

*Robert W. Rinehart - Electronics*

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Phone: (412) 837-4762

GREENSBURG, PENNA. 15601

Industrial Division  
Communications Division  
Consulting, Project Engineering

April 4, 1986

Appalachian Search & Rescue Conference, Inc.  
P.O. Box 440  
Newcomb Station  
Charlottesville, Virginia 22901

Mr G.L. Harrison:

Thank you for the opportunity to bid on the King radio equipment, as listed on your "Communication Equipment Bid" dated January 7, 1986. Price quotation for the twenty or more King Model LPH5142C 14 channel portable includes flex antenna, universal speaker/microphone connector, TOT, Battery savaf, Code guard, multiple Code Guard, scan, priority scan, scan delay and internal keyboard/ LCD.

Recommended Options:

LAA 0811 6" Antenna with BNC connector	\$ 10.00
LZA 0812 BNC Conversion kit ( installed)	25.00
LAA 0105 Spare nickel - cadium rechargeable battery	65.00
LAA 0106 Spare alkaline disposable battery	19.80
LAA0310 Desk Charger (one hour dual rate)	60.00
LAB 0356 One hour dual rate vehicle charger	195.00
LAA 0340 Fourteen hour vehicular charger	30.00
LAA 0200 Speaker mic with coil cord	55.00
LAB 0436 Deluxe leather carrying case (fits large battery)	45.00
LAA 0411 Full cover for carrying case	8.00
LPH 5142C 14 channel portable radio	890.00

All prices less 20% discount.

R.W. Rinehart  
Rinehart Electronics

cc: John Kihl  
George Knast

**KING RADIO CORPORATION - MOBILE COMMUNICATIONS DIVISION**

P.O. Box 3347, 2920 Haskell Avenue, Lawrence, Kansas 66046-0347  
Telephone (913) 842-0402

Portable models include flex antenna, universal speaker/microphone connector, TOT, battery saver, Code Guard™, multiple Code Guard™. In addition, 14 channel models include scan, priority scan, scan delay, and internal keyboard/LCD.

**LPH SYNTHESIZED  
PORTABLE RADIOS**

FREQUENCY RANGE	POWER	CHAN- NELS	BATTERY INCLUDED	5 KHz CHANNEL PROGRAMMING		25 KHz CHANNEL PROGRAMMING	
				PROGRAMMABLE	FACTORY PROGRAMMED	PROGRAMMABLE	FACTORY PROGRAMMED
VHF 148-174 MHz	2 watt	2		LPH2020 A \$ 485	LPH2020 N \$ 510	LPH2023 A \$ 570	LPH2023 N \$ 595
	2 watt	2	Std. NI-CD	LPH2020 B 525	LPH2020 O 550	LPH2023 B 610	LPH2023 O 635
	2 watt	2	Lrg. NI-CD	LPH2020 C 550	LPH2020 P 575	LPH2023 C 635	LPH2023 P 660
	5 watt	2		LPH5020 A 595	LPH5020 N 620	LPH5023 A 695	LPH5023 N 720
	5 watt	2	Std. NI-CD	LPH5020 B 635	LPH5020 O 660	LPH5023 B 735	LPH5023 O 760
	5 watt	2	Lrg. NI-CD	LPH5020 C 660	LPH5020 P 685	LPH5023 C 760	LPH5023 P 785
	5 watt	14		LPH5141 A 705	LPH5141 N 730	LPH5142 A 825	LPH5142 N 850
	5 watt	14	Std. NI-CD	LPH5141 B 745	LPH5141 O 770	LPH5142 B 865	LPH5142 O 890
	5 watt	14	Lrg. NI-CD	LPH5141 C 770	LPH5141 P 795	LPH5142 C 890	LPH5142 P 915

\*NO BATTERY SUPPLIED

**BATTERIES AND CHARGERS**

	\$ USER
LAA0100 Spare nickel-cadmium rechargeable battery — standard capacity	40.00
LAA0105 Spare nickel-cadmium rechargeable battery — large capacity	65.00
LAA0106 Spare alkaline disposable battery — large capacity	19.80
LAA0310 One hour dual rate desk top charger — 120/240 VAC wired for 120 VAC	60.00
LAA0311 240 V. Conversion kit for LAA0310	2.40
LAA0320 One hour dual rate desk top charger — 120/240 VAC wired for 240 VAC	68.00
LAA0300 Fourteen hour desk top trickle charger — 120 VAC	25.00
LAA0360 Five unit multiple charger — dual rate, 120/240 VAC wired for 120 VAC	350.00
LAA0361 240 V. Conversion kit for LAA0360	2.40
LAA0370 Five unit multiple charger — dual rate, 120/240 VAC wired for 240 VAC	390.00
LAB0356 One hour, dual rate vehicular charger — includes mobile mic and external speaker	195.00
LAA0340 Fourteen hour vehicular charger	30.00

**ANTENNAS**

LAA0810 VHF flexible, 6" antenna 148-174 MHz with standard thread-in connector	10.00
LAA0811 VHF flexible, 6" antenna 148-174 MHz with BNC connector	10.00
LAA0812 BNC Conversion kit	10.00
LZA0812 BNC Conversion kit installed (deletes thread-in antenna, adds BNC antenna)	25.00

**SPEAKER MICROPHONE/EARPHONE**

LAA0200 Speaker mic with coil cord	55.00
LAA0220 Earphone	12.00

**CARRYING ACCESSORIES**

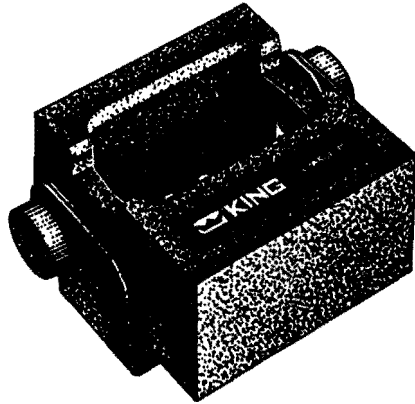
LAB0431 Deluxe leather carrying case with belt loop and swivel — fits standard capacity battery	40.00
LAB0436 Deluxe leather carrying case with belt loop and swivel — fits large capacity battery	45.00
LAA0411 Full cover for carrying case	8.00
LAA0413 Shoulder strap for carrying case	8.00
LAA0400 Belt clip	8.00
LAB0406 Belt Loop swivel and clip kit — mounts directly to radio	15.00
LAA0414 Spare Belt Loop	10.00

**PROGRAMMING/SIGNALLING/SERVICE ACCESSORIES**

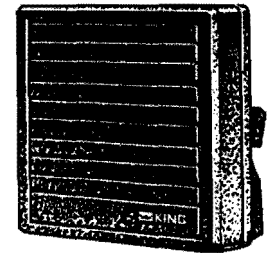
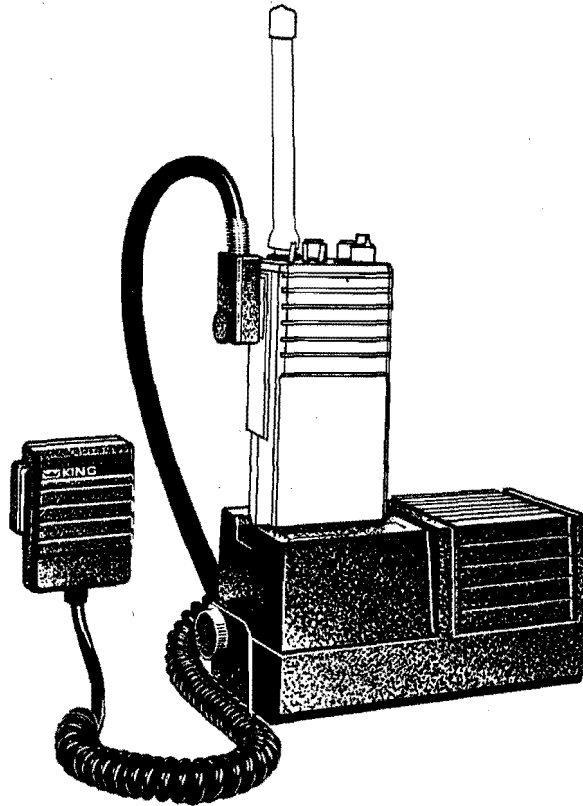
LAA0001 Service manual LPH series	15.00
LAA0701 Programming plug and programming manual	15.00
LAA0700 Cloning cable and programming manual	35.00
LAA0705 RS232 Interface	48.00
LAA0600 Portable Tool Kit, Ant. & Spanner wrench; Cables; Accy. RF; Audio; Battery eliminator	20.00
LZA0510 DTMF Encoder installed	98.00

# SPECIFICATIONS

## VEHICULAR CHARGERS



LAA 0340



LAB 0356

### LAB 0356

The LAB 0356 Vehicular Charger gives King portable radios mobile performance while offering one hour recharge and dead battery operation. An external speaker with five watts of audio output is included for use in high noise environments. The mobile mic included with the system permits full operation of the radio while it is secured in the charging base. The improved performance of a mobile antenna can be achieved through a PL259 connector on the charging base rear panel. Any King LPH/LPU series portable drops into the charger and is secured by spring loaded rollers which retain the unit during vehicle motion. All connections including RF, are securely made through one press-in side connector. A rugged two-piece mounting bracket allows easy mounting to dash or hump. The charger is reverse polarity protected. The LAA 0361 includes: 1 charging base with mounting bracket, 12 VDC power cord, 1 external speaker with

mounting bracket and 1 mobile microphone with hang-up clip.

Input: 13.5-17 VDC.

Minimum Charging Input Voltage: 12.5 VDC.

Minimum Radio Operation Input: 8.5 VDC.

Power Cord: 2 Wire (red/black), Red with in-line fuse, Length 10 feet, 2 Pin Molex Connector.

#### Charge Base

Connectors: External Antenna—PL259.

DC Input—2 Pin Molex.

Mic Output—6 Pin Mini Modular.

Audio Output—2.5 mm Sub-miniature Jack.

Size: 8.5 x 3.75 x 3.5 inches.

Weight: 3 lb. 2 oz.

#### External Speaker

Input: 5 Watts.

Impedance: 4 Ohms.

Cord: 2 Wire, Length 8.5 feet, 2.5 mm Subminiature Plug.

Size: 5.0 x 5.0 x 2.5 inches.

Weight: 20 oz.

#### Microphone

Cord: Coil Cord: Urethane jacket maximum 15" retracted, minimum 90" extended, 6 Pin Mini Modular Connector with boot.

Size: 2.25 x 2.9 x 1.2 inches.

Weight: 6 oz.

### LAA 0340

The LAA 0340 vehicular charger is a compact charging base capable of charging King rechargeable battery packs in 14 hours or less. King LPH/LPU radios are secured in the base with spring loaded rollers. A rugged adjustable mounting bracket attaches the base securely to dash or hump mount.

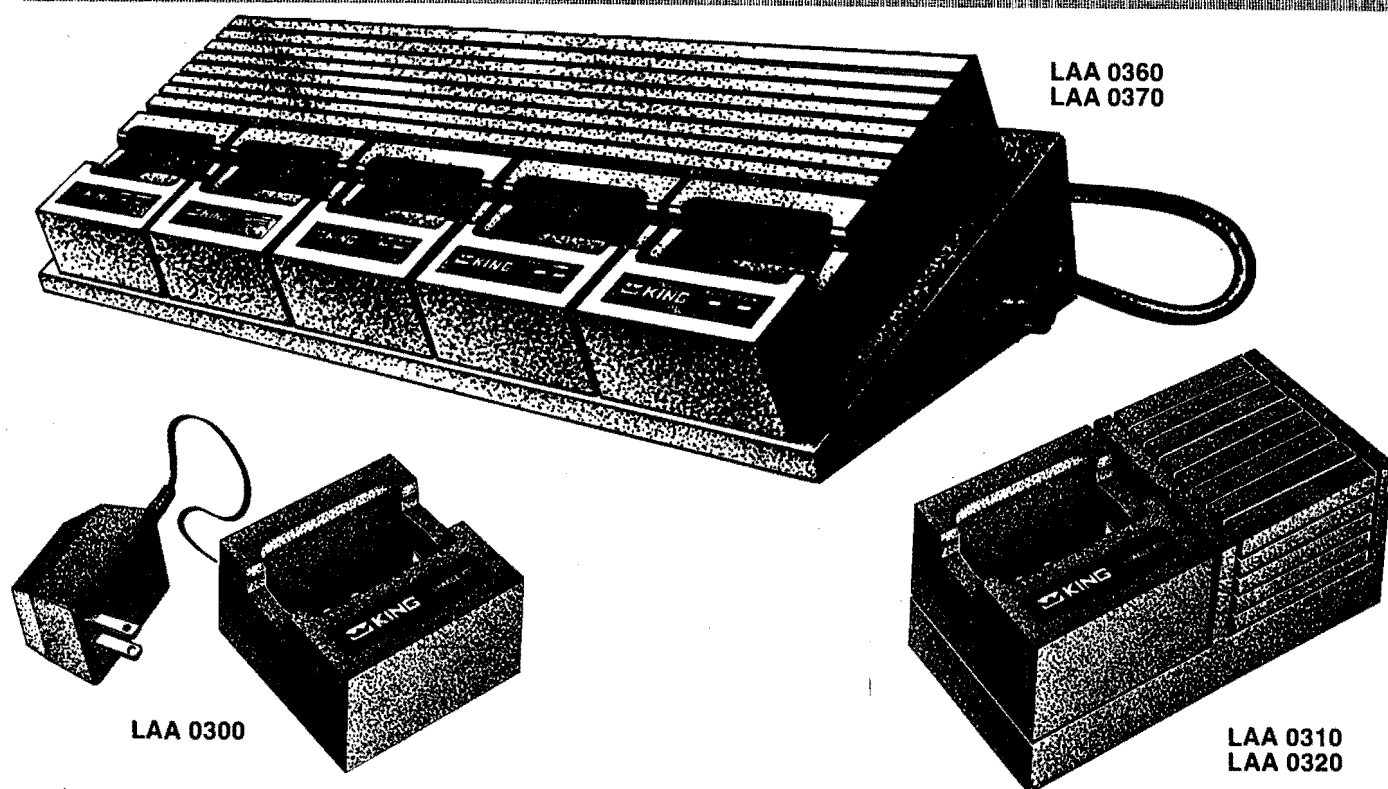
Input: 12-18 VDC.

Power Cord: 2 wire (red/black), Red with in-line fuse, Length 10 feet.



# SPECIFICATIONS

## CHARGERS



### LAA 0300

The LAA 0300 is a compact desk top charger that will recharge King nickel cadmium battery packs (LAA 0100 and LAA 0105) in 14 hours or less. Its compact size makes it ideal to slip into a briefcase or tool kit for travel. The charger will accept a battery pack attached to the radio or alone. The LAA 0300 consists of a charger housing connected to a wall transformer by a two conductor cable. An LED indicator confirms proper contact with the battery pack.

Input: 121 VAC  $\pm$  10%, 60 Hz.

Size: Charger: 3.35 x 3.40 x 2.35 inches.

Transformer: 1.50 x 1.60 x 2.15 inches.

Weight: 1 lb.

Power Cord: Two conductor from transformer to charging base, 78" length.

### LAA 0310 LAA 0320

The LAA 0310 or LAA 0320 will recharge King nickel cadmium battery packs (LAA 0100, LAA 0105) to 90% of the battery capacity in an hour or less. Once the

charging function is complete, the unit will automatically switch to a trickle rate to maintain the charge without damaging the battery pack. The charger will accept a battery pack attached to the radio or alone. Red and green LED indicators confirm proper contact with the battery and show the charge rate.

Input: LAA 0310—121 VAC  $\pm$  10%,  
50/60 Hz.

LAA 0320—242 VAC  $\pm$  10%,  
50/60 Hz.

Size: 7.0 x 3.75 x 3.5 inches.

Weight: 3 lbs. 2 oz.

Power Cord: Grounded, 3 Conductor  
Cable, 78" length.

### LAA 0360 LAA 0370

The LAA 0360 and LAA 0370 are five unit chargers capable of simultaneously charging five King nickel cadmium batteries to 90% capacity in an hour or less. Once the charging function is complete, each receptacle can independently switch to a trickle rate maintaining the charge without damaging the battery pack. Red and green

LED's at each receptacle confirm proper contact with the battery pack and indicate charge rate. The charger will accept batteries attached to the radio or alone. The rugged frame will desk or wall mount and will fit in a 19" rack mount configuration.

Input: LAA 0360—121 VAC  $\pm$  10%,  
50/60 Hz.

LAA 0370—242 VAC  $\pm$  10%,  
50/60 Hz.

Size: 18.5 x 7.25 x 5.5 inches.

Weight: 15 lbs. 8 oz.

Power Cord: Grounded, 3 Conductor  
Cable, 78" length.

### LAA 0311 (Not Pictured)

The LAA 0311 is a conversion kit used to convert the LAA 0310 from 121 VAC to 242 VAC input. Proper labels and voltage tags are included.

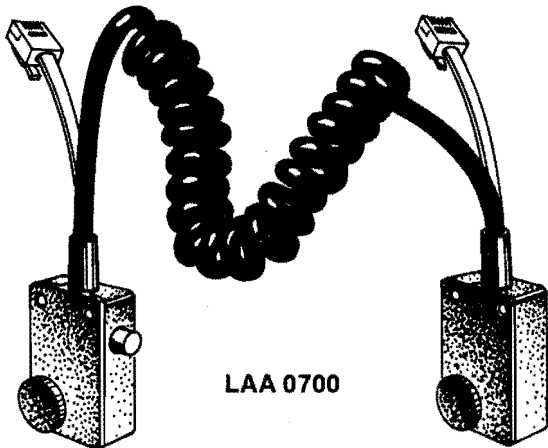
### LAA 0361 (Not Pictured)

The LAA 0361 is a conversion kit used to convert the LAA 0360 from 121 VAC to 242 VAC input. Proper labels and voltage tags are included.

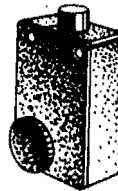
 **KING**

# SPECIFICATIONS

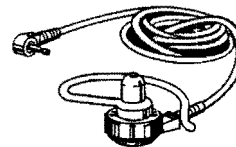
## SPEAKER MICROPHONE PROGRAMMING PRODUCTS



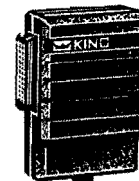
LAA 0700



LAA 0701



LAA 0220



LAA 0200

### LAA 0200

The LAA 0200 is a speaker microphone designed to allow use of the portable radio while it remains attached to the belt. The compact lightweight mic is attached by a clip to: collar, lapel, pocket or strap. The clip swivels 360° allowing the mic to be secured at various angles. A hi/lo switch varies the audio output of the speaker. The coil cord reaches 72" extended and mates with any King LPH/LPU series radio via a plug-in side connector with security screw.

Size: 2.9 x 2.0 x 1.0 inches.

Weight: 6 oz.

Coil Cord: Maximum 12" retracted, minimum 72" extended, four conductors and shield urethane jacket.

Speaker: Input: 500 mW, 300 to 3000 Hz.

Impedance: 8 Ohms.

Mic: Impedance: 3000 Ohms.

Sensitivity: -63dB ± 3dB 300 to 3000 Hz.

Frequency Response: -0dB + 3dB 300 to 3000 Hz.

Connector: RF jack, audio jack, 6 pin data I/O. Includes thread-in security screw.

Switch: Hi/low audio SPST.

### LAA 0220

The LAA 0220 is an earphone for use with King LPH/LPU series portable radios. This

earphone has replaceable ear tip and ear loop and a detachable cord.

Impedance: 2000 Ohms ± 20% @ 1000 Hz.

Sensitivity: 120dB ± 5dB @ 250 Hz.

Connector: 2.5 mm Right Angle Plug.

Cable: 2 Conductor, 60" Length.

### LAA 0600 (Not Pictured)

The LAA 0600 is a tool kit that facilitates service for King LPH/LPU series portable radios. The tool kit includes: (1) an antenna adaptor key and spanner tool to fit the antenna and side connectors; (2) a 6 pin accessory test cable providing access to mic audio, PTT, and monitor functions; (3) an RF cable assembly providing access to the RF port through the 3.5 mm side connector jack; (4) an audio cable assembly that mates with the 2.5 mm side connector output and (5) a battery eliminator allowing the radio to be operated from an AC power supply.

### LAA 0700

The LAA 0700 is a cloning cable used to transfer the programming information in one King radio to another King radio. The cable allows cloning from portable to portable, portable to mobile, mobile to portable or mobile to mobile if the radios are in the same band. Any King radio with a keyboard that is capable of programming can be used to clone any other King radios.

Radios without internal programming capability cannot clone other radios but can accept programming information. 14 channel radios can clone 2 channel radios, but only the information for channel 1 and 2 will be downloaded.

Plug Size: 1 x 1.9 x 1.2 inches.

Coil Cord: Urethane jacket maximum 12" retracted, minimum 72" extended.

### LAA 0701

The LAA 0701 is a programming plug that fits into the side connector of LPH/LPU portable radios. This plug is used to access the programming mode for keyboard radios capable of internal programming.

Size: 1 x 1.9 x 1.2 inches.

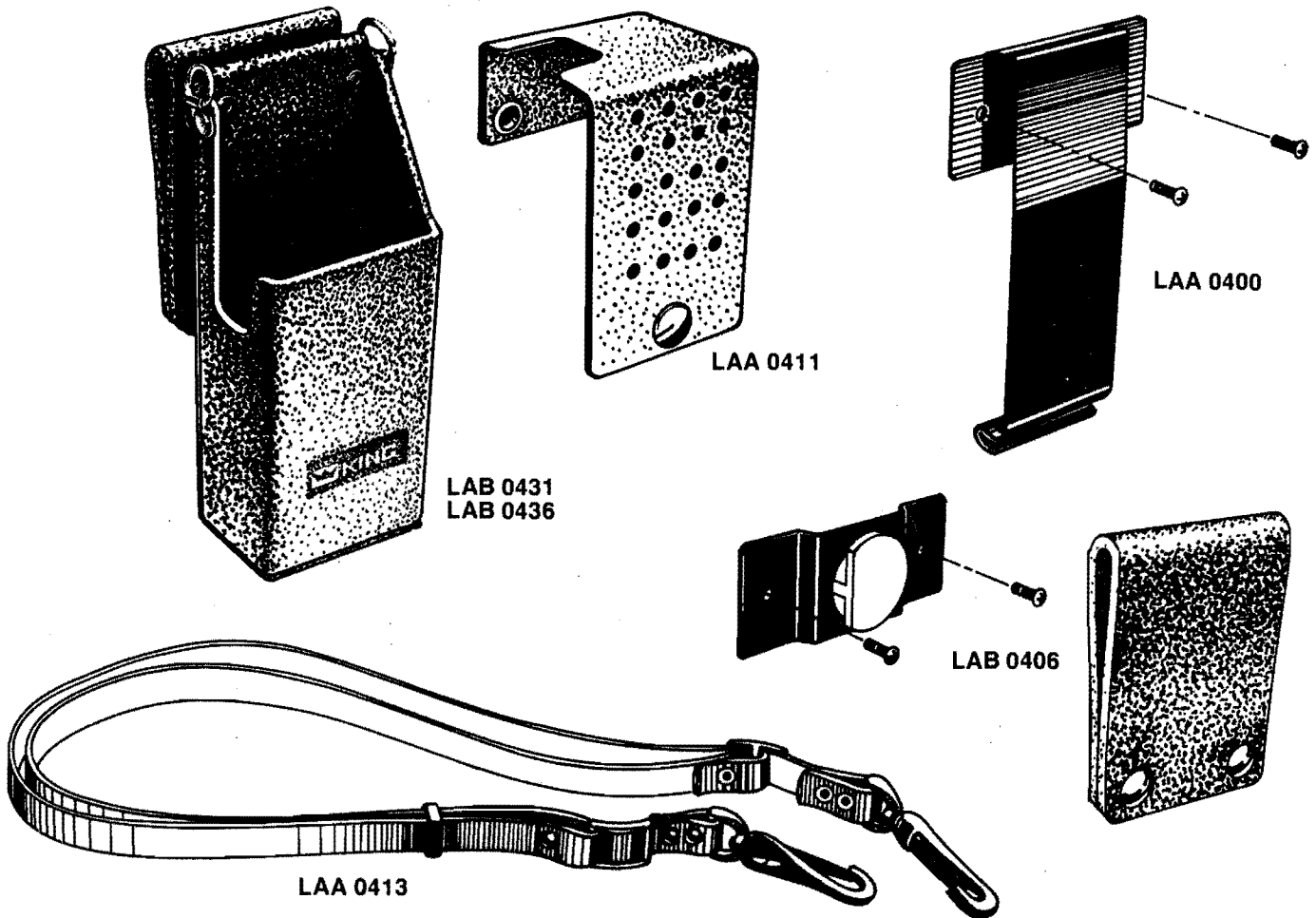
### LAA 0705 (Not Pictured)

The LAA 0705 is an RS232 interface allowing a computer to store programming information and clone King radios. This is ideal for dealers and large system users who need to keep files of programming information that is easily accessible to put new radios in service or to change the programming in a system. The LAA 0705 includes an RS232 interface plug and King LPH/LPU side connector plug connected by a coil cord. Also included is a list of the appropriate RS232 codes required to access the radio memory.



# SPECIFICATIONS

## CARRY CASES ACCESSORIES



### **LAB 0431 LAB 0436**

The LAB 0431 and LAB 0436 are deluxe leather carrying cases made from high grade top shoulder leather. A unique holster clip traps the battery pack in the bottom of the case yielding maximum access to the radio top controls. Both cases come with a detachable swivel belt loop that allows easy removal of the radio and case from the belt. When attached, the radio and case swivels for comfort. The belt loop will accept up to 2 $\frac{3}{4}$ " wide belts. The LAB 0431 is used for radios with standard sized battery packs (LAA 0400). The LAB 0436 is used for radios with large battery packs (LAA 0105, LAA 0106). Both cases include "D" rings for shoulder strap attachment.

### **LAA 0411**

The LAA 0411 is a leather full cover that can be attached to the LAB 0431 and LAB 0436 leather carry cases.

### **LAA 0413**

The LAA 0413 is a leather shoulder strap that can be attached to "D" rings found on the LAB 0431 and LAB 0436 leather carry cases. The shoulder strap is adjustable from 35 to 60 inches.

### **LAA 0414** (Not Pictured)

The LAA 0414 is a spare leather belt loop that mates with the swivel stud found on LAB 0431 and LAB 0436 leather cases.

### **LAA 0400**

The LAA 0400 belt clip fastens directly to the rear heat sink or mounting surface of

LPH/LPU series portable radios with two screws. The stainless steel clip accepts up to 2 $\frac{3}{4}$ " belts and features a reverse bend keeping the radio secured on a belt. The LAA 0400 includes: 1 belt clip, 2 mounting screws. Size: 1.9 x 3.2 x 0.3 inches.

### **LAB 0406**

The LAB 0406 is a detachable swivel belt loop. A swivel stud mounts to the rear heat sink or mounting surface of LPH/LPU series radios with two machine screws. This swivel stud fits into a clip on the leather belt loop allowing the radio to be easily detached from the belt by a 180° rotation. When attached, the radio swivels for maximum comfort. The belt loop accepts up to 2 $\frac{3}{4}$ " wide belts. The LAB 0406 includes: 1 swivel stud, 2 mounting screws and 1 belt loop with clip.

 **KING™**