



Home Counties ATV group



GB3HV digital

- What have we done
- Why have we done it
- The results
- What kit do I need?

GB3HV digital – part 1

- Option to switch the transmitter in to digital mode
 - Control menu 4, option 4=on, 7=off
 - Switches back to FM when Tx de-keys
- Same frequency (1308 MHz)
- DVB-S transmission (as satellite)
 - QPSK, 4 Msymbols, $\frac{1}{2}$ FEC
 - Why DVB-s = its easy!



Power Amps



FM transmitter

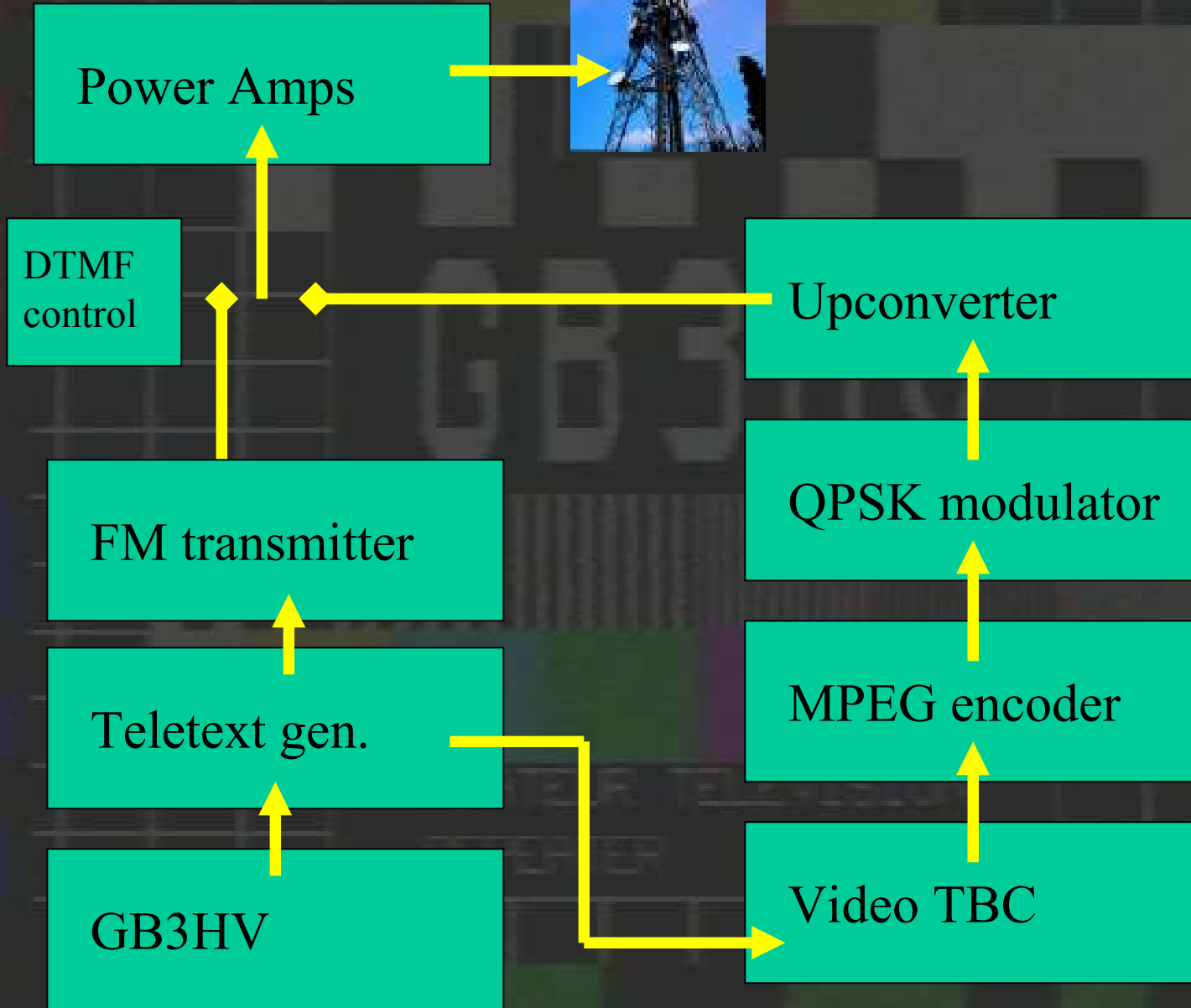


Teletext gen.



GB3HV





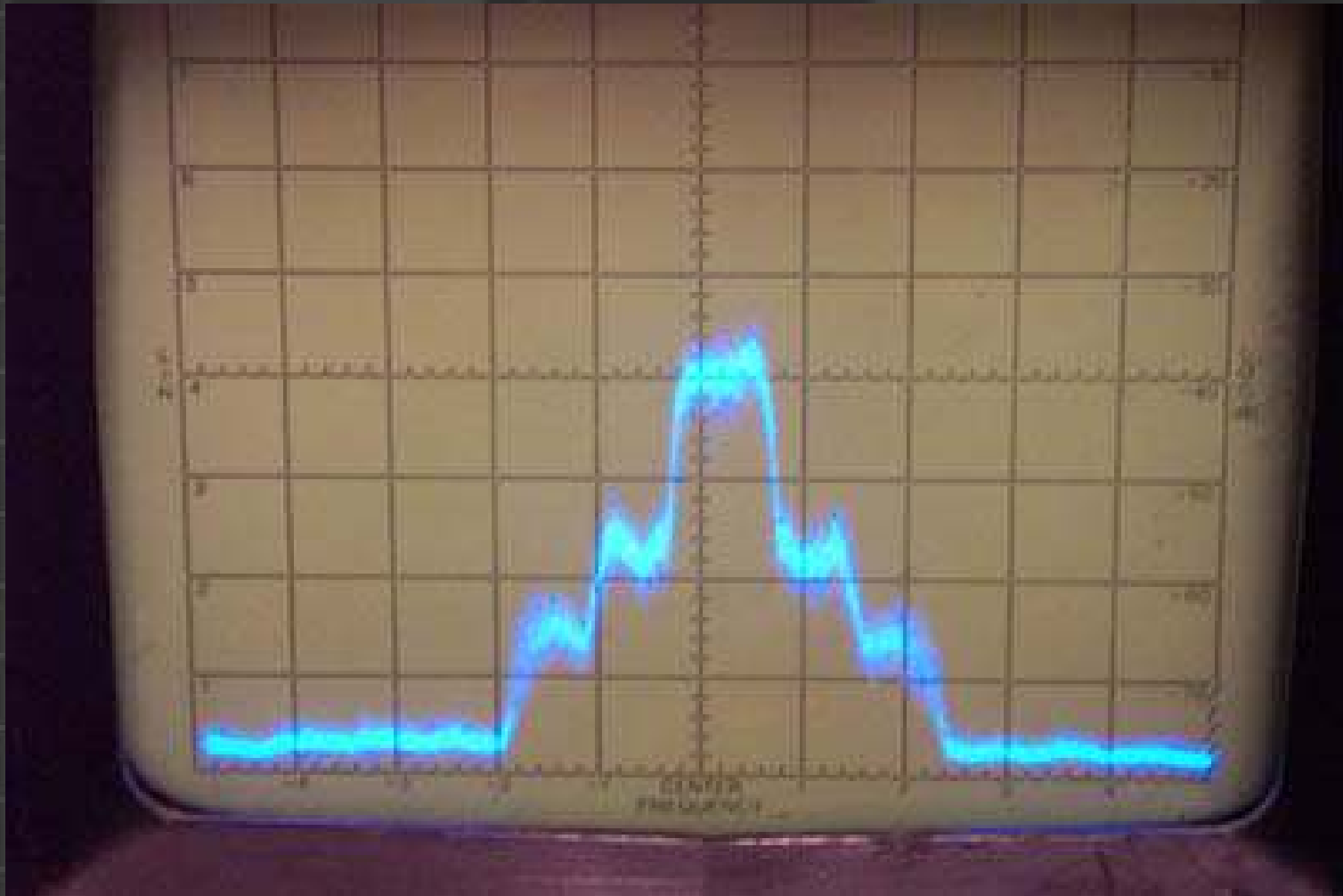
In practice



In practice



On air



Part 1 - Before





Part 1 - After



HV digital – part 1

- HV transmits normal output in digital
 - Test card
 - Repeats any analogue signal
 - Cannot be seen on FM rxr
- What do I need to receive it?
 - Any “free to air” digital satellite rxr
 - HV specials = £15!
 - Technomate = £100
 - L Band pass through to FM rxr

In the shack

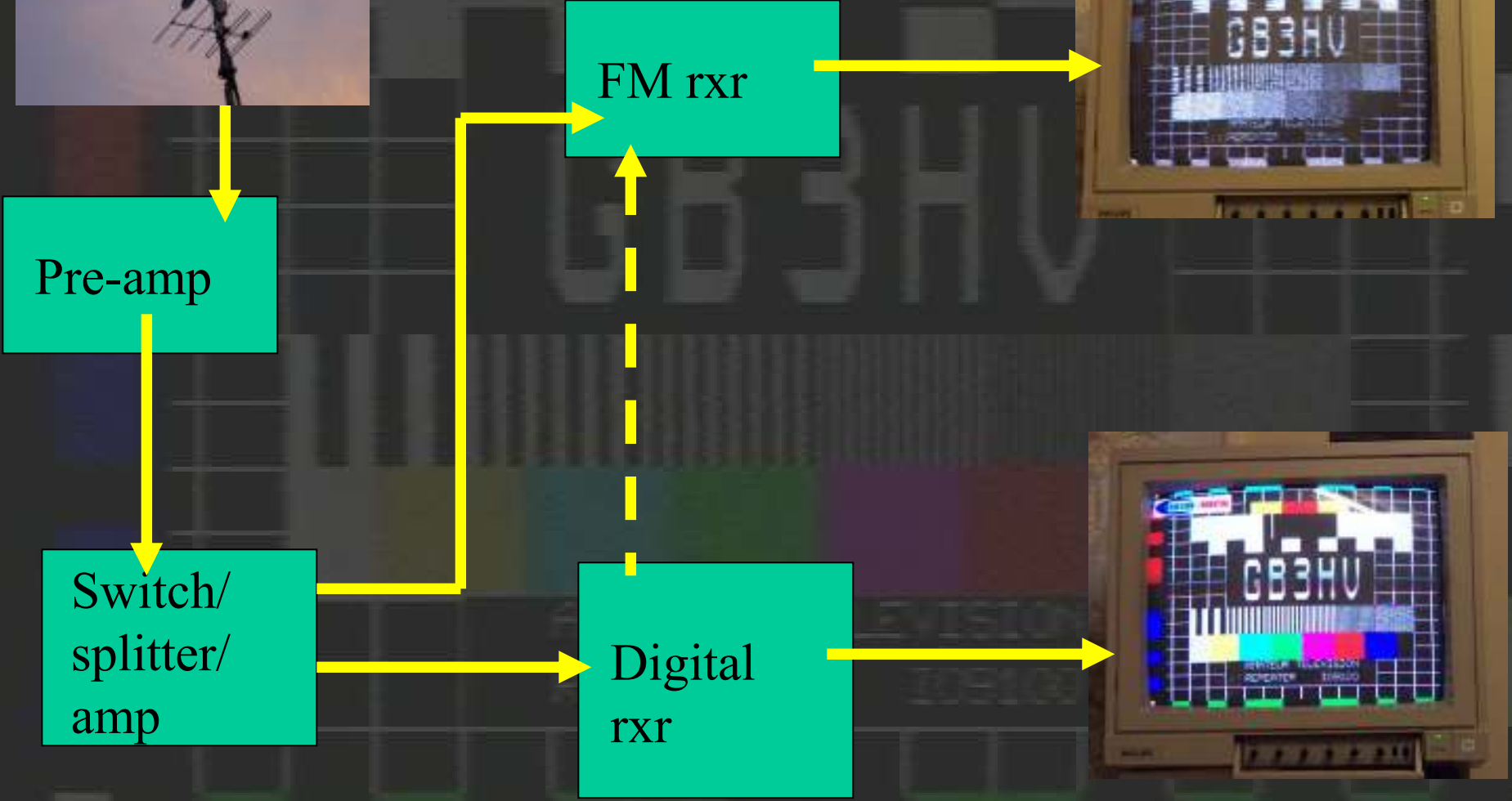


Pre-amp

Switch/
splitter/
amp

FM rxr

Digital
rxr



GB3HV - DIGITAL

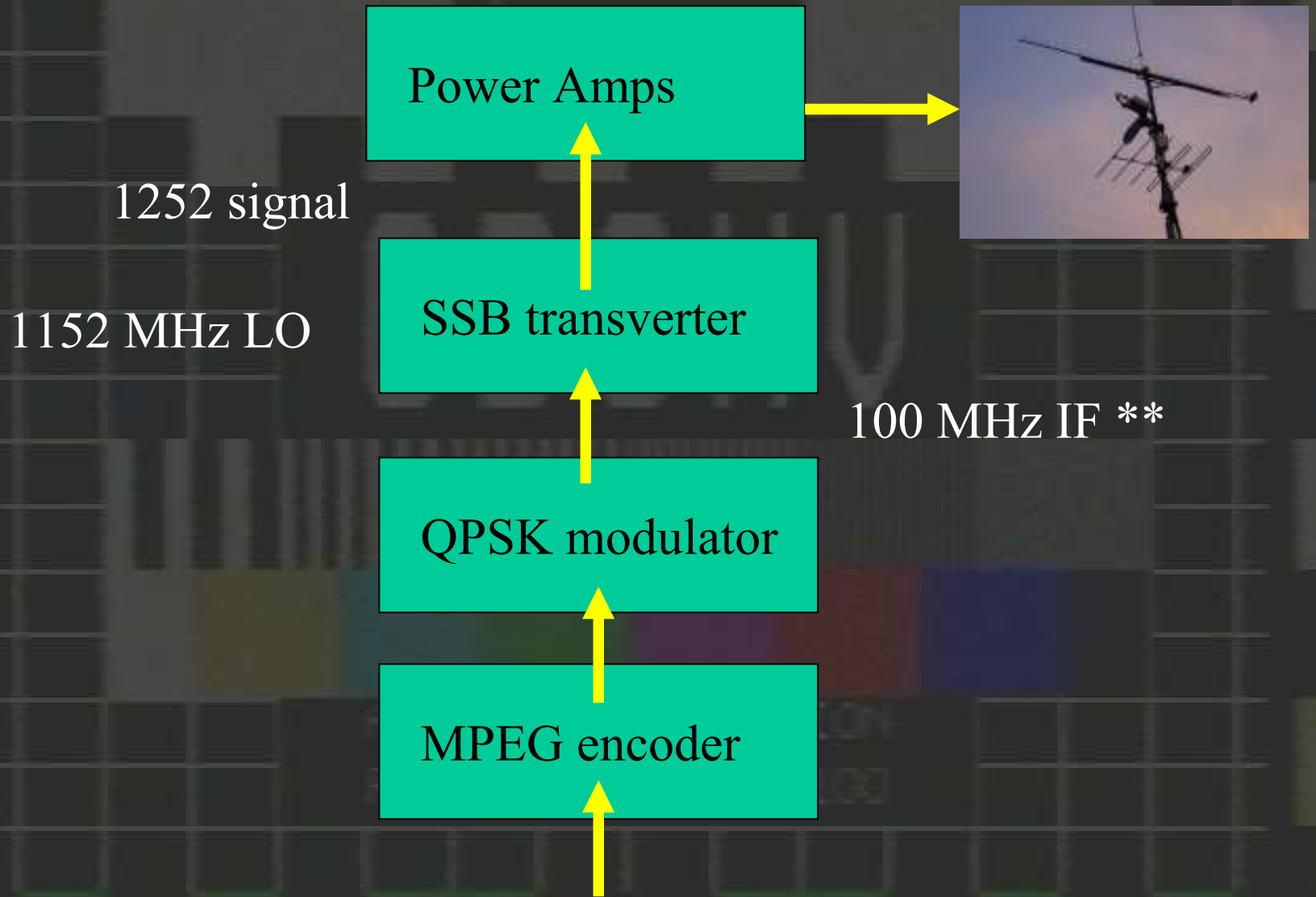
And this is the result!



HV digital – Part 2

- Digital receiver fitted at HV
- Receives digital signals on 1252 MHz
 - 1252 because $1152 + 100 = 1252$
- Same QPSK parameters as output
 - 4 M symbols, $\frac{1}{2}$ FEC
- Automatic aerial selection to be completed ASAP
- Gives P5 in and and P5 out!!

Pt 2 - in the shack



Pt 2 – what do I need?

- Option 1 - Nothing
 - You can still use HV with FM input!
- Option 2- ex commercial kit
 - Big, heavy noisy, hot!
 - Cheap, it works but needs an SSB transverter
- Option 3 – SR systems
 - Encoder+modulator+ low power (10 mw)
 - Just feed the output in to your power brick
 - The MFG of the digital world
- Go on – experiment.....

What next?

- Start using it!
 - Help HCTV lead the way!
- Receive first
 - Buy your HV special
 - When we all have digital rxr – then digital = default??
- Then transmit
 - Buy SR systems kit
 - Experiment
- Linking....