AFTER SALES SERVICE

If you still require assistance with the installation or set-up of your CONTACT 4 after reading this guide book, please telephone our technical advisors on 01904 792211.

REPAIRS

CONTACT 4 is guaranteed for one year from the purchase date. If a fault should develop within this period, please contact your supplier.

If you have any further problems, please contact the Repairs Department at Crucible Technologies on 01904 792211 Ext 4. Our offices are open between 9.00am-5.00pm Monday-Friday. Outside normal office hours, please leave a message and a member of staff will get back to you as soon as possible. Alternatively, you can e-mail us at tech@crucible-technologies.co.uk.

Should the unit fall outside the warranty repair period, please contact our Repairs Department for an estimation of repair costs.

CONTENTS

4. **MASTER EXTENSION SOCKET**

    You may already have extension sockets fitted in your office/ home. However, for CONTACT 4 to function correctly, you will need to make sure that these are MASTER SOCKETS. If you remove the cover of an Extension Socket, you will see a large capacitor (yellow, tablet shape) inside, this means it is a Master Socket. If your extension socket does not have a capacitor in, then it is necessary to replace it with a Master Socket.

5. **TONE OR PULSE TELEPHONE**

    There are two types of telephones; Pulse (also known as LD, Loop Disconnect) or Tone (also known as DTMF, Dual Tone Multi Frequency). Pulse is generally associated with old style telephones. Tone telephones can be distinguished by the musical beeps they emit when sending information.

    For CONTACT 4 to function your telephone must be set to Tone.

GLOSSARY

1. **CALLER ID SERVICE**
   Caller ID allows you to identify the caller's telephone number (and details) before answering the call. The benefits of this in terms of time saved by efficient screening of calls is incalculable. One can identify the incoming call and the relevant person can pick the call up first time. Thus providing a more effective and efficient service if office based. Plus if you are out of the office, you do not have to miss out on any calls, as they are automatically logged.

   Please note Caller ID service is not compatible with BT Callsign™ service or with Auto Fax switching.

   Caller ID stand-alone devices can be purchased in most electrical retail outlets. Alternatively a PC compatible device can be purchased direct from Crucible Technologies.

   Subscription to BT's CDS service is required for Caller ID to work.

2. **INTERCOM OR INTERNAL CALL**
   An extension to extension call.

3. **MAIN BT SOCKET**
   This refers to the box installed by BT from which all your extensions will come from. If you follow the wiring into your house, it is the first telephone socket which you come across. Modern boxes can also be identified by being split; the top half often has a BT symbol on it, while the bottom half has two screws for access.

   It is this socket into which you will plug CONTACT 4 and will then connect any new or existing extensions into CONTACT 4.

FEATURES

CONTACT 4 is a versatile and compact private branch exchange (PBX). It has four ports which allows the connection of four telecom products.

By using CONTACT 4 you have the ability to:

- easily transfer incoming calls

- use BT Callsign™ service to direct calls through to particular extensions (Caller ID service is not compatible with this option)

- page individuals, by means of a distinctive ringing pattern

- share one line with telephone and fax

- connect incoming faxes - either manually or automatically (Caller ID service is not compatible when set in automatic mode)

- supply hold tone to incoming callers

- make extension-to-extension calls

- give complete privacy on all calls

- allow the Caller ID service through to all extensions (see Glossary Note 1)

- activate Call Barring on extensions

- program Do Not Disturb on extensions

- program access codes for Least Cost Routing (LCR)

The unit also features:

- different ring patterns for incoming calls, internal calls and paging calls

- LED indicator to show status of the Unit

SAFETY

The Safety and Installation sections give you important information regarding the safety and installation of CONTACT 4. Guidance on how to check that your newly installed unit is functioning correctly, is also provided.

PLEASE READ THIS SECTION CAREFULLY TO ENSURE A CORRECT AND SAFE INSTALLATION

1. CONTACT 4 should only be connected to the mains power supply after the installation is completed, with all the connecting cables fixed and the cover closed.

2. CONTACT 4 is supplied with a 3A fuse plug. Should it become necessary to change the plug, please make sure that a fuse of the same rating is fitted.

3. Always wall-mount CONTACT 4, ensuring it is not in a damp environment.
   CONTACT 4 is designed for indoor use only.

4. Do not overload electrical wall outlets, as this can increase the risk of fire or electric shock.

5. CONTACT 4 should be returned for servicing in the following cases, if:
   - the Power Supply cable is damaged or frayed
   - liquid has been spilled into the unit
   - the unit is broken or cracked due to being dropped
   - the unit's performance alters suddenly

6. Always unplug CONTACT 4 from the mains power supply, *before* removing the cover.

TROUBLE-SHOOTING GUIDE

CONTACT 4 has been designed to give you years of trouble-free service. However if you do have any problems, this guide should help you pinpoint and rectify them.

PROBLEM	POSSIBLE FAULT	SOLUTION
EXTENSIONS HAVE NO DIAL TONE	*FAULTY BT SOCKET*	Plug a known good phone into the socket. Dial tone should be heard. If none is heard the line or socket is faulty.
CANNOT MAKE EXTENSION TO EXTENSION CALLS	*NO POWER TO CONTACT 4*	Make sure the LED on CONTACT 4 is flashing. If it is, check the wiring to the extension sockets. Check that extension telephones are set to Tone (see Glossary note 5). Use a known good phone to check each extension socket.
FAX CALLS NOT BEING RECEIVED	*ACTIVE FAX SWITCH IS NOT PROGRAMMED*	Check that the Active Fax switch option has been programmed into the system.
NOT ALL PHONES RING FOR INCOMING CALLS	*MORE THAN FOUR TELEPHONES CONNECTED TO LINE*	The telephone line can usually ring up to four telephones. If more than this are connected, some may not ring, especially if they have a REN of 1.5 or 2. The REN is marked on the base of the telephone. Replace with a 1 REN phone.

QUICK GUIDE TO CODES CONT.

CALL BARRING FEATURES

When dialling the following programming codes, there will be a bleep to confirm activity.

ONLY PROGRAMMABLE FROM EXTENSION 1

# # 821	Bar calls on Extension 2
# # 820	Remove Call Bar on Extension 2
# # 831	Bar calls on Extension 3
# # 830	Remove Call Bar on Extension 3
# # 841	Bar calls on Extension 4
# # 840	Remove Call Bar on Extension 4

Call Barring will still allow Emergency 999 and 112 calls to be made

SUGGESTED APPLICATIONS OF CONTACT 4

This section is designed to give some examples on how CONTACT 4 can be used in different set-ups. This list is by no means exhaustive and you may have to use a set-up more suited to your circumstances.

EXAMPLE 1 - FOUR TELEPHONES
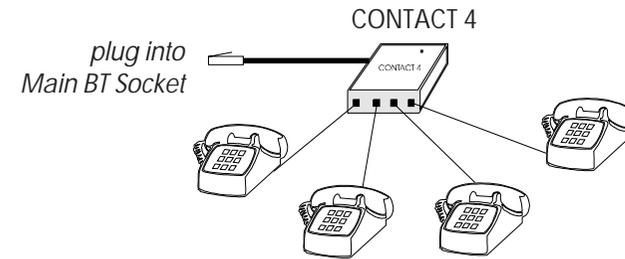
This set-up has four telephones connected to the CONTACT 4. When an incoming call is received, all the telephones will ring and the call can be picked up on any extension; calls can then be transferred to other extensions if required.

EXAMPLE 2 - FOUR TELEPHONES WITH BT CALLSIGN™
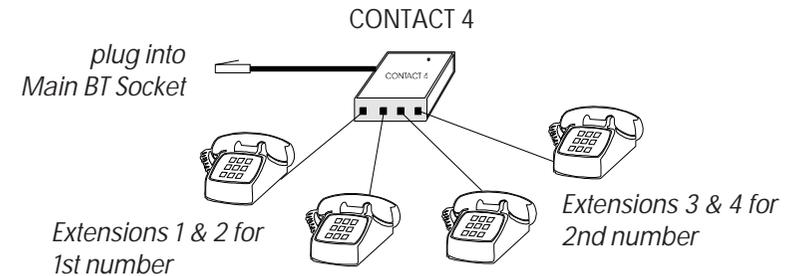
This can be used in a "Home-Office" set up to share a telephone line for the home and the office. BT Callsign™ can be used to get two telephone numbers. Extensions 1 and 2 can be programmed to ring for the 1st telephone number, and used for home use. Extensions 3 and 4 can be programmed to ring for the 2nd telephone number and used for office calls.

EXAMPLE 3 - USING BT CALLSIGN™ FOR FAX MACHINE

CONTACT 4

Fax machine on 2nd number
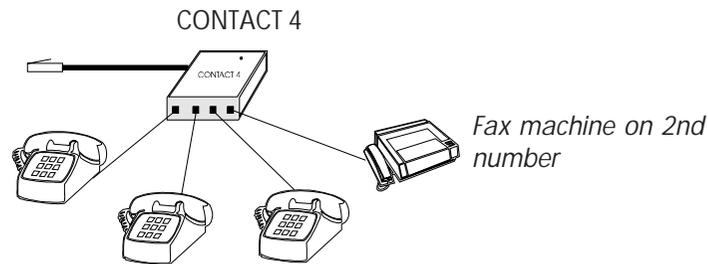
This set up is ideal for a small office where the fax is only used occasionally. Using BT Callsign™ Extension 4 can be programmed to ring for the 2nd number and this is given out as a fax number for the business. The telephone can ring for the 1st number on extensions 1, 2 & 3.

EXAMPLE 4 - THREE TELEPHONES, A FAX MACHINE AND ANSWERING MACHINE

CONTACT 4

Answering machine

Fax machine
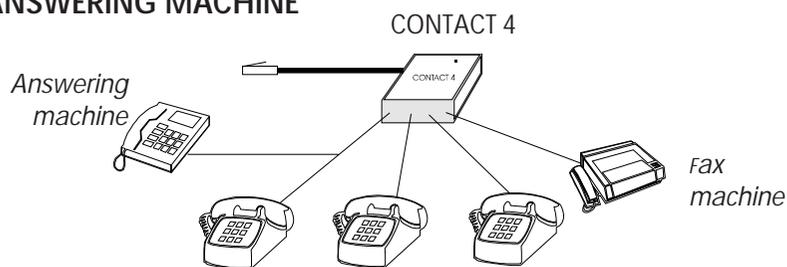
The system can be programmed to have an Active Fax Switch, so when a call is received CONTACT 4 will answer the call and detect whether it is actually a fax or a voice call. If it is a fax call it will divert it automatically to Extension 4. If it is a voice call, it will ring extension 1, 2 and 3. If the call is a voice call and the phone is not answered after a period, the answering machine will pick the call up to allow the caller to leave a message.

NOTE: BT Callsign™ for fax reception is more reliable than an Active Fax Switch.

ONCE YOU HAVE SELECTED THE SET-UP YOU WANT, YOU ARE READY TO START INSTALLING YOUR CONTACT 4.

QUICK GUIDE TO CODES

General calling	
# # 1 - # # 4	Ring Extension 1 to Extension 4.
# # 5	Retrieve a call that has been put on Hold or transferred to another Extension.
# # 6	Put call on Hold.
# # # 1 - # # # 5	Page individual with distinctive ring pattern. Allocated ID number can be between 1 - 5.
When dialling the following programming codes, there will be a bleep to confirm activity.	
Reset	
# # 999 (EXT 1 ONLY)	Returns CONTACT 4 to factory default.
# # 72	Normal mode - turns all settings on system off. The LED flashes once.
Unattended	
# # 70	Enables the Unattended feature, which directs all calls to Extension 4. LED flashes 3 times every few seconds.
# # 71	Disables the Unattended feature.
BT Callsign™	
# # 74 (Ext 1)	Enables system to recognise BT Callsign™ service, so can set individual extensions to ring. The LED flashes four times.
# # 77	Set that particular extension only to ring for 2nd number allocated with BT Callsign™ service.
# # 78	Returns that particular extension to receive 1st number allocated with BT Callsign™.
Active Fax Switch	
# # 73	Enables the Active Fax Switch. The LED flashes twice.
Stop extension ringing (with external calls)	
# # 75	Enables Do Not Disturb mode on that particular extension.
# # 76	Disables Do Not Disturb mode on that extension.

LEAST COST ROUTING

CONTACT 4 can be programmed to automatically insert the access codes required prior to making a call via an alternative carrier. Below is a suggested procedure for programming the CONTACT 4.

Please note that it is important to program the CONTACT 4 in either of the following sequences: A, C and D
       OR   A, B, C and D
Program the Least Cost Routing from Extension 1.

A confirmation beep should be heard every time you enter the last #.

A)   To divert calls starting with 0 through LCR
     # # 922 0 #
     This will pick up all calls starting with a zero

     # # 932 + access code #
     This inserts the access code before numbers starting with zero
     e.g. # # 932XYZ # (XYZ = access code)

B)   To divert all calls starting with 0 and local STD calls
     # # 921#
     Will pick up all calls and route them through Least Cost carrier.

     # # 931 + Access Code + STD CODE #
     Up to 24 digits can be inserted. If less than 24 digits are used press the # symbol to mark the end. For example when XYZ = access code and 01904 = STD code:
     # # 931XYZ01904 #. All local calls are preceded with XYZ and 01904

C)   Exception codes (for Freefone numbers, 999 or any other numbers you do not wish to go via LCR)
     # # 910 + exception code #
     through to **# # 919 + exception code #**
     It is necessary to enter some Exception Codes for the above programming to function correctly. For example:
     # # 910 0800 #   # # 911 999 #

D)   To activate Least Cost Routing
     # # 81   Enable LCR - the LED will have a rapid flash
     # # 80   Disable LCR - the LED will be slow flashing

INSTALLATION

The following instructions are to make the installation of the CONTACT 4 as simple as possible. To assist with this, the procedure has been broken down into two options, termed the Plug-in Installation and the Professional Installation. Simply select the option which best suits your requirements and follow the instructions.

PLUG-IN INSTALLATION

In this installation, there is no need to open the cover of the CONTACT 4. The only equipment required is:
- Extension leads
- Cable clips
- A hammer
- A drill with suitable drill bit

POSITIONING OF CONTACT 4 - WALL MOUNTING

1.   CONTACT 4 needs to be located near to the Main BT socket and a mains power supply socket.

Note: Do not plug CONTACT 4 into the power supply or telephone sockets until installation is complete.

2.   Check that there is enough cable for connecting the telephone plug and the mains power supply, ensuring that both cables are not over-stretched.

Note: For safety reasons make sure you check for internal electrical wiring in the wall, before you commence drilling.
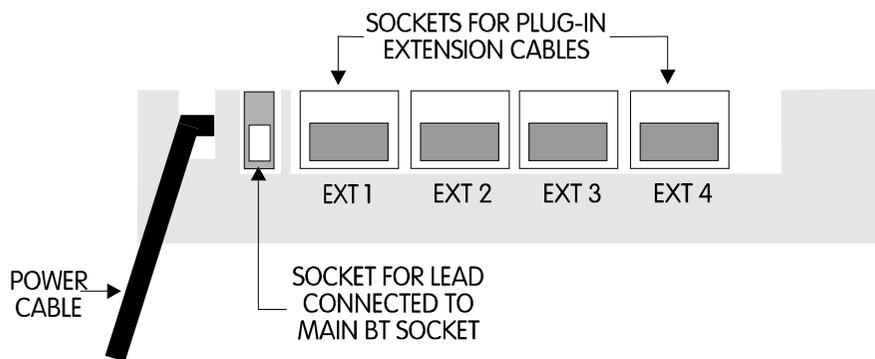
3.   Using the drilling template provided, drill two holes and tap in the rawl plugs provided until they are flush with the wall. The screws need to be put in, so that the head is showing by 5mm.

4. To check that the screw spacing is correct, place the CONTACT 4 on the wall.

5. Remove the unit to proceed with the installation.

CONNECTING THE EXTENSIONS

1. Decide where the extensions are to be located.

2. Plug the telephone into the extension cable and the other end into the CONTACT 4, see Fig 1.

Fig 1: *A front view of the CONTACT 4*

SOCKETS FOR PLUG-IN
EXTENSION CABLES

EXT 1   EXT 2   EXT 3   EXT 4

POWER
CABLE

SOCKET FOR LEAD
CONNECTED TO
MAIN BT SOCKET

3. When all the required extensions are plugged in, the functioning of the newly installed CONTACT 4 can be checked. Plug CONTACT 4 into the Main BT socket and the mains power supply. When switched on the LED should flash once every few seconds.

RECEIVING INCOMING FAXES
Using BT Callsign™

74
Sets Contact 4 to BT Callsign™

Dial ##77 from Extension 4, to set this to ring for the 2nd (BT Callsign™) number
Now all calls to the 1st number will ring extensions 1, 2 & 3 and calls to the 2nd number will ring extension 4 only.

Automatic Mode

73
Sets Contact 4 to Automatic Fax Switch

It is possible to program CONTACT 4 to have an Active Fax switch. This means that CONTACT 4 will answer all incoming calls, and before ringing any extensions it will determine whether it is a fax or a voice call. If it detects a fax tone it will automatically divert the call to Extension 4.

Manual Mode

4

If a fax call is ever received on a telephone, then # # 4 will transfer this to extension 4, where the fax machine will take the call.

ANSWERING MACHINE SETUP FOR NIGHT SERVICE

The connection of an answering machine for night service, need not cause any complications. Simply connect the Answer Machine to Extension 1, 2 or 3. Program the CONTACT 4 to Active Fax switch and it will detect if the call is voice or fax. If it is voice, it will ring Extensions 1, 2 and 3 until the Answering Machine picks up the call.

OPERATING INSTRUCTIONS CONT.

PAGING

+ ID Number

If you are looking for an individual or person from a particular department (either for an intercom call or to transfer an incoming call), it might be more convenient to PAGE them rather than having to search for them. Paging someone causes all telephone extensions to ring in a distinctive manner.

Each person or department should be allocated an ID Number (1 - 5), so when they are PAGED they will be able to identify their own personal ringing pattern.

PAGING RING PATTERNS RING RING RING

This ring pattern depends on the ID Number dialled. The above example is for paging the person with ID 3 (# # # 3). It gives three short blasts of ring.

NOTE:

1. *If the Active Fax switch is set, Extension 4 will not ring for Paging.*
2. *If Do Not Disturb function is set at a particular extension, that extension will not ring for Paging.*

PROFESSIONAL INSTALLATION

This installation allows the cabling to be neater, but does involve the opening of the cover for connection. If there are no telephone extensions already installed the following equipment will be required before installation:

- Up to four Master telephone sockets
- A length of single pair telephone cable
- Cable clips
- A hammer
- A drill with suitable drill bit

POSITIONING OF CONTACT 4 - WALL MOUNTING

1. CONTACT 4 needs to be located near to the Main BT socket and a mains power supply socket.

Note: Do not plug CONTACT 4 into the power supply or telephone sockets until installation is complete, and the cover is correctly secured.

2. Check that there is enough cable for connecting the telephone plug and the mains power supply, ensuring that both cables are not over-stretched.

Note: For safety reasons make sure you check for internal electrical wiring in the wall, before you commence drilling.

3. Using the drilling template provided, drill two holes and tap in the rawl plugs provided until they are flush with the wall. The screws need to be put in, so that the head is showing by 5mm.

4. To check that the screw spacing is correct, place the CONTACT 4 on the wall.

5. Remove the unit to proceed with the installation.

CONNECTING THE EXTENSION SOCKETS

Note: If extension sockets are already fitted then go straight to Point 3.

1. Locate where the extension sockets are to be placed and fit to the wall.

TIP: It may also be useful to mark the extension number on the extension sockets.

2. Lay the correct amount of cable loosely on the floor, lead it from the extension socket to CONTACT 4.

If you have extensions already fitted, replace your existing Extension Sockets with Master Extension Sockets (see Glossary note 5) and wire as follows.

3. Fit the two wires of the extension cable to the Master Extension Socket - Pin 2 and Pin 5 (see Fig 2). It does not matter which colour extension wires are connected to Pin 2 and 5. Lead the cable back to CONTACT 4, clipping it to the wall as you go.

Fig 2:

EXTENSION MASTER SOCKET

Telephone cable leading to Contact 4
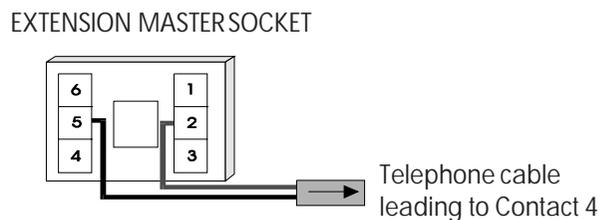
4. Wire the cable from the Master Extension Socket into the first pair of screw terminals on CONTACT 4 (see Fig 3) making sure the same coloured wires are connected.

5. Follow the same procedure for the remaining three sockets (if required).

TRANSFERING AN INCOMING CALL TO AN EXTENSION
There are two ways to do this, you can either ANNOUNCE the call or TRANSFER the call.
To announce the call
<div align="center">

+ Extension Number
</div>

This places the incoming call on HOLD whilst the called extension rings. When the called extension answers, you can ANNOUNCE the call. When the first extension replaces the receiver, the incoming call will be automatically connected to the called extension.

To transfer the call direct to extension
<div align="center">

 # # + Extension Number
</div>

After dialling the required extension number, replace the handset. The external call is placed on hold whilst the called extension rings. When the called extension picks up the receiver, the incoming call will be automatically connected.

CONTROLLING CALLS
To retrieve the incoming caller
<div align="center">

 # # 5
</div>

If you have put a caller through to an extension and realise that the called extension is unmanned, recall the caller by dialling ##5. This code can be dialled from any extension whoever wants to pick-up a call. This code is also used to retrieve calls which have been placed on hold.

Placing calls on hold
<div align="center">

 # # 6
</div>

If you wish to place an incoming call on hold simply dial ##6. To return to the caller dial the retrieval code ##5. After placing a call on hold, it is possible to either ring another extension or to page an individual.

Incoming call not answered by the called extension
If the incoming call is not answered by the called extension within 30 seconds, it is automatically re-directed back to the original extension which transferred it.
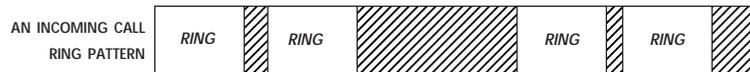
OPERATING INSTRUCTIONS

TO MAKE AN EXTERNAL CALL
Lift the handset, wait for dial tone. Dial the required telephone number. There is no need to dial 0 or 9 to obtain an outside line.

TO RECEIVE INCOMING CALLS
It is possible to answer an incoming call from any extension, just like answering a normal telephone.

AN INCOMING CALL RING PATTERN	RING	RING		RING	RING	

This is a regular double ring tone

If an external call comes in and two extensions are "talking to one another", the free extensions will ring to notify them of the call. The incoming call can be taken on the free extensions, and the extensions having an internal conversation will be interrupted with an engaged tone.

MAKING EXTENSION TO EXTENSION CALLS

 # # + Extension Number

Extension to Extension calls are available at all times by simply dialling:
1, # # 2, # # 3 or # # 4

| AN INTERNAL CALL RING PATTERN	RING		RING	

This has a longer space between the single ring

The called extension will ring and when answered, an intercom conversation is possible.

Note: The only occasion an Extension to Extension call is not possible, is when an external line is in use, this is because the external call always takes priority.

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6. Once the telephone wire has been connected to the extension sockets and into the screw terminals on the CONTACT 4, the cover can be replaced and secured with the six screws.
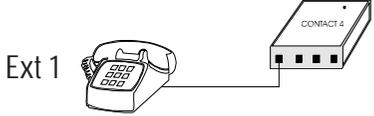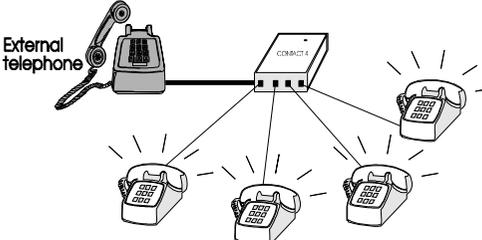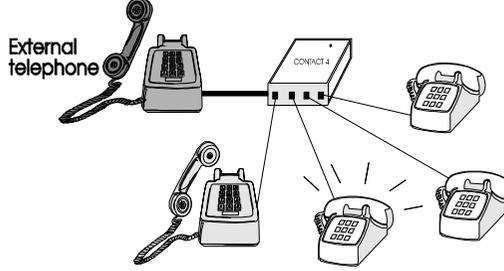
Fig 3: Overhead view of inside Contact 4.
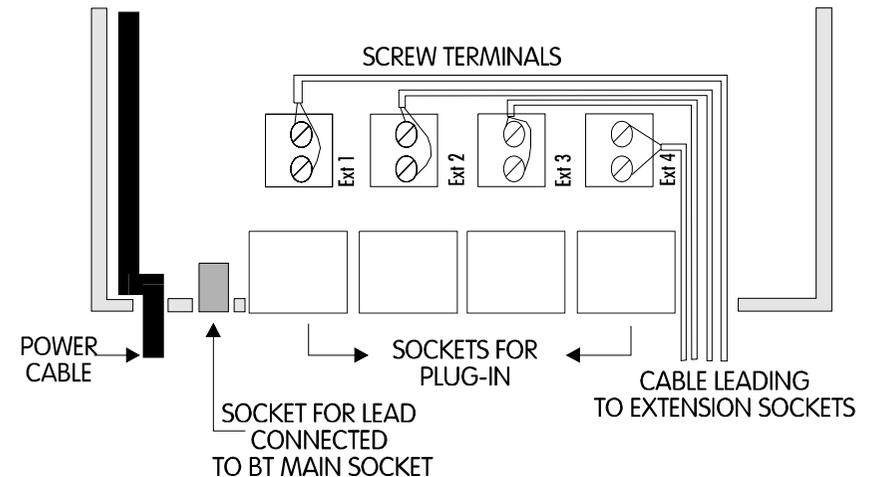
7. After the unit has been re-assembled, CONTACT 4 is ready to be fitted onto the wall. Place the unit onto the two screws previously fitted. The remaining cable can now be clipped to the wall, but remember to leave a small amount of slack under the unit should you require to remove the unit at a later date.

8. To check the functioning of the newly installed unit, plug it into the Main BT socket and the mains power supply. When switched on the LED should flash once every few seconds.

INSTALLATION TESTS

Carry out the following tests to ensure your newly installed CONTACT 4 is functioning correctly.

1:
Connect a telephone to Extension 1.

Ext 1

2:
When the receiver is picked up, the LED on CONTACT 4, is a steady glow. Repeat this on Extensions 2, 3 and 4.

Ext 1
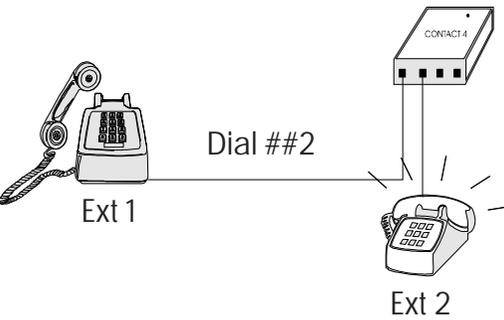
3:
Connect telephones to Extensions 1 and 2.

From Extension 1 dial ##2 to check ringing. When Extension 2 is answered, speech should be heard. Repeat this for Extensions 3 (##3) and 4 (##4).

Dial ##2

Ext 1

Ext 2

4:
When an external call is received, all extensions connected to CONTACT 4 should ring.

External telephone

5:
Answer the call, by picking up Extension 1 and transfer the call to Extension 2 by dialling ##2.

Do not pick up Extension 2 when it rings, to make sure that after 30 seconds the external call returns to Extension 1.

When reconnected with the external caller, ask if they heard a Hold Tone while they waited.

External telephone

Ext 1   Ext 2

Dial ##2

The above Installation Tests allow you to check the functioning of your Contact 4. If you experience any problems, check the wiring and make sure that all connections are correct.