

# ELAN Audio

# SMR-01

## “Smart” AM-FM Monitor Receiver

The perfect tool for your Programming and Technical Departments



The SMR-01 “Smart” Monitor Receiver is a unique piece of Professional Broadcast Equipment, designed to be installed in a remote location such as a provincial or country town having one or more unattended broadcast transmission services

It can be installed on a temporary basis to remotely listen to local AM or FM services, or installed permanently to monitor and report transmission fault conditions

Primary purpose is to sequentially monitor up to 8 broadcast services in the area where it is installed, and report Carrier, Program Audio and Pilot Tone failure to the owner of the failed service as a complete site report by Fax

Ordinary Fax is for reliability reasons, the preferred method although the SMR-01 can be programmed to report to a Mobile Phone or a Telephone Answering Machine where the calling number will be registered on the Caller ID facility as a missed call making it easy to dial back to the SMR-01 for a Verbal Report

Secondary purpose of the SMR-01, is to allow the Broadcasters Programming Department to dial into it using the DTMF buttons on an ordinary Loudspeaking Telephone to listen to any broadcast station in the service area

### ***Temporary Listen Only Installation***

For a temporary installation where the SMR-01 is required for listening only, it can be placed in any location where a normal telephone service is available such as in a Private House, Local Shop, Shire or Tourist Office

Temporary installation is extremely easy, no programming is necessary, simply use a piece of Hook-Up wire as an antenna, connect the Modem to the SMR-01, loop the Phone Line Through the Modem and apply AC Power to the system, the Loop-Through allows the Telephone to be used normally when the line is not occupied by the SMR-01

### ***Permanent Reporting Installation***

For a permanent installation involving transmission fault monitoring and reporting, a proper antenna system is recommended to allow the SMR-01 to reliably sense field strength variations and report on any downward RF level changes

For mixed AM and FM Reception, we recommend the Teledes TL 1000 AM-FM Omnidirectional Antenna, available from ElectroCraft, [www.electrocraft.com.au](http://www.electrocraft.com.au)

For FM reception only, we recommend a suitable Band II Yagi Antenna such as the Hills model Y3 FM or larger types if necessary, also available from ElectroCraft

On a Transmitter Site, we recommend feeding the SMR-01 from the RF Monitor Port through an Attenuator to reduce the RF level to 100 mV or less

The SMR-01 is supplied complete with a Mitsubishi model 56SE Voice Modem, ready to install

### ***Programming and Operating the SMR-01***

Programming the SMR-01 to monitor and report transmission faults on individual services is relatively complex, and normally done by the Stations Technical department using a Personal Computer, Modem and Windows Hyper Terminal, or direct from a Personal Computer using a Null Modem cable

Programming involves preparing and transfer of Voice Data giving the Geographic location of the SMR-01 and Verbal Identification of each monitored service, plus Text Data giving Geographic location, Dial In Number, Identification of Each Monitored Service, Dial Out Fax or Phone Number, whether service is AM or FM, Station Frequency, whether Mono or Stereo and whether service is Active or Suspended

As supplied from the Elan Audio Factory, for testing purposes, the SMR-01 is programmed with a generic test routine with all services programmed as Suspended

This will allow the placement and installation of the SMR-01 in a temporary location for Listen Only duty without having to programme it specially for it's particular location

Not having to programme the unit when it is installed Short-Term as a "Spy Receiver" in a temporary location makes installation an easy task for the Programme Department

***PLEASE NOTE: The SMR-01 will not report transmission faults when all services are suspended***

## **SMR-01 Applications**

### ***For the Programming Department***

Listen to your own Remote Network Radio Stations, and any other Radio Station in the Service Area

### ***For the Technical Department***

Monitor and receive Fax Transmission Fault Reports from up to 8 Monitored Remote Radio Stations

Receive verbal service status report from, and listen to any of the monitored stations

Listen to any Radio Station in the Service Area

Request test Fax giving complete status of services monitored

Two Relay outputs, and one Opto Isolated input are provided making the SMR-01 effectively a "Mini Remote Control System" if installed on a Transmitter Site

## **SMR-01 Demonstration**

We have installed an Elan Audio SMR-01 "Smart Monitor Receiver" on our premises in South Guildford, Western Australia and programmed it to monitor 8 Local Radio Stations for demonstration purposes

This will allow you to dial into the SMR-01 from anywhere in the world using an ordinary telephone, and not only listen to, and get a spoken summary of the status of each monitored Radio Station, you can also by using simple DTMF commands, listen to any other AM or FM Radio Broadcast Station in it's locality

Apart from Technical Monitoring, the ability to monitor any AM or FM Broadcast Service in its locality, whether an owned or competing service has immense potential for your programming department

### ***Be our Guest, please try it out***

To listen to Radio Stations in Perth Western Australia, dial **08 9478 2066**

**IMPORTANT NOTE:** \* is an escape command, press \* at any time to get back to condition 2, which is the starting point for all operations

1; Dial the SMR-01 and wait for it to answer

- 2; The SMR-01 will answer the call and deliver an audio message identifying it's geographical location, then silence awaiting further instructions via the DTMF Buttons
- 3; Press numbers 1 to 8 to interrogate a particular monitored service, you will hear

A; Verbal identification of the particular Monitored Service  
 B; Service Type           **AM**               **FM Mono**       **FM Stereo**  
 C; Frequency           **XXXX**           **MHz**           **KHz**  
 D; Carrier Status       **Carrier OK**      **Carrier Failed**  
 E; Program Status      **Program OK**     **Program Failed**  
 F; If in Stereo         **Pilot OK**       **Pilot Failed**  
 G; Alarm Status        **Alarm Off**      **Alarm Active**  
 H; Service Status      **Active**          **Suspended**    **Inactive**

Station Audio, if present will appear on telephone line till \* is pressed taking you back to condition 2 stopping the station audio with the SMR-01 ready for further control instructions

- 4; To Tune the SMR-01 to any station frequency in the service area

A; For FM \* **## n'n'n'n'**, always 4 digits, Example \* # # 0 9 4 5  
 B; For AM \* **# \* n'n'n'n'**, always 4 digits, Example \* # \* 1 0 8 0

Station Audio, if present will appear on telephone line till \* is pressed taking you back to condition 2 stopping the station audio with the SMR-01 ready for further control instructions

- 5; To operate control relays 1 or 2

A; Relay 1       Press \* 0 0 1, you will hear 3 blips if success  
 B; Relay 2       Press \* 0 0 2, you will hear 3 blips if success

To abort, press \*

- 6; To initiate Text Fax

Press \* 0 1 for monitored service 1, Press \* 0 7 for service 7, you will hear 4 blips

- 7; To end session, just hang up

***The following Perth Radio Stations are programmed into the SMR-01 for demonstration purposes***

- 1; 92.9 MHz   6 PMFM Austereo Perth  
 2; 93.7 MHz   6 PER NOVA Perth  
 3; 96.1 MHz   96FM Perth  
 4; 96.9 MHz   SBS Ethnic Perth  
 5; 97.7 MHz   ABC Classical Perth  
 6; 99.3 MHz   ABC JJJ Perth  
 7; 720 KHz    ABC 6WF Perth  
 8; 1080 KHz   Radio 6 IX Perth

***Perth Radio Stations receivable at Elan Audio***

**AM**

- |          |                    |       |
|----------|--------------------|-------|
| 585 KHz  | ABC News Radio     | 6 PB  |
| 720 KHz  | ABC                | 6 WF  |
| 810 KHz  | ABC Radio National | WN    |
| 882 KHz  | Southern Cross     | 6 PR  |
| 990 KHz  | Print Handicapped  | 6 RPH |
| 1080 KHz | Commercial         | 6 IX  |
| 1206 KHz | TAB                | 6 TAB |

## FM

92.1 MHz	UWA	6 UVS
92.9 MHz	Austereo PMFM	6 PMFM
93.7 MHz	DMG NOVA	6 PER
94.5 MHz	Austereo MIX	6 MIX
95.3 MHz	Ethnic Community	6 EBA
96.1 MHz	96 FM	6 NOW
96.9 MHz	Ethnic SBS	6 SBS
97.7 MHz	ABC Classical	6 ABC
98.5 MHz	Sonshine	6 SON
99.3 MHz	ABC JJJ	6 JJJ
100.1 MHz	CURTIN Uni	6 NR
100.9 MHz	WAAMA	6 AR
101.7 MHz	Groove FM	6 YSM

## SMR-01 General Description

The SMR-01 AM-FM Receiver is constructed as a freestanding unit, in the style of a Hi-Fi Tuner, optional brackets are available from Elan Audio to allow Rack Mounting, and require 2 RU of Rack Space

For operation, the SMR-01 require access to a normal PSTN Telephone Line, and a suitable Modem equipped with the Lucent Chipset

The Mitsubishi model 56SE Voice Modem supplied with the SMR-01 is highly suitable for the application

In operation, the SMR-01 will monitor each programmed service by scanning, dwelling for 30 seconds on each before proceeding to the next service, if Carrier or Pilot Tone is absent from a particular service, the SMR-01 will transmit a Fax to the nominated Fax number after the 30 Second scan time, if Audio Modulation appear to be absent, the SMR-01 will dwell on that frequency for a further 3 Minutes before sending a Fax, in order to minimize false alarms

The SMR-01 is factory programmed with standard text and vocabulary in English, covering the standard text for the Fax Transmission, as well as the words and phrases necessary for verbal reporting

Other required Voice Data such as Geographic Location and Verbal Identification of each monitored service, plus Text Data giving Geographic location, Dial In Number, Identification of Each Monitored Service, Dial Out Fax or Phone Number, whether service is AM or FM, Station Frequency, whether Mono or Stereo and whether service is Active or Suspended must be programmed in via the telephone system from a PC or Null Modem

## FEATURES

The SMR-01 is based on the Philips high performance TEA 6845H Car Radio front end IC used in "Upmarket" European Car Radios

- High Impedance Antenna Input suitable for Car Radio Antenna
- Stable Crystal Locked, Microprocessor Controlled Tuning
- MW AM Band 522 KHz, extended to 1728 KHz for Narrowcast, Tuned in 9 KHz Steps
- Standard FM Band 87.5 MHz to 108.1 MHz, Tuned in 100 KHz Steps
- 2 x 16 Character LCD Status Display
- Unbalanced Left and Right Outputs, suitable to feed Hi-Fi Amplifier
- Mono Confidence Loudspeaker with Volume Control, and Stereo Headphone Outlet
- Program, Carrier and Pilot Tone Presence Indicator LED's
- 3 x Operational Status Indicator LED's
- 4 x Front Panel Mounted Control Switches
- 1 x Opto Isolated Input for External Signal for local tally or alarm
- 2 x Relay Isolated Outputs to operate as Mini Remote Control
- RS-232 Communications Port
- Location Programming via Remote PC or direct via Null Modem
- Fault Report via Modem to Fax
- Status Interrogation via Normal Telephone
- Switchmode Power Supply operating from 100 to 260 V AC Mains

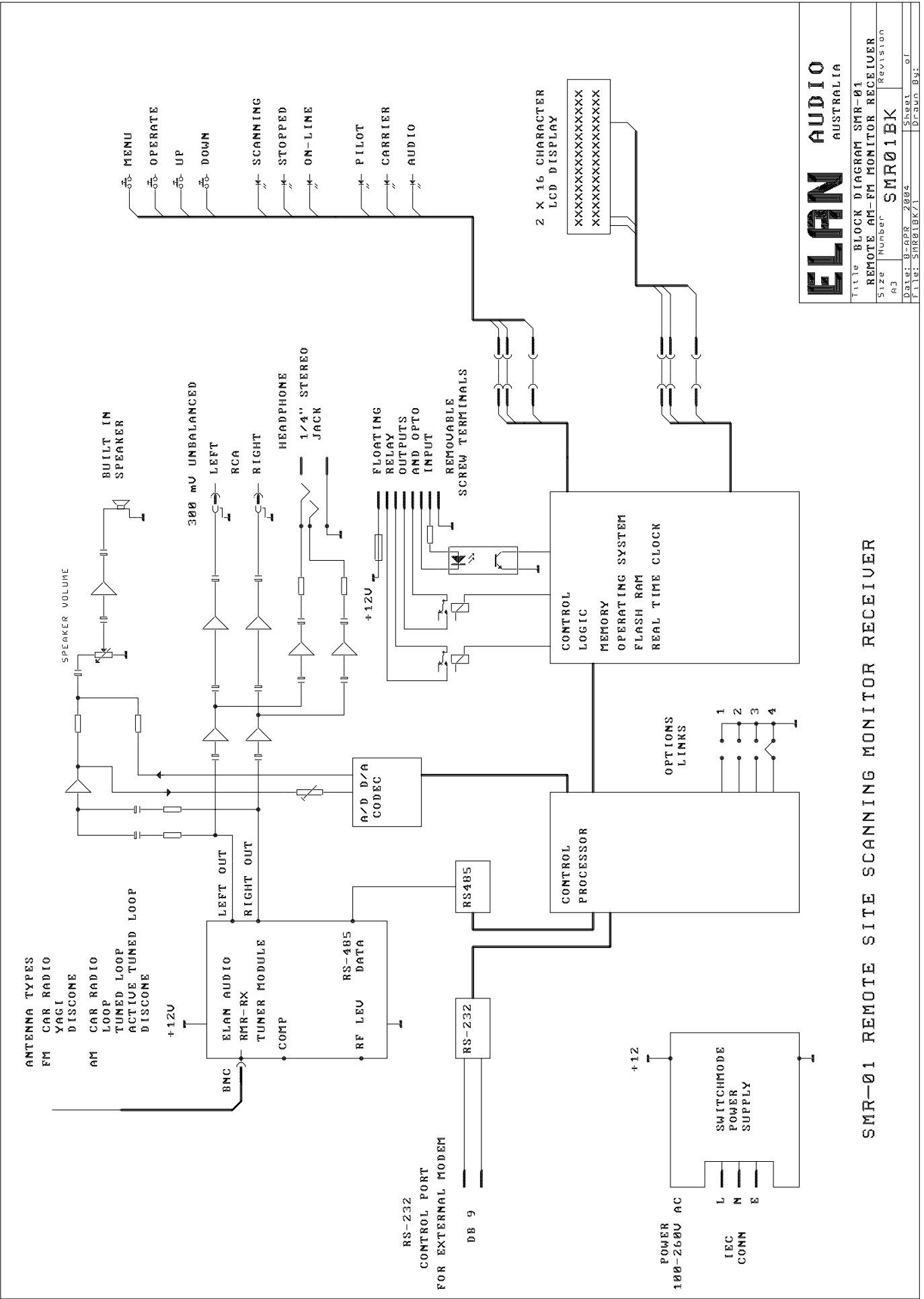


<b>Audio Outputs</b>	Unbalanced 2 x RCA, 300 mV Stereo
<b>Local Control</b>	12V DC 1A and Ground Available in Terminals
<b>Control Outputs</b>	2 x Floating Relay Contacts
<b>Control Inputs</b>	1 x Opto Isolator 12 V DC in Floating
<b>Data Port</b>	RS-232 via DB9 Male
<b>Modem</b>	Mitsubishi model 56SE Voice Modem supplied with the SMR-01
<b>Physical</b>	
Power	100 to 260 V AC 10 VA
Size	W 420 mm x H 75 mm x D 220 mm
Weight	3.5 KG
Weight packed with Modem	4.6 Kg

***Available from***

**ELAN** AUDIO

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# ELAN AUDIO AUSTRALIA

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Remote AM-FM Monitor Receiver	
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SMR-01 Remote Site Scanning Monitor Receiver