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P A C K A R D
CUSTOM CAR RADIO
WITH
AUTOMATIC TUNING

OWNER'S MANUAL
INSTALLATION AND OPERATING
INSTRUCTIONS

This Manual Must be Given to the Owner

KNOW YOUR RADIO

This Owner's Manual and installation instructions has been prepared to give you all the information necessary to insure your obtaining the utmost in satisfactory performance from your Packard Radio.

While you may not be interested in the technical details of the method of installation and service procedure, you should have a thorough understanding of the functions of the radio Receiver and how to operate it in order to obtain the best possible radio performance from it.

We urge you to read carefully that portion of this Owner's Manual which pertains to the operation of the Receiver and its accessories, and suggest that you keep it in the car, available for ready reference.

Packard engineers have collaborated with Philco engineers, and have produced Packard car radios of unsurpassed quality, design and performance.

If there are any parts of this Owner's Manual that are not entirely clear to you, please ask your dealer for the necessary information so that he may be of assistance to you.

GENERAL ACCESSORY DIVISION
PACKARD MOTOR CAR COMPANY
Detroit, Michigan

To the Car Owner . . .

You no doubt, have had the features of your Packard Custom Radio explained to you. For your reference, we are listing below a few of the outstanding radio developments which are incorporated in your Packard Car Radio:

1. **THREE POSITION TONE CONTROL** — Permits adjustment to the tone of the Receiver from brilliant to bass.
2. **PROVISION FOR GUEST SPEAKER** — The radio is designed to operate an additional speaker for the enjoyment of rear seat passengers if desired.
3. **AUTOMATIC VOLUME CONTROL** — Maintains constant level of the volume on the station tuned in as determined by the setting of the manual control.
4. **EIGHT TUBE PERFORMANCE** — Achieved by the use of six tubes, two of which perform dual functions. This insures ample sensitivity and power.
5. **AUTOMATIC TUNING (optional)** — A new development permitting automatic tuning of any one of six selected stations by merely pushing a button.
6. **EIGHT-INCH DYNAMIC SPEAKER** — This large size speaker, provides unexcelled tone quality and ample volume.
7. **SUPERHETERODYNE CIRCUIT** — The superheterodyne circuit is used, as it has been found to be the best of all circuits for satisfactory car radio performance.
8. **INTERFERENCE FILTERING** — The Receiver is remarkably free from noise due to the elaborate interference filtering built into the Receiver.
9. **CONTROLS AND RADIO ENGINEERED TO FIT THE CAR** — With radio and controls engineered during the development of the car, the best possible electrical, mechanical, and acoustical results can be obtained.

OPERATION

To Turn the Receiver "ON" . . .

The Receiver is placed in operation by turning the left-hand control knob clockwise. After the tubes have been warmed up a minute or so, stations within range can be tuned in by turning the right-hand knob, after which the volume can be adjusted to a desired level with the left-hand control knob.

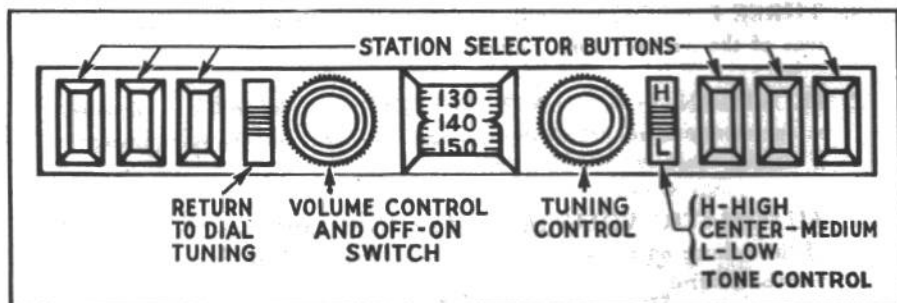


FIGURE 1

Automatic Tuning . . .

To tune in a station whose call letters appear on the station selector buttons, merely push that particular button and the station will automatically be tuned in. The button must be held down until the station is received. Any one of the six stations on the buttons may be selected at will and automatically tuned in. Press only one button at a time.

Dial Tuning . . .

After stations have been tuned in by the automatic push buttons, it will be necessary to push the "RETURN TO DIAL TUNING" button before stations can be selected with the Manual Tuning knob. (See Figure 1). Hold the button down until the mechanism has changed to dial tuning. Then tune in the desired stations with the tuning control and the broadcast stations will be received as indicated on the dial scale.

Tone Control . . .

As the tone varies, depending on the type of program tuned in, it is desirable to have an adjustment which permits the operator to adjust the tone to the point most pleasing for the particular program. The *Tone Control* provides this adjustment. The small lever on the right side of the tuning knob when moved up or down will give a range of tone response from Brilliant in the "H-high" position, to deep Bass in the "L-low" position. (See Figure 1).

Another desirable advantage of this feature is its use in subduing external interference. When operating the Receiver in noisy locations (as when following a street car) reception will be found more pleasing with the tone control set to the "Low" position.

To Turn the Receiver "OFF" . . .

Turn the left-hand knob (Volume Control and Switch) counter-clockwise until a slight click is heard and the dial light goes out.

To Change the Selection of Stations for Automatic Tuning . . .

If at a later date, the radio is to be operated in a different city or location where the local stations received are not those originally set up on the automatic tuning buttons, see your local Packard dealer. For a nominal charge, he will arrange to install the new call letters and adjust the Receiver for operation on the new stations.

Operation of the Cowl Antenna . . .

The cowl extension antenna will be found satisfactory for most local stations when it is in the compact position. When a local station is received poorly, or if the radio is operated in areas at some distance from broadcasting stations, the antenna rod sections can be pulled up, and the antenna extended to its full height, for maximum distance and performance.

The antenna rod is made of the highest grade rust-resisting metal. In order that it may retain its attractive appearance, it is advisable to thoroughly clean and wax the rod at regular intervals after it has been placed in service. Packard wax will prove ideal for this operation.

INSTALLATION INSTRUCTIONS

IT IS IMPORTANT THAT THESE INSTRUCTIONS BE READ CAREFULLY AND THE INSTALLATION MADE EXACTLY AS DESCRIBED. BY OBSERVING THESE INSTRUCTIONS, A SATISFACTORY INSTALLATION CAN BE MADE QUICKLY AND EASILY.

Antenna . . .

The Packard Cowl Antenna, Part No. PA 326533, or the Packard Undercarriage Antenna, Part No. PA 327559, can be used with this Receiver. Complete instructions for installing each antenna is included in the package.

This Receiver is wired for operation in conjunction with the cowl antenna because of its superior performance. It is not subject to tire static, mechanical abuse, or decrease in efficiency caused by weather conditions.

When the Receiver is to be used with the undercarriage antenna, the antenna connection to the antenna transformer *must* be changed. The necessary instructions are given on the label attached to the inside of the bottom cover on the Receiver housing. It is absolutely necessary that this change be made when using the Packard undercarriage Antenna in order to obtain maximum performance.

Receiver and Speaker . . .

Holes are provided in the dash for the Receiver and Speaker mounting bolts. The holes are plugged with rubber buttons which can easily be removed with a screw driver. Place the Receiver in position over the steering column (See Figure 2) with the control end facing the center of the car. Secure it with the "T" bolts.

Install the speaker on the right side of the dash and secure it with the two studs. In the "Model 1703 and 1705 Super Eight," install the speaker in the center of the dash and secure it in the usual manner. Mount the speaker with the speaker cable at the TOP.

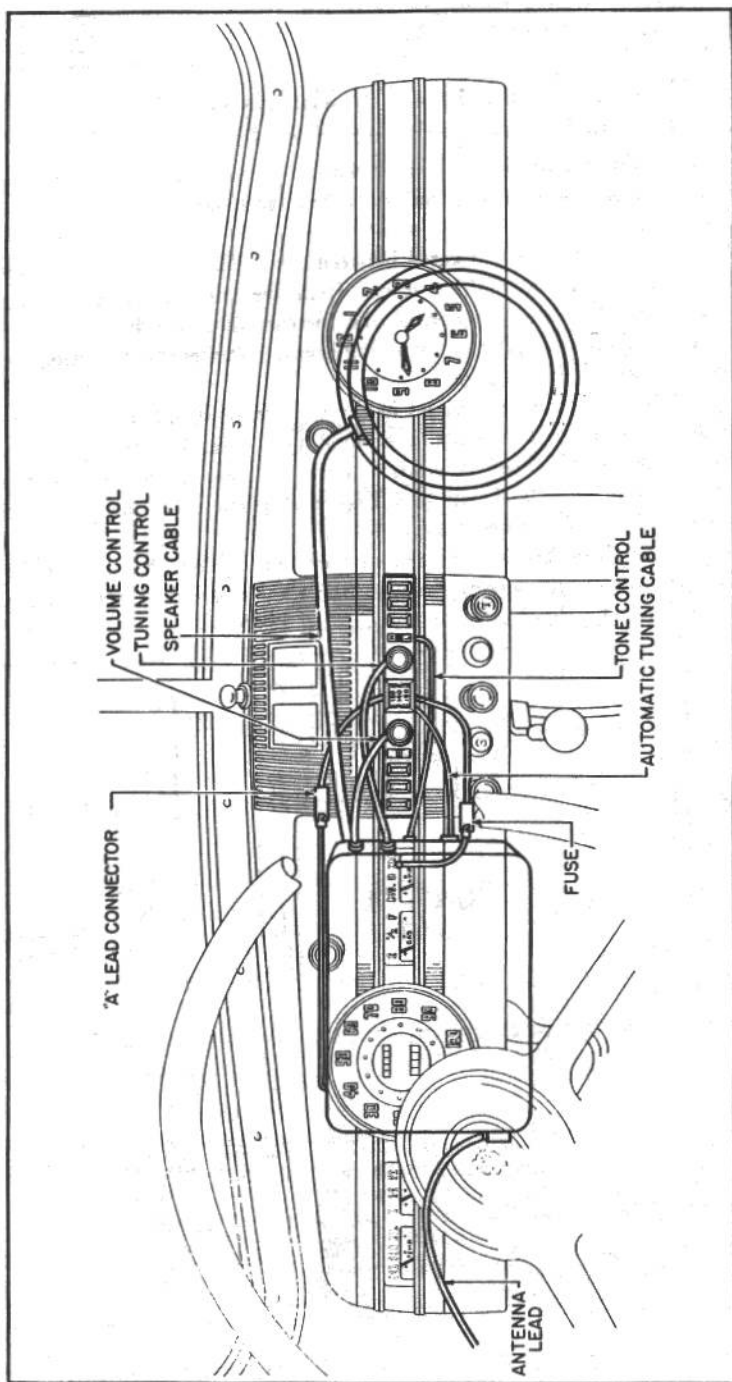


FIGURE 2

A GENERAL VIEW SHOWING INSTALLATION OF RECEIVER, SPEAKER AND CONTROL

CONTROL UNIT (For Models 1700-1-2)

See Instructions on Next Page for Models 1703-5.

1. Unpack the control assembly and control parts. Remove volume and tuning knobs, gland nut covers, gland nuts, and spacing washers, from the control head.

2. Remove the cover plate located between the chrome bars in the center of the instrument board, by pushing it out from the rear. Remove the two screws which hold the center portion of the instrument board in place (See Figure 3). Loosely assemble the two mounting brackets at these points, using the 8-32 screws supplied in the package.

3. Insert the two escutcheon plates in the instrument board, mounting the plate with the small square hole next to the round hole — on the left side.

4. Place the control head in position from the rear of the instrument board. Secure it with two gland nuts (See Figure 3) placing the washer spacers over the control shafts before installing.

Swing the mounting brackets around so they bear against the ends of the control plate and tighten the screws securely. Slip the gland nut covers over the gland nuts and apply the knobs to the control shafts.

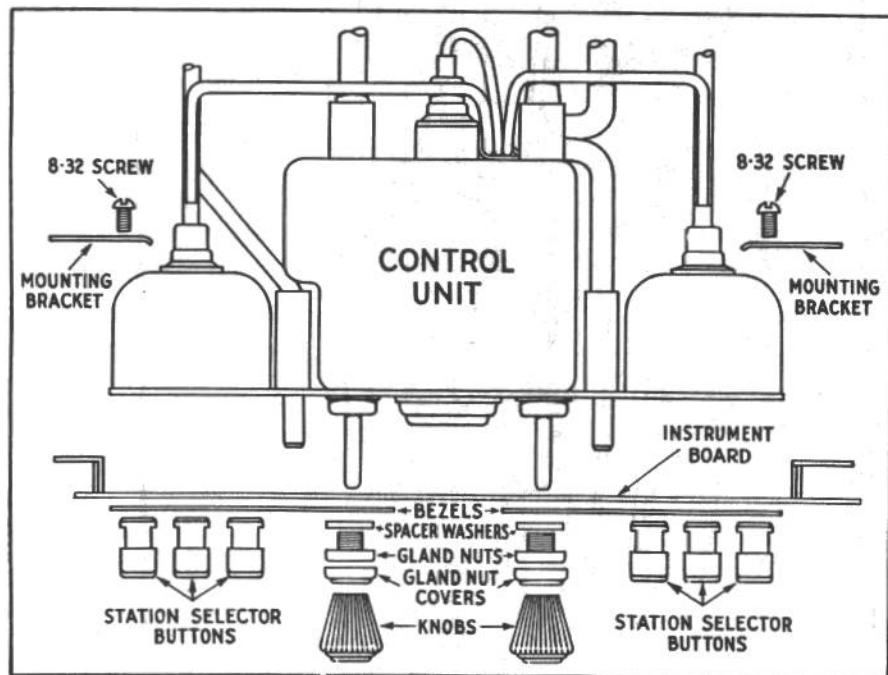


FIGURE 3

ASSEMBLY OF CONTROL UNIT TO INSTRUMENT BOARD

Control Shaft Connections . . .

Refer to Figures 2 and 4, which illustrate the shaft connections to the Receiver. Insert the tuning and volume control shafts into their respective couplings on the Receiver. Turn the knobs until the shafts engage, then tighten the shaft housing nuts.

Cable Connections . . .

Connect the speaker cable in the socket on the end of the Receiver (See Figure 4).

Insert the fuse in the fuse housing of the separate "A" lead and couple it to the short "A" lead on the control. The eyelet end of this lead must be connected to the discharge side of the ammeter.

Connect the remaining "A" lead to the connector on the "A" lead on the top side of the Receiver.

Connect the tone control cable and the automatic control cables in their proper sockets on the end of the Receiver. Refer to Figure 4.

Connect the antenna lead in its socket on the left end of the Receiver.

TO INSTALL THE CONTROL UNIT IN A 1703-1705 "SUPER EIGHT," follow the above instructions with these exceptions:

1. Before installing the control unit, remove the chrome bezel on the control unit.
2. Do not use the two spacer washers under the gland nuts as mentioned in section four.
3. When the control head is installed, use the new super-eight control head panel PA 335869. This may be obtained from the Packard Accessory Division.

To Synchronize Volume Control . . .

Turn the volume control (left) knob clockwise as far as it will go. Then turn it counter-clockwise until the switch clicks off. This synchronizes the "off" position of the switch with the "off" position of the volume control.

Dial Adjustment . . .

As the tuning dial is calibrated in kilocycles, it will be necessary to line it up with the Receiver, so that stations may be tuned in at the proper place on the dial.

This is done as follows:

Turn the tuning knob first to the right until a stop point is reached, then repeat in the opposite direction.

Turn on the Receiver and accurately tune in a station whose frequency in kilocycles is known. (The number on the dial represents channel numbers which, with the addition of a zero, become the frequency numbers).

If the stations do not come in at the exact frequency on the dial, hold the tuning control knob and with the rubber on the end of a lead pencil, move the dial until the correct frequency setting is obtained.

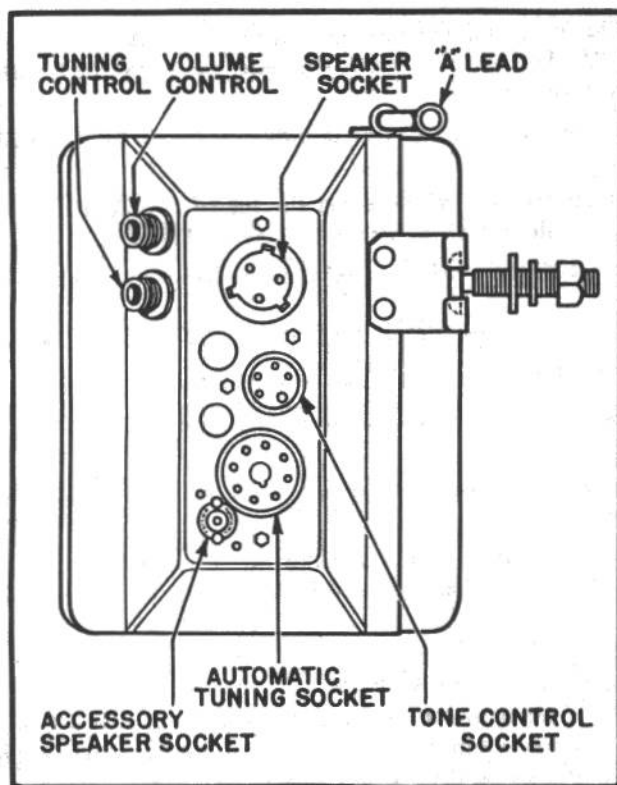


FIGURE 4

VIEW OF RECEIVER SHOWING CABLE CONNECTIONS

Guest Speaker . . .

An auxiliary speaker may be obtained for installation in the back of the front seat on four door sedan models. The use of this speaker greatly adds to the pleasure of passengers in the rear seat by giving more equal sound distribution in

the rear of the car. Full instructions are packed with each auxiliary speaker for its installation; it is part number PA 326756, and may be obtained from the Packard Accessory Division.

Spark Interference Elimination . . .

1. Install an interference condenser on the generator, fastening it under the ground screw on the generator. Do not use the "FIELD" terminal (See Figure 5). Connect the condenser lead to the "A" terminal on the generator. If generator interference persists, it can be eliminated by cleaning the commutator and re-seating the brushes.

2. Connect an interference condenser to the feed lead on either the ignition switch or the ammeter. Try both locations and install the condenser where it is the most effective. The condenser can be mounted on the flange of the instrument board.

3. Cut the distributor-to-coil high tension lead about one inch from the distributor cap and install the screw-in type resistor. (See Figure 5).

4. To check for ignition interference, turn on the radio, start the motor and disconnect the antenna lead-in from the Receiver. If there is any interference coming thru when the volume control is three-quarters open and the Receiver tuned between stations, carefully relocate the speaker cable and ammeter lead so that the interference is reduced to a minimum and fasten at that point. Reconnect the antenna lead and if some interference is still present, move the antenna lead to the most quiet position.

Interference from electric clocks can be eliminated by connecting an additional interference condenser to the ammeter terminal.

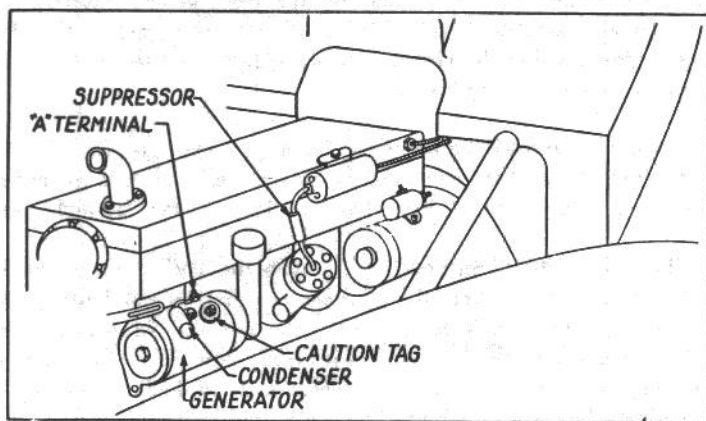


FIGURE 5

SETTING UP THE RECEIVER FOR AUTOMATIC TUNING

1. First turn on the Receiver and allow it to operate for twenty minutes before making the adjustments. During this interval proceed with the other operations as follows:

2. Select and remove from the printed call letter sheet, call letters of six popular stations received in the area in which the radio is to be operated. Select the stations within the range of each button as shown in Figure 6.

3. Remove the knobs, gland nut covers and gland nuts. Loosen the two end mounting screws so the control assembly may be moved back to remove the bezels. Remove the bezel plates. (If the set is not yet installed, disregard the above.)

4. Remove Chrome Caps from Push Buttons by pulling off. Insert a celluloid window and a call letter in each cap and install on the buttons as follows:

The cap with the call letters of the station having the lowest kilocycle frequency, should be placed on the extreme left button (No. 6). The next highest frequency call letters in second from extreme left (No. 5 position). Proceed in like manner from left to right with the remaining call letters in the order of their frequency.

EXAMPLE: A station broadcasting on 600 KC on No. 6 button, 750 KC on No. 5 button, 1000 KC on No. 4 button, etc.

Push control head back in place. Apply bezels, gland nuts and cover, and knobs. Tighten end mounting screws. (Supplement)

5. Remove the small cover plate on the front of the Receiver housing by prying off with a screw driver. This makes accessible the six pairs of screw adjustments for aligning the circuits to the frequency of the stations selected for automatic tuning. (See Fig. 6).

6. Push in the small button (See Figure 1) marked "RETURN TO DIAL TUNING" until the mechanism stops and the Receiver is operating with the conventional tuning knob. Place the tone lever in the "H-high" position.

7. Tune in with the manual tuning knob the station whose call letters are in the No. 6 button. Note the program and push in this button. With a small screw driver turn the screw in the *left* row opposite No. 6 (see Figure 6) to the right or left until the same station is heard. Now adjust the screw in the *right* row opposite No. 6, for maximum volume. If in doubt about the correct station, push the "Return to Manual" button and recheck.

Continue the same procedure with No. 5, 4, 3, 2, and 1 buttons in this rotation, until all six stations whose call letters are on the buttons can be tuned in by pushing their respective buttons. Replace the cover plate.

The Receiver and control may be set up before being installed in the car, but FINAL adjustments must be made with the radio operating on the antenna in the car.

Be sure to save, and give to the owner, the unused call letters from the printed call letter sheet as they may be required at a new location at some future time.

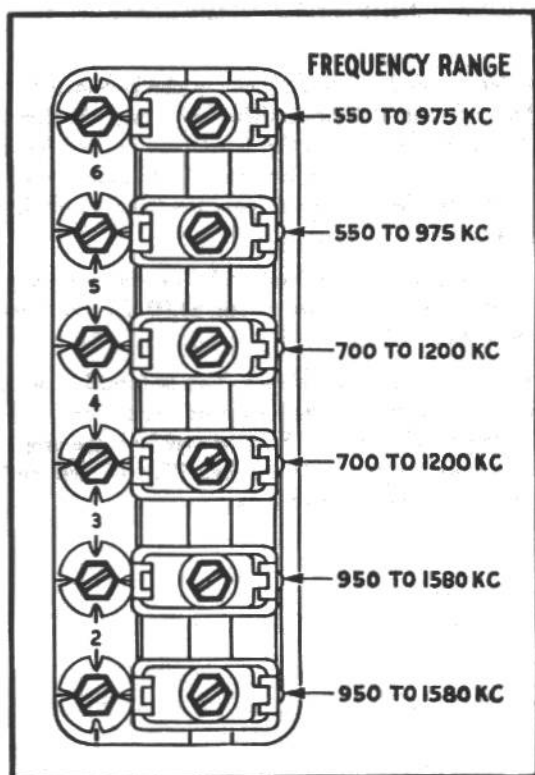


FIGURE 6

FREQUENCY RANGE AND ADJUSTING SCREWS

WARRANTY AND SERVICE

Your Packard Custom Radio is covered by Warranty against defect in material and workmanship for a period of 90 days after delivery of the radio.

In addition, Warranty Repair service is provided at all authorized PHILCO Warranty Labor Service Stations.

To Obtain Warranty Service . . .

1. Return the radio to your Packard dealer or, if you are traveling, return it to the nearest Packard dealer.

2. Have the dealer make preliminary checks and such minor repairs as replacing burnt out fuses, defective tubes, vibrators, repairing loose connections, etc.

3. If the dealer has made these preliminary checks and tests and is unable to repair the radio so that it performs satisfactorily, have the dealer remove the radio from the car and return it to the nearest authorized Warranty Labor Service Station where free warranty repairs will be made as covered by the Warranty Policy. When the repairs are completed, have the dealer re-install the radio in your car.

In case you are traveling, the Packard dealer to whom you apply for service will render a handling charge not to exceed \$1.00 for the removal and re-installation of the radio.

IMPORTANT: A Warranty Registration Tag is furnished with your radio. This tag must be filled in and attached to your radio when it is installed, in order that the Warranty Labor Service Stations may have the proper information when you require service under the Warranty. This is their authorization to render warranty service "free of charge" to you.

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