

# Guide to WTS

Supplementary information  
Telephony & cordless



**Wireless Telephone Systems (WTS) are communication solutions that improve businesses, day-to-day efficiency, operations and customer service. This guide will provide background information on WTS technology, its application and benefits, and will help you to choose the right system and features for your organisation's needs.**

## What is WTS?

WTS is a digital communications technology with over 70 million users worldwide. It is simply a phone system without wires. It provides enhanced personnel mobility to improve your organisation's communication and efficiency and also protects your business relationships. WTS solutions ensure that its users are always available to talk to customers or business associates at any time and to manage on the move. Time is money – don't waste it.

## Who uses WTS?

WTS is used in the business environment by all market sectors, both public and private. These market sectors include healthcare, manufacturing, processing, retail and industry. In fact anywhere that an organisation will benefit from improving its commercial performance and customer communication by allowing personnel to walk and talk.

## How does WTS save time and improve response?

Every day people call a switchboard or direct dial number and are unable to contact the person they want, in sales, service, support or management. The call is often unanswered, it may go to voicemail, or a colleague answers the call and leaves a note on your desk. Every call that is not answered may be a lost customer. It may be that the next time they want to do business they'll try someone else. Callers prefer not to talk to answering machines or voicemail systems; people do business.

## Key benefits

- There is a sales benefit if a business relies on personnel being available to sell or support its products
- Organisation communications become more efficient. Being able to walk and talk and manage on the move provides great flexibility for staff
- There is a cost benefit from being available to answer calls promptly through saving the cost of a returned call
- Rapid response through better communication using WTS can improve response times whether it is for customer service or to respond to an emergency

## Frequently asked questions

### Is there a cost saving?

There is a cost in returning a missed call. Every call made to return a missed call has a value, and the cost can be significant. Remember, 60% of calls fail to reach the intended recipient. What is the cost to your business?

### What gains are possible with a WTS system?

Create 30-60 productive minutes per user per day:

5 interrupts	@ 3 minutes	: 15 minutes
3 call backs	@ 10 minutes	: 30 minutes
Potential time saving		: 45 minutes
Daily saving for 20 users		: 15 hours

This simple check on productive time can be used for any business evaluation and will prove the cost effectiveness of mobile communications.

### What is the level of radiation from a typical WTS handset?

The level of radio energy from a WTS handset is a very low power (10 thousandths of a watt) compared to cellular telephones that may be up to 2 watts of radio power or 200 times greater in strength.

### Will it interfere with my existing wireless products and do I need a licence?

Multitone WTS systems are approved to the applicable standards for WTS-DECT products. They have the appropriate certification and will not interfere with sensitive electronic or electrical equipment. The DECT frequency is also licence free.

### Will the installation interfere with my existing telephone system?

Installing the WTS will not interfere with your existing telephone system. It is connected to your existing analogue extensions or IP telephone systems as an adjunct solution.

### Can I use my mobile handset in the same way as my desktop handset?

All of the features currently available from your analogue desktop handset should be available on your mobile handset. When connected to an IP-PBX, all of the basic features necessary for good communications are accessible.

CH72 handset



CH76IS handset



Access IP-510



## How many base stations will I need and how important is it to have a site survey?

Every site must have a radio survey, which should be carried out by qualified Multitone radio engineers to plan the number and location of every base station required. This will ensure radio coverage is available where it is needed.

Radio waves will pass through almost any object, but each object will decrease the strength of the radio waves. This could be a wall, floor, rack of goods or any other object on the premises. This is why it is important that the radio survey is carried out correctly.

Each radio base station has a range of approximately 1000 feet (300 metres) and has up to 12 voice channels depending on the product used. The field of each base station will overlap every other base station by around 50%. Imagine a circle with another circle drawn half way across the first and at every overlap the number of voice channels is increased by the number of base stations that overlap radio cover (4 + 4 + 4 etc).

The survey ensures that the radio cover from every base station overlaps every other base station. A typical store with open plan shelves or a warehouse may only need two or three base stations.

## Will the installation, training and testing take long?

The installation and testing will normally take no more than two working days. On a small system this may include the training, which will take no more than one hour.

## Do I have to stand still when I take or make a telephone call?

When the wireless system is being planned, a radio survey will be carried out that ensures you have radio coverage everywhere that is needed. This may be in basements, roof cavities, and car parks. A professional radio survey will ensure good radio coverage and the ability to walk and talk throughout the site.

## Can I use my mobile handset at home?

The private mobile telephone is typically designed for use with the installed private wireless base stations. It cannot be used outside of the radio coverage provided at the customer premises.

## Does it cost any extra to use a private wireless telephone?

The private digital wireless telephone is part of a telephone system. There is no call cost associated with calls to other on-site mobile users or desktop telephones. Local, national or international telephone calls may incur charges associated with your telephone service provider and long distance carrier.



### **My pager or mobile cell phone will not work in some places. Will my private wireless handset have the same problem?**

No. Every wireless installation is carefully surveyed by trained wireless professionals to ensure that the radio base stations are strategically located to provide walk and talk communications at all locations required.

### **Can I use my handset in damp, cold or other environments that are not normally recommended for mobile handsets?**

There are ranges of handsets for use in office, industry or manufacturing environments. The handsets can be water resistant or approved for use in environments with explosive liquids, gases or dust. A holster will also protect the handset against damp or cold, as well as damage from impact.

### **Can I use my desktop telephone with my private mobile telephone?**

A mobile telephone may be used in parallel (bridge connection) with your existing analogue telephone or without it. Calls to your extension number will ring both telephones and you can answer with either phone. If you need to walk and talk then pick up your mobile phone, go "off hook", hang up your desk phone and go about your business. This feature may rely on the existing telephone system.

### **How easy is it to add mobile telephones?**

This depends on the WTS solution provided. With the analogue system all you need is a spare analogue port on the PABX and a spare port on your radio server. One pair of wires registers the handset for service to be available.

When the IP solution has been supplied no wiring is necessary, however the IP-PBX supplier may require a licence to be purchased.

### **Is a WTS secure from others listening to my conversations?**

The wireless protocol utilises frequency hopping technology that is 128 bit encrypted and very secure to ensure privacy. Each radio server and each handset has a unique identification number, similar to a credit card. This information is held by the system to ensure that no one can intrude on private communications.

### **How many users can I have on a WTS system?**

This depends on the system you have installed. There are different systems available and there is normally an upgrade path from one to the other. Up to 4096 DECT handsets may be used on the largest solution.

**CH78 bluetooth headset**



**CH78 ear defender headset**



**Executive desk phone IP**



### How easy is it to remove handsets from the WTS system?

If you require new handsets or you have a damaged one, it is simply unregistered from the system using the administration software provided. Alternatively your supplier may provide a remote service that requires you to follow a few simple instructions to remove a handset.

### Is my investment protected against rapid changes in communications technology?

WTS will use an allocated frequency according to the country of use. In Europe this is 1.8GHz, and in North America 1.9GHz

### Do I need a specially trained person to manage the system administration?

The system administration software is very easy to use. The user guide should help you to carry out any handset registration or to make changes to mobile user data.

### What will I have to do to look after the system?

System administration may be managed by you or Multitone. If you wish to manage your own system, you will be able to register new or replacement handsets and administer users. If you don't want to manage the system administration your supplier should be able to carry out work remotely or send an engineer to site. There may be a fee for this work. There should be no other administration duties that would normally be carried out by the user.

OP28 handset



CH78 handset



Basic desk phone



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