COMMUNAL AERIAL SYSTEM (MAD-100)

Inter-communication Entertainment System for TV and Radio Broadcasting (MAD-100)

GENERAL DESCRIPTION

The MAD-100 system supports video from Satellite TV, and CCTV signal interface in addition to broadcasting bandwidths including MF/HF/SW and FM for radio, VHF (F/U), and UHF for television, as well as the video from VCR and DVD.

Especially, the Omni-directional antenna is able to stably receive television and radio signals via the whip antenna during the operation of the ship. To avoid the attenuation of weak signals, the system adopts the Automatic Gain Control (AGC) in the built-in broadband amplifier. This system also boasts solid production so that it does not require any maintenance after installation. As long as the power is on in the system, all functions operate automatically. The Communal Aerial System was tested at the IEC60945 standard and approved for CE by DNV.

System Features

1. Main amplifier [MAD-100]: Maximum subscriber (OMA)
   Included AGC and power supply for MF / SW / FM / VHF / UHF
2. Sub amplifier (MAD-100A): Additional subscriber (OMA)
   Included AGC and power supply for MF / SW / FM / VHF / UHF
3. VTR Amplifier (UP-408, Optional)
4. Omni-Directional Antenna (AT-100): For AM/FM, TV
5. Distributor
6. Terminal for radio and TV
7. Radio / TV, telephone and AC-220 RP terminal
8. Radio / TV cord set
9. Installation materials: End Resistor (75 Ohms and connector)
10. Spare parts: Manufacturer standard
11. Minimum reception level of TV (Standard): 0dB
12. Minimum reception level of radio (Standard): -40dB
13. Maximum Output per a system: 960A
14. Maximum Output per a line: 26/2 / 4 / 8
15. Terminal Resistor Impedance: 75 ohm

Main Amplifier

- MF / SW / FM / VHF / UHF Amplifier Unit [MAD-100, MAD-100A]
- Frequency: MF / SW (150 kHz - 34 MHz), Min. 20dB
  VHF L (155 MHz - 1100 MHz), Min. 20dB
  VHF H (170 MHz - 233 MHz), Min. 20dB
  UHF (470 MHz - 850 MHz), Min. 20dB
- AGC: 0-37 dB
- Gain Deviation: MF / SW (2.5 dB), VHF (1.6 dB), UHF (2.4 dB)
- Noise Figure: MF / SW (7.5 dB), VHF (8.4 dB), UHF (3.4 dB)
- Maximum Output: MF / SW (35.4 dB), FM / VHF / UHF (11.4 dB)
- Power Consumption: DC 12V, 140mA, Max. 45VA
- AC 220V, 26mA, Max. 58VA
- Weight: Approx. 6.5Kg
- Temperature: -20°C ~ +40°C
- In/Out Impedance: 75 ohm

Main Power Supply

1. Power Source: AC110 / 220V, 1-p, 50 / 60Hz
2. Output Power: DC 12V, 1.7A
3. Fuse: 250V, 1A

Omni-Directional Antenna (AT-100)

1. Frequency Range: 0.18kHz ~ 830kHz
2. Rez Pattern & Polarization: Omni-Directional Type
3. Gain: 20dB ± 1.5dB
4. Automatic Gain Control: 0 ~ 25dB
5. Output Impedance: 75 ohm
6. Maximum Output Level: 110dB
7. Power Consumption: 120mA
8. Input Voltage: DC 12V
9. Stand Rate for Wind: 50m / 60m / 80m / 100m
10. Operation Temperature: -40°C ~ +50°C
11. Approx. 6.5Kg

VTR Amplifier (UP-408, Optional)

1. Frequency Gain: VHF: (0.5MHz ~ 11MHz), Min. 36dB
   VHF L (170MHz ~ 233MHz), Min. 36dB
   UHF (470MHz ~ 750MHz), Min. 36dB
2. Gain Deviation: VHF (0.5dB), UHF (0.5dB)
3. Noise Figure: VHF (4dB), UHF (4dB)
4. Maximum Output: FM / VHF / UHF (105dB)
5. Power Consumption: AC110 / 220V, 50mA, Max. 11VA
6. Weight: Approx. 1.7Kg
7. Color: Black
8. Temperature: -20°C ~ +40°C
9. In/Out Impedance: 75 ohm

Single Amplifier at Single Rack Type Wiring Diagram

Connection Diagram of the System

MAD-100 Main Amplifier

AT-100 AM / TV / FM Antenna

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