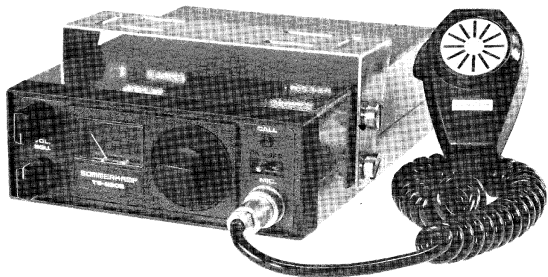


# SOMMERKAMP<sup>®</sup>

## CITIZENS BAND TRANSCEIVER INSTRUCTION MANUAL



MODEL: TS-630S

## INSTALLATION

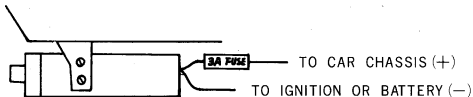
Mounting bracket and screws are supplied for mounting the transceiver underneath the dashboard. Microphone hanger and screws are also supplied. For electrical connection, first make sure that the transceiver is turned off. Connect the red wire to the ACC terminal of the ignition switch or + terminal of battery and ground the black wire to the chassis of the vehicle. The black wire should be grounded as short as possible to minimize the noise interference.

This transceiver is designed for use with the **negative** ground system.

(For installation in the positive ground system, see the following instructions.)

Installation in positive ground system:

- a) Since the cabinet is commonly connected to all B minus potentials in the transceiver, the transceiver must be electrically isolated from the chassis of the vehicle at all times. (See Fig. 1 for connection with power source.)



TRCV CHASSIS TO BE  
INSULATED FROM CAR FIG. 1

- b) Obtain a pair of 0.01 mfd. @500V ceramic capacitors. Cut the antenna coaxial cable approximately 3 inches from the male connector. Connect one of the 0.01 capacitors in line with the center copper wire of the coaxial cable and solder. Tape the connections. Add the other capacitor in line with the shielding braids and solder. Tape the entire exposed braids and capacitor for insulation. These capacitors, inline with the conductors of the coaxial cable, now isolate the antenna ground from the ground of the transceiver. (See Fig. 2)

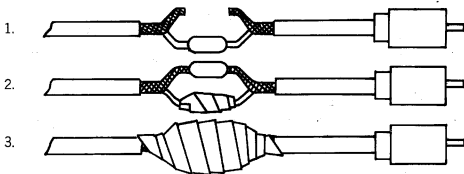


FIG. 2

- c) The mounting bracket must be isolated from the chassis of the vehicle in such a manner as shown in Fig. 3.

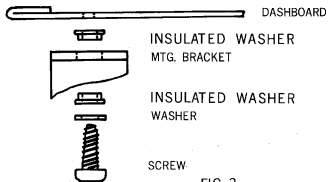


FIG. 3

## ANTENNA

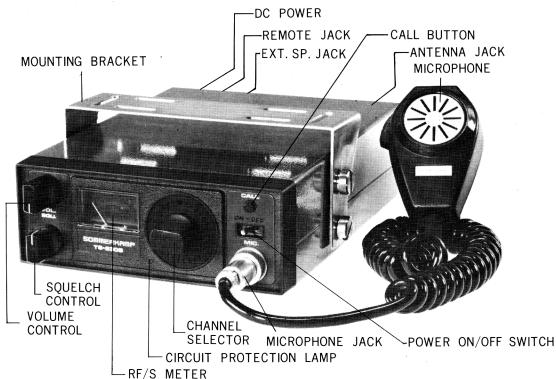
Antenna is one of the most important factors the operation with maximum efficiency. A quarter wave antenna can be successfully mounted for mobile station. The antenna impedance should be 50 ohms. For the details, consult with your distributor.

### Important:

Do not operate the trnsceiver without a proper antenna or dummy load connected to the antenna connector, as the transmitter transistors may be damaged.

## OPERATING INSTRUCTIONS

The transceiver is ready to operate when it is installed with an antenna properly connected. Note that the communication range differs depending upon the environment where the transceiver is operated. You may reach 30 or 40 kilometers where no obstacle exists, but the range may be limited to 5 or 6 kilometers in cities where many high buildings disturbs the communication.



- 1) Turn the set on by switching the ON-OFF snap switch and the channel dial will be lighted. Turn the volume control clockwise to increase the audio sound. Note that the volume control knob is only for adjusting the audio volume, not to increase the transmitting power.
- 2) Turn the squelch control clockwise until incoming noise is eliminated. Do not turn it excessively, as the sensitivity may be reduced.
- 3) Turn the channel selector knob for the desired channel.
- 4) For transmitting, press the button on the microphone and speak into it normally. Release the button for receiving.

### METER

The meter reading indicates the signal strength at receiving, and functions as an output indicator at transmitting, and the meter pointer should be within the Red zone under the normal conditions.

## CIRCUIT PROTECTION INDICATOR LAMP

The Lamp is on when the antenna is mismatched, and the transmitting circuit will be cut off.

## TONE-LIGHT CALLING DEVICE

The Model TS 630S is equipped with a selective tone-light calling device which works on 1,750 Hz signal. To call the other station, push the push-to-talk button and the call button simultaneously, when the calling signal is transmitted. When the signal is received, a peep tone is produced and the call-light lamp will be lighted at the other station, and the lamp stays on until the other station answers.

Please note that the device works only when the other station is switched on and that the buttons on the calling side must be depressed at least for 10 seconds.

### List of accessories:

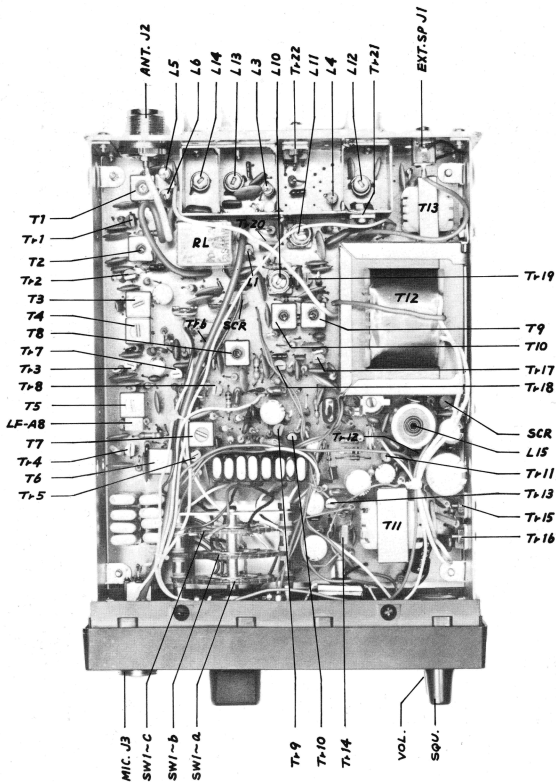
Mounting bracket .....	1
Hexagonal screw .....	4
Microphone hanger .....	1
Screw for above .....	2

### List of channel frequencies:

CHANNEL NO.	FREQUENCY	CHANNEL NO.	FREQUENCY
1	26.965 Mhz	15	27.135 Mhz
2	26.975 Mhz	16	27.155 Mhz
3	26.985 Mhz	17	27.165 Mhz
A	26.995 Mhz	18	27.175 Mhz
4	27.005 Mhz	19	27.185 Mhz
5	27.015 Mhz	20	27.205 Mhz
6	27.025 Mhz	21	27.215 Mhz
7	27.035 Mhz	22	27.225 Mhz
8	27.055 Mhz	B	27.235 Mhz
9	27.065 Mhz	C	27.245 Mhz
10	27.075 Mhz	23	27.255 Mhz
11	27.085 Mhz	D	27.265 Mhz
12	27.105 Mhz	24	27.275 Mhz
13	27.115 Mhz	E	27.285 Mhz
14	27.125 Mhz	F	27.295 Mhz



# COMPLETE PARTS LAYOUT





## PARTS LIST for TS-630S

DESIGNATION	PARTS NAME	PARTS NO.
MP-201	Front Flame	483014-S
MP-202	Chassis Flame	482009-S
MP-203	Back Pannel	484100
MP-105	Cabinet Cover (Upper)	483016
MP-106	Cabinet Cover (Lower)	483015
MP-107	Mounting Bracket	484085
MP-204	Front Plate (L)	484122
MP-205	Front Plate (R)	484120
MP-206	Brand Plate	484097
MP-207	Back Plate	484121
MP-110	Mounting Bracket for Meter	484064
MP-208	Mounting Bracket for Output Trans	484080
MP-209	Heatsink for 2SC1307 (A)	484102
MP-210	Heatsink for 2SC1307 (B)	484101
MP-211	Meter Lamp Reflection Plate	484063
MP-212	Channel Indicator Screen	484107
MP-213	Screen Holder	484106
MP-214	Mounting Bracket for Channel Lamp	484108
MP-111	Call Switch Contact	484086
MP-112	Call Switch Spring	484087
MP-19	Lamp Lens (Red)	M40024R
MP-117	Knob for Channel Selector	484116
MP-17	Knob for Vol. SQU.	474011
MP-118	Nut for Channel Selector	484073
MP-120	Screw for Mounting Bracket	484098
MP-215	Channel Indicator Plate	484115
J1	EXT. SP. Jack	SJ-296
J2	Antenna Jack	MRM/INCH
J3	Microphone Metal Consent	MC-01
J4	Remote Jack	RCA-1P
EP201	Power Cord with Contact & Fuse holder	W-002
F1	Fuse 5A	F-5A
M	Meter	D33B35R
SP	Speaker	87P-30-1
PL1	Pilot Lamp 9V-30 mA	PL-9-30
PL2	Pitot Lamp 12V-50 mA	PL-12-50
SW1	Channel Selector Switch	43-30
MIC	Microphone Complete	22-256-13
EP-202	Crystal Socket 8P	XS-8P
EP-203	Crystal Socket 4P	XS-4P
RL	Reley	SR-74
SW2	Power Switch	PS-2P

## PARTS LIST for TS-630S

DESIGNATION	PARTS NEME	PARTS NO.
Tr1	Transistor	2SC922
Tr2, 3, 4, 5, 6 7, 17, 18, 19	Transistor	2SC839
Tr8, 9, 10, 11, 12	Transistor	2SC945
Tr13	Transistor	2SC900
Tr14, 20	Transistor	2SC496
Tr21	Transistor	2SC1237
Tr22	Transistor	2SC1307
Tr15, 16	Transistor	2SD235
D1, 2, 7, 11	Germanium Diode	1N60
D3	Varistor	1S-1209
D4	Zener Diode	WZ-090
D5, 6, 10, 12	Silicon Diode	1S-1555
D13, 14	S. C. R.	2SF-656
D8	Sillicon Diode	1N-4002
T1	RF Coil (Black)	T-2001
T2	RF Coil (White)	T-2002
T3	I. F. T. 10.7 MHz (orange)	T-2003
T4	I. F. T. 10.7 MHz (orange)	T-2004
T5	I. F. T. 455 KHz (Yellow)	T-2005
T6	I. F. T. 455 KHz (White)	T-2006
T7	I. F. T. 455 KHz (Black)	T-2007
T8	O. S. C Coil 37 MHz (Red)	T-2008
T9	TX Tuning Coil (Green)	T-2009
T10	TX Tuning Coil (Green)	T-2010
T11	Input Transformer	EI-2901
T12	Output Transformer	EI-5701
T13	Choke Transformer	EI-2401
L1, 2, 3, 4, 5, 6	RF Choke	L1033
L10	RF Coil	L-2011
L11	RF Coil	L-2012
L12	RF Coil	L-2013
L13	RF Coil	L-2014
L14	RF Coil	L-2015
L15	Call Coil	L-2010
MF	Ceramic Filter	LF-A8
EP-204	P. C. Board	63001
VR1	Variable Resistor (Volume) 50K Ohm	VR1650K
VR2	Semi Variable Resistor 5K Ohm	SVR005K
VR3, 7	Semi Variable Resistor 50K Ohm	SVR050K
VR4	Semi Variable Resistor 100K Ohm	SVR100K
VR5	Variable Resistor 5K Ohm	VR1605K
VR6	Semi Variable Resistor 1K	SVR001K

## SPECIFICATIONS for TS-630S

Semiconductors:	22 transistors, 9 diode, 2 S. C. R.
Transmitter System:	Synthesizer crystal controlled. Collector modulation AM.
Frequency:	30 channels on 27 MHz.
Output Power:	10 watts.
Band Width:	8 KHz (max).
Antenna Impedance:	50—52 ohms.
Receiver System:	Double conversion superheterodyne, crystal controlled.
Sensitivity:	1 $\mu$ V or better for 100mW output, 10 dB signal to noise ratio.
Intermediate Frequency:	455 KHz, 10.7 MHz.
Receiver Sensitivity:	25 dB down at 10 KHz.
Squelch Sensitivity:	2 $\mu$ V.
Audio Output Power:	1 watt in 10% distortion.
Power Source:	11—16 volt D. C. Negative Ground.
Power Consumption:	TX—1.8A at no modulation. RX—0.3A at no signal.
Microphone:	Dynamic type with press-talk switch.
Speaker:	Dynamic type, V. Coil 8 ohm.
Size:	156×58×205 mm
Weight:	1.5 kg
Accessories:	Mounting bracket, Mounting hard ware, power cord.

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