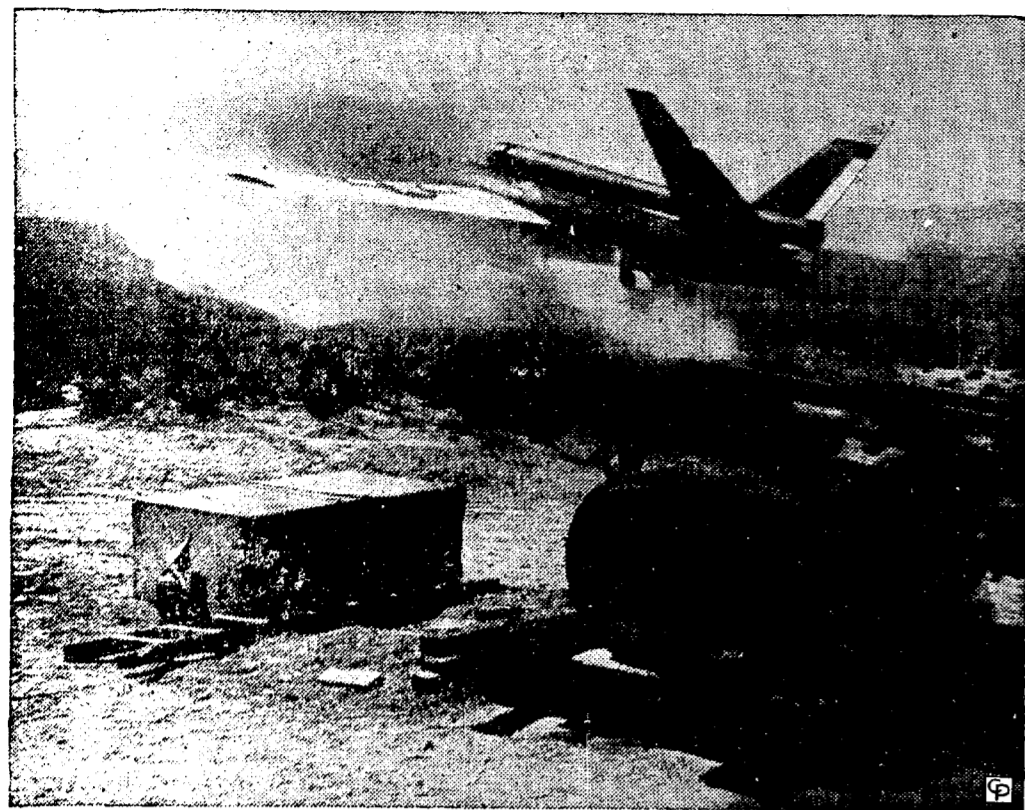


Navy Steps Up Study of Pilotless Aircraft, Guided Missiles at New Test Center on Coast



This is the KDD-1, a radio-controlled target drone. This guided missile is shown taking off from its launching platform at a California navy rocket test center. The KDD-1 was the first target aircraft to be powered by a jet engine. It was developed for use as a high-speed gunnery training target.

By HAROLD KEEN
(Central Press Correspondent)

POINT MUGU, Calif. — Weir, radio-controlled pilotless aircraft and guided missiles are shattering the isolation of this southern California area as the navy seeks to penetrate the veil of the future.

Admittedly belated are the efforts to overtake and surpass the scientific progress in robot weapons attained during the war by the Germans, whom time barely edged out in the race to unleash weapons with power, range and accuracy terrifying to the imagination.

Aided by Nazi Weapons
Officers in charge of the naval air missiles test center here, Capt. A. B. Scoles, commander, and Cmdr. Grayson Merrill, technical director, do not hesitate to admit that the United States would still be far behind in the development of guided missiles if not for captured Nazi information and assistance from German scientists now in this country.

During the war, while Germany devoted a great portion of her resources to experiments with super-sonic wind tunnels and a manufacture of V-1 and V-2 robot bombs, the United States neglected such research. But the navy now is determined to make up for lost time, according to Scoles and Merrill.

Among the missiles are such fantastic weapons as "Little Joe," "Gorgon," "Gargoyle," "Loom" and other birds, some of which already have become obsolete by the swift progress of science.

Guided by Radio
Here at Point Mugu is the proving ground for rocket-launched, jet-propeller bombs guided to targets by radio; for winged missiles equipped to follow a target relentlessly until it is shattered, and for jet-propelled "drone" plane that can be put through intricate aerial maneuvers by radio control from the ground.

There is "Little Joe," for example, which is built to be launched from shipboard by rocket and guided by radio to destroy attacking planes. "Gorgon" can be launched from another plane and steered by remote control by a pilot who can watch the bomb's progress through a television device in its nose.

Navy Version of V-1
"Gargoyle" is a jet-propelled bomb which can follow the most evasive maneuvers of a target, and "Loom" is the navy's version of the Nazis' V-1.

Merrill, by the way, admits that even today certain characteristics of the German V-2 and its successor, the X-4, which had not yet been put to use but might well have wrecked the allied air force's capacity for saturation bombing of Europe, have not yet been equaled by technicians of this country.

However, military thinking now is far ahead of these realities in guided missiles. Project supervisors at Mojave already are casually speaking of "homing" weapons, which would be so made as to search out their own targets after radio control takes them to the general vicinity.

A hint of what such weapons might do is seen in the war-time



This is "Little Joe"—Lt. Comdr. inspects "Little Joe," a short-range, radio-controlled anti-aircraft developed late in the war against the Japanese. "Joe" is designed for launching from a shipboard catapult.

torpedoes which homed to the nose from a ship's propellers, and the bombs which followed infrared rays from the heat of hidden furnaces to seek out camouflaged factories.

Big Research Program
Pres. Truman has approved a greatly expanded organization for research in pilotless aircraft and guided missiles. Headquarters and the nucleus staff were moved down from Mojave to Point Mugu, which is on the southern California coast between Santa Monica and Santa Barbara. Here a 150-mile sea test range is available, and total installation on the 4,000-acre tract will cost nearly \$40,000,000.

Observation stations were to be built on lonely islands off the southern California coast to track by radar the flights of screaming, eerie projectiles traveling at supersonic speeds.

"It is important to realize that the navy must go ahead in this field because of the nature of the weapons which will likely be employed in any future war," Scoles said.

"It has not been demonstrated that aircraft alone can produce an adequate defense or offense for this country, and it is therefore vital that the navy remain foremost among the navies of the world."

Launched from Ships
"The navy's work is centered around the types of pilotless aircraft and guided missiles that can be launched from ships or submarines, or can be launched from

Radio

FREQUENCIES

WIBA 1310	WFL 1000	WMOX 1120
WBA 970	WBU 1240	WGN 720
WBB 1000	WBN 850	WBN 850
WBB 1000	WBN 850	WBN 850
WCCO 830	WMAQ 670	WLS 890

WIBA TONIGHT

5:55 News Report	7:30 Concert Hour	10:15 Music for Tonight
6:00 Supper Club	8:00 Great Artists	10:30 Hotel Edison Opera
6:15 News of the World	8:30 Victor Horne Show	11:00 News Report
6:30 Three Stars	9:00 Concert Hour	11:30 WGN Grand
6:45 Music You Prefer	9:30 Doctor I. Q.	11:30 Biltmore Hotel Orh.
7:00 Cavalcade	10:00 Night News Edition	11:55 News Report

OTHER STATIONS TONIGHT

Fulton Lewis—WIBU	Concert Hr. WMAQ	Armistice Program WIBU
Dr. Bradley WGN	Jamboree WIBU	Night Watch WMAQ
Supper Club WTMJ	Sherlock Holmes WLS	Lowell Thomas WBEM
Jimmy Blade WMAQ	Chi. Rockets vs. Miami	Supper Club WMAQ
Winds of the Week WCCO	WIND 8:00	So the Story Goes WGN
6:15 Lum and Abner WIBU	Radio Theater WBEM	Jack Smith WBEM
6:30 Supper Serenade WBEM	Heater WGN WIBU	10:30
6:45 Smith WCCO	Great Artists WMAQ	Bob Elson WENR
6:50 Melody Lane WBEM	I Deal in Crime WENR	Frank Parker WMAQ
7:00 Lone Ranger WLS	Book of Melody—WIBU	10:45
7:15 Fred Waring WLS	Real Life Stories WGN	11:00
7:30 State Journal News	12:45 Melodies	11:00
7:45 Musical Clock	2:30 News Report	11:00
8:00 News	3:00 Pop Music	11:00
8:15 Musical Clock	3:30 Stella Dallas	11:00
8:30 Shopping Guide	3:45 Widder Brown	11:00
9:15 Art Baker	4:00 Music for Today	11:00
9:30 Road of Life	4:15 Hilarious Jones	11:00
9:45 Joyce Jordan	4:30 Just Plain Bill	11:00
10:00 Fred Waring	4:45 Front Page Farrell	11:00
10:30 Jack Arch Show	5:15 Melodies	11:55 News Report
10:45 David Harum		
11:00 Linda's First Love		
11:15 Mary Foster		
11:30 Farm Roundup		

WIBA TUESDAY

6:00 Farm Frolic	12:00 News Report	5:30 News Edition
6:30 News Report	12:05 Farm Roundup	5:45 Sports Parade
6:45 Melody Lane	12:15 Morning Parade	5:55 News Report
7:00 News Report	12:30 Noon News Edition	6:00 Supper Club
7:15 The Trading Post	12:45 Market Interlude	6:15 News of the World
7:30 State Journal News	1:45 Judy and Tom	6:30 Pop Music
7:45 Musical Clock	2:00 Let's Beautiful	6:45 Education Week
8:00 News	2:15 Ma Perkins	Program
8:15 Musical Clock	2:30 News Report	7:00 Valley
8:30 Shopping Guide	2:45 Right to Happiness	7:30 Date With Judy
9:15 Art Baker	3:00 Backstage Wife	8:00 Moll and Andy
9:30 Road of Life	3:15 Stella Dallas	8:30 Pop Music
9:45 Joyce Jordan	3:30 Lovelorn Jones	9:00 Bob Hope Show
10:00 Fred Waring	3:45 Widder Brown	9:30 Red Skelton Show
10:30 Jack Arch Show	4:00 Music for Today	10:00 Night News Edition
10:45 David Harum	4:15 Hilarious Jones	10:15 Music for Tonight
11:00 Linda's First Love	4:30 Just Plain Bill	11:00 News Report
11:15 Mary Foster	4:45 Front Page Farrell	11:05 Musicians
11:30 Farm Roundup	5:00 Organ Melody	11:55 News Report

WHA TUESDAY

7:30 Band Wagon	9:30 Let's Find Out	12:20 Noon News
7:45 Morning News	9:45 Musical Interlude	12:30 Farm Program
7:55 WMAQ Program	9:55 Weather Report	1:00 Chapter 10
8:00 Music You Want	10:00 Hit Parade	1:30 The Dr. Phil Show
8:30 Morning Melodies	10:30 Campus Visitors	2:00 Books of Today
9:00 News and Views	10:45 Musical Moments	2:30 Music of Masters
9:15 Musical Greeting	11:00 Freshman Forum	3:00 News Edition
	11:30 Noon Musicale	3:45 The Editor's Desk
		4:00 Masterworks

OTHER STATIONS TUESDAY

—MORNING—

Country Hr. WBEM	5:30	Easy Aces WMAQ	5:30
Farm Hour WGN	6:00	Dr. Malone WBEM	6:00
Farm News WLS	6:15	Dr. Malone WBEM	6:00
Top Time WMAQ	6:30	Tom Mix WLU WGN	6:00
Town-Farm WMAQ	6:45	Tennessee Jed WENR	6:00
Devotions WLS	7:00	Jimmy Blevins WMAQ	6:30
Rural Roundup WIBU	7:15	Supper Club WTMJ	6:30
Farm Service WGN	7:30	Dr. Bradley WGN	6:30
Norman Rock WMAQ	7:45	Fulton Lewis WLS	6:30
March Time WIBU	7:55	Lum and Abner WIBU	6:30
Farm Service WIBU	8:15	Elmer Davis WGN	6:30
Farm Frolic WGN	8:30	Supper Serenade WBEM	6:30
Breakfast Club WLS	8:45	Melody Hr. WBEM	6:30
Your Neighbor WMAQ	9:00	Walt Disney WMAQ	6:30
Shady Valley WIBU	9:15	Skip Harrell WMAQ	6:30
Names That's WBEM	9:30	Serenade WIBU	6:30
My Story WLS	9:45	How to Pronounce It	6:30
Once Over WIBU	10:00	WLS	6:45
Nelson Olmsted WMAQ	10:15	Inside of Sports WGN	6:45
Louise King WBEM	10:30	Big Sing WGN	6:45
Pioneers' WBEM	10:45	Katiborn WMAQ	6:45
Lora Lawton WMAQ	11:00	Red Skelton WMAQ	6:45
Caught in Act WBEM	11:15	Walt Disney WMAQ	6:45
Hymns WLS	11:30	Walt Disney WMAQ	6:45
Evelyn Young WBEM	11:45	Walt Disney WMAQ	6:45
Charm School WGN	12:00	Walt Disney WMAQ	6:45
Road of Life WMAQ	12:15	Walt Disney WMAQ	6:45
Listening WLS	12:30	Walt Disney WMAQ	6:45
Farm Friend WIBU	12:45	Walt Disney WMAQ	6:45
Joyce Jordan WMAQ	1:00	Walt Disney WMAQ	6:45
House of Air WBEM	1:15	Walt Disney WMAQ	6:45
Breakfast in Hollywood	1:30	Walt Disney WMAQ	6:45
Fred Waring WMAQ	1:45	Walt Disney WMAQ	6:45
Tell Your Neighbor	2:00	Walt Disney WMAQ	6:45
WIBU	2:15	Walt Disney WMAQ	6:45
Jack Berch WMAQ	2:30	Walt Disney WMAQ	6:45
Grand Slam—WBEM	2:45	Walt Disney WMAQ	6:45
Bill Harrington WGN	3:00	Walt Disney WMAQ	6:45
David Harum WMAQ	3:15	Walt Disney WMAQ	6:45
Lindhard WBU WGN	3:30	Walt Disney WMAQ	6:45
Rosemary WMAQ	3:45	Walt Disney WMAQ	6:45
Glamor Manor WLS	4:00	Walt Disney WMAQ	6:45
Comedian WGN	4:15	Walt Disney WMAQ	6:45
Guiding Light WTMJ	4:30	Walt Disney WMAQ	6:45
Food Magician WMAQ	4:45	Walt Disney WMAQ	6:45
Songs of Praise WGN	5:00	Walt Disney WMAQ	6:45
Adam and Eve WMAQ	5:15	Walt Disney WMAQ	6:45
Aunt Jennie WBEM	5:30	Walt Disney WMAQ	6:45
Live with King WGN	5:45	Walt Disney WMAQ	6:45
Hymns WTMJ	6:00	Walt Disney WMAQ	6:45
Farm & Home WIBU	6:15	Walt Disney WMAQ	6:45
Milkwagon WMAQ	6:30	Walt Disney WMAQ	6:45
Helen Trent WBEM	6:45	Walt Disney WMAQ	6:45
Manquerand WGN	7:00	Walt Disney WMAQ	6:45
Widder Brown WMAQ	7:15	Walt Disney WMAQ	6:45
U. Special WBU	7:30	Walt Disney WMAQ	6:45
A. G. M. WMAQ	7:45	Walt Disney WMAQ	6:45
Songs to Remember WLS	8:00	Walt Disney WMAQ	6:45
Adam and Eve WMAQ	8:15	Walt Disney WMAQ	6:45
Aunt Jennie WBEM	8:30	Walt Disney WMAQ	6:45
Live with King WGN	8:45	Walt Disney WMAQ	6:45
Hymns WTMJ	9:00	Walt Disney WMAQ	6:45
Farm & Home WIBU	9:15	Walt Disney WMAQ	6:45
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