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T9 series fixed cellular and landline terminals

user guide

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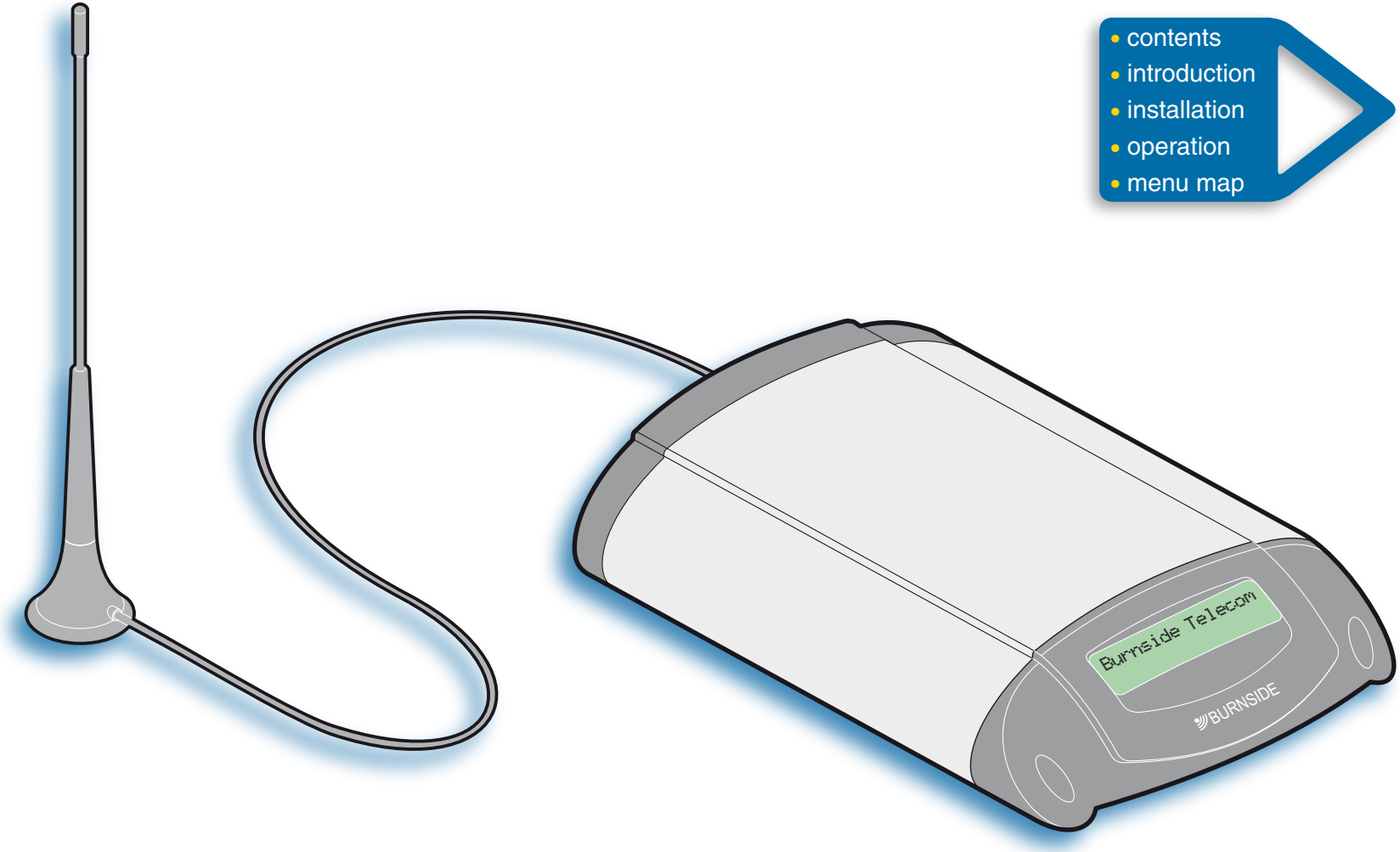

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Introduction

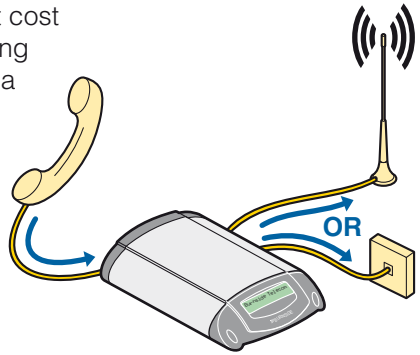
The Burnside T9 series fixed cellular terminal units provide professional telephony features within a compact and easy-to-use package.

All models in the range can be used with a standard desk phone (or cordless phone) in locations where wired sockets are not available. All models also allow you to send and receive text messages, and additionally connect to a computer in order to provide wireless modem facilities for web browsing and email duties. The ability to connect with external devices, such as alarms, is also supplied as standard across the range. Such connections mean that the Burnside unit can send you a text message warning if an alarm is triggered. Alternatively, you can send a text message to the Burnside unit in order to initiate an action from any location.

Things really get interesting when you consider the dual link 'L' models of the Burnside T9 series. These are fitted with both a PSTN *(Public Switched Telephone Network)* landline socket as well as a mobile connection; a combination which can return potentially huge savings on your call costs using the following special features:

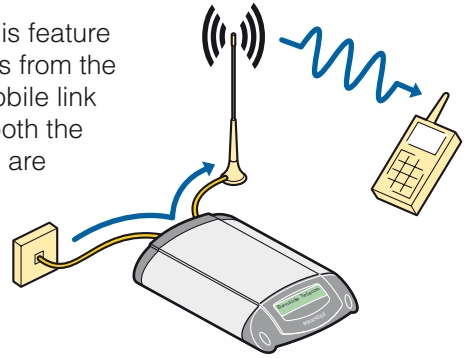
Outgoing call routing

This feature determines the most cost efficient way to route your outgoing calls: Calls to mobiles are sent via the mobile link; all other calls leave via the landline. Thus, you avoid paying unnecessary charges to the networks to convert the calls for you -



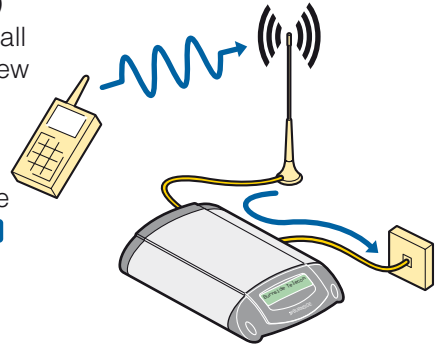
Forward landline (optional)

When you're out and about, this feature lets you forward incoming calls from the landline connection via the mobile link to your mobile phone. When both the Burnside unit and your mobile are fitted with paired SIMs, no call charges will be incurred; unlike the forwarding charges that are made by your telephone service provider to achieve the same result -



Landline dial through (optional)

This feature allows an incoming call from a mobile phone to make a new outgoing call using the landline connection. If you regularly dial landline numbers from your mobile this feature will prove to be an invaluable cost saving tool -

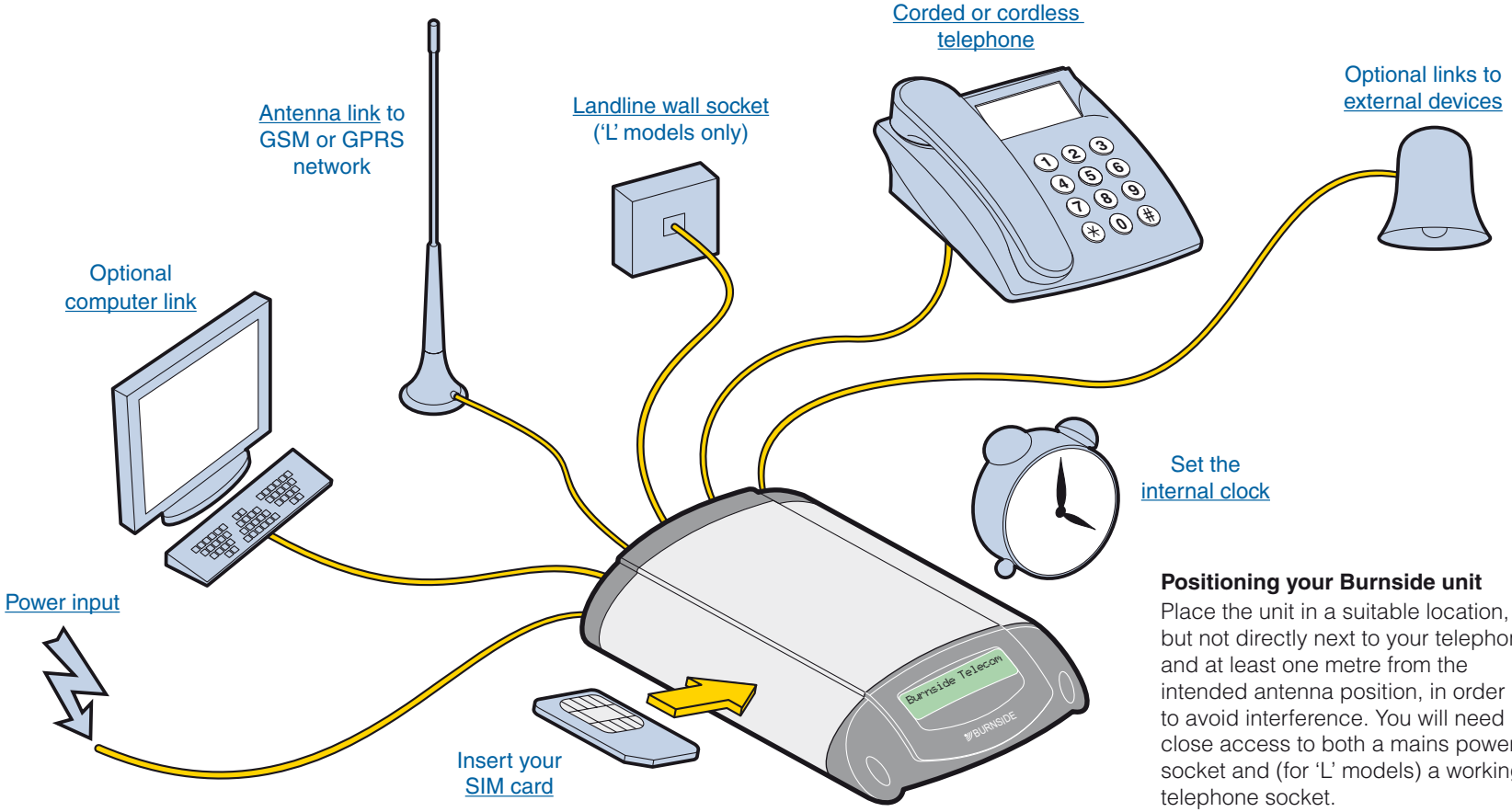


The Burnside unit's clear display and straightforward menu structure mean all of these advanced features are easily available at any time.

Please note that this guide covers numerous versions of the unit. Certain features may not be present in every version.

Installation

The Burnside T9 series units require several basic connections and actions. This section provides details about how to get your unit ready for operation.



Positioning your Burnside unit

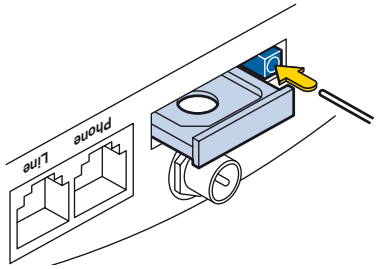
Place the unit in a suitable location, but not directly next to your telephone and at least one metre from the intended antenna position, in order to avoid interference. You will need close access to both a mains power socket and (for 'L' models) a working telephone socket.

Inserting your SIM card

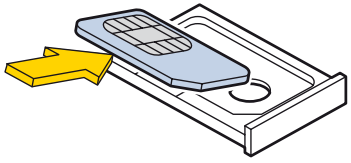
Note: Ensure that the unit is switched off before inserting your SIM card. Insertion is most easily achieved with the unit carefully placed upside down.

To insert your SIM card

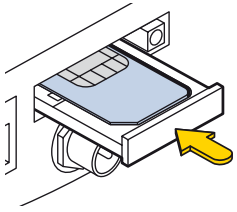
1 Use a thin object to press the tray eject button. Fully remove the tray.



2 Place the SIM card into the tray so that the contacts are facing up.



3 Slide the tray back into the slot and press it all the way in.



SIM and Terminal PIN codes

The Burnside unit has its own Terminal PIN code which is different from the PIN code used by the SIM card. The Terminal PIN is used for certain control menu options and security procedures related directly to the unit rather than the SIM card.

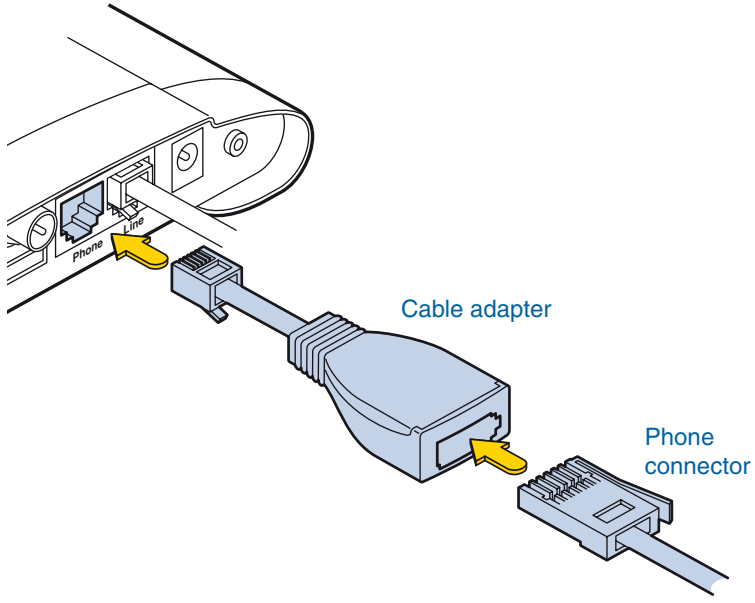
Connecting a telephone

The Burnside unit can be used with a touchtone corded phone, a cordless DECT phone base station or a private branch exchange (PBX), as required.

To connect a telephone

1 Connect the supplied cable adapter to the socket on the rear panel, labelled 'Phone'.

Note: Your phone may have a connector that fits directly into the 'Phone' socket, in which case the adapter is not needed.



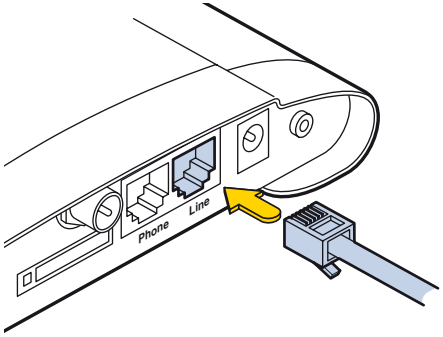
2 Connect your phone (or PBX) to the cable adapter.

Connecting to a landline socket ('L' models only)

Dual link units can be connected to a standard landline wall socket in order to allow least cost routing and call transfer features to be used.

To connect to a landline socket

1 Using the supplied phone cable, connect the smaller of the two plugs to the socket on the rear panel, labelled 'Line'.



Connection to phone socket

2 Connect the other end of the cable to a nearby telephone wall socket. *Note: Ensure that the cable does not cause a trip hazard.*

Connecting the magnetic mount antenna

The supplied antenna has a 3 metre cable to allow it to be positioned well away from the unit and the phone in order to minimise interference.

Note: The antenna base houses a strong magnet, be sure to keep it away from monitor screens, televisions, credit cards or any device affected by magnetism.

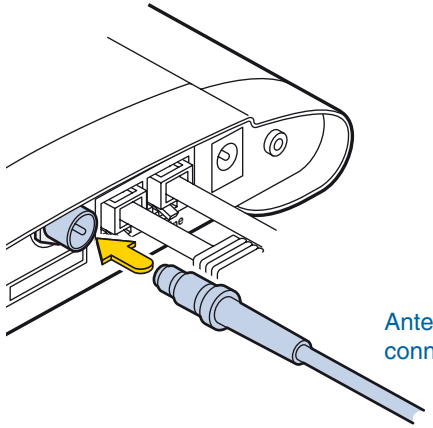
To connect the magnetic mount antenna

1 Assemble the antenna by screwing the upper section into the base until it is finger tight.

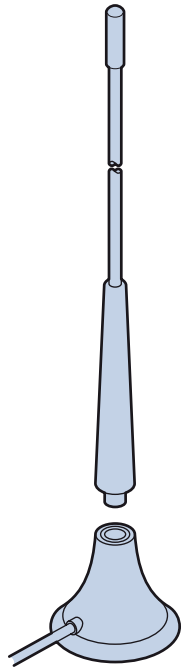
2 Position the antenna where required, if possible on a secure metal surface.

3 Feed the antenna cable to the rear of the unit, insert the connector into the antenna socket and twist the collar until finger tight.

Note: Ensure that the cable does not cause a trip hazard.



Antenna connector

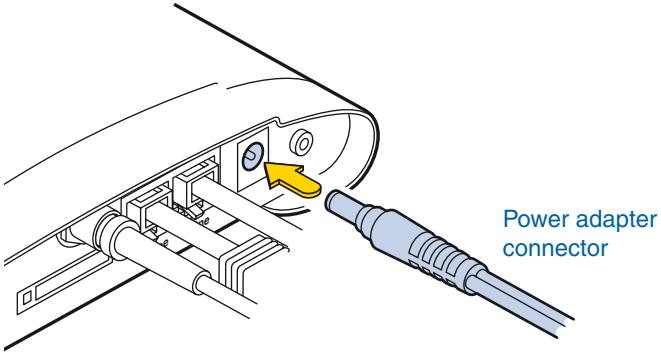


Connecting the power adapter

The supplied power adapter provides a stabilised 15VDC supply to the unit.

To connect the power adapter

1 Attach the connector from the power adapter to the socket on the far right of the rear panel.



2 Plug the power adapter into a nearby mains outlet. The unit will begin operation as soon as power is applied.

Note: Ensure that the cable does not cause a trip hazard.

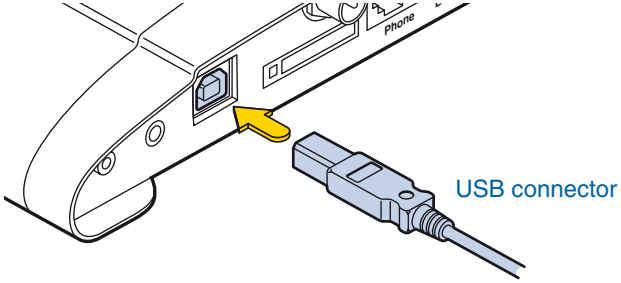
Connecting to a computer (optional)

The unit includes a standard USB port in order to allow it to be linked to a personal computer. Via the USB link, the unit may be used as a GSM or GPRS modem, calls be initiated by TAPI compatible software and firmware updated.

Note: Install the software driver into your computer before connecting it to the Burnside unit - see Data connection for details.

To connect to a computer

1 Once the software driver has been installed on the computer, use a USB type A to type B cable to link a vacant port on the computer to the socket on the Burnside unit.

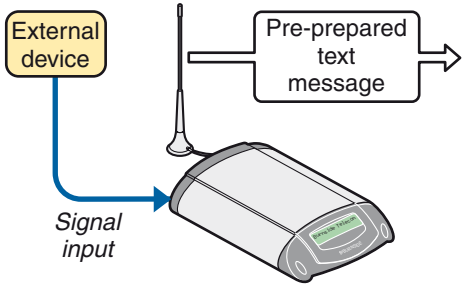


Connecting to external devices

The Burnside unit features a link port which allows it to connect to external devices and either send, or respond to, switched signals.

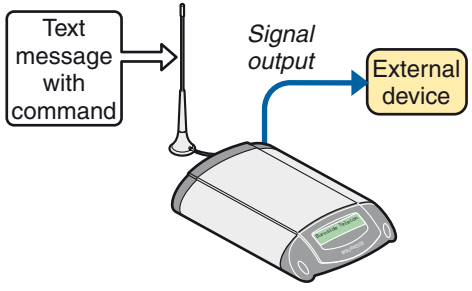
Responding to an input

The unit can react to a received **input** signal (for instance from an alarm system, a simple door switch, etc.) and, in response, send out a pre-prepared SMS text message warning to a specific mobile number.



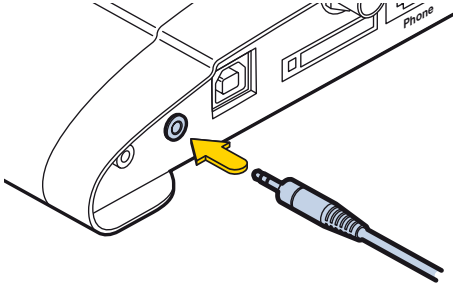
Switching an output

When a specially formatted SMS text message is received, the Burnside unit can generate a switched **output** signal to trigger an external device.



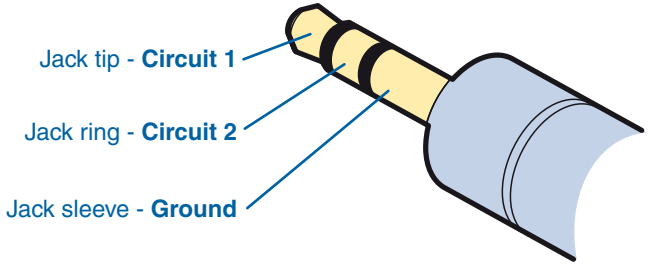
To connect an external device

1 Insert the 3.5mm jack plug of the cable leading from the external device, into the link port socket on the far left of the Burnside unit's rear panel.



To wire the jack plug

Use a three way 3.5mm jack plug, wired as follows, to gain access to both input/output circuits of the link port:



- **Circuit 1** can operate either as an input into the Burnside unit or as an output from it, depending on how the unit is programmed (using ***0#54120*** - see Using the input/output channels for details).

  When set as an input, Circuit 1 responds to a high voltage of 2.4 to 5V and a low voltage of 0 to 0.8V.

  When set as an output. Circuit 1 uses open collector switching which is suitable for providing a logic signal or driving a low power relay providing the latter has an external power source as well as suitable back-EMF protection to prevent damage to the unit's circuitry.

- **Circuit 2** is fixed as an input to the Burnside unit.

  Circuit 2 can sense and report nine distinct voltage levels, ranging from 0.5V to 4.5V in 0.5V steps.

Using menu commands you can configure various aspects of both circuits. See Using the input/output channels for details.

Setting the internal clock

The internal clock of the Burnside unit keeps accurate time and is maintained by an internal battery during power failures. The battery is automatically charged while the unit is switched on (approximately two days to reach full charge) and will last roughly thirty days without a power input.

Note: Date stamping for landline calls is provided by the landline caller ID mechanism. Caller ID from the incoming mobile side uses the Burnside unit clock. To avoid confusion, ensure that the unit clock is correctly set using the method shown here.

To set the internal clock

1 Lift the phone handset and dial ***0#550***. The display will show:

2 Press the ***0*** key to confirm. The display will show:

3 Using the phone keypad, enter the day, month and year. After the sixth digit is entered, the display will show:

4 Enter the current time in hours, minutes and seconds. After the sixth digit is entered, the display will return to the clock menu and the information will be saved.

Operation

This section covers the features of the Burnside unit that you will use on a regular basis, such as:

- Making and receiving calls
- Using the phonebook
- Text messaging
- Using the call register
- Call handling features

Making and receiving calls

Your Burnside unit is designed to make the attached telephone operate as it would do if connected directly to a landline.

To make a call

1 Lift the handset and listen for the dial tone.

2 Dial the required number. Three seconds* after the final number is entered, the call will be placed.

Note: For calls that use the mobile phone link, you must use the full dialling code for all calls, even to those in your local area. On 'L' models (which have an additional landline connection), it is best practice to also use the full dialling code as calls may be directed via either connection method.

** The standard three second dial delay can be changed using menu **0#5220** to a period between 1 second and 1 minute. When entering a phone number, you can optionally press the phone's **#** key to begin the dialling process immediately.*

To make an international call

1 Lift the handset and listen for the dial tone.

2 Press and hold the phone's zero key until '+' appears on the display of the Burnside unit.

3 Dial the standard international code for the required country (e.g. '44' for the UK, '33' for France, etc.) and then dial the required phone number (omit the initial zero of the area code, as usual).

To end a call

1 Replace the handset. No other action is required.

To make a speed dial call

1 Lift the handset and listen for the dial tone.

2 Press the required speed dial number between 1 and 9, then press the **#** button. The display will show the name of the phonebook entry stored at the chosen speed dial location and ask for confirmation to dial.

3 Press the ***0*** key to dial.

To receive a call

When the phone rings, lift the handset and take the call in the usual manner.

If the caller's number is declared by the network, it will be shown on the display of the Burnside unit and also that of the phone (if the phone supports the Caller ID feature). *Note: You can disable outgoing Caller ID using menu **0#5240** - see Caller ID for details.*

If the 'Allow reject' option is enabled on the Burnside unit (menu ***0#5250*** - see Allow reject for details), lift the handset and then press the phone's ***0*** key to accept the call.

Using the Phonebook

The Phonebook uses your SIM card to store the names and numbers of your contacts. You can add, edit, erase, search and dial those stored details using a minimum of keypresses.

Phonebook contacts are listed alphabetically with the exception of the first nine entries, which are reserved for speed dialling your most commonly used numbers.

To add an entry

1 Lift the phone handset and dial ***0#120***. The display will show:

```
Select 1 to 9 or
# for next free_
```

2 You can now either:

- Use one of the first nine (speed dial) memory locations: Press a key between ***1*** and ***9***. If the location is already taken, the display will show the name and 'Replace?'. Press the ***0*** key to proceed (or press ***✱*** to go back a step).

  or

- Use the next vacant standard memory location: Press the ***#*** key.

  The display will show:

```
Enter name then
# (max 14 chars)
```

3 Using the phone's keys in a similar manner to writing a text, enter the name of your contact and then press the ***#*** key.

  The display will show:

```
Enter num then #
(max 20 digits)
```

4 Enter the full phone number of your contact and then press the ***#*** key. *Note: For entering international numbers, see To make an international call.* The entry will be stored within SIM card memory.

To call a standard phonebook entry

1 Lift the phone handset and dial ***0#110***. The display will show:

```
Enter first
character or #:_
```

2 You can now either:

- Scroll through the list: Press the ***#*** key to display the first memory location.

  or

- Search by name: Press the phone key containing the first letter of the contact's name (if necessary, press the key repeatedly to display the correct letter). The display will show the first entry that has the chosen letter.

3 Use the phone keys as follows to scroll down, up or dial:

to scroll down the list by one place,

✱ to scroll up the list by one place,

0 to dial the entry that has the flashing cursor.

To call a speed dial phonebook entry

1 Lift the phone handset.

2 Press and hold a key (between ***1*** and ***9***) for roughly one second.

3 Release the key. After a short pause the display will show the name of the chosen entry:

```
Mum Home
Call?
```

4 Press the ***0*** key to dial the chosen contact, otherwise hang up and start again to choose a different contact.

To edit a phonebook entry

1 Lift the phone handset and dial ***0#130***. The display will show:

2 You can now either:

- Scroll through the list: Press the ***#*** key to display the first memory location.

  or

- Search by name: Press the phone key containing the first letter of the contact's name (if necessary, press the key repeatedly to display the correct letter). The display will show the first entry that has the chosen letter.

3 Use the phone keys as follows to scroll down, up or select:

to scroll down the list by one place,

✱ to scroll up the list by one place,

0 to select the entry that has the flashing highlight.

The display will show:

4 Press the ***0*** key again to confirm your choice. The entry name will be shown on the lower line of the display with an underline cursor.

Use the phone keys as follows to edit the name:

to move the cursor right one place,

✱ to move the cursor left one place,

✱ (press and hold) to delete the current character,

0 to replace the current character with a space (equivalent to delete). You can also enter other punctuation marks with repeated presses of the ***0*** key.

1-9 Use the other keys to enter characters as usual.

5 When you have finished editing the name, press the ***#*** key repeatedly until the cursor exceeds the final character. The display will now show the current number for the entry.

6 Use the phone keys as follows to edit the number:

to move the cursor right one place,

✱ to move the cursor left one place,

✱ (press and hold) to delete the current digit,

0-9 Use the other keys to enter digits as usual.

7 When you have finished editing the number, press the ***#*** key repeatedly until the cursor exceeds the final character. The display will briefly show 'Saved' and return to the Edit menu.

To check the memory status

1 Lift the phone handset and dial ***0#140***. The display will show how many entries are used and available:

To erase an entry

1 Lift the phone handset and dial ***0#150***. The display will show:

You can now either:

- Scroll through the list: Press the ***#*** key to display the first memory location.

  or

- Search by name: Press the phone key containing the first letter of the contact's name (if necessary, press the key repeatedly to display the correct letter). The display will show the first entry that has the chosen letter.

3 Use the phone keys as follows to scroll down, up or select:

to scroll down the list by one place,

******* to scroll up the list by one place,

0 to select the entry that has the flashing highlight.

The display will show:

4 Press the ***0*** key to confirm the erase operation.

Text messaging

The Burnside unit provides SMS text messaging for messages up to 160 characters in length. Inbox and outbox messages are stored within the SIM card memory and the number of messages available are determined by the capacity of the card. The most recently edited text message, as well as messages related to the input port sensors, are stored in non-volatile memory.

*Note: The Auto delete SMS feature is enabled as standard on dual link units. With this mode set, all incoming text messages will be deleted and no indication of their arrival will be given. Use **0#24220** to disable the auto delete mode.*

To write and send a message

1 Lift the phone handset and dial ***0#210***. Depending on whether an existing message is held within the editor, the display will either show:

No previous message stored, you can start typing immediately.

or

Either press ***0*** to clear the existing message or press ***#*** to retain and edit it.

2 Enter your message (see *Character and numeral editing* ➲). The counter in the top right corner shows the number of characters remaining.

3 When your message is complete and the cursor is at the end of the message, press ***#***. The display will show:

You can use the outbox to optionally store messages that you wish to keep, such as template messages or unfinished messages.

4 Either press the ***0*** key to save the message in the outbox (and then continue automatically to addressing) or press the ***#*** key to go straight to the addressing section. The display will show:

5 Either:

- Enter the recipient's phone number and then press ***#***. Then press ***0*** to confirm that you wish to send, or
- Access the phonebook: Press ***#*** immediately and then use the methods described in the phonebook section to locate the required contact; then press ***0*** to select. When prompted, press ***0*** again to confirm that you wish to send.

Character and numeral editing

Use the phone keys ***0*** to ***9*** to enter characters.

Press a key repeatedly to go through the characters available on that key. The choice of characters allocated to each key are shown on the top line of the display. After a short delay or a different key is pressed, the current character is accepted.

The ***0*** key is mainly used for the space character but also includes other formatting characters.

Press and hold a key to change between upper and lower case.

Press and hold the ***✱*** key to delete a character.

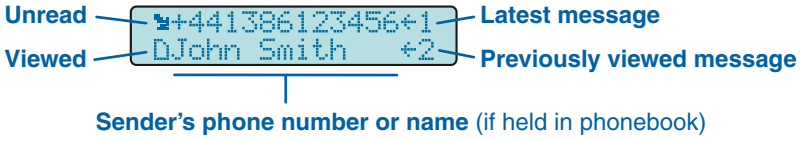
Press and hold the ***#*** key to skip to the end of the message.

To store international phone numbers use the **+** character followed by the country code. Enter **+** by holding down the ***0*** key. If the terminal is on the move for example on a boat, we would recommend using the full number including country code for all phonebook entries.

To read a received message

When one or more text messages are received, the display on the Burnside unit will illuminate and announce the number of new messages. Use the steps discussed below to access received messages (new and previously read) at any time.

1 Lift the phone handset and dial ***0#220***. If any received messages are held, the display will show:



2 Use the phone keys as follows to scroll down, up or select:

to scroll down the list of messages by one place,

✱ to scroll up the list of messages by one place,

0 to select the message entry that has the flashing highlight.

The display will show:

3 Press ***0*** to read the message, then use ***#*** and ***✱*** to move forwards and backwards through the message, respectively.

When you reach the end of the message, press ***#*** once more to show the prompt: 'Delete SMS?'

Either press ***0*** to delete the message, ***✱*** to return to the message or hang up the handset to leave the message within the inbox.

Note: When the inbox is full and new messages are waiting to be received, an alert will be shown on the display to remind you to delete read messages to make space for new ones (deleting messages from the outbox will also free up space).

To view the outbox

The outbox allows you to optionally store messages or message templates that you wish to keep.

1 Lift the phone handset and dial ***0#230***. The first twelve characters of each stored message will be shown on each line:

2 Use the phone keys as follows to scroll down, up or select:

to scroll down the list of messages by one place,

✱ to scroll up the list of messages by one place,

0 to select the entry that has the flashing highlight.

3 Edit, address and send the chosen message as discussed in To write and send a message.

Message settings

There are two main settings related directly to messaging: 'Edit message centre number' and 'Auto delete SMS'.

The '**Message centre number**' is determined by your service provider and stored on the SIM card. If you are instructed to change this number, lift the phone handset and dial ***0#2410***, then use the phone keys to enter a new number (***✱*** and ***#*** to move cursor left and right, long press ***✱*** to delete a digit, ***#*** after last digit to exit and save).

The '**Auto delete SMS**' feature (enabled as standard on dual link units) is useful if you do not wish to receive incoming text messages and thus prevents filling memory with unwanted 'spam' texts. Lift the phone handset and dial ***0#24210*** to discover the current setting, ***0#24230*** to enable auto delete mode and ***0#24220*** to disable auto delete mode. *Note: When auto delete SMS mode is enabled, no indication will be given of incoming messages and no retrieval prior to deletion will be possible.*

Using the call register

The Burnside unit maintains records of incoming calls that are missed or successfully received, as well as the most recently dialled outgoing calls. The call register also provides the duration of the last call and allows you to set limits for the collective duration of outgoing calls (see Tariff timer functions).

To view call register records

1 Lift the phone handset and choose the required register:

- For **missed calls** (incoming calls that were not answered), dial ***0#310***.
- For **received calls** (incoming calls that were answered),
  - (units without landline option) dial ***0#320***.
  - (units with landline option) Mobile calls, dial ***0#3210***.
  - (units with landline option) Landline calls, dial ***0#3220***.
- For **outgoing dialled calls** (not via phonebook), dial ***0#330***.

In all cases, a list of numbers will be displayed and you can use the phone keys as follows to scroll down, up or to dial entries:

to scroll down the list of numbers by one place,

✱ to scroll up the list of numbers by one place,

0 to dial the number that has the flashing highlight.

To erase the dialled list

1 Lift the phone handset and dial ***0#340***.

2 Press the ***0*** key to confirm.

To show durations

1 Lift the phone handset and dial ***0#350***. The display will show:

To show the GPRS log

1 Lift the phone handset and dial ***0#360***. The display will show:

Note: The log is updated at the end of a GPRS session.

To clear the GPRS log

1 Lift the phone handset and dial ***0#370***. Then press ***0*** to confirm the clear operation.

Note: If the SIM is changed, the registers will be automatically erased. If the SIM is removed and then replaced, the registers will remain unchanged.

Tariff timer functions

Using call register information, the tariff timer function maintains a record of outgoing call times and allows you to optionally set a total limit on the duration of outgoing calls and also determine the action(s) that should occur if the limit is exceeded. See also Method for (tariff) timer reset and Restrict call time functions.

- **View time used** - dial ***0#3810*** - Shows the number of minutes used since the tariff time count was reset.
- **Set new tariff limit** - dial ***0#3820*** - Sets the number of minutes for the tariff that applies to the inserted SIM card. Valid entries are '1' to '99999' minutes, press **#** to save.
- **Action taken at time limit** (dial ***0#3830***) - This group of options determine what should happen when the tariff time limit is reached. In all but the 'Show status' and 'Set to no action' options, you can also arrange to send a pre-determined status SMS message to a designated phone number. This optional SMS message function is fulfilled by the Channel 1 'Text to send' facility (dial ***0#55130***).
  - **Show status** - dial ***0#38310*** - Indicates the current action setting.
  - **Set to no action** - dial ***0#38320*** - Determines that no action should be taken when the tariff time limit is exceeded.
  - **Set to alert only** - dial ***0#38330*** - When the tariff timer limit is exceeded, the display will show the number of minutes remaining or exceeded (and an optional text message can also be sent to a specified number).
  - **Set to busy tone** - dial ***0#38340*** - When the tariff timer limit is exceeded, a busy tone will be output and the unit will only accept outgoing emergency calls (and an optional text message can also be sent to a specified number). Menu items remain accessible.
  - **Set to open loop** - dial ***0#38350*** - When the tariff timer limit is exceeded, the unit will place the link to the connected telephone into an open circuit (no voltage) condition and an optional text message will also be sent (if one is stored using the Channel 1 'Text to send' facility (dial ***0#55130***)). This mode is typically used when the unit is connected to a PBX (Private Branch eXchange) trunk line. In this mode, the user interface will no longer be accessible.

    To remove the open loop condition, either send a text message to **reset the tariff timer** ('***ppppre***' where ***pppp*** is the Terminal PIN code - see Remote commands for more details) or temporarily remove power. When power is restored, the unit will no longer be in open loop mode and the menu functions will be accessible to reset the tariff timer or change the action. If no changes are made, one more call can be made, however, when that call is ended, the line will return to open loop. Incoming calls will ring as normal and can be answered. At the end of the call, the line will return to open loop.
  - **Set to use landline** - dial ***0#38360*** - When the tariff timer limit is exceeded, all outgoing calls will be routed via the landline connection (this option is available only on units that include a landline connection facility).

Method for (tariff) timer reset

This group of options control how the tariff timer should be reset.

- **Show status** - dial ***0#38410*** - Indicates the current setting.
- **Set to manual** - dial ***0#38420*** - In this mode, the tariff timer can be reset either by using the 'Reset now' option or by sending a text message (reset the tariff timer) formatted as '***ppppre***' where ***pppp*** is the Terminal PIN code - see Remote commands for more details.
- **Set to automatic** - dial ***0#38430*** - In this mode, the tariff timer will be reset each new month at the start of the day specified using the 'Day of reset' option.
- **Day of reset** - dial ***0#38440*** - Determines the day of each month from which the tariff timer should reset (when the 'Set to automatic' option is set). Valid entries are '1' to '28', press ***#*** to save.
- **Reset now** - dial ***0#38450*** - Resets the tariff timer immediately. This action can also be achieved by either temporarily removing power from the unit or by sending a text message (reset the tariff timer) formatted as '***ppppre***' where ***pppp*** is the Terminal PIN code - see Remote commands for more details.

Restrict call time

This group of options allow you to set a time limit that should not be exceeded by any single outgoing call and also determine the action that should occur if the limit is exceeded. The actions of these options are independent from those of the tariff timer.

- **Set new time limit** - dial ***0#3910*** - Determines the number of minutes permissible within a single outgoing call. Valid entries are '1' to '60' minutes, press ***#*** to save.
- **Action taken at time limit** (dial ***0#3920***) - This group of options determine what should happen when the restrict call time limit is reached.
  - **Show status** - dial ***0#39210*** - Indicates the current setting.
  - **Set to no action** - dial ***0#39220*** - Disables the restrict call time feature. The Show durations option will still show the time of the last call when selected.
  - **Set to end call** - dial ***0#39230*** - When selected, the call will be automatically terminated when the restrict call time limit is reached. If this option is selected, the recall/flash call control is automatically disabled. See Allow recall/flash (***0#5270***).

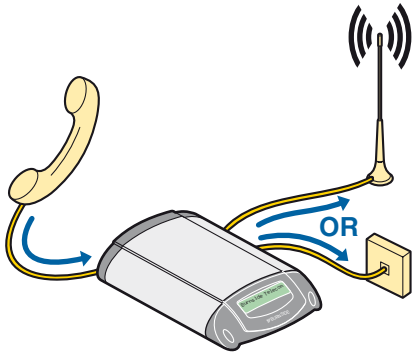
Call handling features

This section presents a number of separate call handling features that help to make the Burnside units which have dual links (mobile and landline) the most flexible and beneficial in their class.

Outgoing call routing ('L' models only)

This feature has the potential to greatly reduce your call costs by ensuring that outgoing calls are made using the most efficient method:

- Calls to fixed phones via the landline connection,
- Calls to mobiles via the mobile connection.



To use outgoing call routing you merely need to enable the feature and, if necessary, redefine the call prefix for mobile numbers ('07' as standard).

- **Show status** - dial ***0#9110*** - Indicates the current setting.
- **Set to match prefix** - dial ***0#9120*** - Enables outgoing call routing via the most efficient method.
- **Set to route all calls** - dial ***0#9130*** - Sends all calls only via the mobile connection.
- **Set to route no calls** - dial ***0#9140*** - Sends all calls only via the landline connection.
- **Prefix of mobile numbers** - dial ***0#920*** - Use this option to optionally change the standard mobile prefix (usually 07). All dialled numbers beginning with these two digits will be routed via the mobile connection when the feature is enabled.

Manually selecting a landline connection

Use the following technique to force the unit to use the landline connection rather than the mobile link for the next call ('L' models only).

*Note: The Allow recall/flash (**0#5270**) option must be enabled before you can use tapping the hook switch as a means of control.*

- After lifting the handset, press the recall button on the phone (or quickly tap the hook switch) to make a direct connection via the landline.

Manually routing a landline call via mobile connection ('L' models only)

This feature allows you to transfer an existing landline call out to a new number via the mobile connection. Think of this feature as your own mini-PBX (Private Branch eXchange), allowing you to connect two remote callers whenever required.

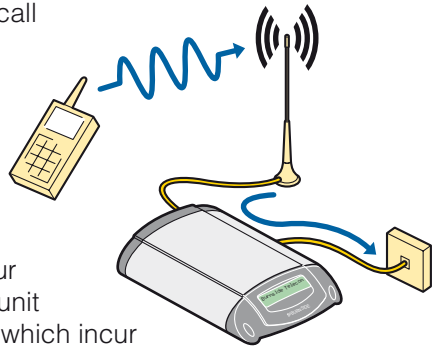
1 During a call (via the landline connection), press ***✱9*** on the phone. The existing call will be placed on hold and you will hear a dial tone.

2 Dial the complete phone number to which you wish to transfer the existing call. Once the called number is ringing, you can either hang up immediately (to directly connect the calls) or wait for an answer in order to introduce the landline caller before hanging up.

- If necessary, press recall on the phone (or quickly tap the hook switch) to display the options for rejecting the new call or swapping to the existing call. Use the ***✱*** or ***#*** keys to choose the required option and press ***0*** to accept.

Note: Once the call is transferred, you will continue to be charged by your mobile service provider for the duration of the new call.

Landline dial through ('L' models only)



This feature allows an incoming call received via the mobile connection to make a new outgoing call using the landline connection. This ability provides great cost savings when you need to regularly dial landline numbers from your mobile. Cost savings will be particularly effective if your mobile phone and the Burnside unit are both fitted with paired SIMs (which incur no charges for calls made between them).

In use, when the Burnside unit answers the incoming call it will either sound a beep to indicate that a PIN code is required or will give a dial tone, depending on the selected mode.

Controlling this feature using phone button presses

The unit will respond according to how the options have been set:

- **Show status** - dial ***0#9610*** - Indicates the current setting.
- **Set to match phonebook** - dial ***0#9620*** - When set, only incoming calls from phone numbers registered within the phonebook will be permitted to make outgoing dial through calls.
- **Set to use PIN** - dial ***0#9630*** - When set, an incoming caller who wants to make a dial through call, will need to enter a valid PIN code (the Terminal PIN, not the SIM PIN) followed by #. If the PIN is correct the landline dialtone will be heard, otherwise the call will end.
- **Set to allow any caller** - dial ***0#9640*** - When set, any incoming caller will be permitted to make a dial through call and will be presented with the landline dial tone.
- **Set to bar dial through** - dial ***0#9650*** - Disables the dial through.
- **To follow on a new call without dialling back into the unit** - dial ***##*** to clear the current landline call and allow a new call to be made.

Controlling this feature using remote text commands

- Send an SMS message to the unit, formatted as follows:

ppppcc

The first 4 characters (**pppp**) must be the terminal PIN (**1234** as standard, ***0#51240*** to change).

Immediately after the terminal PIN (no space), include the first two characters (**cc**) of the appropriate command:

- **ID**ENTITY Enables dial through only for callers who are listed within the phonebook.
- **PI**N Enables dial through and requires PIN entry.
- **NO** Disables the dial through feature.

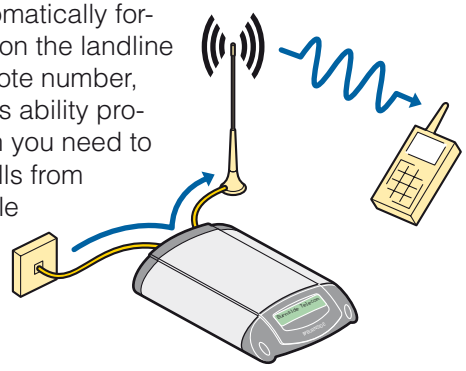
Note: The command characters are not case sensitive.

The unit will normally respond by sending an SMS message back to the number that sent the command. The response is either the new status of the unit or an error message if the command is not recognised. If required, you can suppress the reply by placing a fullstop after the PIN, e.g. **1234.Id** will enable dial through without replying.

Note: It is not possible to guarantee that an SMS will be delivered immediately and there are rare occasions when the message will not be sent at all.

IMPORTANT: Reliable operation of the dial through is dependant on the quality of the connection. If the quality of the connection is poor, a wrong number could be dialled inadvertently. If there is doubt about the quality, use the PIN entry mode which will give a good indication that the connection is good enough to accept the PIN number. Calls originating from a mobile phone should generally be the most reliable due to the way those dialling tones are created by the network equipment.

Forward landline ('L' models only)



This feature allows you to automatically forward incoming calls received on the landline connection to a specified remote number, via the mobile connection. This ability provides great cost savings when you need to regularly transfer incoming calls from your fixed phone to your mobile by avoiding service provider forwarding charges. This feature is particularly cost effective when your mobile phone and the Burnside unit are both fitted with paired SIMs (which incur no charges for calls made between them).

You can choose to allow the locally connected phone to ring (and intercept the call) before or during the forwarding process or carry out forwarding without ringing the local phone. You can also determine other settings to suit your requirements.

Notes:

- *When using this feature, you are recommended to always have a voicemail facility on the mobile phone (to which calls are being forwarded) as a fall back option, in case the network is unable to deliver calls.*
- *A text alert option is available to warn you if a call failed to be forwarded to the mobile phone or its voicemail facility - see Missed call SMS alert for details.*

Certain aspects of this feature can be controlled remotely using specially formatted text messages - see Controlling this feature using remote text commands for details.

Controlling this feature using phone button presses

The unit will respond according to how the options have been set:

- **Show status** - dial ***0#4210*** - Indicates the current setting.
- **Enter number to forward to** - dial ***0#4270*** - Allows you to declare the phone number to which calls should be forwarded.
  Note: You need to set the number to which calls will be forwarded before choosing the forwarding mode. Remember to include the dialling code at all times.
- **Set to ring and forward** - dial ***0#4220*** - The connected phone will ring and the call forwarding process will begin to the remote phone number set by (***0#4270***). If a delay has been set by (***0#42810***) then the specified number of rings must elapse before the call is actually forwarded. In the meantime, if the call is answered by the locally connected phone, then the forwarding process will end.
- **Set to only forward** - dial ***0#4230*** - All calls are forwarded without the locally connected phone ringing.
- **Set to announce, ring & fwd.** - dial ***0#4240*** - The connected phone will ring and the call forwarding process will begin to the remote phone number set by (***0#4270***). Meanwhile a pre-recorded prompt "Please wait for your call to be connected" will be played repeatedly to the caller. If a delay has been set by (***0#42810***) then the specified number of rings must elapse before the call is actually forwarded. In the meantime, if the call is answered by the locally connected phone, then the forwarding process will end.
- **Set to announce & forward** - dial ***0#4250*** - The incoming call will be forwarded to the remote phone number set by (***0#4270***). Meanwhile a pre-recorded prompt "Please wait for your call to be connected" will be played repeatedly to the caller. The locally connected phone will not ring.

continued

Forward landline (continued)

- **Cancel forwarding** - dial ***0#4260*** - Only the local phone will ring.
- Forward options (dial ***0#4280***):
  - **Set num extra rings delay** - dial ***0#42810*** - Allows you to specify how many times the locally connected phone should ring before the forwarding action begins - applicable to modes ***0#4220*** and ***0#4240*** only). The default setting for this feature is ***0*** (i.e. start forwarding immediately).
  - **Missed call SMS alert** - dial ***0#42820***

    If an incoming landline call fails to be connected with the forwarded destination number (due to weak coverage, network congestion, etc.), this feature will send a text message to that number with a list of missed calls, the same as the 'Who' remote command. If the network connection is temporarily lost, the alert message will be sent once the connection is re-established.

    Note: If the phone at the forwarding number was unavailable, causing the network to divert the call to voicemail, then a message would not be sent by the Burnside unit because (from its perspective) the forwarding operation was successful.

    - **Show status** (dial ***0#428210***) - Indicates the current setting.
    - **Alert for any call** (dial ***0#428220***) - Send a text message whenever an incoming call is not successfully forwarded.
    - **Alert for call with ID** (dial ***0#428230***) - Send a text message only when an incoming call (which provides its number) is not successfully forwarded.
    - **No missed call alert** (dial ***0#428240***) - Disables the feature.
- **Prompt test** - dial ***0#42830*** - Allows you to hear the announcement that will be played to callers while forwarding takes place.

Controlling this feature using remote text commands

- Send an SMS message to the unit, formatted as follows:

ppppccffffffff

The first 4 characters (**pppp**) must be the terminal PIN (**1234** as standard, ***0#51240*** to change).

After the terminal PIN (no space), include the first two characters (**cc**) of the appropriate command:

- **FO**RWARD Set call forwarding to the number specified and ring the local phone.
- **SI**LENT As per FORWARD except local phone will not ring.
- **RI**NG As per FORWARD with an announcement to the caller.
- **AN**NOUN As per FORWARD with a caller announcement but no ringing of the local phone.
- **CA**NCEL Cancels call forwarding.

Note: The two command characters are not case sensitive.

After the command, enter number (**ffffffff**) to forward to. If no number is given, unit will use the last number specified. If no last number is stored, it will return an error message.

*When specifying international num, use format **+nn12345678**. Where **nn** is the country code.*

The unit will normally respond by sending an SMS message back to the number that sent the command. The response is either the new status of the unit or an error message if the command is not recognised. If required, you can suppress the reply by placing a fullstop after the PIN, e.g. **1234.Fo** will set forwarding without replying.

Answering a landline call during a mobile call

When a call is in progress over the mobile network, an incoming call over the landline will cause three short beeps to be heard in the handset and the caller identity will be shown on the display. There are several options.

- Replace the handset to discard the mobile call and lift it again to accept the landline call.
- Press the recall button on the phone (or quickly tap the hook switch) followed by the ***0*** key to accept the landline call and put the mobile call on hold.
- Press recall on the phone (or quickly tap the hook switch) again to display the options for rejecting the held call or swapping to the previous call. Use the ✱ or **#** keys to choose the required option and press ***0*** to accept.

Aborting fax or data calls

If a data call or fax call is in progress between the unit and a connected computer, it is not possible to make a voice call at the same time. However it is possible to abort the data/fax call using the following procedure:

1 Lift the handset and attempt to make an outgoing call, for example by dialling ***01***. The unit will immediately indicate it is not possible to dial a voice call by displaying “Busy, hang up” and emitting a busy tone.

2 Press the recall button on the phone (or quickly tap the hook switch) which will cause the display to show “Abort data/fax?”

3 Press ***0*** to end the data or fax call.

Incoming calls during menu access

If an incoming call is received during interaction with user functions, for example editing the phone book, a ringing tone will be heard through the handset. When the handset is replaced, the phone will ring and the call may be answered in the normal way.

Network call features

Note: The availability of these options are dependant on the SIM card and service provider. If a service is not provided, a message such as "operation not supported" or "ss not executed" where ss means Supplementary Service.

Call diverting

These call divert options control the service provided by your mobile network, which will transfer incoming voice calls to a separate phone number when the Burnside unit cannot take calls (for a variety of different reasons). The various divert options are not mutually exclusive, so you can arrange different or the same divert numbers for any or all conditions, as required. Each divert option has three sub menus: *Status*, *Activate* and *Cancel*.

When activating a divert, a destination number must be either entered or chosen from the phonebook. This number is then registered with your network provider.

When cancelling a divert, the previously registered number will be retained by the network. When reactivating the same divert, you will be given the choice to continue with the registered number or delete it and replace it. To just delete it, hang up after deleting.

- **Divert all** - dial ***0#4110*** - All voice calls will be diverted.
- **Divert when busy** - dial ***0#4120*** - Voice calls will be diverted when the phone is busy.
- **Divert no answer** - dial ***0#4130*** - Voice calls will be diverted if not answered within 20 seconds.
- **Divert when off** - dial ***0#4140*** - Voice calls will be diverted whenever the unit is switched off or unavailable. See also Disconnect from network.
- **Cancel diverts** - dial ***0#4150*** - Call diverting will be disabled.

Call waiting

When call waiting is supported by your network and enabled (see menu codes below or Star hash codes), a call waiting situation will occur if an incoming call is received while the unit is engaged in an existing call. When this happens, the number or name (if identified in the phonebook) will be displayed with "Waiting" shown and also a short tone can be heard in the handset.

- **Show status** - dial ***0#53210*** - Indicates the current setting.
- **Activate** - dial ***0#53220*** - Enables the call waiting feature, subject to network support.
- **Cancel** - dial ***0#53230*** - Disables the call waiting feature.

When enabled and a new call is received, you have the following options:

- Ignore the tone and message, and wait until the caller either hangs up or is diverted to voicemail, if enabled.
- Press the recall button on the phone (or quickly tap the hook switch). The display will show "Accept & hold?" with the waiting number/name on the second line. Either:
  - Press ***0*** to place the original call on hold and accept the new call, or
  - Press ***#*** to display "Reject?". Then press ***0*** to reject the waiting call and return to the original call. Alternatively, press ***#*** to re-display the "Accept & hold?" prompt, or
  - Press the recall button (or quickly tap the hook switch) to return to the original call.

Call(s) held and multiparty (conference) calls

Note: Multiparty calls are supported only on non-'L' models.
If one or more calls are held after accepting a waiting call or dialling another number, you have the following options:

- Press the recall button on the phone (or quickly tap the hook switch). The display will show "Reject?". Either:
  - Press ***0*** to reject the current active call and return to the held call(s), or
  - Press ***#*** to display "Add?". Then press ***0*** to add the held call(s) to the current call and provide a multiparty call, or
  - Press ***#*** twice and the display will show "Swap?". Press ***0*** to place the existing active call on hold and connect to the held call(s).

Note: If you try to add a party to a multiparty call and the call is answered by voicemail, you should disconnect the call, otherwise the conference may be recorded by voicemail until it becomes full.

In-call dial

If during a call, you want to make another call without ending the current call, follow this procedure:

1 Press the recall button on the phone (or quickly tap the hook switch) and the display will show:

2 Dial the number, speed dial or use the phonebook and the call will be connected in the normal way. Once connected, the display will show '1 active call' as well as the number of held calls.
  - If it is not possible to connect the call, e.g. the line is busy or there's no reply, you will be automatically returned to the held call(s).
  - If the new call is connected, use the Call Held options (as discussed on the left) to either reject, create a multi-party call or switch between calls.

    Notes: During in-call option selection, to return to a previous option press the ✱ key. Hanging up the phone will terminate all calls (held, calling, active or waiting).

Further information

This section contains a range of further information arranged as a series of appendices.

- Appendix **1**: Menu options
- Appendix **2**: Data connection
- Appendix **3**: Using the input/output channels
- Appendix **4**: Remote commands
- Appendix **5**: Star hash codes
- Appendix **6**: Advanced configuration codes
- Appendix **7**: SMS key characters
- Appendix **8**: SIM security features
- Important safety information

Contacting Burnside Telecom

For any technical queries regarding your T9 series unit, please contact our technical support department:

- Email: techsupport@burnsidetelecom.com
- Tel: +44 (0)8700 762766 (extension 3)
- Fax: +44 (0)1420 520029
- Address: Burnside Telecom Limited,
  Burnside House,
  Isington,
  Alton,
  GU34 4PP,
  United Kingdom.

Appendix 1: Menu options (list)

Most features of the Burnside unit are accessed and configured using the options contained within the menu.

To use the menu

Lift the handset and press **0#** on the phone to enter the menu ➲

- Navigate the menu using these control keys: ⊛ to go back/up; # to go down/forward; 0 to enter/confirm
- Or enter a code to reach a particular menu item:

1 Phonebook ⊞
- **11** Search
- **12** Add entry
- **13** Edit
- **14** Status
- **15** Erase

2 Messages ⊞
- **21** Write message
- **22** Inbox
- **23** Outbox
- **24** Message settings
  - **241** Edit message centre num
  - **242** Auto delete SMS

3 Call register ⊞
- **31** Missed calls
- **32** Received calls
- **33** Dialled numbers
- **34** Erase dialled list
- **35** Show durations
- **36** Show GPRS log
- **37** Clear GPRS log
- **38** Tariff timer functions
  - **381** View time used
  - **382** Set new tariff limit
  - **383** Action taken at time limit
  - **384** Method for timer reset
- **39** Restrict call time
  - **391** Set new time limit
  - **392** Action taken at time limit

4 Divert & forward
- **41** Mobile network divert ⊞
  - **411** Divert all
  - **412** Divert when busy
  - **413** Divert no answer
  - **414** Divert when off
  - **415** Cancel diverts
- **42** Forward landline ⊞
  - **421** Show status
  - **422** Set to ring & forward
  - **423** Set to only forward
  - **424** Set to announce, ring & fwd.
  - **425** Set to announce & forward
  - **426** Cancel forwarding
  - **427** Enter number to forward to
  - **428** Forward options

5 Settings
- **51** Terminal settings ⊞
  - **511** Display contrast
  - **512** Security settings
  - **513** Service settings
  - **514** Restore factory settings
  - **515** TAPI voice mode
  - **516** Tone region selection
- **52** Phone settings ⊞
  - **521** Own number sending
  - **522** Dial delay
  - **523** Alert settings
  - **524** CLI type
  - **525** Allow reject
  - **526** Change volume
  - **527** Allow recall/flash
  - **528** End of call signal type
  - **529** Call progress announce
- **53** Network settings
  - **531** Network selection ⊞
  - **532** Call waiting ⊞
- **54** Input/Output settings ⊞
  - **541** Channel 1
  - **542** Channel 2
- **55** Set clock ⊞

6 Special function ⊞
- **61** Lock outgoing calls
- **62** Lock menu functions
- **63** Monitor inputs
- **64** Disconnect from network

7 Reserved

8 Help

9 Outgoing call routing ⊞
- **91** Calls via mobile networks
- **92** Prefix of mobile numbers
- **93** Landline IDD access code
- **94** Use landline prefix
- **95** Change landline prefix
- **96** Dial through control

Notes:
- Only the first three levels of menu items are shown here.
- Click the ⊞ icon for a section to view further details for each option.
- Items shown in Blue are applicable only to dual link 'L' models.

Menu options (explanations)

This section provides explanations for all of the menu options that are not dealt with elsewhere within this guide. Where options are covered in other sections, the adjacent links will take you straight to the relevant pages:

Phonebook (***0#10***) - See Using the phonebook for details.

Messages (***0#20***) - See Text messaging for details.

Call register (***0#30***) - See Using the call register for details.

Mobile network divert (***0#410***) - See Call diverting for details.

Forward landline (***0#420***) - See Forward landline for details.

Settings (***0#50***) - See below:

Terminal settings (*0#510*)

- **Display contrast** (***0#5110***) - Allows you to adjust the display to suit your surrounding. Use the ***** and **#** keys to change the contrast of the display and press ***0*** to save the setting.

Security settings (*0#5120*)

- **SIM PIN state** (***0#51210***) - Use to specify whether the SIM PIN is required. If enabled, the SIM PIN will be required every time the unit is powered up or logged on.

  If the SIM PIN is incorrectly entered, the number of tries remaining (3 in total) is displayed. If the number of tries expires, the PUK (PIN Unblocking Code - available from your service provider) will be required and this must be entered using the **05* code.
- **Change SIM PIN** (***0#51220***) - Allows a new SIM PIN to be set. The old PIN is first requested followed by the new PIN, which also needs to be repeated. If the OLD PIN is incorrectly entered, the security measures apply (as described above).
- **Terminal PIN state** (***0#51230***) - Specifies whether the terminal PIN is required. The terminal PIN is used to prevent unauthorised use of the terminal and also for remote monitoring and control functions. If the terminal PIN is enabled, the unit will request the PIN when power is applied or if the remote monitoring and control commands are being used.
- **Change terminal PIN** (***0#51240***) - The old terminal PIN must be entered correctly, then the new PIN needs to be entered twice before it is accepted. The PIN is fixed to 4 digits in length and is set at manufacture to **1234**
- **Auto SIM unlock** (***0#51250***) - When enabled, the unit can automatically unlock the SIM at each startup (the SIM PIN must be manually entered once after enabling).

continued

Service settings (*0#5130*)

- **Signal test** (***0#51310***) - Displays the current signal strength expressed in both logarithmic form (dBm) and as a percentage roughly equivalent to the actual received signal level compared to the practical minimum, divided by the possible maximum range multiplied by 100.
- **Show voltage** (***0#51320***) - Displays the voltage level being supplied by the connected power adapter.
- **HR codec control** (***0#51330***) - Controls the use of the HR codec (half rate coder/decoder) used for speech transfer across the mobile network. This setting is normally set to 'Enabled'.
- **PSTN detection control** (***0#51340***) - ('L' models only) This setting allows the unit to test for the presence of a valid PSTN landline connection before dialling outgoing calls. If the link is not valid, the call will be automatically placed on the mobile connection.
  - **No test** (***0#513420***) - When set, the unit will not test for a valid loop current, but will take the line off-hook and dial out using the landline.
  - **Test loop** (***0#513430***) - When set, the unit will take the line off-hook, check for loop current (power supplied by the line) and if current is present, it will dial the number using the landline.
  - **Loop & tone** (***0#513440***) - When set, the unit will first check for loop current and (if found) then check for a dial tone. If both are present, then it will dial the number using the landline.
- **Restore factory settings** (***0#5140***) - See Restore factory settings.
- **TAPI voice mode** (***0#5150***) - When this option is selected, a connected computer may dial the number using standard TAPI compatible software diallers. When a call is initiated by the computer, the local phone will ring for ten seconds to allow the user to make the call. If the phone is not picked up, the call is cancelled. When the TAPI option is not set, the dialling command protocol via the USB link is compliant with GSM specifications.
- **Tone region selection** (***0#5160***) - Selects the style of tones that will be heard via the phone earpiece. On 'L' models, this also determines the tone cadence expected from the network for end of call detection.
  - **Show current setting** (***0#51610***) - Indicates the chosen tones.
  - **Set to GB (UK)** (***0#51620***) - Use UK standard tones.
  - **Set to IE (Eire)** (***0#51630***) - Use Eire standard tones.
  - **Set to NL (Netherlands)** (***0#51640***) - Use Dutch standard tones.

Phone settings (*0#520*)

- **Own number sending** (***0#5210***) - Determines whether your telephone number is sent via the network (Calling Line Identity, CLI or Caller ID) to the person you are calling. The outgoing Caller ID can also be temporarily suppressed (for one call) by first entering #31# or can be enabled for a single call by first entering *31#.
- **Dial delay** (***0#5220***) - Sets the delay to elapse, after entering the last digit, before starting to dial. The range is 1 second to 1 minute and the factory setting is 3 seconds. When dialling, the call can be started immediately by entering **#** at the end of the number.

continued

Alert settings (*0#5230*)

- **Ring cadence** *non-'L' models only* (***0#52310***) - Select one of four different ring cadences. Each cadence is demonstrated through the handset as the options are changed.
- **Ring cadence from mobile network** *'L' models only* (***0#523110***) - Select one of four different ring cadences for incoming calls from the mobile network. Each cadence is demonstrated through the handset as the options are changed.
- **Ring cadence from landline** *'L' models only* (***0#523120***) - Select one of four different ring cadences for incoming calls from the landline. Each cadence is demonstrated through the handset as the options are changed.
- **Ring for new message** (***0#52320***) - Select whether to provide a short ring when new text messages are received.
- **CLI type** (***0#5240***) - Allows you to match the Calling Line Identity (Caller ID) scheme used by the unit to that used by your service provider. CLI presents the caller's phone number and name (if there's a match in your phonebook) plus the date and time for display on the attached telephone.

  *Note: The time displayed on landline calls is provided by the landline Caller ID mechanism. Caller ID from incoming mobile calls use the unit's internal clock. To avoid the confusion of different times, it is recommended that you set the clock to the correct time using menu (**0#550**).*

- **Allow reject** (***0#5250***) - When enabled, the unit will provide an opportunity to accept or reject incoming calls after picking up the receiver. The display will show *'Accept? 01234 567890'* or will show a name, if the caller is listed in the phonebook. During this process, the caller will continue to hear a ringing tone. To accept the call, press the ***0*** key. To reject the call, simply hang up (the caller will hear a disconnect tone).
- **Change volume** (***0#5260***) - Allows you to choose one of three earpiece volume boost levels.
- **Allow recall/flash** (***0#5270***) - Controls the use of recall/flash-hook as used during in-call functions such as accepting call waiting calls and other functions that require the use of recall/flash-hook.
- **End of call signal type** (***0#5280***) - Allows the selection of one of three signalling methods for the end of incoming call: Tone and K-Break (default); tone and line reversal; or only tone.
- **Tone and Kewlstart** (***0#52850***) - A variation of the 'Tone and K-Break' signalling method. This option allows you to extend the end of call break time (*disconnect clear time*) from 275mS to 800mS. This is necessary when used with Asterisk PBX equipment.
- **Call progress announce** (***0#5290***) - When enabled, this option generates audible progress announcements when making calls via the mobile connection. Once dialling has completed, the announcement "Please wait for your call to be connected" will be played. If the call cannot be connected for a temporary reason (e.g. number busy), the announcement "Your call cannot be connected at the moment, please try again later" is played. If there is another reason, the announcement "Your call cannot be connected at the moment" will be played.

Network settings

- **Network Selection** (***0#5310***) - This setting must remain in automatic mode as manual selection is not supported.
- **Call waiting** (***0#5320***) - See Network call features for details.

Input/output settings (*0#540*) - See Using the input/output channels for details.

- **Clock setting** (***0#550***) - See Setting the internal clock for details.

Special function (*0#60*)

- **Lock outgoing calls** (***0#610***) - When enabled, only incoming or emergency outgoing calls may be made. To change the mode, you will be requested to enter the terminal PIN (this is a four digit code which is set to 1234 as standard (use ***0#51240*** to change).
- **Lock menu functions** (***0#620***) - When enabled, the unit will use the terminal PIN to prevent access to all menu functions. Calls can still be made, including speed dial numbers.
- **Monitor inputs** (***0#630***) - When enabled, only incoming calls can be received or emergency calls made and the input(s) will be monitored. If the input conditions are met, an SMS is sent to the number programmed in menus ***0#54130*** and/or ***0#54230***. Before enabling this option, you first need to enable at least one input and set the corresponding SMS alert message.

  When enabled, the power supply level is also monitored and if it falls below 10 volts for a 12 volt supply or 20 volts for a 24 volt supply, an alert is sent to the number allocated to channel 1 (or to channel 2 if channel 1 is allocated as an output).
- **Disconnect from network** (***0#640***) - When enabled, the unit is disconnected from the network, equivalent to switching off a mobile phone. In this state a “Divert when off” condition will apply (if set). Picking up the handset will initiate a request to “log on?”. Pressing ***0*** will cause the terminal to re-connect to the network and request a SIM PIN or Terminal PIN, if enabled.

Help (*0#80*)

Displays the most important key sequences to operate the unit.

Outgoing call routing (*0#90*)

This section controls when to make calls using the mobile network.

- **Calls via mobile networks** (***0#910***) - See Outgoing call routing section for details.
- **Prefix of mobile numbers** (***0#920***) - See Outgoing call routing section for details.
- **Landline IDD access code** (***0#930***) - The number stored here is used to convert the GSM ‘+’ symbol when making international calls via the landline network. The default is **00**. Up to five digits may be entered.
- **Use landline prefix** (***0#940***) - Required only when the Burnside unit is connected to a Private Branch Exchange (PBX) and must dial a prefix (usually **9**) in order to obtain an outside line.
- **Change landline prefix** (***0#950***) - Allows you to change the prefix that must be dialled to gain an outside line via a PBX.
- **Dial through control** (***0#960***) - See Landline dial through section for details.

- **Restore factory settings** (***0#5140***) - Returns all unit configurations to those set at manufacture, as listed here:

  - Sensor 1 = Inactive and set to be an input
  - Sensor 2 = Inactive
  - CLI type = ETSI
  - CLI status = Enabled
  - My number sending = Defined by network
  - Allow rejection of incoming mobile call = Off
  - Terminal PIN required = No
  - GSM ringing cadence = UK
  - PSTN ringing cadence = UK
  - Boost to GSM audio level = No
  - Incoming SMS are deleted = No (non-'L' models)
    Yes ('L' models)
  - Flash hook recognised =
    No (non-'L' models) - Used to accept call waiting, hold call and control multiparty calls
    Yes ('L' models) - Used to manually select PSTN or swap calls with GSM)
  - End of call signalling method = K-Break
  - Alert new SMS with short ring = No
  - Delay before dialling after last digit is entered = 3 seconds
  - Monitoring mode = Inactive
  - Tariff timer restriction = None
  - Day in month to reset tariff counter = 1st
  - Call time restriction = Off
  - Number of minutes for restricted call = 5
  - Inhibit half rate codec = No
  - TAPI compatibility = No
  - Menu lock = No

Additional settings for landline ('L') models.

- Mobile to PSTN dial through = Off
- Calls made via GSM = Automatic by matching dial prefix
- GSM prefix = 07
- Call forwarding = Off
- Number of rings additional delay before forwarding = 0
- Send SMS alert if forward call fails = No
- IDD access code to convert "+" from phonebook entry to = 00
- Insert prefix when dialling PSTN = No
- Prefix for PSTN = 9
- Detection of valid PSTN connection = Only loop current

Appendix 2: Data connection

The Burnside unit features a USB connection so that it can provide data communications for computer devices. Before connection or operation, a software driver (on the supplied Burnside CD-ROM) must be installed on your computer.

Note: Install the driver before you connect the Burnside unit to your computer.

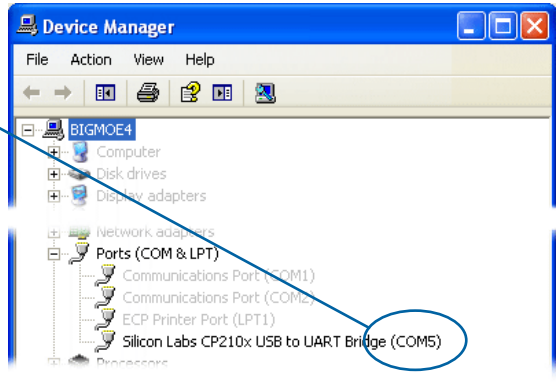
To add driver support

1 Insert the Burnside CD-ROM into your computer's reader and run the program 'PreInstaller.exe'.

2 Once the software has been successfully installed, connect a USB cable between the computer and the Burnside unit.

3 Apart from Windows XP, when the computer recognises the unit, the necessary software driver will be automatically installed. For Windows XP, the 'Add New Hardware' wizard will appear and a warning given about uncerfified drivers. Ignore this warning and continue with the installation.

4 Once the installation is complete, view the Device manager (*Start > Control Panel > System > Hardware > Device Manager*) and check which serial port has been assigned to the Burnside unit.



To configure the unit as a modem

1 Open the Windows Control Panel (*Start > Control Panel*) and run 'Phone and Modems Options'. Change to the Modems tab and click the Add... button.

2 Ensure that the 'Don't detect my modem...' option is ticked and then click the Next > button.

3 Under 'Manufacturer' select 'Standard Modem Types' and then highlight 'Standard 19200 bps modem' and click the Next > button.

4 You will next be asked to choose a serial port. Select the port that was allocated within the Device Manager during the driver installation (see left). Click the Next > button and the new modem entry will be created.

5 Select 'Properties' for the new modem and click the Configure button and in the subsequent dialog box, ensure that the Maximum speed is set to '115200'.

If you would like to connect to the internet using this modem connection, create a new dialup networking configuration suitable for your ISP and ensure that the 'connect using...' option is set to the 'Standard 19200 modem'.

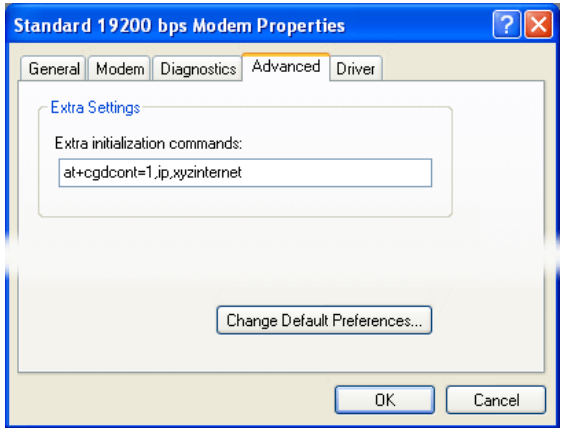
See next page for GPRS information

To configure the unit for GPRS

If your SIM supports it, you can connect to the internet using the higher speed GPRS (General Packet Radio Service) connection. This will provide data rates typically between 40 to 60 kbps, depending on network congestion, signal quality and other variables. Contact your service provider for details. To use GPRS, an additional modem initialisation command is required:

1 Open the Windows Control Panel (*Start > Control Panel*) and run 'Phone and Modems Options'. Change to the Modems tab, highlight the entry named 'Standard 19200 bps modem' and click the Properties button.

2 Click on the Advanced tab and edit the 'Extra initialization commands' field:



Enter **at+cgdcont=1,ip,*xyzinternet***

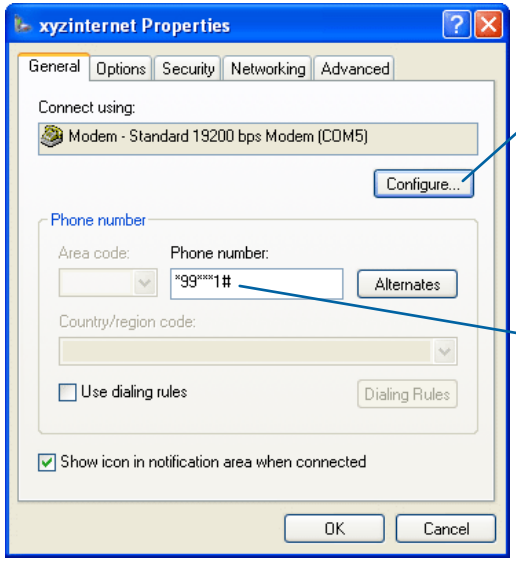
where *xyxinternet* is specified by your service provider.

This special command will not interfere with operations when using the same installation for standard modem and fax.

2 Click OK to save and then click OK to exit the 'Phone and Modem Options' dialog box.

3 Within the Windows Control Panel, run the Network Connections option. Run the New Connection Wizard and select the following options as you work through it: 'Connect to the Internet' > 'Set up my connection manually' > 'Connect using a dial-up modem' > Choose the new 'Standard 19200 bps modem' > Enter a connection name > Enter '***99***1#**' as the phone number > Enter Internet account information from your ISP > Finish.

4 When the 'Connect *ispname*' dialog is displayed, click the Properties button to display the following:



Use this button to make sure that the 'Maximum speed' is set to 115200. Also, select 'Enable hardware flow control'

Ensure that the Phone number is set to *99***1#.

5 Click the Configure button. Ensure that the 'Maximum speed' option is set to 115200 and also ensure that the 'Enable hardware flow control' option is ticked.

6 Click OK to save and exit.

Appendix 3: Using the input/output channels

The Burnside unit features a link port which allows it to connect to external devices and either send, or respond to, switched signals. Combining neatly with the communication features of the unit, the switched output can be triggered by specially formatted SMS messages, while the inputs can be made to trigger outgoing SMS messages when certain conditions are met.

This section deals with menu configuration aspects of the link port, for details about physical connections, please see the Connecting to external devices section.

The link port has two channels:

- Channel 1 can be configured as either an input or output,
- Channel 2 is permanently set as an input.

You can control aspects of this feature using either button presses (as discussed below) or using remote text commands.

Controlling this feature using phone button presses

Channel 1 (input or output) (***0#5410***)

- **Polarity** (***0#54110***) - Determines how the condition logic (i.e. 'true' - action required or 'false' - no action required) relates to the electrical input/output state (i.e. low or high voltage). This option is also used to enable/disable the channel. Options are 'Not used', 'True=High' or 'True=Low'.
- **Input or Output selection** (***0#54120***) - Determines whether channel 1 should operate as an input or an output.
- **Text to send** (***0#54130***) - Uses the normal SMS editing method to create a message and number to call when the input condition is met.
- **Test connection** (***0#54140***) - Displays the current input condition or allows the output to be toggled to test the connection.

Channel 2 (input only) (***0#5420***)

- **Polarity** (***0#54210***) - Determines how the condition logic (i.e. 'true' - action required or 'false' - no action required) relates to the electrical input state (i.e. low or high voltage). This option is also used to enable/disable the channel. Options are 'Not used', 'True=High' or 'True=Low'.
- **Voltage level** (***0#54220***) - Use this option to select the input voltage level that should form the threshold between the 'true' (action required) or 'false' (no action required) logic states. This option offers a range of between 0.5 volts and 4.5 volts in 0.5 steps. The setting of the channel 2 Polarity option (***0#54210***) determines the relationship between the two logic states and the two sides of the threshold voltage level. Setting the voltage level to 2.5V will effectively provide the same facility as a CMOS digital level detector.
- **Text to send** (***0#54230***) - Uses the normal SMS editing method to create a message and number to call when the input condition is met.
- **Test connection** (***0#54240***) - Displays the current input condition.

  *Note: The test connection options (**0#54140** and **0#54240**) refer to the physical levels of the channels, e.g. low, high, 2.5v, etc. However, if you use the remote status command (see Appendix 4 - Remote commands), the channel conditions will be reported as their logical conditions with respect to the polarity that has been set, i.e. true or false.*

  Tip: If you need to send an SMS message to two different locations for a single event, connect both channel inputs together but store different contact numbers for each channel.

continued

Controlling this feature using remote text commands

- Send an SMS message to the unit, formatted as follows:

ppppcc

The first 4 characters (**pppp**) must be the terminal PIN (**1234** as standard, ***0#51240*** to change).

Immediately after the terminal PIN (no space), include the first two characters (**cc**) of the appropriate command:

- **SE**T *Set the channel 1 output to the true state (high or low - according to polarity), if channel is enabled.*
- **CL**EAR *Clear the channel 1 output to the false state (high or low - according to polarity), if channel is enabled.*
- **ON** *Activate input monitoring and lock the terminal.*
- **OF**F *Deactivate input monitoring but the unit will remain locked.*
- **UN**LOCK *Deactivate input monitoring if active and unlock the unit.*

Note: The two command characters are not case sensitive.

The unit will normally respond by sending an SMS message back to the number that sent the command. The response is either the new status of the unit or an error message if the command is not recognised. If required, you can suppress the reply by placing a fullstop after the PIN, e.g. **1234.se** will set channel 1 without replying.

Note: It is not possible to guarantee that an SMS will be delivered immediately and there are rare occasions when the message will not be sent at all.

Appendix 4: Remote commands

Certain facilities can be controlled remotely by sending an SMS text message to the Burnside unit from another phone.

To use remote commands

- Send an SMS message to the unit, formatted as follows:

ppppccffffffff

The first four characters (**pppp**) must be the terminal PIN (**1234** as standard, ***0#51240*** to change).

After the terminal PIN (no space), include the first two characters (**cc**) of the appropriate command - see **Command summary**.

Note: The two command characters are not case sensitive.

The forward landline commands allow you to optionally specify a forwarding number (**ffffffff**).

If no number is given, the unit will use the last number specified. If no last number is stored, it will return an error message.

*When specifying international numbers use format **+nn12345678**. Where **nn** is the country code.*

Command summary

General unit commands

- **IN**IT *Restart the unit.*
- **ST**ATUS *Return status information to the caller (see next page).*
- **WH**O *Returns a list of up to five landline numbers plus time and date received.*
- **LI**ST *Returns a list of up to eleven last received landline numbers.*

Call register and tariff counter commands

- **AL**ERT *Set the tariff action to alert only.*
- **TA**RIFF *Returns the status of the tariff counter.*
- **RE**SET *Reset the tariff counter.*

Forward landline commands

- **FO**RWARD Set call forwarding to the number specified and ring local phone. If no number provided, unit will use the last number specified. If no number is stored, it will return an error message.
- **SI**LENT As per FORWARD except the local phone will not ring.
- **RI**NG As per FORWARD with an announcement to the caller.
- **AN**NOUN As per FORWARD with announcement but not ring phone.
- **CA**NCEL *Cancels call forwarding.*

  *Note: When specifying international numbers in **FO**RWARD, **SI**LENT, **RI**NG or **AN**NOUN, use the format **+nn12345678**. Where **nn** is the country code.*

Landline dial through commands

- **ID**ENTITY Enables dial through, matches Caller ID with phonebook.
- **PI**N Enables dial through and requires PIN entry.
- **NO** Disables the dial through feature.

continued

Input and output commands

- **TR**UE *Set channel 1 output to the true state (high or low voltage output, according to polarity setting), if channel is enabled.*
- **FA**LSE *Set channel 1 output to the false state (high or low voltage output, according to polarity setting), if channel is enabled.*
- **ON** *Activate input monitoring and lock the terminal.*
- **OF**F *Deactivate input monitoring but leave the unit locked.*
- **UN**LOCK *Deactivate input monitoring if active and unlock the unit.*
- **LO**CK *Lock the unit.*

Responses to commands

When a command is received, the unit will normally respond by sending an SMS message back to the number that sent the command. The response is either the new status of the unit or an error message if the command is not recognised. If required, you can suppress the reply by placing a fullstop after the PIN, e.g. **1234.Fo** will set forwarding without replying.

Note: Only the first two characters of commands are required and they are not case sensitive, e.g. **1234sT** *will have exactly the same effect as the above full command.*

Typical response to a status command:

Monitor: off
Lock: off *(the terminal lock condition)*
Input1: true *(if configured as an output, "input1" is replaced with "Output:")*
Input2: 2.5v-f *(the logical condition is also shown, f for false, t for true)*
Missed calls: 13
New SMS: 14
SMS space: 11
Signal: -60dBm
Supply: 12.1v
Supply: break *(shown if power was lost after monitoring was started)*

It is not possible to guarantee that an SMS will be delivered immediately and there are rare occasions when the message will not be sent at all.

Appendix 5: Star hash codes

Star hash codes may be used to control less commonly used facilities and security features. To use, lift the handset and enter the code. A response will be shown on the display. It is not necessary to hang up before entering another code.

Basic syntax used in commands

- Register and activate a function **
- Activate a function *
- Deactivate a function #
- Check status (interrogate) *#
- Unregister and deactivate ##

Security features

These commands relate to the security access features of the SIM card and network services. Use the SIM PIN in all of these cases (not the Terminal PIN).

- Query IMEI *#06#
- Change PIN1 **04***oldPin***newPIN***newPin*#
- Change PIN2 **042***oldPIN2***newPIN2***newPIN2*#
- Unlock PIN1 *8***PIN1*#
- Disable PIN1 lock [1] *870***PIN1*#
- Enable PIN1 lock [1] *871***PIN1*#
- Unblock PIN1 [2] **05***unblKey***newPIN***newPIN*#
- Unblock PIN2 [2] **052***unblKey***newPIN***newPIN*#
- Unlock "PS" lock [3] #0003***MasterPhoneCode*#
- Change call barring password [4] *03*330***oldPw***newPW***newPw*#

Phone number presentation

These commands relate to the use of the Caller Line Identity (CLI) or Caller ID feature supported by the unit.

- Allow network to set CLI condition (default) *801#
- Force sending CLI for all calls *802#
- Force withholding CLI for all calls *803#
- Make a single call and send CLI *31#**phone number**
- Make a single call and suppress CLI #31#**phone number**

The following commands must be sent via a USB computer link in order to receive a valid response code.

- Show CLI presentation state *#30# *(response: +CLIP: 0,n)*
- Show CLI sending state *#31# *(response: +CLIR: 0,n)*
- Check presentation state of call *#76# *(response: +COLP: 0,n)*
- Check presentation state of call *#77# *(response: +COLR: 0,n)*

(where ***n*** is ***4*** for active and ***1*** for inactive)

Notes:

1. *Some SIM cards will not allow you to disable PIN1 protection.*
2. *The PUK (Personal UnblocKing code) is provided by your service provider. See SIM security features.*
3. *The PS (Phone to SIM) lock is an optional feature which ensures that the unit may only be used with a single SIM card. The Master Phone Code is issued by Burnside Telecom once the IMEI number (printed on the underside of the terminal) is declared. Please contact Burnside Telecom for more details about this optional feature.*
4. *Confirm the old call barring password with your network service provider.*

Appendix 6: Advanced configuration codes

The advanced configuration codes may be entered using the telephone handset and also, when using a USB data connection, by using the dialling sequence “ATD” followed by the appropriate configuration code. When using the data connection, it is also possible to interrogate the status of certain network settings, using the *# command prefix.

Call forwarding

Call forwarding is a network service which allows incoming calls to be diverted to an alternative number (such as a voicemail box) when certain criteria are met. In concert with your service provider, the terminal allows you to control various aspects of the call forwarding service. The various forwarding criteria are not mutually exclusive and can be used in combination to divert different types of calls to separate numbers. Commands are composed as follows:

[ACTION] criteria:

Forward unconditionally	**21**
Forward when busy	**67**
Forward when no reply	**61**
Forward when signal lost	**62**
Forward all calls	**002**
Forward all conditional types	**004**

<PHONE NUMBER> to which calls that meet the criteria should be forwarded

Command suffix

***[ACTION]*<PHONE NUMBER>*<SERVICE>#**

Command prefixes:

Activate	*
Register and activate	**
Deactivate	#
Unregister and deactivate	##
Check status (interrogate)[1]	*#

[1] Interrogation is only possible via a data connection.

<SERVICE> types:

Voice only	**11**	Data circuit sync.	**24**
Fax only	**13**	PAD	**27**
SMS only	**16**	Packet	**26**
SMS+FAX	**12**	Data circuit async+PAD	**21**
Voice+FAX	**19**	Data circuit sync.+packet	**22**
Voice+SMS+FAX	**10**	Data circuit asyn.+sync.+PAD	**20**
Data circuit async.	**25**	All services	*(omit code)*

The *service type* allows you to optionally specify one or more particular types of incoming call to forward.

Call forwarding examples

- To register a new number and activate call forwarding when busy (to the phone number 01234 567890): ****67*01234567890*#**
- To deactivate call forwarding when busy: **#67***
- To reactivate call forwarding when busy to 01234 567890 again: ***67***

Call barring

Call barring is a network service which allows incoming and/or outgoing calls that meet certain criteria to be barred from being received or made. In concert with your service provider, the terminal allows you to control various aspects of the call barring service. The various barring criteria are not mutually exclusive and can be used in combination to produce a tighter set of barring regulations. Commands are composed as follows:

[ACTION] criteria:

Bar all outgoing calls	**33**
Bar all outgoing international calls	**331**
Bar all outgoing international calls except to home country	**332**
Bar all incoming calls	**35**
Bar all incoming calls outside of home country	**351**

Note: The PASSWORD is initially configured by the network service provider and is typically 0000 or 1111. This can be changed - see 'Security features' on page 27

✱[ACTION]✱[PASSWORD]✱<SERVICE># ← Command suffix

Command prefixes:

Activate	**✱**
Deactivate	**#**
Check status (interrogate)[1]	**✱#**

[1] Interrogation is only possible via a data connection.

<SERVICE> types:

Voice only	**11**	Data circuit sync.	**24**
Fax only	**13**	PAD	**27**
SMS only	**16**	Packet	**26**
SMS+FAX	**12**	Data circuit async+PAD	**21**
Voice+FAX	**19**	Data circuit sync.+packet	**22**
Voice+SMS+FAX	**10**	Data circuit asyn.+sync.+PAD	**20**
Data circuit async.	**25**	All services	*(omit code)*

The *service type* allows you to optionally specify the services to be barred.

Deactivating collective barring settings

For all of the [ACTION] criteria shown above, it is possible to deactivate them individually using the # command type and their respective criteria codes. However, it is also possible to deactivate the following three barring groups collectively:

- Deactivate all barring **#330✱[PASSWORD]✱<SERVICE>#**
- Deactivate all outgoing barring **#333✱[PASSWORD]✱<SERVICE>#**
- Deactivate all incoming barring **#353✱[PASSWORD]✱<SERVICE>#**

Call barring examples

- To bar all international voice calls (where the password is 0000): **#331✱0000✱11#**
- To deactivate all call barring (where the password is 1111): **#330✱1111#**

Call waiting

Call waiting is a network service that, when enabled, signals an incoming call when a call is already in progress and additionally allows the first call to be held while the second is answered. In concert with your service provider, the terminal allows you to control various aspects of the call waiting service. Commands are composed as follows:

✶43✶ <SERVICE> # ← Command suffix

Command prefixes:

Activate	✶
Deactivate	#
Check status (interrogate)[1]	✶#

[1] Interrogation is only possible via a data connection.

<SERVICE> types:

Voice only	**11**	Data circuit sync.	**24**
Fax only	**13**	PAD	**27**
SMS only	**16**	Packet	**26**
SMS+FAX	**12**	Data circuit async+PAD	**21**
Voice+FAX	**19**	Data circuit sync.+packet	**22**
Voice+SMS+FAX	**10**	Data circuit asyn.+sync.+PAD	**20**
Data circuit async.	**25**	All services	*(omit code)*

The *service type* allows you to optionally specify one or more particular types of incoming call which will be permitted to interrupt an existing call.

Call waiting examples

- To activate call waiting for all types of call: **✶43#**
- To deactivate call waiting for all types of call: **#43#**

Appendix 7: SMS key characters

The unit is designed to support basic text messaging. If the unit is sent picture messages, business cards or other special messages, these may be displayed as meaningless message text. If this occurs, delete the message.

The terminal is capable of displaying the full range of GSM characters.

When a character is received that is not supported, it is replaced with **¿** or a block character.

Characters assigned to each key

1	**.1?!,@_&:"'¿** *(no case change)*	**6**	**MNO6ÑÖØòῼ** **mno6ñöøòῼ**
2	**ABC2ÄÅàÆßç** **abc2äåàæßç**	**7**	**PQRS7ΠβΣ** **pqrs7ΠβΣ**
3	**DEF3ÉèΦ** **def3éèΦ**	**8**	**TUV8ÜÙ** **tuv8üù**
4	**GHI4Γì** **ghi4Γì**	**9**	**WXYZ9ΞΨ** **wxyz9ΞΨ**
5	**JKL5Λ** **jkl5Λ**	**0**	**0()%£$€¥#+-** *(the first character is a space)* *(no case change)*

To change between upper and lower case

Press and hold any character key (2 to 9)

Note: The character set is subject to change.

Appendix 8: SIM security features

When entering PINs, there are no editing functions. Take care to correctly enter the PIN. The digits entered are displayed with the * character for security purposes, so 1234 would be displayed as ****. The SIM PIN mechanism is designed to provide a high level of protection. Three attempts are permitted for normal PIN entry, after which the unblocking code will be required (PUK). This is protected by several levels of time prevention to avoid repeated guessed attempts. A total of 10 attempts are allowed before the SIM is rendered completely unusable.

Time to wait before next PUK input is allowed

- 1st failed attempt, no time to wait
- 2nd failed attempt, 4 seconds
- From 3rd failed attempt, 256 seconds each time

The SIM pin can be between 4 and 8 digits. The PUK is always 8 digits and can be obtained from your service provider.

The Burnside unit's Terminal PIN is fixed to 4 digits and the security measures are simpler. After 3 failed attempts, a delay of 1 minute is applied before accepting another attempt, but importantly, the code stored for auto SIM unlock is erased. If the unit is powered off and on again this delay is cleared.

The most important and financially hazardous situation is to leave the SIM unlocked. If the terminal PIN is lost, contact: support@burnsidetelecom.com for a release code to restore the default.

Emergency calls only

If the SIM is locked or there is not even a SIM in the terminal, it is still possible to make emergency calls by dialling the 112 or 999 (in the UK) emergency number.

Auto unlock precaution

The SIM auto unlock facility works by remembering the last successful PIN that was used. If the auto-unlock facility is then enabled, it will unlock the SIM. However, if the SIM is changed for another SIM, the auto unlock facility is cleared.

IMEI code (International Mobile station Equipment Identity)

This is a unique 15 digit number that we recommend you write down in the front of this manual in the place provided. To view this number dial *#06# or look on the label on the underside of the unit. This number can be used by network operators to permanently block the use of the terminal in the event of theft. You may also be asked for this code when requesting support.

Important safety information

Operating environment

Make sure that no special regulation is in force that imposes restrictions on the use of mobile telephones. Restrictions to mobile telephones would also apply to this phone.

Electronic devices

Most modern electronic equipment is shielded from radio frequency (RF) signals. However, certain electronic equipment may not be shielded against the RF signals from your phone.

Pacemakers

Pacemaker manufacturers recommend that a minimum separation of 20 cm (6 inches) be maintained between a hand-held wireless phone and a pacemaker The same restriction should apply to the external antenna of the phone. If you have any reason to suspect that interference is taking place, switch off the phone immediately.

Hearing aids

The phone radio signals may interfere with some hearing aids. In such event move the antenna as far away as practical or consult your hearing aid supplier.

Other medical devices

Operation of any radio transmitting equipment, including the phone, may interfere with the function of inadequately protected medical devices. Consult a physician or the manufacturer of the medical device to determine if they are adequately shielded from external RF energy or if you have any questions.

Switch off your phone in health care facilities when any regulations posted in these areas instruct you to do so. Hospitals or health care facilities may be using equipment that could be sensitive to external RF energy.

Vehicles

RF signals may affect improperly installed or inadequately shielded electronic systems in motor vehicles (e.g. electronic fuel injection systems, electronic anti-skid (anti-lock) braking systems, electronic speed control systems, airbag systems).

Check with the manufacturer or its representative regarding your vehicle. You should also consult the manufacturer of any equipment that has been added to your vehicle.

Potentially explosive atmospheres

Do not install the phone or site the antenna in any area with a potentially explosive atmosphere and obey all signs and instructions. Areas with a potentially explosive atmosphere are often but not always clearly marked. They include chemical transfer or storage facilities; vehicles using liquefied petroleum gas (such as propane or butane): areas where the air contains chemicals or particles, such as grain, dust or metal powders.

Emergency calls

IMPORTANT: The phone, like any wireless phone, operates using radio signals, wireless and landline networks, as well as user-programmed functions, which cannot guarantee connection in all conditions. Therefore, you should never rely solely upon any wireless phone for essential communications (e.g. medical emergencies).

Remember, to make or receive any calls the phone must be switched on and in a service area with adequate cellular signal strength. Emergency calls may not be possible on all wireless phone networks or when certain network services and/or phone features are in use. Check with local cellular service providers. Emergency calls may be made even when a SIM card is not installed (subject to network availability) using the 112 dialling code.

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