

ATV Demo System at Kempton Park

By G8MNY

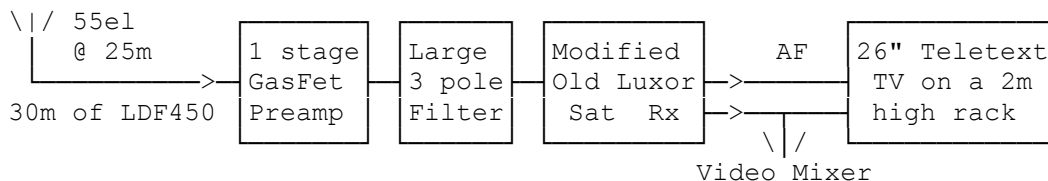
(Updated Jun 12)

(8 Bit ASCII graphics use code page 437 or 850, Terminal Font)

This is a brief rundown on what the Home Counties ATV group's demo system was before the loss of GB3HV site, we now use a simpler 10GHz Rx from GB3BH or just local links.

23CM ATV RX

23cms Rx



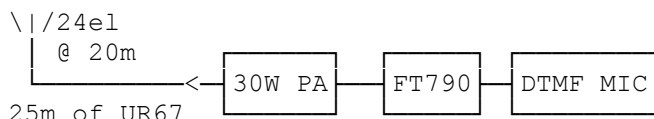
This is to Rx the local 25W ERP ATV repeater GB3HV @ 33km on 1308MHz, but with the very strong London Heathrow radar only 10km away on 1317MHz @ 530MW ERP about 10° off the beam! Needless to say there is radar 100% of the time, but GB3HV was still quite a watchable colour picture P3-4 with hifi sound & 7MB/S teletext with errors!

Using the preamp before the filter, overcomes the high Q filter loss, but at the cost of risk of overload. However being just a single gasfet it is surprisingly linear.

Without the high Q filter all 4 radar frequencies from Heathrow would thoroughly overload the Rx, as well of course would our 40W Tx! As it is the look through was quite good with next to no desensing.

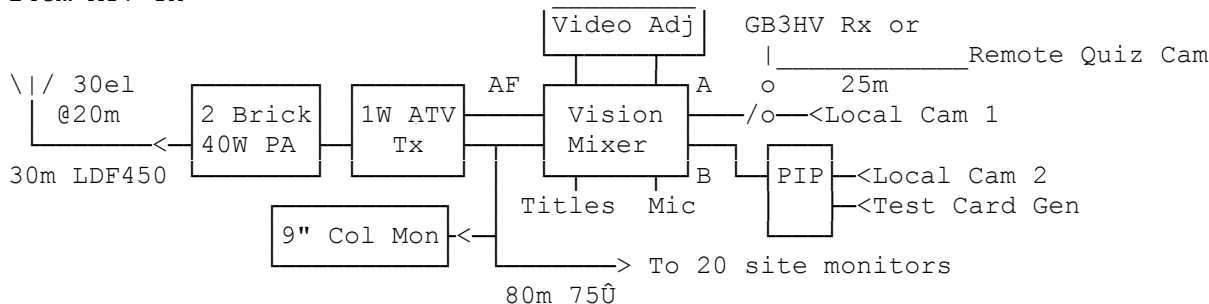
The old Luxor Rx is double conversion with the 1st IF @ 380MHz & all repeaked rather than staggered tuned as it was for wide Sat use. The 2nd IF is @ 70MHz & peak for best. And the Sound carrier vision traps are set for 5.5 & 6MHz the 2 sub carriers used on GB3HV.

70CMS DTMF COMMAND



This allows the demo station @ the Kempton park show to command various functions of GB3HV such as the VCR, Shack & Mast Cameras, 13cms Rx of GB3BH etc.

24cm ATV TX



This set up enabled either local cameras with overlaid Titles (e.g. G8MNY/P) or the picture in picture with an electronic test card to be sent.

While the Rally's Ham Quiz was on, the remote manned camera & audio was fed to GB3HV where it was internet streamed www.gb3hv.com, as well as being on all 20 on site monitors around the show.

All leads were correctly terminated & not Teed as in this simple diagram.

The Video adjustment box gives control over Video Gain, Black level, Colour Hue, Colour saturation, Luminance Sharpness etc.

The PIP box has a 1/4 sized timebase corrected insert of 1 of the 2 channels. The insert can be moved across the screen & in 1 of 2 vertical positions.

The Vision Mixer has 1 timebase corrected channel, & allows fades & wipes between A & B as well as colour overlay titles.

The 9" colour monitor gives a clean view of what is fed to Tx/show screens.

The ATV Tx is a homebrew synthesised one on 1248MHz with pre-emphasised video to CCITT 405 modulated to ± 3.5 MHz peak. The sound system is a 6MHz FM carrier ± 50 kHz with 50uS AF pre-emphasis & an AGC system to keep it well modulated.

The 80m cable run to the site monitor distribution point was planned to be feed from a 24cm Rx watching our locals Tx. But although the back scattered aerial signal was noise free through the building, the degradation of the signal quality from all those moving rally punters, meant the signal was unusable & the cable was fitted externally along a balcony during the rally!

KEMPTON

Setups like this had been used for many years at the old Sandown race course Ham rallies, but until recently not such complex Tx system had been used at Kempton Park ham rally.

Why Don't U send an interesting bul?

73 de John G8MNY @ GB7CIP