



Microchipping - The Importance of ISO

The identification of companion animals by the implantation of electronic transponders (microchips) is being introduced in more and more countries around the world. This brings benefits to animals and owners alike

- Proof of ownership if the pet is stolen
- Traceability of the owner if the pet is lost or injured.
- Reliable identification at the veterinary clinic or pet show.

Just implanting a microchip is not enough. Electronic identification depends on

- The number in each microchip being unique
- Implanting a microchip which will be reliably read by any reader, even one made by a different manufacturer.
- Recording the owner and pet's details on a database which is easily available 24 hours a day, every day.
- Keeping the information in the database up to date when the owner moves house or sells their pet.

Microchip identification has been around for over 20 years and it is worth looking at lessons that can be learned from countries with more experience in this field.

Early microchips were not compatible between manufacturers. One company's product could not be read by a reader made by another. Some companies made different incompatible products and sold them in the same country! Others encrypted the signal from their microchips so that they could not be read by any other reader unless the manufacturer paid a license fee to learn how to decipher the signal.

All this damaged public confidence in the concept of electronic identification of companion animals and slowed development of the market.

Enter ISO. The International Standards Organisation exists to help in just such a situation. Between 1991 and 1996 experts from the manufacturers, veterinary associations and national standards institutes met to choose one technology which would make every microchip readable by every reader anywhere in the world. The work was successful and the standards ISO 11784 and ISO 11785 were born. Responsible manufacturers quickly switched to selling only microchips which met these standards and no longer distributed the old types.

Recognising that in some countries large numbers of animals had already been implanted with old style microchips, readers were developed which could recognise the old types as well as the new ISO 11784 / ISO 11785 transponders.

But in countries where lots of animals had been implanted with the older incompatible microchips and in which many readers could only read one or a limited number of microchip types there were problems. How do you persuade each customer to buy a new universal reader and throw away their old one when it seemed to be working just fine? The earlier that each country or implanting organisation switched to the transponders complying with the ISO 11784 / ISO 11785, the smaller this problem was.

For countries which had never implanted animals before life was even easier. They used ISO 11784 / ISO 11785 transponders right from the start.

Over 20 countries around the world have now committed to the ISO standard and ISO products are the only microchips and readers sold there.

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For countries, clinics or animal shelters starting to introduce microchip identification now, the importance of being sure that the products that you use meet the ISO 11784 / ISO 11785 standards cannot be over emphasised. Nothing else will give the animals that you implant a better chance of being read by any reader anywhere else in the world.

This article was written by the Chair and Secretary of the ISO/TC23/SC19/WG3 committee, charged with the task of developing global standards for Radiofrequency Identification (RFID) technology, to provide answers to common questions specific to companion animal applications.

Questions to ask your microchip salesperson

Is your microchip an FDX ? B type?

Does your identification microchip meet the standards ISO 11784 and ISO 11785?

Does your reader read ISO 11784 / ISO 11785 standard microchips AND the old technologies listed in Annex 1 of the ISO 11784 standard?

How do you ensure that the details of the animal implanted and the person who owns it are recorded in a national database with 24 hour access?

Make sure you go ISO 11784 / ISO 11785

Microchip Manufacturer Codes and the role of ICAR

To be able to manufacture and distribute microchip technology that adheres to the ISO standards, the product in question must undergo testing, facilitated through ICAR (International Committee for Animal recording), to ensure conformance to ISO 11784 and ISO 11785. Upon successful completion of conformance testing, a manufacturer code is allocated and this becomes the first 3 digits of the 15 digit animal ID number for that manufacturer's microchips. This allows the user to identify that the microchip being used is an ISO-standard microchip.

[List of ICAR Manufacturer Codes](#)

[Manufacturer versus Country Code - appropriate use as defined by ISO](#) (.pdf file)

ICAR Code of Conduct

To achieve and maintain consumer confidence in usability and functioning of ISO 11784/11785 compliant RFID technology, manufacturers and suppliers declare the following:

Products and devices offered to the market for use in animal identification and claimed to be compliant to the ISO standards 11784/11785

? Guarantee full conformance to the ISO standards noted above. Conformance can be proven by test certificates issued by approved certification bodies.

? Guarantee uniqueness of identification codes stored in the identification devices. This includes the use of the test code ?999? which is restricted to test applications in the narrow sense, i.e. not in commercial environments. It also includes the restricted use of the country codes to situations where countries have set up an authorised system of centralised allocation of identification codes.

? Allow full traceability of animals identified according to the instructions given by the manufacturer.

The manufacturers and suppliers of RFID-Technology agree to have a responsibility to communicate accurate information concerning ISO 11784/11785 based RFID products and technology. This includes provable performance information verified by approved certification bodies

[Manufacturers that have signed the code of conduct](#)

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WSAVA
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[ICAR Newsletter - All you wanted to know about Microchips but were afraid to ask!](#)

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