

KENWOOD

VHF FM TRANSCEIVER

TK-709

UHF FM TRANSCEIVER

TK-809

INSTRUCTION MANUAL

KENWOOD CORPORATION

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1 INTRODUCTION

This easy-to-operate mobile has been designed to provide dependable communications. All KENWOOD transceivers incorporate the latest in advanced technology, providing communications that can be counted on to keep vehicles and personnel operating at peak efficiency.

This instruction manual covers the following transceivers:

TK-709 VHF FM TRANSCEIVER with FIVE TONE

TK-809 UHF FM TRANSCEIVER with FIVE TONE

When there are differences in operation, separate instructions will be given for each model.

IMPORTANT: GOVERNMENT LAW PROHIBITS THE OPERATION OF UNLICENSED RADIO TRANSMITTERS WITHIN THE TERRITORIES UNDER GOVERNMENT CONTROL. ILLEGAL OPERATION IS PUNISHABLE BY FINE OR IMPRISONMENT OR BOTH. REFER SERVICE TO A LICENSED OR CERTIFIED TECHNICIAN ONLY.

2 SAFETY

It is important that all users understand and are aware of hazards common to the operation of any transceiver.

WARNING:

1 EXPLOSIVE ATMOSPHERES (GASES, DUST, FUMES, ETC.)

Turn off and do not operate your mobile while taking on fuel, or while parked in gasoline service stations. Do not carry spare fuel containers in the trunk of your vehicle if your mobile is mounted in the trunk area.

2 INJURY FROM RADIO FREQUENCY TRANSMISSIONS

Do not operate your mobile when anyone is touching the antenna, or when anyone is standing within two to three feet of your antenna, to avoid the possibility of radio frequency burns or related physical injury.

3 DYNAMITE BLASTING CAPS

Transmitting with your mobile can cause dynamite blasting caps to explode if such operation occurs within 500 feet of the blasting caps. Turn off and do not operate your mobile when in an area where blasting is in progress, or where "TURN OFF TWO-WAY RADIO" signs have been posted. If you are transporting blasting caps in your vehicle, make certain they are carried in a closed metal box having a padded interior. Do not transmit during the time that caps are being placed into or are being removed from this container.

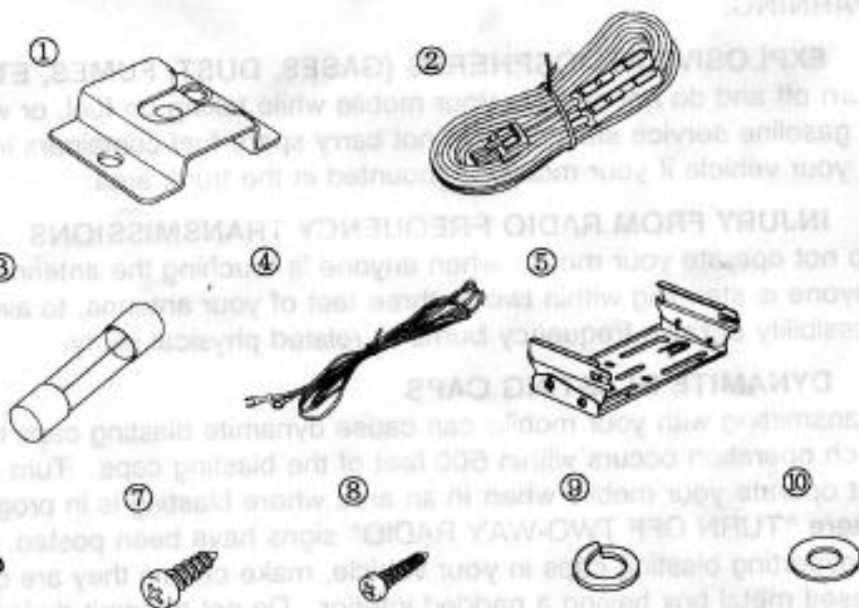
3 UNPACKING AND CHECKING EQUIPMENT

NOTE: The following instructions are for use by your KENWOOD dealer, either an authorized KENWOOD service facility, or the factory only.

Carefully unpack the mobile. It is recommended that you identify the items listed and check them off before discarding the packing material. If any damage has occurred to the equipment during shipping, file a claim with the carrier immediately.

EQUIPMENT

Transceiver	1 ea.
① Microphone hanger	J19-1376-XX	1 ea.
② Power cable assembly	E30-2076-XX	1 ea.
③ Fuse (10 A)	F51-0016-XX	1 ea.
④ Ground cable for hanger	E30-2036-XX	1 ea.
⑤ Mounting bracket	J29-0450-XX	1 ea.
Mounting hardware		
⑥ Machine screw	N30-4018-XX	2 ea.
⑦ Self-tapping screw (Large)	N09-0335-XX	4 ea.
⑧ Self-tapping screw (Small)	N46-4016-XX	3 ea.
⑨ Spring washer	N16-0050-XX	4 ea.
⑩ Flat washer	N15-1050-XX	4 ea.
Instruction manual	B62-0357-XX	1 copy



4 INSTALLATION AND CONNECTION

WARNING: INTERFERENCE WITH VEHICULAR ELECTRONICS

Fuel injection systems, anti-skid braking systems, and cruise control systems are typical of the kinds of electronic devices that may malfunction due to a lack of protection from radio frequency energy that is present when transmitting. If the vehicle contains such equipment, consult the dealer for the make of vehicle and enlist his aid in determining if such electronic circuits will perform normally when the transceiver is transmitting.

NOTE: The following instructions are for use by your KENWOOD dealer; either an authorized KENWOOD service facility, or the factory only.

INSTALLATION EQUIPMENT

CAUTION: Take care when drilling mounting holes to avoid damaging vehicle wiring or parts. Always check to see how far the mounting screws will extend below the mounting surface before installing.

The following tools are required for installing this mobile:

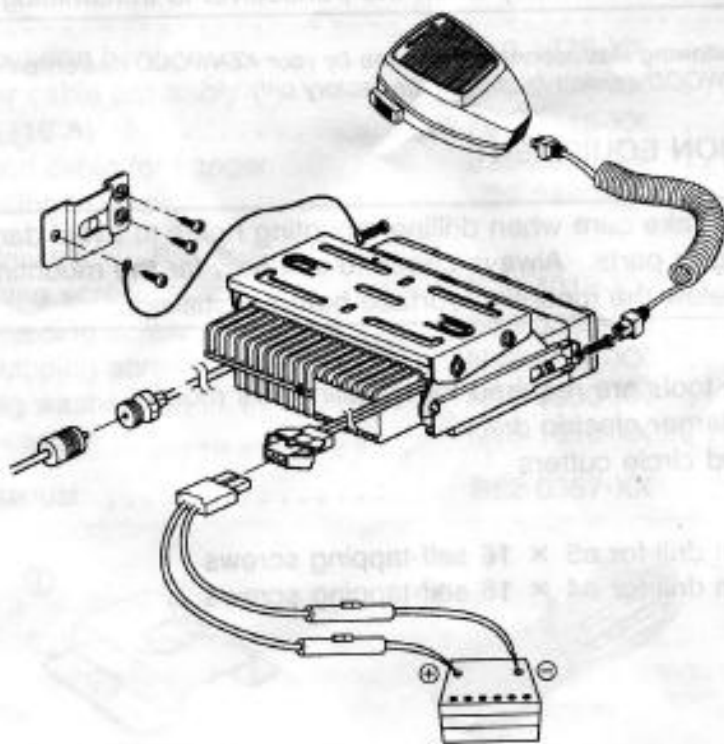
- 1/4" or larger electric drill
- Drills and circle cutters

Drill Sizes

- $\varnothing 4.2$ mm drill for $\varnothing 5 \times 16$ self-tapping screws
- $\varnothing 3.2$ mm drill for $\varnothing 4 \times 16$ self-tapping screws

PLANNING THE INSTALLATION

The accompanying illustration should help you in planning your installation. Before starting, determine the best location for the mobile. The mobile should be convenient for the user, protected from water damage, easy to service, and out of the way of auto mechanics and passengers.



POWER CABLE

The power cable consists of a fused red lead, a fused black lead, and a 2-pin power plug. To install the power cable, check for an existing hole conveniently located in the firewall through which the cable can be passed. If no hole exists, drill the firewall and install a rubber grommet.

Starting with the plug end of the cable at the mobile, run the two power leads into the engine compartment from the passenger compartment. Connect the red lead to the positive (+) battery terminal or switched power source, and the black lead to the negative (-) battery terminal. Always locate the fuse as close to the battery as possible. Coil up the surplus cable and secure it out of the way with the retaining strap provided. Ensure enough slack is available in the cables so that the mobile can be removed for servicing with the power applied.

CAUTION: The mobile operates in 12 volt negative ground systems only! Always check the battery polarity and voltage of the vehicle before installing the mobile.

INSTALLING THE MOBILE

Mount the mobile so that the controls are within easy reach of the user. Use the mounting bracket as a template to locate the holes, then drill the holes and mount the mobile. Leave sufficient room at the rear of the mobile for cable connections. Before attaching the mobile to the bracket, connect the antenna connector and power plug to the mobile.

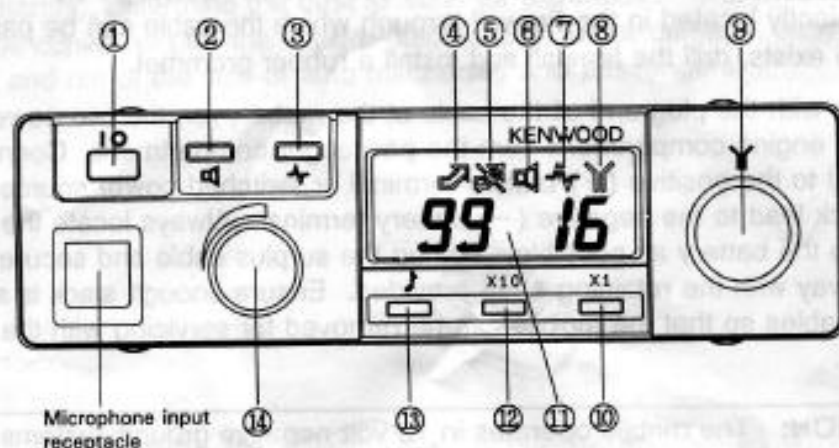
WARNING: For passenger safety, mount the mobile securely so that it will not break loose in the event of a collision. This is especially important in station wagons, vans and similar type installations where a loose mobile could be extremely dangerous to the vehicle occupants.



MOBILE MICROPHONE


Mount the microphone hanger so that the microphone is within easy reach of the user. Neither the microphone nor microphone cable should interfere with the safe operation of the vehicle. After mounting the microphone hanger, connect the microphone plug to the microphone jack on the front of the transceiver, then place the microphone on the hanger.

5 CONTROLS AND FUNCTIONS

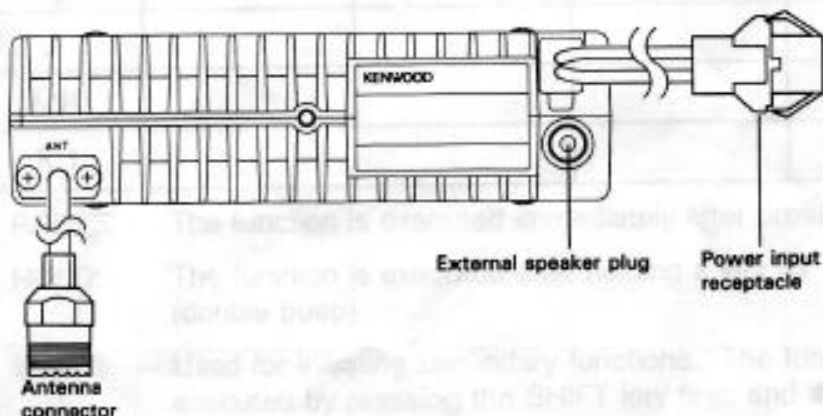
FRONT PANEL



- ① POWER switch
Press to turn the power ON or OFF.
- ②  switch
If programmed as a Monitor switch, allows traffic to be checked on the channel before transmitting.
- ③  switch
If programmed as a Squelch switch, allows the squelch function to be turned ON or OFF.
- ④ TX indicator
Appears while transmitting.
- ⑤ BUSY indicator
Appears when the channel is in use thereby alerting the user not to transmit.
- ⑥ MONITOR indicator
Appears when the Monitor switch is ON.
- ⑦ SQUELCH indicator
Appears when the squelch function is OFF.

- ⑧ CHANNEL ENTRY MODE indicator
Appears when in channel entry mode.
- ⑨ CHANNEL selector
Turn to select your desired channel.
- ⑩ X 1 key
If programmed as a X 1 key, allows the selected system number to be increased by one.
- ⑪ FIVE-TONE CODE / CHANNEL indicator
If the mobile is programmed for dual display, appears when the mobile is turned ON, and displays the five-tone code number / channel number.
- ⑫ X 10 key
If programmed as a X 10 key, allows the selected system number to be increased by one.
- ⑬  key
If programmed as a Five-tone key, allows the five-tone code to be transmitted.
- ⑭ VOLUME control
Turn to increase or decrease the volume.

REAR PANEL



MICROPHONE

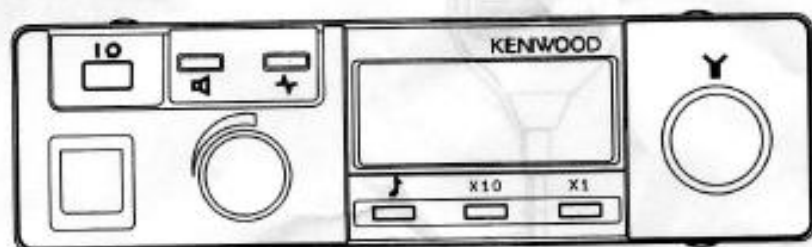
PTT (Push-To-Talk) switch

Press to transmit. Speak clearly into the microphone.



6 KEY DEFINITIONS

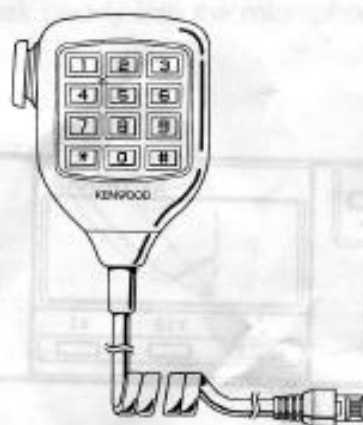
FRONT PANEL KEYS



Key	Functions			
	PRESS	HOLD	SHIFT	RELEASE
X 10				
X 1				

- **PRESS:** The function is executed immediately after pressing a key.
- **HOLD:** The function is executed after holding a key for 500 ms (double beep).
- **SHIFT:** Used for initiating secondary functions. The function is executed by pressing the SHIFT key first, and then a key.
- **RELEASE:** The function is executed if a key is released before the maximum hold-time for the key has expired.

KEYPAD MICROPHONE



Key	Functions			
	PRESS	HOLD	SHIFT	RELEASE
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
*				
#				

Declaración CE de conformidad

Artículo 11 del Real Decreto 444/1994, de 11 de marzo, modificado por el Real Decreto 1950/1995 de 1 de diciembre

El que suscribe D. Shinsaku Nishimura DNI/pasaporte nº MN 9097933
en calidad de presidente de la sociedad

Razón social: Kenwood Electronics Europe B.V.
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Declara, bajo su exclusiva responsabilidad, que

el equipo: transceptor móvil base UHF
fabricado por: KENWOOD CORPORATION
en: Japón
marca: KENWOOD
modelo: TK-809

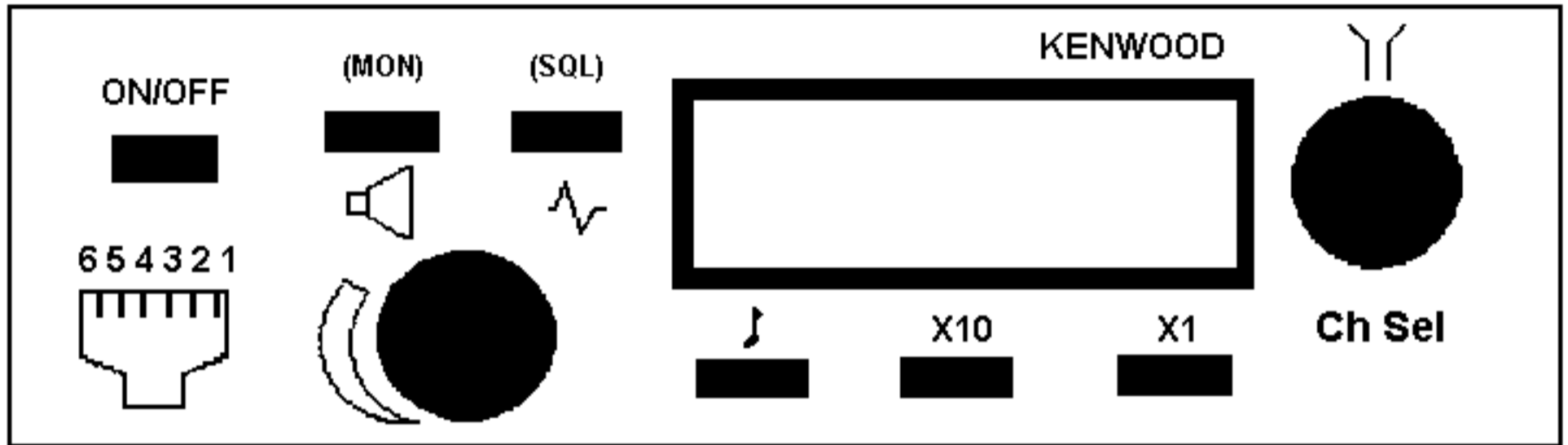
cumple las especificaciones técnicas en materia de compatibilidad electromagnética
indicadas en el certificado CE de tipo número:

HDTP/RDR/167/320506

emitido por: "Telecommunication and Post Department" de Holanda.

Todo ello en cumplimiento de lo establecido en el Real Decreto 444/1994, de 11 de marzo, por el que se establecen los requerimientos de evaluación de la conformidad y los requisitos de protección relativos a compatibilidad electromagnética de los equipos, sistemas e instalaciones, modificado por el Real Decreto 1950/1995, de 1 de diciembre, que incorporan la Directiva 89/336/CEE, sobre la aproximación de las legislaciones de los Estados miembros relativas a la compatibilidad electromagnética, modificada por la Directiva 91/263/CEE y por la Directiva 93/97/CEE.

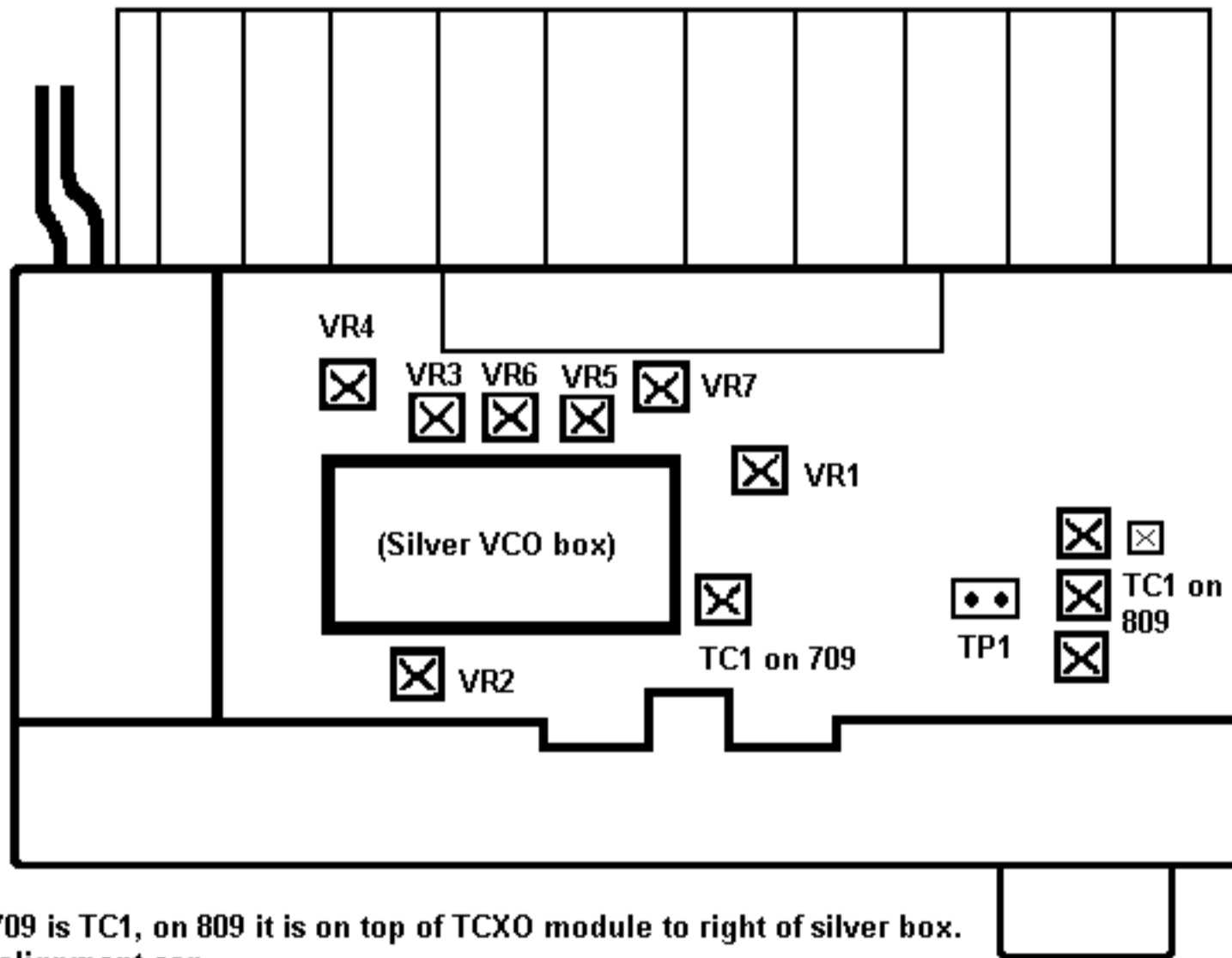
Kenwood TK709/809



MIC

- 1 = 12v
- 2 = PTT gnd
- 3 = PTT
- 4 = MIC gnd
- 5 = MIC hi
- 6 = Hook (G)

- VR1 = SQL Adj
- VR2 = ABTO
- VR3 = MIC gain
- VR4 = Deviation
- VR5 = Tone Dev
- VR6 = DQT wave set for squarest
- VR7 = Power adj Set power to 27 watts or 7 amps max.



Fine freq adj on 709 is TC1, on 809 it is on top of TCXO module to right of silver box. TC1 on 809 is RF alignment cap.