

A PLAIN MAN'S GUIDE TO MASTS & TOWERS

There are a variety of different structures ranging from a simple wooden pole to a multi section, 120 foot tower which could be used to support an aerial. However practicality will generally rule the day and finally dictate the type of structure we can erect. The first thing to consider is whether the mast or tower you are thinking of erecting will require planning permission.

Planning consent

In general, under planning law, any mast over about 3 metres high could be classified as a "structure" and so require planning permission. However, the views of planning authorities on the subject of aerial masts can vary from one local authority to the next so it may be helpful to ask around. Radio amateurs in the local radio club may have already had some experience in trying to get planning permission for an aerial mast and should be able to give you some useful tips. In some local authority areas, the planning laws can be very rigidly applied and yet in others a 'blind eye' is turned on some types of aerial mast that are not too obtrusive, or when the neighbours are not complaining. There are no hard and fast rules to go by and so it is probably best to ask around.

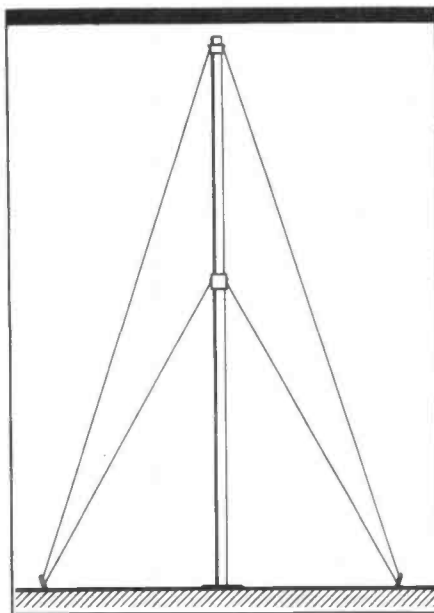
If you feel that you will have to make an application for planning permission, then the following hints might be helpful:

- a) Most local authorities produce an explanatory booklet explaining the various aspects of planning law. Try and get a copy to study carefully.

Part 3

Choosing the right tower

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- b) Refer to your structure as a 'Mast', the word tower may conjure up visions of a large unsightly structure.
- c) Explain your intentions clearly and if possible, use scale drawings of your property to illustrate the proposed location of the mast and any trees, etc that are likely to screen the mast from public view.
- d) When any structural work is

needed to be done, such as foundations, get professional advice.

- e) Home made or DIY structures are not always popular with planning officers and should be avoided. Commercially manufactured masts are more likely to be granted planning permission.
- f) Try and get the consent of your neighbours.

The next thing to have a look at is the various types of masts and 'towers' that are generally available and could be used as amateur radio aerials. It is beyond the scope of this article to deal with each and every kind of aerial mast in detail, so only the most commonly used sorts of mast have been included.

In general, they fall into two categories; fixed masts, either self supporting or guyed; telescopic masts which, like the fixed variety, can be either self supporting or guyed structures. Figs. 1 to 6 show some typical examples of some popular types of mast that are available. The simplest mast of course is just a tubular pole of aluminium or steel held vertical by a system of guys as in Fig. 1. In some instances, when more height is needed, a number of tubular sections can be joined together and guyed to make a taller mast. Simple guyed masts of this type are relatively cheap to put up to heights of 50 to 60 feet but at greater heights, the difficulties in erecting and guying the structure increase thus raising the cost. The real drawback of this kind of mast is that it cannot be easily or quickly raised or lowered and so they are more suitable for 'permanent' installations.

Fig. 2 shows a different type of