

CLASS FM	DWG NO. 317302-TT
---------------------------	-----------------------------

REVISIONS

REV	DESCRIPTION	ENG	DATE
00	INITIAL RELEASE	BOB SMITH	9/09

SIGNATURES REQUIRED		PRINT NAME	SIGNATURE
TSG REPRESENTATIVE		BOB SMITH	
CELL LEAD		JOHN CURTIN / ERIC KAS	
REPAIR SUPERVISOR		DAVID CORN	
QUALITY		RICHARD SMITH	

TSG ENGINEER Bob Smith	DATE 9/09	 FRAMINGHAM, MA 01701-9168
----------------------------------	---------------------	---

APPLICABLE DOCUMENTS: SERVICE MANUAL: 317302-SM	DESCRIPTION MA12EX Loudspeaker (Tenor) Troubleshooting Tips				
	SIZE A	FSCM 32108	CLASS FM	DWG NO. 317302-TT	REV 00

Description

Refer to the MA12EX Service Manual 317302-SM located on the Bose® Service intranet site at <http://intranet.bose.com/tsg> for any information not presented in this document.

1. Preventative Repair Measures

Note: Perform the following on all units returned for repair.

Product	Check	Action
MA12EX Loudspeaker	None	None
CVT-MA12EX Accessory Transformer	None	None

2. Troubleshooting Tips

Product	Symptom	Check	Action
MA12EX Loudspeaker	Distorted output	Drivers	Using the tests in the service manual, sweep the loudspeaker while listening to the individual drivers at a close distance. Replace any defective drivers. You can also perform the rub and tick test for individual drivers if you are unsure if the driver is bad or not.
MA12EX Loudspeaker	Intermittent / no Audio Cracked / damaged connector(s)	Connectors and connections.	Check the input connectors for damage to the plastic housing and the electrical connections. Replace any damaged connectors.
CVT-MA12EX Accessory Transformer	Intermittent / no Audio Cracked / damaged connector(s)	Connectors and connections.	Check the input and output connectors for damage to the plastic housing and the electrical connections. Replace any damaged connectors.

3. Software / Firmware Updates and EQ Changes

- Bose products that are used to drive and to provide EQ's for installed MA12EX loudspeakers will need to have the correct EQ installed on them. The EQ for the original MA12 Loudspeaker cannot be used for the MA12EX. This can be done by updating the software / firmware for the device using the procedures in their respective Service Manuals. Most of these products may already have the correct EQ installed.
- The service manuals are located on the Bose Service web site at <http://serviceops.bose.com>. Refer to the list below for affected products.

DXA-2120 Amplifier
FreeSpace® 4400 Amplifier
Panaray® System Digital Controller II
ControlSpace® ESP-88 / 88C / 00 Systems

Note: The MA12EX is not compatible with the Panaray System Digital Controller I. No EQ is available for the MA12EX in that product.

 Framingham, MA 01701-9168	SIZE A	FSCM 32108	CLASS FM	DWG NO. 317302-TT	SHEET 2 of 2	REV. 00
--	------------------	----------------------	--------------------	----------------------	------------------------	-------------------