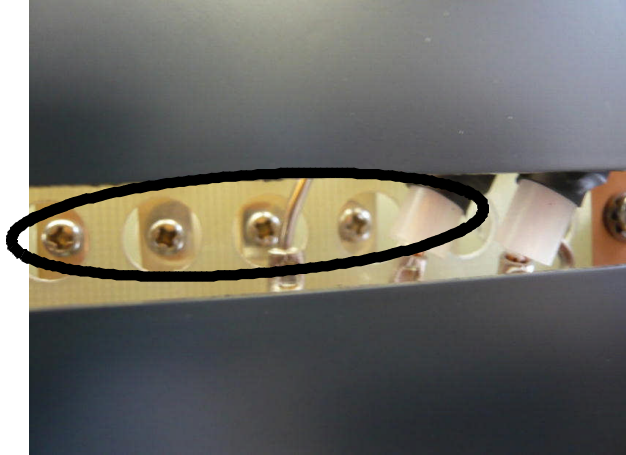


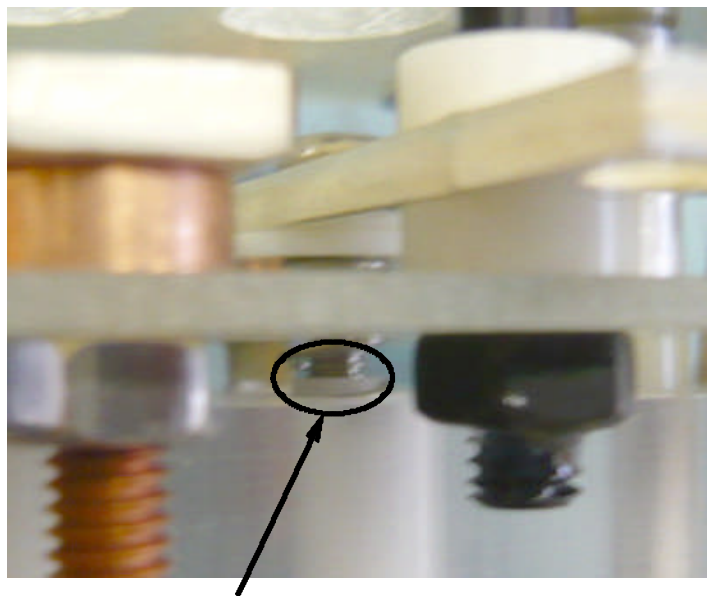
Push Bar Position Adjustment

With Push bars and switching plate misaligned, it can't be locked even if you push the bar a hundred times. Remove the plate on the back panel, so that you can find M3 screws through the rectangular hole. Turn the M3 screws to adjust the push bar position.

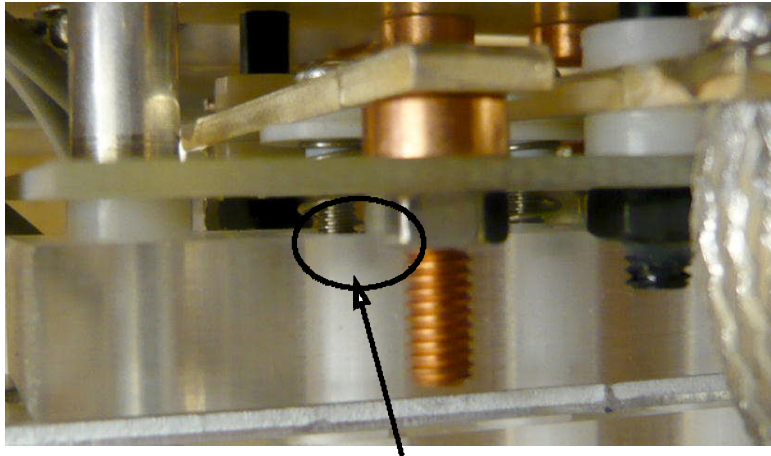
Push Bar, Spring(Small), M3 screws should be as pictured.



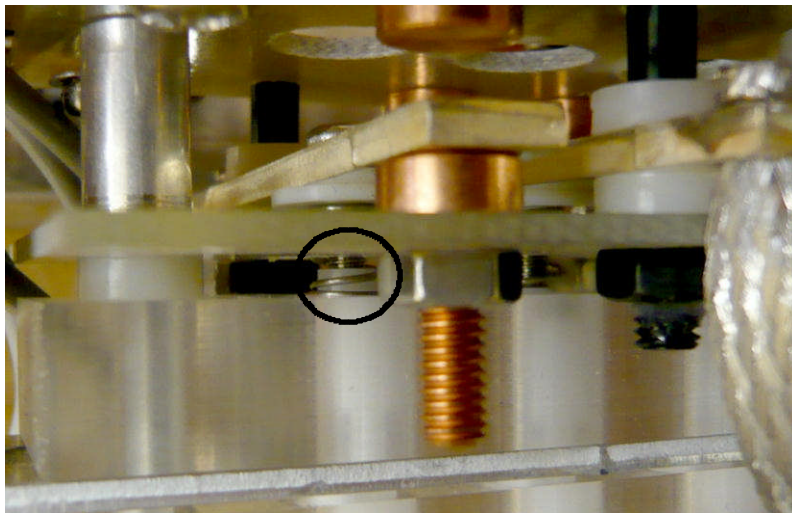
Right position : 1.5 -3mm out



Push Bar right position : 1.5 - 3mm out of acrylic spacer



State of protruberance shortage. **NG : Invisible**



NG : sticks out more than 3mm.
(can't be locked if it sticks out more than 3mm)

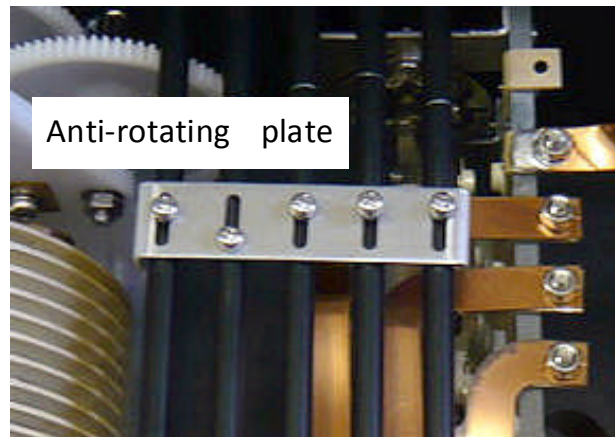
With any one of six push bars improperly positioned, the push bars can't be locked.

Operation Check :

Push the bars randomly more than 30 times. Then, check if locking feature still works correctly.
Also check if the push bars stick out properly.(1.5-3mm.)

Rivet screws : M4

If you need to reprocess the wire for exchange etc, choose thick wires more than 3.5sq.



The aluminum plate shown in the above picture is to prevent the stick of Output Selector Switch from twisted rotation.

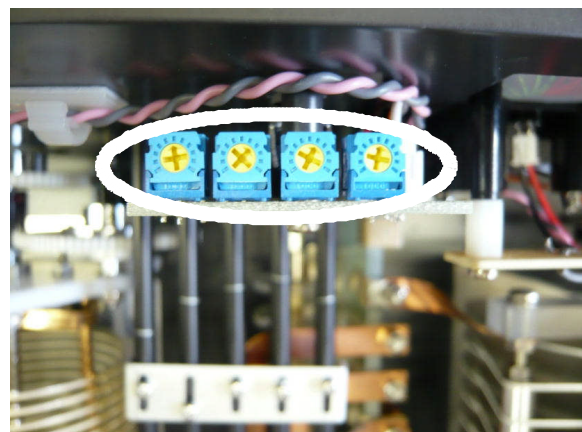
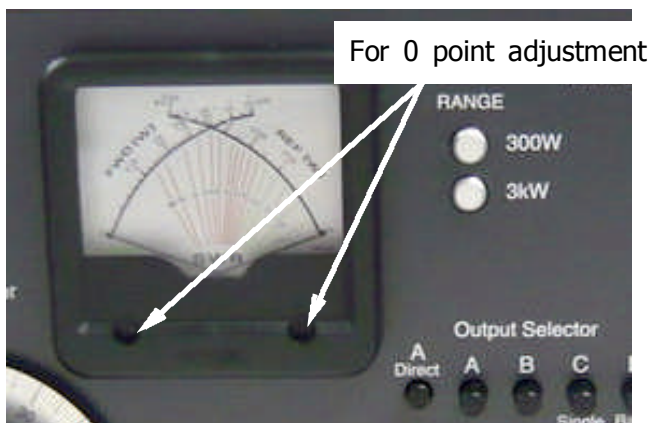
5 screws(M3) used. After the screw driven, head of the screws should not be seated in the aluminum plate. Slide the aluminum plate to check if it moves smoothly.

Cross-Meter Adjustment

With the off power, turn the slotted screw on the front panel to adjust "0" point.

With the power input(2kw as adjusting standard), turn the trimmer of Range Selector beside the meter.

1. Switch the Range Selector to 3kW.
2. Put a calibrated and accuracy guaranteed power meter between the radio and CAT-3000.
3. Input 2kW(SSB), and adjust the cross-meter by rotating the trimmer so that the cross meter reading reaches the same as the power meter reading.
4. With the power other than 2kw input, the meter tolerance must be 20%.
5. Operation check ; Rotate the Variable Inductor when input power more than 1.5W. Electric discharge would be caused if there is a gap between the Pulley and the coil.



Note : Disassembling the power censor(where N-J connector attached) is not recommended. Change the Unit Assembly when it's broken.

Default screw&torque

M2.6	0.32N · m
M3	0.56N · m
M4	1.3N · m
M5	2.5N · m

The above value is not applied to M3 screws of Output Selector.

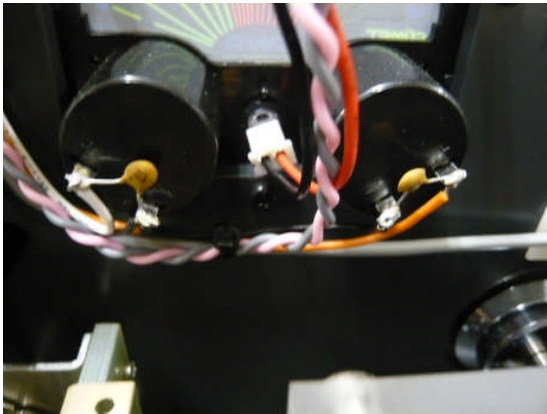
General use tool

- Phillips-head screwdriver # 0, # 1, and # 2
- Flat head screwdriver # 1
- Nipper
- Needle-nose pliers
- Spanner 5.5mm, 7mm, and 8mm
- Hex Wrench(For 2mm and 3mm, a blunt tip wrench is highly recommended.)
- Soldering iron
- Silicone-based lubricant

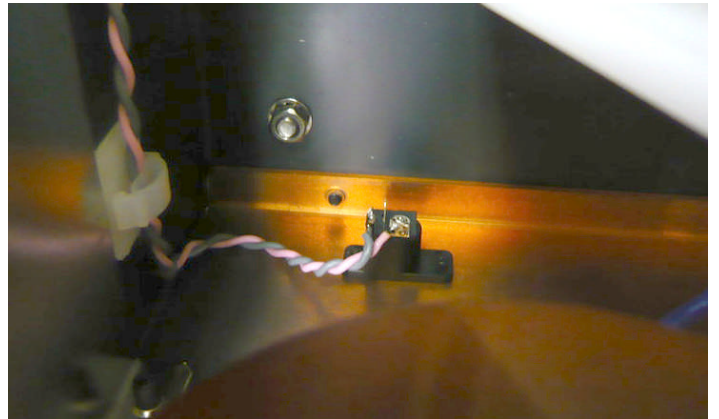
Precaution for the operation

- ◆ Do not touch the silver-plated parts with bare hands, otherwise it will be oxidized to black color.
- ◆ With the large power input, do not switch the output selector. Failure to follow this would cause a fire.
- ◆ Keep CAT-3000 horizontal while the operation.
- ◆ Be sure that CAT-3000 is not exposed to dust, flammable materials etc.
- ◆ There is a stopper at the end of the Variable Inductor. Do not try to turn it beyond a stopper.(This may result in damaging the parts.)

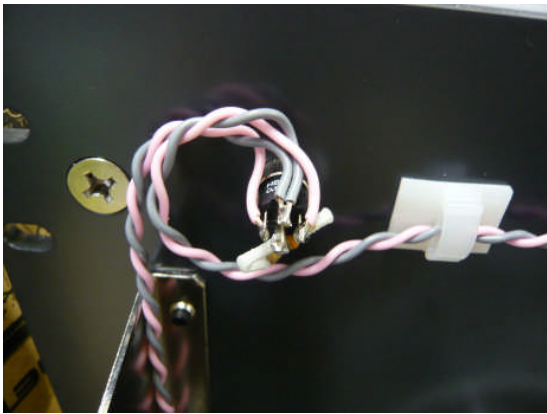
Pictures for Internal wiring



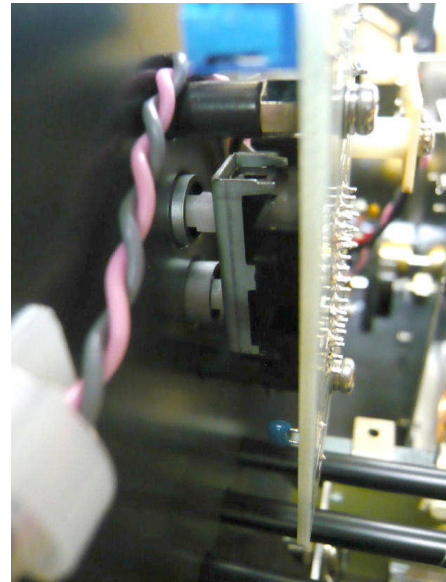
Back wiring of Cross Meter



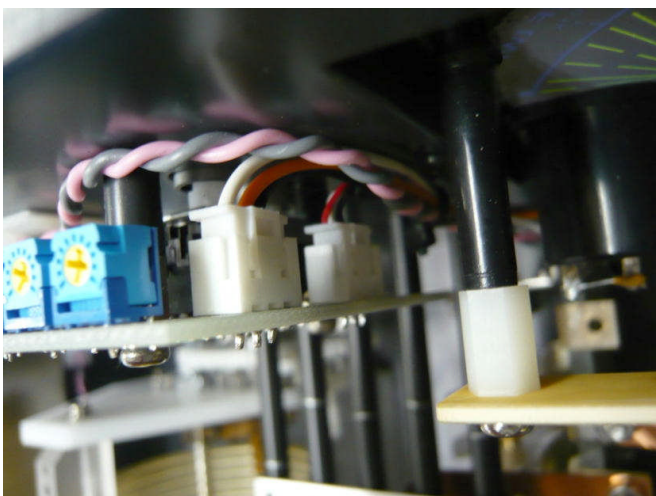
Illumination Terminal for the back panel



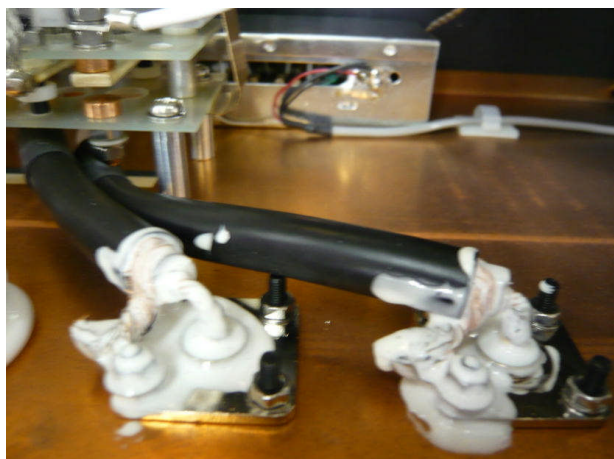
Wiring of the front panel back lighting switch



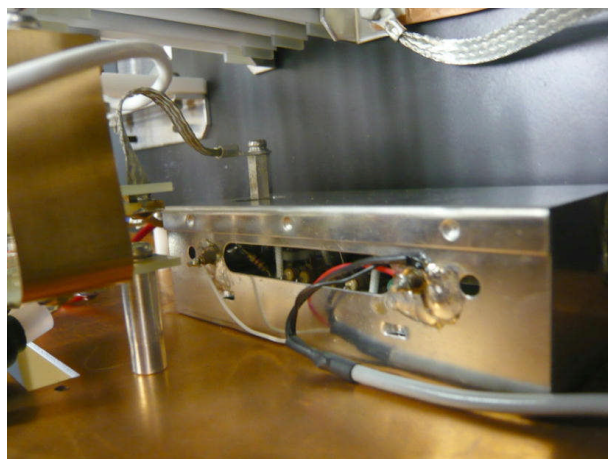
Between Range Selector substrate and the front panel panel



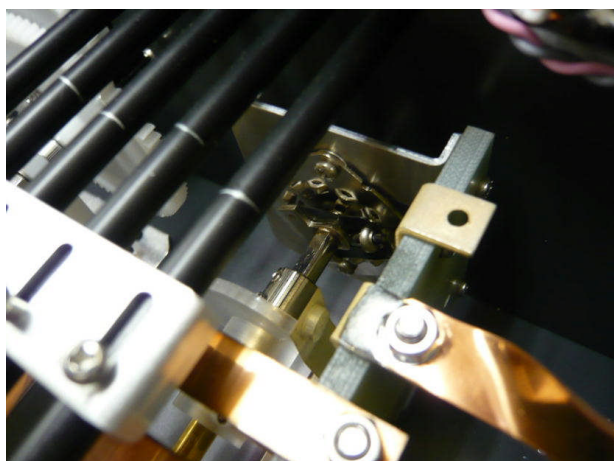
Wiring of Range Selector substrate



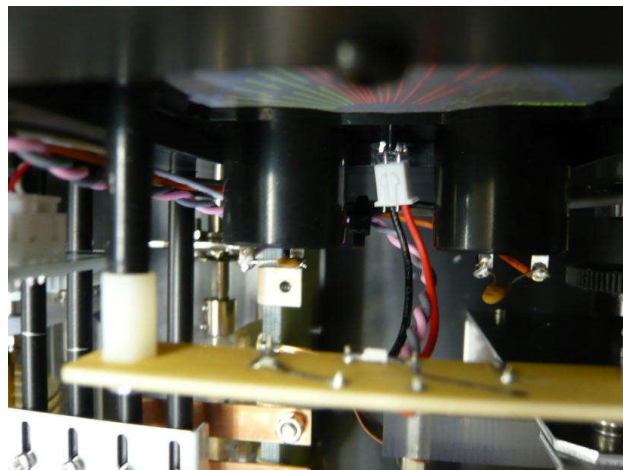
Output Connector A,B



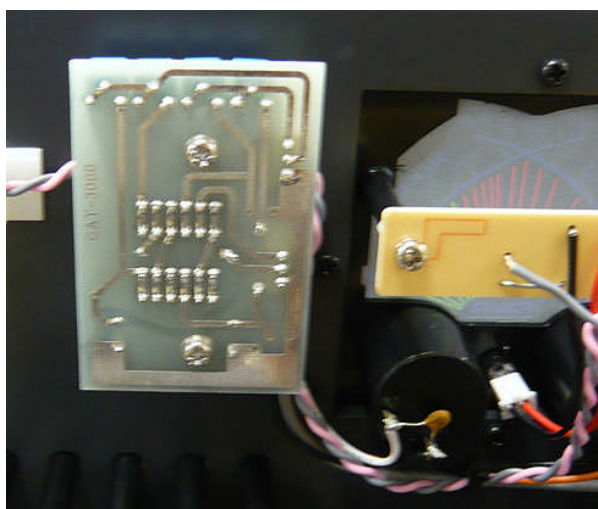
Input Connector ,Sensor circuit



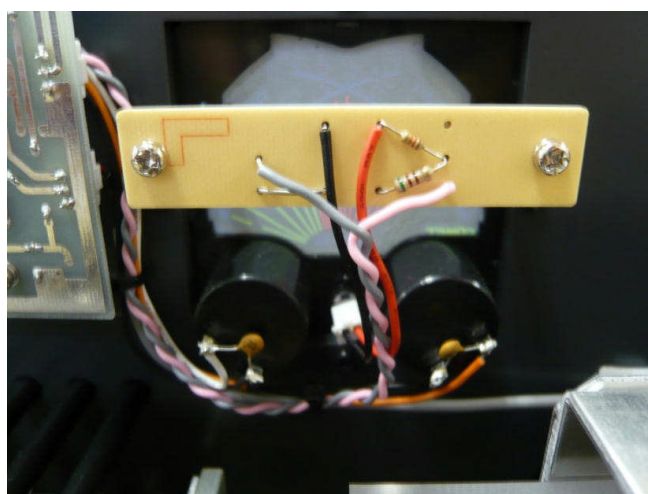
Cam rotary switch



Back side of Meter 1



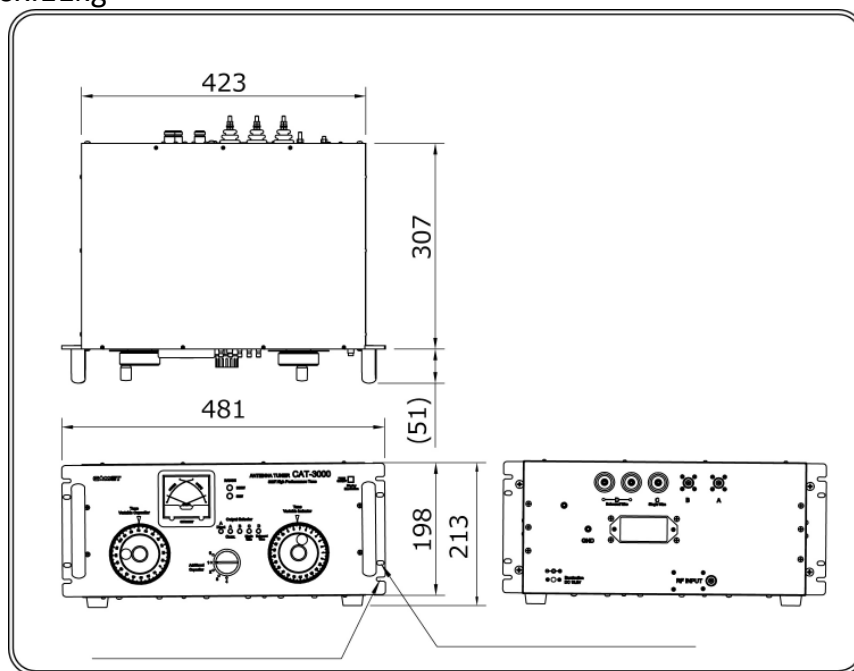
Range Selector substrate



Back side of Meter 2

● Specifications

- Product Type : Antenna Tuner
- Matching Circuit : Roller Inductor, Variable Capacitor, 4-Stage Solid Capacitor
- Roller Inductor : 25turns
- Variable Capacitor Range : Approx. 50 μ F ~ Approx. 190 μ F
- Frequency Range : 1.8 ~ 30MHz
- Impedance tunable Range : 10 Ω ~ 300 Ω
- Max.Power : 3kW(SSB)
- SWR Range : 1 to infinity
- Input Connector : N-Female (Jack)
- Output Terminal : N-Female (Jack) \times 2, insulated terminals(M5 screw) x 3
- Power Ranges : 300W/3kW
- Minimum Power for tuning : Approx.6W
- Permissible ambient temperature range : -10 $^{\circ}$ C ~ +50 $^{\circ}$ C
- Display : Cross-needle analog meter
- Display Illumination : LED
- Power for display illumination : DC13.8V(11V ~ 15V) *Never apply more than 15V.
- Dimension : See the below Fig.
- Installation position : horizontal stand, JIS standard rack, and 19-inch rack
- Weight : Approx.11kg



The content of this service manual is the one at the time of July, 2011.

The content of this service manual is subject to change without notice.

COMET Co.,LTD.