

# KLM

## electronics, inc.

- Solid State Power
- HF VHF and UHF antennas
- Amplifiers . . .
- Antenna rotators
- accessories

### EXPLANATION OF KLM ORDERING CODE . . .

#### Code number explanation for KLM antennas.

This is a very simple system which allows instant identification of any KLM antenna as follows:

- a)-Manufacturer.
- b)-Frequency range.
- c)-Number of elements.
- d)-Special designator.  
as: C, circularly polarized.  
LD, light duty.  
LB, long boom.

#### Example: KLM-144-150-12-C.

Manufacturer	Freq. range	N elements.	Circular polarization.
KLM	144-150	12	C

#### Code number explanation for KLM amplifiers.

Any particular KLM amplifier may be identified as follows:

- a)-Product type.
- b)-Nominal power input (watts).
- c)-Nominal power output (watts).
- d)-Frequency range: A, 50-54MHz, B, 144-148MHz, BC, 219-226MHz, C, 420-450MHz, (440-470 special order).
- e)-Special designator.  
as: L, linear.

#### Example: PA-15-160-B-L

Power amplifier	Pwr. in	Pwr. out	Freq.	Linear ind.
PA	15	160	B	L

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SUPPLY**

### WARRANTY

Ninety days on parts and labor (amplifiers in new heat sink-1 year). Returned unit must include dealer name, date of purchase, explanation of failure symptoms and return shipping instructions. KLM will pay the return shipping costs. Out-of-warranty repairs will be handled on a basis of parts costs plus minimum service charge plus shipping cost. An explanation of failure symptoms and return shipping instructions must be included with the returned unit. No authorization for return is necessary for units in or out of warranty.

KLM reserves the right to make revisions in current production of equipment and assumes no obligation to incorporate these changes in earlier equipment models.

## CONFUSED ABOUT GAIN FIGURES?

KLM conservatively rates all antenna gain against a half-wave dipole reference (expressed as Dbd). Other manufacturers may use "isotropic" reference, which adds 2.2 db to an antenna's Dbd gain rating. Or, they may combine 6 db "ground gain" with the 2.2 Dbi to enhance otherwise poor performance characteristics.

KLM urges you to keep these differences in mind when comparing antenna gain claims and to be suspicious of gain claims where no reference is given.

# VHF antennas

## 2 Meters and 220 MHz

An outstanding series of antennas including specialized models for OSCAR, moonbounce, DX, repeater, and other purposes. The 2 meter 14 and 16 element, and 16 element Circular Polarized antennas are also highly regarded for their high gain and performance characteristics, and the latest addition, the KLM 144-148-13LB (Long Boomer) offers the highest gain of any commercially available antenna.

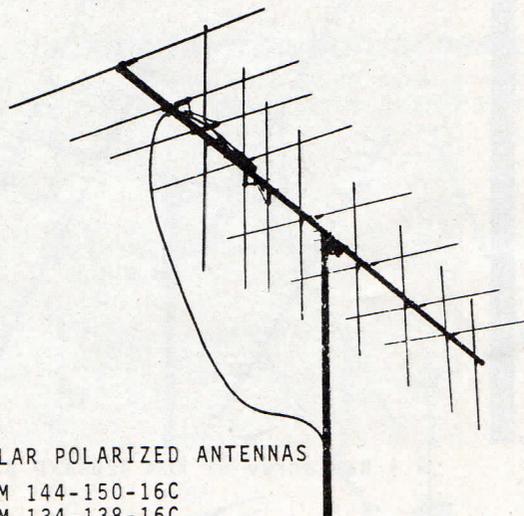
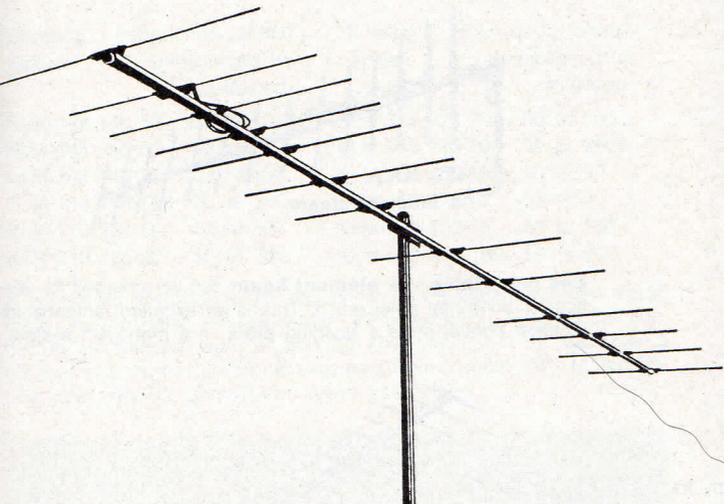
Don't forget that KLM's multi-driven element system means you get the full rated gain and low VSWR across the whole band. Coupled with KLM's quality air-line baluns you can forget retuning and matching problems. Simply assemble, install, and get on the air!

All models feature hi-grade insulating materials, stainless steel electrical hardware, and weather resistant 6063-T832 aluminum alloys.

-- FEATURING --

### KLM 144-148-13LB

Super gain at a very reasonable cost! Our new 13 element "Long Boomer" delivers 15.5 Dbd across the whole band with less than 1.2:1 VSWR. No tuning or matching is necessary - a special balun, rated to 1KW PEP, is supplied with the antenna. Boom length is a manageable 21½ feet. The "Long Boomer" is the perfect way to maximize your 2M system, and its low cost (with balun included) makes it a natural for building a "gangbusters" stacked array.



### CIRCULAR POLARIZED ANTENNAS

KLM 144-150-16C  
KLM 134-138-16C

The best of both worlds! Perfect for OSCAR and the other satellites AND terrestrial SSB And FM. The KLM "Circular" replaces separately fed vertical and horizontal antennas - minimizes multipath and flutter fading. Special balun and phasing harness supplied - only one feedline is needed!

With the optional CS-1 Circularity Switcher, right or left hand circularity can be selected instantly for changing satellite and terrestrial conditions- mounts on one set of KLM feedpoints, needs only a 9-15 VDC source. Still only one feedline.

## 2 METER AND 219-226 MHz ANTENNA SPECIFICATIONS

MODEL	NO. OF ELEMENTS	FREQ. OF OPERATION	GAIN IN Dbd	VSWR (less than)	BEAMWIDTH @ 3db Pt.	FEED IMP.	BALUN	BOOM LENGTH/DIA	MOUNTING/ MAST DIA.	WEIGHT LBS.
144-148-11	11	144-148 MHz	12.3	1.2:1	21°	50 Ω Bal.	Optional	12.5'/1.5"	Center/2"	6
144-148-13LB	13	144-148 MHz	15.5	1.2:1	14°	50 Ω Unbal.	With Balun	21.5'/1.5"	Center/2"	9
144-148-14	14	144-148 MHz	14.2	1.2:1	18°	50 Ω Bal.	Optional	17.3'/1.5"	Center/2"	8
144-148-16	16	144-148 MHz	14.8	1.2:1	16°	50 Ω Bal.	Optional	20.6'/1.5"	Center/2"	10
<b>CIRCULAR POLARIZED ANTENNAS</b>										
144-150-16C	16	144-150 MHz	11	1.2:1	24°	50 Ω Unbal.	With Balun	12'/1.5"	Center/2"	10
134-138-16C	16	134-138 MHz	11	1.2:1	24°	50 Ω Unbal.	With Balun	13'/1.5"	Center/2"	11
<b>220 MHz. ANTENNAS</b>										
219-226-7	7	219-226 MHz	8.8	1.2:1	27°	50 Ω Bal.	Optional	4.75'/1"	Center/1½"	3
219-226-14	14	219-226 MHz	14.2	1.2:1	18°	50 Ω Bal.	Optional	15.25'/1"	Center/1½"	7.5

ALL KLM VHF ANTENNAS ARE UPS SHIPPABLE

# 2 METER ANTENNAS

KLM offers an outstanding series of 2 meter antennas, in a variety of boom lengths, beamwidths, and gain, including special models for DX, repeaters, OSCAR, moonbounce, and other purposes. All except the JV2 Vertical use KLM's multi-driven element system to achieve full rated gain and low VSWR across the whole band without retuning! Most are supplied with a KLM Airline or coax balun that eliminates matching hassles. You just assemble, install, and get on the air. All models feature high-grade insulation materials, stainless steel electrical hardware, and weather-resistant 6063-T832 aluminum alloys.

## JV2 VERTICAL

A new standard of performance for 2 meter verticals. Ideal for repeater and FM use, it's also the perfect portable because it needs no ground or groundplane. Base mounts easily to mast, stake or sidewall. Capacitive-coupled feed means no strap connections to deteriorate. Coverage is 144 through 174 MHz in 2 MHz steps at 1.2:1 VSWR and better.

Model:	<b>JV2</b>	Elements:	<b>1</b>
Coverage:	<b>144-174 MHz x 2 MHz</b>	Feed Impedance:	<b>50 ohms, unbalanced</b>
Gain:	<b>5 dB/ Gndplane</b>	Balun:	<b>Not needed</b>
VSWR:	<b>1.2:1</b>	Boom length/Dia:	<b>N/A</b>
Beamwidth:	<b>Omnidirectional</b>	Weight:	<b>1 lb</b>
Mounting:	<b>Base to mast/ sidewall</b>	Mast size:	<b>1½/2"</b>

## 144-148-4X

Folded dipole drive delivers efficient broadband performance to this all-purpose yagi. Perfect for point-to-point, repeater, and portable communications. The 4X is rear mounted and supplied with 2 KW coax balun.

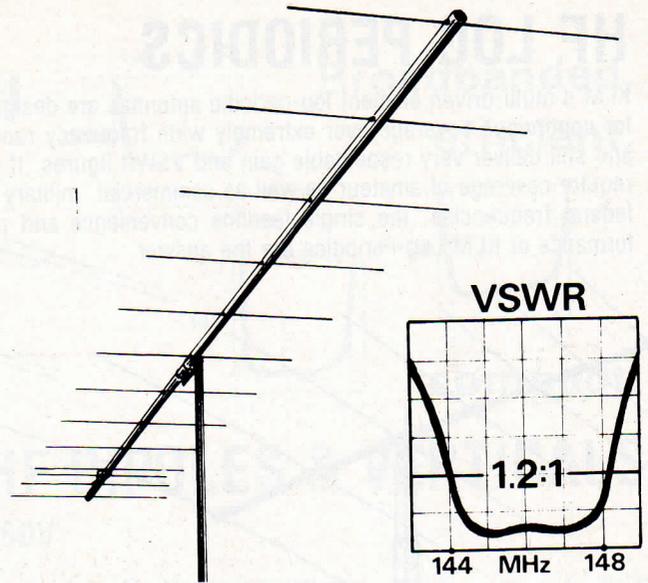
Model:	<b>144-148-4X</b>	Elements:	<b>4</b>
Coverage:	<b>144-148 MHz</b>	Feed Impedance:	<b>50 ohms, unbalanced</b>
Gain:	<b>8.5 dBd</b>	Balun:	<b>4:1 Coax, 2 KW</b>
VSWR:	<b>1.5:1 &amp; better</b>	Boom length/Dia:	<b>4.2' / 1"</b>
Beamwidth:	<b>62°</b>	Weight:	<b>2 lbs</b>
Mounting:	<b>Rear</b>	Mast size:	<b>2"</b>

## 144-148-8

Model:	<b>144-148-8</b>	Elements:	<b>8</b>
Coverage:	<b>144-148 MHz</b>	Feed Impedance:	<b>50 ohms, balanced</b>
Gain:	<b>10.3 dBd</b>	Balun:	<b>Optional (144- 148-50)</b>
VSWR:	<b>1.2:1 &amp; better</b>	Boom length/Dia:	<b>7.25' / 1"</b>
Beamwidth:	<b>50°</b>	Weight:	<b>4 lbs</b>
Mounting:	<b>Center</b>	Mast size:	<b>2"</b>

## 144-148-11

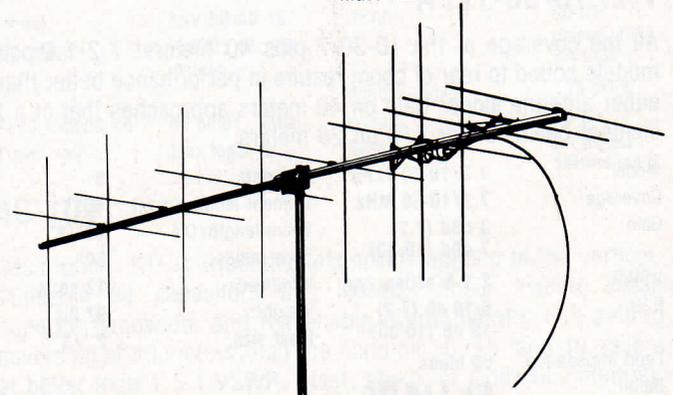
Model:	<b>144-148-11</b>	Elements:	<b>11</b>
Coverage:	<b>144-148 MHz</b>	Feed Impedance:	<b>50 ohms, balanced</b>
Gain:	<b>12.3 dBd</b>	Balun:	<b>Optional (144- 148-50)</b>
VSWR:	<b>1.2:1 &amp; better</b>	Boom length/Dia:	<b>12.5' / 1½"</b>
Beamwidth:	<b>42°</b>	Weight:	<b>6 lbs</b>
Mounting:	<b>Center</b>	Mast size:	<b>2"</b>



## 144-148-13LBA

World's only SUPER GAIN, WHOLE BAND, ALL MODE 2 meter antenna! Dual-driven elements produce 15.5 dBd gain from 144 through 148 MHz at 1.2:1 and better VSWR. Strong 1½" boom needs no trusses or support, overall weight and windloading substantially less than competitive models. Supplied with 2 KW coax balun. Rod parasitics (3/16") anchor through the boom using tough molded-on insulators. Perfect for stacked, high gain arrays.

Model:	<b>144-148-13LBA</b>	Elements:	<b>13</b>
Coverage:	<b>144-148 MHz</b>	Feed Impedance:	<b>50 ohms, unbalanced</b>
Gain:	<b>15.5 dBd</b>	Balun:	<b>4:1 Coax, 2 KW</b>
VSWR:	<b>1.2:1 &amp; better</b>	Boom length/Dia:	<b>21.5' / 1½"</b>
Beamwidth:	<b>28°</b>	Weight:	<b>9 lbs</b>
Mounting:	<b>Center</b>	Mast size:	<b>2"</b>



## 144-150-16C CIRCULAR POLARIZED

Designed for OSCAR but now finding wide appeal for terrestrial SSB and FM where multipath, polarity shift, or flutter fading are a problem. Supplied with special balun and phasing harness for right or left-hand circularity. Single feedline convenience. Optimize signal with optional CS-1 Switcher that lets you select RHC or LHC right in your shack.

Model:	<b>144-150-16C*</b>	Elements:	<b>8H/8V</b>
Coverage:	<b>144-150 MHz</b>	Feed Impedance:	<b>50 ohms, unbal.</b>
Gain:	<b>11 dBd</b>	Balun:	<b>1:1, .5 KW</b>
VSWR:	<b>1.2:1 &amp; better</b>	Boom length/Dia:	<b>12' / 1½"</b>
Beamwidth:	<b>48°</b>	Weight:	<b>11 lbs</b>
Mounting:	<b>Center</b>	Mast size:	<b>2"</b>

\*134-138 MHz model also available