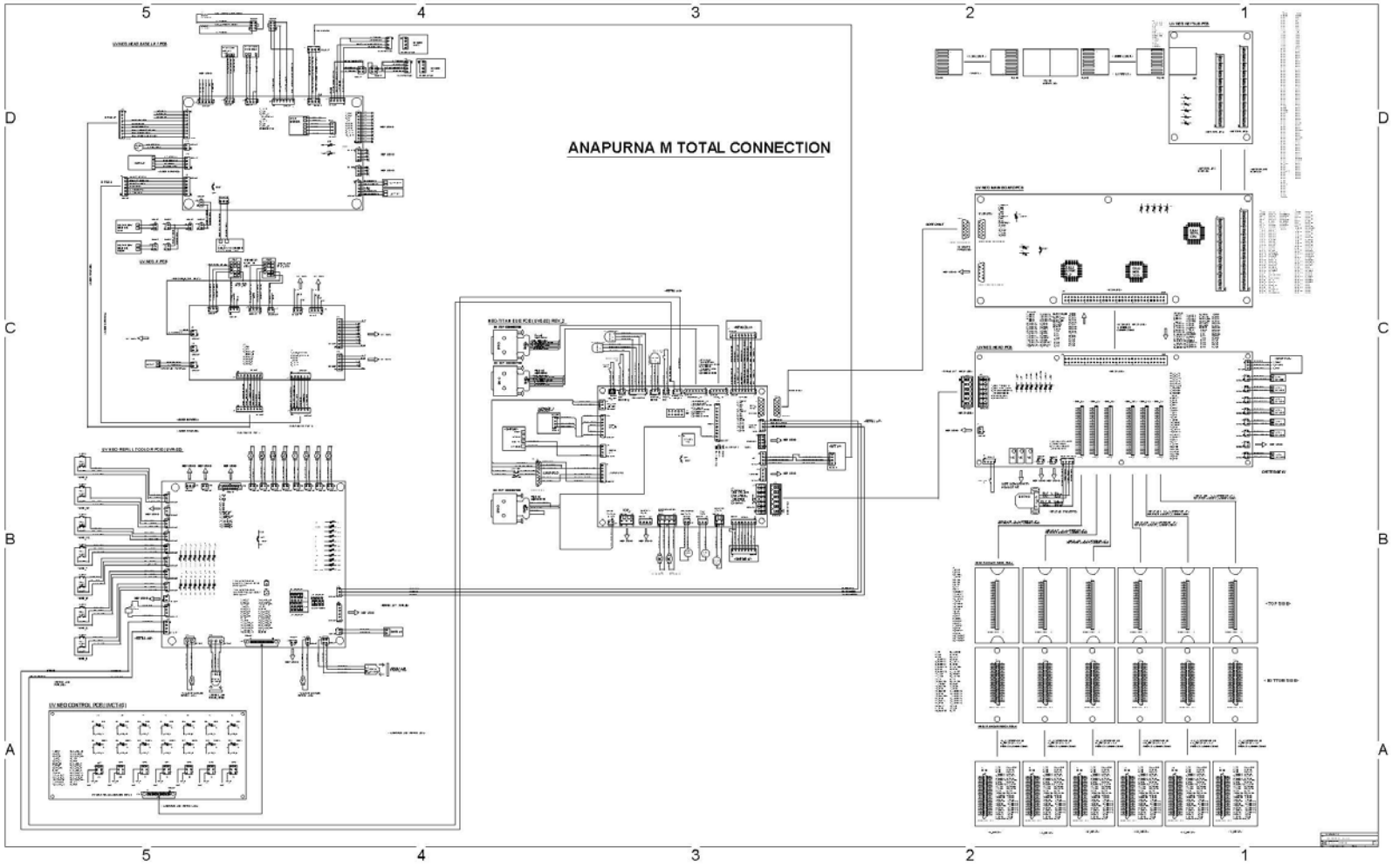
(0.03MPa)

TOTAL SYSTEM DIAGRAM



*** Bigger original circuit diagram is attached for understanding.**

TOTAL PCB LAYOUT

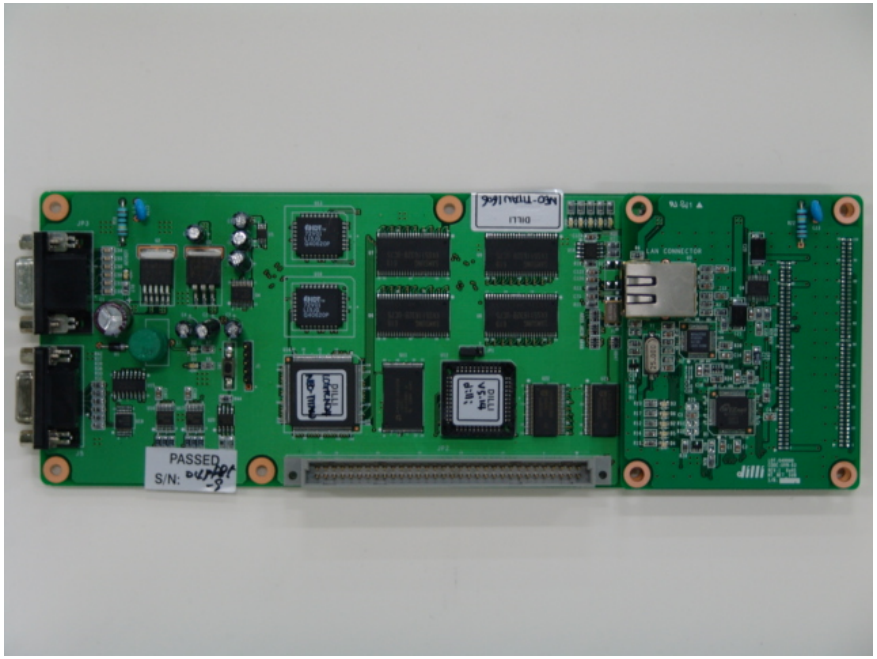


*** Bigger original circuit diagram is attached for understanding.**

PCB LIST

PCB LIST

PCB – Main + NET SUB PCB



MAIN FUNCTION

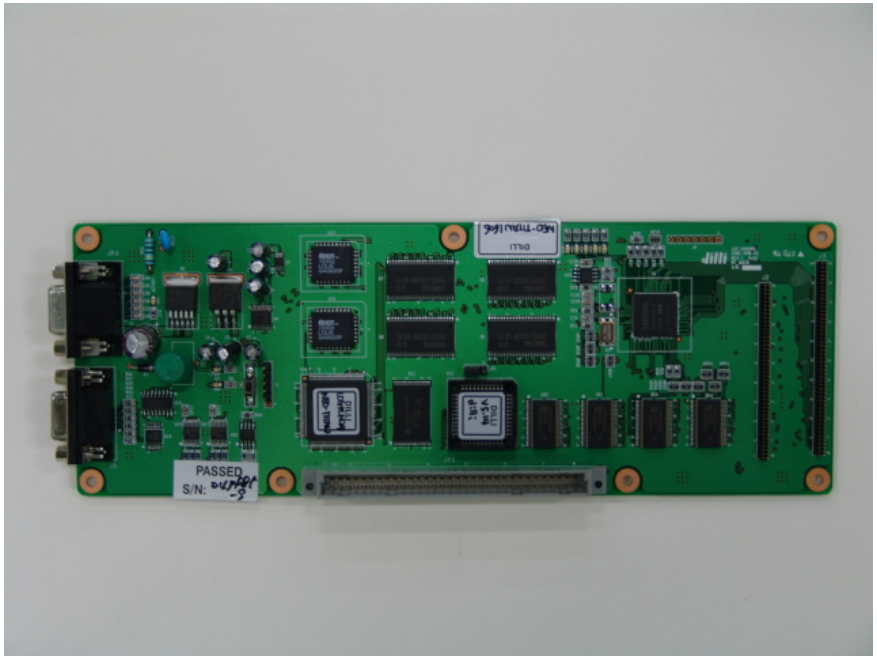
1. It process print data received from sub-net PCB and transfer it to HEAD PCB.

2. All kinds of device is controlled by communicating Thru SUB PCB#2 and Core Cable.

3. Receive operation power supplied thru HEAD PCB.

Part #; UVM-03

PCB – Main PCB



MAIN FUNCTION

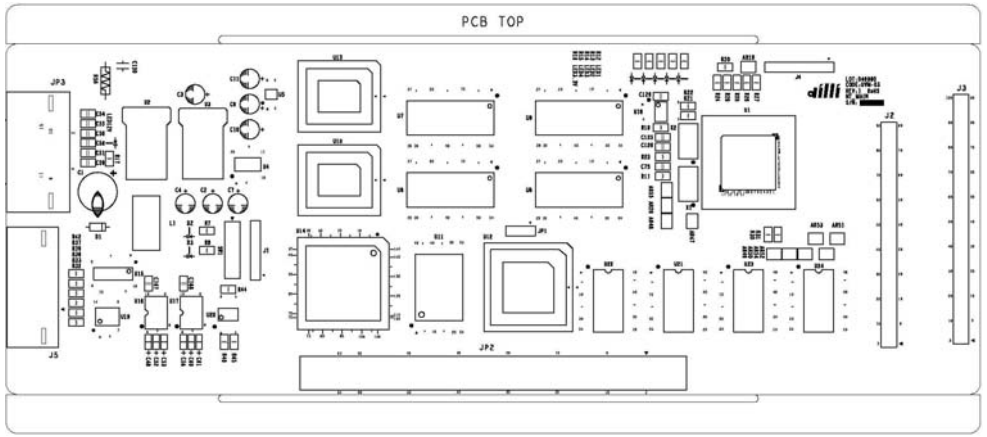
1. It process print data received from sub-net PCB and transfer it to HEAD PCB.

2. All kinds of device is controlled by communicating Thru SUB PCB#2 and 15P Core Cable

3. Receive operation power supplied thru HEAD PCB.

Part #; UVM-03

PCB – Main PCB



Part #; UVM-03

CONNECTOR CONNECTION MAP

1. J1 Disconnection

   J2 2X45 (1.27 Arrangement) --> Net Sub JP1

   J3 2X50 (1.27 Arrangement) --> Net Sub JP2

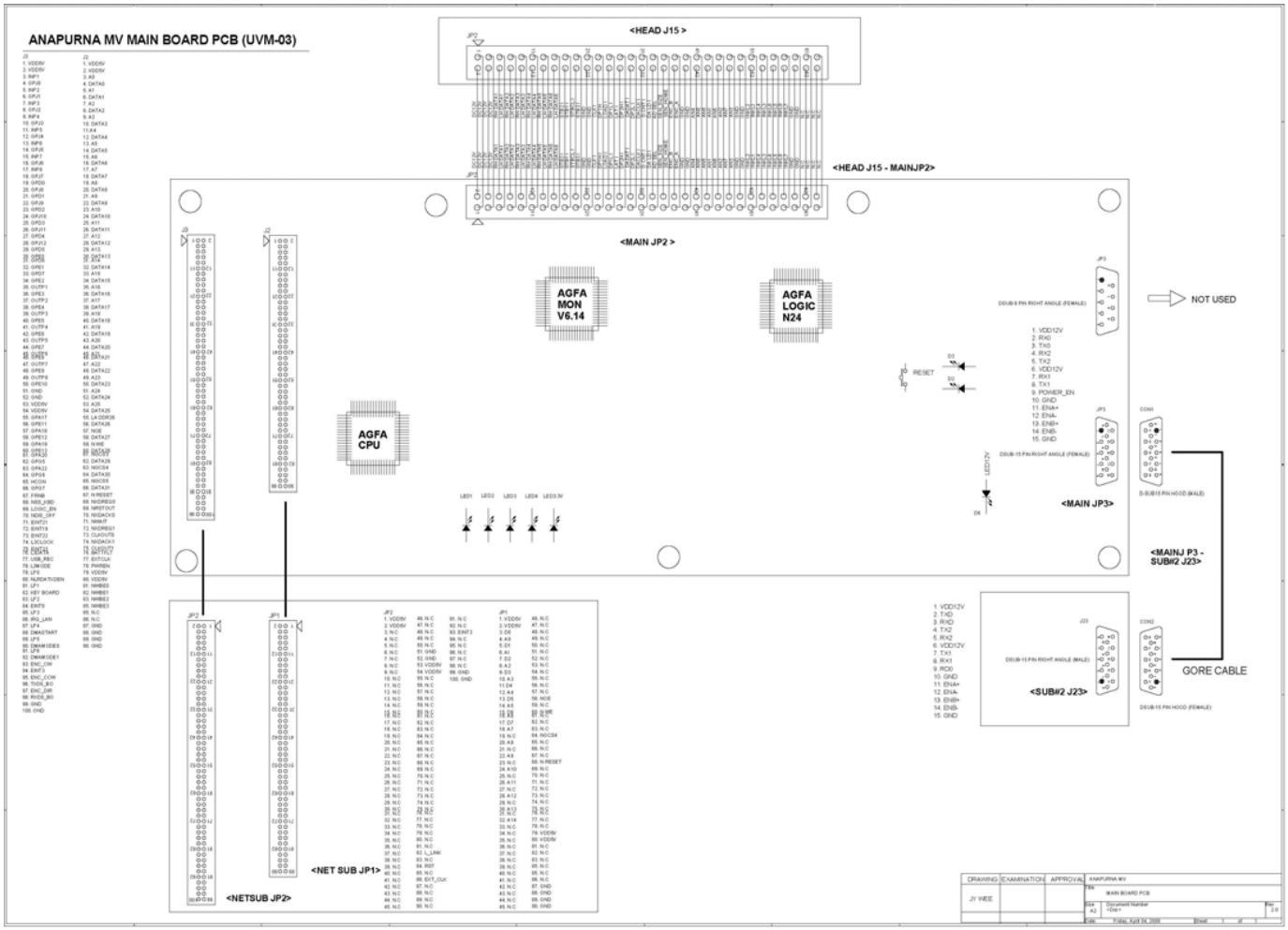
   J4 Disconnection J5 Disconnection

   JP1 Disconnection

   JP2 HRS-PCN10-64P-254DSA --> Head J15

   JP3 D-SUB 15(FEMALE) --> Sub #2 J23

PCB – MAIN PCB IO MAP



*** Bigger original circuit diagram is attached for understanding.**

PCB - MAIN IO MAP-1

HEAD PCB							
J1	HOME	1	VDD5V		HOME SENSOR PCB	1	VDD5V(RED)
	5045-3P	2	SEN-HOME		5051-3P	2	SEN-HOME-OUT(YELLOW)
		3	GND			3	GND(BLACK)
J2	K	1	SIGNAL(BLACK)		FLOAT SENSOR, K	1	SIGNAL K(BLACK)
	5268-2P	2	GND (BLACK)		5264-2P	2	GND(BLACK)
J3	ENCODER	1	B ANGLE		ENCODER	1	ENC-B(YELLOW)
	GI-LGC4P	2	VDD5V		9740(180dpi)	2	5V(RED)
	ANGLE	3	A ANGLE		LGCONNECTOR	3	ENC-A(BLUE)
		4	GND			4	GND(BLACK)
J4	C	1	SIGNAL C (BLACK)		FLOAT SENSOR, C	1	SIGNAL C(BLACK)
	5268-2P	2	GND (BLACK)		5264-2P	2	GND(BLACK)
J5	M	1	SIGNAL M (BLACK)		FLOAT SENSOR, M	1	SIGNAL M(BLACK)
	5268-2P	2	GND (BLACK)		5264-2P	2	GND(BLACK)
J6	Y	1	SIGNAL Y (BLACK)		FLOAT SENSOR, Y	1	SIGNAL Y(BLACK)
	5268-2P	2	GND (BLACK)		5264-2P	2	GND(BLACK)
J7	SIZE	1	V-REF(+V) (YELLOW)		SIZE SENSOR	1	V+(BLUE)
	5268-4P	2	GND (BLACK)		5264-4P	2	GND(BLACK)
		3	SEN-SIZE-1 (YELLOW)			3	OUT(YELLOW)
		4	VDD5V (RED)			4	5V+(RED)
J8	LC	1	SIGNAL LC (BLACK)		FLOAT SENSOR, LC	1	SIGNAL LC(BLACK)
	5268-2P	2	GND (BLACK)		5264-2P	2	GND(BLACK)
J9	LM	1	SIGNAL LM (BLACK)		FLOAT SENSOR, LM	1	SIGNAL LM(BLACK)
	5268-2P	2	GND (BLACK)		5264-2P	2	GND(BLACK)
J10	TEMP_SEN1	1	SEN1	NOT USED			
		2	GND	NOT USED			
J11	SPARE	1	SIGNAL SPARE	NOT USED			
	5268-2P	2	GND	NOT USED			
J12	SOLUTION	1	SIGNAL S (BLACK)		FLOAT SENSOR	1	SIGNAL-SOL(WHITE)
	5268-2P	2	GND (BLACK)	SOLUTION SUB INK TANK	SOLUTION	2	GND(BLACK)
J13	TEMP_SEN2	1	SEN2	NOT USED			
	5268-2P	2	GND	NOT USED			
J14	HEATER POW	1	DC 24V	NOT USED			
	B2P-VH	2	CONTROL GND	NOT USED			
J15	HEAD DATA	1	DC12V		MAIN BOARD, JP2	1	DC12V
	HRS-PCN10	2	DC12V		1:1 CONNECT	2	DC12V
	-64S-254DSA K	3	DC12V		HRS-PCN10-	3	DC12V
		4	DC12V		64P-254DSA K	4	DC12V

PCB - MAIN IO MAP-2

		5	L h DATA1		5	L h DATA1
		6	R h DATA1		6	R h DATA1
		7	L h DATA2		7	L h DATA2
		8	R h DATA2		8	R h DATA2
		9	L h DATA3		9	L h DATA3
		10	R h DATA3		10	R h DATA3
		11	L h DATA4		11	L h DATA4
		12	R h DATA4		12	R h DATA4
		13	L h DATA5		13	L h DATA5
		14	R h DATA5		14	R h DATA5
		15	L h DATA6		15	L h DATA6
		16	R h DATA6		16	R h DATA6
		17	STB1 I		17	STB1 I
		18	STB2 I		18	STB2 I
		19	STB3 I		19	STB3 I
		20	STBCL I		20	STBCL I
		21	GND		21	GND
		22	GND		22	GND
		23	DP1H I		23	DP1H I
		24	CLK I		24	CLK I
		25	DP1L I		25	DP1L I
		26	LOAD I		26	LOAD I
		27	DP2H I		27	DP2H I
		28	LAT I		28	LAT I
		29	DP2L I		29	DP2L I
		30	DADAT I		30	DADAT I
		31	D CNT I		31	D CNT I
		32	DACLK I		32	DACLK I
		33	AD SEL		33	AD SEL
		34	DA LD I		34	DA LD I
		35	SEN_HOME		35	SEN_HOME
		36	SEN_SIZE		36	SEN_SIZE
		37	ENC_A		37	ENC_A
		38	ENS_B		38	ENS_B
		39	GND		39	GND
		40	GND		40	GND
		41	AN0		41	AN0
		42	AN4		42	AN4
		43	AN1		43	AN1
		44	AN5		44	AN5
		45	AN2		45	AN2
		46	AN6		46	AN6
		47	AN3		47	AN3
		48	AN7		48	AN7
		49	GND		49	GND
		50	GND		50	GND
		51	INKL 1		51	INKL 1
		52	INKL 2		52	INKL 2
		53	INKL 3		53	INKL 3
		54	INKL 4		54	INKL 4
		55	INKL 5		55	INKL 5
		56	INKL 6		56	INKL 6

PCB - MAIN IO MAP-3

		57	INKL 7			57	INKL 7
		58	INKL 8			58	INKL 8
		59	GND			59	GND
		60	GND			60	GND
		61	N.C			61	N.C
		62	N.C			62	N.C
		63	N.C			63	N.C
		64	N.C			64	N.C
J16	INK_K	1	VH-POW		CARTRIDGE PCB, J7	1	GND
	5597-30P	2	VH-POW		5597-30P	2	GND
	straight Type	3	VH-POW			3	STBCL
		4	GND			4	LOAD
		5	DC12V			5	STB3
		6	GND			6	STB2
		7	DP1H			7	STB1
		8	DP1L			8	LAT
		9	DP2H			9	CLK
		10	DP2L			10	R-DAT1
		11	DA1(K)			11	L-DAT1
		12	DA2(K)			12	R-DAT0
		13	AD1(K)			13	L-DAT0
		14	GND			14	GND
		15	VDD5V			15	VDD5V
		16	VDD5V			16	VDD5V
		17	GND			17	GND
		18	L-DAT0(K)			18	AD1
		19	R-DAT0(K)			19	DA2
		20	L-DAT1(K)			20	DA1
		21	L-DAT1(K)			21	DP2L
		22	CLK			22	DP2H
		23	LAT			23	DP1L
		24	STB1			24	DP1H
		25	STB2			25	GND
		26	STB3			26	DC12V
		27	LOAD			27	GND
		28	STBCL			28	VH-POW
		29	GND			29	VH-POW
		30	GND			30	VH-POW
J17	INK_C	1	VH-POW		CARTRIDGE PCB, J7	1	GND
	5597-30P	2	VH-POW		5597-30P	2	GND
	straight Type	3	VH-POW			3	STBCL
		4	GND			4	LOAD
		5	DC12V			5	STB3
		6	GND			6	STB2
		7	DP1H			7	STB1
		8	DP1L			8	LAT
		9	DP2H			9	CLK
		10	DP2L			10	R-DAT1
		11	DA1(C)			11	L-DAT1
		12	DA2(C)			12	R-DAT0

PCB - MAIN IO MAP-4

		13	AD1(C)			13	L-DAT0
		14	GND			14	GND
		15	VDD5V			15	VDD5V
		16	VDD5V			16	VDD5V
		17	GND			17	GND
		18	L-DAT0(C)			18	AD1
		19	R-DAT0(C)			19	DA2
		20	L-DAT1(C)			20	DA1
		21	L-DAT1(C)			21	DP2L
		22	CLK			22	DP2H
		23	LAT			23	DP1L
		24	STB1			24	DP1H
		25	STB2			25	GND
		26	STB3			26	DC12V
		27	LOAD			27	GND
		28	STBCL			28	VH-POW
		29	GND			29	VH-POW
		30	GND			30	VH-POW
J18	**INK_M**	1	VH-POW		**CARTRIDGE PCB, J7**	1	GND
	5597-30P	2	VH-POW		**5597-30P**	2	GND
	straight Type	3	VH-POW			3	STBCL
		4	GND			4	LOAD
		5	DC12V			5	STB3
		6	GND			6	STB2
		7	DP1H			7	STB1
		8	DP1L			8	LAT
		9	DP2H			9	CLK
		10	DP2L			10	R-DAT1
		11	DA1(M)			11	L-DAT1
		12	DA2(M)			12	R-DAT0
		13	AD1(M)			13	L-DAT0
		14	GND			14	GND
		15	VDD5V			15	VDD5V
		16	VDD5V			16	VDD5V
		17	GND			17	GND
		18	L-DAT0(M)			18	AD1
		19	R-DAT0(M)			19	DA2
		20	L-DAT1(M)			20	DA1
		21	L-DAT1(M)			21	DP2L
		22	CLK			22	DP2H
		23	LAT			23	DP1L
		24	STB1			24	DP1H
		25	STB2			25	GND
		26	STB3			26	DC12V
		27	LOAD			27	GND
		28	STBCL			28	VH-POW
		29	GND			29	VH-POW
		30	GND			30	VH-POW
J19	**INK_Y**	1	VH-POW		**CARTRIDGE PCB, J7**	1	GND
	5597-30P	2	VH-POW		**5597-30P**	2	GND

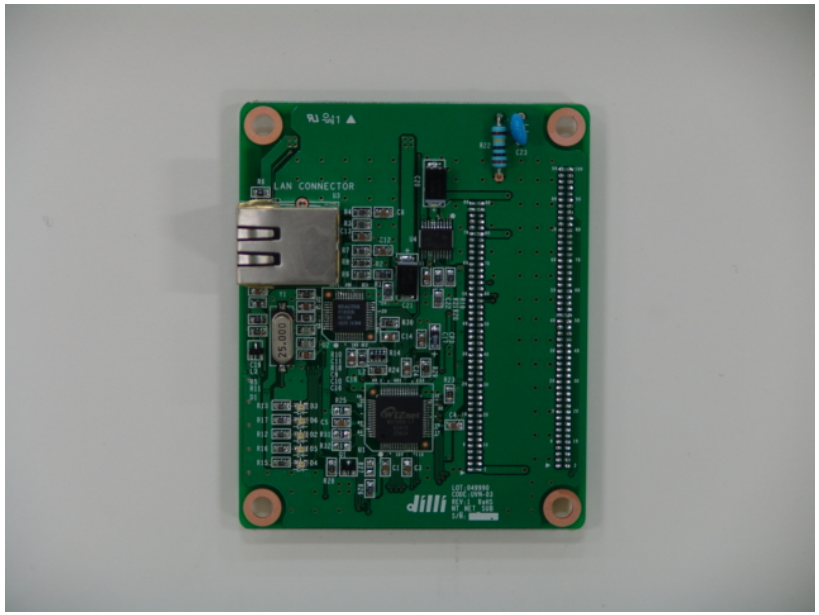
PCB - MAIN IO MAP-5

	straight Type	3	VH-POW			3	STBCL
		4	GND			4	LOAD
		5	DC12V			5	STB3
		6	GND			6	STB2
		7	DP1H			7	STB1
		8	DP1L			8	LAT
		9	DP2H			9	CLK
		10	DP2L			10	R-DAT1
		11	DA1(Y)			11	L-DAT1
		12	DA2(Y)			12	R-DAT0
		13	AD1(Y)			13	L-DAT0
		14	GND			14	GND
		15	VDD5V			15	VDD5V
		16	VDD5V			16	VDD5V
		17	GND			17	GND
		18	L-DAT0(Y)			18	AD1
		19	R-DAT0(Y)			19	DA2
		20	L-DAT1(Y)			20	DA1
		21	L-DAT1(Y)			21	DP2L
		22	CLK			22	DP2H
		23	LAT			23	DP1L
		24	STB1			24	DP1H
		25	STB2			25	GND
		26	STB3			26	DC12V
		27	LOAD			27	GND
		28	STBCL			28	VH-POW
		29	GND			29	VH-POW
		30	GND			30	VH-POW
J20	POWER CON	1	DC24V		SUB#2 PCB	1	DC24V
	6P	2	DC24V		POWER CON 6P	2	DC24V
		3	VHPOW			3	VHPOW(FIRE-HV)
		4	VHPOW			4	VHPOW(FIRE-HV)
		5	GND			5	GND
		6	GND			6	GND
J21	INK_LC	1	VH-POW		CARTRIDGE PCB, J7	1	GND
	5597-30P	2	VH-POW		5597-30P	2	GND
	straight Type	3	VH-POW			3	STBCL
		4	GND			4	LOAD
		5	DC12V			5	STB3
		6	GND			6	STB2
		7	DP1H			7	STB1
		8	DP1L			8	LAT
		9	DP2H			9	CLK
		10	DP2L			10	R-DAT1
		11	DA1(LC)			11	L-DAT1
		12	DA2(LC)			12	R-DAT0
		13	AD1(LC)			13	L-DAT0
		14	GND			14	GND
		15	VDD5V			15	VDD5V
		16	VDD5V			16	VDD5V

PCB - MAIN IO MAP-6

		17	GND			17	GND
		18	L-DAT0(LC)			18	AD1
		19	R-DAT0(LC)			19	DA2
		20	L-DAT1(LC)			20	DA1
		21	L-DAT1(LC)			21	DP2L
		22	CLK			22	DP2H
		23	LAT			23	DP1L
		24	STB1			24	DP1H
		25	STB2			25	GND
		26	STB3			26	DC12V
		27	LOAD			27	GND
		28	STBCL			28	VH-POW
		29	GND			29	VH-POW
		30	GND			30	VH-POW
J22	INK_LM	1	VH-POW		CARTRIDGE PCB, J7	1	GND
	5597-30P	2	VH-POW		5597-30P	2	GND
	straight Type	3	VH-POW			3	STBCL
		4	GND			4	LOAD
		5	DC12V			5	STB3
		6	GND			6	STB2
		7	DP1H			7	STB1
		8	DP1L			8	LAT
		9	DP2H			9	CLK
		10	DP2L			10	R-DAT1
		11	DA1(LM)			11	L-DAT1
		12	DA2(LM)			12	R-DAT0
		13	AD1(LM)			13	L-DAT0
		14	GND			14	GND
		15	VDD5V			15	VDD5V
		16	VDD5V			16	VDD5V
		17	GND			17	GND
		18	L-DAT0(LM)			18	AD1
		19	R-DAT0(LM)			19	DA2
		20	L-DAT1(LM)			20	DA1
		21	L-DAT1(LM)			21	DP2L
		22	CLK			22	DP2H
		23	LAT			23	DO1L
		24	STB1			24	DP1H
		25	STB2			25	GND
		26	STB3			26	DC12V
		27	LOAD			27	GND
		28	STBCL			28	VH-POW
		29	GND			29	VH-POW
		30	GND			30	VH-POW

PCB – NET SUB PCB

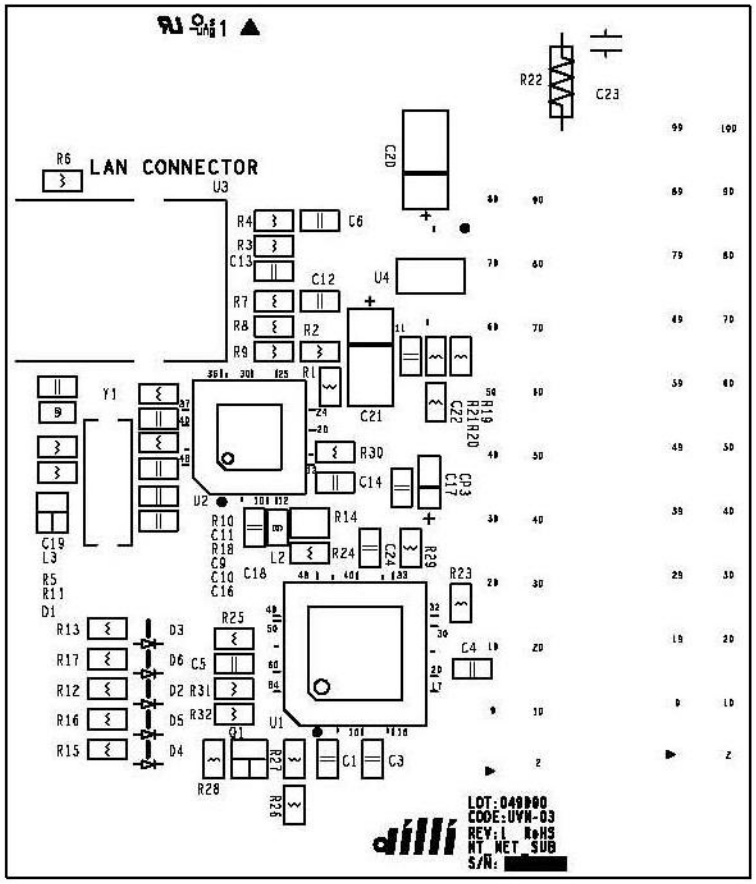


Part #; UVN-03

MAIN FUNCTION

1. Connected with Main PCB. Either transfer output data received thru LAN port or be used when updating files.

PCB – NET SUB PCB

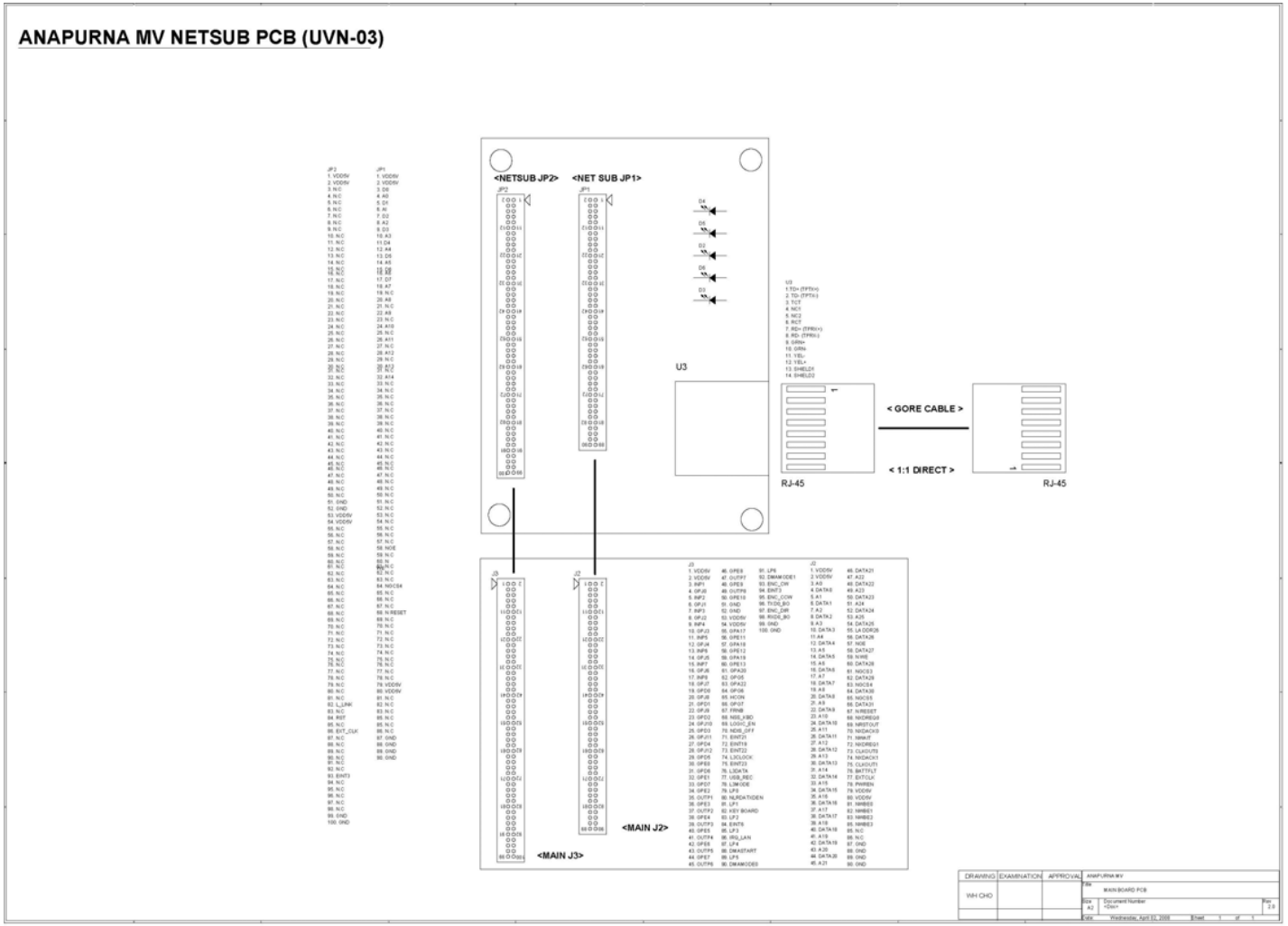


Part #; UVN-03

CONNECTOR CONNECTION MAP

U3 UTP CABLE ---> LAN CABLE
JP1 2X45 (1.27 Arrangement) --> Main J2
JP2 2X50 (1.27 Arrangement) --> Main J3

PCB – NET SUB PCB IO MAP



*** Bigger original circuit diagram is attached for understanding.**

PCB – NET SUB IO MAP-1

NET_SUB								
U3		1	TD+ TPTX+	GORE CABLE	RJ45	1	–	
		2	TD- TPTX-	LAN	UTP CABLE	2	–	
		3	TCT		(LAN)	3	–	
		4	NC1			4	N.C	
		5	NC2			5	N.C	
		6	RCT			6	–	
		7	RD+ TPRX+			7	N.C	
		8	RD- TPRX-			8	N.C	
		9	GRN+					
		10	GRN-					
		11	YEL-					
		12	YEL+					
		13	SHIELD1					
		14	SHIELD2					
JP1	HEADER 2×45	1	VDD5V		MAIN, J2	1	VDD5V	
		2	VDD5V		HEADER 2×45	2	VDD5V	
		3	D0			3	A0	
		4	A0			4	DATA0	
		5	D1			5	A1	
		6	A1			6	DATA1	
		7	D2			7	A2	
		8	A2			8	DATA2	
		9	D3			9	A3	
		10	A3			10	DATA3	
		11	D4			11	A4	
		12	A4			12	DATA4	
		13	D5			13	A5	
		14	A5			14	DATA5	
		15	D6			15	A6	
		16	A6			16	DATA6	
		17	D7			17	A7	
		18	A7			18	DATA7	
		19	N.C			19	A8	
		20	A8			20	DATA8	
		21	N.C			21	A9	
		22	A9			22	DATA9	
		23	N.C			23	A10	
		24	A10			24	DATA10	
		25	N.C			25	A11	

PCB – NET SUB IO MAP-2

		26	A11			26	DATA11	
		27	N.C			27	A12	
		28	A12			28	DATA12	
		29	N.C			29	A13	
		30	A13			30	DATA13	
		31	N.C			31	A14	
		32	A14			32	DATA14	
		33	N.C			33	A15	
		34	N.C			34	DATA15	
		35	N.C			35	A16	
		36	N.C			36	DATA16	
		37	N.C			37	A17	
		38	N.C			38	DATA17	
		39	N.C			39	A18	
		40	N.C			40	DATA18	
		41	N.C			41	A19	
		42	N.C			42	DATA19	
		43	N.C			43	A20	
		44	N.C			44	DATA20	
		45	N.C			45	A21	
		46	N.C			46	DATA21	
		47	N.C			47	A22	
		48	N.C			48	DATA22	
		49	N.C			49	A23	
		50	N.C			50	DATA23	
		51	N.C			51	A24	
		52	N.C			52	DATA24	
		53	N.C			53	A25	
		54	N.C			54	DATA25	
		55	N.C			55	LA DDR26	
		56	N.C			56	DATA26	
		57	N.C			57	NOE	
		58	nOE			58	DATA27	
		59	N.C			59	N WE	
		60	N WE			60	DATA28	
		61	N.C			61	NGCS3	
		62	N.C			62	DATA29	
		63	N.C			63	NGCS4	
		64	n GCS4			64	DATA30	
		65	N.C			65	NGCS5	
		66	N.C			66	DATA31	
		67	N.C			67	N RESET	

PCB – NET SUB IO MAP-3

		68	n RESET			68	NXDREQ0	
		69	N.C			69	NRSTOUT	
		70	N.C			70	NXDACK0	
		71	N.C			71	NWAIT	
		72	N.C			72	NXDREQ1	
		73	N.C			73	CLKOUT0	
		74	N.C			74	NXDACK1	
		75	N.C			75	OLKOUT1	
		76	N.C			76	BATTFLT	
		77	N.C			77	EXTCLK	
		78	N.C			78	PWREN	
		79	VDD5V			79	VDD5V	
		80	VDD5V			80	VDD5V	
		81	N.C			81	NWBE0	
		82	N.C			82	NWBE1	
		83	N.C			83	NWBE2	
		84	N.C			84	NWBE3	
		85	N.C			85	N.C	
		86	N.C			86	N.C	
		87	GND			87	GND	
		88	GND			88	GND	
		89	GND			89	GND	
		90	GND			90	GND	
JP2	HEADER 2×50	1	VDD5V		MAIN, J3	1	VDD5V	
		2	VDD5V		HEADER 2×50	2	VDD5V	
		3	N.C			3	INP1	
		4	N.C			4	GPJ0	
		5	N.C			5	INP2	
		6	N.C			6	GPJ1	
		7	N.C			7	INP3	
		8	N.C			8	GPJ2	
		9	N.C			9	INP4	
		10	N.C			10	GPJ3	
		11	N.C			11	INP5	
		12	N.C			12	GPJ4	
		13	N.C			13	INP6	
		14	N.C			14	GPJ5	
		15	N.C			15	INP7	
		16	N.C			16	GPJ6	
		17	N.C			17	INP8	
		18	N.C			18	GPJ7	

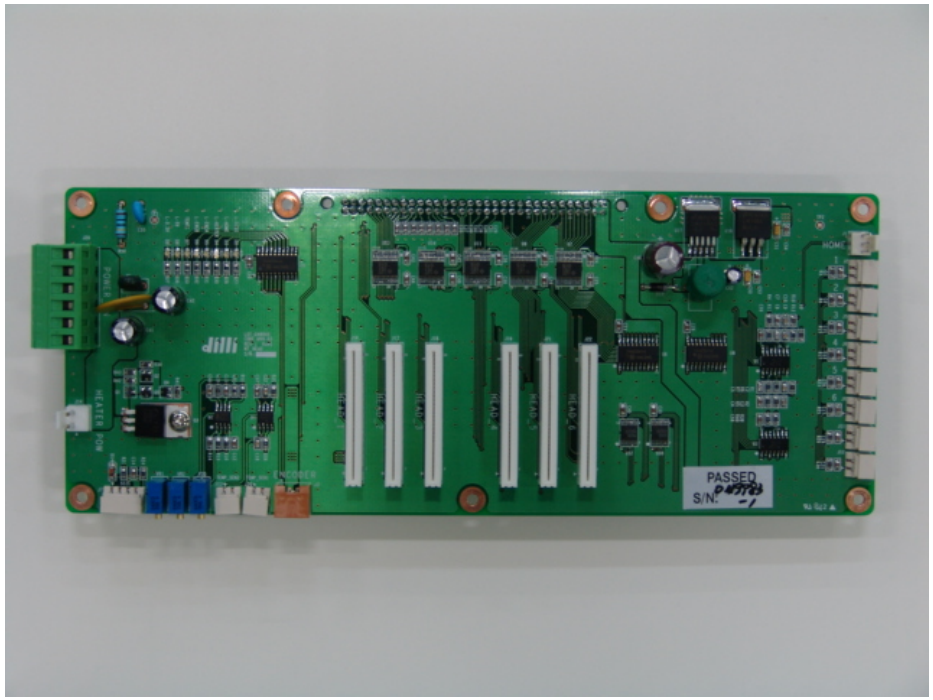
PCB – NET SUB IO MAP-4

		19	N.C			19	GPD0
		20	N.C			20	GPJ8
		21	N.C			21	GPD1
		22	N.C			22	GPJ9
		23	N.C			23	GPD2
		24	N.C			24	GPJ10
		25	N.C			25	GPD3
		26	N.C			26	GPJ11
		27	N.C			27	GPD4
		28	N.C			28	GPJ12
		29	N.C			29	GPD5
		30	N.C			30	GPE0
		31	N.C			31	GPD6
		32	N.C			32	GPE1
		33	N.C			33	GPD7
		34	N.C			34	GPE2
		35	N.C			35	OUTP1
		36	N.C			36	GPE3
		37	N.C			37	OUTP2
		38	N.C			38	GPE4
		39	N.C			39	OUTP3
		40	N.C			40	GPE5
		41	N.C			41	OUTP4
		42	N.C			42	GPE6
		43	N.C			43	OUTP5
		44	N.C			44	GPE7
		45	N.C			45	OUTP6
		46	N.C			46	GPE8
		47	N.C			47	OUTP7
		48	N.C			48	GPE9
		49	N.C			49	OUTP8
		50	N.C			50	GPE10
		51	GND			51	GND
		52	GND			52	GND
		53	VDD5V			53	VDD5V
		54	VDD5V			54	VDD5V
		55	N.C			55	GPA17
		56	N.C			56	GPE11
		57	N.C			57	GPA18
		58	N.C			58	GPE12
		59	N.C			59	GPA19
		60	N.C			60	GPE13

PCB – NET SUB IO MAP-5

		61	N.C			61	GPA20	
		62	N.C			62	GPG5	
		63	N.C			63	GPA22	
		64	N.C			64	GPG6	
		65	N.C			65	HCON	
		66	N.C			66	GPG7	
		67	N.C			67	FRNB	
		68	N.C			68	NSS_KBD	
		69	N.C			69	LOGIC_EN	
		70	N.C			70	NDIS_OFF	
		71	N.C			71	EINT21	
		72	N.C			72	EINT19	
		73	N.C			73	EINT22	
		74	N.C			74	L3CLOCK	
		75	N.C			75	EINT23	
		76	N.C			76	L3DATA	
		77	N.C			77	USB_REC	
		78	N.C			78	L3MODE	
		79	N.C			79	LP0	
		80	N.C			80	NLRDATXDEN	
		81	N.C			81	LP1	
		82	L_LINK			82	KEY BOARD	
		83	N.C			83	LP2	
		84	RST			84	EINT6	
		85	N.C			85	LP3	
		86	EXT_CLK			86	IRQ_LAN	
		87	N.C			87	LP4	
		88	N.C			88	DMASTART	
		89	N.C			89	LP5	
		90	N.C			90	DMAMODE0	
		91	N.C			91	LP6	
		92	N.C			92	DMAMODE1	
		93	EINT3			93	ENC_CW	
		94	N.C			94	EINT3	
		95	N.C			95	ENC_CCW	
		96	N.C			96	TXD0_BO	
		97	N.C			97	ENC_DIR	
		98	N.C			98	RXD0_BO	
		99	GND			99	GND	
		100	GND			100	GND	

PCB – HEAD PCB

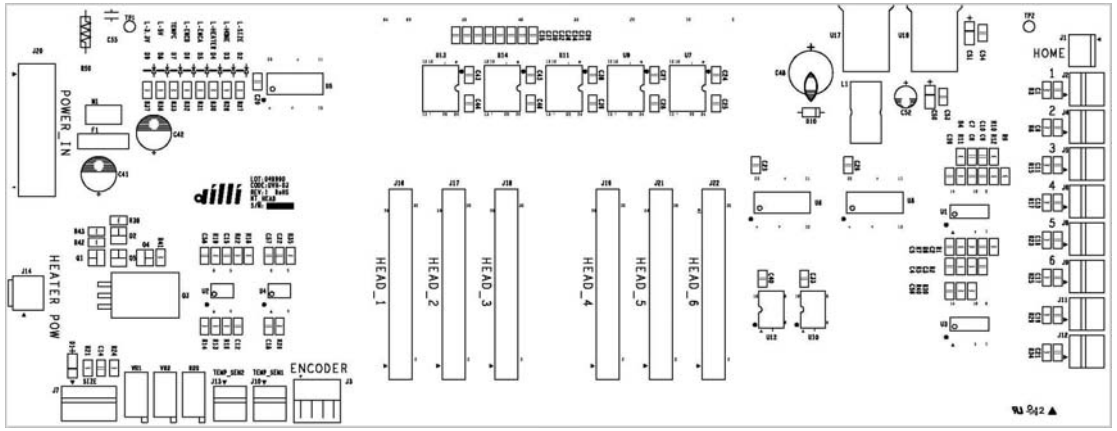


Part #; UVH-03

Main Function

1. Connected with Main PCB, send the signal for ink supply by transferring the signal received from each sub Ink Tank.
2. Send output data received by connecting with each cartridge PCB.
3. Receive Floating signal from each ink tank.
4. Receive the signal for Home sensor, size sensor and encoder.
5. Receive driving power from SUB PCB #2 thru core cable.

PCB - HEAD PCB

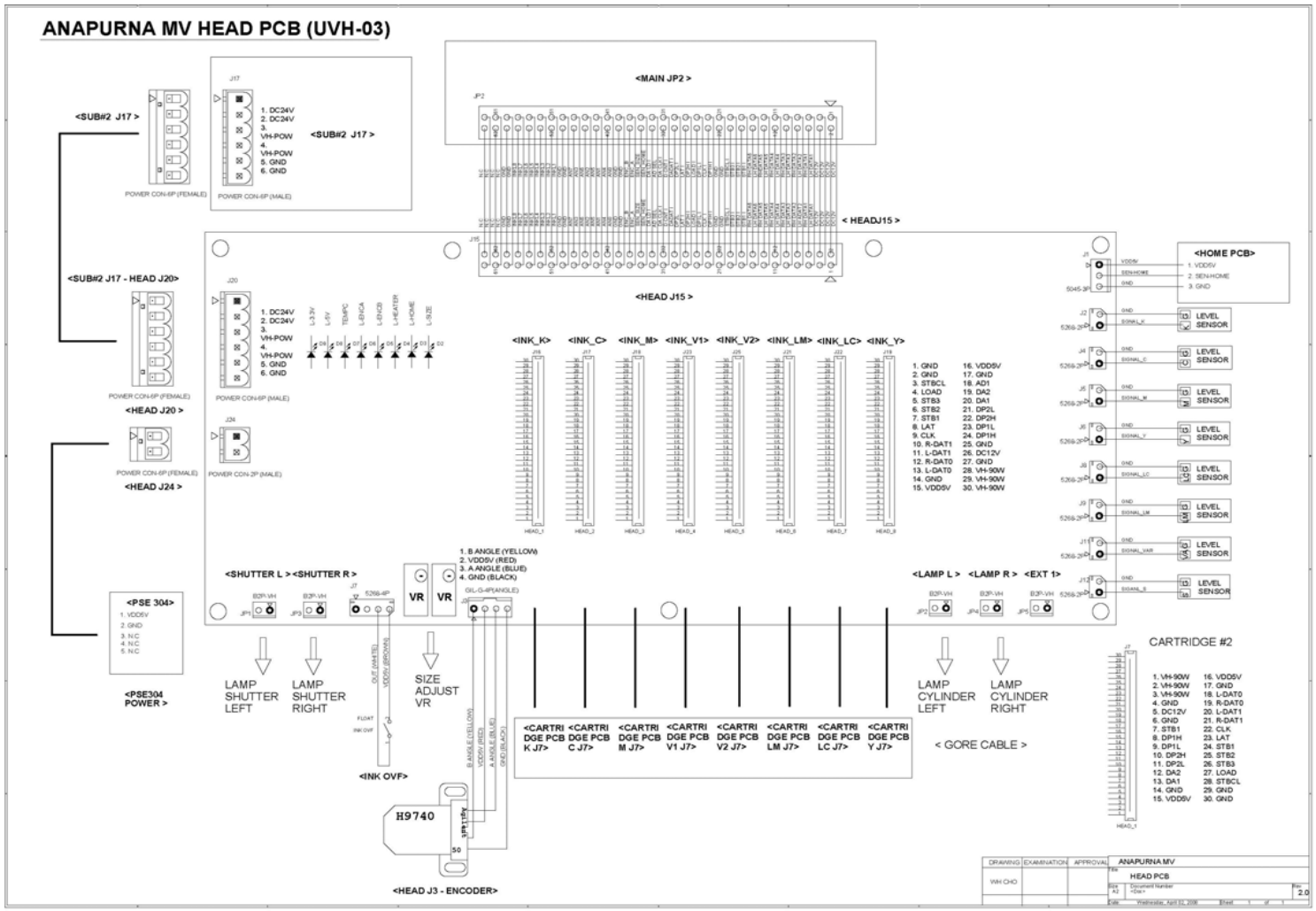


CONNECTOR CONNECTION MAP

J1 5045-3 --> HOME SENSOR PCB
J2 5268-2 --> SENSOR K
J3 GIL-G4A --> ENCODER J4 5268-2 --> SENSOR C
J5 5268-2 --> SENSOR M J6 5268-2 --> SENSOR Y
J7 5268-4 --> SIZE SENSOR
J8 5268-2 --> SENSOR LC
J9 5268-2 --> SENSOR LM J10 disconnection
J11 disconnection J12 5268-2 --> SENSOR Solution
J13 disconnection J14 disconnection
J15 HRS-PCN10-64S-254DSA K --> Main JP2

Part #; UVH-03

PCB – HEAD PCB IO MAP



*** Bigger original circuit diagram is attached for understanding.**

PCB - HEAD IO MAP-1

HEAD PCB							
J1	HOME	1	VDD5V		HOME SENSOR PCB	1	VDD5V(RED)
	5045-3P	2	SEN-HOME		5051-3P	2	SEN-HOME-OUT(YELLOW)
		3	GND			3	GND(BLACK)
J2	K	1	SIGNAL(BLACK)		FLOAT SENSOR, K	1	SIGNAL K(BLACK)
	5268-2P	2	GND (BLACK)		5264-2P	2	GND(BLACK)
J3	ENCODER	1	B ANGLE		ENCODER	1	ENC-B(YELLOW)
	GI-LGC4P	2	VDD5V		9740(180dpi)	2	5V(RED)
	ANGLE	3	A ANGLE		LGCONNECTOR	3	ENC-A(BLUE)
		4	GND			4	GND(BLACK)
J4	C	1	SIGNAL C (BLACK)		FLOAT SENSOR, C	1	SIGNAL C(BLACK)
	5268-2P	2	GND (BLACK)		5264-2P	2	GND(BLACK)
J5	M	1	SIGNAL M (BLACK)		FLOAT SENSOR, M	1	SIGNAL M(BLACK)
	5268-2P	2	GND (BLACK)		5264-2P	2	GND(BLACK)
J6	Y	1	SIGNAL Y (BLACK)		FLOAT SENSOR, Y	1	SIGNAL Y(BLACK)
	5268-2P	2	GND (BLACK)		5264-2P	2	GND(BLACK)
J7	SIZE	1	V-REF(+V) (YELLOW)		SIZE SENSOR	1	V+(BLUE)
	5268-4P	2	GND (BLACK)		5264-4P	2	GND(BLACK)
		3	SEN-SIZE-1 (YELLOW)			3	OUT(YELLOW)
		4	VDD5V (RED)			4	5V+(RED)
J8	LC	1	SIGNAL LC (BLACK)		FLOAT SENSOR, LC	1	SIGNAL LC(BLACK)
	5268-2P	2	GND (BLACK)		5264-2P	2	GND(BLACK)
J9	LM	1	SIGNAL LM (BLACK)		FLOAT SENSOR, LM	1	SIGNAL LM(BLACK)
	5268-2P	2	GND (BLACK)		5264-2P	2	GND(BLACK)
J10	TEMP_SEN1	1	SEN1	NOT USED			
		2	GND	NOT USED			
J11	SPARE	1	SIGNAL SPARE	NOT USED			
	5268-2P	2	GND	NOT USED			
J12	SOLUTION	1	SIGNAL S (BLACK)		FLOAT SENSOR	1	SIGNAL-SOL(WHITE)
	5268-2P	2	GND (BLACK)	SOLUTION SUB INK TANK	SOLUTION	2	GND(BLACK)
J13	TEMP_SEN2	1	SEN2	NOT USED			
	5268-2P	2	GND	NOT USED			
J14	HEATER POW	1	DC 24V	NOT USED			
	B2P-VH	2	CONTROL GND	NOT USED			
J15	HEAD DATA	1	DC12V		MAIN BOARD, JP2	1	DC12V
	HRS-PCN10	2	DC12V		1:1 CONNECT	2	DC12V
	-64S-254DSA K	3	DC12V		HRS-PCN10-	3	DC12V
		4	DC12V		64P-254DSA K	4	DC12V

PCB - HEAD IO MAP-2

		5	L h DATA1			5	L h DATA1
		6	R h DATA1			6	R h DATA1
		7	L h DATA2			7	L h DATA2
		8	R h DATA2			8	R h DATA2
		9	L h DATA3			9	L h DATA3
		10	R h DATA3			10	R h DATA3
		11	L h DATA4			11	L h DATA4
		12	R h DATA4			12	R h DATA4
		13	L h DATA5			13	L h DATA5
		14	R h DATA5			14	R h DATA5
		15	L h DATA6			15	L h DATA6
		16	R h DATA6			16	R h DATA6
		17	STB1 I			17	STB1 I
		18	STB2 I			18	STB2 I
		19	STB3 I			19	STB3 I
		20	STBCL I			20	STBCL I
		21	GND			21	GND
		22	GND			22	GND
		23	DP1H I			23	DP1H I
		24	CLK I			24	CLK I
		25	DP1L I			25	DP1L I
		26	LOAD I			26	LOAD I
		27	DP2H I			27	DP2H I
		28	LAT I			28	LAT I
		29	DP2L I			29	DP2L I
		30	DADAT I			30	DADAT I
		31	D CNT I			31	D CNT I
		32	DACLK I			32	DACLK I
		33	AD SEL			33	AD SEL
		34	DA LD I			34	DA LD I
		35	SEN_HOME			35	SEN_HOME
		36	SEN_SIZE			36	SEN_SIZE
		37	ENC_A			37	ENC_A
		38	ENS_B			38	ENS_B
		39	GND			39	GND
		40	GND			40	GND
		41	AN0			41	AN0
		42	AN4			42	AN4
		43	AN1			43	AN1
		44	AN5			44	AN5
		45	AN2			45	AN2
		46	AN6			46	AN6
		47	AN3			47	AN3
		48	AN7			48	AN7
		49	GND			49	GND
		50	GND			50	GND
		51	INKL 1			51	INKL 1
		52	INKL 2			52	INKL 2
		53	INKL 3			53	INKL 3
		54	INKL 4			54	INKL 4
		55	INKL 5			55	INKL 5
		56	INKL 6			56	INKL 6

PCB - HEAD IO MAP-3

		57	INKL 7			57	INKL 7
		58	INKL 8			58	INKL 8
		59	GND			59	GND
		60	GND			60	GND
		61	N.C			61	N.C
		62	N.C			62	N.C
		63	N.C			63	N.C
		64	N.C			64	N.C
J16	INK_K	1	VH-POW		CARTRIDGE PCB, J7	1	GND
	5597-30P	2	VH-POW		5597-30P	2	GND
	straight Type	3	VH-POW			3	STBCL
		4	GND			4	LOAD
		5	DC12V			5	STB3
		6	GND			6	STB2
		7	DP1H			7	STB1
		8	DP1L			8	LAT
		9	DP2H			9	CLK
		10	DP2L			10	R-DAT1
		11	DA1(K)			11	L-DAT1
		12	DA2(K)			12	R-DAT0
		13	AD1(K)			13	L-DAT0
		14	GND			14	GND
		15	VDD5V			15	VDD5V
		16	VDD5V			16	VDD5V
		17	GND			17	GND
		18	L-DAT0(K)			18	AD1
		19	R-DAT0(K)			19	DA2
		20	L-DAT1(K)			20	DA1
		21	L-DAT1(K)			21	DP2L
		22	CLK			22	DP2H
		23	LAT			23	DP1L
		24	STB1			24	DP1H
		25	STB2			25	GND
		26	STB3			26	DC12V
		27	LOAD			27	GND
		28	STBCL			28	VH-POW
		29	GND			29	VH-POW
		30	GND			30	VH-POW
J17	INK_C	1	VH-POW		CARTRIDGE PCB, J7	1	GND
	5597-30P	2	VH-POW		5597-30P	2	GND
	straight Type	3	VH-POW			3	STBCL
		4	GND			4	LOAD
		5	DC12V			5	STB3
		6	GND			6	STB2
		7	DP1H			7	STB1
		8	DP1L			8	LAT
		9	DP2H			9	CLK
		10	DP2L			10	R-DAT1
		11	DA1(C)			11	L-DAT1
		12	DA2(C)			12	R-DAT0

PCB - HEAD IO MAP-4

		13	AD1(C)			13	L-DAT0
		14	GND			14	GND
		15	VDD5V			15	VDD5V
		16	VDD5V			16	VDD5V
		17	GND			17	GND
		18	L-DAT0(C)			18	AD1
		19	R-DAT0(C)			19	DA2
		20	L-DAT1(C)			20	DA1
		21	L-DAT1(C)			21	DP2L
		22	CLK			22	DP2H
		23	LAT			23	DP1L
		24	STB1			24	DP1H
		25	STB2			25	GND
		26	STB3			26	DC12V
		27	LOAD			27	GND
		28	STBCL			28	VH-POW
		29	GND			29	VH-POW
		30	GND			30	VH-POW
J18	**INK_M**	1	VH-POW		**CARTRIDGE PCB, J7**	1	GND
	5597-30P	2	VH-POW		**5597-30P**	2	GND
	straight Type	3	VH-POW			3	STBCL
		4	GND			4	LOAD
		5	DC12V			5	STB3
		6	GND			6	STB2
		7	DP1H			7	STB1
		8	DP1L			8	LAT
		9	DP2H			9	CLK
		10	DP2L			10	R-DAT1
		11	DA1(M)			11	L-DAT1
		12	DA2(M)			12	R-DAT0
		13	AD1(M)			13	L-DAT0
		14	GND			14	GND
		15	VDD5V			15	VDD5V
		16	VDD5V			16	VDD5V
		17	GND			17	GND
		18	L-DAT0(M)			18	AD1
		19	R-DAT0(M)			19	DA2
		20	L-DAT1(M)			20	DA1
		21	L-DAT1(M)			21	DP2L
		22	CLK			22	DP2H
		23	LAT			23	DP1L
		24	STB1			24	DP1H
		25	STB2			25	GND
		26	STB3			26	DC12V
		27	LOAD			27	GND
		28	STBCL			28	VH-POW
		29	GND			29	VH-POW
		30	GND			30	VH-POW
J19	**INK_Y**	1	VH-POW		**CARTRIDGE PCB, J7**	1	GND
	5597-30P	2	VH-POW		**5597-30P**	2	GND

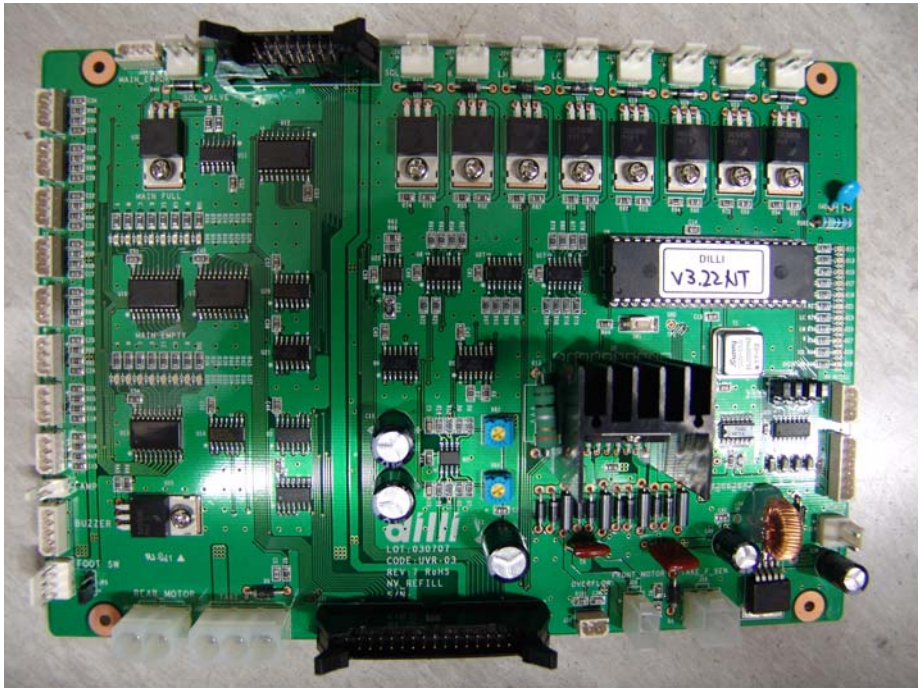
PCB - HEAD IO MAP-5

	straight Type	3	VH-POW			3	STBCL
		4	GND			4	LOAD
		5	DC12V			5	STB3
		6	GND			6	STB2
		7	DP1H			7	STB1
		8	DP1L			8	LAT
		9	DP2H			9	CLK
		10	DP2L			10	R-DAT1
		11	DA1(Y)			11	L-DAT1
		12	DA2(Y)			12	R-DAT0
		13	AD1(Y)			13	L-DAT0
		14	GND			14	GND
		15	VDD5V			15	VDD5V
		16	VDD5V			16	VDD5V
		17	GND			17	GND
		18	L-DAT0(Y)			18	AD1
		19	R-DAT0(Y)			19	DA2
		20	L-DAT1(Y)			20	DA1
		21	L-DAT1(Y)			21	DP2L
		22	CLK			22	DP2H
		23	LAT			23	DP1L
		24	STB1			24	DP1H
		25	STB2			25	GND
		26	STB3			26	DC12V
		27	LOAD			27	GND
		28	STBCL			28	VH-POW
		29	GND			29	VH-POW
		30	GND			30	VH-POW
J20	POWER CON	1	DC24V		SUB#2 PCB	1	DC24V
	6P	2	DC24V		POWER CON 6P	2	DC24V
		3	VHPOW			3	VHPOW(FIRE-HV)
		4	VHPOW			4	VHPOW(FIRE-HV)
		5	GND			5	GND
		6	GND			6	GND
J21	INK_LC	1	VH-POW		CARTRIDGE PCB, J7	1	GND
	5597-30P	2	VH-POW		5597-30P	2	GND
	straight Type	3	VH-POW			3	STBCL
		4	GND			4	LOAD
		5	DC12V			5	STB3
		6	GND			6	STB2
		7	DP1H			7	STB1
		8	DP1L			8	LAT
		9	DP2H			9	CLK
		10	DP2L			10	R-DAT1
		11	DA1(LC)			11	L-DAT1
		12	DA2(LC)			12	R-DAT0
		13	AD1(LC)			13	L-DAT0
		14	GND			14	GND
		15	VDD5V			15	VDD5V
		16	VDD5V			16	VDD5V

PCB - HEAD IO MAP-6

		17	GND			17	GND
		18	L-DAT0(LC)			18	AD1
		19	R-DAT0(LC)			19	DA2
		20	L-DAT1(LC)			20	DA1
		21	L-DAT1(LC)			21	DP2L
		22	CLK			22	DP2H
		23	LAT			23	DP1L
		24	STB1			24	DP1H
		25	STB2			25	GND
		26	STB3			26	DC12V
		27	LOAD			27	GND
		28	STBCL			28	VH-POW
		29	GND			29	VH-POW
		30	GND			30	VH-POW
J22	INK_LM	1	VH-POW		CARTRIDGE PCB, J7	1	GND
	5597-30P	2	VH-POW		5597-30P	2	GND
	straight Type	3	VH-POW			3	STBCL
		4	GND			4	LOAD
		5	DC12V			5	STB3
		6	GND			6	STB2
		7	DP1H			7	STB1
		8	DP1L			8	LAT
		9	DP2H			9	CLK
		10	DP2L			10	R-DAT1
		11	DA1(LM)			11	L-DAT1
		12	DA2(LM)			12	R-DAT0
		13	AD1(LM)			13	L-DAT0
		14	GND			14	GND
		15	VDD5V			15	VDD5V
		16	VDD5V			16	VDD5V
		17	GND			17	GND
		18	L-DAT0(LM)			18	AD1
		19	R-DAT0(LM)			19	DA2
		20	L-DAT1(LM)			20	DA1
		21	L-DAT1(LM)			21	DP2L
		22	CLK			22	DP2H
		23	LAT			23	DO1L
		24	STB1			24	DP1H
		25	STB2			25	GND
		26	STB3			26	DC12V
		27	LOAD			27	GND
		28	STBCL			28	VH-POW
		29	GND			29	VH-POW
		30	GND			30	VH-POW

PCB – REFILL PCB

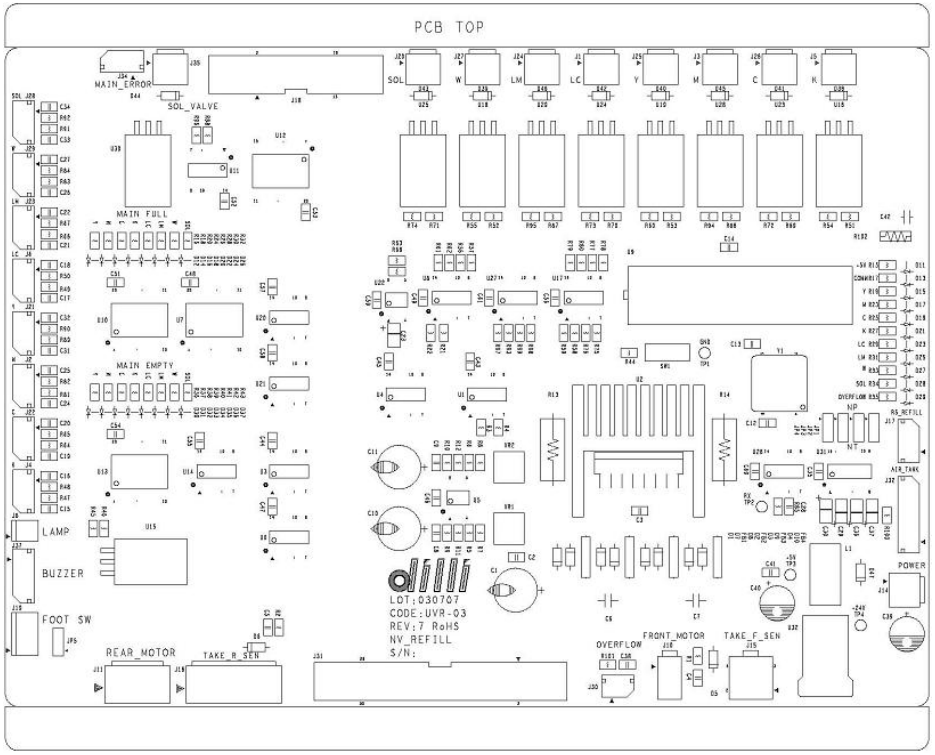


MAIN FUNCTION

1. Connected to both SUB PCB 2 and Communication port.
2. Control each ink pump
3. By connecting with CONTROL PCB. Send and receive the status of Ink and Ink supplying and signal of ink supplying
4. By checking the remained ink in the Main Ink Tank, Sound Biff buzzer if ink is short.
5. Set task up motor controller and overflow.

Part #; UVR-03

PCB - REFILL PCB

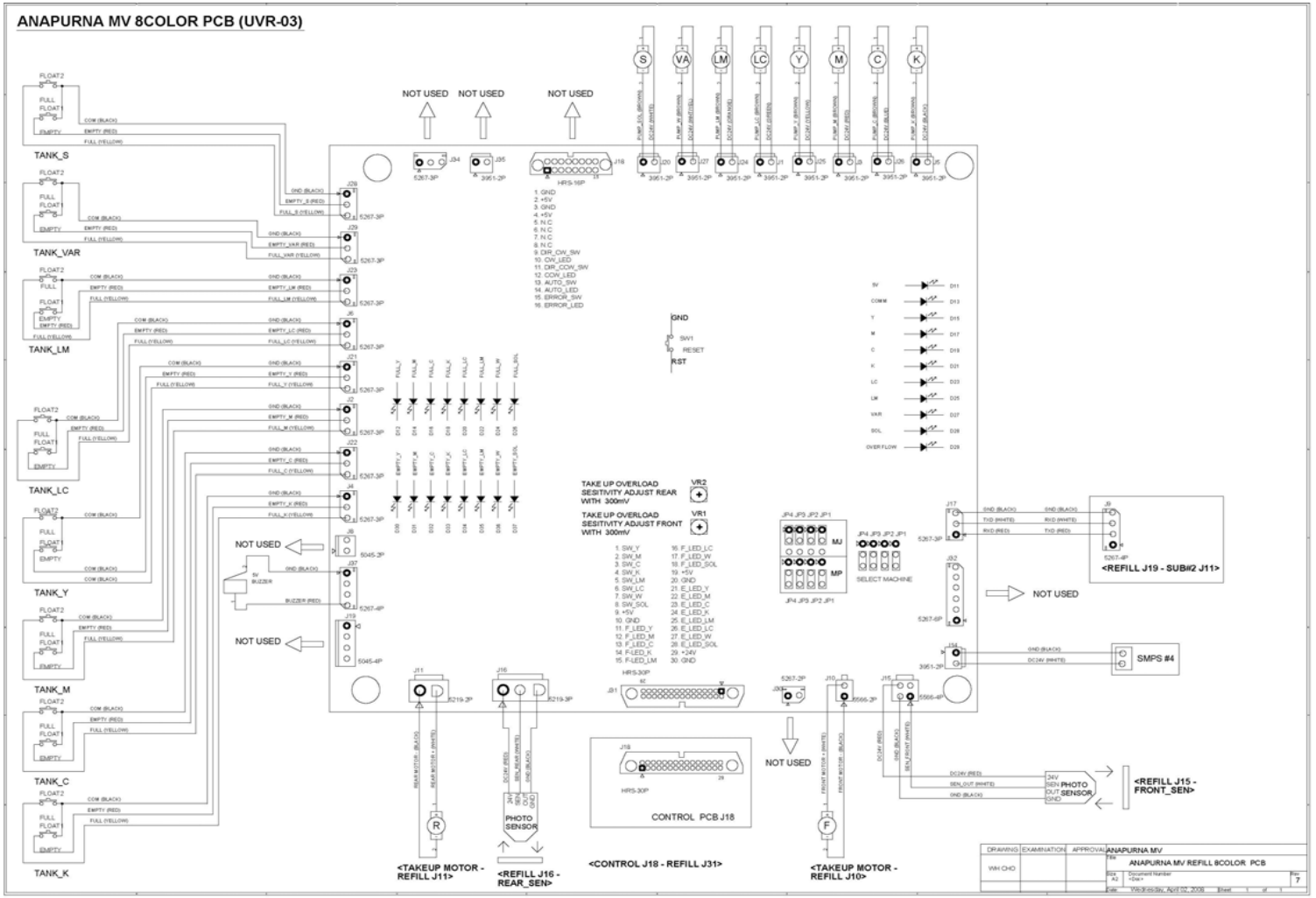


Part #; UVR-03

CONNECTOR CONNECTION MAP

J1 B2P-VH --> Pump LC J2 5267-3 --> Level Sensor M
J3 B2P-VH --> Pump M J4 5267-3 --> Level Sensor K
J5 B2P-VH --> Pump K J6 5267-3 --> Level Sensor LC
J8 Disconnection
J10 5566-2 --> Before Task up motor
J11 5219-2 --> After Task Up Motor
J14 B2P-VH --> SMPS#4 DC24V
J15 5566-4 --> Before Task up motor
J16 5219-3 --> After Task Up Motor
J17 5267-3 --> SUB J9 J18 Disconnection
J19 5045-4 --> SUB J18 J20 B2P-VH --> Pump S
J21 5267-3 --> Level Sensor Y
J22 5267-2 --> Level Sensor C
J23 5267-3 --> Level Sensor LM
J24 B2P-VH --> Pump LM
J25 B2P-VH --> Pump Y
J26 B2P-VH --> Pump C
J27 B2P-VH --> Pump W (Disconnection)
J28 B2P-VH --> Level Sensor S
J29 5267-3 --> Level Sensor W (Disconnection)
J30 Disconnection
J31 IDC30 --> Control J18 J32 Disconnection
J34 Disconnection J35 Disconnection
J37 5267-4 --> BUZZER

PCB - REFILL PCB IO MAP



*** Bigger original circuit diagram is attached for understanding.**

PCB - REFILL IO MAP-1

REFILL										
J1	PUMP_LC	1	INK_PUMP_LC(BROWN)		INK PUMP LC	MOTOR -				
	B2P-VH	2	DC24V(GREEN)			MOTOR +				
J2	TANK_M	1	GND		TANK M Level sensor	BLACK	COMMON			
	5267-3P	2	E_TANK_M			RED	EMPTY SENSOR			
		3	F_TANK_M			YELLOW	FULL SENSOR			
J3	PUMP_M	1	INK_PUMP_M(BROWN)		INK PUMP M	MOTOR -				
	B2P-VH	2	DC24V(RED)			MOTOR +				
J4	TANK_K	1	GND		TANK K Level sensor	BLACK	COMMON			
	5267-3P	2	E_TANK_K			RED	EMPTY SENSOR			
		3	F_TANK_K			YELLOW	FULL SENSOR			
J5	PUMP_K	1	INK_PUMP_K(BROWN)		INK PUMP K	MOTOR -				
	B2P-VH	2	DC24V(BLACK)			MOTOR +				
J6	TANK_LC	1	GND		TANK LC Level sensor	BLACK	COMMON			
	5267-3P	2	E_TANK_LC			RED	EMPTY SENSOR			
		3	F_TANK_LC			YELLOW	FULL SENSOR			
J8	LAMP	1	DC24V(LAMP+)	NOT USED						
	5045-2P	2	LAMP-	NOT USED						
J10	F_MOTOR	1	U1-Q1(BROWN)		TAKE UP MOTOR FRONT					
	5566-2P	2	U1-Q2(BLUE)							
J11	R_MOTOR	1	U1-Q3(BROWN)		TAKE UP MOTOR REAR					
	5219-2P	2	U1-Q4(BLUE)							
J14	POWER	1	GND(BLACK)		SMPS, WK120S24AR	1	DC24V(RED)			
	B2P-VH	2	DC24V(RED)		(DC24V5A)	2				
						3	GND(BLACK)			
						4				

PCB - REFILL IO MAP-2

J15	TAKE-F-SEN	1	TAKE-F-SEN(BLACK)		AUTONICS, PHOTOSENSOR	BROWN	DC24V			
	5566-4P	2	GND(BLUE)			BLACK	SENSOR OUT			
		3	N.C			BLUE	GND			
		4	DC24V(BROWN)							
J16	TAKE_R_SEN	1	DC24V(BROWN)		AUTONICS, PHOTOSENSOR	BROWN	DC24V			
	5219-3P	2	TAKE-R-SEN(BLACK)			BLACK	SENSOR OUT			
		3	GND(BLUE)			BLUE	GND			
J17	RS_REFILL	1	RX REFILL		SUB J9 (TAKEUP/REFILL)	1	+5V			
	5267-3P	2	TX REFILL		5267-4P	2	TX DATA(RED)			
		3	GND			3	RX DATA(BLUE)			
						4	GND(YELLOW)			
J18	TAKEUP	1	GND	NOT USED						
	HIF3BA16DSA	2	+5V	NOT USED						
		3	GND	NOT USED						
		4	+5V	NOT USED						
		5	N.C	NOT USED						
		6	N.C	NOT USED						
		7	N.C	NOT USED						
		8	N.C	NOT USED						
		9	DIR_CW_SW	NOT USED						
		10	CW_LED	NOT USED						
		11	DIR_CCW_SW	NOT USED						
		12	CCW_LED	NOT USED						
		13	AUTO_SW	NOT USED						
		14	AUTO_LED	NOT USED						
		15	ERROR_SW	NOT USED						
		16	ERROR_LED	NOT USED						
J19	FOOT SW	1	+5V(WHITE)		SUB J18 (SOL_ON)	1	VDD5V(WHITE)			
	5045-4P	2			5267-3P	2				
		3				3	SOL_ON(BLACK)			
		4	FOOT_SOL_SW(BLACK)							

PCB - REFILL IO MAP-3

J20	SOL_PUMP	1	INK_PUMP_SOL(BROWN)		INK PUMP SOL		MOTOR -			
	B2P-VH	2	DC24V(WHITE)				MOTOR +			
J21	TANK_Y	1	GND		TANK_Y Level sensor	BLACK	COMMON			
	5267-3P	2	E_TANK_Y			RED	EMPTY SENSOR			
		3	F_TANK_Y			YELLOW	FULL SENSOR			
J22	TANK_C	1	GND		TANK_C Level sensor	BLACK	COMMON			
	5267-3P	2	E_TANK_C			RED	EMPTY SENSOR			
		3	F_TANK_C			YELLOW	FULL SENSOR			
J23	TANK_LM	1	GND		TANK_LM Level sensor	BLACK	COMMON			
	5267-3P	2	E_TANK_LM			RED	EMPTY SENSOR			
		3	F_TANK_LM			YELLOW	FULL SENSOR			
J24	LM_PUMP	1	INK_PUMP_LM(BROWN)		INK PUMP LM	MOTOR -				
	B2P-VH	2	DC24V(ORANGE)			MOTOR +				
J25	Y_PUMP	1	INK_PUMP_Y(BROWN)		INK PUMP Y	MOTOR -				
	B2P-VH	2	DC24V(YELLOW)			MOTOR +				
J26	C_PUMP	1	INK_PUMP_C(BROWN)		INK PUMP C	MOTOR -				
	B2P-VH	2	DC24V(BLUE)			MOTOR +				
J27	W PUMP	1	INK_PUMP_W (BROWN)		INK PUMP W	MOTOR -				
	B2P-VH	2	DC24V(WHITE/YELLOW)			MOTOR +				
J28	TANK_SOL	1	GND		TANK_SOL Level sensor	BLACK	COMMON			
	5267-3P	2	E_TANK_SOL			RED	EMPTY SENSOR			
		3	F_TANK_SOL			YELLOW	FULL SENSOR			
J29	W TANK	1	GND	NOT USED						
	5267-3P	2	E_TANK_W	NOT USED						
		3	F_TANK_W	NOT USED						

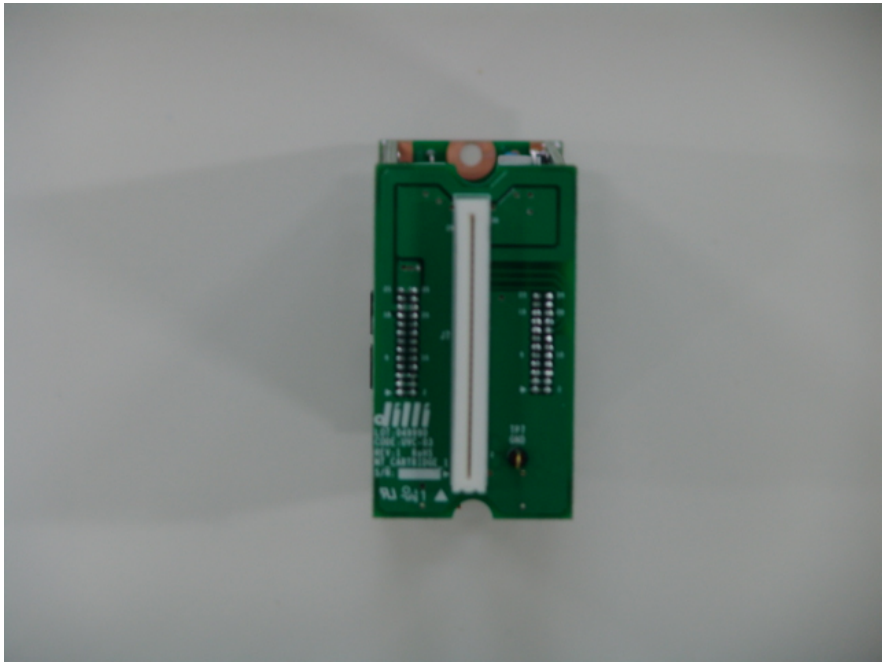
PCB - REFILL IO MAP-4

J30	OVERFLOW	1	+5V	NOT USED						
	5267-2P	2	OVER_FLOW	NOT USED						
J31	CONTROL	1	SW_Y		CONTORL J18	1	SW_Y			
	HIF3BA30DSA	2	SW_M		HIF3BA30DS	2	SW_M			
		3	SW_C			3	SW_C			
		4	SW_K			4	SW_K			
		5	SW_LM			5	SW_LM			
		6	SW_LC			6	SW_LC			
		7	SW_W			7	SW_W			
		8	MANUAL_SOL_SW			8	MANUAL_SOL_SW			
		9	+5V			9	+5V			
		10	GND			10	GND			
		11	F_LED_Y			11	F_LED_Y			
		12	F_LED_M			12	F_LED_M			
		13	F_LED_C			13	F_LED_C			
		14	F_LED_K			14	F_LED_K			
		15	F_LED_LM			15	F_LED_LM			
		16	F_LED_LC			16	F_LED_LC			
		17	F_LED_W			17	F_LED_W			
		18	F_LED_SOL			18	F_LED_SOL			
		19	+5V			19	+5V			
		20	GND			20	GND			
		21	E_LED_Y			21	E_LED_Y			
		22	E_LED_M			22	E_LED_M			
		23	E_LED_C			23	E_LED_C			
		24	E_LED_K			24	E_LED_K			
		25	E_LED_LM			25	E_LED_LM			
		26	E_LED_LC			26	E_LED_LC			
		27	E_LED_W			27	E_LED_W			
		28	E_LED_SOL			28	E_LED_SOL			
		29	+24V			29	+24V			
		30	GND			30	GND			
J32	AIR_TANK_SEN	1	+5V	NOT USED						
	5267-6P	2	N.C	NOT USED						
		3	PRESSURE LOW	NOT USED						
		4	N.C	NOT USED						
		5	N.C	NOT USED						
		6	N.C	NOT USED						

PCB - REFILL IO MAP-5

J34	MAIN_ERROR	1	MAIN_ERROR	NOT USED						
	5267-3P	2	N.C	NOT USED						
		3	GND	NOT USED						
J35	SOL_VALVE	1	SOL_VALVE	NOT USED						
	B2P-VH	2	DC24V	NOT USED						
J37	BUZZER	1	GND		DC5V용 BUZZER	BLACK	BUZZER -			
	5267-4P	2								
		3								
		4	BUZZER			RED	BUZZER +			

PCB – CARTRIDGE#1 PCB



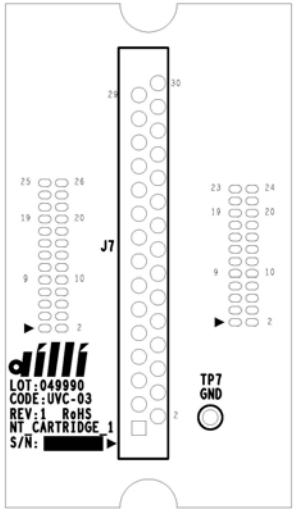
Part #; UVC-03

MAIN FUNCTION

Connected with Signal connector

Coming from HEAD PCB.

PCB – CARTRIDGE#1 PCB



CONNECTOR CONNECTION MAP

J7 5597-30 Straight --> Head J16 K

--> Head J17 C

--> Head J18 M

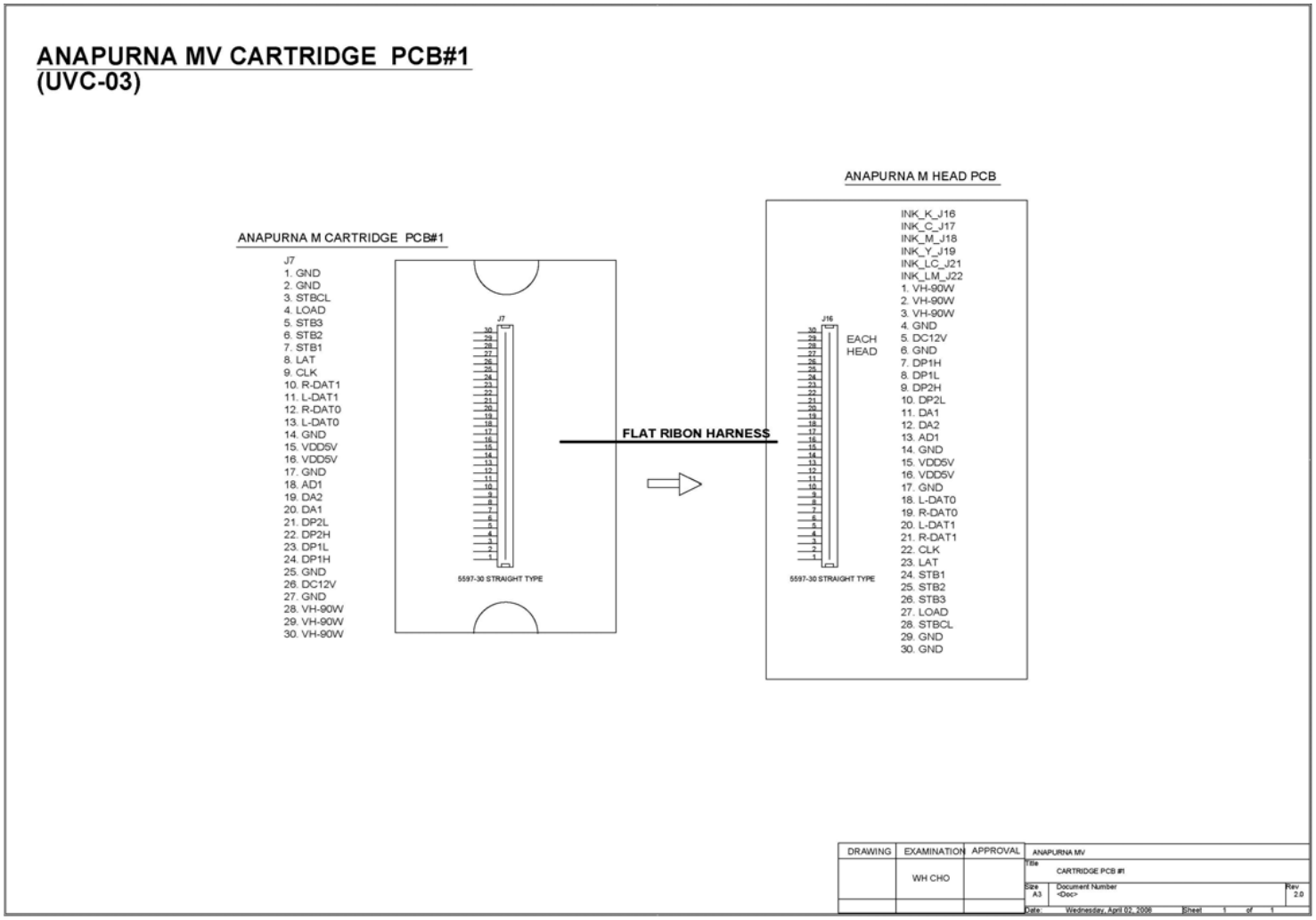
--> Head J19 Y

--> Head J21 LC

--> Head J22 LM

Part #; UVC-03

PCB – CARTRIDGE#1 PCB IO MAP



*** Bigger original circuit diagram is attached for understanding.**

PCB – CARTRIDGE IO MAP-1

Cartridge PCB						
				Head PCB		
J7	1	GND		J16	1	VH-POW
5597-30P	2	GND		5597-30P	2	VH-POW
straight Type	3	STBCL		straight Type	3	VH-POW
	4	LOAD			4	GND
	5	STB3			5	DC12V
	6	STB2			6	GND
	7	STB1			7	DP1H
	8	LAT			8	DP1L
	9	CLK			9	DP2H
	10	R-DAT1			10	DP2L
	11	L-DAT1			11	DA1
	12	R-DAT0			12	DA2
	13	L-DAT0			13	AD1
	14	GND			14	GND
	15	VDD5V			15	VDD5V
	16	VDD5V			16	VDD5V
	17	GND			17	GND
	18	AD1			18	L-DAT0
	19	DA2			19	R-DAT0
	20	DA1			20	L-DAT1
	21	DP2L			21	L-DAT1
	22	DP2H			22	CLK
	23	DP1L			23	LAT
	24	DP1H			24	STB1
	25	GND			25	STB2
	26	DC12V			26	STB3
	27	GND			27	LOAD
	28	VH-POW			28	STBCL
	29	VH-POW			29	GND
	30	VH-POW			30	GND

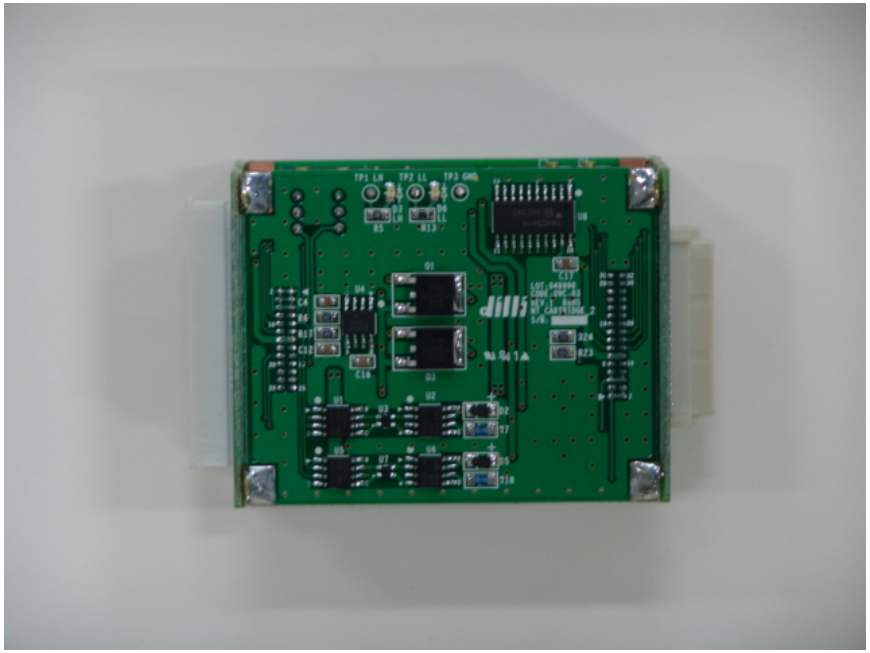
PCB – CARTRIDGE IO MAP-2

J9	1	VH		Print Head	1	VH	
5077-50P	2	N.C			2	N.C	
Receptacle	3	N.C			3	N.C	
	4	R-COM24			4	R-COM24	
	5	R-COM24			5	R-COM24	
	6	R-COM24			6	R-COM24	
	7	R-COM13			7	R-COM13	
	8	GND			8	GND	
	9	R-COM13			9	R-COM13	
	10	L-SI1			10	L-SI1	
	11	L-SI0			11	L-SI0	
	12	TH			12	TH	
	13	R-STB3			13	R-STB3	
	14	VDD5V			14	VDD5V	
	15	R-STB2			15	R-STB2	
	16	GND			16	GND	
	17	R-STB1			17	R-STB1	
	18	GND			18	GND	
	19	R-STBCL			19	R-STBCL	
	20	GND			20	GND	
	21	R-CLK			21	R-CLK	
	22	GND			22	GND	
	23	R-LAT			23	R-LAT	
	24	GND			24	GND	
	25	R-LOAD			25	R-LOAD	
	26	L-LOAD			26	L-LOAD	
	27	GND			27	GND	
	28	L-LAT			28	L-LAT	
	29	GND			29	GND	
	30	L-CLK			30	L-CLK	
	31	GND			31	GND	
	32	L-STBCL			32	L-STBCL	
	33	GND			33	GND	

PCB – CARTRIDGE IO MAP-3

	34	L-STB1			34	L-STB1		
	35	VDD5V			35	VDD5V		
	36	L-STB2			36	L-STB2		
	37	TH			37	TH		
	38	L-STB3			38	L-STB3		
	39	R-SI1			39	R-SI1		
	40	R-SI0			40	R-SI0		
	41	GND			41	GND		
	42	L-COM13			42	L-COM13		
	43	L-COM13			43	L-COM13		
	44	L-COM13			44	L-COM13		
	45	L-COM13			45	L-COM13		
	46	L-COM13			46	L-COM13		
	47	L-COM13			47	L-COM13		
	48	N.C			48	N.C		
	49	N.C			49	N.C		
	50	VH			50	VH		

PCB – CARTRIDGE#2 PCB

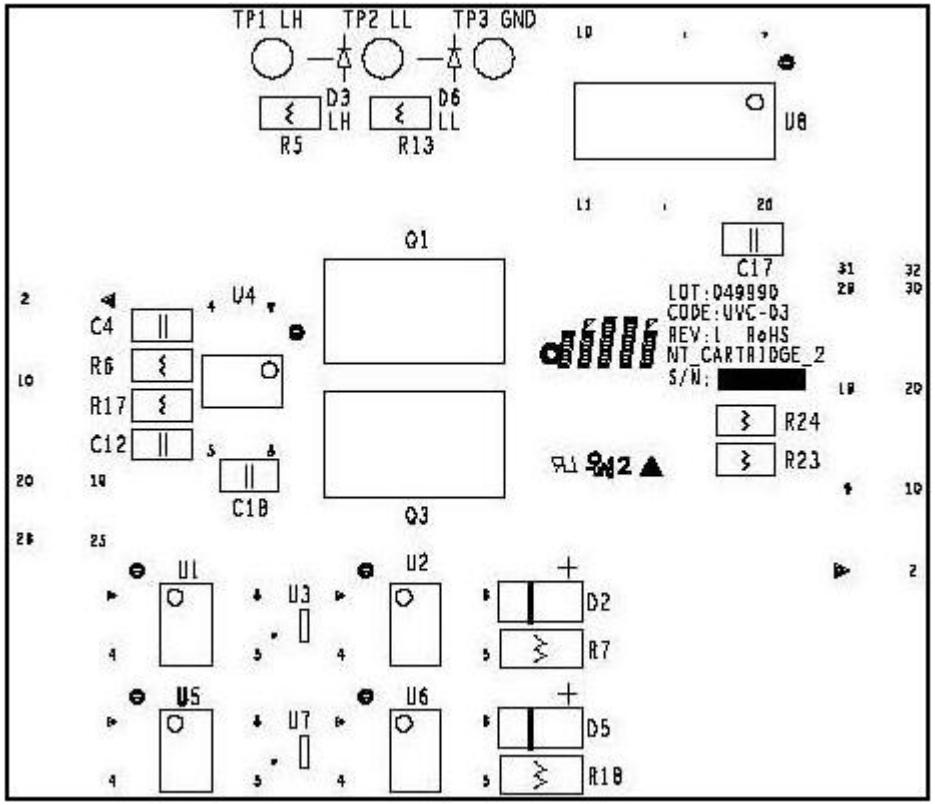


Part #; UVC-03

MAIN FUNCTION

1. Voltage Control Terminal for left side channel. (TP1, TP2)
2. Voltage Control Volume for left side channel. (VR1, VR2)
3. Left Channel Signal Process.

PCB – CARTRIDGE#2 PCB

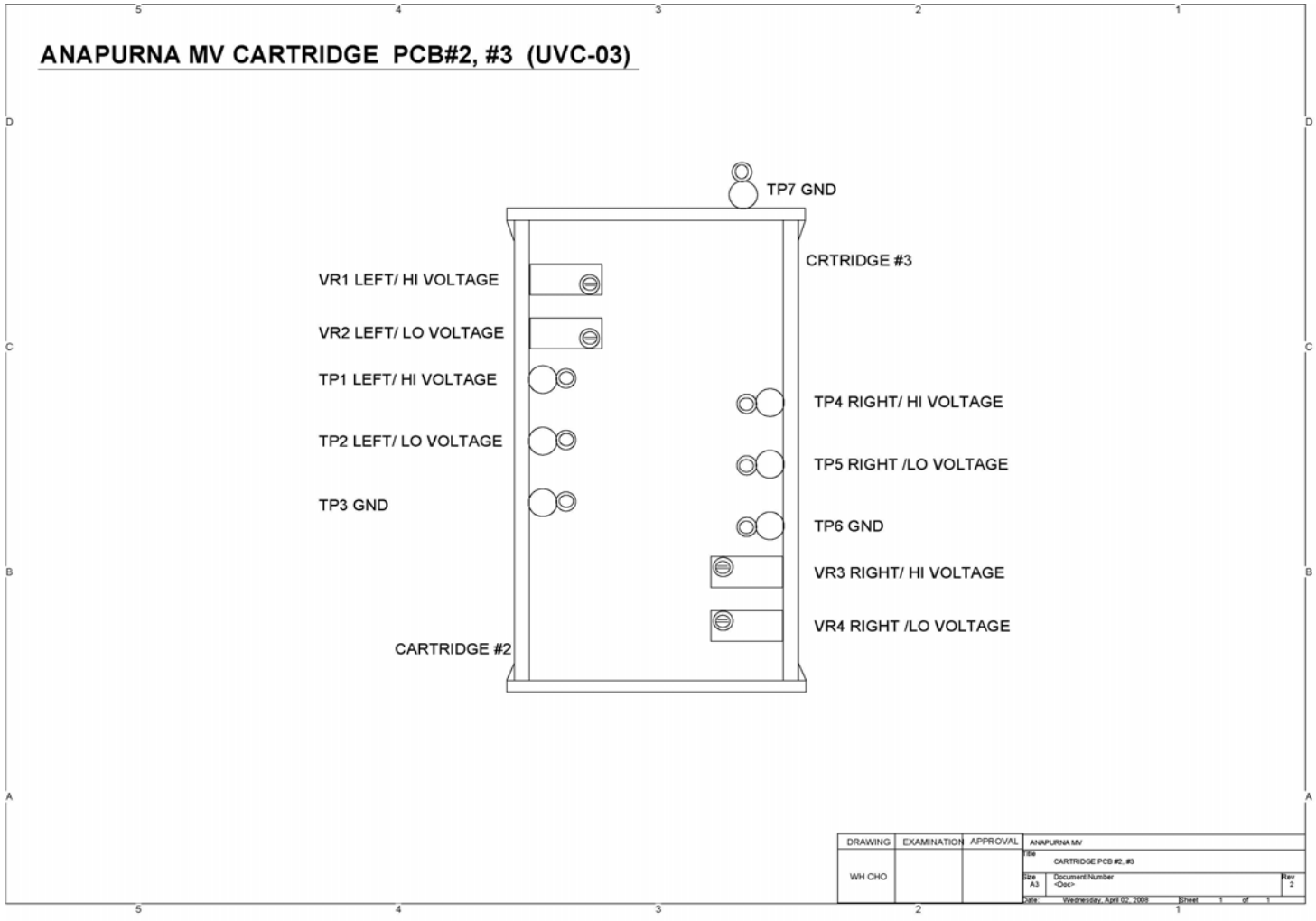


Part #; UVC-03

CONNECTOR CONNECTION MAP

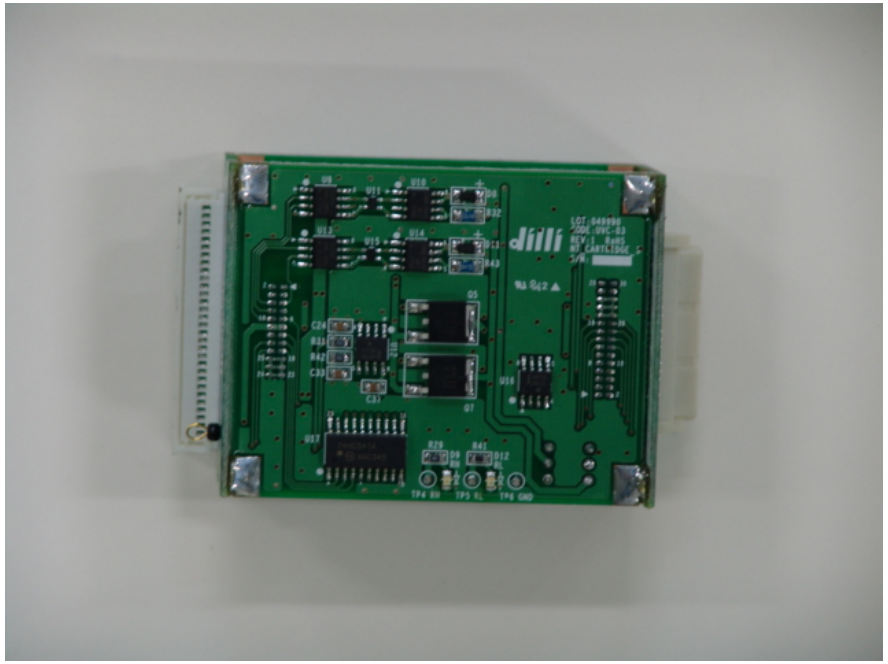
JP1 : (RED) LEFT CHANNEL HIGH 15.00V
Setting terminal.
JP2 : (YEL) LEFT CHANNEL LOW 7.50V
Setting terminal.
JP3 : (BLACK) GND TERMINAL.
VR1 : (LH) LEFT CHANNEL HIGH 15.00V
Setting volume.
VR2 : (LL) LEFT CHANNEL LOW 7.50V
Setting volume.

PCB – CARTRIDGE#2 PCB IO MAP



*** Bigger original circuit diagram is attached for understanding.**

PCB – CARTRIDGE#3 PCB

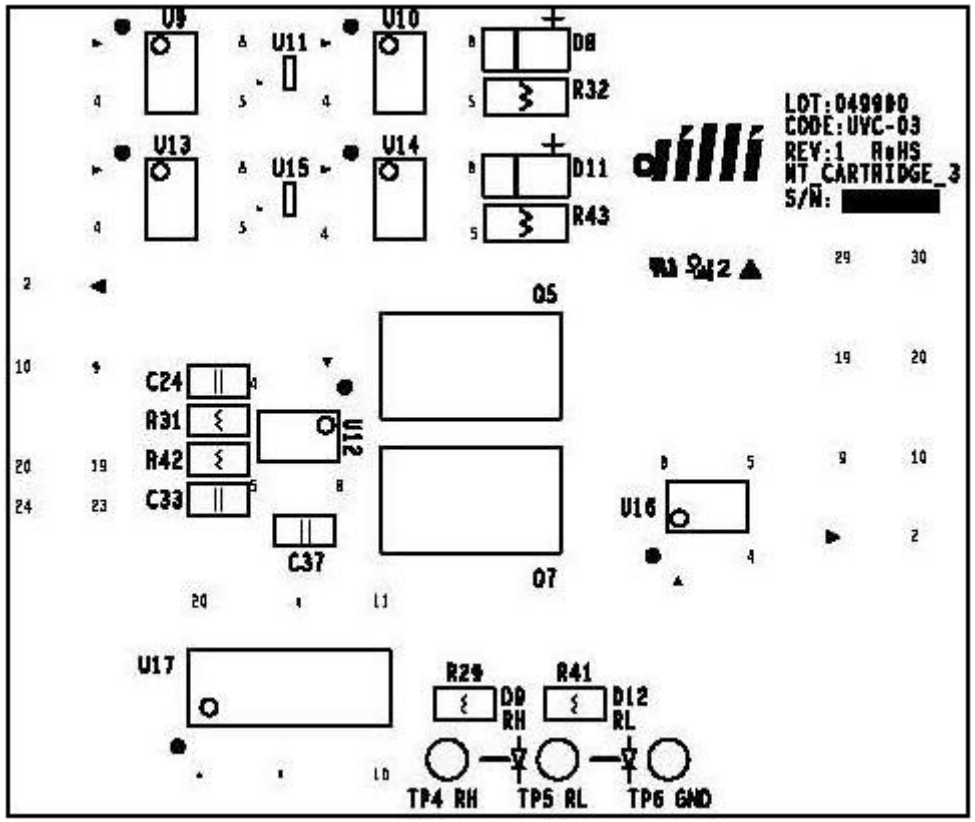


Part #; UVC-03

MAIN FUNCTION

1. Voltage Control Terminal for Right side channel. (TP1, TP2)
2. Voltage Control Volume for Right side channel. (VR31, VR4)
3. Right Channel Signal Process.

PCB – CARTRIDGE#3 PCB

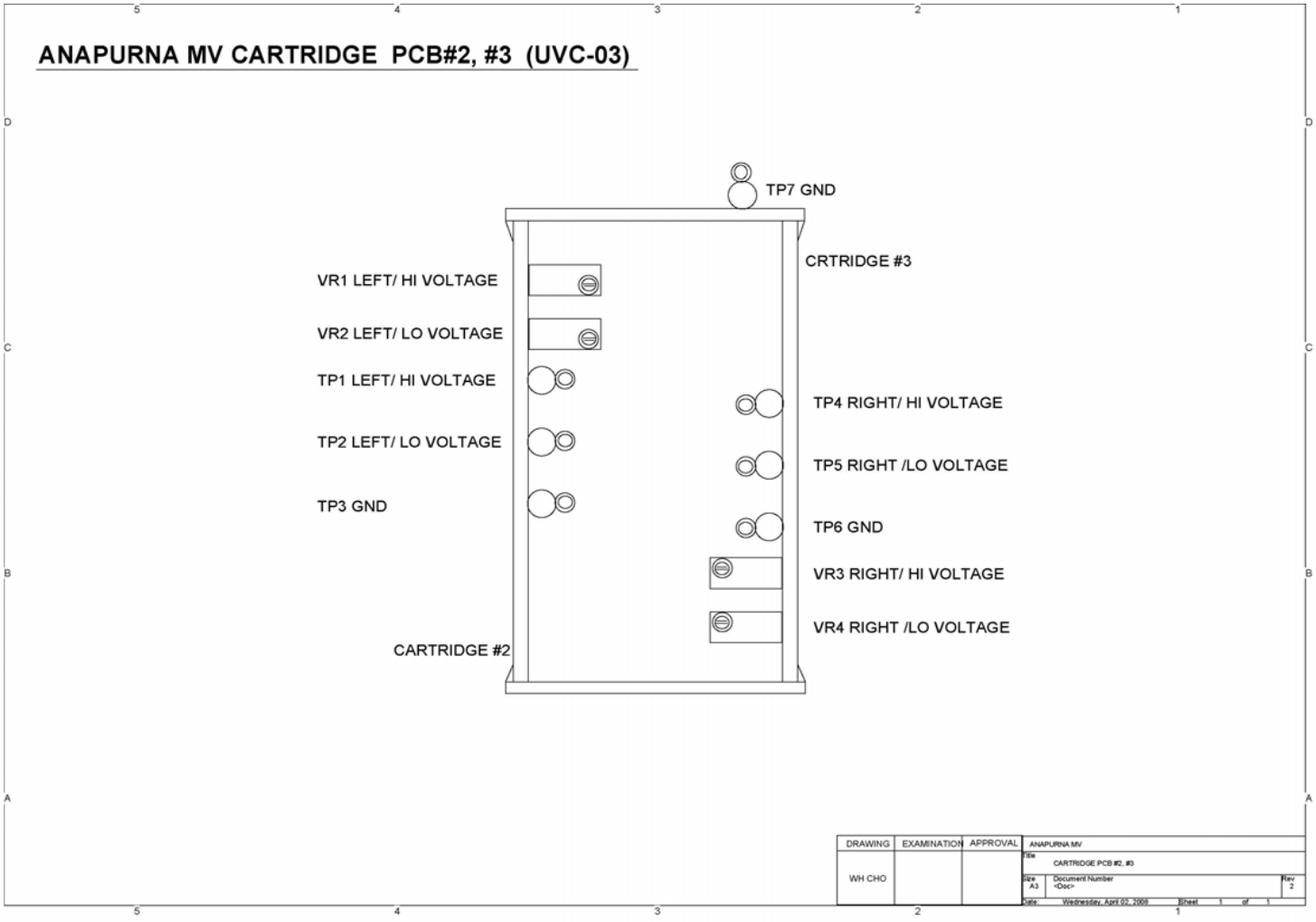


Part #; UVC-03

CONNECTOR CONNECTION MAP

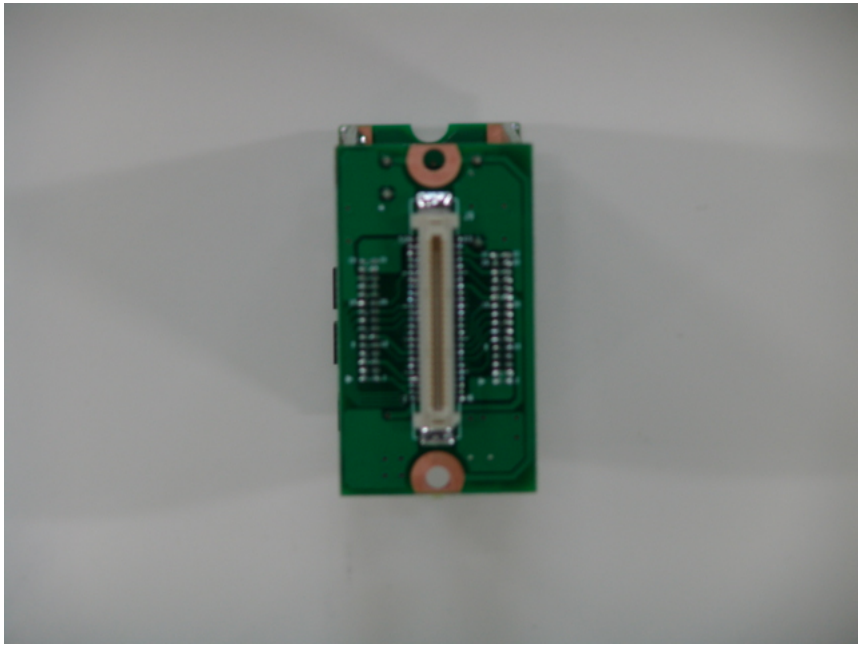
JP4 : (RED) RIGHT CHANNEL HIGH 15.00V SETTING TERMINAL
JP5 : (YEL) RIGHT CHANNEL LOW 7.50V SETTING TERMINAL.
JP6 : (BLA) GND TERMINAL.
VR3 : (RH) RIGHT CHANNEL HIGH 15.00V SETTING VOLUME
VR4 : (RL) RIGHT CHANNEL LOW 7.50V SETTING VOLUME

PCB – CARTRIDGE#3 PCB IO MAP



*** Bigger original circuit diagram is attached for understanding.**

PCB – CARTRIDGE#4 PCB

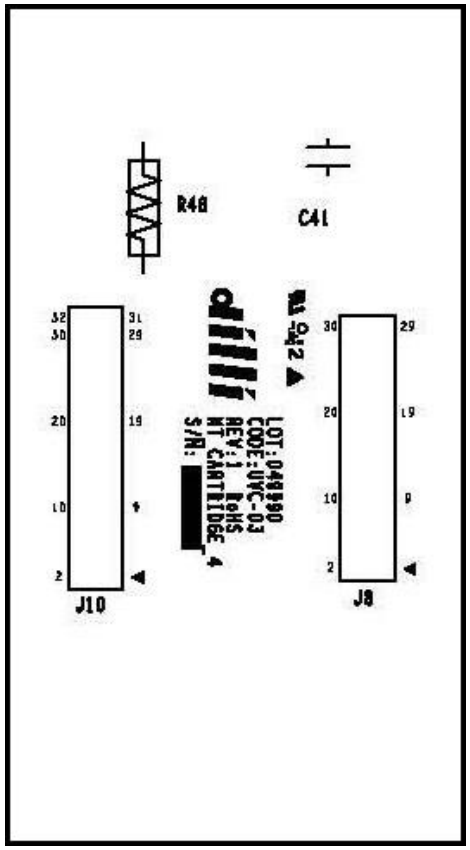


Part #; UVC-03

MAIN FUNCTION

Connected with Konica HEAD

PCB – CARTRIDGE#4 PCB



Part #; UVC-03

CONNECTOR CONNECTION MAP

J7 5077-50 Receptacle --> Print Head K

--> Print Head C

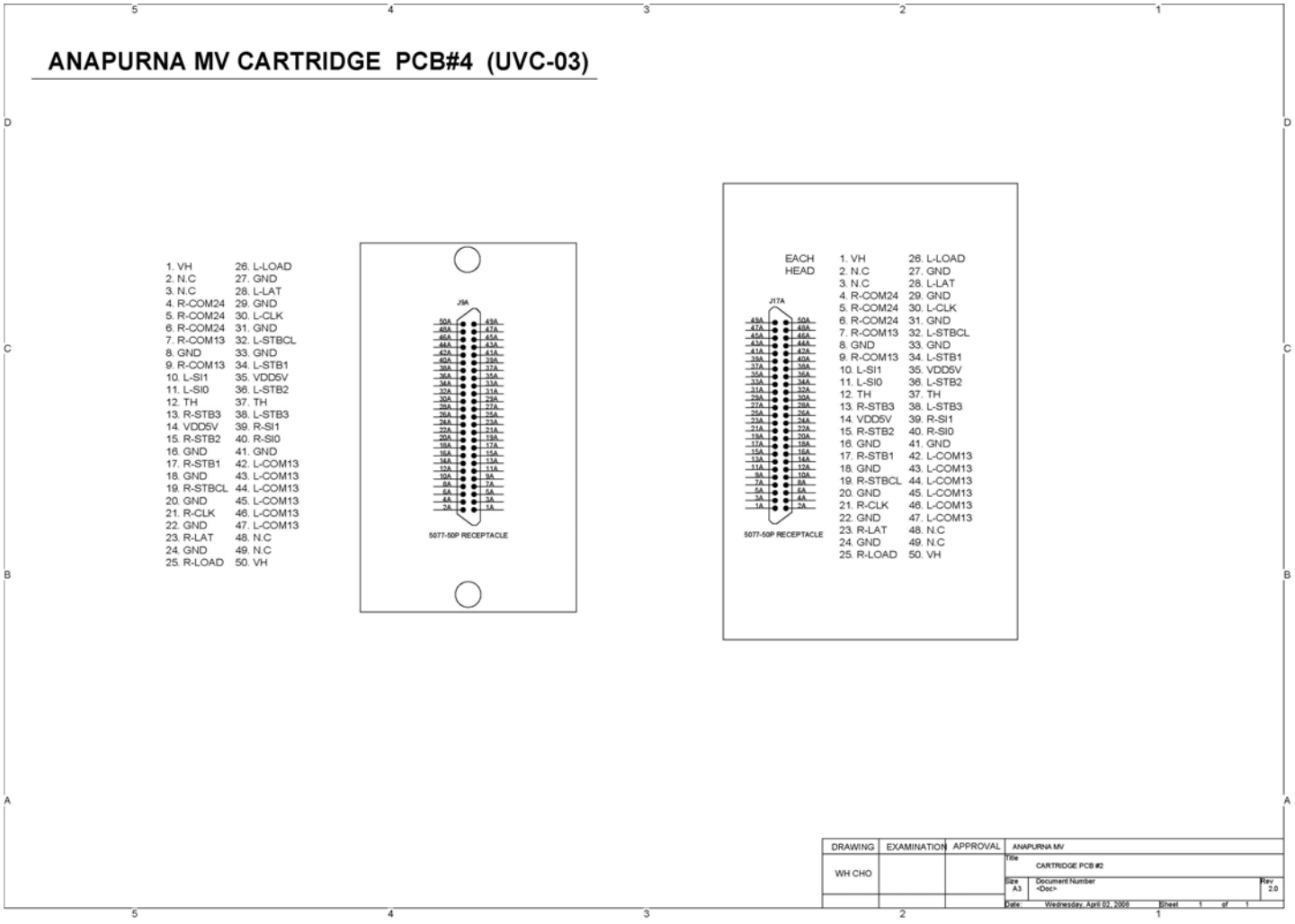
--> Print Head M

--> Print Head Y

--> Print Head LC

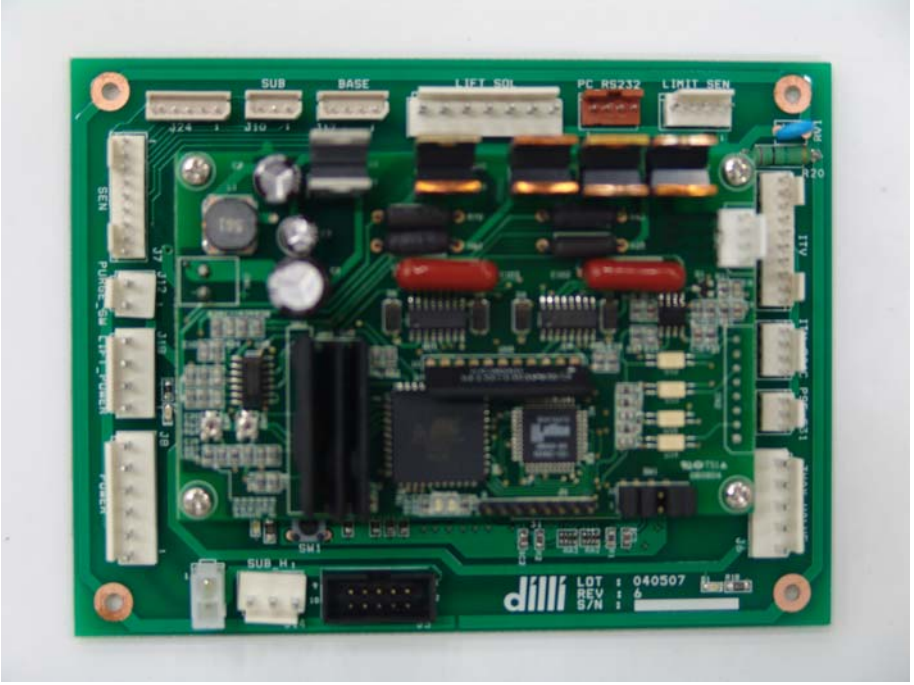
--> Print Head LM

PCB – CARTRIDGE#4 PCB IO MAP



*** Bigger original circuit diagram is attached for understanding.**

PCB - HEAD LIFT PCB

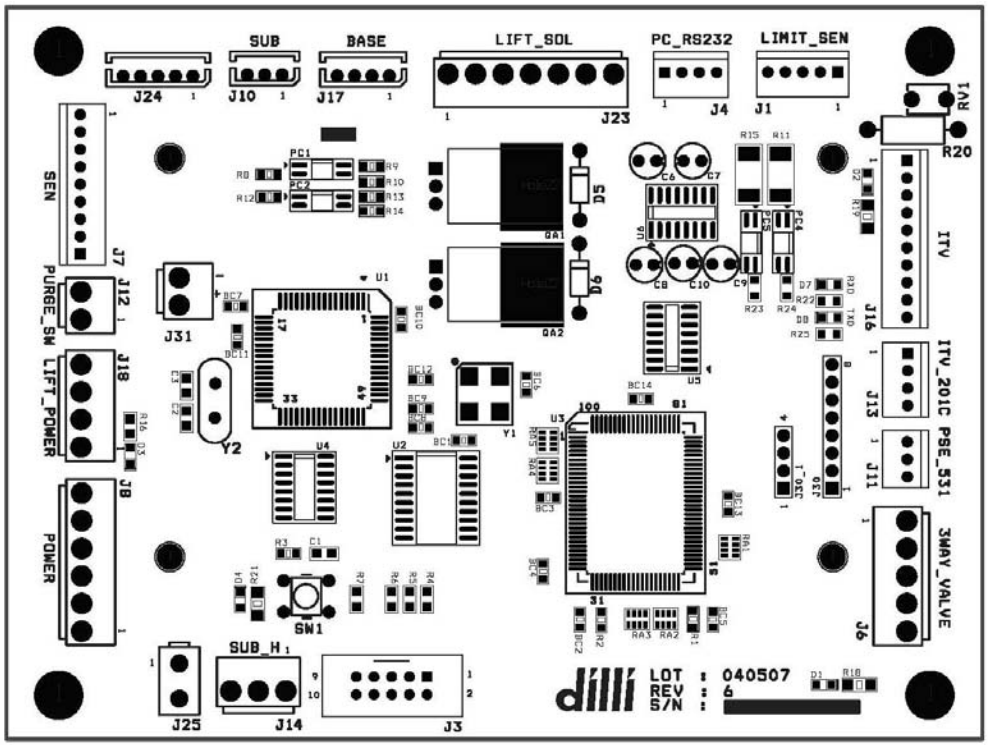


Part #; UVL-01

Main Function

1. Connect Step Motor Connector with Headbase spring PCB1.
2. Transfer Input Signal of both Headbase temperature sensor and Sub-Ink temperature sensor to I/F PCB.
3. Receive the signal pf Headbase Header and sub ink tank heater from I/F OCB.
4. Input two sensors for sensing the Media
5. Output two Solenoids for function operation.
6. Connect with Purge Switch and Solenoid valve of Negative Pressure Purge Change.
7. Receive Driving Power from SMPS#2.

PCB - HEAD LIFT PCB



Part #; UVL-01

CONNECTOR CONNECTION MAP

J1 5045-5 --> UP/DOWN Photo Sensor Omron

J3 Disconnection

J4 GIL-G4 --> Sub#2 J25

J6 B5P-VH --> VT301/VT301V 3Ways Sol Valve

J7 5045-9 --> I/F J2

J8 B6P-VH --> I/F J1

J10 5267-3 --> Temperature Sensor in Sub Ink Tank

J11 Disconnection

J12 B2P-VH --> Purge Switch

J13 Disconnection

J14 B3P-VH --> Heater of Sub Ink Tank

J16 Disconnection

J17 5267-4 --> Headbase Temperature Sensor

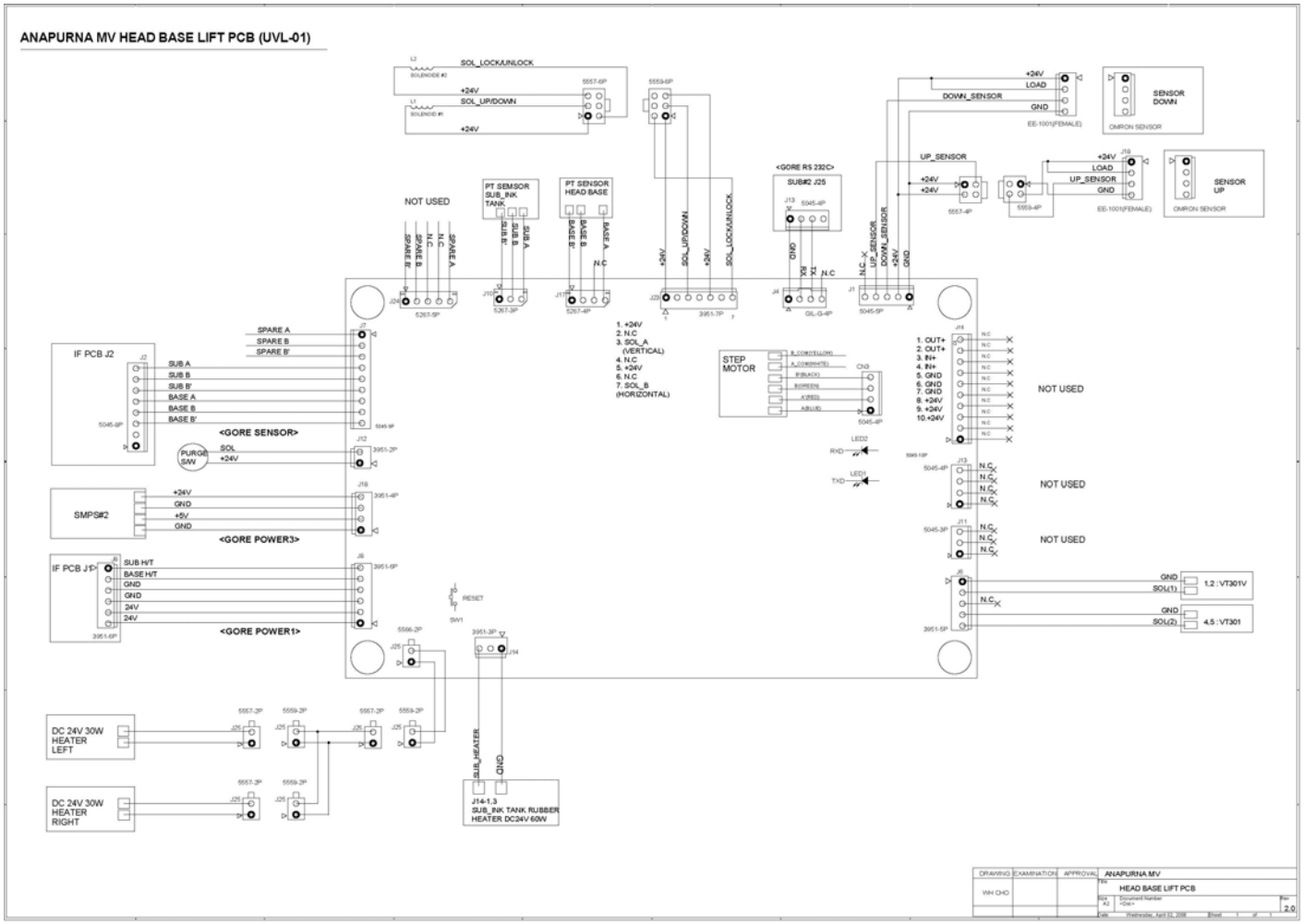
J18 B4P-VH --> SMPS#2 DC24V

J23 B7P-VH --> UP/DOWN (Big) & LOCK/UNLOCK (Small) Solenoid

J25 5566-2 --> Headbase Heater

CN3 5045-4 --> Stepping Motor

PCB - HEAD LIFT PCB IO MAP



*** Bigger original circuit diagram is attached for understanding.**

PCB - HEAD LIFT IO MAP-1

HEAD BASE LIFT										
J1	LIMIT_SEN	1	GND(BLACK)		SEN DOWN	1	+(RED)			
	5045-5P	2	24+V(RED)		OMRON EE-1001	2	L(RED)			
		3	DOWN SENSOR(WHITE)			3	OUT(WHITE)			
		4	UPSENSOR(WHITE)			4	-(BLACK)			
		5	N.C							
					SEN UP		5559-4P		5557-4P	
					OMRON EE-1001	1	(BLACK)	1	(BLACK)	1
						2	(RED)	2	(RED)	2
						3	(WHITE)	3	(WHITE)	3
						4		4		4
J3	AVR_WRITE			NOT USED						
J4	PC_RS232	1	GND(BLACK,RED)	GORE CABLE	SUB PCB J6	1	GND(BLACK,RED)			
	GILG-4	2	RX DATA(ORANGE,ORANGE BAND)		(FEED)	2	RXD(BROWN,BROWN BAND)			
		3	TX DATA(BROWN,BROWN BAND)		5045-4	3	TXD(ORANGE,ORANGE BAND)			
		4	N.C			4	N.C			
J6	3WAY_VALVE	1	GND			1	MALE	1	FEMALE	
	B5P-VH	2	SOL			2	SMP-04V-NC	2	SMR-0V-N	
		3								
		4	GND			3		3		
		5	SOL			4		4		
J7	SEN	1	N.C(SPEAR A)	GORE CABLE	I/F PCB, J2	1	PSE, N.C			
	5045-9P	2	N.C(SPEAR B)		5045-8P	2	ITV, N.C			
		3	N.C(SPEAR B')			3	BASE B'(ORANGE BAND)			
		4	SUB A(BLACK)			4	BASE B(ORANGE)			
		5	SUB B(RED)			5	BASE A(BROWN BAND)			
		6	SUB B'(BROWN)			6	SUB B'(BROWN)			
		7	BASE A(BROWN BAND)			7	SUB B(RED)			
		8	BASE B(ORANGE)			8	SUB A(BLACK)			
		9	BASE B'(ORANGE BAND)							
J8	POWER	1	DC24V(BLACK)	GORE CABLE	I/F PCB, J1	1	SUB HEATER(WHITE)			
	B6P-VH	2	DC24V(BROWN)		B6P-VH	2	BASE HEATER(GREEN)			
		3	GND(RED)			3	GND(YELLOW)			
		4	GND(YELLOW)			4	GND(RED)			
		5	BASE HEATER(GREEN)			5	DC24V(BROWN)			
		6	SUB HEATER(WHITE)			6	DC24V(BLACK)			
J10	SUB	1	SUB B'(WHITE)							
	5267-3P	2	SUB B(WHITE)		PT100Ω, SUB INKTANK SENSOR					
		3	SUB A(RED)							

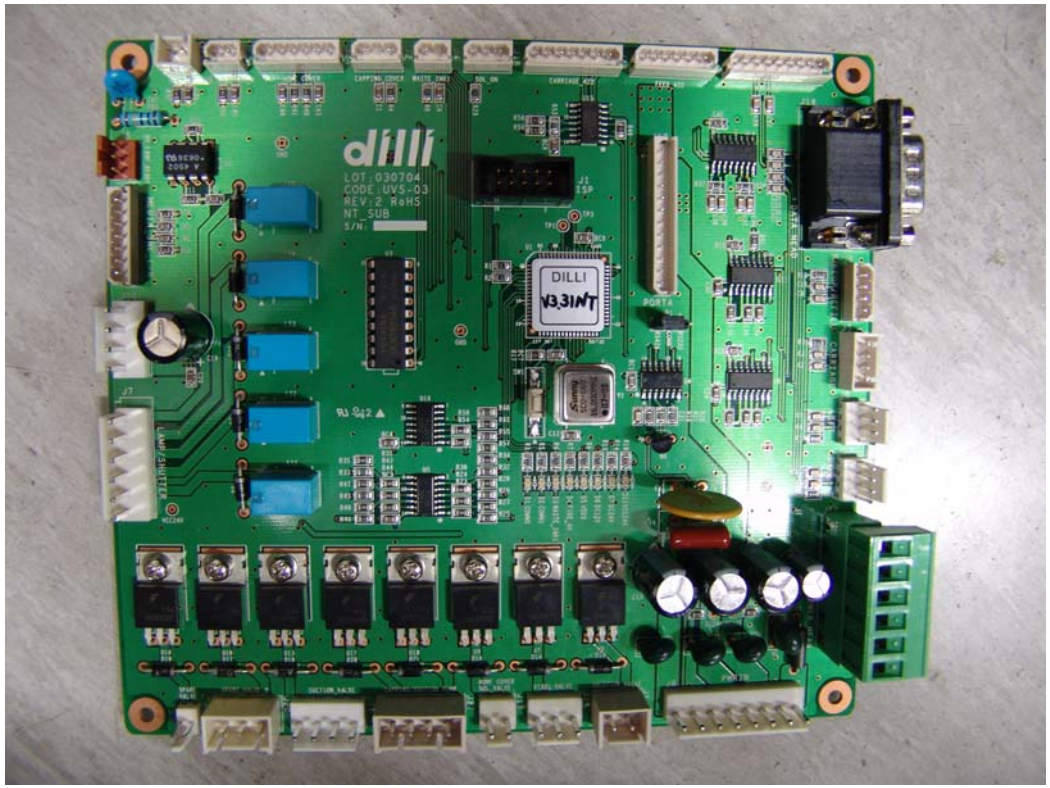
PCB - HEAD LIFT IO MAP-2

J11	PSE531	1	PSE<IN+>(BLACK)	NOT USED						
	5045-3P	2	DC24V(BROWN)	NOT USED	PSE531, Pressure Sensor					
		3	GND(BLUE)	NOT USED						
J12	PURGE SWITCH	1	DC24V(흑)		eao SWITCH		COM(흑)			
	B2P-VH	2	SOL(백)				NO(백)			
J13	ITV 201C	1	ITV(OUT+)(백)	NOT USED						
	5045-4P	2		NOT USED	ITV 2010					
		3	DC24V(갈)	NOT USED						
		4	GND(청)	NOT USED						
J16	ITV	1	ITV(OUT+)	NOT USED	ITV PCB					
	5045-10P	2	ITV(OUT+)	NOT USED	GORE CABLE					
		3	PSE(IN+)	NOT USED						
		4	PSE(IN+)	NOT USED						
		5	GND	NOT USED						
		6	GND	NOT USED						
		7	GND	NOT USED						
		8	DC24V	NOT USED						
		9	DC24V	NOT USED						
		10	DC24V	NOT USED						
J17	BASE	1	SUB B'(WHITE)							
	5267-4P	2	SUB B(WHITE)		PT100Ω, HEADBASE SENSOR					
		3								
		4	SUB A(RED)							
J18	LIFT_POWER	1	GND5V(BLACK)	GORE CABLE	SMPS#2	+(RED)	DC5V(CH1)			
	B4P-VH	2	DC5V(RED)		WK75S0524	-(BLACK)				
		3	GND24V(GREEN)			+(WHITE)	DC24V(CH2)			
		4	DC24V(WHITE)			-(GREEN)				
J23	LIFT_SOL	1	DC24V(BLACK)				5559-6P		5557-6P	
	B7P-VH	2				1	DC24V(BLACK)	1	(RED)	SOL#1
		3	SOL#1(RED)(UP/DOWN SOL)			2	SOL#1(RED)	2	(RED)	<UP/DOWN
		4				3	DC24V(YELLOW)	3	(RED)	SOL#2
		5	DC24V(YELLOW)			4	SOL#2(GREEN)	4	(RED)	<LOCK/UNL
		6				5		5		
		7	SOL#2(GREEN)(LOCK/UNLOCK SOL)			6		6		
J25	BASE_H	1	GND(BLACK)				5557-2P		5559-2P	
	5566-2P	2	BASE_HEATER(RED)			1	(BLACK)	1	(BLACK)	1
						2	(RED)	2	(RED)	2
										1
										2

PCB - HEAD LIFT IO MAP-3

CN3	STEP_MOTOR	1	A(BLUE)		STEPPING	1	(BLUE)			
	5045-4P	2	A'(RED)		MOTOR		N.C(WHITE)			
		3	B(GREEN)			2	(RED)	Ⓜ		
		4	B'(BLACK)			3	(GREEN)			
							N.C(YELLOW)			
						4	(BLACK)			

PCB – SUB PCB

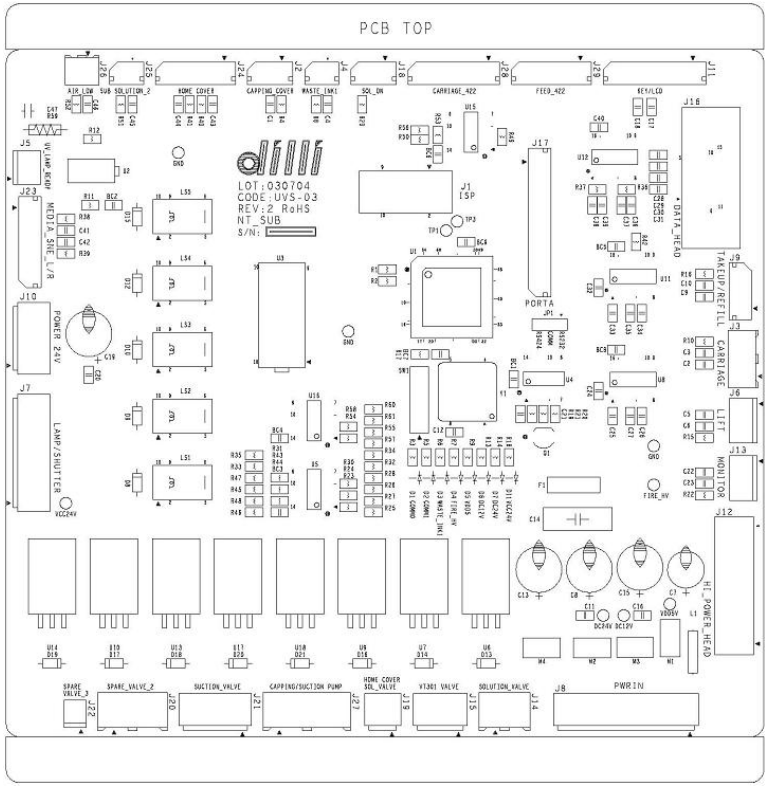


Part #; UVS-03

Main Function

1. Control all kinds of I/O by connecting with Main PCB. (15pins core cable)
2. Communicated with each device by built-in communication port (Servo-driver, Lifting. Refilling)
3. Input and output signal Procedure of UV Lamp, All kinds of sensors Input, and Motor and valve control
4. Receive driving power from SMPS#3.

PCB – SUB PCB



Part #; UVS-03

CONNECTOR CONNECTION MAP

J1 Disconnection J2 5267-3 --> Capping Cover

J3 Disconneciton J4 5267-2 --> Waste Sensor (Purge)

J5 GIL-G3 --> UV LAMP READY (Lamp PLC)

J6 5045-4 --> LIFT J4

J7 B6P-VH --> LAMP SHUTTER (Lamp PLC)

J8 B8P-VH --> SMPS$3 J2 DC Power

J9 5267-4 --> Refill J17

J10 B4P-VH --> SMPS#2 24VPower

J11 5267-8 --> LCD Board J1

J12 POWER CON 6P --> HeadJ20

J13 Disconneciton J14 35313-2 --> Solenoid Valve

J15 B3P-VH --> VT301Valve

J16 D-SUB 15P --> Main JP3

J17 5267-12 --> Carriage Driver CN1B

J18 5267-3 --> Refill J19

J19 B2P-VH --> Home Cover Solenoid Valve

J20 Disconnection J21 Disconnection

J22 5045-2 --> Carriage Driver CN1B

J23 5267-7 --> Sensor #2 SEN OUT

J24 5267-6 --> Home Cover Open/Cruse sensor

J25 5267-2 --> Sub Solution Tank #2

J26 35312-2 --> Air LOW Sensor

J27 35313-4 --> Capping / Section motor

J28 5267-7 --> Carriage Servo CN3

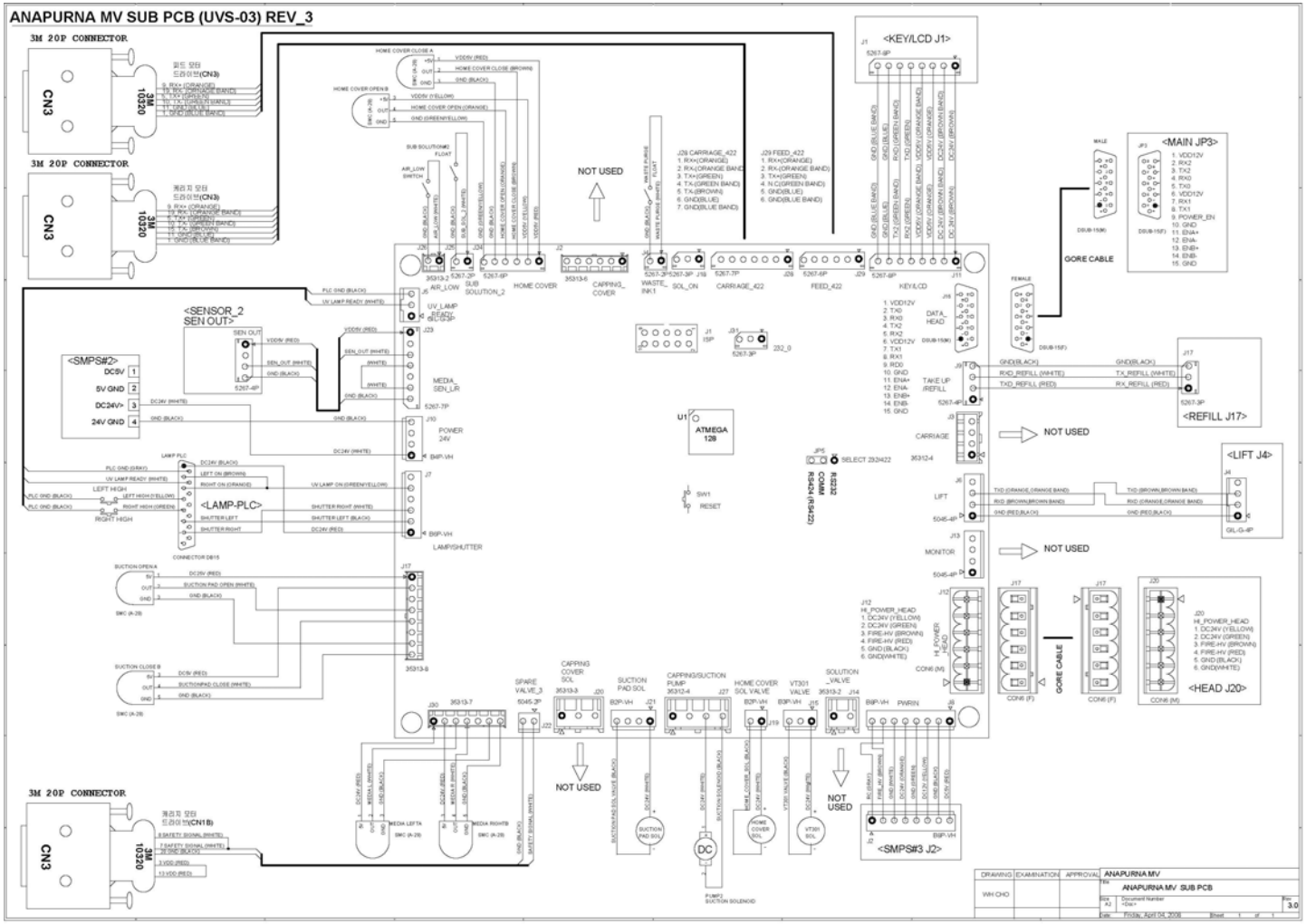
J29 5267-8 --> Feed servo CN3

JP1 Servo Driver communication method selection

1-2 RS232 Selected

2-3 RS422 Selected

PCB – SUB PCB IO MAP



*** Bigger original circuit diagram is attached for understanding.**

PCB - SUB IO MAP-1

		3	N.C	NOT USED				
		4	GND	NOT USED	AVR			
		5	RESET	NOT USED	(WRITER)			
		6	GND	NOT USED				
		7	SCK	NOT USED				
		8	GND	NOT USED				
		9	MISO	NOT USED				
		10	GND	NOT USED				
J2	CAPPING_COVER	1	VDD5V (RED)		CAPPIG CLOSE SENSOR	BROWN	VDD5V	
	5267-3P	2	CAPPING_COVER(WHITE)			BLACK	SENSOR OUT	
		3	GND(BLACK)			BLUE	GND	
J3	CARRIAGE	1	VDD5V	NOT USED				
	35312-4P	2	TX0_T2	NOT USED				
		3	TX0_R2	NOT USED				
		4	GND	NOT USED				
J4	WASTE_INK1	1	WASTE_INK1(WHITE)		WASTE TANK PURGE	ORANGE		
		2	GND(BLACK)		FLOAT SENSOR	BROWN		
J5	UV_LAMP_READY	1	DC24V	NOT USED	UVLAMP 15P CONNECTOR	NOT USED		
	GIL-G3	2	UV_LAMP_READY(WHITE)			PIN No10 UV LAMP READY		
		3	GND(BLACK)			PIN No9 PLC GND		
J6	LIFT	1	GND(RED, BLACK)		LIFT PCB J4	1	GND	GORE CABI
	5045-4P	2	TX0_R1(BROWN,BROWN BAND)		GIL-G4	2	TXD(ORANGE,ORANGE BAND	
		3	RX0_T1(ORANGE,ORANGE BAND)			3	RXD(BROWN,BROWN BAND)	
		4	VDD5V	NOT USED		4	N.C	
J7	LAMP/SHUTTER	1	DC 24V(RED)		UVLAMP 15P CONNECTOR	SELECT SWITCH DC 24V (RED)		
	B6P-VH	2	SHUTTER LEFT(BLACK)			PIN No6 LEFT SHUTTER (BLACK)		
		3	SHUTTER RIGHT(WHITE)			PIN No5 RIGHT SHUTTER (WHITE)		

PCB - SUB IO MAP-2

J7	LAMP/SHUTTER	1	DC 24V(RED)		UVLAMP 15P CONNECTOR	SELECT SWITCH DC 24V (RED)	
	B6P-VH	2	SHUTTER LEFT(BLACK)			PIN No6 LEFT SHUTTER (BLACK)	
		3	SHUTTER RIGHT(WHITE)			PIN No5 RIGHT SHUTTER (WHITE)	
		4	UV LAMP OUT1				
		5	UV LAMP OUT2(GREEN/YELLOW)			UV LAMP SELECT SWTCH (GREEN/YE	
		6	TEMP OUT				
J8	PWRIN	1	VDD5V (RED)		SMPS#3 J2	1	HIGH_VOLT_EN (GRAY)
	B8P-VH	2	GND (BLACK)			2	FIRE_HV (BROWN)
		3	DC12V (YELLOW)			3	GND (WHITE)
		4	GND (GREEN)			4	DC24V (ORANGE)
		5	DC24V (ORANGE)			5	GND (GREEN)
		6	GND (WHITE)			6	DC12V (YELLOW)
		7	HIGH_VOLT_EN (GRAY)			7	GND (BLACK)
		8	FIRE_HV (BROWN)			8	VDD5V (RED)
J9	TAKEUP/REFILL	1	VDD5V	NOT USED	REFILL J17		
	5267-4P	2	RX0_T2 (RED)		5267-3P	1	RX REFILL (RED)
		3	RX0_R2 (WHITE)			2	TX REFILL (WHITE)
		4	GND (BLACK)			3	GND (BLACK)
J10	POWER 24V	1	DC24V (WHITE)		SMPS#2	RED	DC5V
	B4P-VH	2	DC24V			BLACK	5V GND
		3	GND			WHIT	DC24V (WHITE)
		4	GND (BLACK)			GREEN	24V GND (BLACK)
J11	KEY/LCD	1	DC24V (BROWN)		LCD BOARD	1	DC24V (BROWN)
	5267-8P	2	DC24V (BROWN BAND)		5267-8P	2	DC24V (BROWN BAND)
		3	VDD5V (ORANGE)			3	VDD5V (ORANGE)
		4	VDD5V (ORANGE BAND))			4	VDD5V (ORANGE BAND))
		5	RX2 (GREEN)			5	RX2 (GREEN)
		6	TX2 (GREEN BAND)			6	TX2 (GREEN BAND)
		7	GND (BLUE)			7	GND (BLUE)
		8	GND (BLUE BAND)			8	GND (BLUE BAND)

PCB - SUB IO MAP-3

J12	HI_POWER_HEAD	1	DC24V(GREEN)		HEAD J20	1	DC24V(GREEN)	
	POWER CON 6P	2	DC24V (YELLOW)		POWER CON 6P	2	DC24V (YELLOW)	
		3	FIRE_HV (BROWN)			3	FIRE_HV (BROWN)	
		4	FIRE_HV (RED)			4	FIRE_HV (RED)	
		5	GND (BLACK)			5	GND (BLACK)	
		6	GND (WHITE)			6	GND (WHITE)	
J13	MONITOR	1	VDD5V	NOT USED				
	5045-4P	2	RX1	NOT USED				
		3	TX1	NOT USED				
		4	GND	NOT USED				
J14	SOLITION_VALVE	1	DC24V (WHITE)		SOLUTION VALVE	RED	SOL_VALVE_+	
	35313-2P	2	SOLUTION_VALVE(BLACK)			BLUE	SOL_VALVE_-	
J15	VT301_VALVE	1	DC24V		VT-301 SOL_VALVE	GRAY	AIR_VALVE_+	
	B3P-VH	2	N.C					
		3	AIR_VALVE			GRAY	AIR_VALVE_-	
J16	DATA_HEAD	1	DC12V (PAIR #6 +)		MAIN JP3	1	DC12V (PAIR #6 +)	
	D-SUBHD15P(MALE)	2	TX0 (PAIR #2 +)		D-SUBHD15S(FEMALE)	2	RX2 (PAIR #1 +)	
		3	RX0 (PAIR #2 -)			3	TX2 (PAIR #1 -)	
		4	TX2 (PAIR #1 +)			4	RX0 (PAIR #2 +)	
		5	RX2 (PAIR #1 -)			5	TX0 (PAIR #2 -)	
		6	DC12V (PAIR #6 -)			6	DC12V (PAIR #6 -)	
		7	TX1 (PAIR #3 +)			7	RX1 (PAIR #3 +)	
		8	RX1 (PAIR #3 -)			8	TX1 (PAIR #3 -)	
		9	RD0 (PAIR #8 +)			9	RD0 (PAIR #8 +)	
		10	GND (PAIR #7 +)			10	GND (PAIR #7 +)	
		11	ENA+ (PAIR #4 +)			11	ENA+ (PAIR #4 +)	
		12	ENA- (PAIR #4 -)			12	ENA- (PAIR #4 -)	
		13	ENB+ (PAIR #5 +)			13	ENB+ (PAIR #5 +)	
		14	ENB- (PAIR #5 -)			14	ENB- (PAIR #5 -)	
		15	GND (PAIR #7 -)			15	GND (PAIR #7 -)	

PCB - SUB IO MAP-4

J17	PORTA	1	DC24V	NOT USED	SERVO DRIVER CARRIAGE	PIN No3 VDD (RED)	
	5267-12P	2	DC12V	NOT USED	CN1B (3M 20P) 10320	PIN No13 VDD (RED)	
		3	VDD5V	NOT USED		PIN No7 SAFETY SIGNAL (WHITE)	
		4	PA0	NOT USED		PIN No8 SAFETY SIGNAL (WHITE)	
		5	PA1	NOT USED		PIN No20 GND (BLACK)	
		6	PA2	NOT USED			
		7	PA3	NOT USED			
		8	PA4	NOT USED			
		9	PA5	NOT USED			
		10	GND	NOT USED	SERVO DRIVER CARRIAGE		
		11	GND (BLACK) SAFETY SENSOR GND		CN1B (3M 20P) 10320	PIN No20 GND (BLACK)	
		12	GND	NOT USED			
J18	SOL_ON	1	VDD5V (WHITE)		REFILL J19	1	FOOT_SOL_SW (BLACK)
	5267-3P	2	N.C		5045-4P	2	
		3	SOL_ON (BLACK)			3	
						4	+5V (WHITE)
J19	HOME COVER SOL VALVE	1	DC24V		HOME COVER SOL	2	SOL +
	B2P_VH	2	HOME_COVER_SOL		5559-4 PIN ONLY	4	SOL -
J20	SPARE_VALVE_2	1	DC24V	NOT USED			
	35313-3	2	N.C	NOT USED			
		3	SPARE_VALVE_2	NOT USED			
J21	SUCTION_VALVE	1	DC24V	NOT USED			
	B4P-VH	2	N.C	NOT USED			
		3	N.C	NOT USED			
		4	SUCTION_VALVE	NOT USED			
J22	SPARE_VALVE_3	1	DC24V	NOT USED	SERVO DRIVER CARRIAGE	PIN No20 GND (BLACK)	
	5045-2P	2	SPARE_VALVE_3 (WHITE) SAFETY SIGNAL		CN1B (3M 20P) 10320	PIN No7,8 SAFETY SIGNAL (WHITE)	

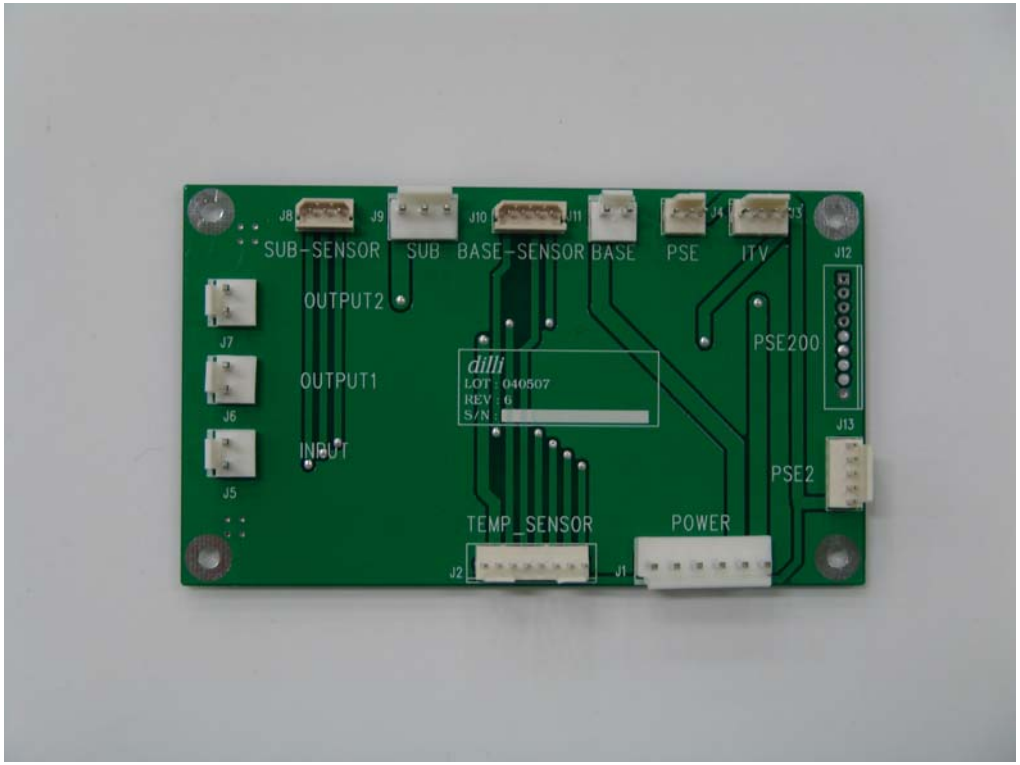
PCB - SUB IO MAP-5

J23	MEDIA_SEN_L/R	1	VDD5V (RED)	SAFETY SENSOR PCB	1	VDD5V(RED)	
	5267-7P	2	VDD5V	5264-4P	2	N.C	
		3	MEDIA_SEN_R (WHITE)		3	SEN OUT(WHITE)	
		4	MEDIA_SEN_L (WHITE J23-6과 점퍼)		4	GND (BLACK)	
		5	N.C				
		6	GND (WHITE J23-4와 점퍼)				
		7	GND (BLACK)				
J24	HOME COVER	1	VDD5V (RED)	HOME_COVER_OPEN	BROWN	VDD5V (YELLOW)	
	5267-6P	2	VDD5V (YELLOW)		BLACK	HOME COVER OPEN (ORANG	
		3	HOME_COVER_CLOSE (BROWN)		BLUE	GND (GREEN/YELLOW)	
		4	HOME_COVER_OPEN (ORANGE)	HOME_COVER_CLOSE	BROWN	VDD5V (RED)	
		5	GND (BLACK)		BLACK	HOME COVER CLOSE (BROW	
		6	GND (GREEN/YELLOW)		BLUE	GND (BLACK)	
J25	SUB_SOLUTION_2	1	SUB_SOLUTION_2	SUB SOLUTION TANK#2	1	SUB_SOLUTION_2(WHITE)	
	5267-2P	2	GND	FLOAT SENSOR 5557-2P	2	GND (BLACK)	
J26	AIR_LOW	1	AIR_LOW (WHITE)	AIR_LOW	1	AIR_LOW (WHITE)	
	35312-2P	2	GND (BLACK)	5557-2P	2	GND (BLACK)	
J27	CAPPING/SUCTION PUMP	1	DC24V (RED)	CAPPING MOTOR	RED	MOTOR + (RED)	
	35313-4P	2	CAPPING PUMP (BLACK)		BLACK	MOTOR - (BLACK)	
		3	DC24V (WHITE)	SUCTION MOTOR	RED	MOTOR + (WHITE)	
		4	SUCTION MOTOR (GREEN/YELLOW)		BLACK	MOTOR - (GREEN/YELLOW)	
J28	CARRIAGE_422	1	RX+ (ORANGE)	CARRIAGE DIRVER CN3	PIN No9 CARRIAGE RX+ (ORANGE)		
	5267-7P	2	RX- (ORANGE BAND)	3M 10320	PIN No19 CARRIAGE RX- (ORANGE BA		
		3	TX+ (GREEN)		PIN No5 CARRIAGE TX+ (GREEN)		
		4	TX- (GREEN BAND)		PIN No10 CARRIAGE TX- (GREEN BAN		
		5	TX- (BROWN)		PIN No15 CARRIAGE TX- (BROWN)		
		6	GND (BLUE)		PIN No11 CARRIAGE GND (BLUE0		
		7	GND (BLUE BAND)		PIN No1 CARRIAGE GND (BLUE BAND)		

PCB - SUB IO MAP-6

J29	FEED_422	1	RX+ (ORANGE)		FEED DRIVER CN3	PIN No9 FEED RX+ (ORANGE)		
	5267-6P	2	RX- (ORANGE BAND)		3M 10320	PIN No19 FEED RX- (ORANGE BAND)		
		3	TX+ (GREEN)			PIN No5 FEED TX+ (GREEN)		
		4	TX- (GREEN BAND)			PIN No15 FEED TX- (GREEN BAND)		
		5	GND (BLUE)			PIN No11 FEED GND (BLUE)		
		6	GND (BLUE BAND)			PIN No1 FEED GND (BLUE BAND)		
JP1	COM CHANGE	1	RS232					
	2.54-3P	2	COM	JP1-3과점퍼				
		3	RS424(RS422)	JP1-2와점퍼				

PCB – IF PCB

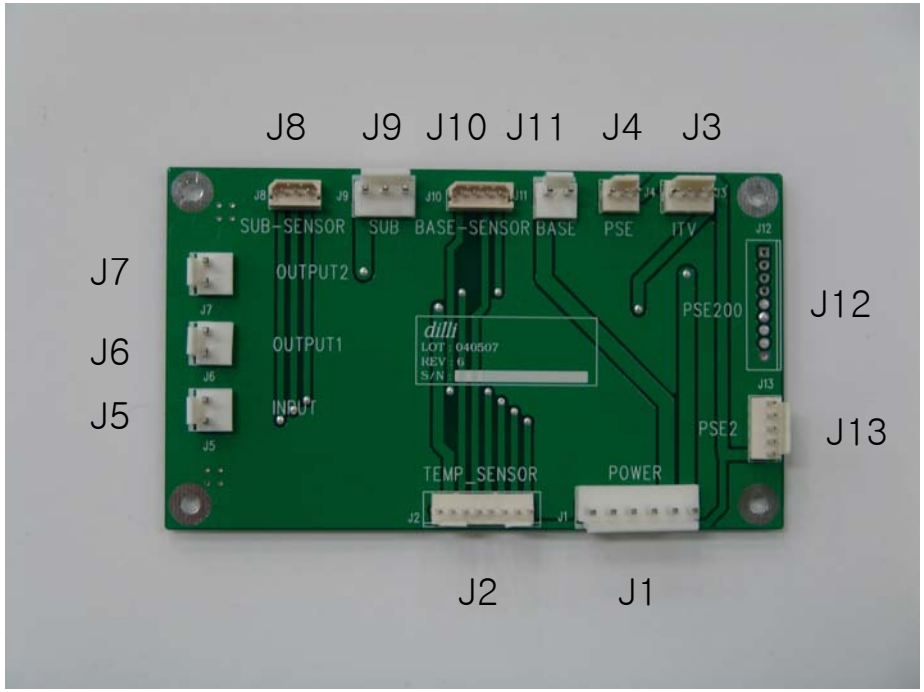


Part #; UVI-01

Main Function

1.Signal Connection at Headbase Lift PCB located on the upper by connecting heater and temperature sensor cable.

PCB – IF PCB

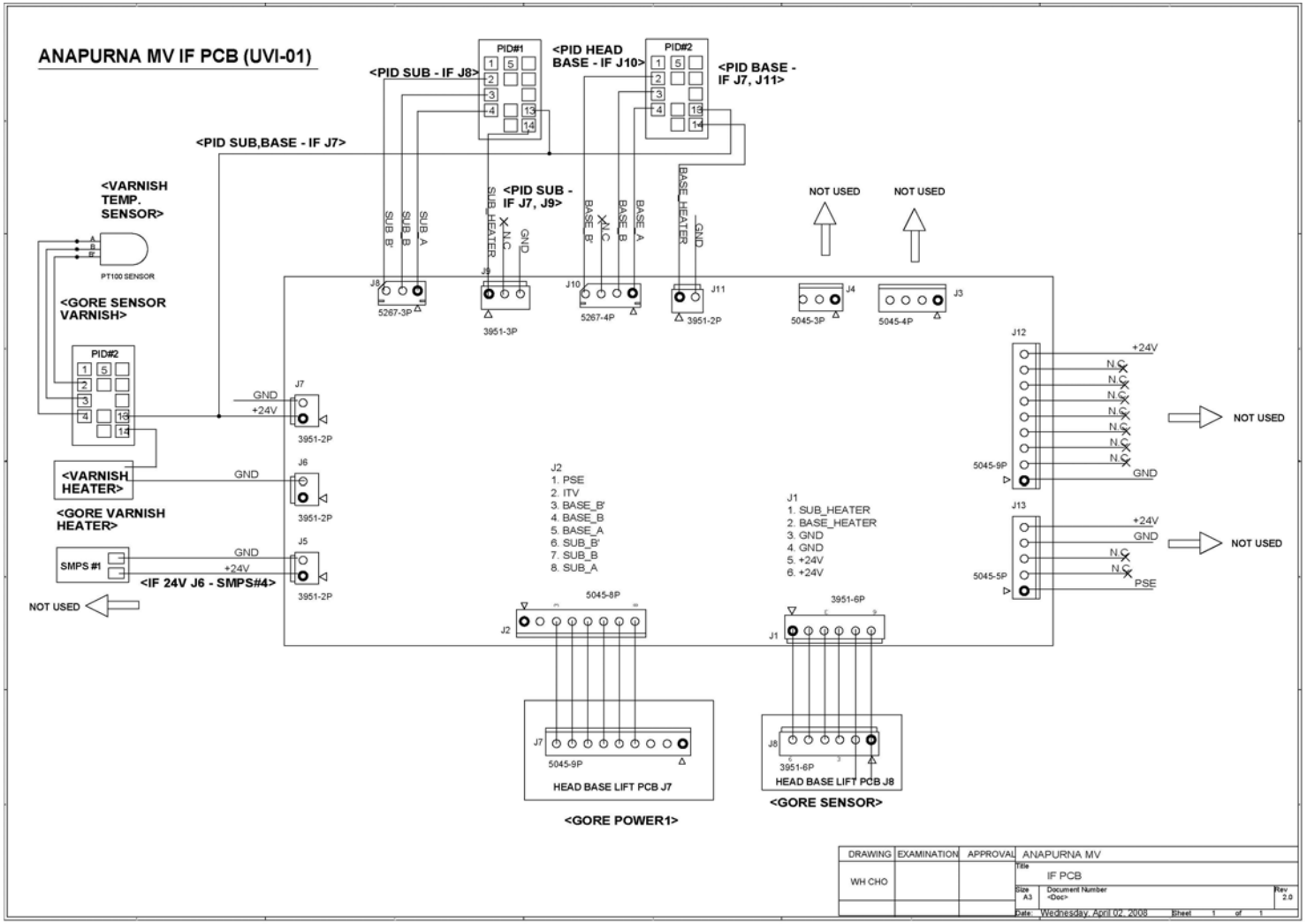


Part #; UVI-01

CONNECTOR CONNECTION MAP

J1 B6P-VH --> Lift J8
J2 5045-8 --> Lift J7
J3 Disconnection
J4 Disconnection
J5 B2P-VH --> SMPS#1 DC24V
J6 Disconnection
J7 B2P-VH --> PID#1-13, PID#2-13
J8 5267-3 --> PID#1-2, 3, 4
J9 B3P-VH --> PID#1-14
J10 5267-4 --> PID#2-2, 3, 4
J11 B2P-VH --> PID#2-14
J12 Disconnection
J13 Disconnection

PCB – IF PCB IO MAP

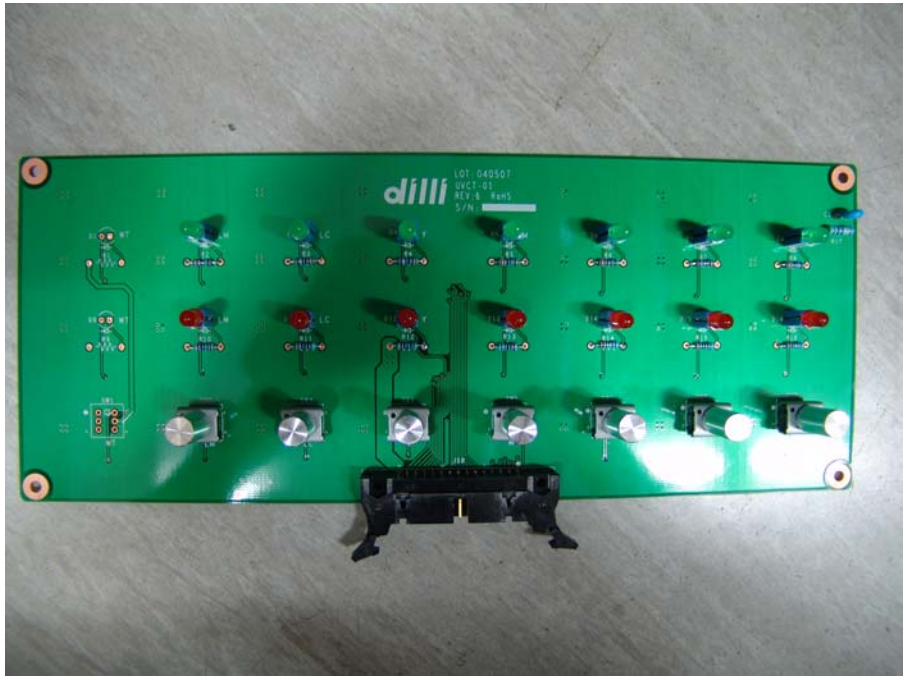


" Bigger original circuit diagram is attached for understanding.

PCB - IF IO MAP

I/F PCB									
J1	B6P-VH	1	DC24V(WHITE)	GORE CABLE	HEAD BASE LIFT PCB	J8	1	SUB_HEATER(BLACK)	
		2	DC24V(GREEN)			B6P-VH	2	BASE_HEATER(BROWN)	
		3	GND(YELLOW)				3	GND(RED)	
		4	GND(RED)				4	GND(YELLOW)	
		5	BASE_HEATER(BROWN)				5	DC24V(GREEN)	
		6	SUB_HEATER				6	DC24V(WHITE)	
J2	5045-8P	1		GORE CABLE	HEAD BASE LIFT PCB	J7	1		
		2				5045-9P	2		
		3	BASE B' (ORANGE BAND)				3		
		4	BASE B (ORANGE)				4	SUB A (BLACK)	
		5	BASE A (BROWN BAND)				5	SUB B (RED)	
		6	SUB B' (BROWN)				6	SUB B' (BROWN)	
		7	SUB B (RED)				7	BASE A (BROWN BAND)	
		8	SUB A (BLACK)				8	BASE B (ORANGE)	
							9	BASE B' (ORANGE BAND)	
J5	B2P-VH	1	DC24V(WHITE)		SMPS#1			DC24V	
		2	GND(BLACK)					GND	
J7	B2P-VH	1	DC24V(WHITE)		PID#1-13,PID#2-13				
		2							
J8	5267-3P	1	SUB B' (WHITE)		PID#1-2				
		2	SUB B(WHITE)		PID#1-3				
		3	SUB A(RED)		PID#1-4				
J9	B3P-VH	1	SUB_HEATER (BLACK)		PID#1-14				
		2							
		3							
J10	5267-4P	1	BASE B' (WHITE)		PID#2-2				
		2	BASE B (WHITE)		PID#2-3				
		3							
		4	BASE A (RED)		PID#2-4				
J11	B2P-VH	1	BASE_HEATER (BLUE)		PID#2-14				
		2							

PCB – CONTROL PCB

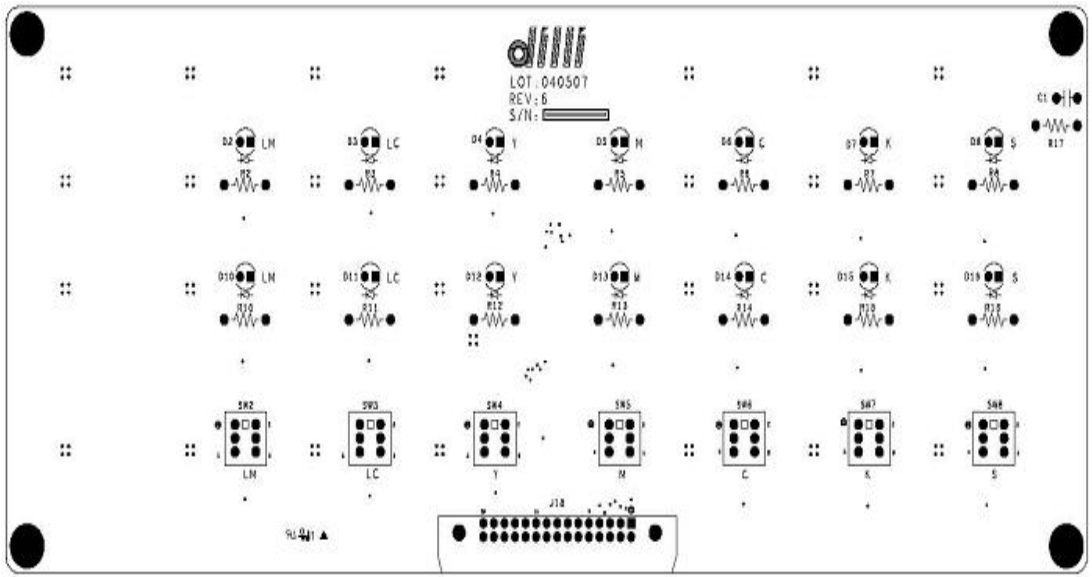


Part #; UVCT-03

MAIN FUNCTION

1. By connecting with Refill PCB, the current status of refill can be checked, the ink also can be supplied forcefully.

PCB - CONTROL PCB

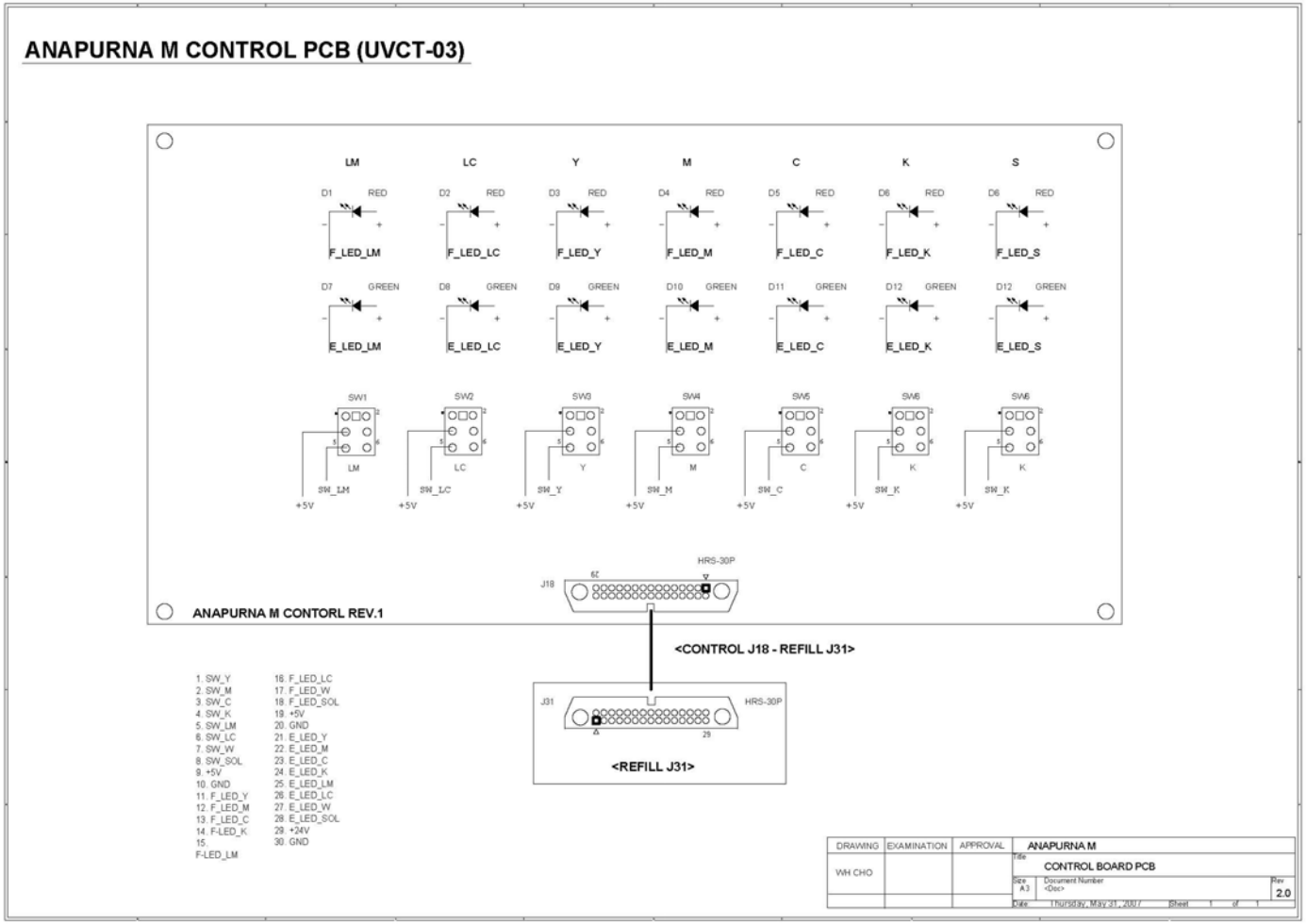


Part #; UVCT-03

CONNECTOR CONNECTION MAP

J18 IDC-30 --> Refill J31
SW2 : LM Manual Refill Button
SW3 : LC Manual Refill Button
SW4 : Y Manual Refill Button
SW5 : M Manual Refill Button
SW6 : C Manual Refill Button
SW7 : K Manual Refill Button
SW8 : S Manual Refill Button
D2 : Sub Ink LM
D3 : Sub Ink LC
D4 : Sub Ink Y
D5 : Sub Ink M
D6 : Sub Ink C
D7 : Sub Ink K
D8 : Sub Ink S
D10 : Auto Refill LM
D11 : Auto Refill LC
D12 : Auto Refill Y
D13 : Auto Refill M
D14 : Auto Refill C
D15 : Auto Refill K
D16 : Auto Refill K

PCB – CONTROL PCB IO MAP



*** Bigger original circuit diagram is attached for understanding.**

PCB - CONTROL IO MAP

CONTROL PCB													
J18	1	SW_Y		REFILL PCB	J31	1	SW_Y						
HIF3BA-30PDS	2	SW_M			HIF3BA-30PDA	2	SW_M						
	3	SW_C				3	SW_C						
	4	SW_K				4	SW_K						
	5	SW_LM				5	SW_LM						
	6	SW_LC				6	SW_LC						
	7	SW_W				7	SW_W						
	8	MAUAL_SOL_SW				8	MAUAL_SOL_SW						
	9	+5V				9	+5V						
	10	GND				10	GND						
	11	F_LED_Y				11	F_LED_Y						
	12	F_LED_M				12	F_LED_M						
	13	F_LED_C				13	F_LED_C						
	14	F_LED_K				14	F_LED_K						
	15	F_LED_LM				15	F_LED_LM						
	16	F_LED_LC				16	F_LED_LC						
	17	F_LED_W				17	F_LED_W						
	18	F_LED_SOL				18	F_LED_SOL						
	19	+5V				19	+5V						
	20	GND				20	GND						
	21	E_LED_Y				21	E_LED_Y						
	22	E_LED_M				22	E_LED_M						
	23	E_LED_C				23	E_LED_C						
	24	E_LED_K				24	E_LED_K						
	25	E_LED_LM				25	E_LED_LM						
	26	E_LED_LC				26	E_LED_LC						
	27	E_LED_W				27	E_LED_W						
	28	E_LED_SOL				28	E_LED_SOL						
	29	+24V				29	+24V						
	30	GND				30	GND						

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