



# Telephone Systems

## Buyers' Guide

Purchasing new telephone systems can be confusing, particularly for a small business with little in-house technical expertise. You've enough to do as well as sourcing that long overdue medium or small office telephone system.

[www.telephonesystems.co.uk](http://www.telephonesystems.co.uk)

# Confused about buying a telephone system?

**Relax!** We'll help you make an informed decision by demystifying the technical jargon that surrounds telephone systems and telephone system installation.

Read on to discover the options available to help you select a suitable telephone system. We'll even recommend a reputable telephone systems installation company near you to supply, install and maintain your telephones system.



# Phone Systems Buyers' Guide

**When you're considering phone systems, there's no substitute for personal service from a local specialist who understands your requirements and will help you select the right business phone system.**

Before contacting a phone system supplier, this guide will help you consider the best telephone systems for your needs. Whether you're experienced in choosing company phone systems or you've never had to buy phone systems before, it'll help you make a wise investment.

Please keep this guide in mind as you gather information from phone system reviews and move from general guidance about phone systems for small businesses to building a relationship with a local phone systems supplier. Whether you choose one of the many new phone systems to buy outright, or consider hosted phone systems, a great decision starts here.

## Types of business phone systems

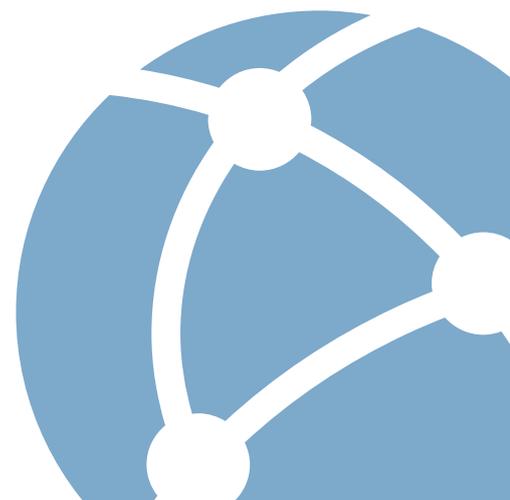
You'll read about Keyless System Units (KSU), PBX, VoIP, digital phone systems, computer phone systems, and IP phone systems – just some of the terms in an acronym-crammed sector. Relax! We'll help you.

Whatever system you eventually choose, your local specialist will help you through the maze of choosing a suitable phone system and support you with vital phone system maintenance. If you do nothing else at this stage, please consider carefully what you want your phone system to do for you – then choose a local partner to turn this into reality.

The three main phone systems for small and medium-sized businesses (SMEs) are as follows:

- ➔ Key System Unit (KSU)
- ➔ Private Branch Exchange (PBX)
- ➔ VoIP Phone Systems

Key System Unit (KSU) ↓



# Key System Unit (KSU)

**The Key System Unit (key telephone system or key phone system) is a multiline phone system that is efficient for up to 50 users. A KSU unit relies on the user to select an external line, rather than the automated exchange of Private Branch Exchange (PBX) phone systems.**

The term 'key' derives from an original Bell System term for a manually operated switch, such as the line-button on early telephones. Modern KSU phone systems have a central hub (the key system unit) that provides functionality, such as internal calling, that non-key phone systems can't offer.

A variation of the KSU phone system is the KSU-less system. This offers generally similar functionality but without some of the more specialised (and expensive) technology of the pure KSU system. Cheap and simple to set-up, KSU-less systems are generally only viable for up to 10 users.

Nowadays, the distinction between the largest key systems and corporate-level PBX systems is increasingly blurred, with the main differentiators being the quantity, scope and sophistication of available functionality. Modern hybrid key systems are virtually small PBXs, fully digital systems that, in some cases, even embrace the latest VoIP technology.

## Pros

- Efficient for up to 50 employees
- Convenience of proprietary handsets
- Latest hybrids combine key system and digital functionality
- Proven one-size-fits-all functionality
- Easy customisation through software upgrades
- Reliability and ease of maintenance

## Cons

- Possible limitations for larger businesses
- May lack some functionality of full-blown PBXs

If you need even more help choosing between phone systems, Telephone Systems UK Ltd can help you select a friendly phone systems dealer near you.

[Private Branch Exchange \(PBX\)](#) ↓



# Private Branch Exchange (PBX)

**The Private Branch Exchange (PBX), also known as a Private Automatic Branch Exchange (PABX) or an Electronic Private Automatic Branch Exchange (EPABX), is a dedicated telephone exchange for a single business.**

Typically, PBXs become efficient above 50 extensions. At their most elaborate and sophisticated, they are the phone system powerhouses that support major corporates with many thousands of users.

The PBX automatically makes connections between your organisation's internal phones, as well as connecting them to the public switched telephone network (PSTN) via trunk lines. In this respect it differs from the Key System Unit (KSU) phone system that relies on individual users to make their own external connections.

Back in the days of centralised switchboard operators, the PBX was the standard system for companies with many employees. The technology evolved from the external exchanges operated by telephone companies and evolved over the years to become the standard corporate-level phone system.

Along with massively increased functionality, the technology of the latest PBX phone systems has become increasingly computerised and miniaturised. What's more, the traditional differences between PBXs and key systems (designed for up to 50 employees) have become blurred as technology advances have made so-called virtual PBXs possible. Typically, these use broadband internet to carry data, a development that has reduced costs and brought many of the traditional advantages of the corporate PBX to SMEs.

Most modern PBXs support VoIP (VoIP PBX, IP-PBX or IPBX). Indeed, development of the PBX now seems to have gone full-circle as the latest corporate VoIP centres are hosted by operators or even telephone companies using Centrex, a PBX-like service that provides switching at a central office rather than at the customer's premises. Although these modern IP Centrex systems offer essentially the same service as the original PBX, the concept has evolved so far that the term barely applies now.

Though all the talk seems to be about VoIP, the old circuit switched telephone network is alive and well and existing PBXs are often still competitive with modern IP Centrex systems.

## Pros

- ➔ Proven for very large organisations
- ➔ Integrates well with major corporate functions such as call centres
- ➔ Decreasing footprint of equipment



- Proven technology
- Proven for very large organisations
- Integrates well with major corporate functions such as call centres
- Decreasing footprint of equipment
- Proven technology
- Convenient rack-mounted equipment
- Integration with other IT equipment

## Cons

- May lack the convergence benefits of VoIP systems

## Hosted PBX vs. On-premises PBX

For many businesses, the choice of phone systems will come down to either a hosted or an on-premises PBX. A hosted PBX is delivered as a service by the provider (usually billed monthly). The on-site equipment is limited to phones and basic routing devices. Everything else is managed by the service provider.

Reasons for choosing hosted PBX include:

- Concentrate on what it does best rather than managing a phone system
- Scalability
- Seamless 24/7/365 service
- No maintenance/upgrade burden
- Flexible pricing makes budgeting easy

For businesses with up to 50 users, the low start up costs and minimal maintenance requirements of hosted PBX means this is often the next step up from a KSU system. On-premises PBX phone systems require all the required equipment to be on the customer's site. The start up costs are higher, but the customer enjoys the following benefits:

- More control (upgrade whenever needed)
- Greater flexibility of use and features
- Easy customisation
- May be more cost-effective in the long term

VoIP Phone Systems ↓



# VoIP Phone Systems

**Voice over Internet Protocol (VoIP) phone systems refer to IP-based (Internet Protocol-based) systems that package and transform voice data for transmission over the Internet, thereby avoiding the need to use traditional telephone networks.**

Although VoIP technology has been around for nearly 30 years, it's only been the arrival of cheap broadband that the technology has grown in reliability and cost-effectiveness.

Consider purchasing an IP-based phone system if one or more of the following apply to your business:

- ➔ You wish to link offices using PBX-to-PBX communications
- ➔ You want single voice and data infrastructure between two or more locations
- ➔ You want smooth migration toward VoIP
- ➔ Remote workers need to become part of the centralised telephone system and share common functionality
- ➔ You are planning a major upgrade to your existing data network.

As well as offering other benefits to the consumer, VoIP has significantly lowered the cost of phone calls. VoIP phone systems require only a broadband connection and a suitable Internet phone such as one of the following:

- ➔ A VoIP telephone with an Ethernet connection or USB connection
- ➔ VoIP adaptors enabling use of touch-tone phones through an IT network
- ➔ A software phone application (such as Skype) installed on a PC

Because a VoIP user only needs a viable broadband connection, it's perfect for mobile staff as well as the increasing numbers of office-based VoIP devotees.

## Pros

- ➔ Cost savings for businesses and high volume users
- ➔ Cheap infrastructure and running costs
- ➔ Remote workers can use the same phone number
- ➔ High call quality
- ➔ Increasing reliability with fast broadband



- Continued success and adoption of VoIP will make this an increasingly attractive option for businesses
- Converged VoIP allows integration of legacy networks with Internet technology
- Features such as conference calling, video conferencing and itemised billing are often cheaper than with conventional phone systems
- Converged VoIP allows integration of legacy networks with Internet technology
- Reliability – the technology of choice for most call-centre environments

## Cons

- Vulnerability to failed broadband connections
- Vulnerability to power-outage (back-up power needed)
- Viability may be limited by geographical broadband coverage
- Time-delays possible during conversations
- Softphones often have lower quality than VoIP or adaptor phones

If you need even more help choosing between phone systems, Telephone Systems (UK) Ltd can help you select a friendly phone systems dealer near you.

[Phone System Configuration](#) ↓



# Phone System Configuration

**When it's time to choose a new phone system, there is no substitute for planning and careful consideration of your requirements – not just for today but into the future as your business evolves.**

Various aids are possible when planning your system configuration:

- ➔ Online guides
- ➔ Internal planning and brainstorming
- ➔ Support from a reliable local phone systems partner (not just a fast-talking phone systems salesperson)

## Needs assessment

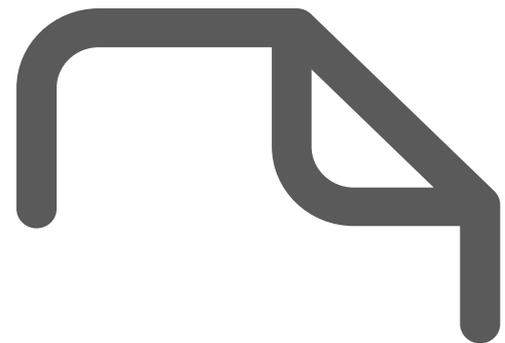
Understanding your needs is vital if you are going to make a cost-effective system choice: one that meets your current and future needs while avoiding wasteful over-specification. The closer your installed telephone system comes to matching your actual requirements, the better the value of this sizeable investment to your business. Consider the following points:

- ➔ What call volume does your phone system have to cope with today?
- ➔ How will call volumes rise in the future?
- ➔ Does your new system have to be compatible with existing equipment?
- ➔ What special functions do you want your phone system to perform?
- ➔ What do you want the new system to do that your existing one doesn't do?
- ➔ What problems do you have with your current system?

Build your assumptions, expected benefits, cost analysis and any other relevant factors into your phone system procurement plan. Just as you prepare an annual business or marketing plan, the creation of a thorough, senior management-backed phone system procurement plan will help ensure that you choose the right system – and the right supplier – for your current and future needs.

## Current needs

Experienced phone systems experts recommend preparing a detailed list of current and planned trunks (the external connections), extensions (handsets, fax machines and modems) and an assessment of the requirements that each user has.



A simple matrix structure will enable the identification of required functionality and different workgroups and will help to simplify the complexity of your organisational phone system needs. Put as much time as you can into needs assessment and drive make sure the task is driven from senior management downwards.

## Future needs

Having understood your current requirements, think carefully about how your phone system needs will change over the next five to ten years.

- ➔ Will your business be expanding?
- ➔ Will you be recruiting new employees?
- ➔ Will you be developing call centres?
- ➔ Will more of your staff be mobile?
- ➔ Will home-working or tele-commuting be more important?

Though many modern systems (especially software-based PBXs) are modular, scalable and can cope with some expansion, there will still be limits on the number of users you can add to the system. And even if you can add to the size of the system in future, doing so will probably be more expensive and disruptive than accurately assessing your requirements and specifying the optimum system from the beginning.

## Planning external connections

ISDN lines are the norm for external connections (primary rate BTISDN30 or BT branded ISDN2 for smaller businesses). These are not the same as high-speed broadband data transfer, which is not suitable for voice calls unless you are planning to embrace the latest voice over Internet protocol (VoIP) technology.

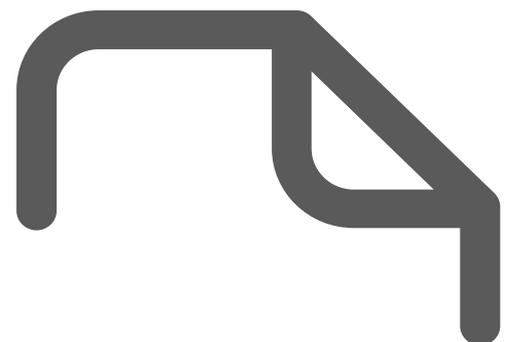
ISDN lines also offer important extra services such as Direct Dialling Inwards (DDI), Caller ID and External Transfer.

One of the most important parts of external connection planning involves the accurate estimation of how many lines (trunks) you require.

In particular, your assessment of likely call volumes will indicate the ration of trunks to extensions that you will require to deliver the required service.

Too high a ratio of extensions to trunks will mean that your staff struggle to get an outside line 0 while inbound callers find that your lines are always busy. This is where phone system planning can really have an impact on your day to day business.

Phone System Features ↓



# Phone System Features

**While some requirements are bound to be unique to your business, many aspects of phone system functionality are common to all businesses.**

These requirements are satisfied by basic phone system functionality, the features that now have virtually a commodity status with little if any variation between suppliers:

## Incoming call management

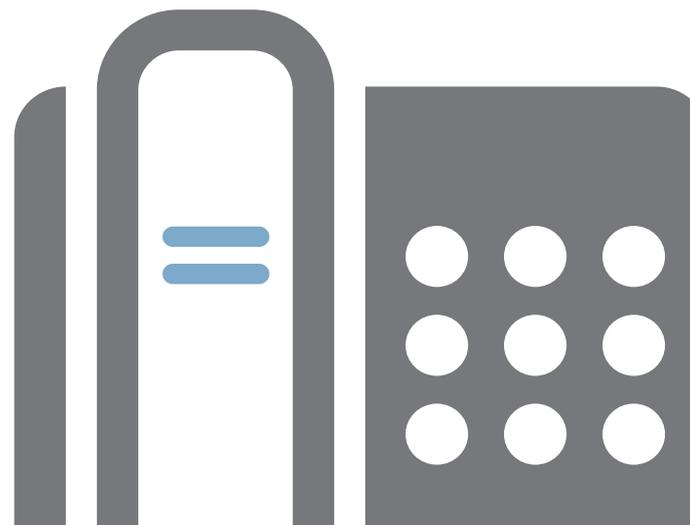
- Call forwarding
- Call transfer
- Call parking
- Call holding
- Camp on (where a call waits for an extension to become free)
- Call waiting
- Call pick-up
- Call recording
- Do not disturb

## Outgoing call management

- Direct inward dialling (DDI)
- Speed dialling

## Other features

- Monitoring features (including Caller ID)
- Reporting features (such as Call Accounting)
- Voice mail box (and voice mail)
- User directories
- Basic conferencing facilities
- Password-protected security



Advanced phone system functionality consists of the business-specific features that different organisations may or may not require:

### Advanced call management

- Call queuing
- Hunt groups
- Call flipping (transfer from a landline to a mobile phone without interruption)
- Night answering
- Find me/follow me extension of Call Forwarding

### Automated call routing features

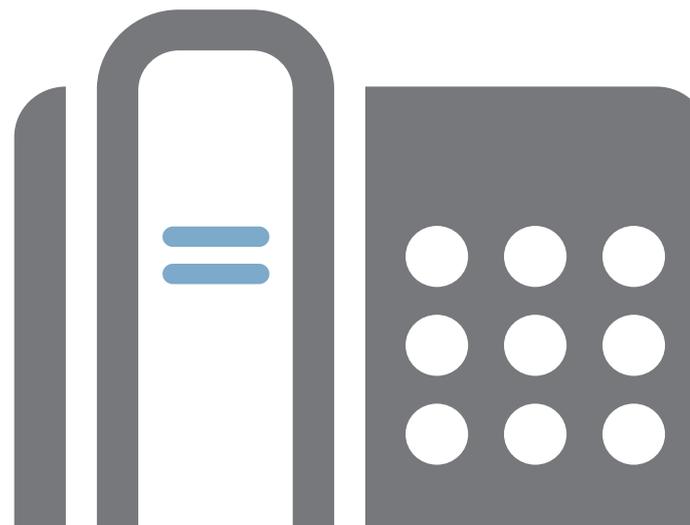
- Automated call attendant
- Automated call distribution

### Application and hardware integration

Allows users to integrate devices (e.g. faxes and mobile phones) with applications such as Microsoft Outlook and customer relationship (CRM) management software.

When you need to discuss system functionality, Telephone Systems (UK) Ltd can help you select a helpful phone systems dealer near you.

Add-on Applications ↓



# Add-on Applications

**At a given price point, modern phone systems will come with a wide range of features, well known functionality such as pick-up, transfer, speed dialling, last number redial and similar features that we all take for granted.**

Specify extra applications correctly from the start.

In addition to these, your phone system can be specified with additional applications. It's rather like buying a Windows PC: it comes with several built-in features that would enable you to get started; but if you want to do specialised work you need to request the required software. It's the same with phone systems. You'll be living with the decisions you make for many years, that's why it's vital to think them through and get them right from the beginning.

Some of the available phone system applications are as follows:

- ➔ Voicemail and voice recording
- ➔ Automated answering
- ➔ Auto attendant functionality
- ➔ ACD (Automatic call distribution)
- ➔ Call management
- ➔ DECT (Digital Enhanced Cordless Telephony)
- ➔ CTI (Computer telephony integration)

Whether it is the convenience of the ubiquitous voicemail or a very specific CTI application for running your call centre efficiently, the costs and inconvenience of retro-fitting an overlooked application make it imperative that you consider your requirements carefully at the needs assessment stage.

When you need to discuss system functionality and add-on applications, Telephone Systems (UK) can help you select an experienced phone systems dealer near you.

[Phone System Pricing](#) ↓



# Phone System Pricing

**Pricing of phone systems is a notoriously difficult area, not just because it involves so many variables but because today's more expensive system may bring operational efficiencies and cost savings in the future. Equally, cutting corners to save cost today can end up costing more in the long run.**

Prospective purchasers should budget for the entire project and consider the whole life cost (WLC).

## More than just handsets

Buying phone systems involves much more than just ordering a consignment of handsets and plugging them in. A typical phone system (if such a thing is possible) involves the following elements, all of which have pricing and whole life cost implications:

- Handsets
- Central system unit
- Applications
- Monitoring software
- Network installation
- Possible building and infrastructure changes
- Support
- Staff training
- Ongoing maintenance

## SMEs should budget around £200 per extension

KSU-less phone systems will be cheaper than any system with a central control unit.

Full KSU and PBX phone systems will be more expensive, with central hub costs approaching £1,000 in many cases and good quality handsets running at £100 or more.

For an SME with up to 20 extensions, the installation cost is likely to fall in the range of £1,000 to £5,000.



For quick reckoning, many experts budget on round £200 per extension.

For larger organisations, more sophisticated technology, a greater training requirement and the need for more maintenance can easily push the cost-per-extension up to £500 or more.

Whatever the eventual solution, project pricing will include these three main components:

- Start-up costs
- Regular maintenance costs
- Internal staffing costs

### Ensure all suppliers quote for the same system

Because so many variables are involved, not least among the businesses offering phone systems, we cannot overemphasise the importance of properly understanding your requirements and preparing a carefully specified brief for the work. By doing this, all potential suppliers will be forced to quote for exactly the same installation. This will make it much easier for you to compare different quotations.

And remember to look carefully for any hidden costs:

- Start-up costs beyond setup and equipment fees?
- Day to day usage costs not covered by the solution?
- Requirement for add-ons or extras to handle your existing phone system?
- Additional costs for upgrading?

If you are ready to talk systems and pricing, Telephone Systems (UK) can help you select a local phone systems dealer near you.

Implementing the Phone System ↓



# Implementing the Phone System

**Armed with your needs assessment, it's time to talk to potential phone system suppliers. As with your needs assessment, it's vital to invest time in this. As well as ensuring that you get the best possible system, you could be embarking on a long working partnership.**

Given the proliferation of phone systems dealers since the UK market was liberalised, how should you go about finding a good local dealer?

- Reputable online directories
- Vendor websites
- Recommendation
- Listings of manufacturer accredited dealers
- Local knowledge

As part of this site, you can quickly access your local Telephone Systems (UK) office. With our comprehensive UK coverage you're sure to find that we have an experienced phone systems expertise close to you.

You need someone who is manufacturer accredited (and check that their accreditation is up to date). Choose someone who has specific experience with the needs of similarly sized businesses to yours, or organisations working in a similar sector.

Here's a quick checklist of things to establish when you are short listing potential suppliers:

- Are they manufacturer accredited?
- Have they undertaken installations for similar businesses?
- Can they demonstrate suitable systems to you?
- Are they locally based for attentive service and local market knowledge?
- Will they provide a complete package including cabling and hardware?
- Can they help with calls and billing services?
- What are their support and maintenance costs?
- Will they provide training (at what cost)?
- Is it a well established business?



- Can they provide good references and showcase projects?
- Will you have a single point of contact (SPOC) – insist on this.

Having shortlisted a few possible suppliers, ask them to visit you. Give them your needs assessment and see what they come up with. At this stage, look for the following:

- Willingness to ask you questions about your requirements
- A considered approach to solutions
- Good chemistry (do they feel 'right')
- Locally based for service?
- Clear thinking about future maintenance
- Open and transparent approach
- Genuine interest in your needs

Having found a potential supplier who meets all of these criteria, you've probably found partner who will help you harness the power of your new phone system.

Getting Support ↓



# Getting Support

**Industry surveys consistently indicate the importance of solution cost as the most important factor influencing the choice of a phone system.**

That said, vendor support policies and ease of implementation follow close behind. Whether you're concerned about getting your team up to speed or the long-term support of your new phone system, don't overlook this vital part of your investment.

Support comes in different forms so you'll need to make sure you understand the terms offered by a potential dealer. If ever there was a place for transparency, openness and clear statement of what is and what isn't included, this is it.

A faulty telephone system can easily cripple your business and cost you thousands of pounds. Choosing an unsuitable support agreement could prove expensive and inconvenient over the years ahead; and if you are planning to upgrade in the future, make sure that you aren't locked into a restrictive agreement.

- What does your maintenance package cover?
- What service level agreement (SLA) is right for your business?

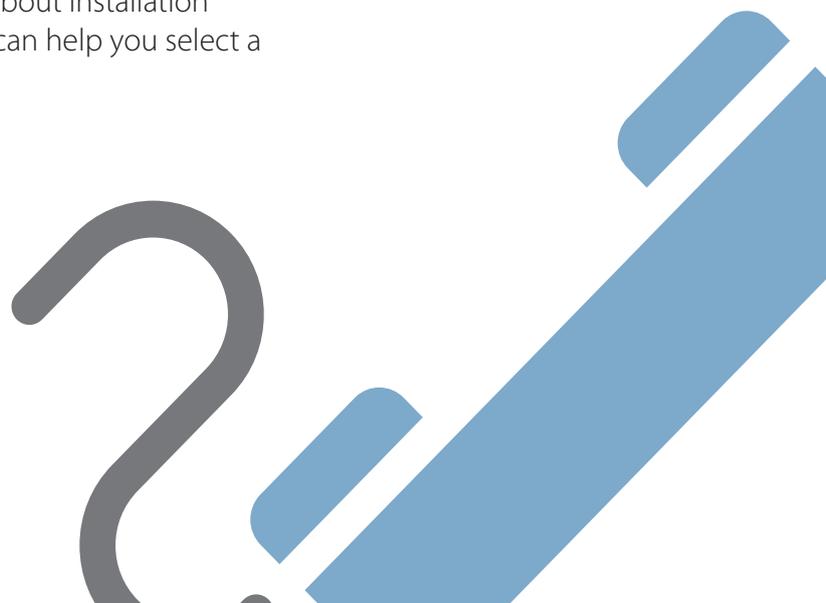
For many SMEs, a 4–6 hour lead time for a maintenance call out will be reasonable.

- Who is responsible for support of third-party applications?
- Are handsets and cabling covered?
- Does your supplier hold spares (or can they get them quickly)?

Be aware that some services (such as account management and software upgrades) may be extra value-added services. There's nothing wrong with this, but make sure you understand exactly what your support package does (and does not) include. Insist on the supplier being specific and, as for the proposed system hardware and software) documenting everything clearly for you.

When you have prepared your needs assessment and are ready to start talking to system providers about installation and support, Telephone Systems (UK) Ltd can help you select a local phone systems dealer near you.

[Phone System Checklist](#) ↓



# Phone System Checklist

See our Phone system checklist below:

## General considerations

- What is your investment timeframe? (Do you want to meet immediate needs or future strategic needs?)
- What is your budget? (project costs or monthly cost per user)
- Document the existing system (and its strengths and limitations)
- Is your building infrastructure suitable for required phone system?
- What are your current broadband connection details?
- What is your current network load and available unused bandwidth?
- What is the ratio of inbound and outbound calls?
- What are the percentages of internal, local, long-distance and international calls each month?
- How many remote and/or mobile users do you have?
- What are your current and future business requirements?
- Define your critical and optional requirements
- Carry out a full cost-benefit analysis
- Look out for hidden costs

## Specific functionality

- Number of users
- Multiple user phones?
- Line requirement
- Incoming caller ID?
- Voicemail requirement (even for employees without a phone extension)
- Receptionist or automated attendant?
- Direct dial to any extensions?
- Remote working requirement



- Special call handling (e.g. sales) requirement
- Do mobile employees need to receive calls or messages immediately?
- Call monitoring
- Other special functionality required?
- Any third-party applications required?

When you have prepared your needs assessment and are ready to start talking to system providers, consider Telephone Systems (UK) Ltd - and select a local phone systems dealer near you.

### Next steps

Next, compare your short listed dealers and the different system options carefully; when you finally commit to a supplier, make sure a detailed and unambiguous contract is in place (and that you understand it).

Congratulations! You're about to make a great decision and invest in the business-enhancing phone system you need for the years ahead.

Further Reading ↓



# Further Reading

Please click the links below to view more information.

## Products and Services

- [Telephone Systems by Size](#)
- [Telephone Systems by Type](#)
- [Telephone System Solutions by Industry](#)
- [Telephone System Accessories and Options](#)
- [Telephone System Services](#)

---

## Broadband

- [Leased Lines](#)
- [ADSL](#)
- [Managed IP VPN](#)
- [Internet VPN](#)
- [Private Networks](#)

---

## Calls and Lines

- [Cheaper Calls and Lines](#)
- [Non Geographic Numbers](#)

