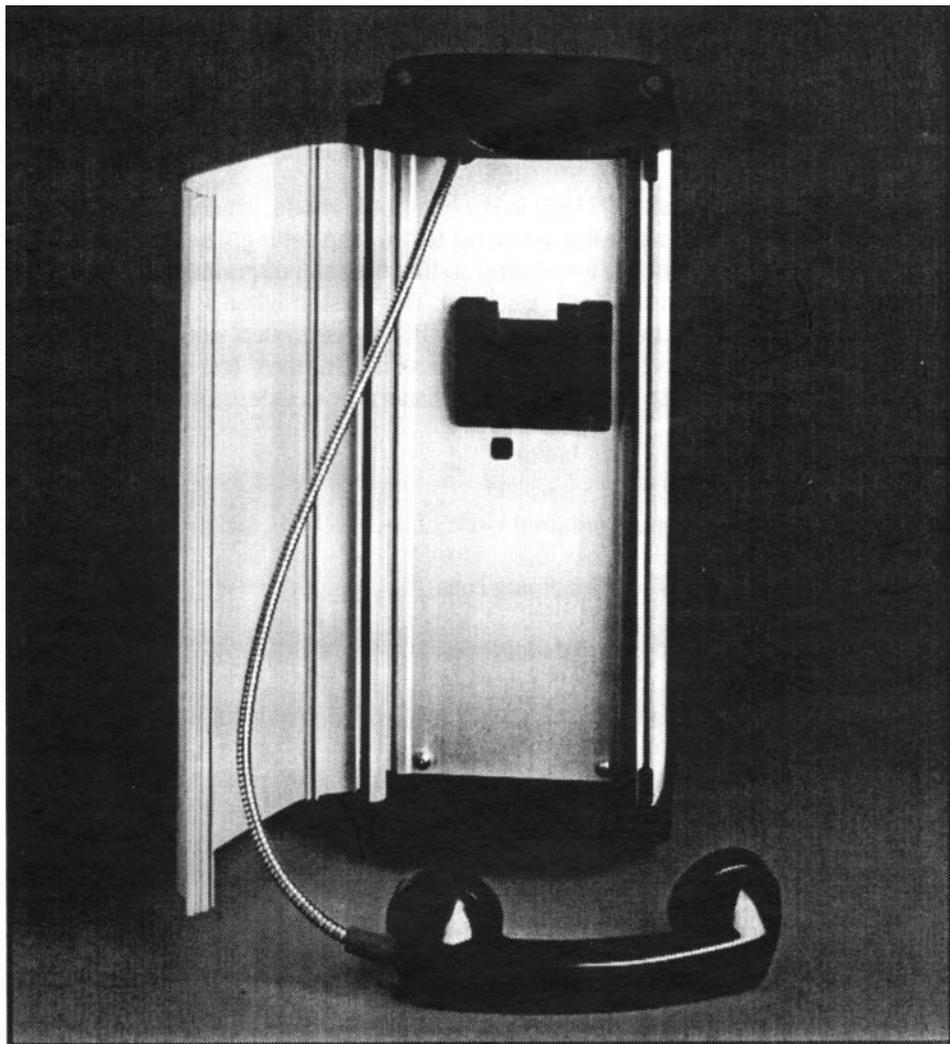


**USER GUIDE**  
**for**  
**RA705/2000 Series**  
**C.B. Weatherproof Telephones**



**R A C A L   A C O U S T I C S**

# ***General/Approved Facilities***

*The "Installation" information provided in this User Guide is for the sole use of your approved telephone installer.*

The types of telephone covered by this guide including the illuminated panel version in the 'Off-hook' illumination mode, are approved in the United Kingdom under the no. S/3064/3/P/502732 for connection to a direct exchange line (i.e a line exclusive to the exchange meter, not a shared or party line), to an extension of a direct exchange line or to an extension on certain types of PBX.

The illuminated panel version (/21X0) in the 'On-hook' mode, is only permitted to be connected to a direct exchange line when set to the 1mA setting. The local exchange office **MUST** be informed of the installation so that they can disconnect the Line Testing Equipment that checks for line current. This version when set either in the 1mA or 5mA modes, may be connected to any PBX or equivalent equipment provided it has approval to offer up to this amount of 'On-hook' line current. No versions are suitable for use on party line installations or as extensions to pay phones.

## ***Approved Facilities***

This apparatus has been approved for the use of the following facilities:-

1. Audible alarm indication of incoming calls.
2. Installation access using special tools only.
3. Provision to introduce equivalent 'master socket' bell capacitor for directly wired applications, set by plug link on installation.
4. Provision to connect external extension bell.
5. Provision to locally signal the 'CALL' condition via separate calling switch.
6. Hearing Aid compatible earphone
7. Optional Extensible (/2X00 version) or Armoured (/2X50 version) handset cable.
8. 'On-hook' & 'Off-hook' Line powered illuminated panel area versions (/21X0 - 1mA or 5mA set by plug link on installation)

# *Additional Facilities*

Any other usage will invalidate the approval of the apparatus if as a result it then ceases to comply with the standards against which approval was granted.

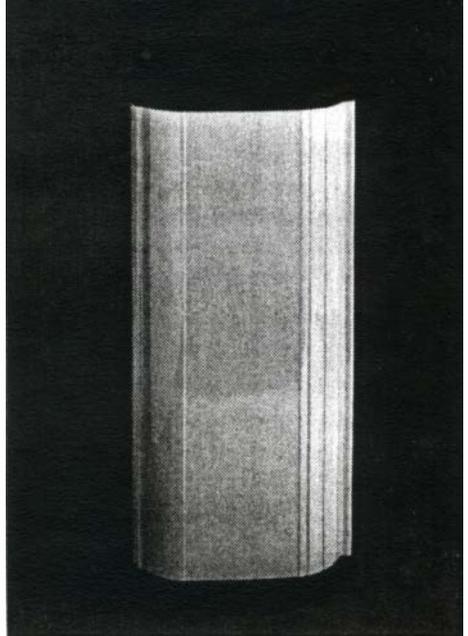
Connection is effected by plugging in to the appropriate line socket. If your telephone connection is not fitted with new style sockets contact your approved telephone installer or the telephone network supplier (using the postcard provided).

If this method of connection is inadequate because for example the telephone is to be mounted outside, where new sockets are not intended to be used, arrange for your telephone network supplier to directly connect the instrument (using the postcard provided).

The telephone should operate correctly when connected to most compatible PBXs, including those that use secondary dialling tone. However it cannot be guaranteed that the apparatus will operate under all possible conditions of connection. Any cases of difficulty particularly in the case of the illuminated panel versions, should be referred in the first instance to your local supplier of the instrument.

This apparatus is intended to be internally accessible for installation purposes, only to authorized personnel and must be installed such that user access is prevented. Correct fitting and installation are mandatory as failure to prevent such user access will invalidate any approval given to this apparatus.

On the illuminated versions (/21X0) a user definable text panel is provided. To access this, remove front panel. Insert required message printed on a thin clear piece of plastic film. This should be cut to a maximum size of 74mm square.



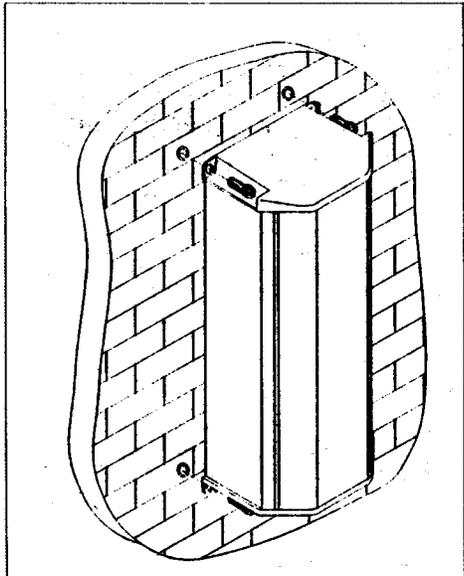
# Installation

The RA705 telephone may be mounted either on the surface of a wall or to the side or top of a pole, using one of the accessory fixing kits available.

4 holes are provided at the rear corners of the telephone suitable for use with bolts up to 10mm diameter thread and 20mm diameter head size. Wall holes drilling pitch is rectangular, 155mm across and 412mm down.

## **Wall Mounting**

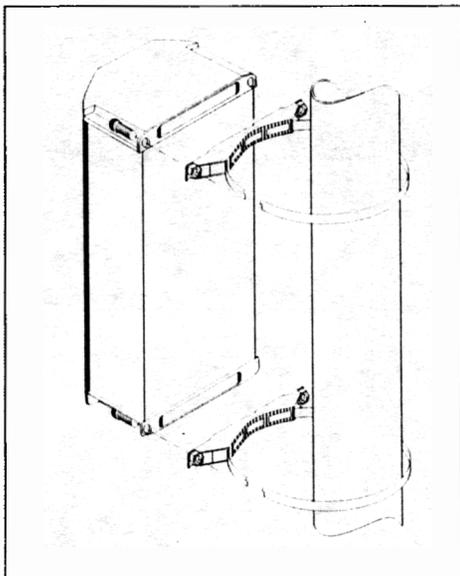
- i) Discard adaptor bracket attached to the backplate.
- ii) Screws or bolts through the outer holes in the backplate are used to secure the telephone to the wall.



# Installation

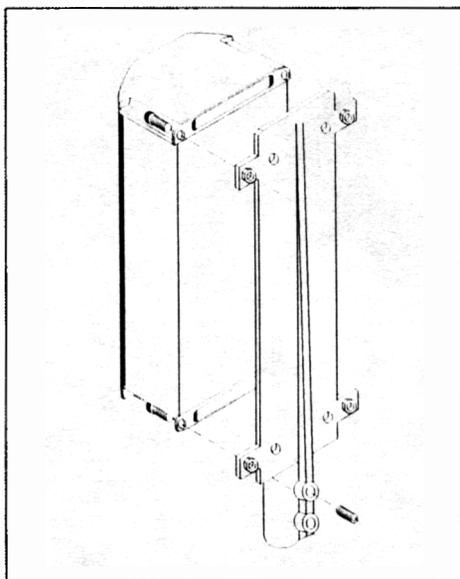
## ***Pole or Post Mounting***

- i) Band adaptor bracket at required height to pole.
- ii) Attach telephone to bracket using bolts provided.
- iii) Band lower bracket to pole.



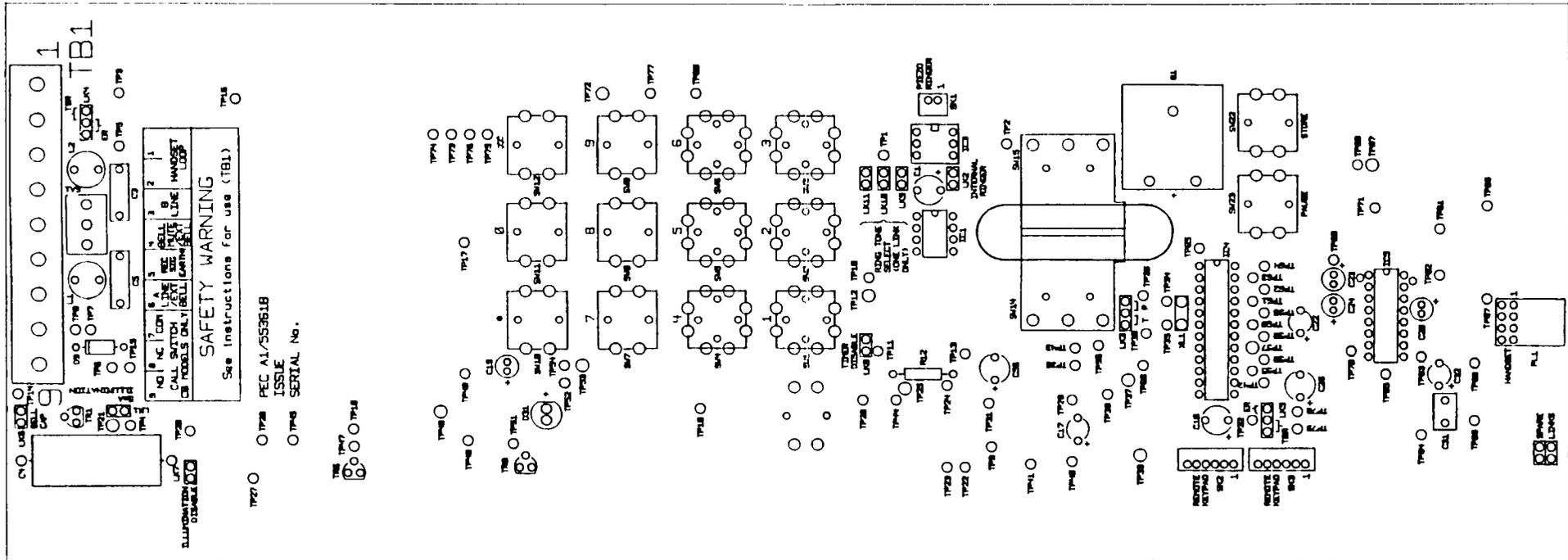
## ***Top of Pole Mounting***

- i) Place the top of pole mounting over the top of the pole.
- ii) Tighten the grub screws to secure the mounting
- iii) Discard adaptor bracket attached to telephone backplate and secure telephone backplate to top of pole mounting by screws provided.



# Board Location of Line Terminals & Links

The following information is provided for use by your approved installer or telephone network supplier only.



# Link & Switch Settings

## *Line Terminal Connections & Selections*

The number of telephones which can be connected to a direct exchange line or PBX extension is limited by the ringer equivalence number (REN) of all the telephones connected, which should not exceed a total value of 4.

The REN value of this telephone is 1. In case of doubt consult your telephone supplier.

Mode selectable plug links as follows:-

	<b>Factory set:</b>
LK1 enables 5mA 'On-hook' panel illumination, 1mA when not fitted.	Fitted
LK2 enables internal audible ringer	Fitted
LK6 enables internal bell capacitor (only used when Master Socket not fitted)	Not fitted
LK7 disables 'On-hook' panel illumination	Fitted
LK8 disables call timer	
LK9 } One of these only	Fitted
LK10 } to alter ringer	Not fitted
LK11 } frequency	Not fitted

Two spare plug links are provided, 'parked' at the top of the circuit board.

## *Internal Audible Ringer*

The instrument has three different sounder types as set by the plug links LK9, LK10 and LK11. This allows for different audible call alarms to be set in instances where co-located telephones cause confusion on incoming calls. Only one of the links should set at any one time.

# ***Link & Switch Settings***

## ***External Bell (or tone caller)***

All bells must be approved for connection to the telephone network. They are of the low frequency A.C. type (15Hz-25Hz). D.C. or unapproved versions must NOT be used. Connect to terminals 4 and 6 of the tag block.

If it is required to disable the internal audible ringer (perhaps due to REN limitations) then remove the link LK2. Ensure that plug link LK6 is fitted enabling the internal bell capacitor if a master socket is NOT used.

## ***Call restriction timeout***

If this facility is enabled (LK8 not fitted) then each call will be time restricted to approximately 6 minutes.

# *Electrical Connections*

## ***Line Terminal Connections***

The Terminal block mounted at the back of the unit is labelled as follows:-

- |    |                                       |         |                          |      |
|----|---------------------------------------|---------|--------------------------|------|
| 1. |                                       | Handset |                          |      |
| 2. |                                       | Loop    |                          |      |
| 3. | Line (B)                              |         | } Rd                     |      |
| 4. | Extension bell                        |         | } Bl                     | plug |
| 5. | Not connected                         |         | } Gn                     | 431A |
| 6. | Line (A) & extension bell             |         | } Wh                     |      |
| 7. | 'PRESS' call switch (common)          |         | } For all models         |      |
| 8. | 'PRESS' call switch (normally closed) |         | } except CB              |      |
| 9. | 'PRESS' call switch (normally open)   |         | } press to call versions |      |

## ***Earth Bonding***

The telephone is to be bonded to earth using the Earth Bonding Point located behind the main plate inside the telephone. Where the telephone is installed within electrified railway locations other recommendations regarding earthing may apply, e.g. BR specification N0. 1686 para 5.2.4.

## ***Electrical Connections***

To access the line connections, open the door and release the four retained corner screws using a 2.5mm hex key. The cables are passed through any relevant conduit and connected (in the case of directly wired situations) to the tag block on the lower part of the circuit card. The tag connection is made by merely pushing the bare-ended wire directly into the block. To release the connection depress the part of the block adjacent to the wire entry and withdraw the wire at the same time.

Both the front of the door and the sides of the telephone are designed to accept self adhesive labelling. Maximum size for all areas is 90mm wide by 375mm high.

# ***RA705/2000 Operation***

## ***To make a call:***

Open the door.

Lift handset (and 'PRESS' key, if necessary).

Await operator answer.

At end of call replace Handset and close door.

## ***To answer a call:***

Open the door.

Lift Handset.

At end of call replace Handset and close door.

# Spares & Accessories

The weatherproof telephones described in this guide are part of a family of instruments from Racal Acoustics Ltd. , viz:

RA705/x x x x

- |        |   |   |
|--------|---|---|
| 0      | - | Standard & 1 number illuminated autodialler |
| 1 to 6 | - | Autodial, non-illuminated                   |
| 0      | - | Extensible handset cable                    |
| 5      | - | Armoured handset cable                      |
| 0      | - | Non illuminated panel                       |
| 1      | - | Illuminated panel                           |
| 1      | - | Manual dial, DTMF/LD                        |
| 2      | - | CB, no dial                                 |
| 3      | - | LB, magneto call                            |
| 4      | - | AutoDialler, DTMF/LD                        |

## Spares & Accessories:

Side of pole fixing kit: Part No. ....

Top of pole fixing kit: Part No. ....

Armoured Handset: Part No. ....

APPROVED for connection to telecommunication systems specified in the instructions for use subject to the conditions set out in them

S/3064/3/P/502732



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**RACAL**