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USER HANDBOOK

for

STATION RADIO A14 CLIP-ON KIT

in Truck, ½-ton, cargo, Rover 1

Published under the authority of
The Signal Officer-in-Chief (Army), Ministry of Defence, Whitehall, S.W.1.

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ASSOCIATED PUBLICATIONS

User handbook for Station Radio A14 - Army Code 13119
User handbook for SRA 14 clip-on kit for Rovers - Army Code 60239
EMER Wheeled Vehicles Q 027/7 Modification Instruction No. 1.

DESCRIPTION

1. Installation kit, electronic equipment, S.R. A14 (clip-on kit), enabled S.R. A14 to be installed in Trucks G.S., F.F.R., ¼-ton Rover 8 or ¾-ton Rover 9. Adapter kit to Rover ½-ton enables users to install the A14 clip-on kit and S.R. A14 in Trucks G.S. cargo, ½-ton, Rover 1.

2. In this installation the S.R. A14 is operated as it would be in a manpack role and it is powered by its own internal battery.

3. The A14 can be fitted on either side of the truck but radio set and antenna must both be on the same side so that the antenna connector can be as short as possible. All the component parts of the truck mounted antenna are provided in the kits quoted below.

EQUIPMENT REQUIRED

Installation kit, electronic equipment, S.R. A14 (clip-on kit), Z1/5820-99-193-4710

4. Details are given in the relevant CES and in the user handbook for S.R. A14 clip-on kit for Rovers, Army Code 60239.

Adapter kit to Rover ½-ton, Z1/5820-99-114-8213

5. Details are given in the relevant CES. The adapter kit contains the following items, with the necessary screws, nuts, washers, etc.

Bracket antenna base, long, Z42/5985-99-114-8214
Bracket antenna base, short, Z42/5985-99-114-8215
Mounting antenna base, Z42/5985-99-114-8216
Frame mounting, Z42/5985-99-114-8217
Handbook
EMER

S.R. A14 manpack radio station

6. This kit is held by users.

VEHICLE MODIFICATIONS

7. Details of the modification to prepare the ½-ton Rover for the A14 clip-on kit installation are given in EMER Wheeled Vehicles Q 027/7, modification instruction No. 1. The modification consists of four holes drilled in the left hand or the right hand wheel arch. Users should send trucks to workshops for these holes to be drilled. The wooden 'L' shaped radio set carrier from the installation kit, and the frame from the adapter kit in which it is mounted, should be sent to workshops with each truck. For each vehicle to be modified, users must inform workshops whether the holes are to be drilled on the left hand or the right hand side.

INSTALLATION INSTRUCTIONS

Radio

8. Locate the four holes in the appropriate wheel arch. Take the steel angle frame mounting from the adapter kit and place it over the four holes, positioned so that the two studs are towards the centre of the truck. These studs are intended for the battery charger.

9. Take the wooden 'L' shaped carrier from the installation kit and fit it into the frame with the straps towards the centre of the truck. Secure it with four 3-in. bolts. Fit a washer under each bolt head, pass each bolt down through the wooden carrier, the frame and the wheel arch. Under the wheel arch, fit a 1½-in. dia. washer against the metal. Secure with nut and lock nut.

10. Fit the radio into the carrier with the antenna tuning unit towards the antenna position. Fold the webbing tidily and fasten the carrier strap firmly round the radio.

Battery charger

11. Take the battery charger from the installation kit. Before fitting it, make sure that its input is correctly adjusted to suit the voltage of the vehicle battery to which it is to be connected. See the A14 user handbook.

NOTE - The Rover ½-ton cargo truck has a 12V battery, not 24V as in the FFR version. In Rover ½-ton cargo trucks the battery negative is earthed.

12. Fit the battery charger to the two studs on the frame which carries the radio. Secure it with two nuts and washers.

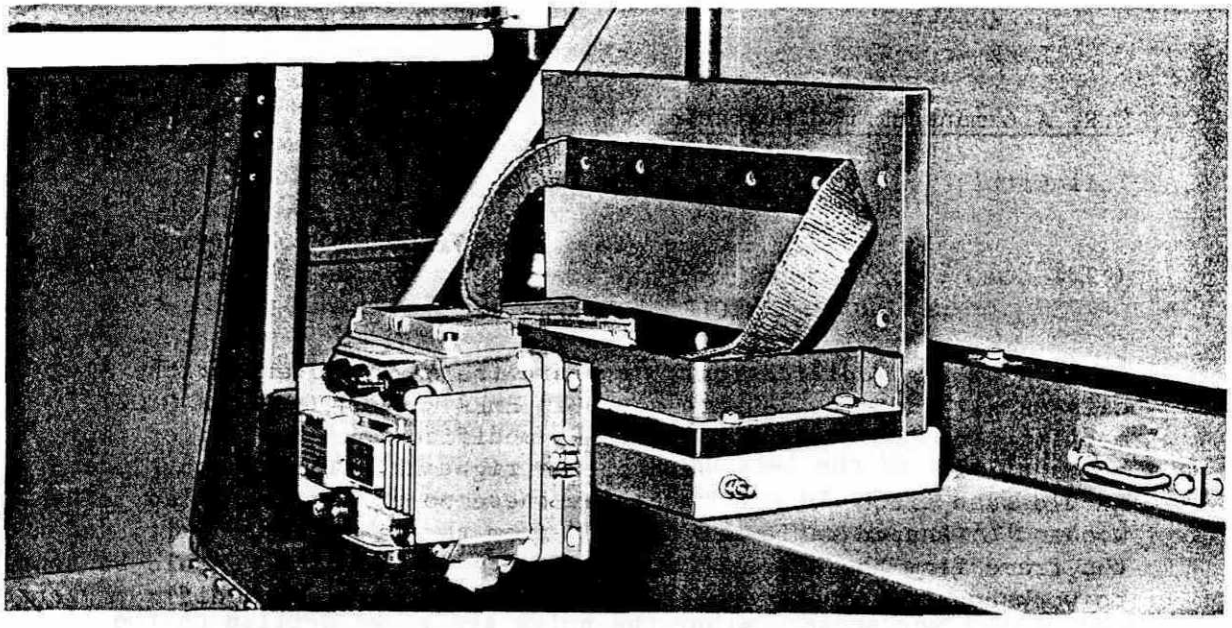

FIG. 1 FITTING RADIO CARRIER AND BATTERY CHARGER

Antenna bracket

13. If the detachable body sides have been removed from the truck, use the short antenna bracket provided in the adapter kit. See fig. 2. Fit it on the same side as the radio as follows: Hook the bottom of the bracket under the truck side wall, position the loosely rivetted top flap over the top of the wall, engage the clamping hook in the adjacent 'D' ring bolted to the wall for lashing down cargo. Tighten the nut firmly to hold the bracket.

14. If the body sides are in position on the truck, use the long bracket. It is fitted in the same way as the short bracket described above.

15. A different vertical mounting tube for the antenna base is provided for the ½-ton truck because the tube used on Rover 8, 9, etc., cannot be fitted to the new antenna bracket. Fit this 68 cm (27 in.) mounting tube into the bracket which has just been clamped onto the truck. Near the bottom a flange with a flat on one side locates the tube correctly and prevents it turning. Fasten it by tightening the locking screw at the bottom of the bracket.

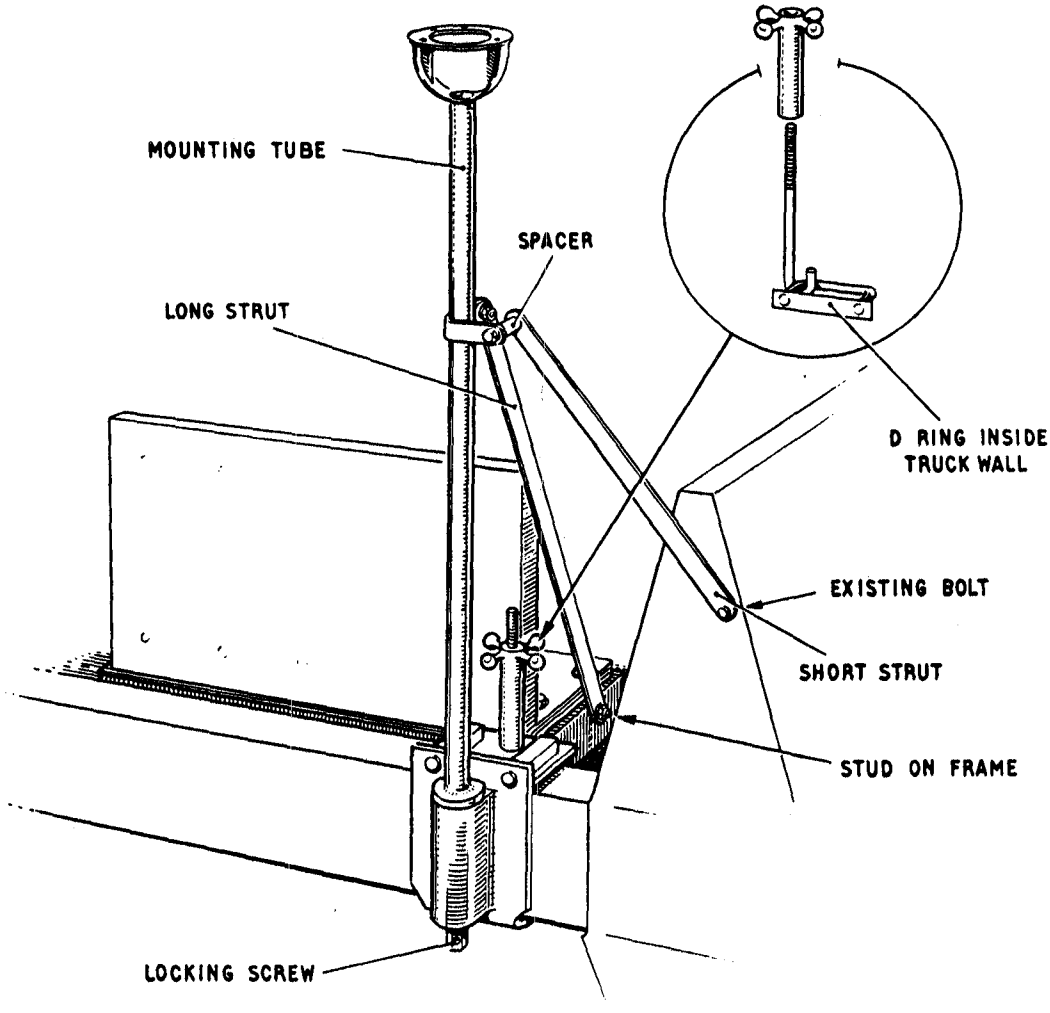

FIG. 2 FITTING THE ANTENNA BRACKET

16. Bolt the two bracing struts to the lugs on the tube, the long one across the vehicle and the short one to the front. Note that a 15 mm (⅝-in.) spacer has to be fitted between the top of the short strut and the lug on the tube to keep the strut in line with the side of the truck. See fig. 2. Then fasten the long strut to the stud on the side of the frame which holds the radio and the short strut to an existing bolt on the side of the truck. Screws, nuts, spring washers, flat washers, etc., are provided with the mounting.

Antenna connector

17. Make a connector of the exact length to reach between the antenna base and the antenna tuning unit as described in paragraphs 18 to 23, calculating the length of cable required as described in paragraph 22. One end of the cable must be connected to the inside of the antenna base before the base is fitted. The parts are supplied in the clip-on kit and should be assembled as follows:

18. Take the length of cable and strip the insulation back for 1 cm (½-in.) at one end. Thread this end through the gland nut and the washer supplied with it. See fig. 3. Splay the wires out over the washer. Tuck them under it to retain them and slide the gland nut up to the washer. Screw the gland nut to the terminal inside the antenna base using the tool supplied with it.

19. After fitting the antenna connector to the terminal inside the antenna base, fit the antenna base to the flange on the top of the mounting tube. Fit a plate, plastic, between the antenna base and the flange and secure the assembly by means of the six screws ¼-in UNF, nuts and spring washers supplied with the mounting. See fig. 4.

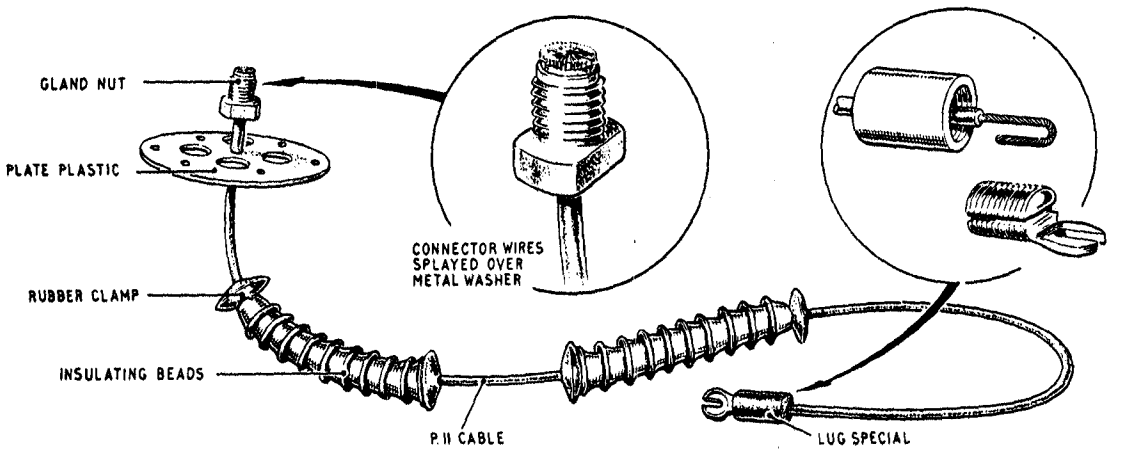

FIG. 3 MAKING THE VEHICLE ANTENNA CONNECTOR

20. On the free end of the cable which hangs from the antenna base thread one rubber clamp, 25 insulators with open ends downwards and the second rubber clamp. Group the insulators to prevent the cable touching the antenna mounting. When the hood is fitted to the truck, thread the cable through the input hole provided near the antenna base. Do not leave any slack cable outside the hood. Inside the hood, thread on the cable another rubber clamp, the remaining 25 insulators and the fourth clamp.

21. If the hood is not fitted, thread the two groups of insulators onto the cable and position them along it as necessary to prevent the cable touching any metal part of the vehicle or installed equipment.

NOTE - If the cable should touch any metal parts when the set is transmitting, tuning adjustments would be upset.

22. Do not cut to length before the A14 and its ATU are installed. After fitting the A14, offer the cable up to ascertain the length required to reach the ATU antenna socket. The connector should be as short as possible without straining it as it must not touch any metal projections. Allow approximately 10 cm (4-in.) sideways movement in the centre of the cable so that the flexing of the antenna base does not strain it. Add 2.5 cm (1-in.) to allow for the loop inside the lug and cut the cable.

NOTE - The connector is an effective part of the antenna and must be kept as short as possible or tuning calculations will be upset and there will be a loss of output.

23. At the end of the cable, strip back the insulation for 4 cm (1½-in.) and twist the wire strands firmly together. Remove the bush from the body of the lug and slip it on to the cable. Fit the wire into the groove in the side of the lug. Screw the bush firmly on to the lug to grip the wire. See fig. 3.

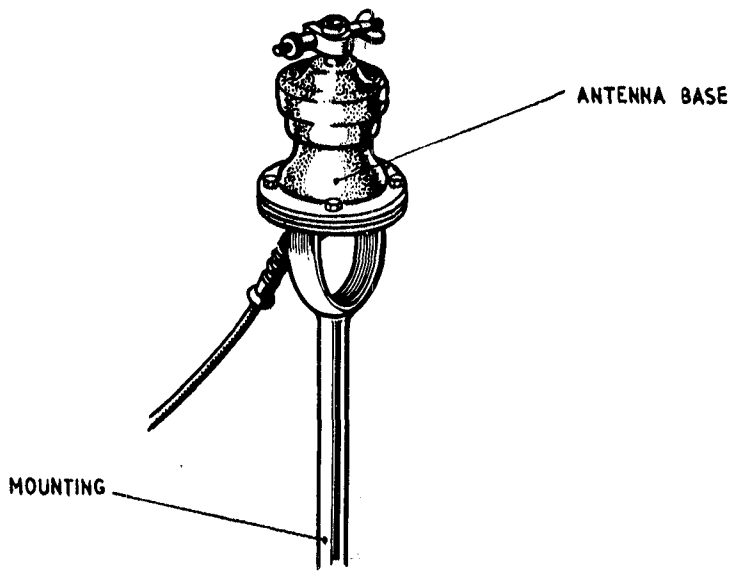

FIG. 4 FITTING THE ANTENNA BASE

24. An adapter RF lead is to be fitted between the antenna connector and the ATU antenna socket. Fit the lug to this adapter and tighten the terminal to retain it. Insert the plug into the antenna socket on the ATU.

Antenna rod

25. When it is required for use, fit together three 1.2 m (4-ft.) antenna sections and mount them in the antenna base. A 3.6 m (12-ft.) rod should normally be used on the truck.

CONNECTIONS FOR BATTERY CHARGING

26. The Rover ½-ton cargo truck is not equipped with power take off and improvised arrangements have to be made to charge the radio battery. This can be done by connecting the A14 battery charger direct to the vehicle battery as follows.

27. Obtain two cable assemblies from the installation kit, one 2.4 m (8-ft.) long and the other 3 m (10-ft.) long. Connect the 8 ft cable between the battery charger output socket and the A14 battery. Connect the 3 m (10-ft.) cable between the battery charger input plug and the terminals on the vehicle battery.

IMPORTANT - Correct polarity is essential when connecting the battery charging cable to 12V or 24V power supplies. Connect the red cable to the battery positive (+) terminal and the black cable to the battery negative (-) terminal.