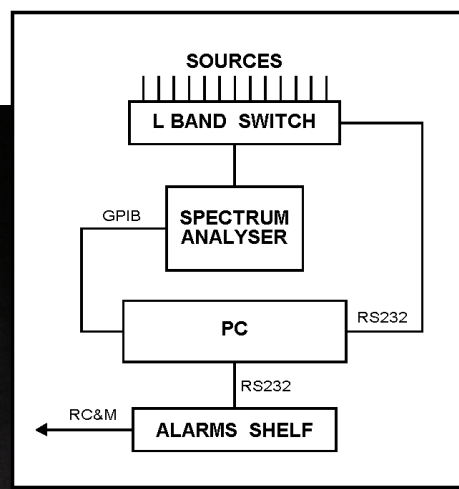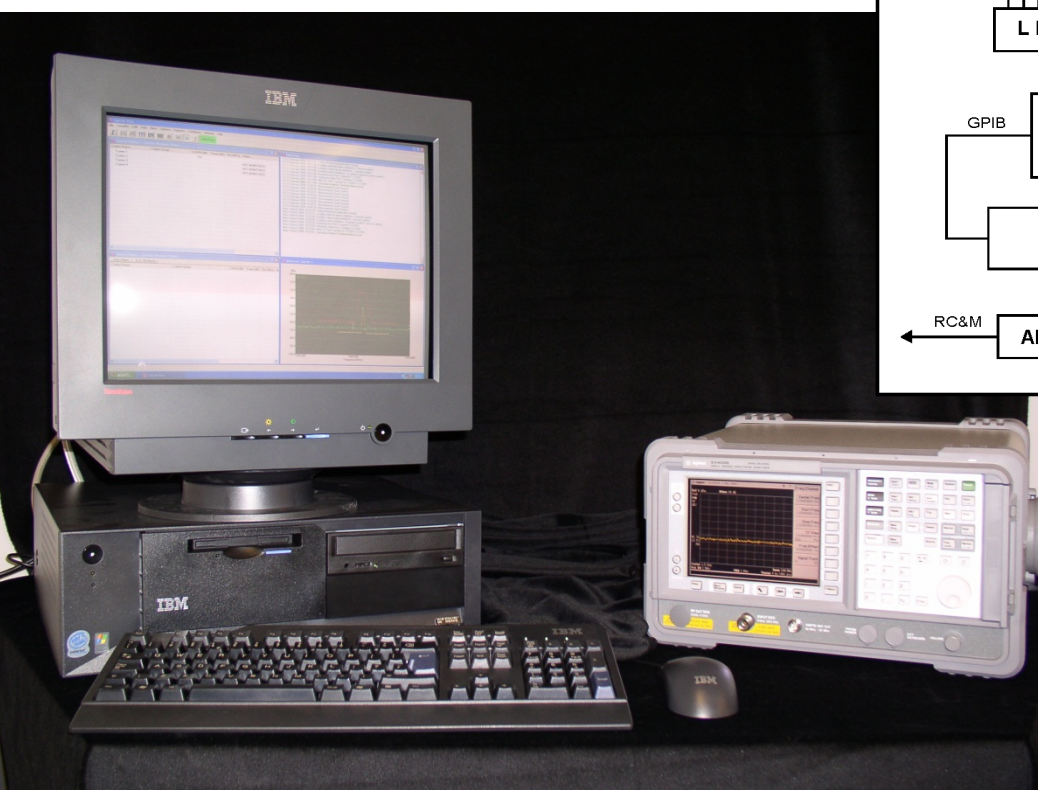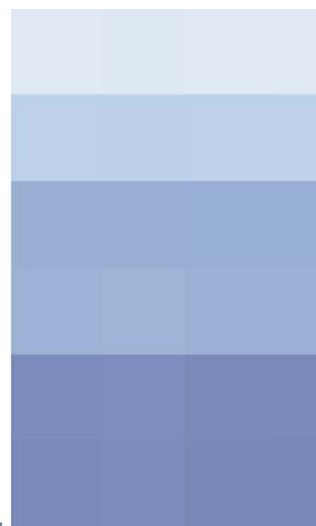# *Carrier Monitoring to 26 GHz*

ETL's stripped-down carrier monitoring system is cost-effective but provides all of the functionality needed to ensure effective carrier monitoring for uplinks and downlinks in satellite earth stations. The system comprises proprietary ETL software, a PC, L-band or SHF switch, and an Agilent (ESA E or L-series) Spectrum Analyser. The system is optimised for the relevant frequency range and typically monitors up to 6 SHF sources (C-band or Ku-band) or 32 L-band sources, each potentially with many carriers. Larger systems are also possible.

Individual carriers are monitored in rotation and masks and / or limits can be set for power, C/N, EIRP, and shape. Alarms are triggered for C/N and high and low states for power. The system provides historical event logging and reporting.

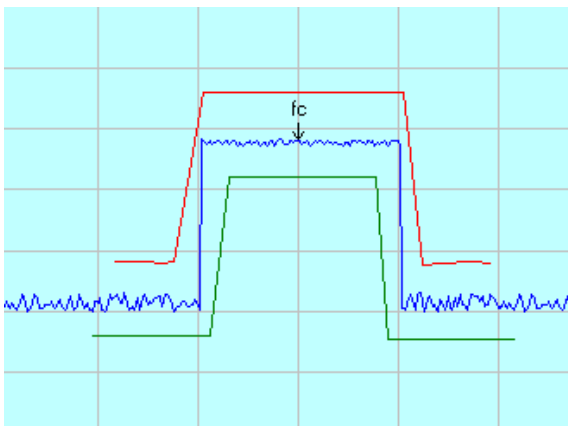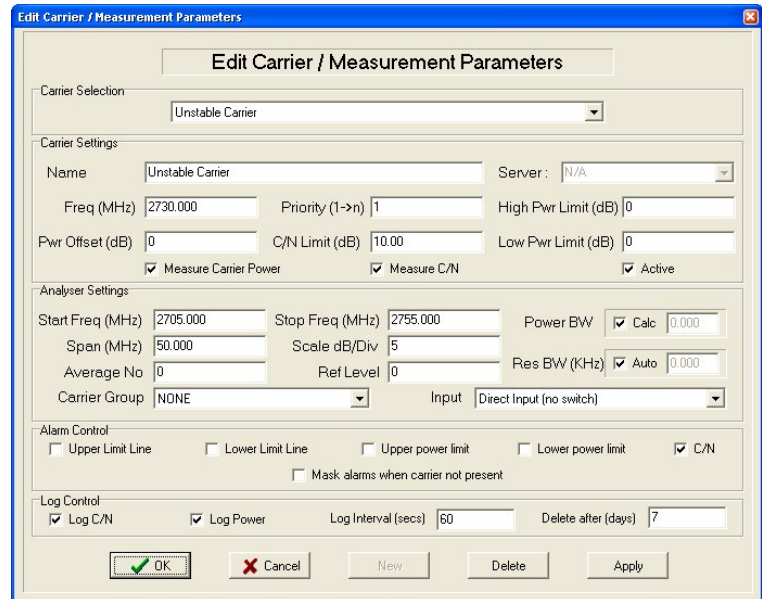*product overview*

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Carrier Monitoring: continued

Fig. 1 – 4:1 SHF switch

The software is simple to use, and the desired settings for each carrier are defined in terms of upper and lower power limits, C/N limits, and spectrum analyser settings (frequency range, span, resolution bandwidth and so on.

A spectrum for each carrier also allows a precise upper and lower target mask to be defined, via "drag points".

Alarms can triggered if the actual carrier goes out of specification via either of these methods. Alarms are individually enabled or disabled for each carrier. There is also a facility requiring the carrier to be outside the defined specification for a settable number of cycles before the alarms are triggered. Alarms are displayed on screen and also as dry contact closure, using a super-dongle (summary alarm) or alarm shelf (multiple alarms).

ETL Systems develop, design and manufacture specialist equipment for satellite ground stations. For a fuller description of the ETL product range, please see our website on www.etlsystems.com. This range can be used as the basis to meet your specific demands.

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