

APPLICATION

SITUATION

The DBS signal from a single dish is needed in multiple or distant locations and a constant known output level is required.

SOLUTION

Model PAL20-T powers a DBS dish, amplifies the DBS signals, pre-emphasizes high frequencies to compensate for cable slope and automatically adjusts signal output level for **-20 dBm** per transponder (for 32 equal amplitude input transponders).

RELATED CONSIDERATIONS

Model PAL20-T has a frequency range which supports DISH network and DIRECTV Phase III, (3 LNB) systems. Use model LA142a or PAL20a for amplifying DIRECTV AU9 (5 LNB) systems.

FEATURES

- DBS compatibility..... DISH, DirecTV Phase III
- MADE IN USA3 YR Warranty
- Indoor/Outdoor Case:Diecast Aluminum
- Powers LNBs: short circuit protected
- Automatic Gain preset for -20 dBm (32 CH)
- Slope Compensation.....200 ft RG-6

SPECIFICATIONS

RF Specifications Typical QC Limit

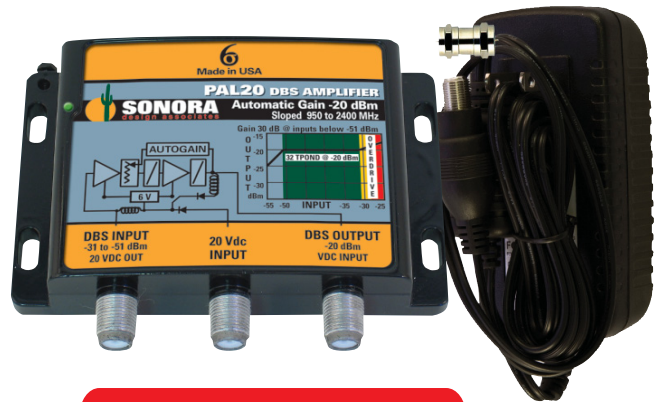
Gain @ inputs below AGC threshold

950 MHz	.....22 dB	..... 21 dB
1450 MHz	.....26 dB	..... 25 dB
2150 MHz	.....30 dB	..... 29 dB
2400 MHz	.....24 dB	..... 23 dB

Passband Flatness

Any 24 MHz band	.....0.1 dB	..... 0.2 dB
Slope Compensation	.....	.....
950 MHz to 2150MHz	..... 8 dB	.....6 dB
Input Return Loss	.....14 dB	..... 12 dB
Output Return Loss	.....12 dB	..... 10 dB
Preset AGC Output (32 transponders)	.....	.....-20 dBm

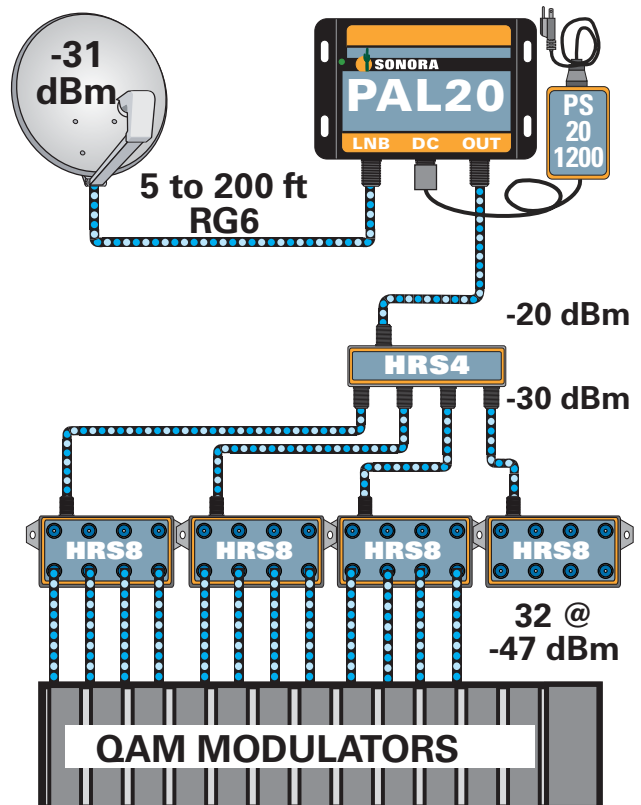
DBS AMPLIFIERS



Unit may be line powered via DBS Output. Power & 22 kHz passes to Input. Model HRFPI inserts power on coax using the included power transformer.

DESCRIPTION

DBS (DirecTV or DISH) 950 to 2400 MHz high power automatic gain amplifier. (AGC stands for Automatic Gain Control)



PAL20-T AUTOGAIN

Order From:



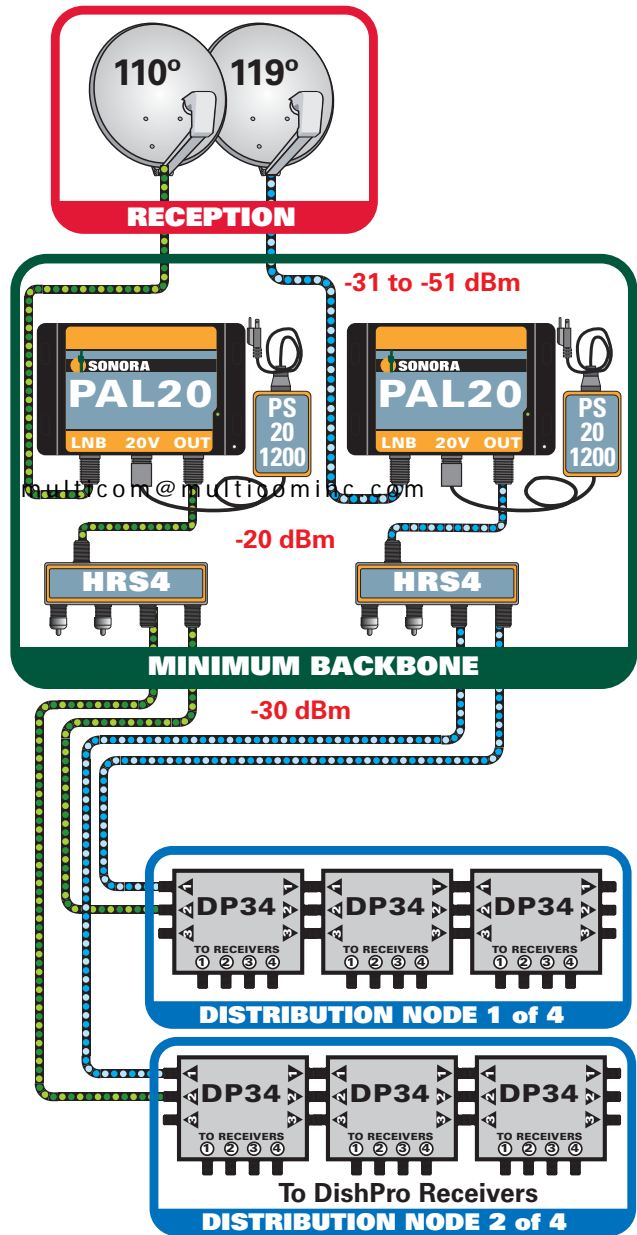
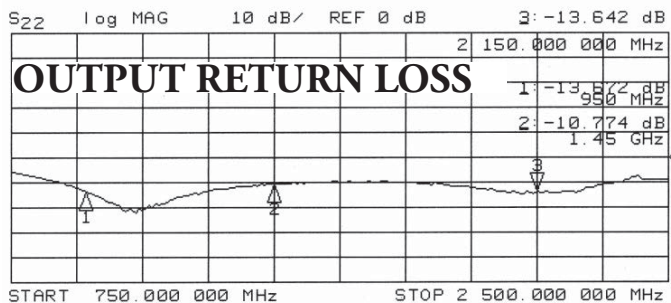
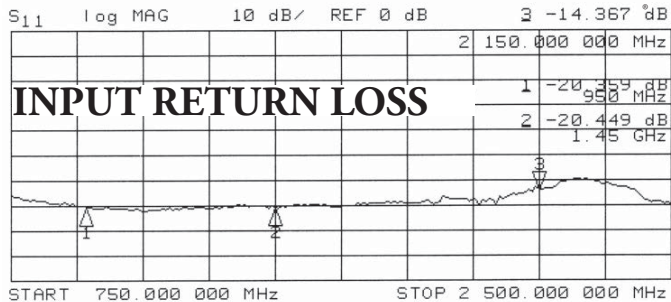
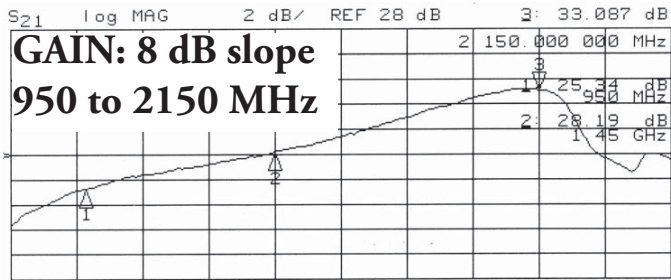
Toll Free: 800-423-2594
www.multicominc.com
multicom@multicominc.com

DBS AMPLIFIERS

PAL20-T AUTOGAIN

Slope compensation is factory set to compensate for higher cable loss at higher frequency. The top plot illustrates the slope compensation.

Return loss measures the ability to process signals cleanly. High Return Loss (large negative dB) equals low reflections.



SPECIFICATIONS

RF Specifications Typical QC Limit
 AGC Window @ -20 dBm out..... -31 to -51 dBm
 (for 32 equal amplitude Ku Transponders)

Maximum Output Power

IM2 with 2 tones @ 1 dBm..... -37 dBc..... -34 dBc min
 IM3 with 2 Tones @ 1 dbm -47 dBc..... -44 dBc min
 Noise Figure..... 7 dB @ 2150 MHz

Power Specifications

Voltage 10 to 24 VDC
 Current draw (amp only) 100 mA
 Wall transformer 20 Vdc, 1200 mA
 short circuit protected

RF Specifications Typical QC Limit
 Powering options:..... "F" Power Port
 or RF Output In-line Power (requires HRFP1)
 ..PS201000 required if amp is between switch and dish

Mechanical Specifications

Diecast Aluminum 4" L, 3.5" W, 7/8" H
 Connector Spacing 1"
 Weight 1 lb (0.45 kg)
 Master Carton (16 units) 20" x 10" x 10"
 Master Carton Weight..... 17 lbs (8 kg)

Environmental Specifications

Operating Environment..... Indoor / Outdoor

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multicom@multicominc.com sonoradesign.com

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