



AUDIO LEVEL INDICATOR:

INDICATOR IS GREEN WHEN A PROPER AUDIO SIGNAL/LEVEL IS PRESENT; OFF WHEN AUDIO SIGNAL/LEVEL IS LOW OR NOT PRESENT.

OLI – OPTICAL LEVEL INDICATOR:

INDICATOR IS GREEN WHEN A PROPER OPTICAL POWER SIGNAL/LEVEL IS PRESENT; RED WHEN THE OPTICAL POWER IS TOO LOW OR NOT PRESENT.

AUDIO OUTPUT:

THIS AUDIO OUTPUT PROVIDES A 70VRMS CAPABLE OF DRIVING UP TO 5 WATTS MAX. A TYPICAL APPLICATION IS TO CONNECT THE MR-05B-PA TO A SPEAKER WITH A 70VRMS INPUT TRANSFORMER. THE 70VRMS TRANSFORMERS HAVE VARIOUS INPUT POWER LEVEL TAPS FROM 0.25 WATTS TO 10 WATTS. THE TRANSFORMER SECONDARY CONNECTS DIRECTLY TO THE SPEAKER WHICH COMMONLY HAS AN 8 OHM IMPEDANCE. MULTIPLE SPEAKERS MAY BE DRIVEN FROM THE MR-05B-PA AS LONG AS THE TOTAL POWER IS NOT MORE THAN 5 WATTS.

 american fibertek 120 BELMONT DRIVE SOMERSET N.J.	DATE: 29 JAN 18		MR-05E-S-PA CUSTOMER ASSEMBLY DRAWING			
	ACAD FN.: MR-05E-S-PA CC					
	SCALE: NONE	DWG BY: BLB	DWG. NO.:	SH. OF	REV.:	CHK.: <i>SK</i>

## Overview

The American Fibertek Series 05E-(S) transmits single direction line level audio, 600 ohms balanced or unbalanced, on one multimode or single mode fiber. The audio is transmitted over the link using FM modulation which results in an improved signal to noise ratio and a constant audio output level over the full optical loss budget.

The American Fibertek MR-05E-(S)-PA is an alternate receiver which operates in conjunction with the American Fibertek MT/RT-05E-(S) Series transmitters. The MR-05E-(S)-PA receiver embeds a 5 Watt audio amplifier and a 70 Volt audio transformer which enables the unit to drive remote 70V speakers with powers up to 5 Watts. This eliminates the need to provide a separate audio post amplifier to the line level output of an optical receiver in order to drive paging speakers.

Audio distribution at 70 Volts transmits the 5 Watts at a lower current which reduces the distribution power loss. Distances up to 2100 ft with 24 AWG may be accommodated. The 70 Volts is delivered to a 70 Volt speaker which is a speaker which has a 70 Volt transformer. 70V transformers usually have several power taps ranging from ~ 1 Watt to 10 Watts.

In an application where the MR-05E-(S)-PA is driving a single 70 Volt speaker, the 5 Watt speaker tap would provide the full 5 Watts of power. If less power was needed, a lower speaker tap should be utilized.

The MR-05E-(S)-PA is capable of driving multiple 70 Volt speakers as long as the total power of the speaker taps is 5 Watts max. For example, the MR-05E-(S)-PA is capable of driving (2) 70 Volt speakers set up with 2.5 Watt taps.

In applications where the speakers are 8 ohms (not 70 Volt speakers), an external 70 Volt audio transformer may be utilized. The Speco T7010 is a 70 Volt to 8 ohm audio transformer with 10W, 5W, 2.5W, 1.25W, .625W taps. Below are block diagrams showing the use of external transformers with a single speaker and two speakers.

## Block Diagrams

