SKY COMMAND SYSTEM II

The SKY COMMAND SYSTEM II allows remote control of a TS-2000, TS-2000X, TS-B2000, TS-480HX, TS-480SAT, TS-590S, TS-570D, TS-570S, or TS-870S HF transceiver.

You will use one transceiver as a control station called "Commander". The transceiver connected with the HF transceiver is called "Transporter". It will function as an interface between the Commander and the HF transceiver. This system allows you, for example, to watch for and hunt DX while washing your car, or to operate the HF transceiver while relaxing in your car, living room, or patio, instead of in your shack.



The Commander and Transporter transfer audio and commands as below:



Commander

(TH-D72A/E/ TH-D7A/ TM-D710A/E/ TM-D700A)

Transporter

(TH-D72A/E/ TH-D7A/ TM-D710A/E/ TM-D700A)

HF transceiver

CONNECTING THE TRANSPORTER WITH THE HF TRANSCEIVER

In order to connect TH-D72 to the HF transceiver, you need to prepare three cables by yourself. The COM terminal on this transceiver accepts a 2.5 mm (1/10") 3-conductor plug. If necessary, use the cable (service part: E30-3400-XX) to modify the cable end of RS-232-C connector.



Note:

- Operation of Sky Command System II may not been permitted in certain countries. Check your local laws before operating.
- Switch OFF both the Transporter and HF transceiver before making the connection.
- The Transporter automatically transmits its callsign in Morse at regular intervals because of legal requirements; therefore, transmit side tone must be output from the HF transceiver.
- When the Transporter is too close to the HF transceiver, unwanted feedback may cause malfunction.
- Do not share a regulated power supply between the Transporter and the HF transceiver. Unwanted feedback may cause malfunction.

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PREPARATION FLOW

The following steps should guide you to a good start of Sky Command operation. First connect the Transporter to the HF transceiver.

1 <On the Commander and Transporter> Select the same VHF and UHF frequencies.

When using the TH-D72 to communicate with the Commander and Transporter, set the TH-D72 as described below.

<Commander>

Band A: VHF frequency	Band B: UHF frequency
Full Duplex: ON	Tone: ON (Band B)
<transporter></transporter>	
Band A: UHF frequency	Band B: VHF frequency
Full Duplex: ON	CTCSS: ON (Band A)

Note: Configure the squelch to an appropriate level for both the VHF and UHF band on the Commander and Transporter. If the squelch is not set to an appropriate level, the transceivers may enter a BUSY state due to noise signals and be unable to transmit.

- 2 <On the Commander> Access Menu 500 to program a callsign (9 digits max.) for the Commander.
 - You may enter your exact callsign; ex. W6DJY.



- 3 <On the Commander> Access Menu 501 to program a callsign (9 digits max.) for the Transporter.
 - This callsign must be different from the one for the Commander. So you may add SSID characters; ex. W6DJY-1.



- 4 <On the Transporter> Access Menu 500 to program the same callsign as you entered in step 2.
- 5 <On the Transporter> Access Menu 501 to program the same callsign as you entered in step 3. The same callsign as you entered in step 2.
- 6 <On the Commander and Transporter> Access Menu 502 and select the tone frequency.
 - · Select the same tone frequency on both transceivers.



7 <On the Commander> Access Menu 503 and select "Commander".



• "Push [0] key to Start Commander!!" appears.



8 <On the Transporter> Access Menu 503 and select "Transporter".



Now the Commander and Transporter are in Sky Command mode. For operations in this mode, see "CONTROL OPERATION". First switch ON the HF transceiver and press [SYNC] on the Commander. To exit the Sky Command mode, access Menu 503 and select "Off".

Note:

- Unless you program callsigns, you cannot select "Commander" or "Transporter" using Menu 503.
- On the HF transceiver, select 9600 bps and 1 stop bit (default) using the Menu Set-up function.
- ◆ Adjust the audio level on both the Transporter and HF transceiver while listening to audio output from the Commander. An appropriate position of the AF control on the HF transceiver might be in the range, 8:30 to 9:00.
- To distinguish your various stations or nodes, you can have up to 15 Secondary Station IDentifiers (SSIDs); ex. W6DJY-1 to W6DJY-15. You always have to put a dash between your callsign and SSID number.
- Your station's transmit signal can be received when the receive frequency is 3 times the transmit frequency.
 Example: Transmit frequency is 146.600 MHz and receive frequency is 438.000 MHz.

ATTENTION: Use only after verifying that there is no reception disruption during communications.

PROGRAMMING CALLSIGNS

The built-in TNCs of the Commander and Transporter communicate each other when you send a control command from the Commander. So you must program different callsigns (9 digits max.) on these transceivers as the IDs of the TNCs.

Use the following Menu Nos. to program callsigns:

On Commander		
500	COM Callsign	Callsign for Commander
501	TRP Callsign	Callsign for Transporter
On Transporter		
500	COM Callsign	Callsign for Commander
501	TRP Callsign	Callsign for Transporter

- 1 Access Menu 500 or 501, then [► (OK)].
 - The callsign entry field appears; the first digit blinks.



2 Press [▲]/[▼] or rotate the **Tuning** control to select a character.

• You can enter 0 to 9, A to Z, and –.

- 3 Press [►OK].
 - The cursor moves to the next digit.
- 4 Repeat steps 2 and 3 to enter up to 9 digits.
 [ESC ◀]: Cancels entry of a callsign.
 [A/B]: Deletes the digit at which the cursor is blinking.
- 5 Press [**>OK**]. to complete the setting.
- 6 Press [MENU] to exit Menu mode.

The keypad also is available to enter alphanumeric characters in step 2.

PROGRAMMING A TONE FREQUENCY

On receiving a tone from the Commander, the Transporter causes the HF transceiver to enter Transmit mode. On both the Commander and Transporter, access Menu 502 and select the desired, same tone frequency.



CONTROL OPERATION

When in the Sky Command mode, the keys of the Commander will function as below. First switch ON the HF transceiver and press [0] (SYNC) on the Commander.



Each time you press the desired key, the Commander will automatically enter transmit mode and send the corresponding control command to the Transporter.

Key	Function
Tuning control	Frequency or memory channel number change
[A/B]	In VFO mode: VFO A/ VFO B switch In Memory Recall mode: no change
[1] (PWR)	Power ON/ OFF
[2] (RX)	HF frequency receive ON/ OFF
[3] (MODE)	Modulation mode switch
[4] (RIT)	RIT ON/ OFF
[5] (XIT)	XIT ON/ OFF
[6] (CLR)	RIT offset or XIT offset clear
[7] (SPLIT)	Split-frequency ON/ OFF
[8] (M>V)	Transfer from Memory to VFO
[0] (SYNC)	Current settings retrieve (from HF transceiver)
[MONI]	To monitor the UHF band on the Commander
[B] (M/V)	VFO/ Memory Recall mode switch
[▲]	XIT/ RIT offset frequency increase
[▼]	XIT/ RIT offset frequency decrease
[*] ¹ (FAST)	In LSB, USB, or CW mode: 10 Hz/ 1 kHz switch In FM or AM mode: 1 kHz/ 10 kHz switch
[#] ² (ENTER)	In VFO mode: frequency entry ON In Memory Recall mode: channel number entry ON
[PTT]	To transmit audio on an HF frequency

"FS" appears when you select 1 kHz step (LSB/ USB/ CW) or 10 kHz step (FM/ AM).

² After pressing **[#]**, press **[0]** to **[9]** to enter a frequency or memory channel number.