



Model MA-Series Mast Mounted Preamplifiers

VHF, FM, UHF, All-Band, and Single Channel Models

Product Description

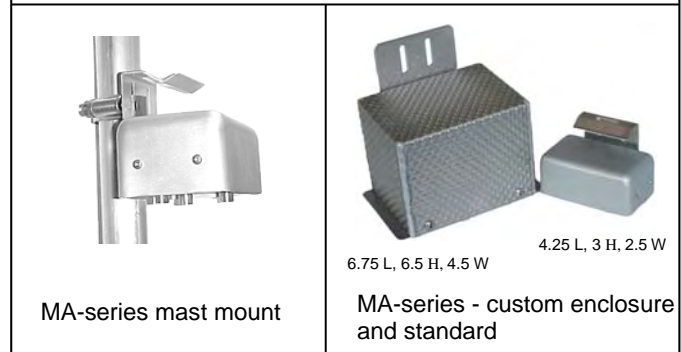
The MA-series high-performance antenna preamplifiers are designed to increase signal levels and improve signal quality from the TV/FM antenna output in order to offset signal loss in down leads, and to optimize the signal quality (high level and low noise) to the TV system.

Features

- Easy to install. Reliable operation.
- Suitable for NTSC and ATSC (HD) signals
- State-of-the-art GaAs p-HEMT SMD amplifier ICs for high gain, low noise, high output capability and optimum weak signal sensitivity
- Low noise input improves weak signal reception and provides better picture quality
- High output capability for optimum signal handling of mixed weak and strong signal pickup
- Traps and filters available in case of signal overload or interference
- Custom solutions for difficult reception problems and 50 ohms applications
- Static discharge provided
- Powered with UL approved AC power adapter
- Full technical support and two-year warranty



MA-series package: Pre-amplifier, AC adapter and power inserter.



MA-series mast mount

6.75 L, 6.5 H, 4.5 W

MA-series - custom enclosure and standard
4.25 L, 3 H, 2.5 W

Models, Gain, Noise Figure (NF)

VHF (40-220 MHz) model / gain / NF	UHF (470-800 MHz) model / gain / NF	All-channel (40-860 MHz) model / gain / NF	Input Impedance *
MA-15-77: 15 dB gain, 2.2 dB NF	MA-16U-77: 16 dB gain, 2.0 dB NF	MA-82-16-77A: 16 dB gain, 2.0 dB NF	75 ohm
MA-25-77: 25 dB gain, 2.5 dB NF	MA-25-77: 25/30 dB gain, 2.0 dB NF	MA-82-25-77A: 25 dB gain, 2.5 dB NF	75 ohm
MA-15-37: 15 dB gain, 2.7 dB NF	MA-16U-37A: 16 dB gain, 2.7 dB NF	MA-82-25-37A: 16 dB gain, 3.0 dB NF	300 ohm
MA-25-37: 25 dB gain, 3.0 dB NF	MA-25U-37A: 25/30 dB gain, 3.0 dB NF	MA-82-25-37A: 25 dB gain, 3.0 dB NF	300 ohm
VHF Single Channel model / gain / NF	UHF Single Channel model / gain / NF	Separate UHF/VHF inputs model / gain / NF	Input Impedance *
MA-20-77-ch.(#): 22 dB gain, 3.0 dB NF	MA-20-77U-ch.(#): 25 dB gain, 3.5 dB NF	MA-16-UV-77A: 16 dB gain, 2.0 dB NF	75 ohm
MA-20-77-ch.FM 22 dB gain, 3.0 dB NF	—	MA-25-UV-77A: 25 dB gain, 2.5 dB NF	75 ohm
MA-20-37-ch.(#): 20 dB gain, 3.5 dB NF	MA-20-37U-ch.(#): 25 dB gain, 3.5 dB NF	MA-16-UV-37A: 16 dB gain, 3.0 dB NF	300 ohm

* All Ma-series have 75 ohm output with F-connector. Models with 300 ohm input have screw terminal input



Model MA-Series Mast Mounted Preamplifiers

VHF, FM, UHF, All-Band, and Single Channel Models

Specifications

Category	Model	Gain (min)	Noise Figure	Frequency Coverage	Maximum Input /Output Capability	Application
VHF, FM	MA-15-37	15 dB	3.5 dB	40-230 MHz	28 dBmV / 8 chs;	Fringe area
	MA-15-77	15 dB	3. dB	40-230 MHz	43 dBmV / 8 chs	
	MA-25-37	25 dB	3.5 dB	40-230 MHz	22 dBmV / 8 chs;	Deep fringe
	MA-25-77	25 dB	3 dB	40-230 MHz	47 dBmV / 8 chs	
MA-20-37-ch.# *	22 dB	4.0 dB	6 MHz VHF	30 dBmV / 1 ch	Fringe-Deep fringe	
MA-20-77-ch.# *	22 dB	3.5 dB	6 MHz VHF	52 dBmV / 1 ch		
MA-20-77-ch.FM *	22 dB	3.5 dB	FM (88-108 MHz)	"		
UHF	MA-16U-37A	16 dB	3.0 dB	470-870 MHz	30 dBmV / 8 chs;	Fringe area
	MA-16U-77A	16 dB	2.5 dB	470-870 MHz	46 dBmV / 8 chs	
	MA-25U-37A	25 dB	3.0 dB	470-870 MHz	21 dBmV / 8 chs;	Deep fringe
	MA-25U-77A	25 dB	2.5 dB	470-870 MHz	46 dBmV / 8 chs	
MA-20-37-ch.# *	25 dB	4.0 dB	6 MHz UHF	27 dBmV / 1 ch	Fringe-Deep fringe	
MA-20-77-ch.# *	25 dB	3.5 dB	6 MHz UHF	52 dBmV / 1 ch		
All-Band	MA-82-16-37A	16 dB	3.0 dB	40-870 MHz	30 dBmV / 8 chs;	Fringe area
	MA-82-16-77A	16 dB	2.5 dB	40-870 MHz	46 dBmV / 8 chs	
	MA-82-25-37A	25 dB	3.0 dB	40-870 MHz	21 dBmV / 8 chs;	Deep fringe
	MA-82-25-77A	25 dB	2.5 dB	40-870 MHz	46dBmV / 8 chs	
	MA-16UV-37A	16 dB	3.0 dB	40-230, 470-870 MHz.	30 dBmV / 8 chs;	Fringe-Deep fringe
MA-16UV-77A	16 dB	2.5 dB	Separate VHF, UHF inputs	46 dBmV / 8 chs		
MA-25-UV77A	25 dB	2.5 dB		"		

Common Specifications

Output Impedance/Connector	75 ohms type F– female
Recommended Minimum Input	-15 dBmV
VHF Preamplifier Power and Power Requirements	-18 V DC, +110 VAC Adapter
UHF/All-band Preamplifier Power and Power Requirements	+18 V DC, +110 VAC Adapter
Shipping weight	2 lbs (pre-amplifier, power supply)
Dimensions (in): Preamplifier	4.25 L, 3 H, 2.5 W
Dimensions (in): Power Inserter, AC adapter	3.125 L, 3.125W, 2 H
Warranty	2 years, parts and labour
Connectors	F-61 (75 ohm) and Screw terminal (300 ohms)

Notes:

- Single channel models have Input bandpass with 2 dB insertion loss
- Option: Custom models requiring 50 ohms impedance available with BNC, N, or sma connectors
- When traps and filters are required ahead of preamp, use 75 ohm shielded cable to 75 ohm input

HOOKUP MA-PREAMP All Band VHF/UHF

Equipment: MA82-25-77A Mounting Clamp, Power inserter (DR-82-18V), AC Adapter

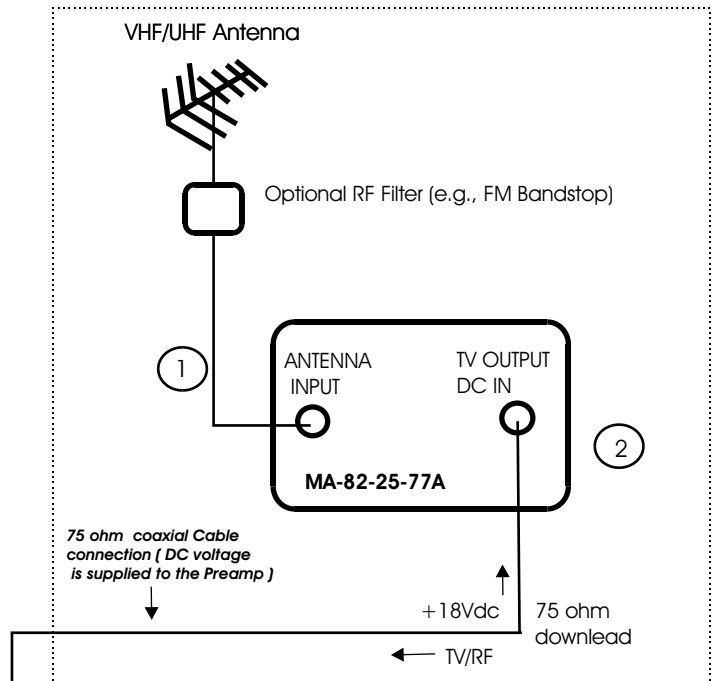
Hookup Procedure

Refer to diagram before hooking up equipment

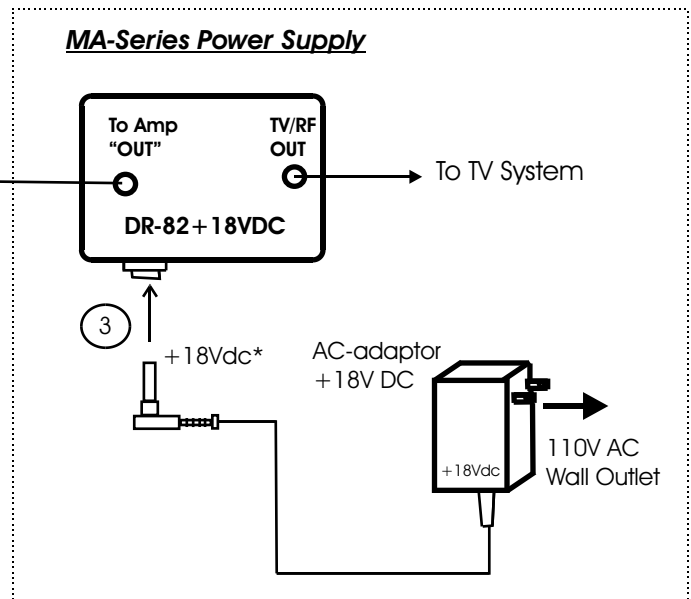
1. Connect Antenna to MA-PREAMP INPUT
2. Connect MA-UHF PREAMP OUTPUT to DR-82-18VDC
3. Connect DR-82+18V to TV System
4. Check ground system for antenna/mast *
5. Connect AC Power Adapter

Disconnect Procedure

Disconnect Power before disconnecting Antenna from INPUT.



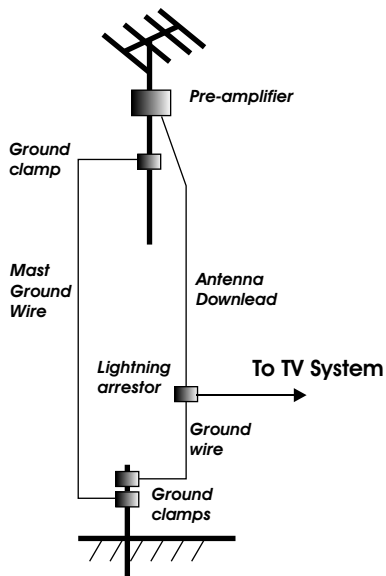
MA-Preamplifier mounted outdoors



This section for indoor installation

***Reminder: Antenna Ground System**

To protect pre-amplifier and antenna user, Antenna mast should have a good *ground system*. Properly ground antenna mast to prevent static charge accumulation on antenna and protect against lightning damage. Refer to antenna installation manual for details.



Tin Lee Electronics MA-Series Preamplifier Hookup

Example Application: Hookup Two Separate MA-preamplifiers (UHF and VHF)

Two pre-amplifiers are supplied from one power supply and outputs are combined for single drop line. Separate pre-amplifiers for different gain requirements- UHF band need greater gain than VHF band. UHF/VHF combiner is power passing through all ports

Equipment:

MA-Preamplifiers (MA-25U-77A, MA-15-77),
Mounting Clamp, Power inserter (DR-82-18V), AC
Adapter, and UV7X DC (power passing)

Hookup Procedure

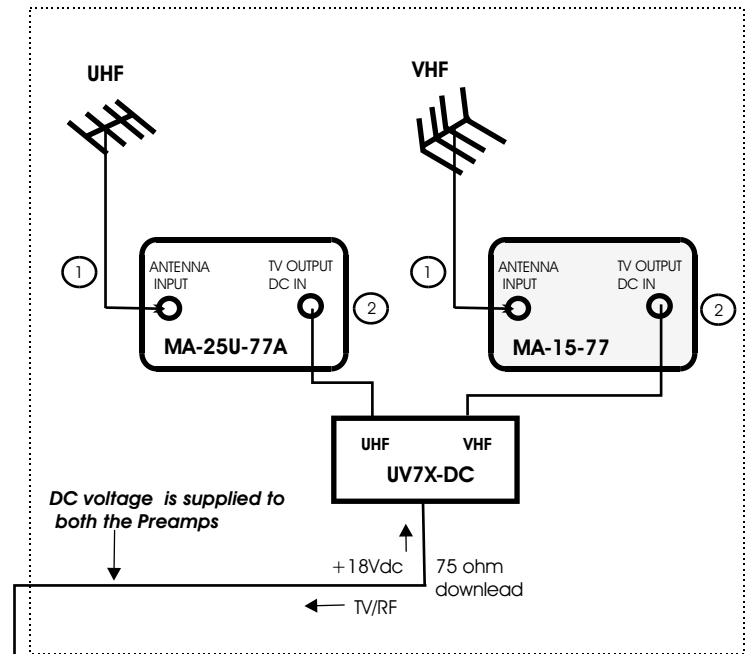
Refer to diagram before hooking up equipment

1. Connect Antenna to MA-PREAMP INPUTS
2. Connect MA-PREAMP OUTPUTS to DR-82-18V
3. Connect DR-82-18V to TV System
4. Connect AC Power adapter.

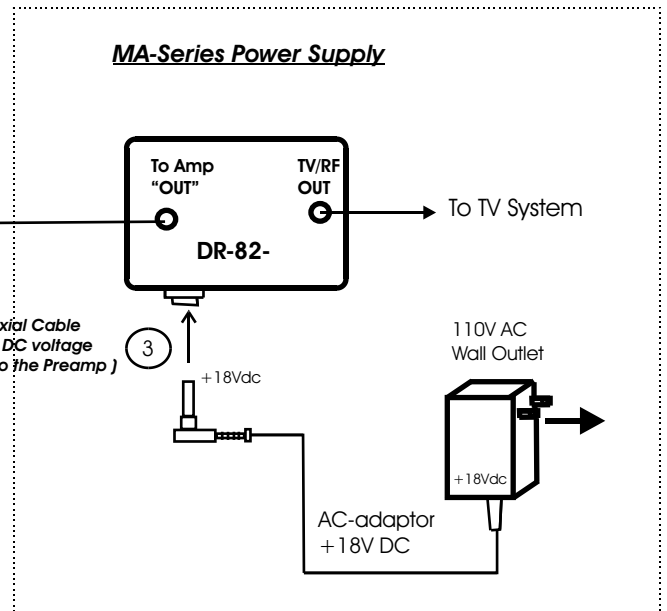
Reminder - provide ground system for antenna/mast *

Disconnect Procedure

Disconnect Power before disconnecting
Antenna from INPUT.



MA-Preamplifiers mounted outdoors



This section for indoor installation

*Reminder: Antenna Ground System

To protect pre-amplifier and antenna user,
Antenna mast should have a good *ground system*.
Properly ground antenna mast to prevent static charge
accumulation on antenna and protect against
lightning damage. Refer to antenna installation
manual for details.

