

REP-01

Digital Emergency Program System



The REP-01 is a practical and reliable Emergency Program Source, primarily designed for installation at Radio Broadcast Transmitter Sites as a Back-Up Program Source in the event of Land Line or Link failure

It can equally well be used at the Studio as a Back-Up Program Source in case of Automation System or Satellite Receiver failure

Other potential uses are as a continuous Audio Delivery System for Background Music, Phone on Hold, Tourist Radio, Art or Museum Exhibitions and many other applications

The REP-01 is inherently highly reliable, being completely Solid State, and based on a removable Compact Flash Media Card, using MP3 Compression

Compact Flash Media is easily programmed with MP3 Audio Files from a PC using Cool Edit Pro or other common Audio Editing Software, an MP3 Ripper and a USB Memory Card Reader

Compact Flash Media Cards are readily available in 32 MB, 64 MB, 128 MB, 256 MB and 512 MB with 1 GB available from some suppliers and 2 GB and 4 GB and larger predicted in the near future

Program Storage Capacity depends on capacity of the Compact Flash Media Card used, and the degree of MP3 Compression applied

For Emergency Program use for Broadcast, we recommend the use of 128 MB Compact Flash Media, 44.1 KHz Sampling Rate, Stereo at 160 Kbit/Sec giving nearly 2 Hours of Audio in Near CD Quality

Operation of the REP-01 as an Emergency Program Source, is extremely simple with Audio delivery starting on either a contact closure between two control terminals located on the rear of the unit, or the application of between 5 and 12V DC to the other two adjacent control terminals

When used as an Emergency Program Source, the first Audio Track, Track 0, on the Compact Flash Memory module must be recorded as the Station ID or "Apology" track

This will make preparation of Emergency Program Material easy for Network Operators, as only Track 0 need to be changed to suit different locations and Station ID's

The REP-01 is factory configured on an internal DIP Switch as an Emergency Program Source and set to play two random recorded Tracks, then Track 0, three random Tracks, Track 0, two Random Tracks, Track 0 and so on until stopped

Other DIP Switch settings change the operation of the REP-01 to give continuous play of all tracks in a Pseudo Random Sequence, or continuous play of all tracks In Sequence

The REP-01 is suitable for installation at virtually any type of Radio Broadcast Transmitter site and provides + 4 dBu Balanced Line Level Stereo and Mono Outputs on three XLR Type Connectors as well as an unbalanced, 3.5 V PP Mono Output on a BNC Connector

The Unbalanced output provides internally selectable 50 and 75 u/Sec Pre-Emphasis ready to be fed to the Composite Input of a normal FM Broadcast Transmitter

Two Switches are provided on the front panel, one is the Test Switch and simulates an Emergency Start, and may be used instead of the rear mounted control terminals, to operate the REP-01 as a continuous Audio Delivery System

The other Switch, is a Step Switch allowing the user to step through all recorded tracks in sequence for verification of correct media and correct operation

A Headphone Monitor Jack and four status LED Indicators are also provided on the front panel

It is planned to introduce an Optional Transformer Balanced AES-EBU Output Module, selectable to output 32 KHz, 48 KHz or 96 KHz Sampling Frequency at 16, 20 or 24 Bit Sampling in Stereo with provision for an external Sync Input in the near future

All common MP3 Sampling Rates including 32 KHz, 44.1 KHz and 48 KHz with data rates up to 256 Kbit/Sec are handled by the decoder system of the REP-01

Potential Audio Storage Capacity depends on the MP3 format used and is roughly as follows

Assuming Stereo, 44.1 KHz Sampling Frequency, MP3 Compression 160 Kbit/Sec Data Rate, the storage capacity of a 128 MB Compact Flash Card, is about 1.7 Hours, 256 MB 3.4 Hours, 512 MB 6.8 Hours and for 1 GB, a staggering 13.6 Hours

Greater storage capacity is potentially available at the expense of Audio Quality by changing to Mono, reducing the Sampling Rate and increasing the Compression Ratio, with a 1 GB Compact Flash Media Card as an example, will give approximately 64 Hours of Audio Storage in Mono at 24 KHz Sampling Rate using 12:1 Compression

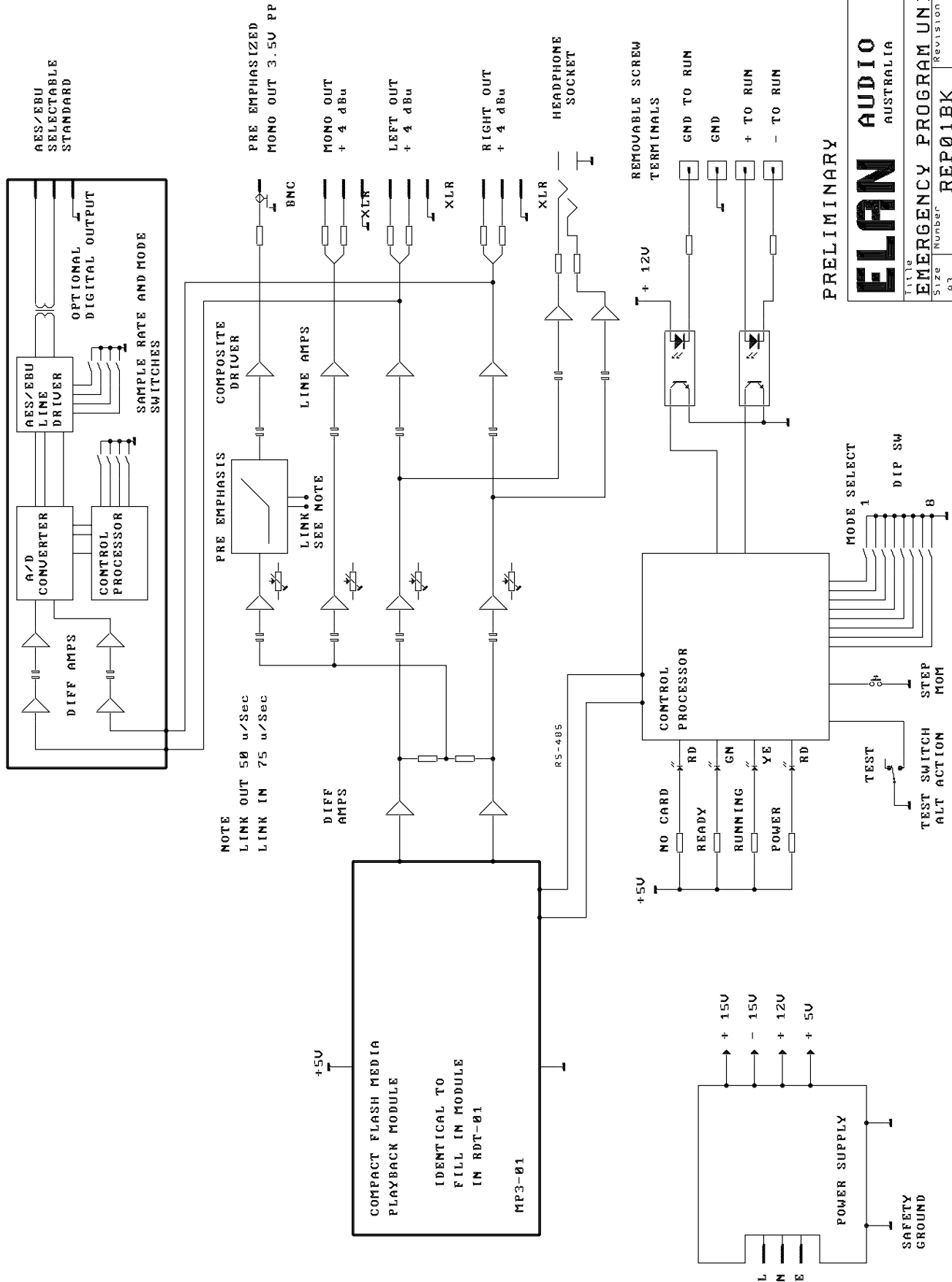
A quality level not acceptable for Broadcast, but making the REP-01 of potential use for Stores and Hotel Background Music playing Random Track Selections

Features

- 1RU Rackmounting
- Removable Compact Flash Card Media
- Balanced +4 dBu Stereo Outputs on XLR Type Connectors
- Balanced +4 dBu Mono Output on XLR Type Connector
- Unbalanced Pre-Emphasized Mono Output on BNC Connector
- Optional Transformer Balanced AES-EBU 32 or 48 KHz, 16, 20 or 24 Bit Stereo Output
- Headphone Socket
- Run Test Switch
- Sequence Step Test Switch
- Opto Isolated Control Inputs
- 4 x LED Status Indicators
- 200 to 260 V AC Operation

Applications

- Standby Program Source at Broadcast Transmitter Site
- Standby Program Source at Broadcast Studio Complex
- Background Music Delivery Unit



PRELIMINARY

ELAN AUDIO AUSTRALIA

Title		EMERGENCY PROGRAM UNIT	
Size	Number	Revision	
A3	REP01BK		
Date: 5-SEP-2003		Sheet	of
File: REP01BK/1		Drawn	By: