VCR Clinic

Reports from Steve Beeching, T. Eng., Alfred Damp, G. Jackson and Richard Roscoe

Ferguson 3V38/JVC HRD110

The problem with this machine was intermittent failure of the front buttons to operate. During one of the rare occasions when the fault was present we found that Q223's base voltage was high – so was the voltage at diode D225. The cause of the trouble was that Q208 was turning on very intermittently – but why? There was a partial short in the audio DIN socket, between the earth pin and the remote data pin. **S.B.**

Intermittent Erasure

When the problem is intermittent sound erasure, which may be accompanied by no sound recording, you may also notice colour flutter due to incomplete erasure of the video tracks. If the machine is a Toshiba V65, a JVC HRD140/150 or a Ferguson 3V44/45 look for C23 on the top right-hand panel and solder a 5·6nF Mylar capacitor across it. If the machine is a Ferguson 3V31 or a JVC HR7650/7655 replace the bias oscillator module with the later type and change both relays. **S.B.**

Sony SLC6

Failure of Q01 in this machine removed the E-E 12V supply and thus the E-E signals. **S.B.**

Head Cleaning

This can apply to any machine, though the two in question were both Fergusons – a 3V31 and a 3V29. The fault was described as picture rolling, with the tracking control not working. A noise bar moved up through the picture and the head switching point was visible in the bottom third of the picture. Use of a scope revealed that the head switching point wandered from approximately thirty lines early right through to the field sync, but this was happening on only one channel. The cure? Clean the video heads – a piece of oxide was causing misalignment of the tape path. **A.D.**

Ferguson 3V31

The complaint with this machine was intermittent speed variations when warm. Checks were made around the AN6341 capstan servo chip IC6 when the fault occurred. A replacement chip failed to provide a cure: all the inputs were found to be correct but the output was varying. The output goes to the TC4066 switching chip IC7. 9V entered this i.c. at pin 1 but only 6V came out at pin 2: control pin 13 was at about 5V. This pin is driven by IC22 (M54519P) which turned out to be the culprit – heating and cooling it made the fault come and go. **A.D.**

Fisher FVHP715

As soon as this machine was plugged in a hum bar appeared on the monitor screen. A scope check revealed a 2V p-p hum ripple on the 9V supply to the combined r.f. modulator/splitter/booster unit – when this was unplugged the supply line ripple disappeared. Having had similar symptoms with a 3V16 I checked the r.f. modulator by substitution. No difference! To cut a long story short – about changing voltage regulator i.c.s etc. – I eventually arrived at the full-wave rectified 16V line. Each rectifier diode is fed via a separate fuse, one of which was open-circuit. The result of this was that the 16V supply was half-wave rectified. **A.D.**

Philips VR6660

The job card read "clock display faulty". In fact the bottom right and bottom grids (cA and dA) on the display were continuously on. Replacing IC2 (SN75518N) cured the fault. **A.D.**

Sony SLC7

This machine is well known for its slow rewind and the modification kit to correct this. I've had a machine that developed the same fault again some time after fitting the kit however. The solution seems to be to remove the rubber tyres on the idler wheel (and the drive motor if the modification has not been carried out), turn them inside out and replace them. This has even obviated the need for the modification with two SLC7s. **G.J.**

Sanyo VTC5000

The reel drive motor used in this machine has a tendency to run slow with the result that tapes get tangled. Motor replacement is obviously advised but is neither cheap nor easy. I've found that a single drop of high-quality watch oil applied to the upper bearing, which is just accessible with the cover removed, can double the life of the motor. **G.J.**

Salora SV8200/Mitsubishi HS303

Although the machine was a Salora SV8200 we found a Mitsubishi HS303B underneath the covers. It took several seconds for the drum servo to lock: the picture wobbled and the audible note of the drum motor had a harsh tone. Monitoring the sample and hold at TP4A showed that it was fluctuating up and down. C4B8 turned out to be 100μF instead of 47μF. **R.R.**

Toshiba V65

The 2A fuse in the power supply failed but, unexpectedly, the machine continued to work after a fashion. To save you confusion, if you have the same trouble the symptoms are as follows: clock o.k.; through signal from aerial to TV set o.k.; E-E signal has bad hum bar; eject and load o.k.; selection of play, rewind, fast forward etc. switches the machine off. **R.R.**

ITT P4833/Ferguson 3V24

One of these portable VHS machines had a fault in the E-E and camera modes. The video signal was badly distorted, with washed out and smeary whites, weak sync and bad vision buzz on sound. The colour content was correct however, as was playback of a test tape. Following through the video input signal path brought us to IC2