PHONE INTERCOM SYSTEM INSTALLATION / OPERATION

It is recommended that you read these instructions completely prior to acquiring tools and materials for the installation of the Phone-Com in order to help you decide which tools and materials are appropriate for your particular installation.

Recommended Tools:

Phillips screwdriver, slotted screwdriver, wire cutter, wire stripper, wire crimper.

Recommended Materials:

Four #8 mounting screws*, ten #6 lug connectors*, color-coded multi-conductor cable* (22 AWG minimum, four or five conductors depending on application - see Wiring Diagrams section), cable ties, in-line fuse assembly*, wire splices.

Note: These (*) items are provided with model PI-2 SET.

Mounting:

- 1) Select a suitable location for mounting each Phone-Com. Any conveniently located vertical or horizontal flat surface will suffice wood, metal or fiberglass. You may leave the phone unmounted on a tabletop, but fixed mounting will decrease the chance of eventual strain on the wiring which may cause loose connections. The Phone-Com is not waterproof and should not be located where it will be exposed to spray or excessive moisture. Avoid mounting the Phone-Com near fluorescent lights as these may interfere with its operation.
- 2) Remove the mounting bracket from the base of the Phone-Com by sliding it downward until it releases. Using two each #8 mounting screws, securely attach the bracket to the mounting surface with the "L" shaped securing tabs facing outward and upward.

Wiring:

- 1) Wiring the Phone-Com will probably be made easiest by securing it first to the mounting bracket. Align the slots on the back of the base with the mounting bracket securing tabs and slide downward. The Phone-Com will lock into place.
- Disconnect the phone plug which attaches the handset to the base. Set the handset aside for the time being.

- 3) Using a phillips screwdriver, remove the copper-colored screw which is on the front of the base where the mouthpiece normally rests. Remove the base cover by pulling outward slightly at the bottom and pushing it upward to release it. Note the terminal block in the center of the base with five terminals labeled "+", "CH" "B", "-" and "1", respectively.
- 4) Repeat all of the above steps for the second Phone-Com.
- 5) Route your four or five conductor cable between the two Phone-Corn calling stations and then cut it to the appropriate length. (See Wiring Diagrams to determine whether you need four or five conductors.) Note that the cable is routed into the Phone-Com via a small port located beside the phone jack at the bottom of the base. Color coded wiring is recommended to insure that wires are connected to proper terminals.

Five conductor cable is available from NEWMAR. Request part number 110-2205-0.

The cable should not be routed alongside unshielded cables or other electronic or electrical devices which may radiate electrical noise into the Phone-Com wiring. Such noise sources may include tachometer wiring, VHF power leads, battery charger leads, alternator charging leads, etc. Non-metallic fasteners such as cable ties are recommended for securing the cable. If metal fasteners such as staples are used, ensure that the cable is not accidently pierced or shorting of the conductors may occur.

- 6) Strip the ends of the individual conductors of the multi-conductor cable and your "+" and "-" power leads. Terminating the leads with ring lug connectors will ensure a secure installation. If you choose to terminate the leads use ring terminals appropriate for a #6 screw. Note that some terminals will need to accommodate two conductors. Where this is the case both conductor leads must be crimped into the same lug.
- 7) Attach the conductors to the terminal strip of each Phone-Com according to the appropriate diagram on the following page, carefully noting the color of each conductor to ensure correct connections. The wiring scheme in diagram A may be used on vehicles with positive, negative or floating grounds. The scheme in diagram B may only be used on negative ground vehicles. Both methods will yield identical performance of the Phone-Com.
- 8) Replace the base cover and reattach the handset.

Wiring Diagrams (Two Stations Only):

S CONDUCTOR METHOD

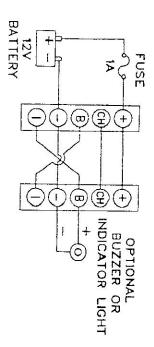


Diagram A

Ü. NEGATIVE GROUND VEHICLE) 4 CONDUCTOR METHOD

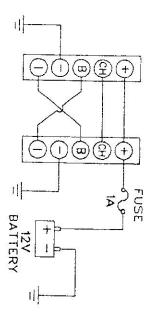


Diagram B

peration:

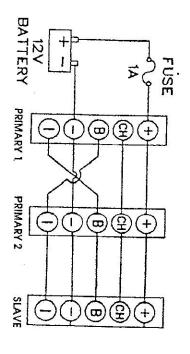
will illuminate for as long as you are pressing the button. buzzer on the other station will sound and the red light below the buttor picking up the handset and pressing the button on the Phone-Com base. The Energize your 12 volt power source. Operation is then simply a matter of

number: 578-0028-0.) contact the factory. (Buzzer part number: 117-0100-0, Indicator Lamp part location is available from NEWMAR. Check with your electronics dealer or which may be mounted externally in a more conspicuous or convenient buzzer may not be heard, a separate 12 volt buzzer or indicator lamp If you wish to operate the Phone-Com in a high noise area where the internal

Slave Option

and it can be used to call the other primary phone. However you will not be able exactly as the phone it is in parallel with. It will be paged (buzz) at the same time of the second and so on). When wired this way the slave phone will behave connect "B" of the first unit to "B" of the second, "CH" of the first unit to "CH" illustrated below, NEWMAR model PI-10. Proper wiring for an additional slave station is to page (buzz) the parallel unit. Multiple station selective calling requires to another unit. This involves wiring the second unit in parallel with the first. (i.e., If you desire, you may hook up an additional Phone-Com as a "slave"

Wiring with Slave Station:



Troubleshooting:

PROBLEM

0000	A. Interc	
COMPANIE OF SOLE	 A. Intercoms will not 	-
_		
	ᆵ	

each other. communicate or page

POSSIBLE CAUSE

SOLUTION

lead is blown. fuse in power

breaker is tripped or put power circuit

determining cause of or replace after overload. Reset circuit breaker

2. Bad 12 volt connection to intercom.

verify that intercoms are connection in wiring. and "-". If not locate bad across terminals "+" receiving 12 volts Using a voltmeter,

"B", "CH" and "1". Mis-wire of terminals

refer to wiring diagram. Verify proper wiring -

PROBLEM	POSSIBLE CAUSE	SOLUTION	PROBLEM
B. Intercoms com-	 Terminals "B" and	 Verify proper wiring -	D. Noise on intercom when engine is running
municate, however	"1" are incorrectly	refer to wiring diagram.	

terminals "B" or "1" or Bad connection on are incorrectly

be paged.

one or both cannot

nection, attach

refer to wiring diagram.

To verify bad conmeter should indicate at

detective intercom.

volts is not measured paging intercom is silent intercom, If 12 between "1" of paging locate bad connection push its paging button. paging intercom and not, move voltmeter to paged. If so, then intercom is being silent intercom. Voltintercorn and "B" of terminals "." and "1" of intercom is defective. If least 12 volts when terminals "-" and "B" of voltmeter between f 12 volts is measured,

defective.

hard to hear. communication is weak, properly, however C. Intercoms function

12 volt source low.

output voltage. If low converter, measure If battery powered converter. repair or replace (less than 12 VDC) powered by AC to DC recharge battery. If

POSSIBLE CAUSE

SOLUTION

or battery charger is when engine is running

operating.

system powering into 12 volt battery putting AC ripple battery charger ignition system or Engine alternator

additional help. Contact factory for battery charger and/or nator/ignition system, leads to intercom. Install filters on alter-12 volt input power

turned off. battery charger are when engine and E. Noise on intercom

Defective handset.

intercoms.

contact factory. Replace handset -

Specifications:

Input Range: 12-15 VDC

Size 81/2"H x 3 3/4"W x 3"D Wire Gauge: 22 AWG minimum Operating Current (Buzzing): 45 milliamps Operating Current (Talking): 20 milliamps Maximum Distance Between Stations: 1600 feet

Weight: 1.1 lbs.