

# 2-Way Business Radio Buyers Guide

You have been given the responsibility for buying 2-way business radios. You have looked at the market place and seen a multitude of manufacturers and radio solutions, you are even more confused than when you started. You now find yourself asking a huge range of questions like where to start, what to look for and how to stay within budget.

This 12 point guide will help you through the process of matching your business communication needs to the ICOM range of 2-way business radio solutions. Hopefully following these tips will make the process a lot simpler and avoid any frustrations. Let's get started...

## 1. Why should I choose 2-way business radios?

Hopefully you will have already answered this question. You know that you need to keep in touch with your staff by using an efficient, simple and effective radio system that is easily controlled and managed.

2-way business radio does that. Depending on your needs and applications used, a 2-way radio system can improve safety, productivity, customer and employee relations and hopefully make your organisation more profitable.

## 2. What can two way business radios do for me?

2-way business radio is a flexible form of communication and can provide simple one-to-one communication between a small group of users, or by increasing the number of channels you could have one channel for everyone, one channel for management, one channel for security, one channel for office cleaning staff and so on. You can use each channel like an intercom system, this allows you to call individuals or groups instead of broadcasting your message to everyone.

Some radios have a scanning capability, so your radios will only pick up conversation for the channels you have programmed.

Dependent on your needs you can build a complex radio system integrating not just radio communication but security monitoring via GPS and CCTV. Coverage between groups over a wide geographical area is possible by using the internet.

## 3. Who will use them?

The great thing about 2-way radios is that they are easy to use and can be used by anyone with very little training. Deploy radios to groups of staff, their managers and remember that an ICOM radio system is easily expandable, just add additional handsets as the need arises. 2-way radios are ideal for security staff, farmers, office personnel, shopwatch schemes, shift workers, production line inspectors, playground monitors... the list is endless.

## 4. Where will I use the radios?

Look at where you want to use them, in buildings, out on-site in vehicles or perimeter patrolling. Define your needs and ask your local ICOM dealer to advise on the best way to give you coverage of that area. A quick 'rule of thumb' is that VHF travels farthest outdoors whereas UHF

is better for local onsite use (within buildings etc.), but take your dealers advice for the best solution.

## 5. 2-Way Business Radio vs Mobile Phones

It is true that in some businesses people use mobile phones in place of 2-way radios. However, here are some good reasons why it is best to use 2-way radio:

- When you want to make a call on a mobile phone, at a minimum you will have to press a speed dial button and wait for connection. Between the dialling and the time delay of the person on the other end answering, some time can go by (if they answer at all). With a 2-way radio you simply press a button and start talking. In an emergency situation, this speed could be critical.
- You can talk to multiple users at once.
- There is no monthly contract with 2-way radios. You never have to worry about exceeding your allotted call time like you would do with a mobile phone.
- ICOM radios are built to military specification which means that they will work in wet and arid environments or even after being dropped onto concrete. Most mobile phones are not built to this standard.
- 2-way radios continue to work in disasters scenarios or major security incidents. Even if mobile phones do work, the mobile phone tower can become overloaded as everyone tries to use their mobile phone.
- 2-way radios can stay on site at the end of the day for use by shift or night workers.
- There may be places in your business where mobile phones won't work. When repeaters are installed, 2-way radio will reach all areas of your business.

## 6. So what types of 2-way business radio are there?

2-way radios are essentially available in four types: handheld, vehicle-mounted mobile, desktop base-station and repeater base-station.

- **Handheld** 2-way radios are the walkie-talkie type you will see people carrying around.
- **Vehicle-mounted mobile** 2-way radios are installed into a car or truck dashboard and use the vehicle battery for power. They achieve better range by using an externally mounted antenna fitted to the vehicle.
- **Desktop base-station** radios use mains power and can be connected to a cable leading to an external mounted antenna, the higher the antenna is mounted, the better the range. Vehicle-mounted mobile radios are usually used as base-stations by adding an AC to DC power converter
- **Radio repeaters** are compatible fixed radios that boost the operational range of the mobile units in your PMR radio system. Repeater can be used to cover areas

in your premises where a 2-way radio will not transmit or receive. A repeater receives a 2-way radio transmission and rebroadcasts it further.

### 7. How do I choose what sort of system I need?

Modern 2-way radios have many functions and features. However, which of these do you really need?

- Are the radios to be used by just a few people?
- Are you in an area where only a few radios are needed?

As with all business decisions, you will need to identify what you need from your radio system. There are many things to think about. A good starting point is getting an Icom business radio dealer involved in the first instance will be able to guide you through your options and will have the skills to put a radio system together and the local expertise to help you with licensing, installation and after sales support.

### 8. Analogue or Digital?

Having outlined the types of 2-way business radios there are, there is another choice, whether to use analogue or digital. If you have a radio system already, it will be most probably be an analogue system.

ICOM have launched a digital 2-way radio solution called **IDAS (ICOM Digital Advanced System)**. This is capable of analogue, digital or digital/analogue mixed-mode operation. This enables the user to receive either analogue and digital-mode signals on a single channel. Mixed-mode operation is a great benefit, as there is no need to buy a complete system outright. This allows you to migrate from analogue to digital at your own financial pace, an important consideration in the current economic climate. There is nothing wrong with purchasing analogue radios, they will be around for some considerable time. But there is a clear business case for digital business radio.

As well as future proofing your communication needs, ICOM digital radios are incredibly spectrum efficient, doubling the number of potential users on the traditional current channel capacity of 12.5 kHz. In addition, ICOM IDAS radios feature outstanding audio quality and superb noise-cancelling properties. When comparing digital with analogue, the audio quality of analogue gradually deteriorates with static noise as the distance increases, whereas a digital system provides stable audio for longer than analogue, right until the very edge of the communication range.

### 9. What features do I need?

Radios can be purchased with a variety of functions and features, here are just a few that you may want to consider:

#### • Security features?

There are many features that can be installed or programmed into 2-way radios. The 'Emergency Call' or 'man down' feature enables that radio user to immediately notify all other radios using that same channel. For example, if the radio users should become injured, trapped or in danger, a simple button push will alert everyone and the microphone on the caller's radio is automatically activated for a brief period so that an emergency message can be given.

#### • Selectable Power

Good quality mobile radio units allow switching between high and low power modes. Low power reduces the

range of your 2-way radio, but extends the life of the battery and vice versa. Some radios also allow you to program the power mode on individual channels so some channels can use low power, while other use high power.

#### • Accessories

Headsets, spare batteries, cases, belt clips and speaker microphones are often a necessity. Check out the ICOM range of accessories to find the items you need.

If your organisation operates multiple work shifts, your staff may need to share radios. To allow seamless operation, you might consider the ICOM 6-way BC-121N rapid charger and some extra batteries.

#### • Warranty

A warranty is mandatory but it also guarantees of peace of mind when purchasing a radio. Authorised ICOM dealers and the manufacturer will back up what they are saying in terms of product quality and build. All ICOM UK's business radios (radio body only) carry a 2 year parts and labour warranty.

### 10. What will it cost?

Your local ICOM Business Radio Dealer can answer this. Often you will find that the radios you need are more affordable than others you may have looked at previously. ICOM have a comprehensive range at all price levels, all have the same top quality. You could consider spreading the immediate cost by leasing rather than outright purchase.

### 11. Do I need a licence for 2-way business radio?

You do. You will need a radio licence to operate your 2-way business radios. This is issued by the **Government Agency - OFCOM**. Licensed frequencies are allocated on a case by case basis. You can ask your dealer to program them into your radios.

Ask your dealer to help with your licence application, they will advise on the best way to obtain the channel(s) you need.

If you wish to use your radios throughout the UK and are not based at one fixed location, you can apply for a **Business Radio Simple UK Licence**. This is £75, renewable every 5 years.

### 12. Where can I find more information?

As mentioned earlier, it is always a good idea to take advice from your ICOM business radio dealer. They can help analyse your operational needs and recommend the features you do or don't need.

For further information, visit the following websites:

- [www.icomuk.co.uk/PMR-Private\\_Mobile\\_Radio](http://www.icomuk.co.uk/PMR-Private_Mobile_Radio)  
Gives information about the ICOM range of 2-Way business radios.

- [www.idasuk.co.uk](http://www.idasuk.co.uk)  
This provides comprehensive information about Icom's digital radio system called IDAS.

We hope this guide makes good sense and helps you take the correct steps in choosing a 2-way business radio solution. However, if you still have any questions, please call our team on: 01227 741741 or e-mail us at: [info@icomuk.co.uk](mailto:info@icomuk.co.uk).