

Broadcast Digital FM PLL Exciter Mod: TFM32D

Digital FM PLL Exciter controlled by microcontroller



The TFM32D Digital PLL exciter covers the FM Broadcast Band in the range of 87.5 ~ 108.0 MHz with step size of 100 KHz. It can deliver 30 Watt at 50 Ohm Load

The LCD screen of TFM32D displays operating Frequency , Lock state , RF Power Forward and Reflected , Heatsink temperature , Audio Modulation Level (%) and also displays Alarm reasons of any kind of malfunction.

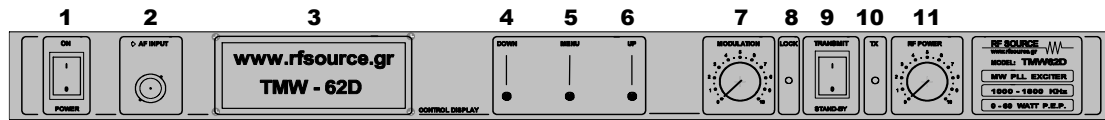
The TFM32D has protections from high VSWR, Over output Power , Over Temperature , Unlocked Frequency , Over modulation Power Supply malfunction . When an Alarm gets activated, the controller restarts the Exciter operation three times. If this procedure fails to solve the malfunction, the exciter goes to STBY mode. The TFM32D needs 110 or 220 VAC to operate and its weight is 3,9Kg max.

SPECIFICATIONS :

Frequency Band :	87,5 ~ 108,0 MHz
Output Resistance :	50 Ohm
Output RF Power :	0 ~ 30 Watt
Frequency Step size :	100 KHz
Harmonics :	< -65 db
Spurious :	< -70 db
Modulation Type :	WFM
Supply Voltage :	100 ~ 240 Volt AC
Supply Consumption :	< 70 Watt
AF Input Resistance :	10 KOhm
AF Input level :	> 300 mV p - p
AF response :	10 Hz ~ 100 KHz -3 db
Warranty :	1 Year

- Ultra thin 19" Rack Mounted 1U High
- LCD screen 2 X 16 character numerically and analog bar display
- Digital readouts
- Digital controlled by microcontroller on screen messages
- 0 ~ 30 Watt Continues
- High Efficiency Switching Power Supply Low RF noise

TRANSMITTING – RECEIVING SYSTEMS



- 1 Power On – OFF switch
- 2 AF Input connector BNC
- 3 2 X 16 character LCD backlight Display
- 4 DOWN Control Button
- 5 MENU Button
- 6 UP Control Button
- 7 Modulation control knob
- 8 LOCK Frequency LED
- 9 Transmit – Stand-by switch
- 10 Transmit LED
- 11 RF Output level control knob

1. Preliminary Instructions

• General foreword

The equipment in object is to considering for uses, installation and maintenance from “trained” or “qualified” staff, they conscious of the risks connected to operate on electronic and electrical circuits electrical. The “trained” definition means staff with technical knowledge about the use of the equipment and with responsibility regarding the own safety and the other not qualified staff safety place under his directed surveillance in case of works on the equipment. The “qualified” definition means staff with instruction and experience about the use of the equipment and with responsibility regarding the own safety and the other not qualified staff safety place under his directed surveillance in case of works on the equipment.

WARNING: The machine can be equipped with an ON/OFF switch which could not remove completely voltages inside the machine. It is necessary to have disconnected the feeding cord, or to have switched off the control panel, before to execute technical operations, making sure himself that the safety connection to ground is connected. The technical interventions that expect the equipment inspection with circuits under voltage must be carry out from trained and qualified staff in presence of a second trained person that it is ready to intervene removing voltage in case of need.

RF Source-Greece doesn't assume responsibility for injury or damage resulting from improper procedures or practices by untrained/unqualified personnel in the handling of this unit.

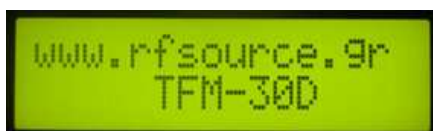
WARNING: The equipment is not water resistant and an infiltration could seriously compromise its correct operation. In order to prevent fires or electric shocks, do not expose the equipment to rain, infiltrations or humidity. Please observe all local codes and fire protection standards during installation and use of this unit.

WARNING: The equipment has to its inside exposed parts to risk of electric shock, always disconnect power before opening covers or removing any part of this unit. Fissures and holes are supplied for the ventilation in order to assure a reliable efficacy of the product that for protect itself from excessive heating, these fissures do not have to be obstructed or to be covered. The fissures doesn't be obstructed in no case. The product must not be incorporated in a rack, unless it is supplied with a suitable ventilation or that the manufacturer's instructions are been followed.

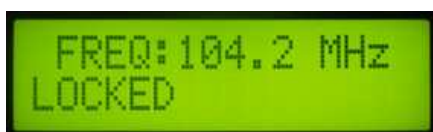
www.rfsource.gr Nikis 61 str. 17455 Alimos – Attiki Greece

Contact RF Source +302109829640 Fax +302109834991 analog@rfsource.gr

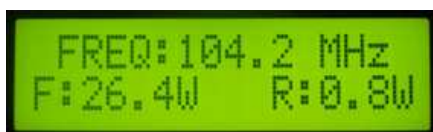
Quick guide for use



1) Welcome screen after Power ON.



2) Push the MENU button once to go to the frequency selection screen. You can select the operating frequency using the UP – DOWN buttons (100 KHz step size). This screen also shows the Lock Frequency state.



3) Push the MENU button again. This screen shows the operating frequency, the Forward “F” RF Power and the Reflected “R” RF Power You can also change the operating frequency using the UP – DOWN buttons.



4) Push the MENU Button again. This screen shows only the Forward RF Power numerically and also with analog bars.



5) Push the MENU Button again. This screen shows only the Reflected RF Power numerically and also with analog bars.



6) Push the MENU Button again. This screen shows the PA’s heatsink temperature.



7) Push the MENU Button again. This screen shows the PA's supply voltage.



8) Push the MENU Button again. This screen shows the modulation level numerically and also with analog bars.



9) This screen appears only when HI SWR Alarm gets activated (Reflected RF Power > 3.0 Watts). The RF output shuts down.



10) This screen appears only when Overload - Over modulation Alarm gets activated (Forward RF Power >31.0 Watts). The RF output shuts down.



11) This screen appears only when Power supply unit Alarm gets activated (VCC <=25 V or >=31 V). The RF output shuts down.

© Copyright 2010
RF Source-Greece
Nikis 61 str. Alimos 17455 Greece
Phone: +30 210 9829640
Fax: +30 210 9834991
Email: analog@rfsource.gr
Web: www.rfsource.gr
All rights reserved

Printed and bound in Greece. No part of this manual may be reproduced, memorized or transmitted in any form or by any means, electronic or mechanic, including photocopying, recording or by any information storage and retrieval system, without written permission of the copyright owner.

IMPORTANT NOTICE

RF Source RESERVE THE RIGHT TO MAKE CHANGES TO THE PRODUCT(S) OR INFORMATION CONTAINED HEREIN WITHOUT NOTICE. RF Source ASSUMES NO RESPONSIBILITY FOR ANY ERRORS WHICH MAY APPEAR IN THIS DOCUMENT.

WARRANTY INFORMATION APPLICABLE TO THE PRODUCT IDENTIFIED HEREIN IS AVAILABLE UPON REQUEST. NOTHING CONTAINED HEREIN SHALL CONSTITUTE A WARRANTY, REPRESENTATION OR GUARANTEE OF ANY KIND. RF Source EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS AND/OR IMPLIED INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY, AND OF FITNESS FOR A PARTICULAR PURPOSE, USE OR APPLICATION.

No part of this document may be copied or reproduced in any form or by any means without the prior written consent of RF Source.

WARNING

RF Source PRODUCTS ARE NOT INTENDED FOR USE IN LIFE SUPPORT APPLIANCES, DEVICES OR SYSTEMS. USE OF A RF Source PRODUCT IN ANY SUCH APPLICATION WITHOUT WRITTEN CONSENT IS PROHIBITED.