

# KLM ELECTRONICS CATALOG Fall-1974

VHF & UHF ANTENNAS

SOLID STATE AMPLIFIERS

HF ANTENNAS

## KLM 20 METER "BIG STICK" MONOBANDER

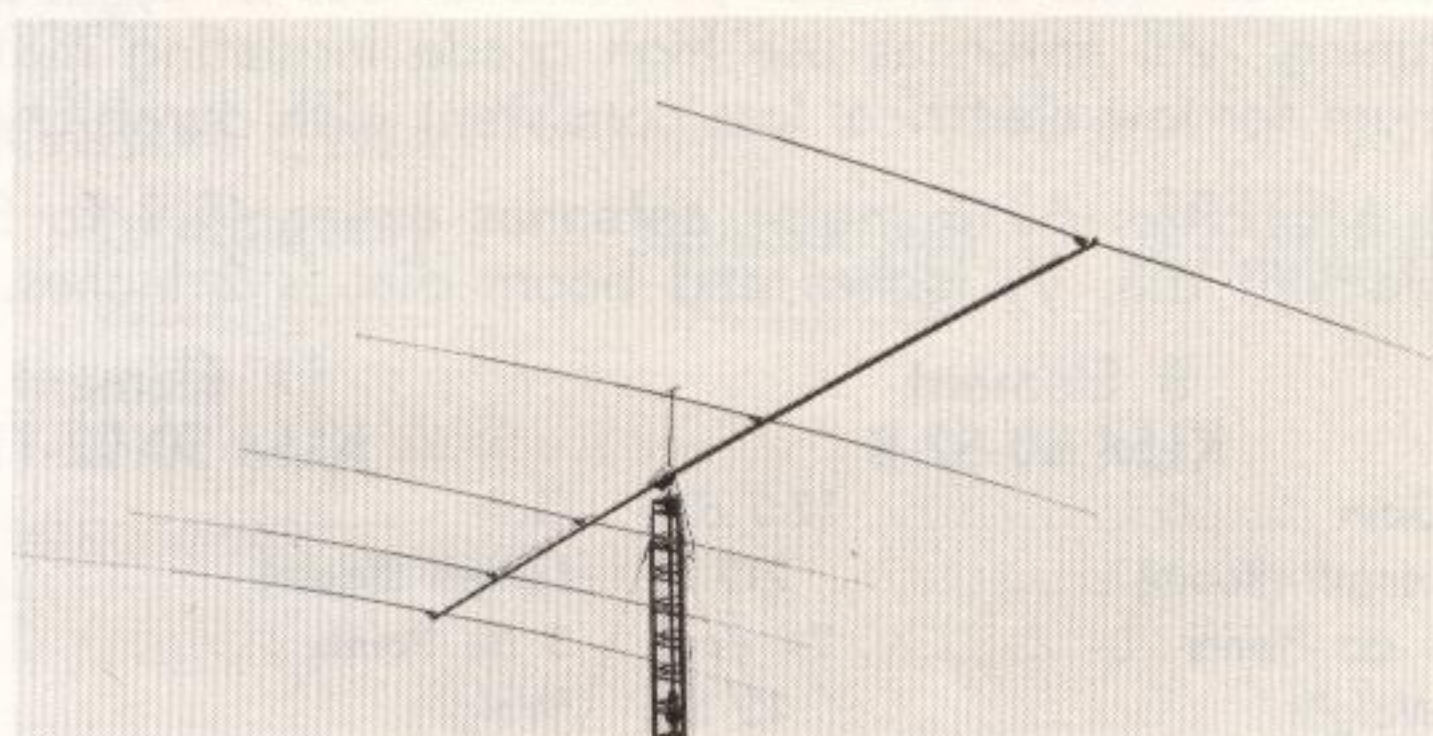
### EXCLUSIVE FEATURES

Constant gain and low SWR across the phone and CW portion without retuning. DUAL DRIVEN elements for high efficiency and superb front to back and front to side ratio . . . that will put YOU on top of the pileups . . . All elements insulated from the boom with KLM's exclusive epoxy insulators.

#### NEW

*Construction  
Technique  
Permits  
Even Faster  
Assembly*

Elements ..... 5 full size  
Frequency of Operation ..... 13.9 to 14.4 MHz  
Gain Over a Dipole ..... 9.7 + 0.2db  
Front to Back Ratio ..... 30 db  
Impedance ..... 200 ohm balanced  
(50 ohms with KLM's optional 4:1, 4KW pep balun)



Boom Size ..... 42' x 3" dia.  
Weight ..... 65 lbs.  
Turn Radius ..... 28 feet  
Wind Area ..... 9.25 sq. ft.  
Order Part Number ..... KLM 13.9 - 14.4 - 5

*NEW  
Construction  
Technique  
Permits  
Even Faster  
Assembly*



A log periodic antenna with useful frequency operation from 10 to 31 MHz. This fully insulated boom antenna is the answer to the most demanding operator allowing full coverage of 10 and 15 MHz WWV, 13-14-15-17 and 19 MHz Mars. 20-15 and 10 meter amateur bands, all shortwave bands from 10 to 30 MHz and of course 27 MHz CB. In short, this array gives the user the equivalent of an optimum spaced long boom, 3 element Yagi ANYWHERE from 13 to 30 MHz!!

• Elements ..... 7  
• Frequency of Operation ..... 13 to 30 MHz  
• Gain (typ.) ..... 9.2 db iso.

## KLM Tri-Bander with NO Traps!

20 METERS 15 METERS 10 METERS

- Front to back ratio (typ.) ..... 15 dB.
- Feed impedance ..... 50 ohm unbalanced  
(4:1 4kw balun supplied)
- Max. SWR ..... 2.0:1
- Boom size ..... 30.0 ft. x 3 in. dia.
- Weight ..... 70 lbs.
- Wind load area ..... 8.25 sq. ft.
- Turning radius ..... 26 ft.

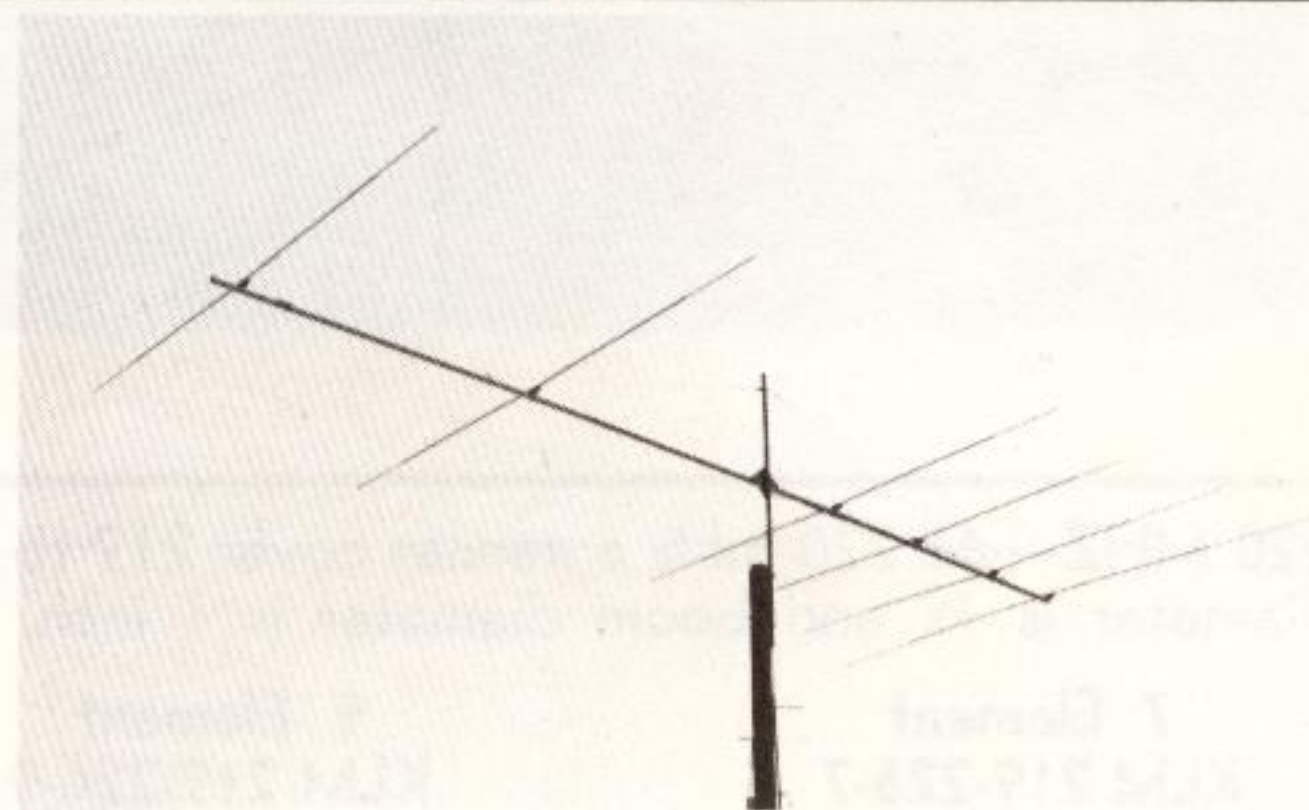
Order Part Number ..... KLM 13 - 30 - 7

## KLM 15 METER "BIG STICK" MONOBANDER

Features constant gain and low VSWR across the phone and CW band without retuning. Front to back is 30 db or better from 21.0 to 21.450 MHz.

Elements ..... 6, full size  
Frequency ..... 21.0 to 21.5 MHz  
Gain Over a Dipole ..... 10.5 db  
Front to Back Ratio ..... 30 db  
Impedance ..... 200 ohm balanced  
(50 ohms with KLM's optional 4:1  
4 KW PEP Balun)

Boom Size ..... 36' x 3"  
Weight ..... 85 lbs.  
Turn Radius ..... 20 ft.  
Wind Area ..... 9.5 sq. ft.  
Order Part No. KLM 21.0-21.5-6



All KLM HF ANTENNAS use 6063 - T832 aluminum elements, top quality stainless steel hardware and high grade epoxy insulation material. SPECIFY YOUR MAST SIZE WHEN ORDERING. KLM also has the facility to build to your specific HF Band requirements.



## VHF & UHF Antennas

These multidriven antennas for the 50 mHz, 144 mHz, 220 mHz and 432 mHz band are designed to give maximum gain and clean patterns as well as a good SWR over the frequency range specified with no re-tuning. All antennas use high grade insulating materials, all stainless steel hardware and 6063-T832 aluminum for low electrical loss consistent with durability and strength.

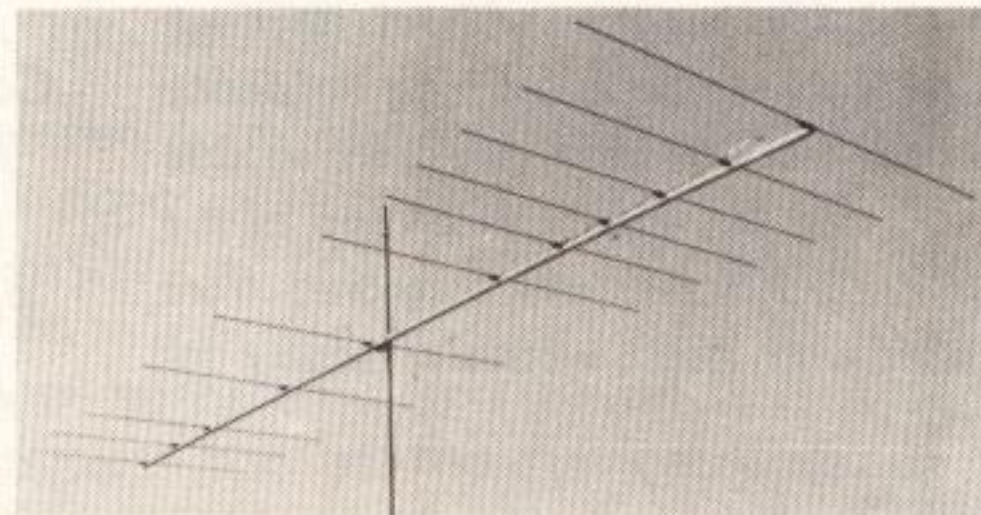
**6 METERS**—All 6 meter antennas cover 49.9 to 52.5 mHz with a 50 ohm balanced feed impedance. Element dia.  $\frac{1}{2}$  inches and boom dia. is 2 inches.

### 8 Element KLM 50-52-8

Gain ..... 12.0 dbd  
Length (Boom) ..... 219 in.  
3 db Points ..... 24 degs.  
Weight ..... 12 lbs.

### 11 Element KLM 50-52-11

Gain ..... 14.0 dbd  
Length (Boom) ..... 360 in.  
3 db Points ..... 21 degs.  
Weight ..... 27 lbs.



**2 METERS**—All 2 meter antennas cover 143.5 to 148.5 mHz with 50 ohm bal. feed impedance. Element dia.  $\frac{3}{8}$  inch, boom dia. 1 in. up to 11 El.  $1\frac{1}{2}$  inch to 12 to 16 El. No boom support necessary. 7 El. is also rear mountable if desired.

### 7 Element KLM 144-148-7

Gain ..... 11 dB iso.  
Boom length ..... 64 in.  
3 db points ..... 27 degs.  
Weight ..... 3.5 lbs.

### 8 Element KLM 144-148-8

Gain ..... 12.5 iso.  
Boom length ..... 87 in.  
3 dB points ..... 25 degs.  
Weight ..... 4 lbs.

### 9 Element KLM 144-148-9

Gain ..... 13.7 iso.  
Boom length ..... 120 in.  
3 dB points ..... 24 degs.  
Weight ..... 5 lbs.

### 11 Element KLM 144-148-11

Gain ..... 14.5 iso.  
Boom length ..... 150 in.  
3 dB points ..... 21 degs.  
Weight ..... 6 lbs.

Kits less booms are also available at substantial savings —

### 12 Element KLM 144-148-12

Gain ..... 13.5 dpl.  
Boom length ..... 169 in.  
3 dB points ..... 20 degs.  
Weight ..... 7.5 lbs.

### 14 Element KLM 144-148-14

Gain ..... 14.2 dpl.  
Boom length ..... 208 in.  
3 dB points ..... 18 degs.  
Weight ..... 8 lbs.

### 16 Element KLM 144-148-16

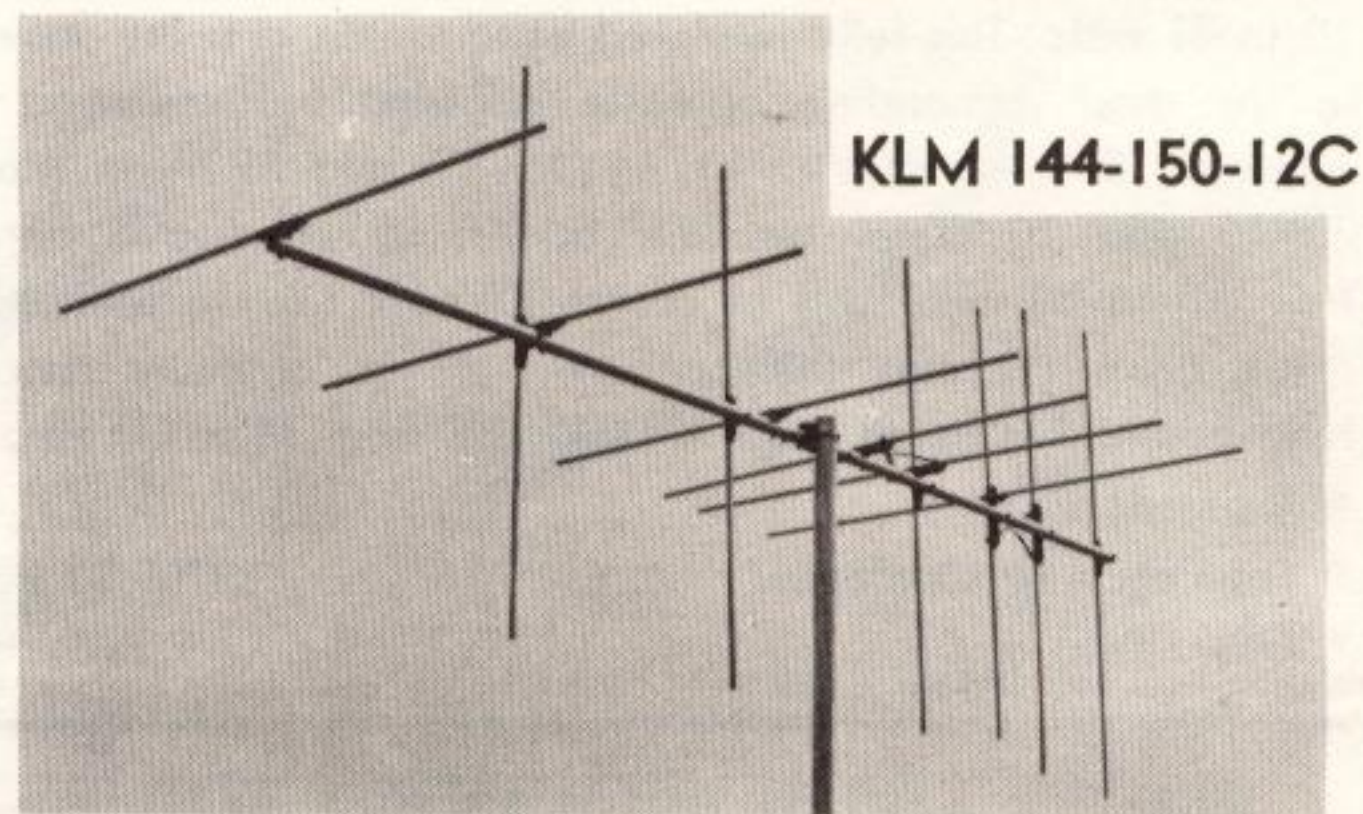
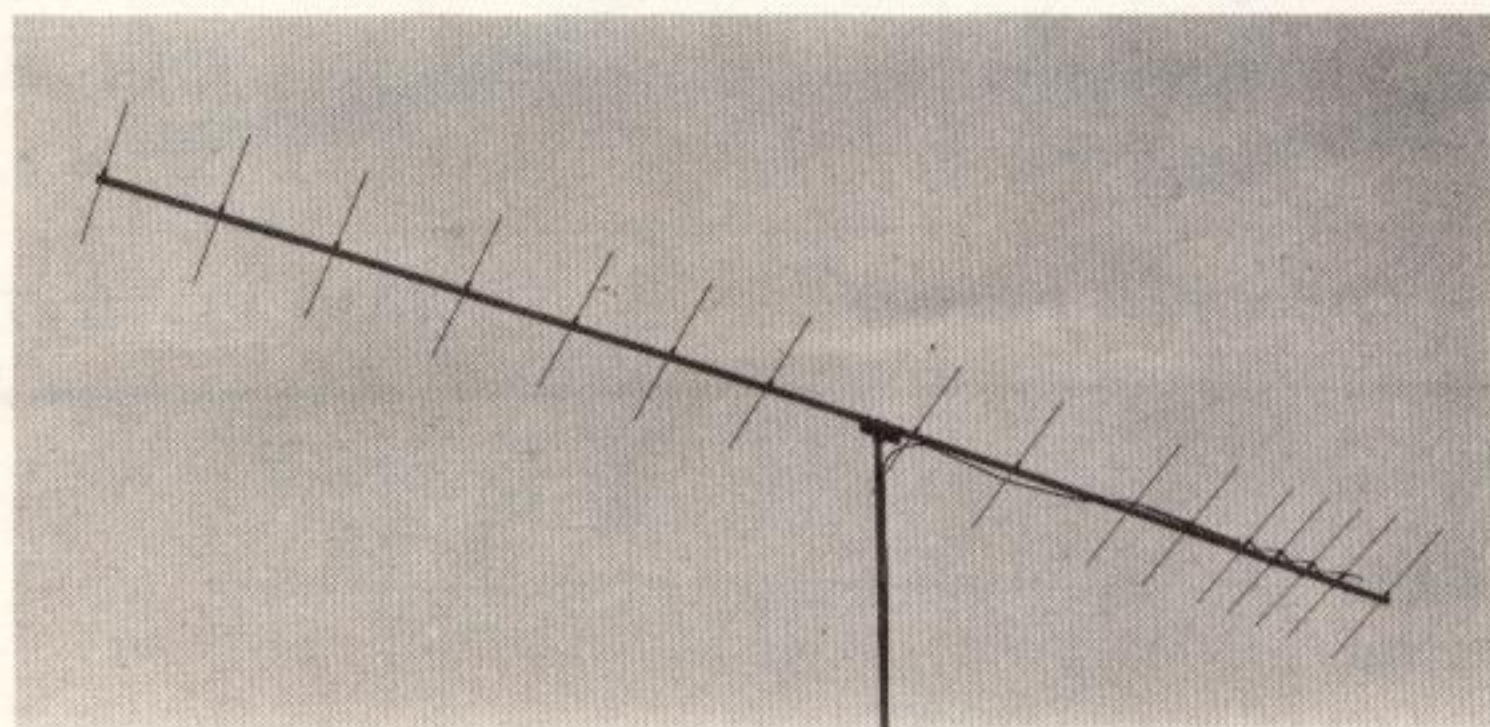
Gain ..... 14.8 dpl.  
Boom length ..... 248 in.  
3 dB points ..... 16 degs.  
Weight ..... 10 lbs.

### 14 Element KLM 144-148-14K 16 Element KLM 144-148-16K

## 2 Meter Moonbounce Building Blocks !

### 12, 14, and 16 Element

KLM 144-148-16



KLM 144-150-12C

NEW! For the oscar satellite bugs and hams who require both horizontal and vertical polarizations at times, we now have a 12 element, circularly polarized antenna for 144-150 mHz with 9.5 db gain over a dipole. Antenna comes complete with harness.

**220 MHZ**—All 220 mHz antennas cover 219 to 226 mHz with a 50 ohm balanced feed impedance. Element diameter is  $\frac{3}{8}$  and boom diameter is 1 inch.

### 7 Element KLM 219-226-7

Gain ..... 11 dB iso.  
Boom ..... 57 in.  
3 dB points ..... 27 degs.  
Weight ..... 3 lbs.

### 9 Element KLM 219-226-9

Gain ..... 13.7 iso.  
Boom length ..... 74 in.  
3 dB points ..... 24 degs.  
Weight ..... 3 lbs.

### 11 Element KLM 219-226-11

Gain ..... 14.5 iso.  
Boom length ..... 100 in.  
3 dB points ..... 22 degs.  
Weight ..... 4.5 lbs.

### 14 Element KLM 219-226-14

Gain ..... 16.4 iso.  
Boom length ..... 183 in.  
3 dB points ..... 18 degs.  
Weight ..... 7.5 lbs.



**432 MHz**—All 432 mHz antennas are designed with a 50 ohm balanced feed impedance. Element diameter is  $\frac{3}{8}$  and boom diameter is 1 inch. The 6 and 14 element antennas are rear mountable.

**Continuous Coverage 440 to 520 mHz**  
**Ideal for Point to Point or Repeater Control**

### REAR MOUNTABLE

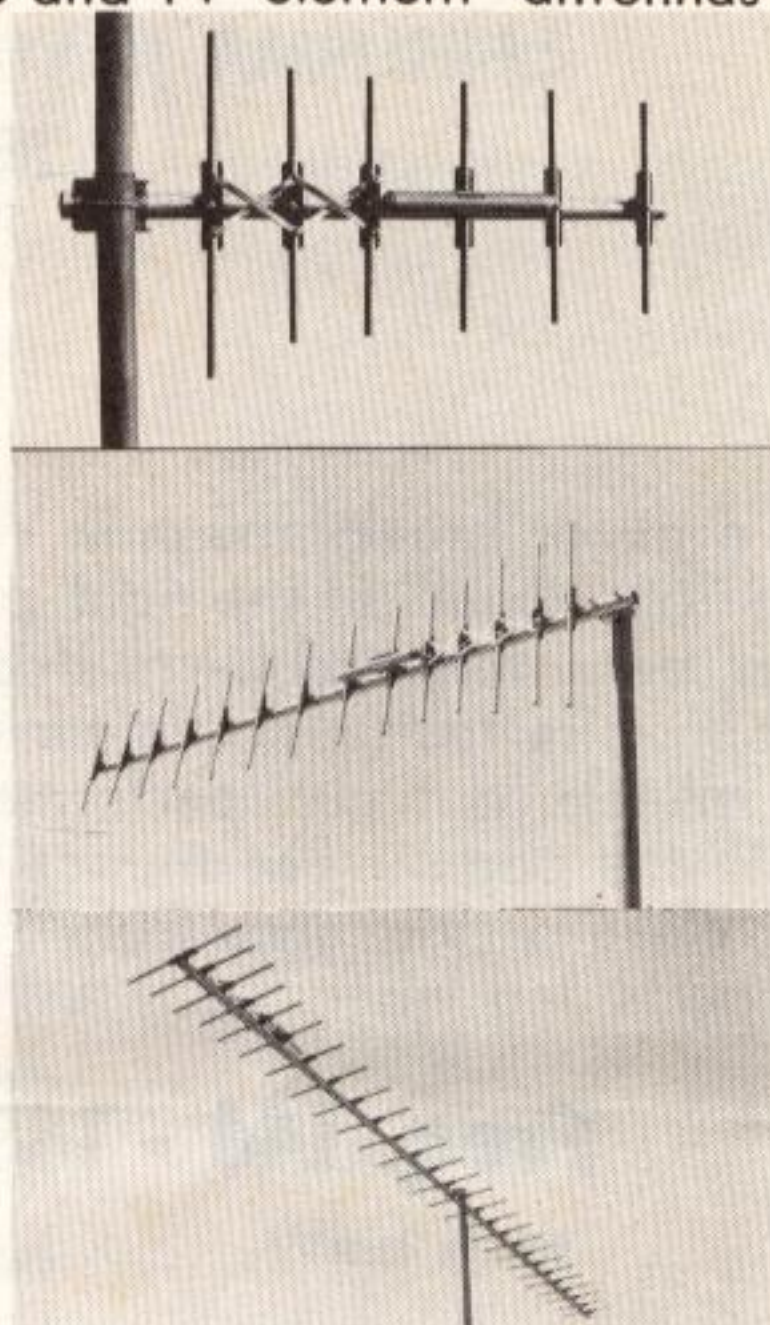
**420 - 470 mHz - No Tuning**  
**Excellent Repeater Control**  
**Antenna or System Building Block**

### 14 ELEMENTS

Mountable for Vertical or Horizontal Polarization

**420 - 450 mHz - No Tuning**  
**Maximum Gain for Tropo, Contest,**  
**DX, Repeater Control, etc.**

### 27 ELEMENTS



### 6 Element KLM 440-520-6

Gain ..... 7 dbd min.  
 Boom ..... 24 in.  
 3 dB points ..... 26 degs.  
 F/B Ratio ..... 20 db min.  
 Weight ..... 1.2 lbs.

### 14 Element KLM 420-470-14

Gain ..... 13.7 iso.  
 Boom length ..... 57 in.  
 3 dB points ..... 18 degs.  
 Weight ..... 4 lbs.

### 27 Element KLM 420-450-27

Gain ..... 16.7 iso.  
 Boom length ..... 120 in.  
 3 dB points ..... 15 degs.  
 Weight ..... 7.5 lbs.

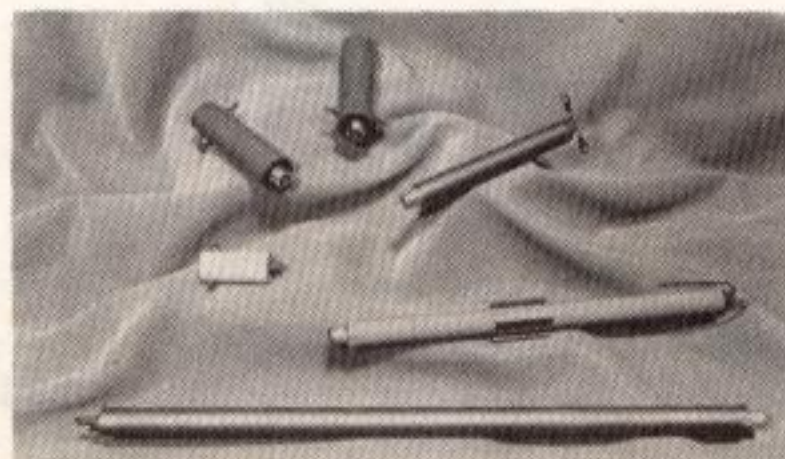
## KLM "Hi Performance" Baluns And Couplers

When optimum performance and clean patterns are a must ... **HIGH FREQUENCY FERRITE BALUNS**

Frequency Range	Impedance	Power Capability
5 - 31 mHz	50 ohms unbal to 200 bal.	4 KW PEP
3 - 60 mHz	50 ohms unbal to 50 ohms bal.	4 KW PEP
10 - 110 mHz	75 ohms unbal to 75 ohm bal.	2 KW PEP
20 - 130 mHz	50 ohm unbal to 200 ohm bal.	2 KW PEP

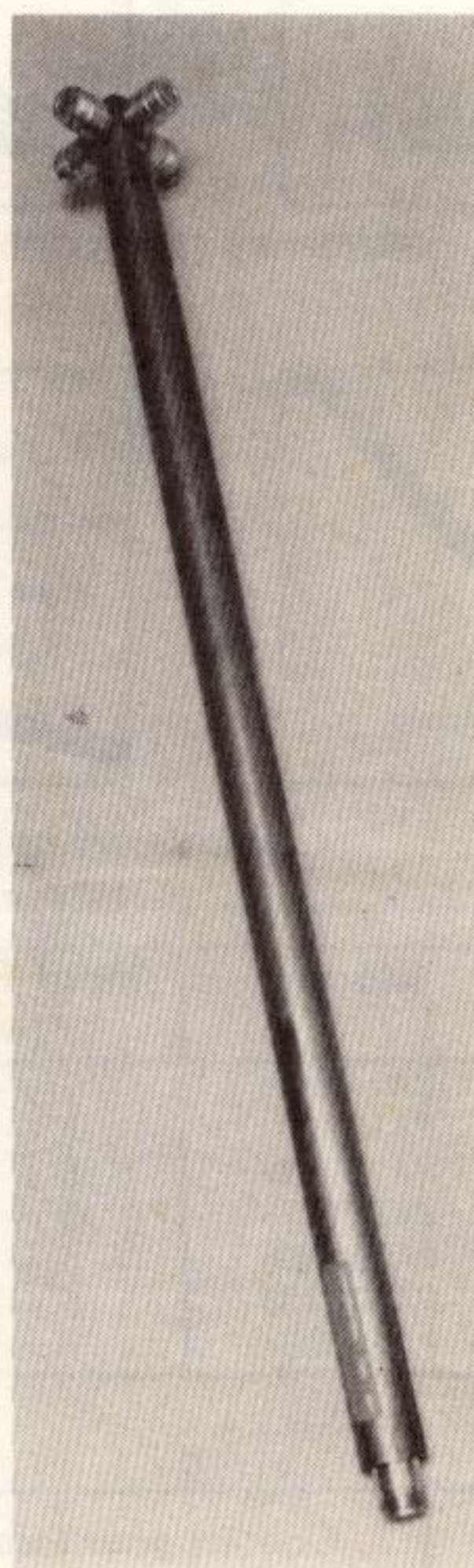
### VHF - UHF "Sleeve" Baluns

Featuring Teflon and low loss air line construction. The 144 and 220 mHz baluns are standard with SO-239 connectors but are available on special order with a type N fitting for \$1.0 extra. The 432 MHz balun is standard with the type N fitting.



Frequency	Impedance	Nominal Power Capability
144 MHz	50 ohm unbal to 50 ohms bal.	2 KW PEP
144 MHz	50 ohm unbal to 100 ohms bal.	2 KW PEP
144 MHz	50 ohm unbal to 200 ohms bal.	2 KW PEP
144 MHz	75 ohm unbal to 50 ohms bal.	2 KW PEP
220 MHz	50 ohm unbal to 50 ohms bal.	2 KW PEP
220 MHz	50 ohm unbal to 100 ohms bal.	2 KW PEP
220 MHz	75 ohm unbal to 50 ohms bal.	2 KW PEP
432 MHz	50 ohm unbal to 50 ohms bal.	2 KW PEP
432 MHz	50 ohm unbal to 200 ohms bal.	2 KW PEP
432 MHz	75 ohm unbal to 50 ohms bal.	2 KW PEP
432 MHz	50 ohm unbal to 200 ohms bal.	2 KW PEP

Fully tested phasing harness quarterwave matching cables are also available for two, four and eight bay stacking complete with phasing instructions, and PL 259 connectors.



### ANTENNA COUPLERS

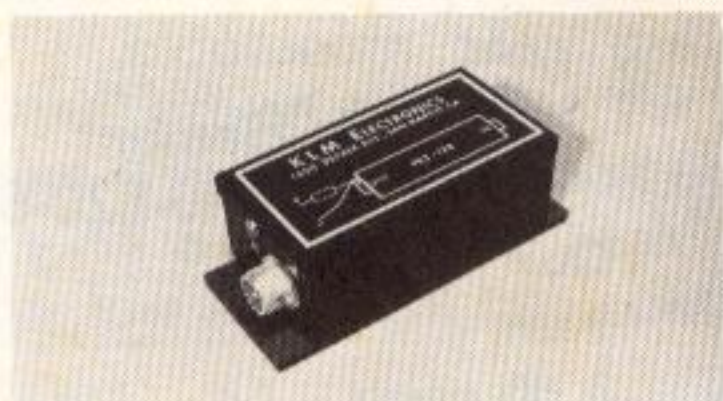
For the ham who wants to stack VHF-UHF antennas for EME, tropo, or antenna couplers—complimenting our already popular high efficiency balun line. These couplers or power dividers are made with 'N' connectors only and replace the 2 quarter wave matching cables, barrels and 'Ts' needed to tie 2 or 4 antennas together allowing a significant cost savings not to mention reduction in cable and connector loss. Its a natural for your next array — be it for 2 or 32 antennas.

2 antenna coupler 140-150 Mhz  
 4 antenna coupler 140-150 Mhz  
 2 antenna coupler 219-226 Mhz  
 4 antenna coupler 219-226 Mhz  
 2 antenna coupler 400-470 Mhz  
 4 antenna coupler 400-470 Mhz

Inquiries accepted on other frequencies, impedances and antenna sizes. All prices are subject to change without notice. Units are shipped F.O.B. San Martin, CA. For antennas with booms in excess of 165 inches in length, specify mast size if over 1 1/2 inch diameter.



# VHF Solid State Power Amplifiers



**PA2 - 12B**



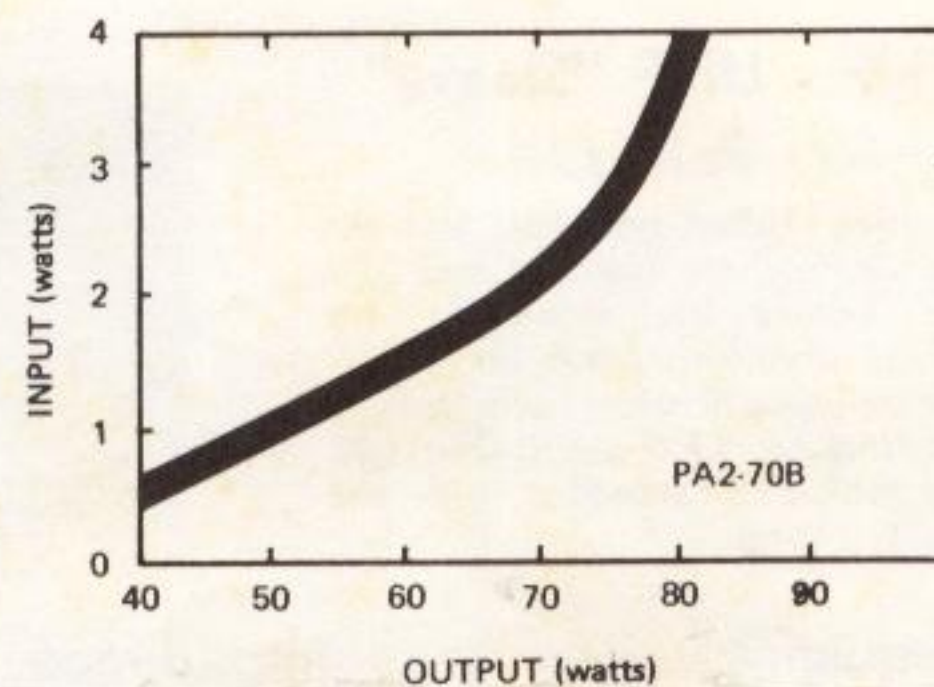
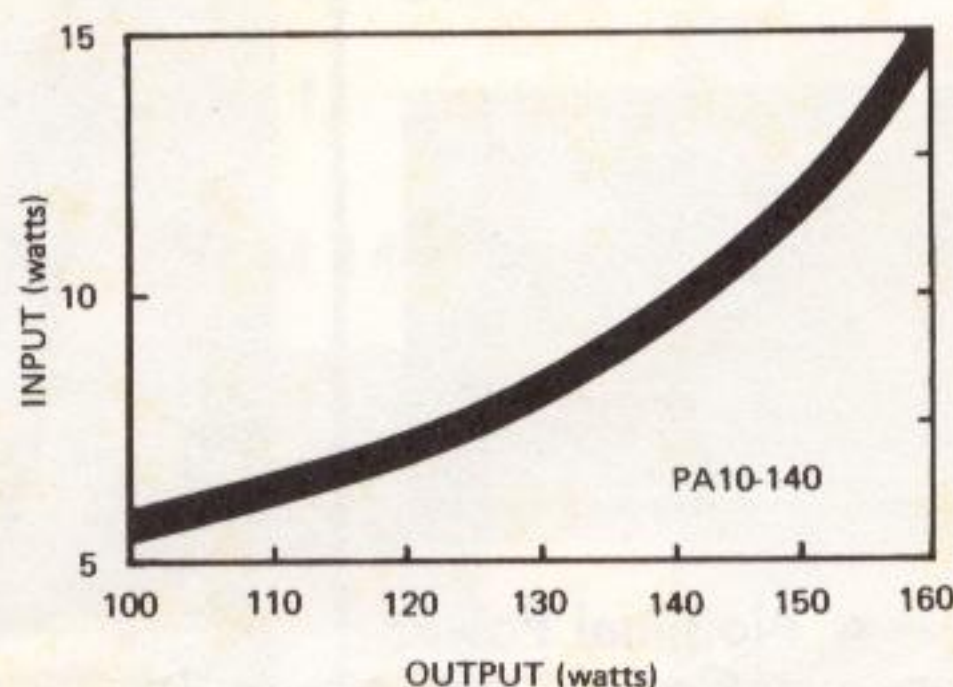
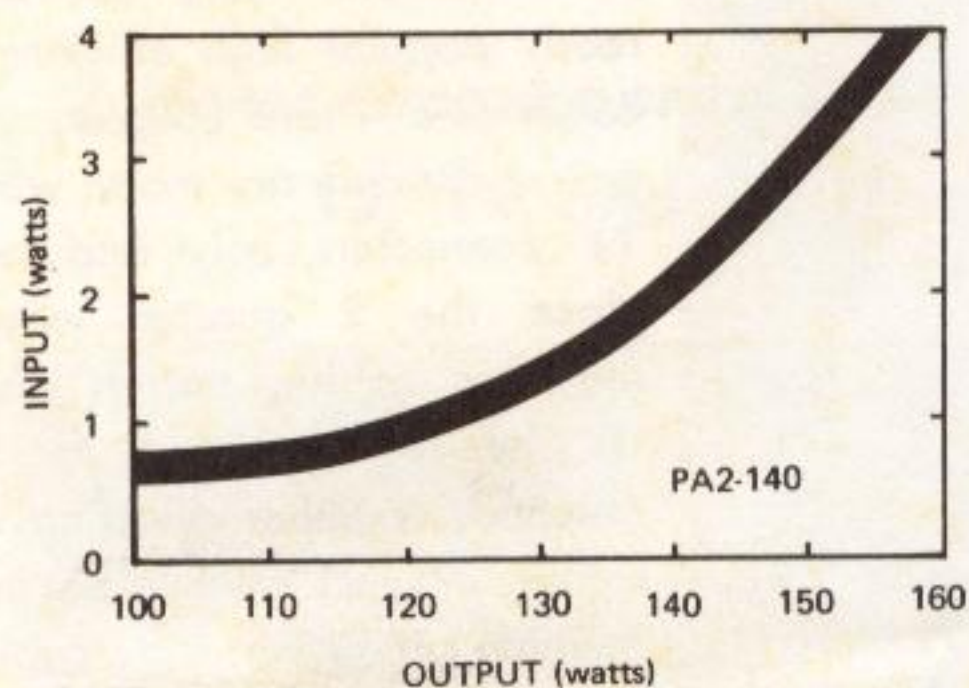
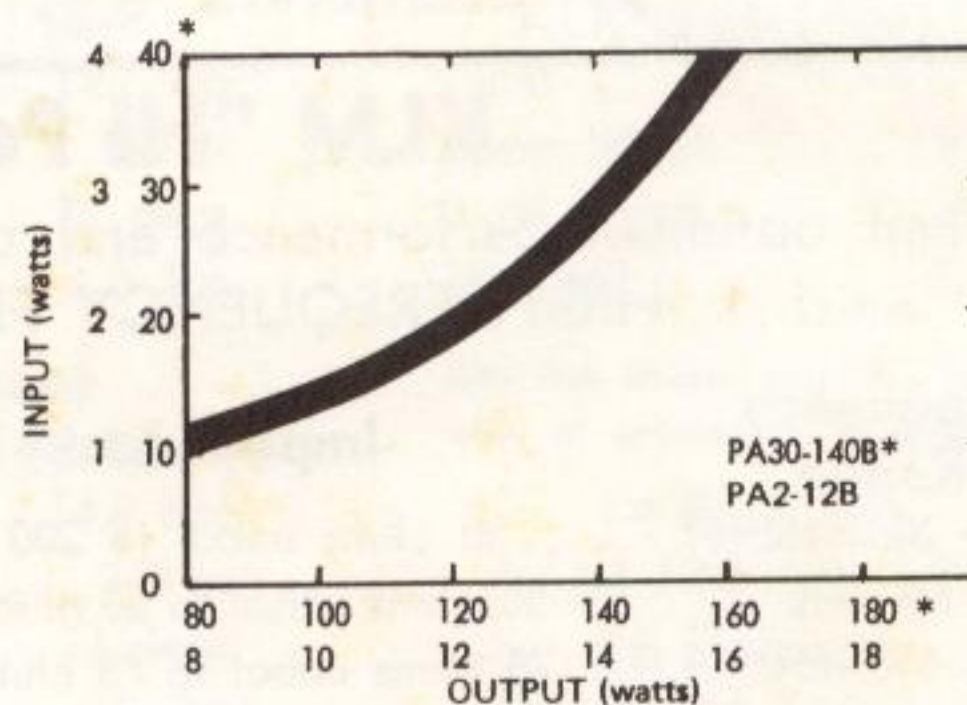
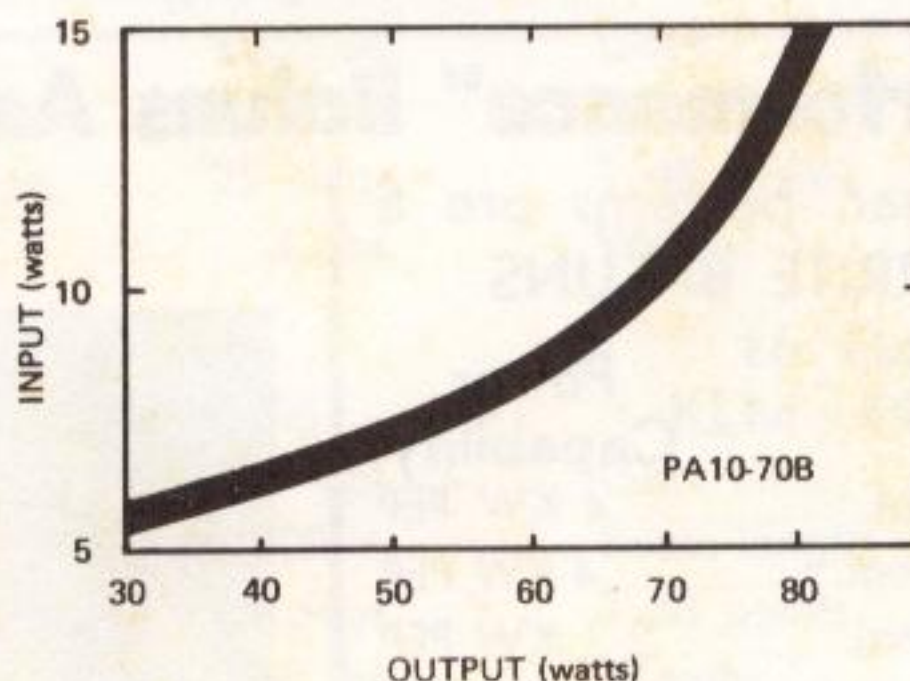
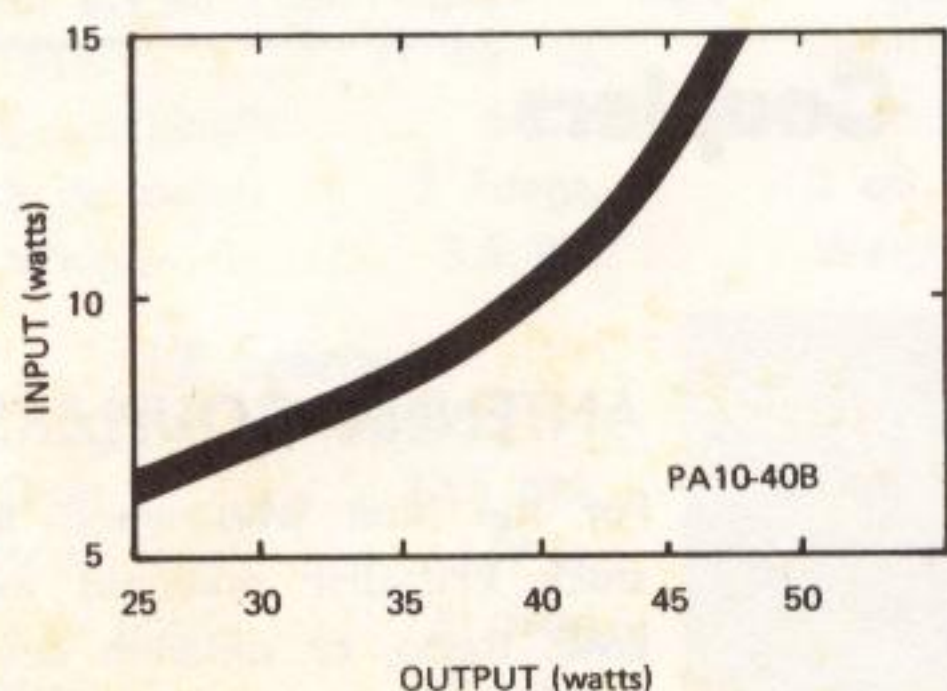
**PA 10 - 140 - B**

**KLM ELECTRONICS** announces a major breakthrough in VHF FM power amplifier pricing. **KLM** has made it possible for everyone to have a "big signal" at the right price by designing amplifiers to take advantage of the latest in reliable RF power transistors and micro-stripline construction. All **KLM** amplifiers feature the latest state-of-the-art no compromise features. No tuning micro-stripline circuits designed to take any phase of SWR and still provide reliable, optimum performance. Either automatic or manual switching and the RF inputs are compatible with the popular FM transceivers. Compact too as the typical popular 6-1/2 x 7 1/2 x 2 inch size shows. Stable, clean performance from 11.5 to 14.5 volts. And, oh yes, all amplifiers feature 90 days warranty on all parts and labor.

## Typical Data

## Freq. 144 - 148 MHz

## Vcc 13.4 VDC



Frequency (MHz)	Model	Input Range (w)	Nominal Po (w)	Nominal Amps	Size
144	PA2-12B	1 — 4	12	2.0	2.25 x 5 x 2"
	PA10-40B	5 — 15	40	5.0	6.5 x 5 x 2"
	PA10-70B	5 — 15	70	8.0	6.5 x 7.5 x 2"
	PA2-70B	1 — 4	70	10.0	6.5 x 7.5 x 2"
	PA10-140B	5 — 15	140	18.0	6.5 x 10 x 2"
	PA30-140B	15 — 40	140	15.0	6.5 x 10 x 2"
	PA2-140B	1 — 4	140	20.0	6.5 x 10 x 2"

Add \$2.00 per amplifier for PPD U.S.A.

Prices subject to change  
without notice.  
California residents  
add 6%.

Contact your local distributor or:

**KLM ELECTRONICS**

"THE COMMUNICATIONS EQUIPMENT INNOVATORS"

1600 Decker • San Martin, California 95046

(408) 683-4240

Your local distributor is:



# KLM ELECTRONICS

Antennas

Amplifiers

1600 Decker Ave. San Martin, CA 95046  
[408] 683-4240

PRICE LIST EFFECTIVE MAY 1, 1974

<u>KLM PART NO.</u>	<u>LIST PRICE</u>	<u>DEALER NET QTY. 1-9</u>	<u>DEALER NET QTY. 10-UP</u>	<u>QTY. ORDERED</u>
<u>ANTENNAS</u>				
KLM 13-30-7	\$289.00			
KLM 13.9-14.4-5	219.95			
KLM 21.0-21.5-6	224.95			
KLM 15-10-DUO	335.95			
KLM 35-130-14	159.95			
KLM 50-52-11	97.29			
KLM 50-52-8	60.49			
KLM 144-148-7	23.79			
KLM 144-148-8	29.19			
KLM 144-148-9	34.49			
KLM 144-148-11	38.79			
KLM 144-148-12	42.19			
KLM 144-148-14	49.69			
KLM 144-148-16	53.95			
KLM 144-150-12C	54.95			
KLM 219-226-7	20.49			
KLM 219-226-9	22.69			
KLM 219-226-11	28.19			
KLM 219-226-14	37.79			
KLM 440-520-6	15.19			
KLM 420-470-14	21.55			
KLM 420-250-27	41.95			
BALUNS, ALL	13.95			
<u>ANTENNA COUPLERS</u>				
KLM 140-150-2	19.95			
KLM 140-150-4	25.95			
KLM 210-230-2	18.55			
KLM 210-230-4	23.55			
KLM 400-470-2	16.95			
KLM 400-470-4	22.95			
<u>2 METER AMPLIFIERS</u>				
PA 2-12B	44.95			
PA 10-40B	79.95			
PA 10-70B	129.95			
PA 2-70B	149.95			
PA 30-140B	169.95			
PA 10-140B	189.95			
PA 2-140B	219.95			

"THE COMMUNICATIONS EQUIPMENT INNOVATORS"