Chapter 6

Equipment

In addition to preparing the accommodation, you must also prepare the equipment (also known as furniture) you are going to need before acquiring your bird. However, when buying equipment, you should know what type of species you plan to keep (see Chapter 4: Selection of Species).

It's ironic that many falconers will spend £1,000 or more on a falcon, research its parent's life history in detail, require documented (sometimes video) evidence of how it was hatched and reared and inspect every feather with a magnifying glass, only to take it home and provide it with the cheapest equipment they can find! Why? If you owned a fine pair of English shotguns, would you carry them around in a plastic supermarket carrier bag?

If you want the best equipment for your bird, it always costs more, but there is usually a reason for this. If a swivel, for example, costs £10 more than another, it is probably better, stronger and longer lasting. If you buy the best, it will in fact be cheaper in the long run because it will last you a long time, if properly maintained.

Note, too, that you should have purchased and readied the equipment, from hoods to baths, as you are going to need to take some of the equipment with you when you collect the bird.

6.1 Hoods

Hoods, in my opinion, are essential to the training and husbandry of a bird of prey. They are used in much the same way as an on/off

A selection of hoods (left to right: Anglo Indian, American/Dutch, Bahraini).

switch. Anything that a bird is frightened of, aggressive towards or nervous about can be instantly removed from view by the use of a hood. It also allows you to expose your bird to new sights and experiences at your own pace.

There are various hood patterns available in many books. Cut them out, neatly trace them on to cards, then lock them in a drawer for the next five years and forget about them! It takes years of practice to make a light, comfortable, well-fitting hood; you cannot learn to make one from a book in a couple of hours. You wouldn't believe the amount of "hood-shy" birds I have seen as a result of shoddy, ill-fitting home-made hoods.

There are two main hood types I would recommend for our beginner-recommended Harris hawk. The Anglo-Indian Hood is a hood made from a single piece of leather, flared around the eyes and well suited to the hawk's head shape, if the right size is chosen. The Blocked Dutch Hood is made from three pieces of leather with a slightly more attractive finish, more expensive and slightly tighter around the eyes, but still very serviceable if it fits correctly.

Avoid the cheaper Arab hoods; their braces might suit the warm, dry desert, but they will lock the hood to your bird's head if they get wet and swell. I like Martin Jones' hoods as they are made from soft leather, which is kinder to the skin around beak and cere. They fit very well and will last forever if looked after correctly.

All birds of prey will differ slightly in size of hood or beak

opening just as human heads and mouths do. So when ordering your hood, if you ask nicely, the manufacturer may send you three hoods, one slightly larger, the other smaller. Try on all three and send back the ones that don't fit. Note that if you bite the hood braces at this stage, you will mark them and probably be asked to pay for them.

If for some reason you are unhappy with them all, please don't force your bird to wear a hood that may be too tight or touches its eyes. You'll only make it hood shy, refusing to accept it in future.

If a hood appears to fit well at first, keep it on for a couple of minutes, then look at the area around the eyes for signs of moisture, a sure sign that the hood is touching the eyes. If there is moisture, the hood does not fit properly.

If you do not have a suitable hood for your new bird, loose-loft your bird in its mews, put your training programme on hold and wait for the arrival of replacements.

With all this said, you're probably wondering how you actually go about hooding the bird for the first time. Hooding is probably one of the most difficult skills that a beginner has to learn; much like riding a bike, it requires practice—the more you do it, the better you get. It's easy for the beginner to give up on hooding, so please persevere. The benefits far outweigh the disadvantages for both you and bird. If you start early enough or can practise on a bird already well made to the hood, then you will have a running start.

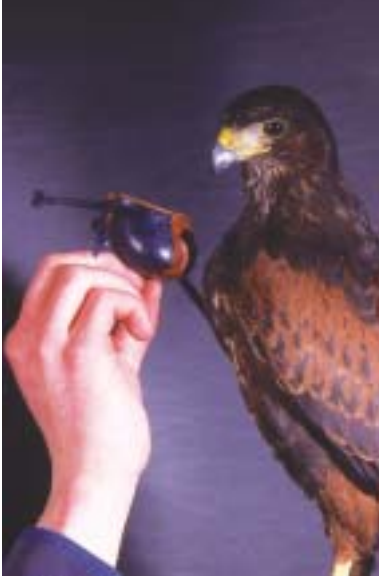
Unfortunately, this practice has to be carried out on a young bird who, if badly hooded will become hood shy and very difficult to hood in the future. It has to be said that a bird that has never been hooded is far easier to hood than a bird that has had several aborted attempts made.

The act of getting your hood on the bird's head, if done correctly, is the easy part. Hold your hood between finger and thumb by its plume, with the opening of the hood upwards.

Stroke the breast of your bird slowly with the neck strap of the hood.

The next stage is where a lot of people go wrong. Up to this point, you have been moving slowly and deliberately

Stroking your bird with the neck strap of the hood.



Moving the hood slowly up the breast, with an aim to axis under the chin.

The hood seating is put into place on the head.

whilst dealing with your bird. It is important that you do the same when putting the hood on your bird's head. Many people try to rush at this stage. Imagine that the centre of the hood's chinstrap is a hinge, which when in contact with the underside of the beak allows the hood to rotate onto your bird's head.

As soon as the hood is on the head, let go! Don't try to hold on. If the hood isn't on all the way, gently push against the plume with the tips of your fingers. Now you've achieved the easy part. It's now time to fasten the hood. Place the nearest, longest hood brace loosely into your mouth (do not allow the bird to feel the pressure in any way).

The next step has to happen literally all at once. Take the opposite hood brace in your hand and draw it tight against the other, whilst pushing your fist and bird up and forwards.

This action pulls the hood onto the head whilst it is fastened. If you keep the fist still at this stage, the bird will just lean backwards leaving you with a closed hood between your teeth and fingers, and an unhooded bird! This is a difficult operation and requires practice.

If possible, try to practise on someone else's bird that is already well made to its hood, even if it requires paying a commer-

The braces are drawn between teeth and hand.

A happy hooded Harris hawk on a perch.

cial falconry centre or school. The instruction you will receive on the school's birds will prevent you from making a mess of your own. It will be money well spent! At the very least, ask a friend to provide a bent finger, onto which you must fasten a hood. Ask them to make it a little difficult by moving or trying to pull it back out of the hood at crucial moments. It may sound strange, but this will really help your technique.

6.2 Perches

Certain species of birds have evolved to sit on certain types of perches. Hawks living in woodland have a foot that is designed to wrap around a tree branch. Falcons, on the other hand, spend most of their lives in open country on cliff and rock and have a larger,

The bow perch.

flatter foot better suited to a flat surface. For these reasons, a variety of perches have evolved in falconry. Below are discussions of two of the many perches commonly used by falconers: the bow perch and the block.

6.2.1 The bow perch

In medieval times, man hunted with both archery bow and hawk, often both at the same time. When perching, all birds of prey like to sit at the highest point. With this knowledge, ancient falconers discovered that the bow shape, pressed firmly into the ground, allowed their birds both wing and tail clearance, as well as comfort.

Before the initial purchase of a bow perch, you need to decide whether you intend to use it in inside or out. There are two basic designs available, either a spiked bow or a weighted foot bow. (There are even designs that allow you both options interchangeably.)

I find a well-made stainless weighted bow fills all of my requirements as it can be used on any surface and remains portable. Mild steel is strong but does not weather. It can be anodised or galvanised but with bangs and hard wear, the protective coating will chip off, allowing it to rust. Stainless steel is much better and will last a lifetime, but it is obviously more expensive.

Note that if you choose a weighted foot perch, a smooth foot will allow the perch to be dragged more easily than one that has rubber feet. If your bird is to be tethered in close proximity of others, your bird may be able drag its bow perch to reach another bird,

resulting in disaster. (See Chapter 5: Housing Your Raptor for more information on choosing a surface on which to place your perch.)

The tethering ring on your bow should be of a strong but light material. It should also be large enough to slip easily over the diameter of the bow without snagging.

6.2.2 The block perch

Birds with a flat foot prefer to sit on blocks. As Harris hawks and red-tails have feet designed to cling around branches, they are more comfortable on bow perches, but some people like to use blocks.

When choosing the size of block, consider the size of the bird. Many people think that providing the largest block size available is kinder to their bird. Wrong! Your block should be sufficiently large that your bird can sit with both feet on top and still have tail overhanging the side. Larger blocks encourage your bird to sit more centrally, resulting in their mute covering its surface.

A block with straight sides allows the bird to smear mute all over it. So choose a block type that gradually decreases in diameter from its top. Note also that the more elaborate the grooves and steel work, the harder they are to clean. Plain and simple is best.

Wooden blocks require regular maintenance and may split in cold weather. There are, however, composite plastic and fibreglass options now available that are more durable and offer greater longevity.

Your jess length is also very important when using a block. If your jess is longer than the diameter of your block, they will eventually slip over, or "straddle," the block, and your bird may get tangled, upset and possibly even break feathers.

The tethering position is also an important consideration when choosing a style of block. I really dislike using the Arab-style blocks, which, although beautiful, tend to have very small tethering rings at the base, which will repeatedly

A hooded "hybrid" falcon on a block perch.

clog up the leash (resulting in feather damage). The Arab system of tethering is different to that which I subscribe, so these blocks aren't really designed for use with Western equipment.

Based on my experience, I prefer the traditional block, which if manufactured correctly allows freedom of leash and equipment, practicality of cleaning and aesthetic good looks.

An ideal gauntlet for a male red-tail or a Harris hawk.

6.3 Glove or gauntlet

There are many qualities of glove, or gauntlet, available. They differ in style from manufacturer to manufacturer, but as a rule I always tend to go for quite a high-cuff length glove, preferably double-thickness and made of buckskin. If you are considering the training of large female red-tail, then I strongly suggest a double- or even triple-thickness buckskin glove.

I especially prefer a glove that has hand-stitched fingers. When sewing machines stitch leather, they make neat stitching, but they tend to group these stitches very close together. This makes the leather closely perforated, much like the tear in toilet paper. Because the fingers bend and wear quicker than the rest, this increases the chances of the glove splitting around the fingers. This is less likely to happen with a hand-stitched glove, which do, however, tend to be a little more expensive.

Obviously if you fly merlins or sparrow hawks, a larger glove would be an overkill, but as I recommend you consider training a Harris hawk or red-tail, then you may need a glove that can withstand a more powerful grip.

Also, the glove should be fitted with a strong metal tethering "D" ring, which is well stitched or riveted to the glove. Your glove

should be treated regularly with a good leather grease to not only keep it supple, but also waterproof it for the inevitable wet day out in the hunting field.

Some people are of the opinion that a glove must be replaced each season, which is fine if you want to spend the money. A good-quality and well-cared-for glove, however, should last several seasons.

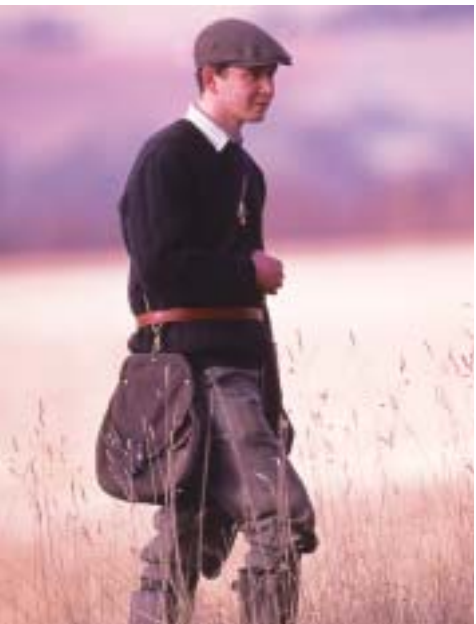
A hawking vest or waistcoat (courtesy of Ben Long).

6.4 Hawking bag or vest

The main function of a hawking bag is to carry equipment, food and eventually the quarry you have caught.

They are also invaluable as a cover or screen when removing a bird from its kill. By the very nature of their usage, they will get blood, urine (animal, not yours), and chick yolk on them, so choose a style and design that you are able to machine wash. Most bags have a food pocket, designed to be cleaned after use, but make sure this is large enough to hold six ounces (170 g) or more of food. It also will need to have separate pockets for lures, knives, creance lines and obviously quarry.

Some bags offer bags of space for quarry, but remember that several rabbits will be very heavy when stuffed in one bag, and the quality of the meat (if intended for human consumption) will be degraded. With your bag you will need a shoulder strap or belt strap. I prefer a "Sam Brown"–type shoulder strap, which, when used in conjunction with your waist belt, stops the bag from swinging around (a handy thing when climbing fences, etc.).



A hawking bag.

Belt clips are okay, but they tend to pull on your hip if full of quarry. A more modern alternative is the hawk-

ing waistcoat. A waistcoat with more pockets than Batman's utility belt might seem appealing, but I find that the main quarry pockets are around the base of the back, which can be very uncomfortable if you are walking far with a few bunnies onboard.

Also in cold weather you are probably going to be wearing several layers of clothes, and getting into your waistcoat might become a problem. You could buy a very large size, but on warmer days, with less clothes on, you'll tend to look like weight watcher of the year!

Whichever you choose, the most important thing is that they will hold a second set of everything your bird wears, just in case something is lost in the hunting field.

6.5 Jess

The oldest type of jess (leather strap around your bird's legs) used here in the United Kingdom is the "traditional." This jess is comprised of a single piece of leather shaped and then bound around the bird's legs using a slit system.

The bad point to these jesses is they have a slit in the end to accommodate the swivel, and when the bird is free flown, this slit can get tangled with tree branches, resulting in the possible death of your bird. To avoid this, a British army officer, Guy Aylmeri, came up with another design whilst serving in India, which has proven to be far superior. A leather bracelet is fastened around the bird's ankle, using a two-part brass ring or eyelet.

Into this eyelet, a mews jess can be slipped, which is utilised

The slits in the end of the jess allow the swivel to be fitted.

when the bird is in the mews and tethered, but when free flown, this mews jess can be removed and replaced with a flying jess, basically an identical jess but without the slit for the swivel.

The benefits of this system of jess are obvious, preventing your bird from becoming entangled in trees when flown. The only bad point to "Aylmeri" jesses are the bracelets.

If you are flying a bird that has a tendency to bate, or jump around a lot, when tethered (especially common in short-wings), the brass eyelets can inflame the back of the ankles, eventually resulting in damage and infection. This does not happen with the traditional jess, as there is no item that is made from metal involved in its construction.

The final type of jess you could use is the "false Aylmeri." This system employs the best parts of both jess types; the bracelets are bound onto the bird's legs using the same method as the traditional jess, but they do employ a brass eyelet that is positioned further away from the bird's legs (avoiding inflammation). Because it has an eyelet, this then allows you to utilise and change both mews and flying jesses.

The only fault I have found with the false Aylmeri is that if they are badly manufactured, they leave the eyelet very close to the bird's rear talon and toe. If the talon slips into the eyelet and the bird bates, it can result in a broken toe.

Although the Aylmeri bracelet system allows you to interchange jess, from mews to flying, I personally have experienced many problems in the hunting field when birds playing with their flying jess are able to remove and lose them.

I now use a permanent system of flying jess in the form of a small slip of leather fastened around the bracelet that is virtually impossible for the bird to remove in the flying field.

Other equipment you need to manufacture jesses include:

- good-quality hide, preferably Kangaroo skin.
- scissors.
- metal rule.
- scalpel.
- eyelet tool with eyelets.
- artery clamp or pliers.
- leather dressing/jess grease.
- leather hole punch.

Equipment needed for manufacturing jesses.

So let us look at how to manufacture some Aylmeri jesses.

Cut two strips of leather, stretching the hide first and cutting in the direction of the least stretch. They should be about 2 mm (.08 in) wider than the brass eyelets and at least 30-cm (1-ft) long.

Rub leather dressing/jess grease liberally into the leather, ensuring that it is well worked in. Wipe off any excess.

Cut a point on one end of each strip of leather, squaring the opposite end off.

Start to fold the square end of the leather approximately the same width as the brass eyelet (not smaller).

Fold the leather three times to form the button.

Using your leather punch, punch a hole through the centre of the button.

Pinch the pointed end of the strap together (suede side inwards); a push point through punched hole in button.

Draw the strap through the hole either by hand or with the use of artery forceps/pliers until the button is tight.

To prepare the Aylmeri bracelets, cut two strips of leather about 2 mm (.08 in) wider than the brass eyelets you will use, grease as before and place the eyelet centrally at one end (allowing for all-around overlap). Make an impression and then punch out this hole using your leather punch. Test eyelet for size and trim around it with scissors, allowing a 1 mm (.04 in) overhang.

Begin to cut a fringe by making small parallel insertions in the size of the bracelet for about 3 cm (1.2 in). (These may be finished once you size the bird's leg and are ready to fit the bracelets). To prepare permanent flying straps/jess, cut two strips of leather about 30-cm (1-ft) long and 4-mm (.16-in) wide. Cut a sharp point on one end and grease, punching a small hole in the other end.

The finished button(s). / Decide how long your jess needs to be (e.g., no longer in length than the diameter of a block perch or no longer than 15 cm (.5 ft) for a Harris hawk.) Cut a fresh point at the desired length, and then punch a small hole at the top and the bottom of the 3-cm (1.2-in) slit that will accommodate the swivel.

6.6 Swivel

The swivel is connected to the jess and allows the jess to be utilised without tangling. There are various types of swivels, made from various metals. I would recommend the use of a stainless-steel swivel.

The benefit of the flat-top type swivel will become apparent with use; when you fasten your jess onto your swivel, you will find that ordinary swivels allow your jess to slip down, eventually jamming the swivel's action and allowing your bird to tangle up (which may result in feather damage).

Some falconers prefer to pass one jess onto one side, and the other on the opposite side, but I personally prefer to pass them both over the same side, as this helps to keep them together and stops them from slipping down.

There are some equipment manufacturers, who have incorporated a rubber system into their swivels, supposedly eleviating the shock when a bird bates. I favour anything that gives my bird greater comfort, but am unwilling to trust this new device until the strength of rubber can be proven over a prolonged period of time.

The swivel is fitted by placing both pointed ends of the mews jess together and passing them through the larger end of the swivel.

Over the smaller end, bring both sides back up to the bar, finally pulling slightly to seat them onto the top bar of the swivel.

6.7 Leash

Traditionally, leashes were manufactured from leather, but because of its poor reliability in all weathers, I do not trust leather leashes.

In this day and age, human-made materials like braided nylon are incredibly durable and strong, offering the perfect alternative to leather. In these materials your choice is extensive: flat-braided nylon, cotton-coated braided nylon or polypropylene.

I do not like flat leashes, as I find them almost impossible to undo if wet and totally impossible when frozen in winter. Likewise, I do not particularly like polypropylene as it is slippery and awkward to tie. I prefer cotton-coated braided nylon, which is very easy to handle, hard-wearing, and once a leash is made, it should last you a lifetime. See the photos below to learn how to manufacture a leash.

Cut a suitable length of leash material (approximately 80 cm (2.6 ft)) and place one end against your thumb, and start to coil around your thumb.

Start to coil back on itself for four turns. Slide your thumb out and feed the opposite end of the leash down through the centre of the coils. Pull the full leash length through the coils until it forms a knot. Finish the knot end by cutting excess material and melting onto knot with a naked flame. Melt the opposite end to stop it from fraying.

There are now elasticised or Bungee leashes on the market. The idea behind these is that they take the trauma out of a bird's bate, reducing stress to legs. Great idea, but unfortunately for every forward motion there is a backward one, and on the backward bounce, the bird tends to dig its tail into the ground, breaking feathers!

A kinder alternative is to always ensure that you tie your bird as short as possible (without it constantly pulling on its legs). This results in your bird achieving less speed in the bate, therefore being pulled up with less stress.

Once you have made your leash, it is an ideal opportunity to practise tying your falconer's knot, a knot that can be tied or untied using only one hand (you'll have a bird on the other). See photos below to see how to tie a falconer's knot.

Holding the leash's-button in your gloved hand, as though it were your bird; pass the leash end through the tethering ring on your glove.

Place your hand through the loop, take the furthest leash in your first two fingers, leaving your thumb outside.

Reach forwards with your thumb and lift the furthest leash, bringing it back against your fingers to form a loop.

Bring the leash in your fingers from behind and over the top of the knot.

Push the leash in your fingers, down through the loop created by your thumb. Drawing your thumb out, pull it up to make a tight loop.

Finally, tuck what remains of your leash back through the loop. This gives you added safety: if the bird plays with the leash, it will only tighten it, rather than undo it. To untie, simply pull the loose end out of the loop and pull!

6.8 Bells

A bell is an audible location device, which has become far less important with the advent of telemetry, but still allows you to locate your bird at close range. When purchasing a bell, you are looking to fulfil three criteria, as follow:

- Tone (can you hear it over a distance?).
- Weight (is it light enough for your bird?).
- Longevity (will it last a whole season?).

The first criteria should be met by all falconry bells. As for the second, manufacturers are starting to produce some very heavy bells, which although hard wearing and long-lasting (over several seasons), they do weigh your bird down slightly. As to the size of a bell, use your common sense; smaller is better provided you can hear them.

As a bell ages, the dropper (piece of metal inside) starts to wear its way through the bell. This changes the tone, and the dropper will eventually break its way out. For this reason I prefer to use an Indian or "Lahore" bell, which has changed very little in design or manufacture for several hundred years. They offer good tone, are reasonably priced and will normally last you a full season.

Bells may be mounted on the leg or tail, but which is prefer-

able? I prefer to use both, placing one bell on a "bewitt" (a piece of leather on the leg) and another on the tail, which also gives me a point to secure the telemetry. The benefit of a leg bell comes into its own when a bird is physically footing or killing its prey; at this time the legs are moving rapidly and can be heard from quite a distance. There are, however, many occasions when a bird is killing in long grass or cover; at this time the leg bell is muffled, and the clearer position of the bell on the tail becomes advantageous.

To make a bewitt, see the following photos.

Cut a strip of leather approximately 3-mm (.12-in) wide by 15-cm (.5-ft) long. Cut a point on both ends and grease. Using your hole punch, punch a small hole in the middle or so of the strap. Insert an end of the strap in the bar of the bell and feed bell to position in the centre.

Place one of the pointed ends of your strap through the hole in the centre and pull through, attaching the strap to the bell.

Finally punch another small hole in the strap approximately 1 cm (.4 in) away from the bell position. This is as far as you can go until it is time to fit it.

Some falconers like to use a neck-mounted bell. It is held in place by a loop made from a soft piece of leather or elastic to hold the bell in position.

Normally clear of obstructions, a neck-mounted bell rings clearly in any circumstance. A word of warning, however: if your bird gets it tangled in flight on a branch or barbed-wire fence, this may result in a broken neck in extreme circumstances.

Smaller birds like merlins and sparrow-hawks can often find a leg bell a hindrance, to both their footing ability as well as their general flying capabilities. With both of these species, I prefer to use just a tail bell. For Harris hawks or red-tails, the use of both leg bells and tail bells offer no such problems.

To prepare my favourite type of tail mount, cut two three-millimetre (.12 in) wide, five-centimetre (2-in) pieces of leather but do not grease! Take a medium-sized plectrum and, using your hole punch, punch two parallel lines in the centre of the plectrum, approximately four-millimetre (.16-in) high by two-millimetre (.08-in) wide and around five-millimetre (.2-in) apart.

Get your small tail bell ready as well as super glue and an electrical cable tie.

6.9 Hawk baths

Many people say that birds do not drink, getting all of their fluid requirements on a daily basis from their food. This is utter rubbish; every bird I have ever owned has been observed taking fluids orally at sometime or other. Birds of prey never die of malnutrition, but rather dehydration.

It has to be said that taking fluids orally is quite awkward for them, due to the fact that their windpipe is on the base of their mouths at the back of their tongues. To avoid inhalation of any fluid, they throw their heads back quite violently to get the fluid into their throats, which is called “bowsing.” Repeated bowsing can cause them to go off balance. (It is where the word boozing comes from!)

Their fluid intake is directly matched with their metabolic rate (how fast their body is working). In colder weather, their metabolic rate increases (which keeps them warmer), so they require more baths in cold weather than in hot!

Tethered bird in bath.

Your bird should have access to a bath at all times (other than the initial stages of training when the close proximity of a bath to a freshly jessed bird could result in drowning). Your bath should be of sufficient size that your bird can stand at least up to its knees in water and can roll from side to side.

I prefer a round bath, as it has no corners to break feathers or on which the jess and swivel can catch. There are several falconry equipment suppliers that have baths on offer, made from either fibreglass or PVC. I find that repeated moving and cleaning cracks the fibreglass baths, whereas the PVC ones are indestructible.

A telemetry receiver and transmitter.

6.10 Telemetry

The use of telemetry has revolutionised falconry. The use of a light-weight-tracking device attached to your bird will take away a lot of your initial anxiety about free flight. I could write a whole book just on the use of telemetry, such a complex and fickle subject it is. However, do not trust it wholeheartedly. The best telemetry in the world will never take the place of competent basic training, and its eventual use is an indication of failure on your part to train your bird correctly. But it will pay for itself the very first time you use it, as without it you may not get a lost bird back.

There are two main frequencies available on the market: 216mhz and 173mhz. The 216mhz systems offer shorter transmitter aerials and shorter receiver antenna, and overall are a more compact system of operation. The only downside is the frequency itself. 216mhz is a recognised military frequency in the United Kingdom, and its use for falconry is illegal here. It is the main frequency used by falconers in North America. The 173mhz systems, although larger and bulkier, are legal to use in the United Kingdom, making it our only legal option.

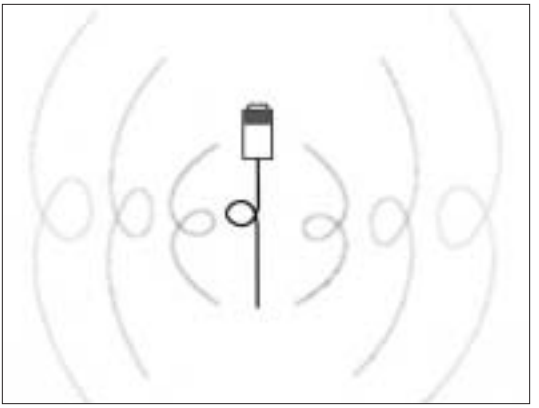
Watch batteries power the transmitter, and the number of batteries dictate its overall range or life expectancy (dependant on manufacturer). The transmitter gives off a radio signal by way of the aerial (antenna), which is received by the receiver unit.

The way in which it is received starts to get a bit technical, so I will break it down into layman's terms. Imagine this long, straight aerial giving off a long, thin signal. If the aerial is bent or twisted, it will give off a bent or twisted signal. For example, a transmitter laid horizontally will give off a horizontal signal.

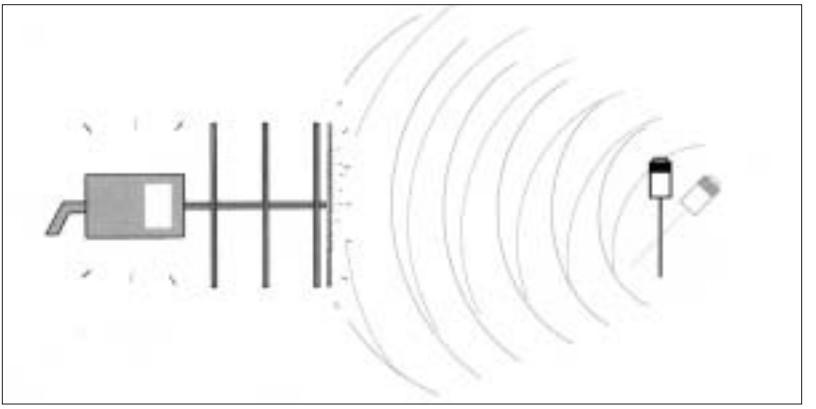
The receiver antenna (yaggi) laid in a horizontal plane will receive this signal perfectly in line of sight.

If the receiver were in a vertical plane, it would only receive a fraction of the signal.

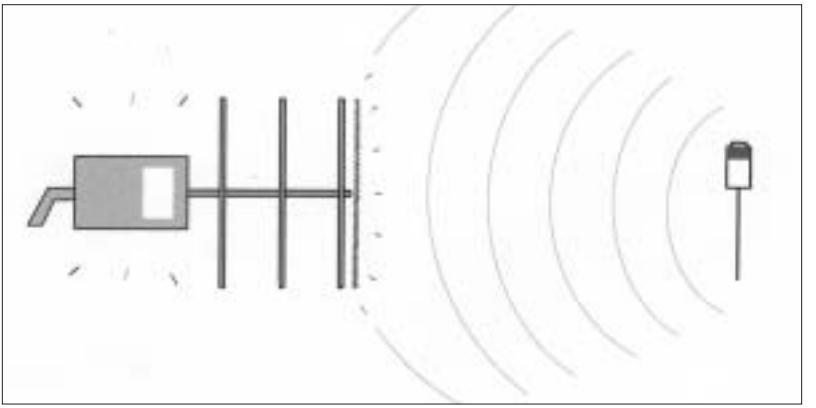
So, if you mount your transmitter on your bird's tail and your receiver gets the best signal in an horizontal position, the bird is probably still in flight. If in a vertical position, then it is probably sitting down.



Transmitter with bent aerial gives off bent signal.



Transmitter transmitting in an horizontal plane, with receiver, receiving at full strength on the same horizontal plane.



On this occasion, the receiver indicates that the transmitter is in a vertical position.

The mountain deflects the signal depriving the receiver.

Any obstacles in the area act to deflect this signal, sometimes bouncing at severe angles.

Although a telemetry manufacturer might advertise that its particular transmitter has a thirty-mile (48-km) range, this range will only be within line of sight. Any mountains or buildings might defer this signal in certain circumstances to less than a quarter of a mile.

When using telemetry, try to always use new or relatively new batteries. Practise a lot with your new system. A good way to practise is to get a family member or friend to position your transmitter somewhere a couple of miles away. It's then your job to go and find it. I start off with my receiver gain turned up fully. I then imagine that I am standing at the centre of a clock face. I turn my receiver aerial through the twelve hours of the clock (360 degrees).

Narrow down the strongest signal, into a quarter of the clock face (for example, between twelve and three o'clock) and then turn down the gain until your signal has almost gone. Do not touch or turn up your gain after this.

You are now looking at a certain direction somewhere in a ninety-degree arc, hopefully less. I can tell by the setting of the gain on my receiver approximately how far away my transmitter is.

Head off (either by car or on foot) in the approximate direction

of the signal. I would normally go about a quarter of a mile. Stop and repeat the clock face process again. If your signal has got stronger without turning up your gain, then you are obviously going in the right direction. If the signal is coming from the way you have just come, then you have obviously gone too far. Keep repeating this process, gradually turning your gain down, as you get closer. You will eventually get to the point where you have a very strong signal with your gain turned right down. As you walk with your receiver, you will physically see the signal suddenly drop, until you turn 180 degrees and it returns. You are now within a few feet of your transmitter!

Some systems allow you to turn the yaggi aerial part of your receiver off and just use the receiver box on its own—when within three to four feet (.9–1.2 m)—others have fancy attenuators that basically do the same thing. Either way, criss-cross the ground at this stage looking for the strongest signal. Most systems when operated properly will guide you to your transmitter even in the dark! Practise and you will be ready in case you really do need it.

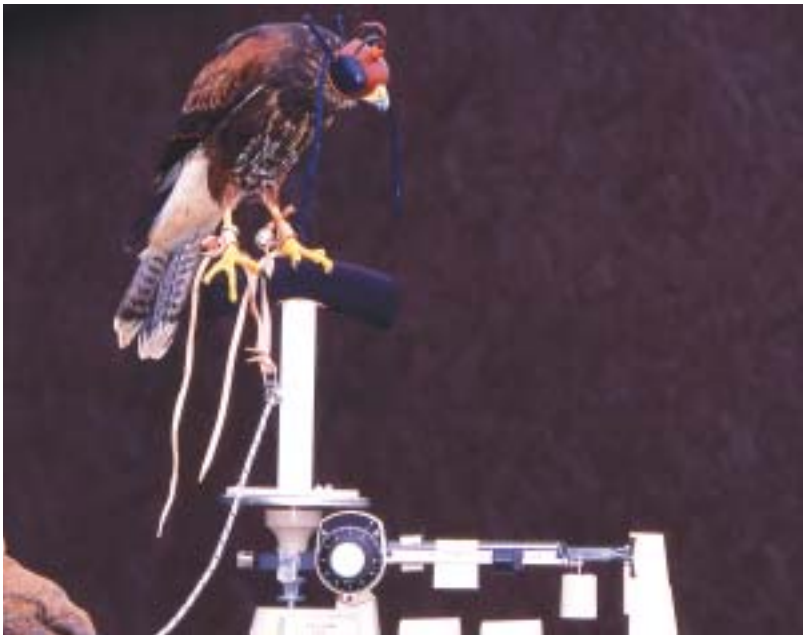
6.11 Scales

When purchasing scales to weigh your bird, you have two main options: balance or digital. I do not like digital scales for the following reasons:

- They are manufactured specifically to weigh inanimate objects. Also, the way in which they are designed to record weight makes any modification to the original design ineffective (e.g., the fitting of a perch).
- They are often light or top heavy, which makes them unstable.
- They will often reset (tare) in the initial stages of a bird stepping on.

I have tried dozens of sets of digital scales from different manufacturers, but as yet have found none that are accurate enough for the purposes of falconry. A scale that is only one quarter of an ounce out could result in the death of a smaller species of hawk.

Balance scales can be heavy, old-fashioned, expensive, but they are a very simple mechanism, which allows very little to go wrong.



A young, hooded Harris hawk on the scales.

You can choose to weigh in ounces or grammes, both of which are accurate if used properly. If you want ultra-sensitive scales, you might like to try the Ohaus dial-a-gram scales, which are accurate to a fraction of a gramme.

You may want to convert your own scale, as many old candy-shop type scales can be purchased from second-hand bric-a-brac shops.

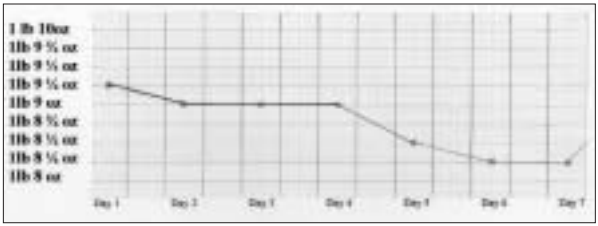
6.12 Weighing charts

The importance of weighing and monitoring your bird's weight during training and flying will become apparent throughout the remainder of this book. As well as columns to record actual weight, your chart will also need columns to record time of weighing, food intake, food type, temperature on the day, weather condition (is your bird heavy because it is wet?) and finally your personal remarks so that you can record performance and look back upon it in future months.

Bird's Name: *Baldrick* **Species:** ♂*Harris Hawk* **Ring Number:** *1234W*

Date	Weight	Time	Intake	Foodtype/type	Temp.	Remarks
23/4	*1lb. 9¼ oz.*	*10 am*	*3 oz.*	*rabbit*	*7°*	*Flew ok, caught 1 rabbit.*
24/4	*1lb. 9 oz.*	*12 noon*	*3 oz.*	*chick*	*6°*	*Not flown.*
25/4	*1lb. 9 oz.*	*12 noon*	*3 oz.*	*chick*	*6°*	*Little slow to respond.*
26/4	*1lb. 9 oz.*	*11 am*	*1 oz.*	*chick*	*6°*	*Very slow to fist, need to drop.*
27/4	*1lb. 8½ oz.*	*1 pm*	*2 oz.*	*chick*	*7°*	*Bit better, still a little lazy.*
28/4	*1lb. 8¼ oz.*	*12 noon*	*3 oz.*	*chick*	*7°*	*Great! 1 pheasant, flew very well.*
20/4	*1lb. 8¼ oz.*	*1 pm*	*3 oz.*	*pheasant*	*6°*	*Very, very good.*

A sample weight chart and graph.



In addition to a written record, I also like beginners to use a visual record or graph, which shows very easily how your bird's food intake affects its weight.

6.13 Transport box

Once your bird is trained, you will want to hunt it as often as possible, and this may require you covering some distance by car to fly on good land, with plenty of quarry. If a bird is going to damage feathers anywhere, it will damage them in its travel box.

As well as keeping your bird quiet and contented, your travel box serves a variety of purposes.

- It contains all mute, keeping your vehicle clean.
- It gives you secure, overnight accommodation when away from home.
- It allows you a warm, contained space in particularly bad weather.

A transport box should not only provide adequate space to avoid feather damage in transit, but it also should be built in such a way that it can be kept sanitary, as such a small area will get quite dirty. Some people use plastic pet carrier–type boxes, which I have tried but find that they cause feather or webbing damage to my birds' tails as they are forced to sit on the floor. Transport boxes should be of sufficient size that your carefully trained bird will be happy to spend time in them, stepping in and out with ease.

A bird in a travel box.

If you are going to build a larger box, then two factors must be taken into consideration. First, if it is not light tight, your bird will jump around in it if unhooded. Note that you may also box your bird wearing a hood, but if travelling in the morning, be sure that the bird has cast to prevent choking (see Chapter 7: Diet and Nutrition).

Second, will it fit in your car? You would be amazed at the amount of people who have made superb boxes varnished and finished with brass handles only to discover that they will not fit in their cars!

6.14 Creance line

A creance line is your insurance policy in the early stages of training. It consists of a stout, 100-foot (30-m) line, wrapped around a stick. Your line should be of light, strong braided nylon, and I find that white is a good colour as it is easier to see. Do not use fishing line! It is very hard to see and can get tangled around either you or your bird. It is also difficult to see any damage to it and is prone to break.

The way you wind up your creance line is also very important. The lazy way is to wind it repeatedly around the stick, which will turn

Wound creance; note the figure-eight pattern.

The correct way to store it is to wind it in a figure eight around the stick, twisting the stick slightly with each turn, to ensure that the line spreads evenly around the stick.

6.15 Lure

Once your bird is free flying, you'll want to introduce it to game. In the United Kingdom, it is not only illegal, but also immoral to fly your bird at what is termed as "bagged" game (released quarry). Your lure will act as your live game and can take the form of any quarry you wish to concentrate upon.

I like to use the dead carcass of a prey species, animated with line and powered by either human or bike (see Chapter 14: Entering). You may not have the means at this stage to obtain such lure carcasses. So you can instead use the skin of a rabbit or the wings of a pheasant without any problem.

You can make a very simple rabbit lure using a one-litre plastic bottle. Partially fill it with sand (for weight) and glue the dried (cured) rabbit skin onto it. I like to partially crush my bottle into a flatter shape by removing the lid, squeezing it, then replacing the lid to form a vacuum and hold this shape.

The flatter lure travels easier, keeping the food reward cleaner and more natural-looking. I then use a piece of string to hold the food reward onto it and fit a swivel and line onto the neck of the bottle.

For a wing lure, you'll require a pair of wings, a good fishing swivel, some string and your lure line and stick. A wing lure is made as follows:

Select a dry-cured pair of wings.

Place them back to back and separate at primary/secondry division in wings.

Place a piece of thick string in a figure eight through the wings.

Draw tight and tie in a reaf knot at the base edge (the bit of wing that once joined the bird).

Then tie any food reward onto the lure with a reaf knot.

Slide on the swivel of the lure line.

Tie on with yet another reaf knot.

Cut off any excess string.

One finished wing lure ready for use.

6.16 First-aid kit

A basic first-aid kit should be carried at all times whilst out hawking, in case of emergencies and minor cuts and bites, etc. The essential ingredients in a proper first-aid kit are listed in Chapter 19: Health and First Aid.

Checklist of equipment

Before you even think about acquiring a bird, ask yourself if you have the following:

- Mews and weathering.
- Jess and fitting tools.
- Bells, tail mount and bewitts.
- Swivels.
- Leash.
- Hood.
- Suitable perches—portable and fixed in mews.
- Hawking bag or vest.
- Glove.
- Telemetry.
- Scales.
- Transport box.
- Freezer for hawk food.
- Hawk bath.
- Weight charts
- Creance line and stick.
- Rabbit or pheasant lure.
- First-aid kit.

If not, it's time to go shopping. Check out the Contacts of Interest section at the end of this book for information on some equipment manufacturers.