

## FuG 200 (HOHENTWIEL) ASV AND NAVIGATIONAL RADAR

FuG 200 (Hohentwiel) is a search and warning equipment and is used for the detection of surface vessels and as a navigational aid.

Manufactured by Lorenz, the FuG 200 consists of a two-tube high-power transmitter, a superheterodyne receiver, and a CRT indicator. The transmitting antenna consists of eight end-fed, half-wave horizontal dipoles arranged in colinear pairs mounted on brackets in front of the fuselage and facing forward in the line of flight. The receiver has no r-f amplification; it is connected, by means of a motor-driven switch, alternately to two antennas fitted on the starboard and port sides of the fuselage at angles of 30° to the line of flight.

Below the observer on the right is a switch-box fitted with four knobs. The top two-way switch turns the equipment on and off. The bottom knob remotely controls the gain in the receiver. The right-hand lever is self-centering and makes a slight adjustment in the frequency. The left-hand switch is used when Hohentwiel is at 2,000 meters\* or higher.

The range scale etched on the glass of the CRT screen coincides with the vertical time-base and is calibrated from zero to 150 km at 10-km intervals, the distance between the 10-km marks being progressively smaller as extreme range is reached. Because of ground returns, satisfactory readings cannot be obtained at less than three km. To offset this, some of the FuG 200's have been fitted with a switch by which the scale can be magnified so that close ranges can be read off to the nearest 50 meters. Receiver and transmitter are probably not accessible during flight since a remote control box is provided.

FuG 200 is used in a Ju 88, Ju 188, Ju 290, Heinkel III, FW 200, and Do 217. Late information includes details of a radar of this type which was fitted on a submarine. For blind

bombing at night, it is said that best results can be obtained by the combined use of Hohentwiel, X-Gerät Clock, and Altimeter FuG 101, FuG 101A, or FuG 103.

The indicator of a captured Hohentwiel had the following markings:

Sichtgerät S.C. 200  
Ln. 28893-2  
124-1575-C-1  
NR. 2034

The characteristics of FuG 200 are as follows:

RANGE (miles): Approximately 60.

FREQUENCY RANGE (mc): 570; possible band 550 to 570.

PULSE RECURRENCE FREQUENCY (cps): 600.

ANTENNA: In three sections, one for transmitting and two for receiving. Each section consists of eight dipoles and eight reflectors. Transmitting antenna is on nose of aircraft, flanked on each side by receiving arrays that point 30° to left and right of line of flight.

TYPE OF PRESENTATION: Display unit in front of the observer contains CRT with vertical timebase, that is, a screen of perspex sheet metal with 15 parallel horizontal lines reading 0 to 150 km (from bottom to top). Of the four knobs on front panel, the top left controls the zero point; the top right, the focus of the trace; the bottom left changes the range from 0 to 150 km for search and navigational aid to the 0 to 15-km range for approach and attack; the bottom right governs the brightness of the trace.

POWER SOURCE: Motor generator, 500 volts a-c, supplying power packs in each unit.

SIMILAR SETS: Rostock Gerät, an early type of search equipment which has been scrapped and is now superseded by the FuG 200.

POWER INPUT REQUIRED: Not known.

\* One meter = 3.28 feet.

TM E 11-219

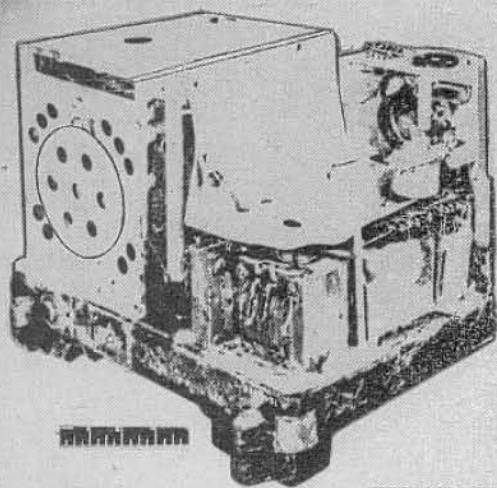
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POWER OUTPUT: Not known.

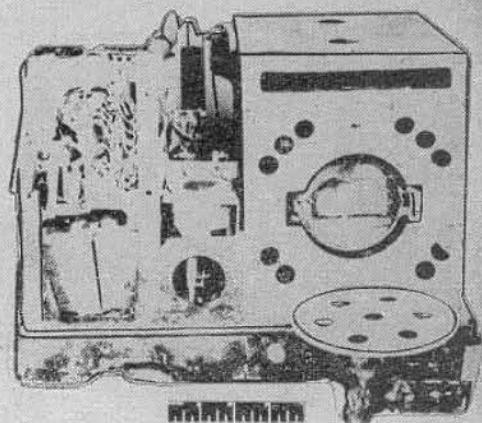
TUBES (type and number): Transmitter: two RD 12 TF, plate-modulated, push-pull with Lorenz tubes RS 323 as alternative. Receiver: one LG 7 as mixer, one LD 1 as local oscillator, four LV 1 as i-f's, two LG 1 as detectors, and two LV 1 as videos.

## PRINCIPAL COMPONENTS

	DIMENSIONS			WEIGHT (lb.)
	Height (in.)	Width (in.)	Depth (in.)	
Transmitter and modulator .....	10½	13¾	8¾	32
Indicator unit....	8½	9	5½	13½
Control box.....	4¼	4¼	2¼	

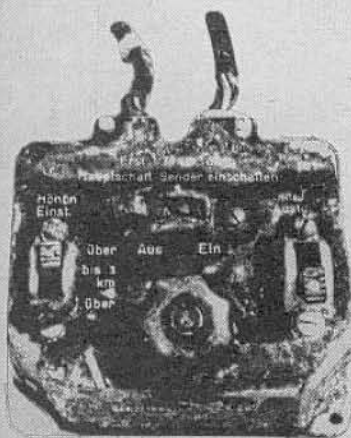


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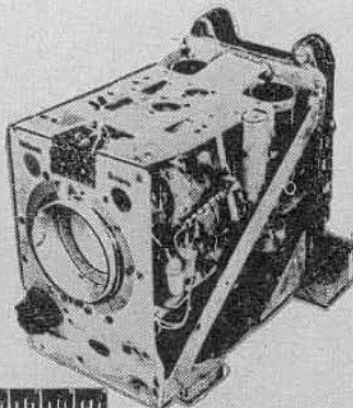
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TRANSMITTER MODULATOR



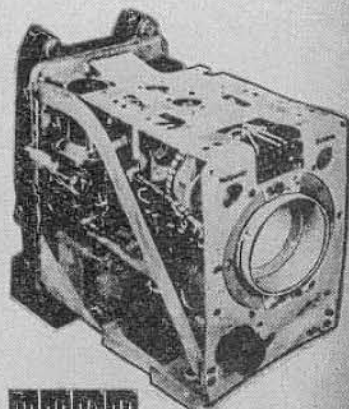
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CONTROL BOX  
(SCHALTKASTEN) SK 200



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INDICATOR (SICHTGERAT) SG 200



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