

**TECHNICAL SOLUTIONS AUSTRALIA PTY LTD**

# TSPhone Controller Manual

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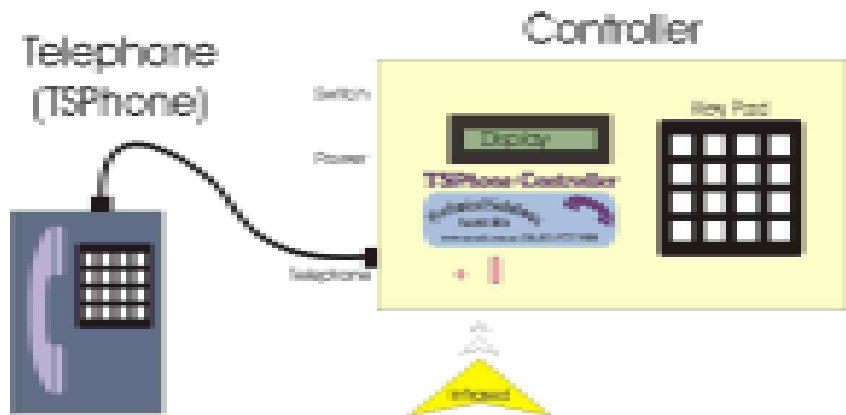
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# Introduction

The TSPhone Controller is a purpose designed interface for the TSPhone, Technical Solutions' unique disability access telephone. The TSPhone controller contains a small computer, and works as an infra red remote control and personal phone book.

Infra red signals are received from environmental control equipment (ECU's) such as the Gewa Prog by the TSPhone controller, and these commands are then used to operate the phone.



## Setting Up

Getting the system up and running consists of two stages - connecting the controller to the TSPhone and power, and then teaching your ECU how to communicate with the TSPhone controller.

### Connecting the units

Prior to connecting the units, consider the location for the setup. Like any hands free phone, the TSPhone must be located as close as possible to the user to give the best sound quality. The TSPhone controller should be placed where the user can see the display, and in line of sight from the user's ECU.

The ECU transmits infra red light, using the same system as a television remote. The signals will reflect off light or shiny surfaces, however the most reliable results will be achieved by pointing the ECU at the TSPhone controller.

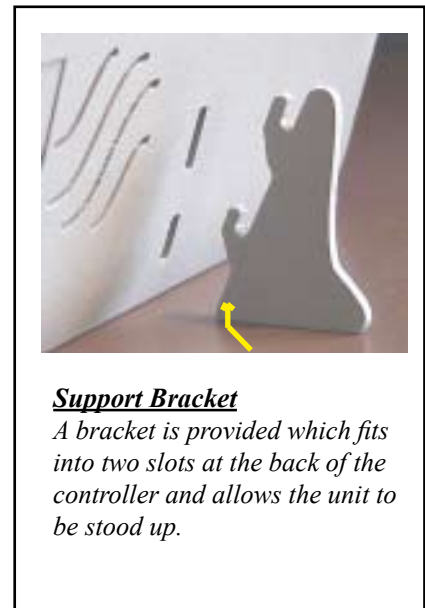
Infra red remote controls can be confused by other light sources - avoid placing the TSPhone controller in direct sunlight or near light sources, especially compact fluorescent or standard fluorescent lights.

### Plugging the TSPhone controller in

Two plugs need to be connected:

The short flat cable that runs between the TSPhone and the TSPhone controller. This cable can be used either way around, and simply pushes into the socket at the back of the phone, and the socket on the side of the controller.

The Power Supply connects into the socket next to the phone cable on the controller. When the power adapter is plugged into a power point and turned on, the controller will start working.



#### **Support Bracket**

*A bracket is provided which fits into two slots at the back of the controller and allows the unit to be stood up.*

### ***Compact Fluorescent Light Globe Warning !!***

Do not position the TSPhone controller near lights that have been fitted with "Energy Saver" or other compact fluorescent globes. These globes interfere with the infrared receiver and make the TSPhone Controller function very slowly.

# TSPhone Controller Functions

The following instructions describe how to control your phone via the keypad on the controller. The same functions can also be accessed via an infrared remote control or ECU.

## Answering a call

Operating any button (**PROG users, Level 6, 7 or 8**) while the controller display shows **INCOMING CALL** will answer the phone.

## Hanging Up

Pressing "C" at any time will hang up and return the controller to "ready" mode (**PROG users, Level 6, 7 or 8**).

## Making a call - There are five ways of making a call:

- Direct dialling** - From the ready mode, press A. The display will show **OFF HOOK**. When you hear the dial tone, use any of the dialling keys (0 - 9, \* #). Press C to finish. People using switch scanning access to the ECU may not be able to make selections fast enough for the telephone exchange and should therefore use one of the next four options.
- Delayed dialling (PROG users, Level 6)** - From the ready mode, using the number keys or infrared via ECU, enter the number you are going to call. Watch the display or listen for the beep to verify each number has been accepted. When you have completed the number, press A. The controller will take the phone off hook and dial the number for you.
- Dialling from the phone book (PROG users, Level 6)** - From the ready mode, enter a number from 1 to 20, and then press A. The number previously stored in the phone book location will be retrieved and dialled.
- One touch dialling from the phone book (PROG users, Level 7 or 8)** - From the ready mode, send the infrared code for one of the phone book entries. The number will be automatically retrieved and dialled. This system is especially useful for people using ECU systems with limited capabilities.
- Last number redial (PROG users, Level 6)** - From the ready mode, enter 0, and then press A. The last number dialled will be retrieved and dialled.

| Key   | Function  |
|-------|---|
| 0 - 9 | <i>Numeric keys. Used to dial numbers and select phone book entries</i>   |
| *     | <i>When dialling, this introduces a short pause (see details below) When on a call, this sends the * signal</i>   |
| #     | <i>When on a call, this sends the # signal</i>  |
| A     | <i>Control Button A: Answers incoming calls or initiates dialling</i>   |
| B     | <i>Control Button B: Used to store or look at numbers in the phone book</i>   |
| C     | <i>Control Button C: Always hangs up and returns to the "ready" mode.</i>   |
| D     | <i>Control Button D: Accesses the infra red training mode and control menus such as speaker volume. This is the only button that cannot be used via an ECU.</i> |



**Remember,**  
*pressing "C" at any time will end a call and reset the controller to "ready" mode.*

## Using the Phone Book - (Speed Dial)

A built in phone book has the capacity to store up to 20 numbers. These numbers can be quickly retrieved and called, and changed as often as desired. The numbers can be programmed from the built in keypad or via an ECU.

### To store a number

From the ready mode, enter your number and then press the B key. The controller will show `STORE AT`. Next enter the location you want the number stored at (the range available is 1 to 20). The controller will show `PRESS B TO STORE`. Press B and the controller will store the number in permanent memory. The phone book will be retained even if the controller is removed from the power supply. Note: Location 0 is automatically overwritten each time you make a call, and is used as a last number redial feature.

### To view a number

From the ready mode, enter the location you want to see, (between 0 and 20) and then press the B key. The controller will display the phone number stored at the location. At this point you can either press A to dial the displayed number, C to return to the ready mode, or press B to copy the number to another location. If no number has been stored at a location, the controller will say `NOTHING IS STORED AT XX`.

## Training your ECU

Your ECU must send the correct infra red signals to operate the TSPhone controller. Before this can be done, the ECU must "learn" the signals it is to send. This is done by putting the ECU into a recording mode, and then transmitting signal samples from the controller. Detailed instructions are given later for the Gewa Prog. Most other ECU systems use a similar procedure, which should be described in the operating manual for the particular device. The remote control signals correspond to the buttons on the TSPhone controller keypad. It is a good idea to become familiar with its operation before training the ECU.

## Training Infra Red (Gewa users don't do this)

Once you are familiar with the functions of the buttons on the controller, you can assign any of the buttons except D to an ECU signal. This is done by getting the ECU to record an infra red sample from the TSPhone controller.

**NOTE for Prog users:** The Gewa Prog factory default codes on level 6 will access the full keypad of the TSPhone Controller while levels 7 & 8 will access speed dial memories 1-10 & 11-20 respectively.

See page 6

Please read the instructions for your particular ECU in conjunction with these ones.

To train an ECU you must first align the receiving area of the ECU with the Infrared Training LED on the side of the controller. You may need to sit the ECU on a small book to get both devices at the right height.

(See below)



**TRAINING FULL KEYPAD:** From the ready mode, press D and then 0, then 1 to put the controller into IR training mode. In this mode, pressing any key except D will transmit an infra red signal that corresponds to that key press. Pressing D will end the training mode.

Set up your ECU to receive a particular signal, and then hold down the key on the controller while the ECU learns the code.

**TRAINING SPEED DIAL MEMORIES:** from the ready mode press D, 0, 0, 1. You can then use the following buttons: A = step up through locations, B = step down through locations, C = transmit the IR code to the ECU, D = finish training.

# Special Settings and Functions

The TSPhone Controller has a memory area that controls special functions. This area is accessed in a similar way to the phone book, except that the numbers you store affect the way the controller operates.

## Predial number

If your phone is connected to a private exchange, such as in a hospital or nursing home, you may need to dial a number to get an outside line (Usually 0 or 9). The TSPhone Controller can automatically insert this number in front of the entries in the phone book. This feature makes it easy to move the controller between home and hospital or respite facilities.

Setting up the predial number involves two steps:

### 1. Enter the predial number

From the ready mode, enter # then the predial number, followed by B. The controller will display CNTRL VALUE STORE AT. Enter 90.

### 2. Turn the feature on

From the ready mode, enter #1 to turn the predial number feature on, or #0 to turn it off, followed by B. The controller will display CNTRL VALUE STORE AT. Enter 91.

## Dialing Speed Adjustment (not currently implemented)

If a phone line is noisy, it may help dialling reliability by setting the controller to a slower dialling speed. From the ready mode, enter # and a number between 0 and 9, (9 is fastest) then press B. The controller will display CNTRL VALUE STORE AT. Enter 93. The default setting is 8.

## Delay between taking phone off hook and starting dialling. (not currently implemented)

If you are using an external ECU device to send each digit to the phone, you may need to set this to 0. Usually, a short delay (1 second, setting = 5) is needed after the phone is taken off hook, for the dial tone to stabilise before the number is dialed. The value of this setting is multiplied by 1/5 of a second to set the delay

From the ready mode, enter # and a number between 0 and 9, (9 is longest delay) then press B. The controller will display CNTRL VALUE STORE AT. Enter 95. The default setting is 5 (1 second).

## Speaker Volume Setting

The volume can also be changed from the controller keypad by pressing D, 1 and then stepping the volume up by pressing 1 or down by pressing 0. Pressing C returns to ready mode.

| Memory No. | Function   |
|------------|--|
| 90         | <i>Predial number - any single number, which will be automatically dialled prior to numbers from the phone book. (Default = 0)</i> |
| 91         | <i>Enable predial number: Store 1 to turn feature on, or 0 to turn off. (Default = 0)</i>  |
|            |  |
|            |  |

### My TSPhone Controller Will Not Dial!

If you can dial out successfully from the phone keypad but not from the Controller keypad, the batteries in the TSPhone may need replacing. Note that the TSPhone has 2 compartments with a total of 4 batteries.

## Using built in PROG codes

The GEWA PROG has built in codes which will work with the TSPhone Controller without needing any infrared training. The following PROG levels are automatically supported:

**Level 6** - This level can be used for full manual control of the TSPhone.

**Level 7** - The buttons 0-9 on level 7 access speed dial locations 1 to 10.

**Level 8** - The buttons 0-9 on level 8 access speed dial locations 11 to 20.

(See Using the Phone Book page 4. to store phone numbers for speed dialling.)

### Resetting the Prog to built in codes

If you have previously recorded any infrared codes into Levels 6,7 or 8 - and want to use these levels for the TSPhone, you will have to restore the built in codes. This will erase any training you may have done on these levels. You may want to use the Prog's "COPY CODES" function to move the codes to another level before doing the reset.

To reset a level, first select the level to be reset in the normal way. Then press and hold the program button and simultaneously press 3. Release the program button. Then press the following keys in order: Level key, 1,2,3, Level key. All lights will flash in turn, and then the indicator lamp will flash green to show the operation was completed. Repeat the above, selecting each of the levels to be reset in turn.

The table below shows the Gewa Link or Prog Codes that will operate each button on the TSPhone Controller. This table can be used to set up custom scanning systems, as well as ECU equipment from any manufacturer that supports the Gewa Code definition.

**HINTS - EASIER PHONE ANSWERING:**  
***If you copy A (answer) and C (hang up) from level 6 to the A & C keys on each PROG level that you use it will be much easier to answer incoming phone calls without having to change levels.***

| <b>Gewa Link Codes for TSPhone Controller</b> |                  |                                  |                   |                                   |                   |
|---|------------------|----------------------------------|-------------------|-----------------------------------|-------------------|
|   | <b>LEVEL 6</b>   | <b>LEVEL 7 - Quick dial 1-10</b> |                   | <b>LEVEL 8 - Quick dial 11-20</b> |                   |
| <i>KEY</i>                                    | <i>Prog Code</i> | <i>Prog Code</i>                 | <i>Phone Book</i> | <i>Prog Code</i>                  | <i>Phone Book</i> |
| 1   | 80               | 96                               | 1                 | 112                               | 11                |
| 2   | 81               | 97                               | 2                 | 113                               | 12                |
| 3   | 82               | 98                               | 3                 | 114                               | 13                |
| 4   | 83               | 99                               | 4                 | 115                               | 14                |
| 5   | 84               | 100                              | 5                 | 116                               | 15                |
| 6   | 85               | 101                              | 6                 | 117                               | 16                |
| 7   | 86               | 102                              | 7                 | 118                               | 17                |
| 8   | 87               | 103                              | 8                 | 119                               | 18                |
| 9   | 88               | 104                              | 9                 | 120                               | 19                |
| 0   | 89               | 105                              | 10                | 121                               | 20                |
| *   | 90               |                                  |                   |                                   |                   |
| #   | 91               |                                  |                   |                                   |                   |
| A   | 92               | 108                              | A                 | 124                               | A                 |
| B   | 93               | 109                              | B                 | 125                               | B                 |
| C   | 94               | 110                              | C                 | 126                               | C                 |
| D   | 95               |                                  |                   |                                   |                   |