

# E2072 Guardian DSP

## Broadcast Audio Fail & Changeover Unit

E2072 'Guardian' is an Audio Fail and Changeover Unit capable of automatic and manual operation with both local and remote control.

The E2072 is designed to provide sophisticated management of audio sources, such as lines, STLs or onsite backups.

The unit detects failures in the composite/multiplex signal used in FM broadcasting and, separately, failures in analogue stereo or AES/EBU digital programme source signals, then, automatically and independently switching to reserve sources. In the case of analogue stereo, when only a single main channel input (left or right) is registered as failed, the remaining good channel is directed to both main inputs (i.e. the source effectively becomes mono).

The time to detect failures and the threshold levels for those failures can be pre-set by front panel controls. As well as signal level, loss of 19kHz pilot in a composite/ multiplex signal, and loss of clock in an AES/EBU digital signal are also detected as failures which cause a reserve source to be selected (though detection of loss of pilot can be disabled internally). The facility to remotely select an alternative Audio main programme source is also provided. Relay outputs are provided for on/off control of reserve programme sources. Front panel displays clearly indicate the status of the switching and settings.

Signals present above the set threshold levels are indicated, in real-time, by green displays. The unit uses micro-controller and DSP (digital signal processing) based software control. Comprehensive hardware/ software 'watchdogs' are incorporated which illuminate a front panel CPU ALARM display if a software fault occurs. This automatically switches off other front panel displays as their indications may be erroneous in this circumstance and also defaults all path routing relays to select the normal main programme sources (as is the case when the unit is not powered).

### Specifications

/S Inputs/Outputs, Analogue Stereo	XLR L & R balanced (input 600Ω /10kΩ, internal switch selected)
/E Inputs/Outputs, AES/EBU	XLR (L) balanced (input 110Ω)
/S High Sensitivity Reserve Input	1/4" jack socket, unbalanced 10kΩ with 6dB or 12dB gain, selectable on rear panel switch
/M Inputs/Outputs, Composite/MPX	75Ω BNC sockets
Remote Control and Monitoring	Rear panel 25 way D socket for parallel control and monitoring of major functions and Status. Momentary and continuous control relay connections.
Detection Delay	6 steps from 5 to 140 seconds (plus infinite and hold on reserve) - note, single setting -30dBu to +5dBu (independent settings for composite/multiplex and analogue/digital L/R) 85- 264V AC (universal input, switched mode power supply)
Dynamic Sensitivity	Both 50-60Hz single phase plus protective earth
Power Supply (AC)	Power consumption variable, but less than 25VA, dependent on external loading.
Ambient Temperature (operating)	0°C to +45°C
Ambient Temperature (storage)	-20°C to +70°C
Relative Humidity (operating)	≤90% RH, non condensing
Altitude (operating)	Up to 3000m a.s.l
Dimensions	1U with 280mm intrusion into rack (including connectors)
Weight	Approx 3.5kg
Warranty	Limited 5 Years

In line with our policy of continual development, we reserve the right to alter specifications without notice.



Three hardware options are available as follows:-

/S Analogue Stereo Audio Fail Detection and Switching

/M Composite/MPX Fail Detection and Switching

/E AES/EBU Fail Detection and Switching

One or two options must be fitted, with /S & /E mutually exclusive.

Available options are thus:- E2072-01/S, E2072-01/M, E2072-01/E, E2072-01/SM and E2072-01/EM

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