TV PREAMP SPECS (U.S.)

RevB 8/3/06 holl_ands

Manufacturer Part Number	VHF Gain (dB)	UHF Gain (dB)	P1dB (dBm)	OIP3 (dBm)	VHF MaxOut (dBuV)	UHF MaxOut (dBuV)	VHF NF (dB) typ	VHF NF (dB) max	UHF NF (dB) typ	UHF NF (dB) max	Measured V, U NF
AntennaCraft											
10G201	16	22						3.0		2.6	
10G202	29	29						3.0		2.6	
10G212	30	30						4.0		3.5	
Antennas Direct											
PA16		16							2.5		
Blonder-Tongue											
Suburban III	15	19					5.0		4.0		26 dB, 14 dB
Voyager III + Vaulter III Dual	15	18					5.0		3.3		8 dB, 19 dB
Vaulter III	15	20					5.0		3.5		
CMA-BB	26					105	5.0				
CMA-Uc		20				106			3.0		
SCMA-Ub		25				120			2.5		
						(~11 dBm)					
Channel Master											
CM3039	13	13					3.0		2.2		10 dB, 14 dB
Titan CM7777 (7775, 7776)	23	26			117	111 a	2.8		2.0		CH30: 2.0 dB
Titan CM7778 + Spartan series	16	23			116	110 a	3.0		2.2		6 dB, 9 dB
Delhi											
Model 476	16	15					4.0		7.0		
Pico Macom											
MPA-HD	15	17			90	85 b	3.0		5.0		
b. For 15 Channels at Xmod = -?? dB.											
Research Comms											
Type 9248		20	20	31					0.4		
Type 9250		20				127			0.4		
						(~18 dBm)					
	VHF	**UHF**			**VHF**	**UHF**					

Manufacturer Part Number	Gain (dB)	Gain (dB)	P1dB (dBm)	OIP3 (dBm)	MaxOut (dBuV)	MaxOut (dBuV)	VHF NF (dB) typ	VHF NF (dB) max	UHF NF (dB) typ	UHF NF (dB) max	Measured V, U NF
Radio Shack											
15-1108A (discontinued)	26	26									**CH30: 7.0 dB**
15-1109 (discontinued)	30	30									**CH30: 3.6 dB**
15-1124 (discontinued)	25	25									
15-1170 In-Line TV/SAT Amp	10	10			94	83		7.5		7.5	**7.1 dB, 7.2 dB**
[Max In specified for -60dB IM3]											**CH30: 6.0 dB**
15-2507 with 0-15 dB DistroAmp Gain	15	15						4.5		4.5	
Sitco (www.simplicitytool.com)											
PA24 series	20	25						1.6		1.4	
Terk											
AMP15 (2-way for CATV)	15	15					3.5		3.5		
Winegard											
DA-0905		21.6							3.2		
HDP-269	12	12			123	123	3.0		3.0		
AP-2880	29	19			118	118	2.9		2.9		**CH30: 2.6 dB**
AP-4700 (VHF bypass)	0	19				118	0.0		2.9		
AP-8700	17	19			118	118	2.8		2.8		**6 dB, 3.2 dB**
AP-8703 + AP-8733	17	19			118	118	3.9		3.9		
AP-8275 + AP-8283	29	28			118	118	2.9		2.8		
AP-4800 (VHF bypass)	0	28				118	0.0		2.7		**0 dB, 3.3 dB**
						(~9 dBm)					

Note: Pout (dBm) = MaxOut (dBuV) - 60 - 48.75 ***Pout (dBmV) = Pout (dBuV) + 60***

Measured VHF, UHF Noise Figures are averages from:
The Performance of Antenna Amplifiers Used for Terrestrial DTV Reception",
IEEE Transactions on Broadcasting, Vol 50, No 2, June 2004.

Measured CH30 Noise Figures are from:
www.hdtvprimer.com/ANTENNAS/basic.html

Following additonal preamps could not be identified:

Amp #1	19	19	3.8	3.8	**3.3 dB, 2.9 dB**
Amp #3	26	26	unk	unk	**19 dB, 16 dB**
Amp #10	25	20	3.5	4.4	**14 dB, 4.2 dB**
Amp #11 (probably 50 ohm???)	11.3	13.5	5.0	5.0	**6.0 dB, 4.9 dB**

TV PREAMP SPECS (Non-U.S.)

RevB 8/3/06 holl_ands

Manufacturer Part Number	VHF Gain (dB)	UHF Gain (dB)	P1dB (dBm)	OIP3 (dBm)	VHF MaxOut (dBuV)	UHF MaxOut (dBuV)	VHF NF (dB) typ	VHF NF (dB) max	UHF NF (dB) typ	UHF NF (dB) max	Delta OIP3-P1dB
Alcad (Spain)											
AA-101 (Plug in module)		12				100			3.0		
BR-103/105 (replaces Balun module)		14				100			1.5		
AM-309 (VHF + 2 x UHF)	10-30	20-36				106 a		4.0		3.0	
a. per DIN 45004B, 103 dBuV for IMD3 = -66 dB, 90 dBuV for IMD2 = -60 dB											
Blake (UK)											
Digi-Amp proILA11 (kits)		12				96 b			3.0		
b. For 5 Analog and 6 Digital channels, within 14 dB of desired channel.											
DX Antenna (Japan)											
ERM-402A	30+	34+			120	112 c	3.5	4.0			
c. Single Freq., IM2 = -42 (Vlo), IM3 = -52 (Vlo) to -58 (Vhi), Xmod = -46 dB											
Fracarro (Italy)											
MAP-208 (VHF Hi-Band 3 + UHF)	19-34	20-35				108	4.0		3.0		
Johansson (Belgium)											
7101 (VHF+UHF, 10-18 dB adj. gain)	18	18				105	3.5		3.5		
7104 (VHF+UHF)	24	24				101	3.5		3.5		
7211 (VHF 10-30 dB, UHF 25-40 dB gain)	30	40				105	3.5		3.5		
7312 (UHF, 25-35 dB var. gain)		35				105 d			2.5		
7313 (UHF)		15				102 d			2.0		
7315 (UHF)		25				107 d			1.8		
7320 (UHF, 25-35 dB var. gain)		35				105 d			2.0		
d. For -35 dB IM3 levels.											
7409 (VHF 10-25 dB, UHF 10-25 dB gain)	25	25				105	3.5		3.5		
7420 (VHF+UHF 23 dB+UHF 8-23 dB gain)	10	23				105	3.5		3.5		
7432 (VHF bypass, UHF 25-40 dB gain)	-0.5	40				105	0.5		2.5		
9661 (Indoor 7-22 dB SAT/TV Distro Amp)	22	22				105 e	6.0		6.0		
e. For -60 dB IM3 levels.											
	VHF	**UHF**			**VHF**	**UHF**					

Manufacturer Part Number	Gain (dB)	Gain (dB)	P1dB (dBm)	OIP3 (dBm)	MaxOut (dBuV)	MaxOut (dBuV)	VHF NF (dB) typ	 max	UHF NF (dB) typ	 max	Delta OIP3-P1dB
Kathrein (Germany)											
VCP66		22							2.7		
Lindsay (Canada)											
LSPA-L (CH2-6)	25					117 e	3.7				
LSPA-H (CH7-13)	25					117 e	3.0				
LSPA-U (UHF)		25				117 e			4.0		
e. Cross-Mod -57 dB											
Maspro (Japan)											
UB50	0	35-50							1.5	2.5	
Televes (Spain)											
5006 (when config for 2 x UHF)		27							2.5		
5007 (when config for VHF + UHF)	0	27					0.0		5.0		
Triax (Denmark)											
TA34CD		34							1.8		

Note: Pout (dBm) = MaxOut (dBuV) - 60 - 48.75
Pout (dBmV) = Pout (dBuV) - 60

GENERAL PURPOSE PREAMP SPECS

RevA 9/3/05 holl_ands

Manufacturer Part Number	VHF Gain (dB)	UHF Gain (dB)	P1dB (dBm)	OIP3 (dBm)	MaxOut (dBuV)	VHF NF (dB) typ	VHF NF (dB) max	UHF NF (dB) typ	UHF NF (dB) max	Delta OIP3-P1dB
Adv'd Rcvr Comm Products										
P30-1000/11VD	11	11	18			3.5		3.5		
Angle Linear										
PHEMET (GaAs FET)	20	15	12	26		0.4		0.5		14
FET VHF	12					1.5				
Jim Prof. Series (Japan)										
M75 (var. gain -10 to +20 db)	20					2.0		2.0		
Hamtronics										
LNK-WB (2-1000 MHz)	15	10				5.0		5.0		
Hobbyron										
R-PR2 (1-1000 MHz)	25	25					2.5		2.5	
Kuhne										
LNA-1018A (only 100-180 MHz)	20			44		1.0	1.3			
LNA-3050A (only 350-500 MHz)		20	28	40				1.0	1.3	12
KU-0515 (75 ohm available)	20	20	21	33		1.2	2.0	1.2	2.0	12
Mini-Circuits										
ZFL-1000LN	20	20	3	14		2.9		2.9		11
ZX60-3011		12	19	31				1.4		12
Monteria										
VHF-UHF Preamp (20-1000 MHz) 10 dB and 30 dB also avail.	20	20		38		1.5		1.5		
NuWaves										
HILNAV1	20	20	18	32		0.8		0.8		14

NOTE: All are 50 ohm Input/Output, unless otherwise indicated

LOW NOISE PREAMP IC SPECS

RevA 9/3/05 holl_ands

Manufacturer Part Number	VHF Gain (dB)	UHF Gain (dB)	P1dB (dBm)	OIP3 (dBm)	MaxOut (dBuV)	VHF NF (dB) typ	VHF NF (dB) max	UHF NF (dB) typ	UHF NF (dB) max	Delta OIP3-P1dB
Agilent										
ATF-33143 (PHEMT) (Ham favorite)		25	22	32				0.5		10
ATF-54143 (EPHMET)		16.6	20	36				0.5		16
Cougar Components										
AC1286		28	11	22				1.0	1.7	11
Macom										
A1212	15	15	19	29		1.6		1.5		10
MAALSS0012	14	14	21	32		1.5	2.0	1.5	2.0	11
MAALSS0038	14	14	22	32		1.5	2.0	1.5	2.0	10
MAAMSS0040 (for CATV)	12	12	23	33		3.8		2.8		10
For 135 channels: CTB = -72.5 dBc (typ), CSO = -75 dBc (typ), Cross Mod'l'n = -64 dBc (typ)										
MAMUSS0007 (for CATV)	5	5				3.7		3.4		
Cascade Amp plus 3-Way Splitter	8.5	8.5				3.4		3.0		
For 135 channels: CTB = -70 dBc (typ), CSO = -73 dBc (typ), Cross Mod'l'n = -66 dBc (typ)										
Mini-Circuits										
AMP-15	13	13	8	22		2.8		2.8		14
Mitsubishi										
MTF1302 (GaAs FET) (Ham favorite)		12						< 1.0		
MTF1402B (GaAs FET) (Ham favorite)		16	15					< 0.5		

NOTE: All are 50 ohm Input/Output, unless otherwise indicated

	VHF	UHF

Manufacturer Part Number	Gain (dB)	Gain (dB)	P1dB (dBm)	OIP3 (dBm)	MaxOut (dBuV)	VHF NF (dB) typ	 max	UHF NF (dB) typ	 max	Delta OIP3-P1dB
Watkins-Johnson										
AG101 (GaAs)	15	15	15	31		2.0		2.0		16
AG102 (GaAs)	15	15	18	36		2.0		2.0		18 a
AH1 (GaAs)		14	21	42				2.2		21 a
AH31 (GaAs MESFET)	19	18	21	41		2.5		2.0		20 a
AH101 (GaAs MESFET)	14	14	26	47		4.4		3.5		21 a
AM1 (GaAs)	14	14	18	39		2.4		2.2		21 a
FH1 (GaAs MESFET)	18	18	21	42		1.0		1.0		21 a
AP4 (FET)		16	27	40				1.5		13
FP101 (GaAs FET)	14	14	26	37		1.9		1.9		11
AH2 (GaAs MESFET) (for CATV)	14	14	20	38		3.5		3.0		18 a

For 77 channels: CTB = -71 dBc (typ), CSO = -48 dBc (typ Sngl-Ended), CSO = -75 dBc (typ Push-Pull), Cross Mod'l'n = -65 dBc (typ)

Note: (a) denotes likely irregularities in OIP3 curve.

NOTE: All are 50 ohm Input/Output, unless otherwise indicated