



# *Motorola*

## **POLICE CRUISER**

### **AMERICA'S FINEST POLICE CAR RADIO**

We herewith present the new Motorola "POLICE CRUISER" — a 6-tube high quality police car receiver, with 6-in. separate external speaker, and the "Magic Eliminode." This model is the result of over six years of intensive specialization in the development, engineering and manufacture of auto radio exclusively. It represents the last word in police car set design and construction.

The Motorola "POLICE CRUISER" is not an ordinary radio — not a house set adapted for automobile use. It is specifically engineered to give long, continuous, satisfactory service and take the "bumps" a police car receiver is regularly subjected to.

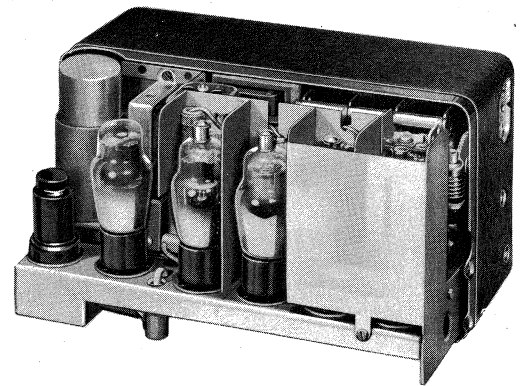
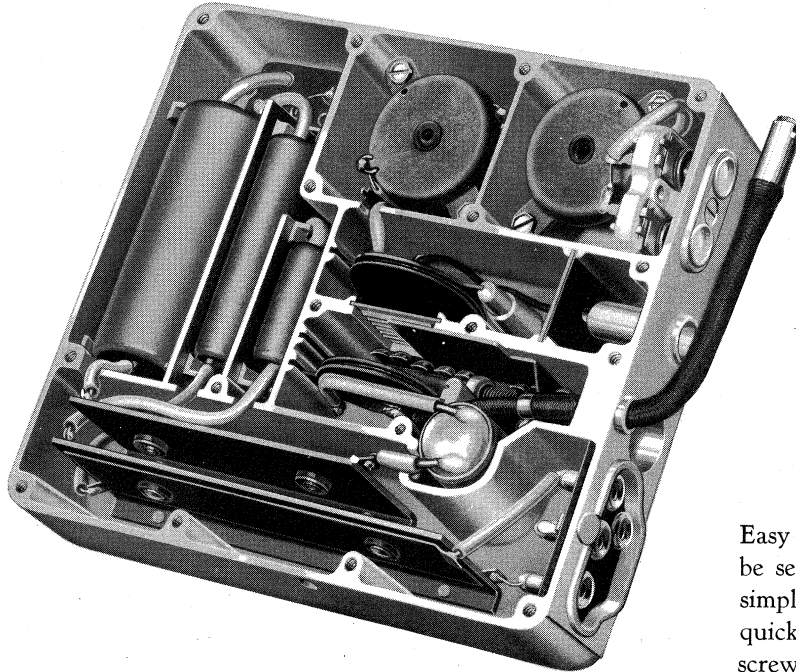
All of the outstanding features that have made Motorola Auto Radio the standard of comparison in the industry have been incorporated in the design and construction of the Motorola "POLICE CRUISER." Its ruggedness, its efficient performance, its ability to perform under difficult conditions and its general all-around dependability make the Motorola "POLICE CRUISER" a superior product worthy of your consideration.



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# Outstanding Features of the Motorola "POLICE CRUISER" That Make It Easier and Quicker to Install and Service

Motorola's exclusive features are quickly apparent. Simplicity and high quality is the keynote of the 1936 Motorola "POLICE CRUISER." Its superiority is easily demonstrated . . . It is engineered specifically to give long, uninterrupted, satisfactory service in police work.



## PLUG-IN CHASSIS

Easy to Install and Service. Tubes and Vibrator may be serviced without removing chassis from housing — simply remove front cover. Easier to inspect and quicker to service. Covers are friction fastened — no screws. Chassis easily removed and replaced.

## Only MOTOROLA has The "Magic Eliminode" NEWLY PERFECTED! Revolutionary Improvement in Design

This exclusive patented Motorola feature completely eliminates all spark plug suppressors, and in the later model cars even eliminates the distributor suppressors — this is an achievement that cannot be accomplished by any other auto radio built.

Eliminating spark plug suppressors is of utmost importance in police work, as the use of spark plug and distributor suppressors seriously affect top speed of the car, impair engine efficiency and cause excessive consumption of gasoline.

## ADJUSTABLE ANTENNA SYSTEM

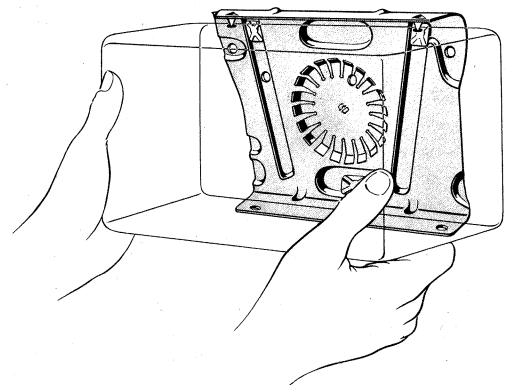
"Series-Fed" Antenna System — adjustable for peak performance when using either under-car or roof aerial.

## Compact Shape and Size . . . Installs Over Steering Wheel

More easily and quickly installed than ever before over steering post, on exclusively designed "Jiffy" Mounting Bracket.

## CENTER-SPLIT HOUSING

Permits easy access to tubes and vibrator.



## INSTALLS ON "JIFFY" MOUNTING BRACKET

This unique Motorola feature permits you to remove and replace entire set in a jiffy. Lift set up and it's out! Can be just as quickly replaced. Makes installation and servicing more convenient than ever. Mounting holes to match the knock-outs in most cars.

**Positively NO SPARK PLUG SUPPRESSORS to Impair Engine Efficiency**

# **For Maximum Efficiency in Police Car Radio Reception . . . Specify the NEW MOTOROLA "POLICE CRUISER"**

Motorola "POLICE CRUISER" is a radio receiver especially designed in the Motorola engineering laboratories to meet the exacting requirements and continuous operation demanded of mobile radio receivers in police work.

The Motorola "POLICE CRUISER" is dependable, and most efficient. It embodies all of the ruggedness of design and construction that have made Motorola the most popular auto radio set. Hundreds of thousands of satisfied car owners everywhere are a powerful testimonial of Motorola's outstanding performance.

The "POLICE CRUISER" is made by the manufacturer of "America's Finest" auto radio. Motorola leadership is the result of many years' intensive specialization in the development and engineering of auto radio. During these years Motorola engineers have lived and breathed auto radio — and nothing else.

Precision made of highest quality materials, the "POLICE CRUISER" is designed to give efficient, continuous service with a minimum amount of attention. Its "roadability" and consistent, satisfactory operation under most difficult conditions put Motorola in a class by itself.

Motorola will stand the severest comparison. Test Motorola thoroughly and let it prove to you its superiority. Its first cost is low — and due to its high quality, great savings in servicing costs may be effected.

It embraces, among other features, the following salient points, which we ask you to consider in detail:

## **EXTRA SENSITIVITY**

The extreme sensitivity of the Motorola "POLICE CRUISER" and its rapidly rising power sensitivity reduce fading of signals under viaducts, over steel bridges, in congested areas surrounded by steel buildings, and when driving through low-field-strength areas.

## **LOW CURRENT CONSUMPTION**

Every effort possible has been made to reduce the current drain of the Motorola "POLICE CRUISER" to a minimum consistent with good performance. Ref-

erence to the "A" Battery Drain Chart (see Chart 1) will show that the Motorola "POLICE CRUISER" has a battery drain approximately 60% of that consumed by an average 6-tube car receiver. The Motorola "POLICE CRUISER" with cold cathode rectifier and permanent magnet dynamic speaker, has a drain of 24 watts at 6 volts, while that of the average 6-tube car receiver has a drain of 39 watts at 6 volts.

The average car generator will easily compensate for this low drain, even at slowest cruising speeds.

# **MOTOROLA "POLICE CRUISER"**

## **PERMANENT MAGNET DYNAMIC SPEAKER**

Newly developed, high permeability iron is used in the construction of its permanent magnet. A speaker of this type gives efficiency equal to that of electrodynamic speakers, *without using any battery current.*

The Motorola "POLICE CRUISER" Speaker is also resonated to the voice frequencies, so that extraneous noises occurring in the higher sound frequencies are not reproduced. The 6" speaker is separate from the receiver, and may be installed in any part of the car, and mounted at any angle to obtain greatest volume and clearness from the acoustical properties of the car.

## **HEAVY DUTY VIBRATOR**

Designed with large contacts for long, continuous service. This Vibrator is of the interrupter type, and works in conjunction with an O-Z-4 cold cathode rectifier tube.

Due to the low current demands of the receiver on the vibrator, and due to the efficient regulation provided by the extra large iron core of the power transformer, an operating life of from 1200 to 1500 hours can be expected from the Motorola Vibrator.

## **CONTROL HEAD**

Remote control panel clamps onto the lower edge of the instrument panel, and includes the volume control knob, which also controls the power switch. It is furnished with a Red Indicating Light, which forcibly calls attention to the driver that the radio is turned on — and is on the wave, even though no signals are being picked up.

## **SERVICING**

The Motorola "POLICE CRUISER" receiver mounts on "Jiffy" Mounting Bracket, and may be removed for servic-

ing by merely removing two studs at the bottom and removing the plug-in connections. A center-split housing is used — making it easy to remove the front cover, exposing the vibrator and tubes. This makes it easy to test the tubes and vibrator without removing the entire chassis.

## **FREQUENCY RANGE**

The Motorola "POLICE CRUISER" is a fixed frequency receiver permanently adjusted to the frequency of the transmitting station on which it is to be used.

*This frequency must be given when ordering.* The receiver will be properly adjusted to it at the factory and the crystal accurately ground to maintain this frequency throughout the life of the receiver.

The "POLICE CRUISER" can be supplied for any single frequency between 1550 KC and 2800 KC.

## **CRYSTAL CONTROL**

This insures radio reception as long as even the slightest signal is intercepted by the car aerial. Crystal Control is the best method known to science and research to regulate the frequency of the oscillator. The receiver frequency cannot shift to either side of a transmitter frequency, and thus is not subject to variance due to temperature changes which affect the component parts of the receiver.

By referring to the curve (see Chart 2) showing frequency change plotted against temperature, you will discover that within the normal operating range of the receiver an over-all frequency drift of only 600 cycles can occur — this means a drift of 300 cycles to either side of the center of the police transmitter channel. Since 300 cycles is only .3 of 1 kilocycle, and the carrier wave is normally 10 kilocycles wide, the loss in sensitivity due to drift is less than .1 of 1 microvolt.

# **MOTOROLA "POLICE CRUISER"**

# A BATTERY DRAIN

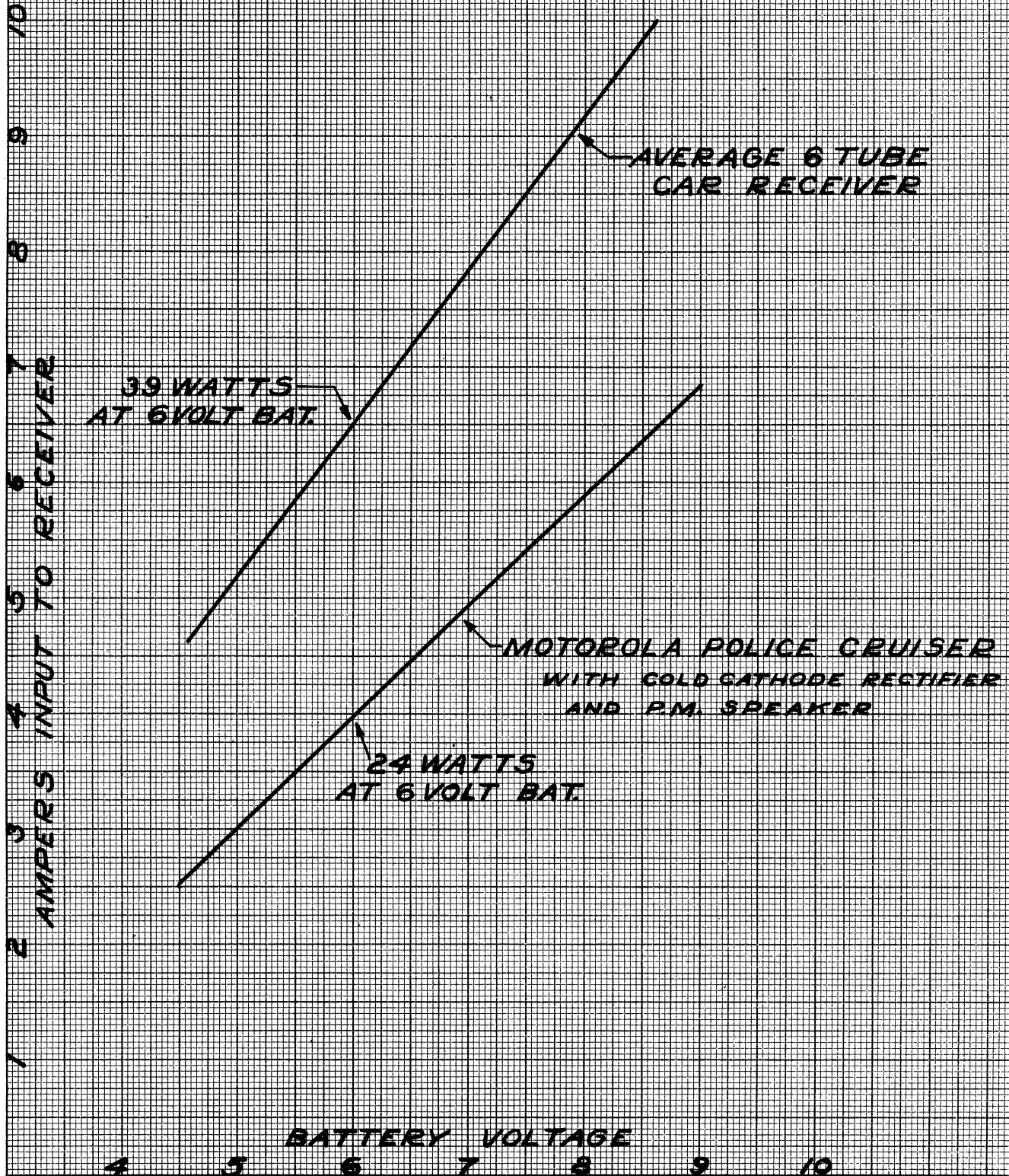
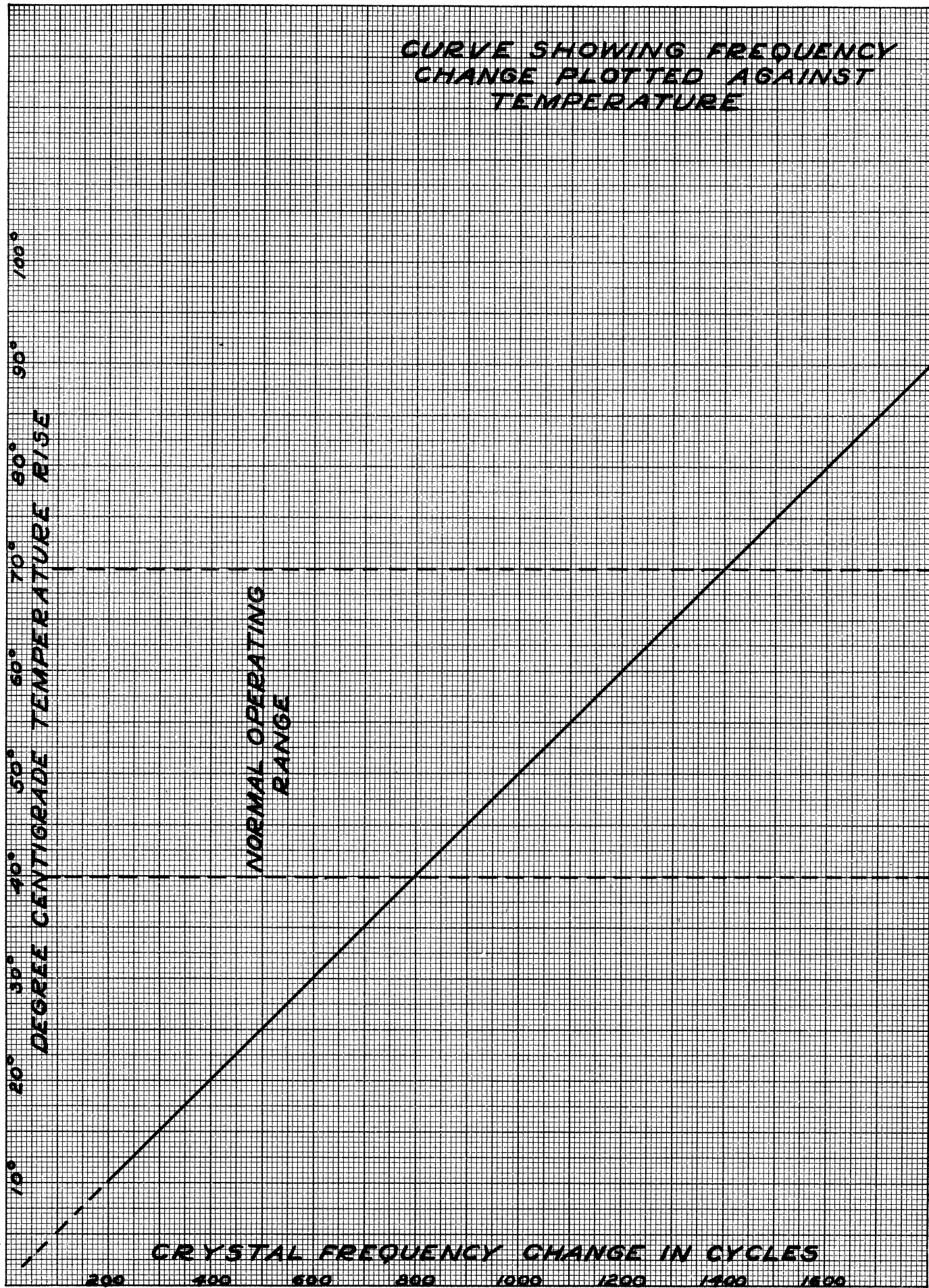
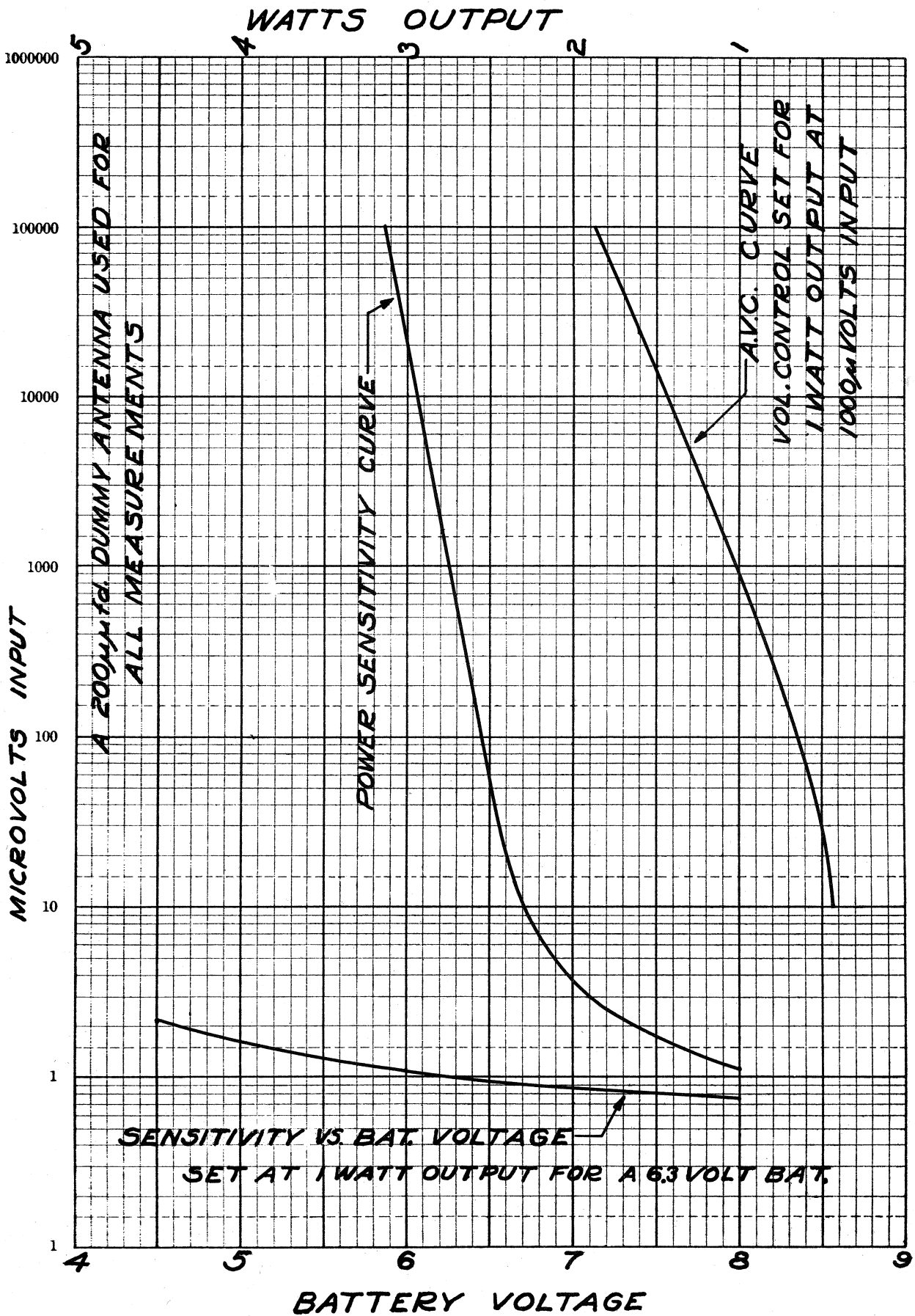


CHART 1

**CURVE SHOWING FREQUENCY  
CHANGE PLOTTED AGAINST  
TEMPERATURE**



**CHART 2**



MODEL POLICE CRUISER  
 DATE 4-13-36  
 BY R. S. Y. - ENG. DEPT.

SIGNAL GENERATOR

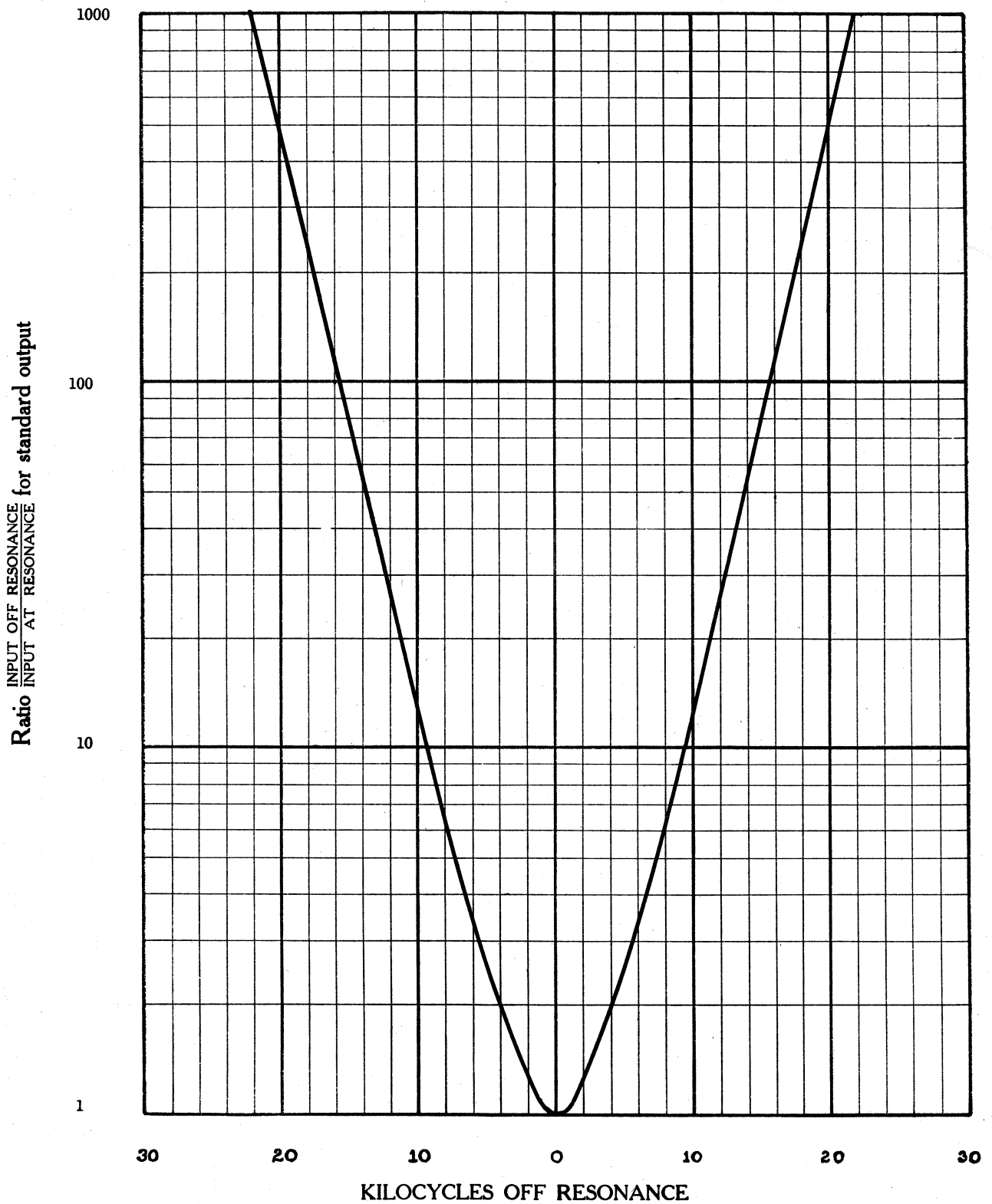
CHART 3

# SELECTIVITY

Model POLICE CRUISER - CRYSTAL CONTROL

Date 4-14-36

*CURVE TAKEN AT 1712 K.C.*



**CHART 4**

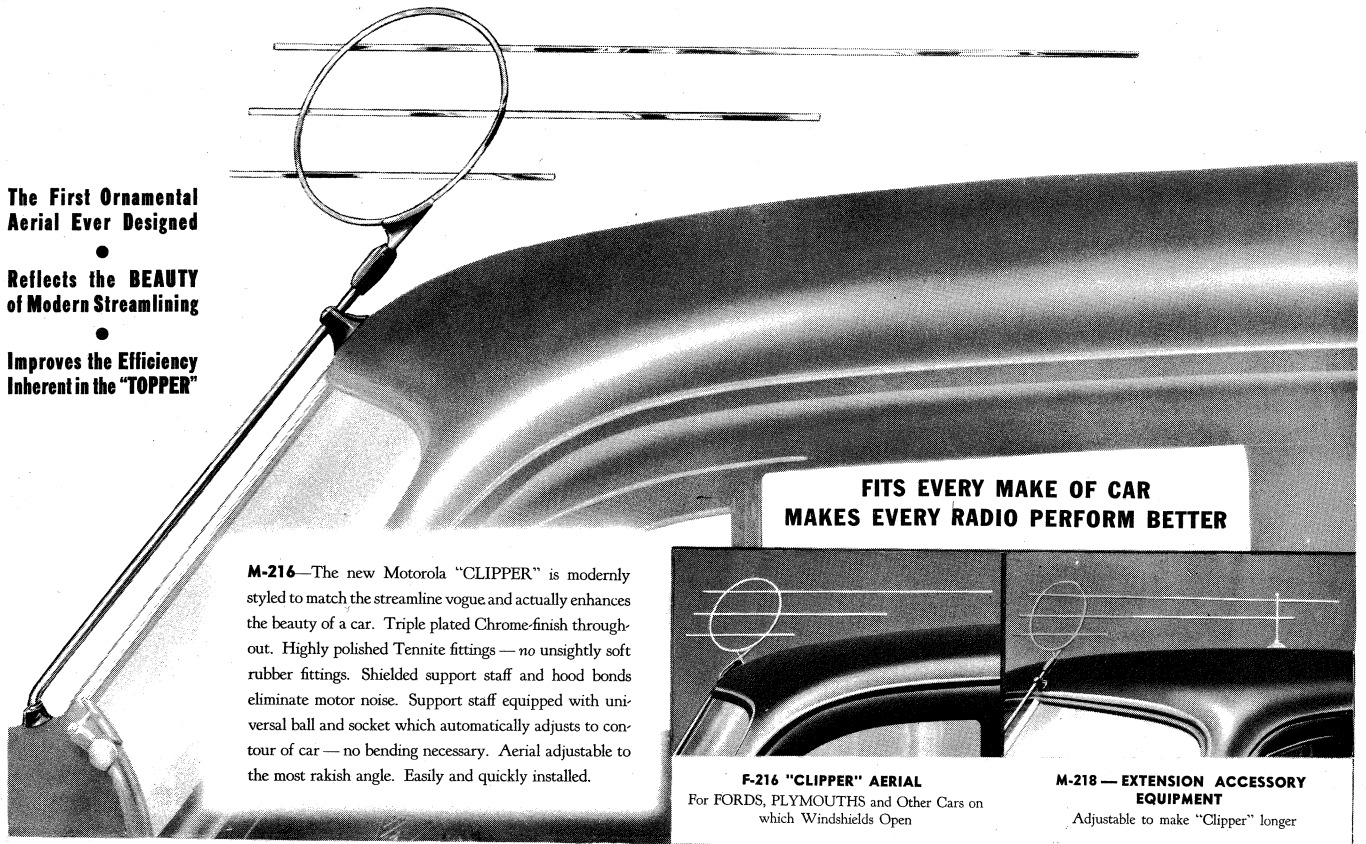


# The *Motorola* **CLIPPER** Roof Aerial

The First Ornamental  
Aerial Ever Designed

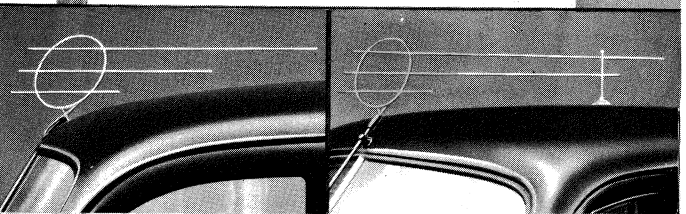
Reflects the **BEAUTY**  
of Modern Streamlining

Improves the **Efficiency**  
Inherent in the "TOPPER"



**FITS EVERY MAKE OF CAR  
MAKES EVERY RADIO PERFORM BETTER**

**M-216**—The new Motorola "CLIPPER" is modernly styled to match the streamline vogue and actually enhances the beauty of a car. Triple plated Chrome-finish throughout. Highly polished Tennite fittings — no unsightly soft rubber fittings. Shielded support staff and hood bonds eliminate motor noise. Support staff equipped with universal ball and socket which automatically adjusts to contour of car — no bending necessary. Aerial adjustable to the most rakish angle. Easily and quickly installed.



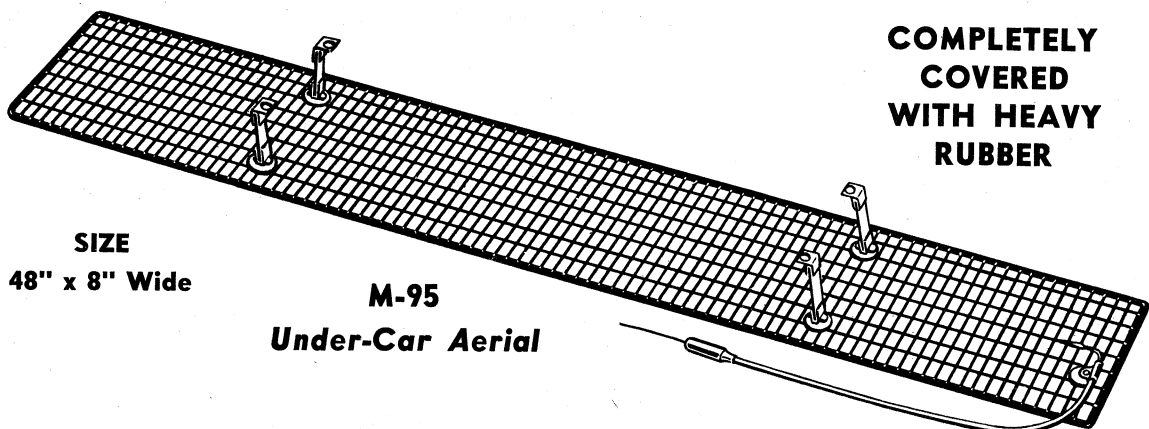
**F-216 "CLIPPER" AERIAL**  
For FORDS, PLYMOUTHs and Other Cars on  
which Windshields Open

**M-218 — EXTENSION ACCESSORY  
EQUIPMENT**  
Adjustable to make "Clipper" longer

## **NOTE: SPECIAL "CLIPPER" TOP ONLY**

**M-221 — "CLIPPER" AERIAL SEPARATE TOP UNIT.** To replace the top part only on Motorola "TOPPER" Aerials. The distinctive streamline "CLIPPER" top section only for ready replacement of the "Toppers" now already installed. Packed 2 in carton (with trade-in allowance).

## **EXCLUSIVELY DESIGNED UNDER-CAR AERIAL**



**SIZE**  
48" x 8" Wide

**M-95**  
**Under-Car Aerial**

**COMPLETELY  
COVERED  
WITH HEAVY  
RUBBER**

### **EXTRA HEAVY CONSTRUCTION**

The specially developed Motorola M-95 Under-Car Aerial is a full-size 48 inch x 8 inch grid mesh plate, designed to have the correct capacity and signal pickup that exactly matches all Motorola car receivers.

Both plate and lead-in connection are completely coated with

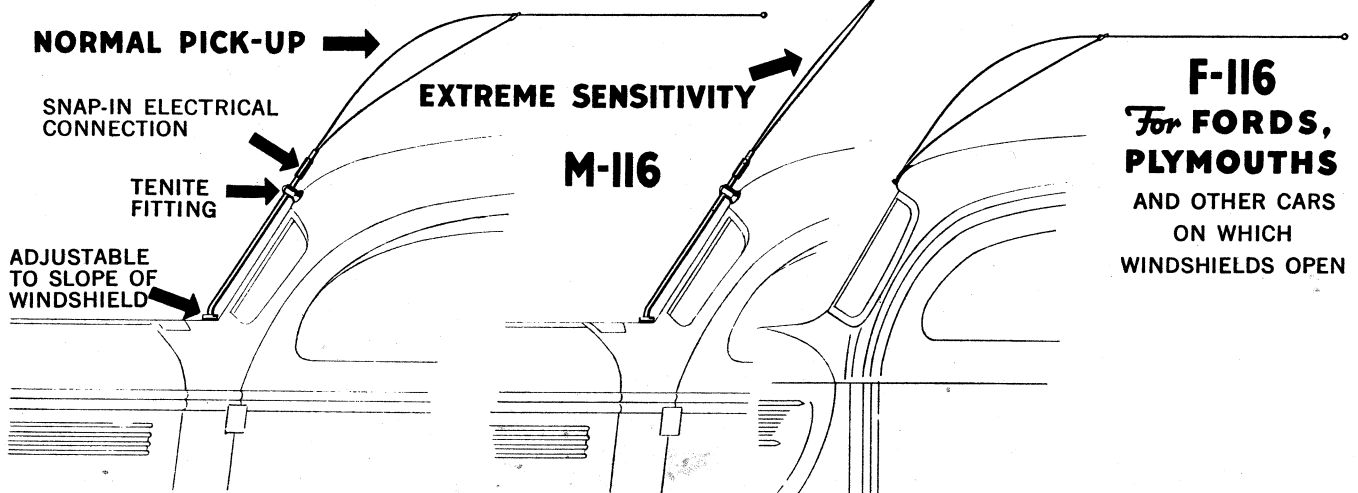
heavy live rubber, applied by newly perfected rubber electroplating process. Insures perfect reception and prevents short-circuiting in wet weather.

Easy to install without drilling holes in car running board — flexible mountings. Keeps out of sight under running board.

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# THE *Motorola* TOPPER

"Tops" in Aerials for Steel Top Cars



For all steel top cars. Insures "tops" in performance, and eliminates the tire static and the "weather" problem. Streamlined, chrome-plated, tempered steel shaft. Easily and quickly installed. When out in the country away from broadcasting stations, it snaps up to extreme sensitivity and gives extra power to the radio. When locked down in position in the city it will not hit obstructions such as low garage doors.

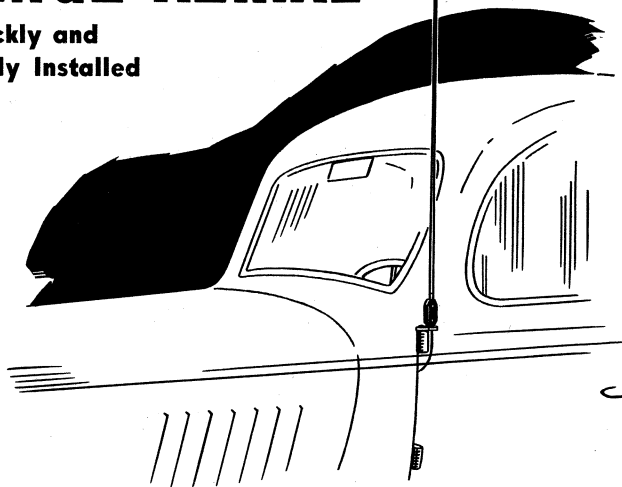
Order M-116 "Topper" Aerial

Specially designed "Topper" Aerial for Fords, Plymouths and other cars on which windshields open. Fastens to top of car. Streamlined, chrome-plated tempered steel shaft. Easily and quickly installed. Adjustable for city and country.

Order F-116 "Topper" Aerial

## *Motorola* HINGE AERIAL

Quickly and  
Easily Installed



M-220 — MOTOROLA HINGE AERIAL

Made of spring steel, triple-plated chromium finish, with hinge bracket and lead-in complete. Those who prefer this type of aerial will find it neat appearing and efficient.

## INSULATORS FOR Buick and Oldsmobile RUNNING BOARD AERIALS

We supply Insulators for Buick and Oldsmobile so that the Running Boards of these cars may be used as aerials, as provided for by car manufacturer. Packed complete 1 set in carton.

M-144 Insulators for Buick

M-149 Insulators for Oldsmobile

# *Motorola*

## **IS THE STANDARD OF COMPARISON IN AUTO RADIO**

Motorola is the acknowledged leader in the auto radio industry. Ever since the very beginning of radio for automobiles — Motorola has stood out first in the field. The Motorola "POLICE CRUISER" is the product of "America's Finest" auto radio manufacturer.

Motorola was first in auto radio to pioneer practically every major advancement. You can with perfect confidence rely on the Motorola "POLICE CRUISER" for efficient operation, long and continuous service, and a minimum of servicing.

The Motorola "POLICE CRUISER" will prove its superiority in any test of comparison made in your own laboratories — and in actual operation will prove most economical.

Motorola is backed by a distributor and installation service organization which is unique in the industry. There are over 3,000 Authorized Motorola Installation and Service Stations in large and small cities from Coast to Coast and Border to Gulf. Your nearby Motorola community distributor is at your service. Write him for sample sets for testing purposes and further particulars.



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