

JAMES PRESTON—Associated Television Ltd

# THUNDERBIRDS

**I**N THE BEGINNING there was Mickey Mouse—brain child of Walt Disney—and the first truly international star of cartoon fantasy. Over the following 30 plus years cartoon fantasy has moved from slap-stick comedy in one dimension to high adventure—by Bond out of Bulldog Drummond—and anticipates the Cape Kennedy capers in new dimensions of time and space.

Now television—through AP Films, an ATV subsidiary—supersedes Ray Bradbury and Isaac Asimov in TV's greatest programme departure in the youthful history of ITV. 'Thunderbirds are go'.

'Thunderbirds', shot in colour at AP Film Studios at Slough, is arguably one of the few real innovations in television film technique and provides an interesting microcosm of British television as a whole. The production falls into four equally fascinating categories; the moral attitude, production technique, exports and merchandising.

The present world-wide success of 'Thunderbirds' is no overnight wonder. Nine years ago the mastermind behind AP Films, Gerry Anderson, devised as an independent production a puppet series called 'Four Feather Falls'; commercially acceptable, but not a great TAM-rating hit. It was only when ATV came onto the scene that calculated ideas of programme construction and deep analysis of potential audiences became a policy which was utilized in 'Thunderbirds' predecessors: 'Supercar', 'Fireball XL5' and 'Stingray'; programmes not entirely devised for children, but for children viewing with adults, thus creating a true family audience.

The formula of 'Thunderbirds' drama—no less subtle than supposedly adult programmes like 'The Fugitive', 'Amos Burke' or 'Bonanza', although in the case of 'Thunderbirds' set at some unspecified time in the future where the enemies are the temporary



Lady Penelope the British representative of International Rescue.

failings of an advanced technology in an almost Utopian world—provides science fiction, sex appeal in Lady Penelope, romance in Tin-Tin and comic relief in Parker, Lady Penelope's droll Man Friday. The identification most viewers need between good and evil is provided by The Hood, a hideous criminal who wants to learn the secrets of International Rescue so that he might dominate the world. He is, of course, always thwarted, but always manages to survive. The depths to which this pervert will sink is proven by the fact that only criminals in this series smoke cigarettes.

Projecting the International Rescue Organization onto the screen reflects the modest genius of Gerry Anderson and his own organization. International Rescue comprises Jeff Tracy ('Good-looking, resolute, far-seeing') whose five sons pilot the five Thunderbirds of the title. Unsurprisingly the sons are named after the pioneer American astronauts: Scott, Virgil, Alan, Gordon and John with the addition of 'Brains'... 'The bespectacled, scientific genius who has invented all the incredible machines and equipment which makes rescues of every kind possible. He is a typical egg-head, shy and rather hesitant'.

The basic product at AP Films is a puppet about 22-inches tall which has about five alternative heads so that expressions, between happiness and tears, can be shown. Behind each 'character' is a sculptor who creates the face, a puppeteer manipulating each character from the 25-feet long gantry which spans the film set, a wardrobe department happily basing many of the female character's dresses on the latest pages of 'Queen' or 'Vogue' and a fully teamed film crew.

This miniature world, shot without animation, uses complete film stages at about one third live-action size in Gerry Anderson's own concept of 'Supermarionation'. All mainstage shots are by Arriflex cameras, with Mitchell R35's reserved for the special effects studio, on 35-mm colour stock which is specially processed onto a 16-mm master for use in America and in all overseas sales where it would be difficult to distribute a 35-mm master. In addition a fine grain print and a reduction duplicate is held for insurance which is much needed after a five week shooting schedule on a £38,000 plus budget per episode.

The Arriflex lends itself to another Anderson developed film aid, closed circuit TV monitoring through the film camera so that all studio staff, viewing through monitors, can see the entire action on the miniature stage. It also, incidentally, gives a TV screen image in addition to the camera image. The problems of a small stage are tremendous. Even on such fundamentals as camera tracking the crew is reduced to working on



Making the puppets is one of the most important operations in the 'Thunderbird' series. The sculptor is seen working on a head of a miniature actor on which he is providing the character with a moustache.

maximums of 3-feet instead of 10-feet. As the sets themselves are rarely more than 10-feet deep it creates many depth of focus problems. Many of these problems are overcome by stopping down the high illumination levels. As opposed to the feature film studio, normal stops of  $f/9.5$  and  $f/16$  may be used.

An additional problem is the basic height of the puppet which stands on a stage only 1-ft 3-in. high. The lens angle must always be on the level of the character's eyes, except for villains who are shot from below this level to heighten their macabre appeal. The lens height is therefore usually below 3-ft, a matter of the camera and the crew having to get down to the puppet's level to get a realistic view of their world.

The final shooting ratio is a surprisingly low 4 or 5 : 1 but at least twice the cutting is used as the audience, however young and unsophisticated, will not tolerate holds of more than 30 seconds on the puppet's face while, on the other hand, a feature film can hold while the character's facial changes, reflecting emotion,



Looking down into a 'Thunderbird' set. The puppeteers give an indication of the relative size of the figures and furniture.

add to the story. The greatest refinement of Supermarionation is the lip-synchronization through a solenoid in the puppet's head.

The sound track is recorded before any other part of the production, using 'live' actors of the quality of Ray Barrett, Peter Dyneley, David Graham, Sylvia Anderson, who plays the part of Lady Penelope and also acts as script editor; Christine Finn, David Holliday, Matt Zimmerman and John Tate. The tape is transmitted to the solenoid through special tungsten steel wires—usually nine per puppet—which control the characters. The wires are .003-in. in diameter for arms and .005 for bodies (a human hair is about .002-in.

in diameter) and are non-reflecting. In many cases the wires are painted to the set's background colour, but there is a school of thought which believes that the sight of a wire adds to the psychological enjoyment of the series.

AP Films, on which this better-than-Hollywood success story is based, has been in operation in its present context for only eight years. At the moment the studios consist of four sound stages and a special effects studio, six cutting rooms, with two new buildings costing £250,000 coming into operation this year. The company employs 25 full time staff to shoot more than a million feet of film per year.



Obviously producing film at this cost for the British market—its total potential audience is only 25 millions—will present an immediate loss unless the product is skilfully marketed overseas. To date 'Stingray', two years after the end of production, has made £3 million and is still selling well. 'Thunderbirds' went on offer abroad through ATV's wholly-owned selling subsidiaries in September 1965, and in three months signed up 23 overseas markets in the Middle East, Central Africa, Central America and the Pacific Islands. The four AP-filmed series sell in the 70 countries serviced by I.T.C and contributed to ATV's record 1965 overseas sales total of \$10,585,700.

Today, commercial exploitation of any highly popular television (or film) product is incomplete without merchandising. AP Merchandising, which also handles a number of other ATV programme products, and now

to be expanded through the acquisition of Rosenthal Toys, handles a wide range of Supermarionation products from jigsaw puzzles to biscuits, models of 'Stingray', the 'Thunderbird' rockets and even lollipops. The merchandising system acts in two ways either through direct manufacture or licensing of properties. The company is sufficiently broadly based additionally to handle the British merchandising of such American products as 'Dr. Kildare' and 'The Man From U.N.C.L.E.'.

Two other outlets are also exploited—although directed entirely at the juvenile market: 'TV Century 21' and 'Lady Penelope' comic papers which are published in partnership with City Magazines even though at the time of launching it was well known that the market in children's comics is ever declining. The venture is a commercial success, probably through the

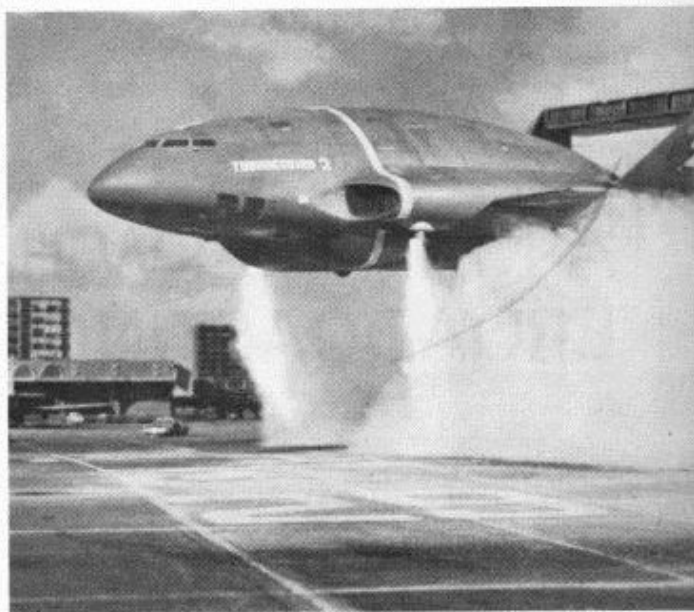
A low-angle shot obtained by mounting the camera below floor level. The TV monitor shows the cameraman exactly what viewers will see.



two essentials required in launching any new product: an entirely new and imaginative property and a pure entertainment (escapist?) capacity. AP Films' subsidiary started through the exploitation of 'Fireball XL5' and 'Supercar' strip cartoons which were placed in a children's magazine.

The second major outlet is provided through ATV's controlling interest in a record company: 'Century 21 Records' are 33 $\frac{1}{3}$  mini-albums containing 21 minutes playing time. The discs cover specially written material featuring characters from the AP Film series or Barry Gray's highly atmospheric music from the series. (Each 'Thunderbirds' episode is individually scored.)

Future plans at AP Films? Gerry Anderson's main concern in the continuation of 'Thunderbirds' beyond the originally conceived 26 episodes is to reduce the jerkiness of the characters' legs which so immediately identifies them as puppets. Further development of additional heads for each character, to give ever changing expressions, will be another refinement. But the great gamble is a full-length colour cinemascope feature movie, shot in Supermarionation and featuring the Thunderbird vehicles and characters. The shooting schedule is expected to cover 16 weeks on a modest £200,000 budget. At the studios they tell you that their problems are minimized through having no prima donna stars to handle. Even the huge daily technical tantrums have not curbed their enthusiasm and plans are already laid for a follow-up t.v series in



A typical example of a realistic 'Thunderbird' model.

Supermarionation. AP Films are not saying what it will comprise, but Mr Lew Grade, Managing Director of ATV, has already privately shown a few members of the press some initial art-work and his enthusiasm seemed unlimited.

And if Lew Grade is enthusiastic, 'Thunderbirds' elder brothers will be definitely go, go, go.