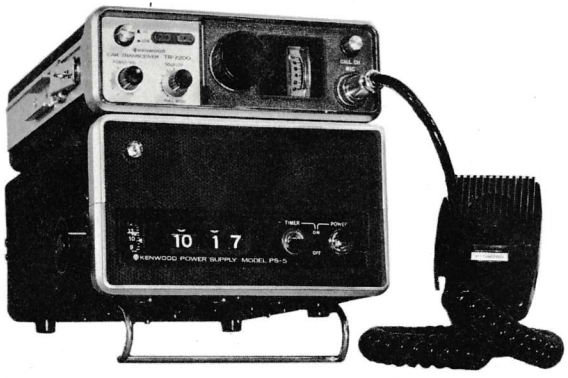
PS-5

POWER SUPPLY

KENWOOD

OPERATING MANUAL



PS-5 with TR-7200

The PS-5 is especially designed to supply stabilized DC power to the MODEL TR-7200 (G) car transceiver when the transceiver is to be employed as a fixed-station equipment. Consistent in size and performance with the TR-7200 (G) car transceiver, the PS-5 contains a digital clock (with a timer) and a protection circuit to guard against over-current or short circuit across the output terminals.

PS-5 OPERATING MANUAL

CONTENTS

SPECIFICATIONS

GENERAL SPECIFICATIONS

Application	Supply of stabilized DC power to the TR-7200 (G).
Dimensions	7-1/16"(180mm)wide x 3-15/16" (100mm)high x 9-7/16"(240mm) deep
Weight	Approx. 8.36 lbs. (3.8kg)

POWER SUPPLY SECTION

Power Requirement	220V AC ±10%, 50 Hz
Output Voltage	13.8V DC
Output Current	3.2A intermittent, 2A max. continuous.
Fluctuation	±4% against an input AC voltage variation of 220V AC ±10%
Ripple Component	10 mV or less at 220V AC input and 3.2A output current at 13.8 V DC.
Ground	Negative ground

CLOCK SECTION

Clock Frequency	50 Hz
Power Consumption	Approx. 3.6 VA
Timer ON Period	60 minutes ±20 minutes
Time Set Accuracy	0 to −15 minutes or better

NOTE: The circuit and ratings may change without notice due to developments in technology.

SECTION 1. CONTROLS

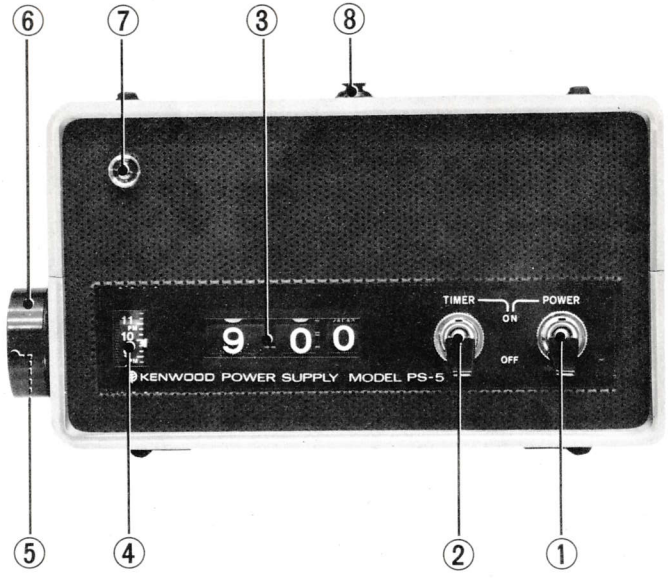


Fig. 1 Front Panel

① **Power Switch**	Power ON-OFF switch for the PS-5 and associated transceiver.
② **Timer Switch**	ON-OFF switch for a timer.
③ **Time Indicating Wheel**	Graduated from 0 to 12 hours in minute steps.
④ **Time Set Wheel**	Provides 24 hours of time to be selected, with AM and PM markings.
⑤ **Time Knob**	Used to set the clock to the present time.
⑥ **Timer Knob**	Used to set the timer to the desired time at which the timer supplies power to the PS-5 and associated transceiver.
⑦ **Neon Lamp**	Lights to indicate that power is supplied to the equipment.
⑧ **Ratch**	Locks the top cover onto the PS-5 casing.

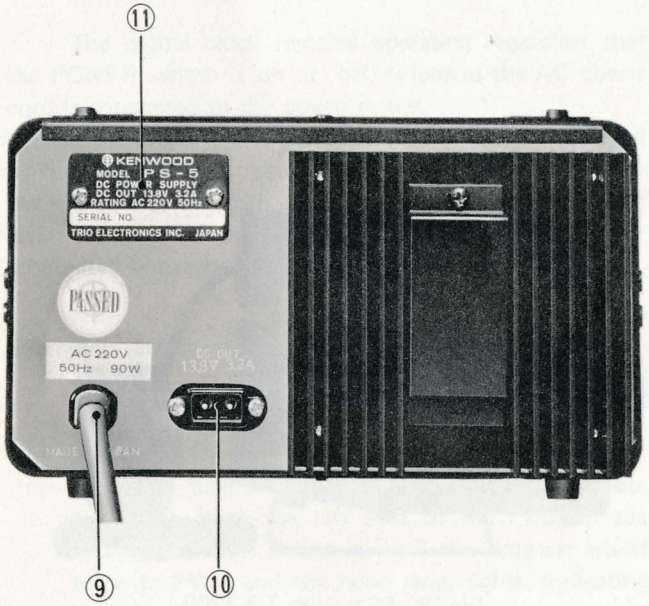


Fig. 2 Rear Panel

⑨ **AC Power Cord** Supplies 220V AC (50 Hz) power to the PS-5.

⑩ **DC Out Connector** Supplies 13.8V DC power to the associated transceiver through the accessory DC power cord.

⑪ **Name Plate** Marked with the clock frequency.

SECTION 2. PRIOR TO OPERATION

2-1 UNPACKING

The following accessories are supplied with this set. Please check to see that all are provided.

DC power cord	1
Spare fuse (1A)	1

2-2 INSTALLATION AND CONNECTIONS

The TR-7200 (G) car transceiver may be placed on the top of the PS-5 to form a single unit, after removing the top cover from the PS-5, as shown in Fig. 3. To remove the top cover, unhook the ratch by pulling. If desired, the stand-off leg supplied with the TR-7200 (G) transceiver may be utilized with the PS-5 to install the equipment aslant, as shown in Fig. 3.

Connect the PS-5 to the TR-7200 (G) with the DC power cord supplied with PS-5. With the POWER and TIMER switches set to the OFF position, connect the AC power cord to the AC power outlet. Then, turn the POWER switch on. The neon lamp will then light, indicating that the PS-5 supplies power to the transceiver if the power switch of the transceiver is on.

Fig. 3 PS-5 with TR-7200

SECTION 3. OPERATION

3-1 SETTING THE DIGITAL CLOCK UP

The digital clock remains operating regardless that the POWER switch is on or off, as long as the AC power cord is connected to the power outlet.
Setting the clock to the present time can be accomplished by turning the inner small knob TIME, projecting from the left side of the PS-5. The clock is in a 12 hours system and note that, for example, the same 8:00 of time be discriminated between AM and PM.

Example: When setting the clock to 8:00 PM.

a) Turn the TIME knob and set the time indicating wheel to 8:00.
b) Turn the POWER and TIMER switches on.
c) Gradually turn the TIMER knob (outer large knob, projecting from the left side of the PS-5) in the counterclockwise direction until the time set wheel turns to PM 8 and the neon lamp lights, indicating that the timer is turned on.
d) If, in this attempt, the neon lamp lights with the wheel indicating AM8, it requires that the time indicating wheel be turned another 12 hours period of time to obtain 8:00 with PM (or PM 8:00).
The digital clock employs a synchronous motor, which is regulated by the line frequency to show accurate time.

3-2 HOW TO USE THE TIMER

Typical use of the timer can be found as automatic switching of the TR-7200 (G) regularly at the desired time of each day. To set the timer to the desired time, use the TIMER knob (outer large one), located on the left side of the PS-5. Then, turn the POWER switches of both the PS-5 and the associated transceiver to the respective desired positions, and turn the TIMER switch on. With the above controls made, the timer will automatically actuate the transceiver at the same set time of each day, keeping the transceiver operating for approximately 1 hour, upon lapse of which the timer will automatically return the transceiver off. If it is desired to use the transceiver beyond this period of time or to operate at times other than that set by the timer, place the TIMER switch at the OFF position.

3-3 CAUTION

The TIME and TIMER knobs may be turned in either the clockwise or counterclockwise direction except when:

TIME knob The minute wheel is in motion (or is shifting to the higher digit.).
This requires readjustment after the minute wheel has completed the shifting.

TIMER knob The cum is seated in the notch at the time set by the TIMER knob.
Under this condition, the TIMER knob may be turned only in the counterclockwise direction.

SECTION 4. PRECAUTION

1. The protection circuit will disabled the output circuit when a short circuit or an overcurrent occurs.
   If this is the case, turn the POWER switch off, and check for the cause and repair the equipment.
   If the protection circuit operates, turn off the POWER switch immediately. Then, to restore the output voltage, turn on the power switch 3 to 5 seconds after.
2. The heat sink attached to the rear of the PS-5 will be considerably heated by the transmitting current when transmission is continued over a long period of time. This, however, will not present any problem as long as the power supply is used at a rated output current. There should be sufficient space from the heat sink to the adjacent wall, curtain, or other objects easy to catch fire, and good ventilation for the equipment.
3. When the power supply is placed separate from the transceiver, they should be interconnected with as thick a cable and as short a length of a cable as possible. A long cable can produce a drop of output voltage (1V or more during transmission) or pick up the RF energy from the ambient, causing abnormal oscillation. RF signal picked up by the power cord can be blocked out by a 0.01 to 0.001μF, 50V, capacitor inserted between the DC output connector and the ground or by modifying the cable length.

4. The PS-5 may be continuously operated over a long period of time for purposes other than to use with the specified transceiver, if operation is limited to a rated current value of 1A or less.
5. The PS-5 is not rated for supplying power to more than one transceiver, the TR-7200 (G).

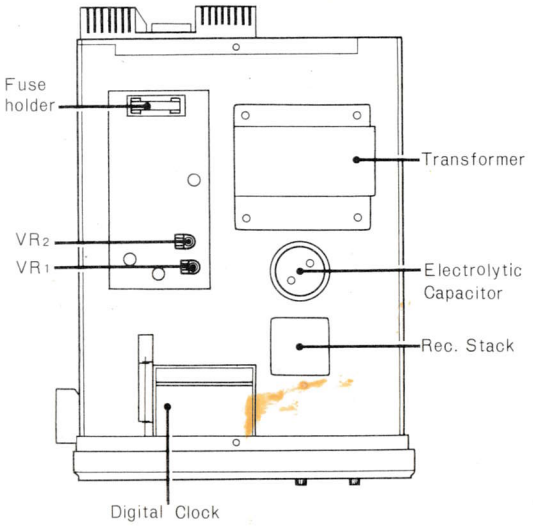


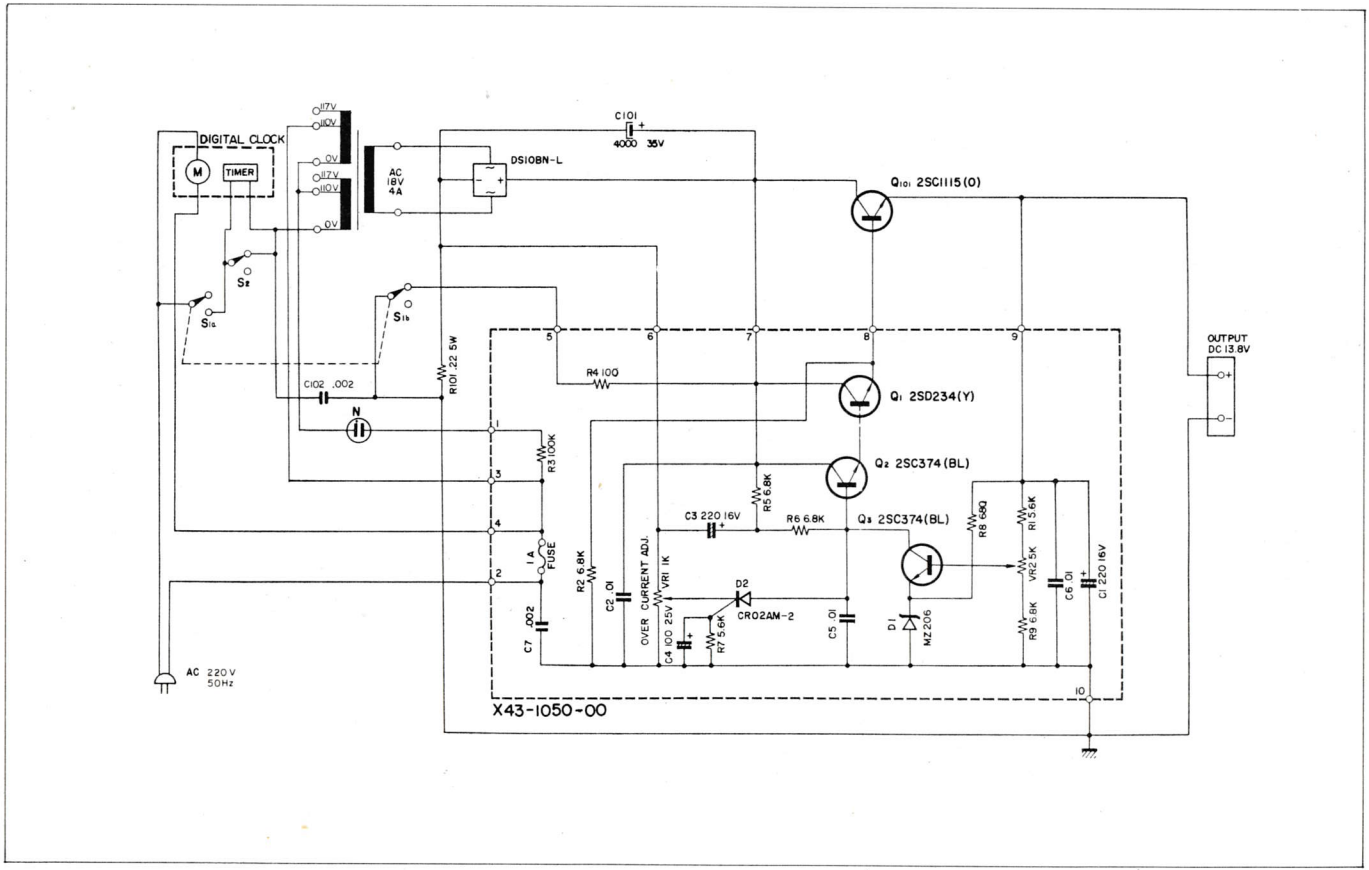
Fig. 4

SECTION 5. MAINTENANCE

1. The fuse, if blown, can be replaced with the spare 1A fuse, after disconnecting the AC power cord from the power outlet and settling the trouble that has led to the opening of the fuse. The fuse is contained in a holder, located on the printed circuit board.
2. The PS-5 is factory- adjusted to an output voltage of 13.8 V. If the voltage widely differs from the rated value, adjustment may be made with semi-fixed potentiometer VR2, located on the printed circuit board, so that the correct value may be obtained on a multi-meter or DC voltmeter connected to the output terminal. (Fig. 4)
3. The overcurrent protection may be modified by means of semi-fixed potentiometer VR1 mounted on the printed circuit board. It is recommended, however, that re-adjustment be performed by our service station, since it is a critical device affecting equipment performance.

NOTES

SCHEMATIC DIAGRAM



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