

ARMY EQUIPMENT
SUPPORT PUBLICATION

CARRIER, FULLY TRACKED, ARTICULATED, LHD, 90A BU206 (UK VARIANT)

INSTALLATION INSTRUCTION NO. 7

SUBJECT :Two Way Voice Intercommunication System

INTRODUCTION

1. All vehicles introduced into Service require intercommunication between the vehicle crew members and passengers. This instruction details the kit required and instructions to install the Vehicle Intercommunication System. Due to the high level of ambient noise in the vehicle it is recommended that the Staff User Headset NSN 5965-99-649-8166 is used which provides hearing protection.

ASSOCIATED PUBLICATIONS

2. The associated publications are as follows:-

INSTALLATION ILLUSTRATIONS

3.

Figures

- 1 Vehicle Installation Layout
- 2 Drivers Junction Box Mounting Plate Fixing details.
- 3 Junction Box right angled Mounting Plate Fixing detail:
- 4 Assembled ty-rap end cradle.
- 5 Position of cradles with ty-raps to support Cable No.5.
- 6 Position of ty-raps on frame corners.

IMPLEMENTATION PLAN

Applicability

4. This installation is to be fitted to Carrier, fully Tracked, Articulated, LHD, 90A, BU206. UAC1260-9103 UK Variants.

Action required by:

5. Units and establishments holding subject vehicles

5.1. When authorised by LS(OR)3.

5.2. Record installation instruction details in the vehicle documents.

5.3. Demand the following installation kit:

MOD SET 'G' FU 1075093

quote this instruction as authority for the demand and the registration number of the vehicle.

5.4. On receipt of stores, request REME/Workshops to embody this installation.

6. Units and establishments embodying this installation

6.1. This installation is to be carried out by Nominated Workshops authorised by EME 76.

6.2. Units embodying this installation are to enter completion details in the vehicle documents.

Man Hour content

7 Estimated time for:-

7.1. Fitting 4 off Junction
Boxes and 1 off AF Amplifier -

7.2. Fitting and securing interconnecting
cables in front and rear cabs -

Associated modifications

8 Nil.

EQUIPMENT, TOOLS AND STORES

Stores required

9 Vehicle Intercom System 9080 Kit of Parts

<u>Item No.</u>	<u>Description</u>	<u>Nato Stock No.</u>	<u>Qty</u>
1	Amplifier AF	5820-99-725-0604	1
2	Junction Box	5965-99-725-0603	4
3	Power Cable Assy Pt. No. 27821	5995-99-751-5859	1
4	Cable Assy No. 3 Pt. No. 20563	5995-99-751-5869	1
5	Cable Assy No. 4 Pt. No. 20564	5995-99-751-5870	1
6	Cable Assy No. 5 Pt. No. 20565	5995-99-751-5871	1
7	Plate, Mounting, right angle Pt. No. 27832	5340-99-782-3596	3
8	Plate, Mounting Pt. No. 27833	5830-99-782-3597	1
9	Plate, Anchor Pt. No. 27834	5310-99-782-3601	3

<u>Item No.</u>	<u>Description</u>	<u>Nato Stock No.</u>	<u>Qty</u>
10	Screws, self tapping pan head 1/2" No.12		2
11	Bolts M8 x 25mm hx hd. st.st.		4
12	Washer, shakeproof M8		4
13	Screw M6 x 20mm lg. csk		6
14	Plate, anchor Pt. No. 27834		3
15	Screw M4 x 15mm lg.pan hd.slotted		8
16	Ty-rap cradle self adhesive		15
17	Ty-rap long		15
18	Ty-rap short		25
19	Araldite, Rapid twin pack		1
20	Fuse 1A		1

DETAILED INSTRUCTIONS

General

10.

10.1. Mod Set - comprises the items listed in Table at Para 9.

10.2. To install this modification, the sequence of operations given must be followed.

10.3. Numbers in brackets in this text refer to item numbers in Table at para 9 and Figure 1.

10.4. The right and left hand sides of the vehicle are those which would be assumed by a person sitting in the driver's seat.

10.5. Modification details to the vehicle are given in Figs.1 to 6.

CAUTION

Before commencing this installation modification the vehicle and radio batteries located under the left and right hand side rear passenger seats in the front car, must be disconnected.

NOTE: Use Loctite 290 on ALL screws, associated with mounting the AF Amplifier and Junction Boxes, unless otherwise stated, including the mounting plates and Junction Box top plate assembly.

Front Cab

10.6. Fitting the drivers Junction Box mounting.

10.6.1. Referring to Fig. 1 and 2, mark the roof position for the Mounting Plate and screw holes.

10.6.2. Using a hand drill and a 4.6mm size drill, carefully drill two marked holes through inner skin only. Do not allow drill bit to exceed a depth of 10mm., thus ensuring no damage to the outer skin occurs. An electric drill is NOT recommended for this operation.

10.6.3. Using emery paper, remove paint gloss from shaded area shown in Fig. 2.

10.6.4. Ensure threaded holes are properly masked on unpainted face of Mounting Plate. Mix up half the quantity of araldite (19) provided, using equal quantities of adhesive and hardener and cover unpainted surface of Mounting Plate (8) to within 15mm of its edge. Ensure araldite is present in both holes in roof.

10.6.5. Position the Mounting Plate and secure using two self tapping screws.(10). Do not use Loctite 290 on these two screws. Tighten screws evenly alternating between them, to ensure an even pressure is exerted over the whole araldited area. When araldite appears at the outer edge of mounting plate no further tightening of screws is necessary. Leave to set as long as is possible but a minimum of 3 hours.

10.7. Fitting the passenger Junction Box Mounting

10.7.1. Referring to Fig. 1 and 3, mark hole positions for the Mounting Plate (7) on frame, ensuring bottom of bracket is flush with bottom of frame.

10.7.2. Drill pilot hole of approximately 4mm in marked positions before expanding to 8mm diameter. Collect all swarf e.g. use vacuum cleaner.

10.7.3. Place Cable No.5 (6) into well of frame where holes have been drilled such that the seven pin connector is to the right of the vehicle (starboard). Refer to Fig. 1, view on Arrow 'A'.

10.7.4. Feed Cable No. 4 (5) over top of frame in vicinity of rear hatch and manoeuvre along to the left (port) side of holes drilled at operation 10.7.2.

10.7.5. Position Anchor Plate (9) into well of frame and locate its tapped holes behind the holes drilled at 10.7.2.

10.7.6. Position Mounting Plate (7) onto frame and secure using two screws (13) into the Anchor Plate. Ensure that the Mounting Plate bottom edge is flush with the bottom of the frame. See Fig. 3.

10.8. Fitting the AF Amplifier

10.8.1. Referring to Fig.1 position the AF Amplifier onto the sloping rear panel, with its connectors uppermost, and locate over the four tapped fixing holes.

10.8.2. Using four bolts (11) and spring washer (12) on each, secure the AF Amplifier in position.

10.9. Fitting the Junction Boxes

NOTE: To access the Junction Box mounting holes it is necessary to remove its top plate assembly secured with two retaining screws. The two mounting holes, counter-bored are diagonally opposite each other in its base assembly.

10.9.1. Fitting the passenger Junction Box

10.9.1.1. Using two screws (15), secure the Junction Box (2) onto the right angle Mounting Plate fitted at 10.7. such that the volume control is pointing into the middle of the cab.

10.9.2 Fitting the driver's Junction Box

10.9.2.1. Using two screws (15) secure the Junction Box (2) onto the roof mounting, fitted at 10.6, such that the volume control is facing the windscreen.

10.10. Fitting the Interconnecting Cables

10.10.1. Remove panels on left (port) side of cab, beneath both door hatches, to expose cable looms.

10.10.2. Connect Power Cable (3) to AF Amplifier 'BATTERY' connector and, referring to Fig. 1, route as follows:-

10.10.2.1. Lay in frame cross member above AF Amplifier, feeding to left (port).

10.10.2.2. Feed down to floor through cleates of main cable loom.

10.10.2.3. Feed cable along left side of cab floor with other cables to feet of driver.

10.10.2.4. Position cable against loom rising vertically and feed through its cable cleat. Secure cable to loom close to the floor using a ty-rap (18).

10.10.3. Identify vertical earth terminal strip on left side of cab by drivers feet and connect blue wire to a spare terminal.

10.10.4. Route brown wire to main fuse box and connect to the bottom of Fuse No. 4. Ensure stripped tinned section of brown wire is central under retaining screw.

10.10.5. Fit new fuse (20) in position of Fuse No. 4.

10.11. Fitting interconnecting Cable Assy No. 4.

10.11.1. Identify Cable Assy. No. 4 positioned over frame at operation 10.7.4. and fit connector hanging over front of frame, to the passenger Junction Box rear 'LINE' connector.

10.11.2. Fit its other connector to AF Amplifier 'FRONT CAB LINE' connector.

10.12. Fitting Interconnecting Cable Assy No. 5.

10.12.1. Identify Cable Assy No.5 positioned in frame at operation 10.7.3. and connect left (port) facing connector to passenger Junction Box front 'LINE' connector, and feed slack cable into frame well.

10.12.2. Continue laying cable into frame well, to the right (starboard) side of the vehicle and fit a long ty-rap (17) around the frame thus containing the cable.

10.12.3. Thread short ty-rap (18) through ty-rap cradle (16), such that the ty-rap anchor protrudes to the cradle base side.

10.12.4. Remove greased paper backing from adhesive pad on cradle and referring to Fig. 1 position 150-200mm apart along well, above the right (starboard) passenger hatch, such that the ty-rap is vertical and its anchor to the bottom as in Fig. 4.

10.12.5. Fit a cradle (16) with ty-rap (18) on the rear facing side of the central pillar in line with the cradles fitted in operation 10.12.4. such that the ty-rap is vertical with its anchor to the bottom as in Fig.

10.12.6. Fit a cradle (16) with ty-rap (18) on the inward facing side of the central pillar, half way between the roof lighting cable and rear edge of pillar in line with, and similar attitude to that at 10.12.5.

10.12.7. Thread short ty-raps (18) between roof and cable loom running across roof 150-200mm apart, to point at right angles to driver's Junction Box, referring to Fig. 1. Ensure ty-rap anchors are protruding towards the roof.

10.12.8. Fit two cradles (17) and ty-raps (18) evenly spaced on roof between cable loom and driver's Junction Box. Plug Cable Assy No. 5 into driver Junction Box 'LINE' connector and secure cable with ty-raps along route detailed at 10.12.8, back to 10.12.4.

10.12.10. Pull any surplus cable back into the rear frame well ensuring no stress is exerted at connection made in operation 10.12.1.

10.13. Fitting interconnecting Cable No. 1.

10.13.1. Interconnecting Cable No. 1 (NSN: 5995-99-751-5861) illustrated in Fig. 1. should be fitted in accordance with Installation Instruction No.

10.13.2. Run cable along rear of the horizontal frame, from umbilical connector, and plug into the AF Amplifier connector marked "REAR CAB LINE".

Rear Cab

10.14. Fitting the port side Junction Box mounting.

10.14.1. Referring to Fig.1 and 3 mark hole positions for the Mounting Plate (7) on frame.

10.14.2. Drill pilot hole of approximately 4mm in marked positions before expanding to 8mm. diameter. Collect all swarf e.g. use vacuum cleaner.

10.14.3. Position Mounting Plate Anchor Plate into well of frame and locate its tapped holes behind the holes drilled at 10.14.2.

10.14.4. Position Mounting Plate (7) onto frame and secure using two screws (13) into the Anchor Plate. Ensure that the Mounting Plate bottom edge is flush with the bottom of the frame. See Fig.3

10.15. Fitting the starboard side Junction Box Mounting

10.15.1. Referring to Fig.1 and 3 carry out operations 10.14.1. to 10.14.4.

10.16. Fitting the Port and Starboard Side Passenger Junction Boxes

NOTE: To access the Junction Box mounting holes it is necessary to remove its top plate assembly secured with two retaining screws. The two mounting holes counterbored, are diagonally opposite each other in its base assembly. Once mounted replace the top plate and secure into position.

10.16.1. Using two screws (15) secure Junction Boxes onto the port and starboard right angle Mounting Plates as fitted at 10.14 and 10.15 such that the volume controls are pointing into the middle of the cab.

10.17. Fitting the Interconnecting Cables

10.17.1. Interconnecting Cable No. 2 (NSN: 5995-99-751-5662) illustrated in Fig. 1 should be fitted in accordance with Installation Instruction No.

10.17.2. Plug the connector of Cable No. 2. onto the port Junction Box rear connection, referring to Fig. 1.

10.17.3. Lay cable in frame well, between Junction Box and umbilical connector.

10.18. Fitting Interconnecting Cable No. 3

10.18.1. Referring to Fig. 1 plug one end of Cable No.3 onto the port Junction Box connector and the other end onto the Starboard Junction Box upper connector.

10.18.2. Lay cable in frame well, between the two Junction Boxes.

10.18.3. Fit long tie wrap (17) around the frame, to contain the cable in the well, one adjacent to each Junction Box and two at each corner, as shown in Fig. 6.

10.19. Testing

10.19.1. Carry out a visual check on the installation, particularly to ensure the Power Cable (4) has been connected to the vehicle supply correctly.

10.19.2. Reconnect the vehicle batteries ensuring polarity is observed.

10.19.2. Switch on the Intercom supply and, using two 'A' Vehicle Staff User Headsets, ensure intercommunication can be achieved between all Junction Box positions. During this check ensure that the volume controls operate smoothly.

10.19.3. Switch off the intercommunication supply.

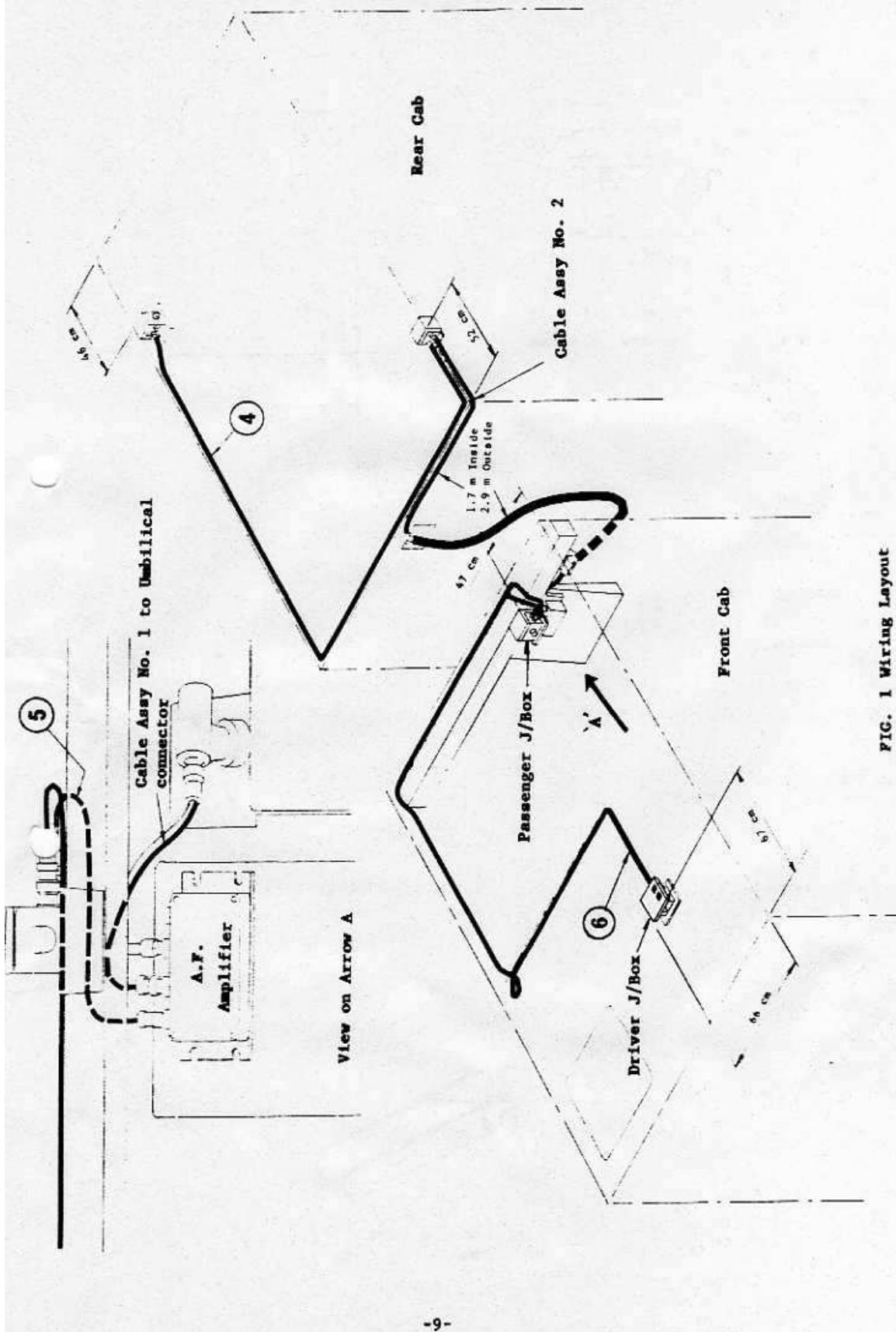


FIG. 1 Wiring Layout

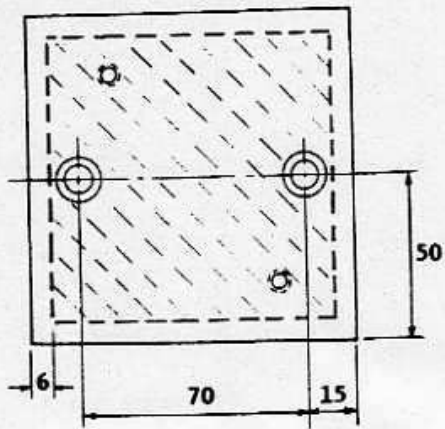


FIG.2 Drivers Junction Box mounting plate fixing details.

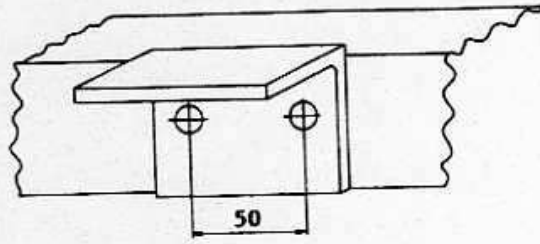


FIG. 3. Junction Box angled mounting bracket fixing detail.



FIG. 4. Assembled ty-rap and cradle.

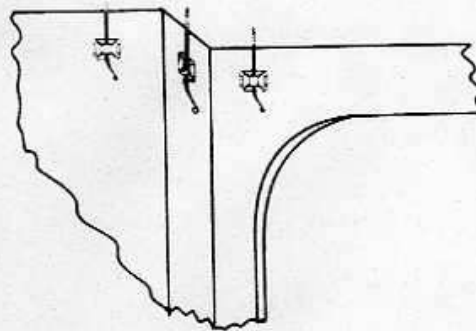


FIG.5. Position of cradles with ty-raps to support cable No. 5

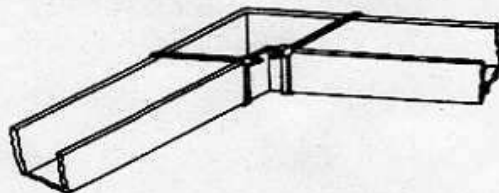


FIG. 6. Position of ty-raps on frame corners.