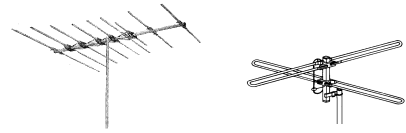


ANTENNAS

VHF=Channels 2 to 11
UHF=Channels 14 to 83

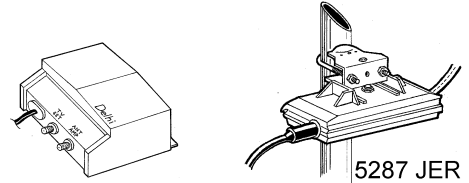


VHF & UHF (TV) CONSUMER ANTENNAS 300 ohm				
RECEPTION AREA	# ELEMENTS	BOOM LENGTH (inches)	WEIGHT (lbs.)	DELHI PART #
Metro	24	68.5	8	VU-932S JER
Suburbs	33	102.5	10	VU-933S JER
Fringe	37	114	11	VU-934S JER
Deep Fringe	52	147.5	15	VU-935S JER
Deeper Fringe	60	171	16	VU-936S JER
Deepest Fringe	64	194	20	VU-937S JER

POWER ZOOM--Optional accessory extends UHF sections by 33.5" to provide additional UHF gain VU-8PZ JER

TRANSFORMER--Convert from 300 to 75 ohm coax with the AMT-82 JER or T6789 JER transformer

FM CONSUMER ANTENNAS 300 ohm	
METRO/SUBURB OMNI-DIRECTIONAL	C677M JER
FRINGE UNI-DIRECTIONAL 8.5' long	QFM-9 JER (accepts AMT-82 JER balun for 75 ohm coax)



ANTENNA-MOUNTED AMPLIFIERS (TV)							
FREQUENCY/BAND	INPUT IMPEDANCE	DOWNLEAD IMPEDANCE	OUTPUT IMPEDANCE	LO VHF GAIN (dB)	HI VHF GAIN (dB)	UHF GAIN (dB)	PART #
VHF/UHF/FM	300	300	300 (dual)	19	17	17 - 15	5383 JER
VHF/UHF/FM	300	75	75	19	17	19 - 17	5287 JER
VHF/UHF/FM	300	75	75	35	30	30	5287PCX JER

300 ohm hook-up wire supplied. Lightning protected. Low noise. FM trap.

SPACERS/INSULATORS

	PORCELAIN FEED-THRU INSULATOR—Nickel plated brass hardware. Cushion washers supplied. #10-58 DAB (5/8" high) #10-78 DAB (1" high) #9547 SMI (4-1/2" high)
	CERAMIC METAL BASE INSULATOR—Corrugated surface provides longer leakage path. #10-67 DAB (1-3/8" high)
	STEATITE CONE INSULTR—Nickel plated brass screws. Cushion washer. #10-30 DAB (5/8") #10-31DAB (1") #10-32 DAB (1-1/2")
	PORCELAIN AIRPLANE INSULATORS—Good for mobile & aircraft or guy wire applications. Compression type strain insulators. #10-73 DAB (2") #10-74 DAB (1-1/2") #10-72 DAB (2-1/4" block)
	STEATITE STANDOFFS—Threaded holes on both sides. JAN-I-8. #10-44 DAB (3/4" high)

UHF CONSUMER ANTENNAS, 300 ohm (use AMT-82 JER balun to adapt to 75 ohm coax) Connects to VHF antenna w/out coupler					
CHANNELS	14-30	14-46	14-70	40-70	14-83
DELHI PART #	CYD-1430 JER	CYD-1446 JER	CYD-1470 JER	CYD-4070 JER	SFA1483S JER (for fringe areas)

ANTENNA CABLE

75 OHM COAX — Higher loss than twinlead, but shielded. RG59 (#8241 Belden) RG6 (#9248 Belden CATV type). "F" connectors — #FC57B PHI (RG59) or #25-7032 AIM. (RG6).

300 OHM TWINLEAD — Lower loss than 75 ohm coax but subject to RF interference. Use only in remote rural areas. #8230 Belden

450 OHM LADDER LINE — Low loss antenna cable for ham radio applications. 5450 INT'L

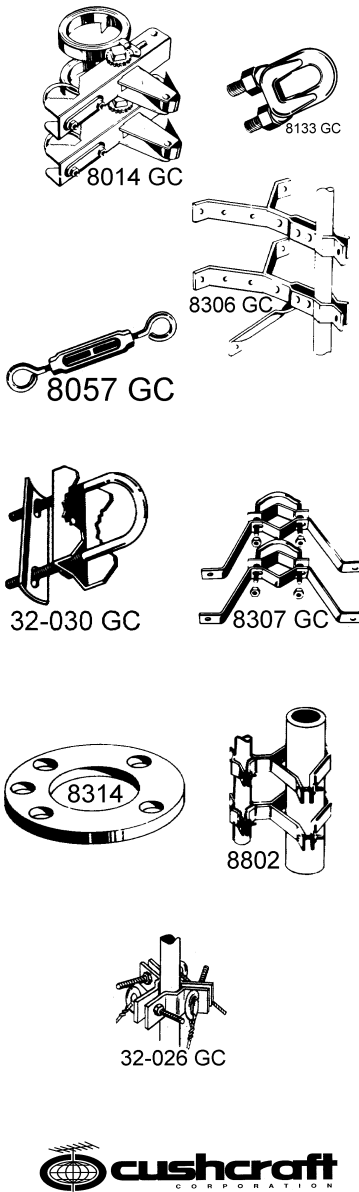
COMMON FREQUENCIES

AM radio, 530 kHz to 1600 kHz
C.B. radios, 27 MHz
CATV transmissions 50-800 MHz
TV channel 2 55 MHz
FM Radio, 86.5 MHz to 108 MHz
Cellular phones 800 MHz
Cordless phones 900 MHz

ANTENNAS

COMMERCIAL ANTENNAS VHF & UHF				
FREQ. (MHz)	TYPE	DESCRIPTION	PART #	REQUIRED BASE
108-512 VHF	BASE STATION MAST	1/4 wave (cut to freq.) w/ PL259	ASP-7A ASP (unity gain)	Any mast up to 1-1/4" o.d.
108-512 VHF	MOBILE 3/4" HOLE ROOFTOP MOUNT	1/4 wave w/PL259	ASP-790 ASP (unity gain)	3/4" Hole or Motorola Mount.
108-512 VHF	MOBILE MAGNET MOUNT	1/4 wave (fits into K220)	ASP-795 ASP (unity gain)	K-220 ASP w/PL259
130-174 VHF	MOBILE BALL/BUMPER MOUNT	Mounts with 3/8"-24 thread. PL259 term.	ASP358 ASP (3 dB gain)	ASPR368 ASP swivel base
135-160 VHF	BASE STATION	Half wave Ringo (original)	AR2 CUS (3.75 dB gain)	Mast
135-160 VHF	BASE STATION	3 ea. 5/8 wave stacked Ringo Ranger II	ARX-2B CUS (7 dB gain)	Mast
144-174 VHF	MOBILE ON-GLASS	Half wave w/PL259	APR151.3G ASP (unity gain)	Rear Window
150-174 VHF	MOBILE ON-GLASS	Half wave w/PL259	AP-153 ASP (cellular look-alike)	Rear Window
435-450 UHF	BASE STATION	3 ea. 5/8 wave stacked Ringo Ranger II	ARX-450B CUS (7 dB gain)	Mast
440-450 UHF	BASE STATION	YAGI 6 & 11 element	A449-6 CUS A449-11 CUS	Mast
440-460 UHF	BASE STATION	Half wave Ringo (original)	AR-450 CUS (3.75 dB gain)	Mast
445-470 UHF	MOBILE (replacement)	2 ea. 5/8 wave stacked Comes w/out any base	ASP7655 ASP (5 dB gain)	K-220 (magnetic)
450-470 UHF	BASE STATION (100 mph wind survival)	UHF Yagi (7 element)	PC457N CUS (10 dB gain)	Mast
806-869 UHF	MOBILE ON-GLASS	Trunking w/N (m) conn.	AP-852.3N ASP (3 dB gain)	Glass Window
824-896 UHF	MOBILE ON-GLASS	Cellular w/mini-UHF(m) & adapter to TNC (m)	APD873/CP ASP (open coil) APD876/CP ASP (closed coil)	Window
824-896 UHF	MOBILE TEMPORARY	Cellular Clips over window	APD862 ASP (3 dB gain)	Side Window
824-896 UHF	MOBILE ROOFTOP, 3/4" HOLE	Cellular TNC (m)	ASPD1860 ASP (3 dB gain)	3/4" Hole in Roof
824-896 UHF	MOBILE MAGNET MOUNT	Cellular w/mini-UHF (m) & adapter TNC (m)	ASPD1894/CP	Metal Car Body

NOTE: The Ringo Ranger is omni-directional and a Yagi is uni-directional.



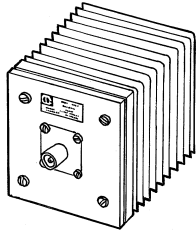
MOBILE ANTENNA ACCESSORIES	
	GUTTER CLIP--To fasten down long whips when not in use. Attaches to gutter; no holes in car. K-115 ASP
	SWIVEL BASE--Stainless steel ball mount. 3/8-24 threaded hole. ASPR368 ASP
	"QUICK-GRIP" TRUNK MOUNT--No holes in car. For base loading coil or Xfmr antennas. K-204 ASP
	RUBBER PLUGS--To cover holes following antenna removal. K-34 ASP (1-5/16" hole) K-35 ASP (3/4" hole) K-37 ASP (3/8" hole)
	MAGNET MOUNT--For low profile ASP antennas. By removing low profile adaptor, 5/8"-24 thread base load coil antennas may be used. K-350 ASP
	TRUNK LIP BRACKET--External bracket mounts on unexposed part of trunk lip. For antennas that mount in a 3/4" hole. Attaches with 3 sheet metal screws. K-361 ASP
	COWL MOUNT--For standard ASP base loaded coils. Requires 7/8-15/16" hole. 35° adj. K-47 ASP
	ROOFTOP MOUNT--Replacement 3/8" hole snap-in mount adaptor only for rooftop mounts. K-45 ASP
	ROOFTOP MOUNT--3/8" snap-in mount, complete. K-57 ASP
	ROOFTOP MOUNT--3/4" toggle mount, complete. K-49 ASP
	WHIP ADAPTOR--For lo band loaded & hi band gain antennas. Fits ASP-375 ASP. #K-50 ASP
	WHIP SET SCREW ADAPTOR--For .046" dia. whip. K-43 ASP
	WHIP/BALL & SET SCREW ADAPTOR--.072" stainless whip, 5/16-24 thread. K-51 ASP

See "tower" § of catalog also!

ANTENNA/MAST HARDWARE

- GUY WIRE CLAMPS**—Galvanized steel for 1/8" wire size. **8133 GC**
- GUY WIRE MAST CLAMP**—Fits masts up to 1 1/2" diameter. **32-026 GC**
- GUY RINGS**—For fastening guy wire to antenna mast. Holes accommodate guy wire thimbles. For 1 1/4" masts; ring I.D. is 1-3/8". **8314 GC**
- MAST CLAMP ASSEMBLY**—To fasten cross bars to mast. **32-030 GC** (clamp only)
- MAST MOUNT, CHIMNEY, RATCHET** —2 brackets/set, will withstand high winds & bad weather. Requires only a wrench to fasten to chimney. Accepts masts up to 1 1/2" diameter. Strapping is 3/4" wide, 18' long stainless steel. **8014 GC**
- MAST MOUNT, VENT** —Installs quickly on vents or pipes. Zinc plated steel. For masts up to 1 3/4". **8802 GC** (fits vents 2-4"). **8803 GC** (fits vents 4-6").
- MAST MOUNT, WALL**—Zinc plated steel. 2 brackets/set. Heavy duty for masts up to 2 1/2". Clearance is 2 1/2". **8307 GC**
- MAST MOUNT, WALL, SNAP-IN** —For masts up to 1 3/4". **8306 GC** (6" clearance) **8308 GC** (8" clearance) **8318 GC** (18" clearance).
- TURNBUCKLES**—For installing guy wire on antennas. 4" closed, 5-5/8" open. **8057 GC**

ANTENNAS



CDI DUMMY LOAD

PRECISION DUMMY LOADS •dry •"N"(f) connector			
PART #	CW POWER (continuous)	VSWR	FREQ
4010 CDI	10W	1.05:1 1.10:1	DC-1000 MHz 1 GHz-4 GHz
4025 CDI	25W		
4050 CDI	50W		
Other dry loads available by speical order. Inquire.			

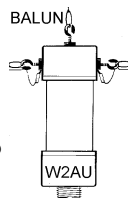
Need an RF **FIELD STRENGTH ANALYZER** or an RF **WATTMETER**? See the "Test Equipment" § of this catalog!

ANTENNA RELATED PRODUCTS

ANTENNA SWITCH, UHF—2 position coaxial switch with UHF female (SO-239) connectors. **CS-201**
DIAWA or **MFJ-1702 MFJ**

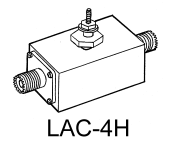
ANTENNA SWITCH, BNC—4 position coaxial switch with BNC female connectors. **CS-4 DIAWA**

BALUN—1::1 matches 50-75 ohm coax to 50-75 ohm balanced. Broadband 1.8 - 40 MHz. 2KW PEP max. Built-in lightning arrester, stainless steel, breather holes. **W2AU 1:1 MFC UNADILLA**



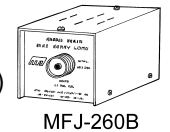
BLITZ BUG—In line air gap coaxial lightning arrester w/two UHF (f) connectors. **LAC-2 CUS**

BLITZ BUG—200 watt ceramic cartridge coaxial lightning arrester **LAC-4 CUS** (has two UHF (f) connectors) **LAC-4N CUS** (has two "N" (f) connectors).



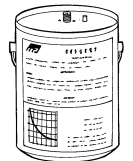
BLITZ BUG—2K watt ceramic cartridge coaxial lightning arrester. **LAC-4H CUS** (has two UHF (f) connectors) **LAC-4NH CUS** (has two "N" (f) connectors).

DUMMY LOAD, HAM—300W (30 seconds), dry, VHF/HF, SWR: 1.1:1 to 30 MHz, 1.5:1 30-150 MHz. UHF(f) connector. **MFJ-260B MFJ**



FILTER, LOW PASS—Operating frequency is 0 to 30 MHz, power is 1.5 KW CW, impedance is 52 ohms. UHF connectors. Reduces possible interference from your transmitter to TV or other services above 30 MHz. **MFJ-704 MFJ**

FILTER, HI PASS—Easy to install on TV, FM & VCR. Eliminates RFI from Ham & CB radios. Contains "F" connectors. Attenuates signals below 50 MHz. **5KHP-50 MFC** or **HP-75T AMECO**



SWR/POWER METER—1.8 - 150 MHz, Forward power range: 15/150/1.5kW. Power rating 1.5kW (1.8-60 MHz) & 1kW (144 MHz). Large cross needle meter. **CN-101 DAIWA**

MFJ-250

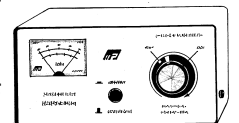
SWR/POWER METER—1.8 - 60 MHz; 200/2K watts, compact cross needle meter. **CN-520 DAIWA**

SWR/WATT METER—1.8-60 MHz , cross-needle meter, reads peak & average power, built-in lamp meter. Two power ranges: 200/2000w forward & 50/500w reflected. Read SWR from 1:1 to 8:1. Comes with UHF (f) connectors **MFJ-815B MFJ**



MFJ-815B

SWR/WATT METER, HF—1.8-30 MHz . Two power scales (30 & 300w). UHF (f) connectors. **MFJ-816 MFJ**



MFJ-816

SWR/WATT (FIELD STRENGTH) METER—1.7 MHz - 150 MHz, SWR 1:1 to 1:3, 0-10 & 0-100 Watts RF power. UHF (f) connectors. **FS-45 PHILMORE**

ANTENNAS

COAX-SEAL — Hand moldable plastic seal for coax fittings. Protects against moisture & corrosion. Flexible at any temperature. Provides years of protection. Insures low SWR. Forms & seals over odd shaped & difficult coax fittings, non-contaminating, nonconductive. **COAX-SEAL**

SCOTCHKOTE ELECTRICAL COATING — Tape splice with 33+ electrical tape and apply Scotchkote evenly over surface. Forms a strong, fast-drying outer seal. Good for abnormal weathering or moisture conditions. Resists moisture, oil & alpha hydrocarbons. **SCOTCHKOTE 3M**

ELECTRICAL MOISTURE SEALANT PADS — 2½ inch square self-sealing pads moisture proof connections, adds strain relief to splices, replaces tapes and applies in half the time. **06149 3M** (25/box).

RF SPECTRUM (meters = 300 % Mhz)			
FREQ. (Hz)	BAND	METERS	USES
3-30 kHz	VLF		maritime radio, navigation
30-300 kHz	LF		aero radio, navigation
300 kHz -3 MHz	MF	1800-2000 kHz 160 meters	AM broadcasts
3-30 MHz	HF	3.5-4 MHz 80 meters 7-7.3 MHz 40 meters 10.1-10.15 MHz 30 meters 14-14.35 MHz 20 meters 18.068-18.168 MHz 17 meters 21-21.45 MHz 15 meters 24.89-24.99 MHz 12 meters 28-29.7 MHz 10 meters	short wave, ham, CB
30-300 MHz	VHF	50-54 MHz 6 meters 144-148 MHz 2 meters 222-225 MHz 1.25 meters	TV, FM broadcasts wireless phones
300-3,000 MHz	UHF	420-450 MHz 70 centimeters 902-928 MHz 33 centimeters 1240-1300 MHz 23 centimeters	TV, cellular phones, data, radar, satellite
3,000-30,000 MHz	SHF		radar, comm.
30,000 MHz-300 GHz	EHF		radar, satellite

ANTENNA COAX

RG8 LOW LOSS — **9913 BELDEN**
 RG58 — **8240 BELDEN**
 RG213 — **8267 BELDEN** (non-contaminating, outdoor version of RG8)
 ALL OTHERS — See "Wire & Cable" § of catalog.

ROTOR CABLE •8 conductor	
AWG	BELDEN #
2 ea 16 awg 6 ea 18 awg	9405
2 ea 18 awg 6 ea 22 awg	8448



TV ANTENNA ROTOR

U-105 ECG—For up to a 5 sq. foot antenna. Requires a 3-wire cable.



ACK DELIVERS—Whether by UPS, US Mail, bus, courier, or steamboat, **Ack** will gladly **ship** your parts to you. Next day delivery is common within the region. Just give us a call.

COPPERWELD* ANTENNA WIRE			
AWG	LENGTH	TYPE	PART #
12	100'	SOLID	AN-122 CRO
	150'		AN-123 CRO
14	100'		AN-142 CRO
	150'		AN-143 CRO
18	250'		AN-181 CRO
14	100'		STRANDED

*Copper coated steel wire for both strength & conductivity. The ideal wire for making antennas!

MULTIBAND TRAP ANTENNAS (COILS)		
•User Tunable •2KW PEP •To Avoid Switching Antennas in Multiple Radio Systems		
BAND	METER	UNADILLA #
28.675 MHz	10	KW-10 MFC
21.275 MHz	15	KW-15 MFC
10.125 MHz	30	KW-30 MFC

COAXIAL RELAYS •UHF Connections					
VOLTS	COIL OHMS	TYPE	WATTS	FREQ.	PART #
10-16 VDC	190	SPDT	1250	DC to 180 MHz	101 MFC UNADILLA
10-16 VDC	190	SP3T	1500	DC to 180 MHz	1013 MFC UNADILLA
115VAC	N/A	SPDT	500	DC to 1000 MHz	W128AX-11 MAG*

*DPDT AUXILIARY CONTACTS — 10A DPDT auxiliary contacts are included with this relay.