

# The rogues' gallery

**Bill Wright** draws inspiration from some of the classic cock-ups he's seen and corrected in a lifetime of aerial rigging

## Bill Wright

Bill grew up with a TV aerial in his hand, helping his installer dad from an early age. In 1971 he seized the reins and has never looked back. Nowadays he concentrates on distribution systems, leaving everything else to his son Paul. Now he's semi-retired he only works 50 hours a week.



**A fatal weakness**  
Masts should never be fixed so they rub against the structure – something will give way in the end

### It's a funny thing about being an aerial installer – your work is up there for all to see for years.

And no one's perfect. The mast you left not quite upright, the array that looks down at the ground ever so slightly – don't you wince a little every time you drive past?

These are minor things and no one would notice but you, but far greater sins are committed every day by some of our more dodgy brethren in the trade. Things that really hit you in the eye; things that make you draw in your breath and curse the cowboys in our midst. Here are a few 'installer errors' of the coarser kind.

If you spot any of your own work here I'd keep quiet about it. There certainly isn't a prize. But my opinion of those who perpetrate these aluminium abortions is so low I can't believe that they read a high-class mag like *What Satellite*. My guess is that as they munch their burgers they have tits-and-bums-

based publications propped up on the steering wheels of their tatty vans.

### A fatal weakness

Any aerial mast will bend slightly in the wind and the degree of movement should be considered when the mast is positioned.

Masts should never be fixed so that they are pressed against masonry or guttering. That is what's happened here – with the inevitable result. The four vertically polarised cheap-as-chips aerials are like a sail in the wind, so after a short time the mast has rubbed against the abrasive masonry enough to be fatally weakened.

Where the chimney has a large decorative corbel, the options are either to find a bracket with sufficient standoff or, if the owner agrees, chip away an inch or so of the overhanging masonry.

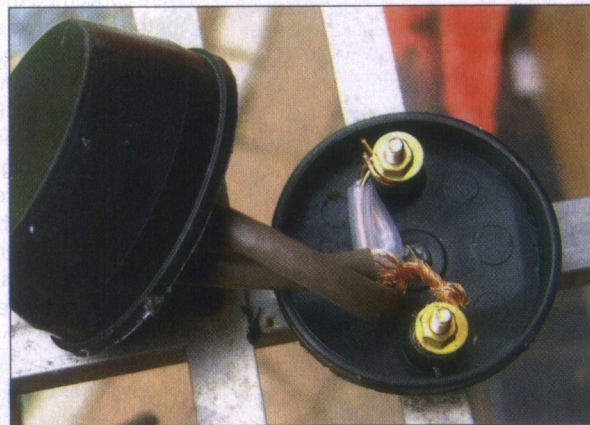
To make matters worse, there were four cheap aerials on one mast – and

on the whole block of flats there were four installations like this – one on each chimney! Sixteen cheap aerials instead of one good aerial and an amplifier.

### Two aerials, one cable

The customer wants to watch telly in bed, so he rings the Roy Rogers Aerial Company. Two minutes after Roy climbs

**Two into one**  
Extra cables should be attached via a junction box, not to the aerial itself





**Criminal rigging**  
This loop of co-ax was fraudulently installed as a 'high gain loft aerial'

bolted to the side of the stack, making a lashing wire unnecessary, but the chimney must be in really good condition and the load slight.

As for those brackets that grip the corner of the chimney with two claws, the least said the better.

### DAB dipole too close to Yagi

This is a seven-element Yagi-Uda array designed for the upper half of the DAB band. Every good quality Yagi array is a symphony of tuned components. The lengths of the elements and the spacings between them are carefully calculated to work in harmony and this gives the best possible gain and directivity across the desired bandwidth.

For this to work the aerial must be in 'free space', with no significant object intruding into the capture area. Just about the worst thing you can do to a Yagi is to put something long and metallic near the driven element and in the same plane, so the presence of this 2in diameter mast helps harmony like shoving a crowbar into the works of a grand piano.

It will certainly ruin the performance of the aerial, which should have been fixed on the end of a side arm at least half a wavelength long. Being horizontal, the arm would have had negligible effect on the aerial's characteristics. Of course, many Yagis can be end-mounted, which puts the mast behind the reflector where it can do no harm.

### Couldn't give a damn

This is gross – it's an example of idle, couldn't-give-a-damn aerial rigging.

The reflector will rattle and probably come loose. The mast clamp will probably tap on the chimneybreast and the noise will go right through the

onto the roof (without a crawler, no doubt) a cable drops down to the bedroom window and the job's as good as done!

It's only after Roy's taken the money and scarpered that the customer tries the living room TV set and finds that reception is degraded. When a second downlead is needed the first job must be to measure the signal to make sure that it will withstand the extra losses.

Then a proper outdoor splitter should be used. Punching a hole in the junction box cover and shoving the second cable through it is definitely not

elderly customer to investigate her poor reception. She had paid the local TV shop a fairly large sum for a 'high gain loft aerial'.

This is what Jackie found in the loft. The customer didn't want to complain to the local shop because they were 'good friends'. Takes your breath away, doesn't it?

### No corner plate

The rest of the job looked quite decent, but this corner of the stack wasn't easy to reach.

Lashing wire is (or should be) under considerable tension and it can work its way into the mortar, causing the course of bricks above to lift up. This will make the whole chimney unsafe. It's often possible to get that awkward corner plate into position by bending the lugs so the plate is held on the wire, then gently pushing it along with a mast or something. Brackets can, of course, be

(left) Corner wear  
Chimney lashing  
without a corner  
plate is a recipe  
for disaster

(below) Pole clash  
A Yagi aerial  
needs free space  
to work correctly



recommended. Connecting two cables directly to the terminals affects the aerial's performance and creates an impedance mismatch. The hole isn't sealed either, so soon the air space in both cables will fill with water. Note also the lack of a balun on this cheap contract aerial.

### A criminal installation

This is criminal fraud – pure and simple. My friend Jackie (yes, a lady installer and a good one too!) was asked by an



**A laughable lash-up**  
Throwing cable across the roof like this is both lazy and stupid

house. I can see that the installer couldn't have fixed the chimney bracket any higher, but a bracket with an inch or two more stand-off and a longer mast would have solved the problem with ease. Failing that, a three-foot cranked mast would have made a half decent job of it.

But let's face it, these guys carry only the most basic gear in their scruffy vans. A few cheap aerials, masts, and chimney fixings, a roll of nasty co-ax, a box of cable clips and that's about it.

As a matter of fact a lot of these so-called installers will make repeated trips to the wholesalers, buying just enough each time for the next one or two jobs. We've all met

**(right) Idle install**  
This hasty fitting will rattle until the day it falls off

**(below) Trunk call**  
Ugly white trunking and cable on a sloppy outdoor job



them in there, haven't we?

'One ten-element aerial, one mast, one chimney bracket, one lashing kit, please. Oh, and a box of clips, please. Those cheap ones.'

The only surprise here is that the aerial is a grouped one because the 'one size fits all' contract-quality wideband array is the cowboy's favourite.

### National lampoon's rigging

This house is in an area of outstanding natural beauty, and I'm guessing that somewhere in that locality is an aerial installer of outstanding natural stupidity. Just look at that hideous white cable!

It's just so lazy to throw a cable over a roof like this yet, bizarrely, the installer has actually bothered climbing up there to clip the cable to the slates.

But even with the four fixings on the slate the cable will probably be dislodged by sliding snow. It should have been taken along the walls just under the eaves.

The worst culprits are those satellite dish installers who are not supposed to set foot on roofs (I'm sure you know to whom I refer) who have been known to literally throw a roll of co-ax over a terraced house, securing the cable under the eaves at each side of the building and leaving it loose all the way across the roof. Inevitably, it rubs on the ridge and the tiles, allowing rain water to run down the inside of the cable into the receiver.



### Lazy linking

This is just hideous isn't it? In order to get a cable from one loft to the next someone has put all this mini-trunking on the walls.

It was obviously done like this to 'hitch a ride' on an existing catenary wire – but it would have been much better to have put a neat catenary across between the cable entry points at the top.

White cable shouldn't be used outdoors because the plastic perishes in sunlight and it looks awful, and just highlights the bad workmanship here. I wonder how the mini-trunking is fixed to the wall. Couldn't be the adhesive type, surely?