Training Program

Maintenance

n | Norsat
International Inc.

Maintenance cycle

- User need to check the antenna system every mentioned cycle.

No	Parts	Recommended Maintenance Cycle(Year)	Maintenance Point
1	All Connectors	0.5	Check the tight status
2	All Belts	0.5	Check the belt tension and status of abrasion
3	Power Supply	1	Check the output voltage(48VDC)
4	Motors of 3 axis	1	Check the driving torque using SCS (-500~+500 when antenna is tracking)

How to maintain your terminal

- The maintenance when **Powered Off** ACU
  - Check the cable connection
    - L band cables, TX low loss cable and signal/power cables
    - Wrench and screwdriver
  - Check all timing belt tension
    - Check if the belt tension is ok. (The belt should be tight)

- The maintenance when **Powered On** ACU
  - Check the output voltage of Rx and Tx on ACU
    - 48V on Rx connector
    - 48V on Tx connector (It is not necessary to measure the DC voltage on Tx connector if the external power supply or modem is used for the DC voltage of the BUC since Tx DC power on the installer manu is "off").
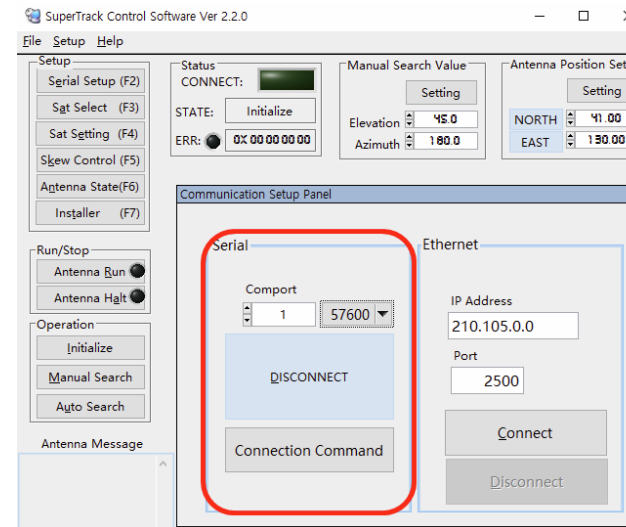
Check the driving torque of 3 Axes

- This maintenance is performed by the satellite pointing.

- Connect the PC with ACU.

- Run the SCS V2.2.0
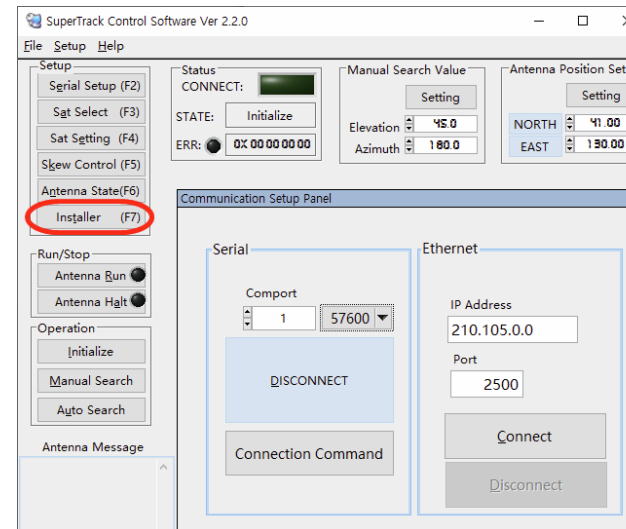
- Select the 'VSAT' icon and click the 'OK'.

Check the driving torque of 3 Axes

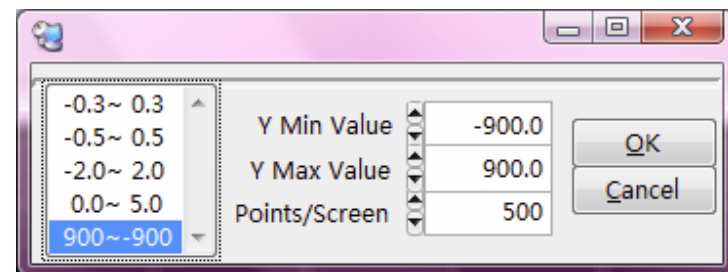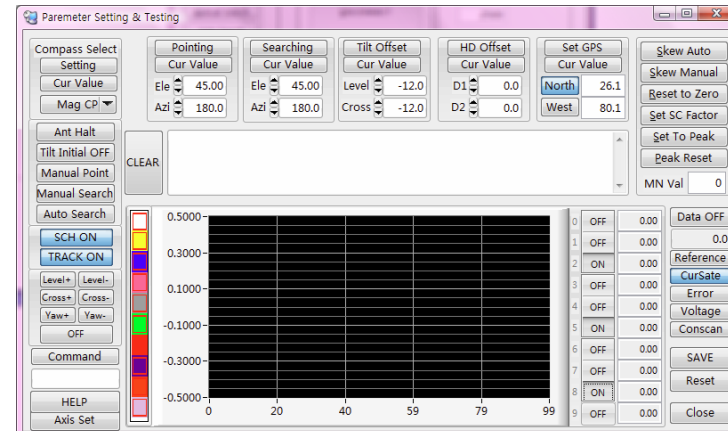- Select the comport, click the 'DISCONNECT'and 'Connection Command'.

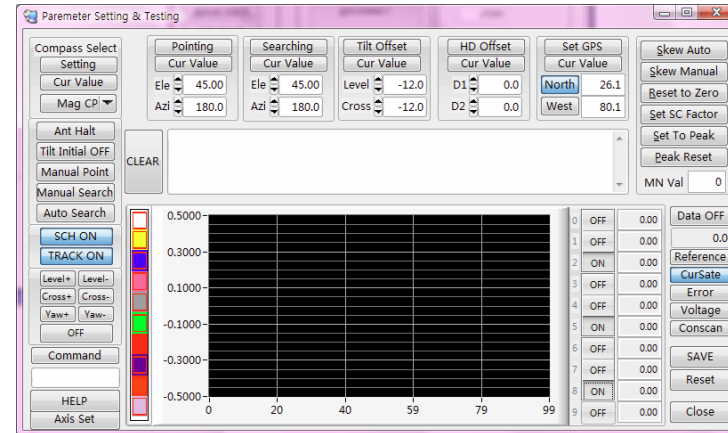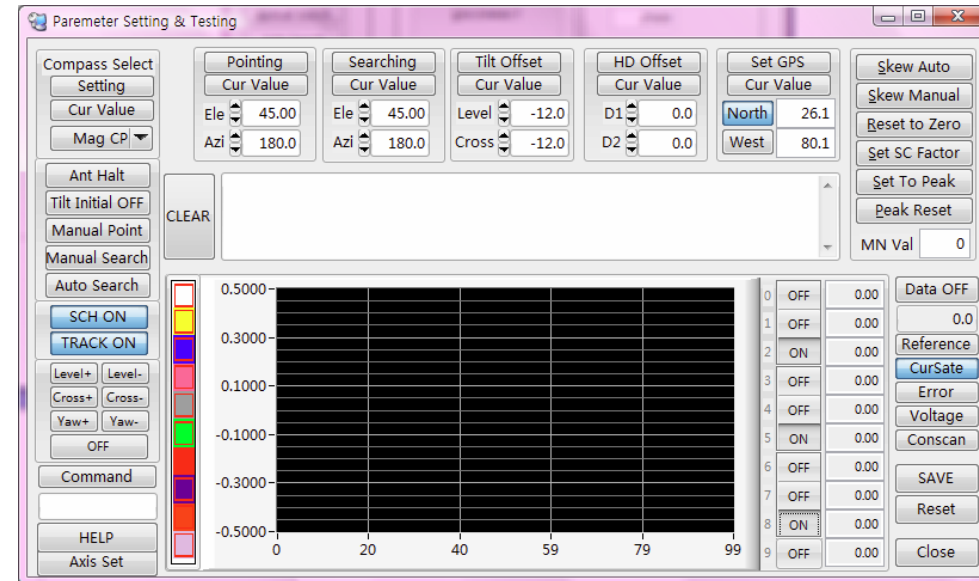- Click the 'Installer(F7).

Check the driving torque of 3 Axes

- Click the 'CurSate' and select the No. 2, 5 and 8

- Click the 'Axis Set'.

- Select the '900~-900' and then click the 'OK'.
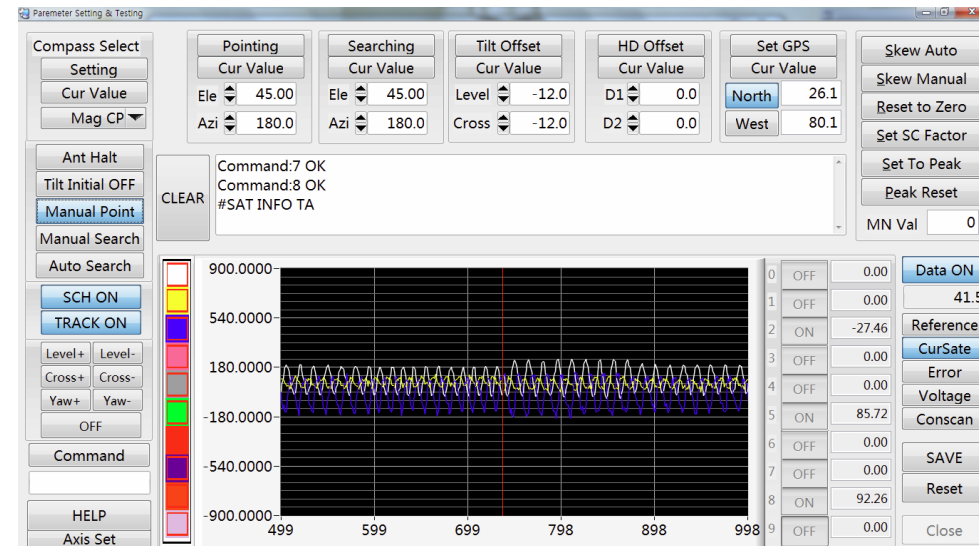 - The reading value should be +-500.

Check the driving torque of 3 Axes

- Click the 'Data OFF' to see the driving torque using graph.

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Recommended replacement cycle

- Electrical Part
    - Includes RF parts (LNB, BUC), PCU Assembly (the components in PCU: BU, MCU, SBU,…), ACU Assembly (ACU mainboard, NMEA converter, VFD panel,…), Motor related modules (EL, Az, Cross motor, brake, LCIU, YCU…), rotary joints, External power supply
        - The recommended replacement cycle: 3 years
        - The mandatory replacement cycle: 5 years

- Cable, Belt, Wire ropes/Rubber damper
    - Cable: RF cables, cables between each components (PCU-IU, IU-Motor), cables inside PCU and ACU.
    - Belt: EL/AZ/Cross belt, stepping belt, encoder belt
        - The recommended replacement cycle: 5 years
        - The mandatory replacement cycle: 7 years

Replacement cycle table

No	Part	Nomenclature			Recommended Replacement Cycle(Year)
1	RF	BUC*			3
2		LNB*			3
3	PCU	Assembly*			3
4		BU(Base Unit)*			3
5		MCU(Main Control Unit)*			3
6		MDU(Motor Driver Unit)*			3
7		MRU(Multi RF Unit)*			3
8		SBU(Sensor Base Unit)*			3
9		SU(Sensor Unit)	Assembly*		3
10			SLU(Sensor Level Unit)*		3
11			SCU(Sensor Cross Unit)*		3
12			SYU(Sensor Yaw Unit)*		3
13		DCDC*			3
14		FSK modem*			3
15		GPS*			3

No	Part	Nomenclature	Recommended Replacement Cycle(Year)
16	ACU	Assembly*	3
17		ACU Main board*	3
18		NMEA Converter*	3
19		BD MUX*	3
20		FSK modem*	3
21		Key Pad*	3
22		VFD Panel*	3
23		Power Supply*	3
24		Power Board*	3
25	Motor	Elevation/Cross/Azimuth Motor Assembly*	3
26		Brake*	3
27		Skew Motor Assembly*	3
28		SBA(Skew Board Adaptor)*	3
29		Level Cage Stepping Motor Assembly*	3
30		Encoder*	3
31		Proximity Sensor*	3
32		LCIU(Level/Cross motor Interface Unit)*	3
33		YCU(Yaw motor Interface Unit)*	3

Replacement cycle table

#	Category	Item	Years
34	Cable	L-Band**	5
35		14GHz**	5
36		PCU to Skew Block**	5
37		Cables between PCU and each IU**	5
38		Cables between each IU and each motor**	5
39		Cables inside PCU**	5
40		Cables inside ACU**	5
41	Belt	Elevation/Cross/Azimuth belt**	5
42		Stepping**	5
43		Encoder**	5
44	Etc.	Rotary Joint*	3
45		Wire Rope Isolators/Rubber damper**	5
46		External power supply*	3

*Must be replaced within 5 years

** Must be replaced within 5 years