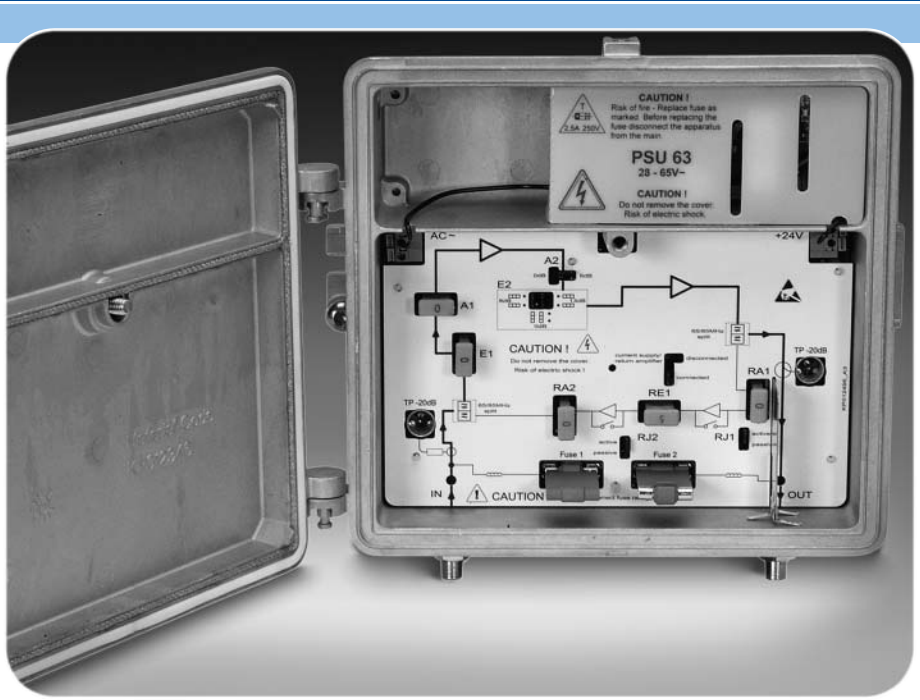
Flex Max220

Basic 42/54MHz

Distribution Amplifier



Applications

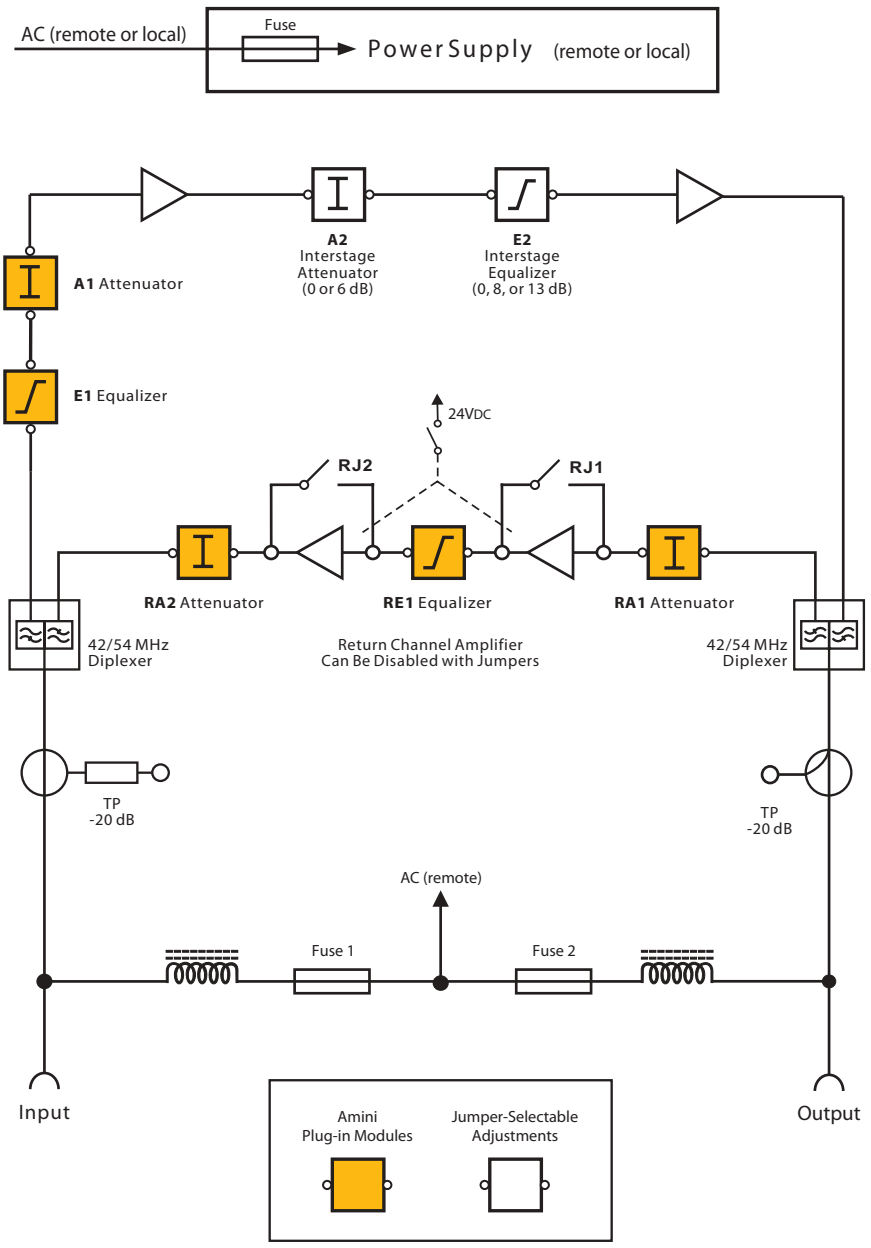
- **End-of-line distribution amplifier or tap driver**
- **Medium and large multi-dwelling unit architectures**

The C-COR Flex Max220 Basic Distribution Amplifier combines advanced RF technology with installer friendly features to deliver signals to the subscriber at lower expense. The Flex Max220 Basic Amplifier is dedicated to systems in which input sources are cable drops.

The Flex Max220 Basic Amplifier is an advanced end-of-line distribution amplifier to meet the requirements for modern HFC multi-transport networks. Applied robust Gallium Arsenide technology improves system performance and drives total system costs down. The Flex Max220 Basic has a convenient input equalizer built onto the motherboard, enabling the equalization value to be achieved with attenuators. This enables operators to carry only one type of plug-in accessory and, thus, drastically reduce operational expenses. The on-board interstage equalizer has jumper-selectable 0, 8, or 13dB tilt options, and the on-board interstage attenuator has jumper-selectable 0 or 6dB options. With its 34.5dB gain, the Flex Max220 Basic covers all applications for modern high performance distribution amplifiers.

Features

- Apartment amplifier with GaAs hybrid
- High level power doubler output
- Input equalizer and attenuator set in 1dB steps with Amini PADs
- Jumper-selectable interstage attenuator with 0/6dB options
- Jumper-selectable interstage equalizer with 0/8/13dB tilt options



Flex Max220 Basic Distribution Amplifier Block Diagram

Specifications

	Forward	Return
General		
Bandwidth, MHz	54 to 862	5 to 42
AC Current Passing, A	3	3
Typical Operating Conditions		
Operational Gain, dB (Notes 1, 2, and 3)	34.5	–3.5/11/24
Flatness, dB	±0.75	±0.75
Return Loss, dB, min. (Note 4)	>18	>16
Channels, Number of NTSC (Note 5)	112	2
Operating Levels (recommended)		
Frequency, MHz	862/54	42/5
Input, dBmV, (Note 6)	10/10	12/12
Output, dBmV (Note 7)	44.5/31.8	8.5/23/36
Performance Specifications		
(Temperature Range: –20 to 60°C)		
Carrier-to-Interference Ratio, dB		
Composite Triple Beat @ 48dBmV (Note 5)	60	—
Composite 2IM @ 50dBmV	—	60
Composite Second Order @ 49dBmV (Note 5)	60	—
Noise Figure, dB, typ.	<8	<8

Powering Requirements	
Remote Power Supply, VAC	40 to 90 (47 to 63Hz)
Local Power Supply, VAC	90 to 250 (47 to 63Hz)
Power Consumption, W, typ.	16
Hum @ max. remote feeding, –dBc	<60
Plug-In Modules	
Input and Return Path Attenuators	Amini: 0 to 20dB, in 1dB increments
Input and Return Path Equalizers	Amini: 0 to 16dB, in 1dB increments
Physical and Environment Specifications	
Dimensions (W x H x D), mm (in.)	228 x 87 x 192 (9.0 x 3.4 x 7.6)
Weight, kg (lbs)	2.5 (5.5)
Connectors	
RF Input and Output Ports	3.5/12; 5/8–inch; f-type, female; IEC
RF Testpoints	F-type, male
Local Power Supply	PG9
Operating Temperature Range, °C	–20 to 60, without permanent failure
Storage Temperature Range, °C	–40 to 70
Protection According to IEC 529	IP55

Notes:

1. Spacing is at the highest frequency with EQs, PADs, and diplexers installed. Measured with 13dB of tilt at 862MHz. Return spacing includes losses due to housing, diplexers, and EQs.
2. Return gain is shown as passive/one gain stage/two gain stages.
3. The –3.5dB passive gain is measured from 5 to 32MHz with an additional 3dB of loss between 32 and 42MHz.
4. Forward return loss is measured at 40MHz (–1.5dB/octave up to 862MHz).
5. Distortion with 110 NTSC channel loading and 10dB of tilt at 750MHz and at full gain.
6. Forward path acceptable range: 4 to 15dBmV. Return path acceptable range: 10 to 15dBmV.
7. Return output corresponds to operational gain (passive/one gain stage/two gain stages) and is specified excluding any diplexer roll-off.

Specifications subject to change without notice

Ordering Information

						1	2	3	4	5		6	7	8	9		10
F	M	2	2	0	–	B	x	A	x	x	–	x	M	N	5	–	x

1 Platform

B	Basic

2 Frequency Split

4	42/54 MHz	a
6	65/85 MHz	b

*a) Select "**G**", "**H**", "**S**", or "**U**", in #10 block,* **Country Deviations**.

*b) Select "**A**", "**C**", or "**E**", in #10 block,* **Country Deviations**.

3 Return Channel Amplifier

A	Active return

4 Power Supply

2	Local powering (90–250 VAC)	a
6	Remote powering (28–65 VAC)	b
9	Remote powering (40–90 VAC)	c

*a) Must select "**N**" in #5 block,* **Fuse**.

*b) Must select "**6**" in #2 block,* **Frequency Split**.

*c) Must select "**4**" in #2 block,* **Frequency Split**..

5 Fuse

A	Standard 4 A fuse	
N	No fuse	a
S	Shorting bar	

*a) In case of local powering. Select "**2**" in #4 block,* **Power Supply**.

6 RF Adapter

3	3.5/12 type
5	5/8-inch
F	F-type
I	IEC type

7 RF Testpoint Connector

M	F-type, male

8 Status Monitoring

N	No status monitoring

9 Protection

5	IP55

10 Country Deviations (defines mains plug and country certifications)

N	No power cord (remote powering)	a
A	Australia	b,c
C	China	b,c
E	Europe	b,c
G	Argentina (IRAM2073 connector)	b,d,e
H	Chile	b,d,e
S	Standard, stripped, no connector	b,d,e
U	South America, US-type connector	b,d,e

*a) Select "**6**" or "**9**" in #4 block,* **Power Supply**.

*b) Select "**2**" in #4 block,* **Power Supply**.

*c) Must select "**6**" in #2 block,* **Frequency Split**.

d) IRAM certifications and special labels included.

*e) Must select "**4**" in #2 block,* **Frequency Split**..

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