SEPT-1975

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NUCLEAR INFORMATION

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UNITED STATES

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ENERGY RESEARCH & DEVELOPMENT ADMINISTRATION
NEVADA OPERATIONS OFFICE

ARTMENT OF ENERGY DECLASSIFICATION REVIEW
NEW DATE: [illegible]
DETERMINATION (CIRCLE NUMBER(S))
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2. CLASSIFICATION CHANGED TO
3. CONTAINS NO DOE CLASSIFIED INFO
4. COORDINATE WITH
5. CLASSIFICATION CANCELLED
6. CLASSIFIED INFO BRACKETED
7. OTHER (SPECIFY)

CLASSIFIED BY: T. E. Wade
T. E. WADE, DIRECTOR
NUCLEAR SYSTEMS DIVISION
NEVADA OPERATIONS OFFICE

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# NEST

NUCLEAR EMERGENCY SEARCH TEAM

# DETECTION SYSTEMS

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6/25/01

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UNITED STATES

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ENERGY RESEARCH & DEVELOPMENT ADMINISTRATION
NEVADA OPERATIONS OFFICE

# NEST

## NUCLEAR EMERGENCY SEARCH TEAM

# DETECTION SYSTEMS

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## NUCLEAR EMERGENCY SEARCH TEAM

In November of 1974, Mahlon E. Gates, Manager of the Nevada Operations Office (NV) of ERDA was directed to develop a coordinated response to cope with an increasing potential for incidents involving nuclear material. The direction was contained in a Secret letter from Major General Ernest Graves, Director, Division of Military Application, HQ, dated November 18, 1974, which authorized the Manager, NV, to draw on existing emergency response capabilities at ERDA field offices, ERDA laboratories and ERDA contractors to establish the coordinated response. These existing program elements, as well as new program facets, have been developed to form the Nuclear Emergency Search Team (NEST).

The NEST capability has been established to respond to several types of nuclear emergencies, including lost, stolen or diverted nuclear weapons, or lost, stolen or diverted nuclear/radioactive material. NEST team members have expanded on accident response capability to develop radiation detection systems and techniques capable of searching for any material with a radiation signature. Systems that can be deployed vary in size from hand-held to airborne detection arrays. In addition, equipment has been developed to aid in the identification and disarming/disabling of clandestine devices involving radioactive material. This team is equipped to provide technical advice and assistance, predict potential downwind impact, evaluate the immediate hazard, and make recommendations regarding public safety.

A NEST response can begin in the early phases of a threat assessment. As the threat credibility increases, the NEST response can be escalated to include an advance team of advisors who can assist in on-site assessment of a problem and prepare for the involvement of additional support elements.

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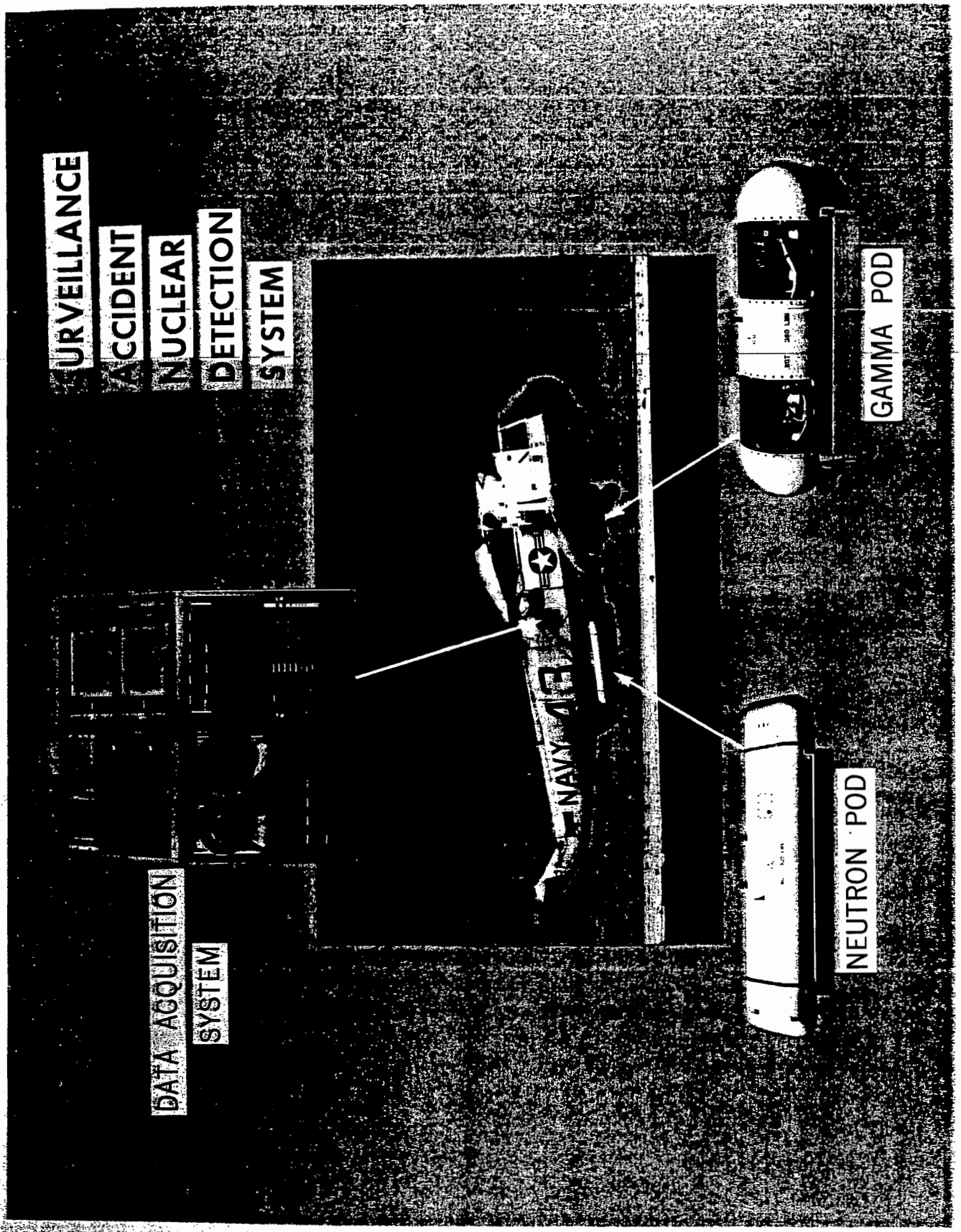
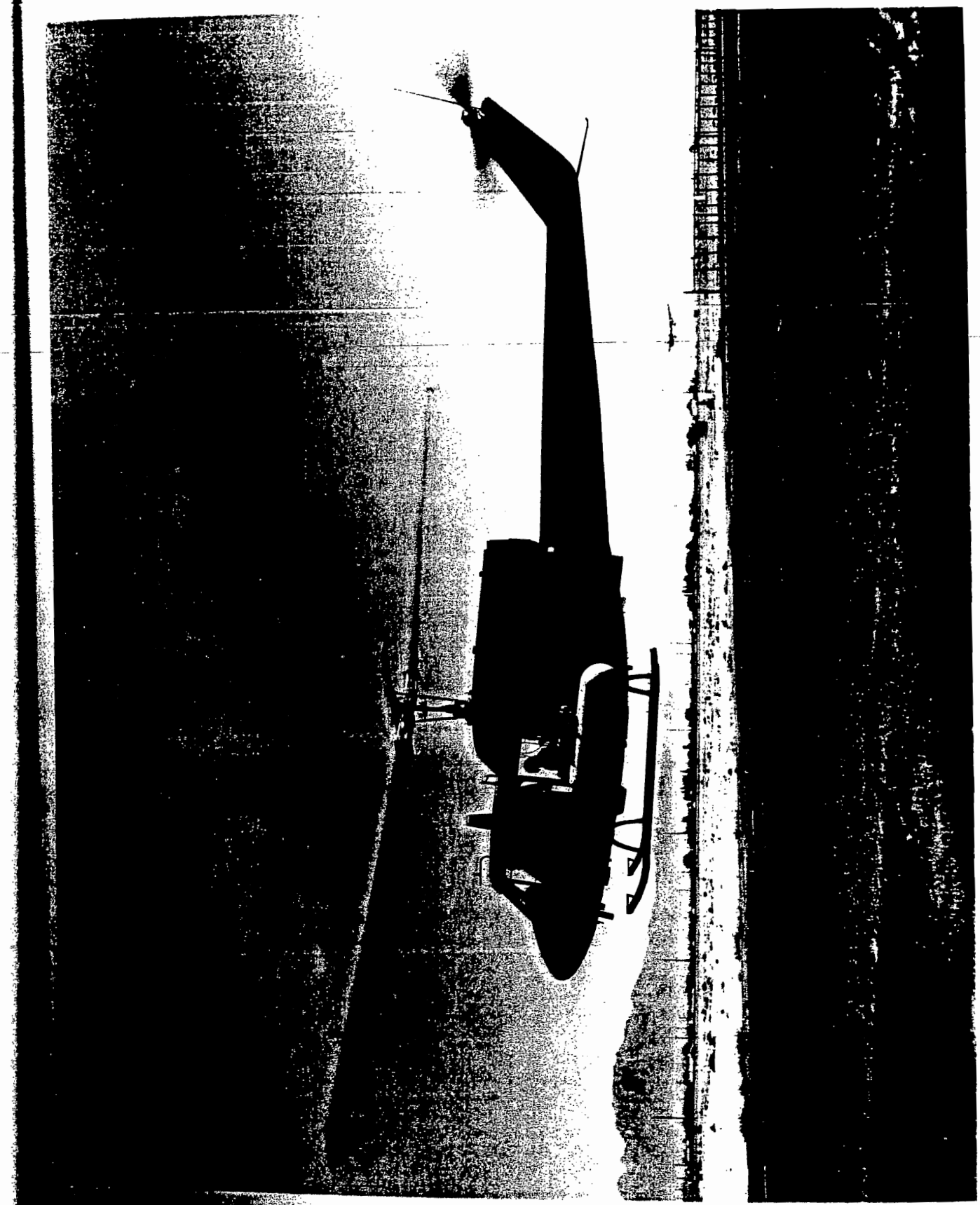
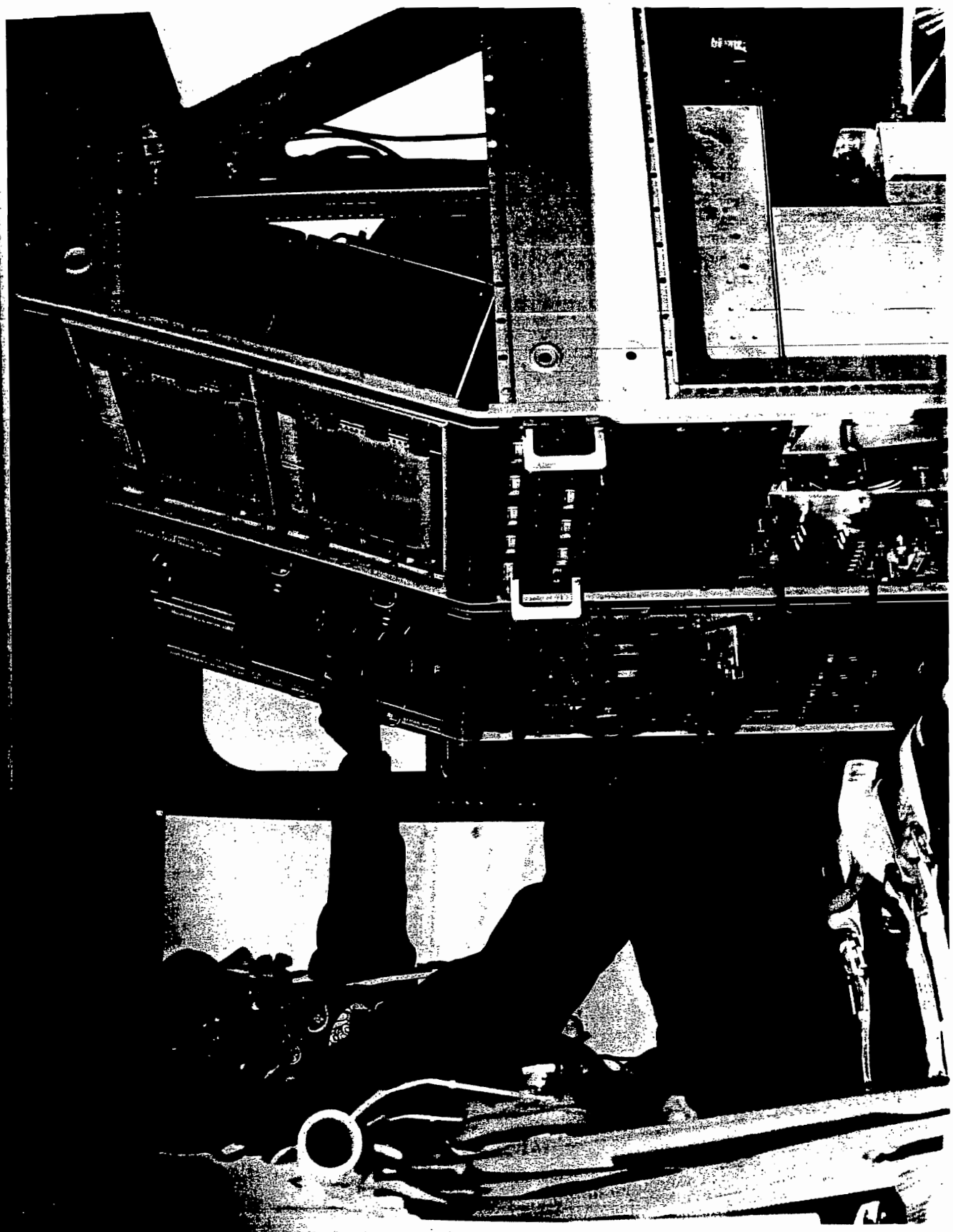
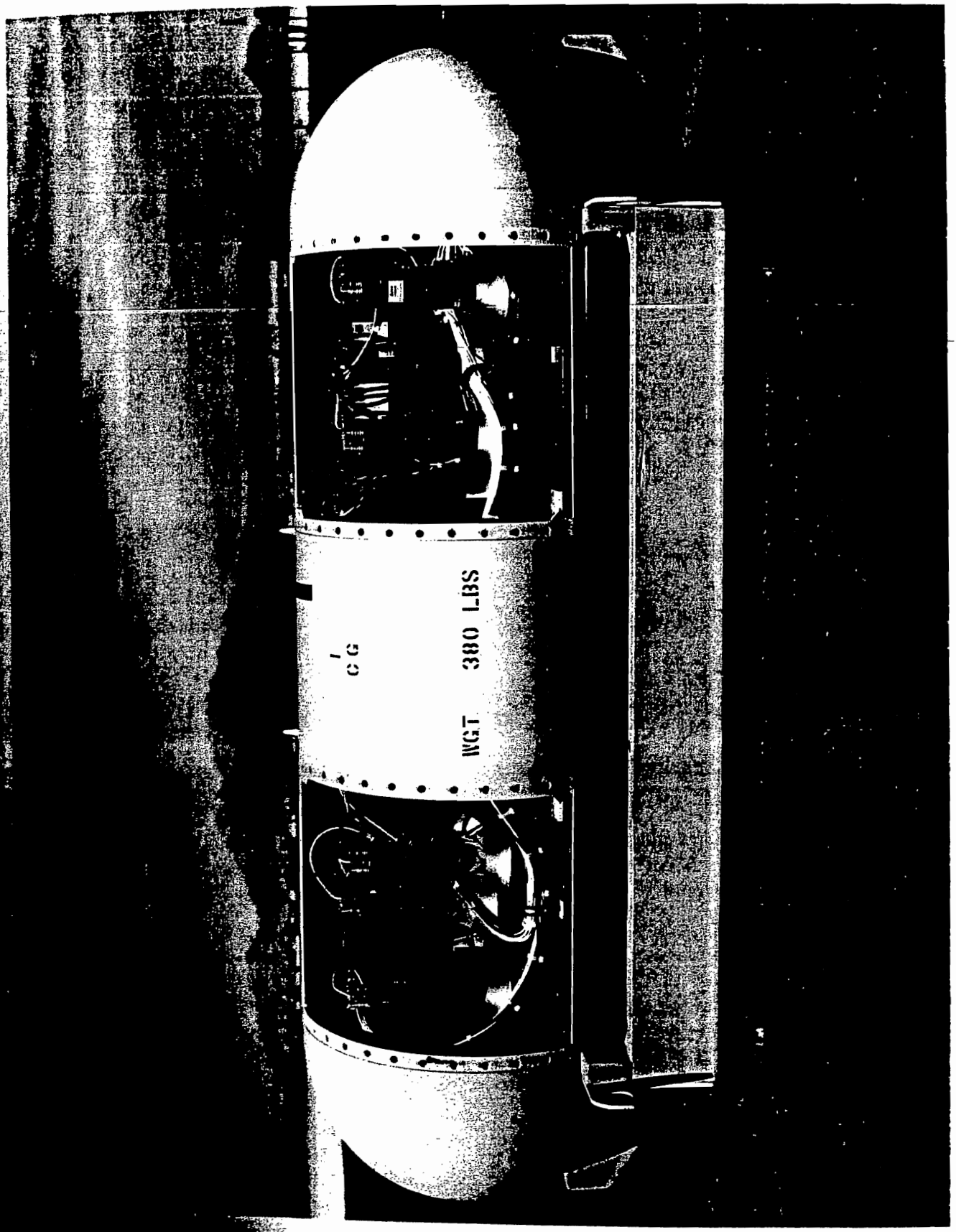

URVEILLANCE
ACCIDENT
NUCLEAR
DETECTION
SYSTEM
DATA ACQUISITION
SYSTEM
NEUTRON POD
GAMMA POD



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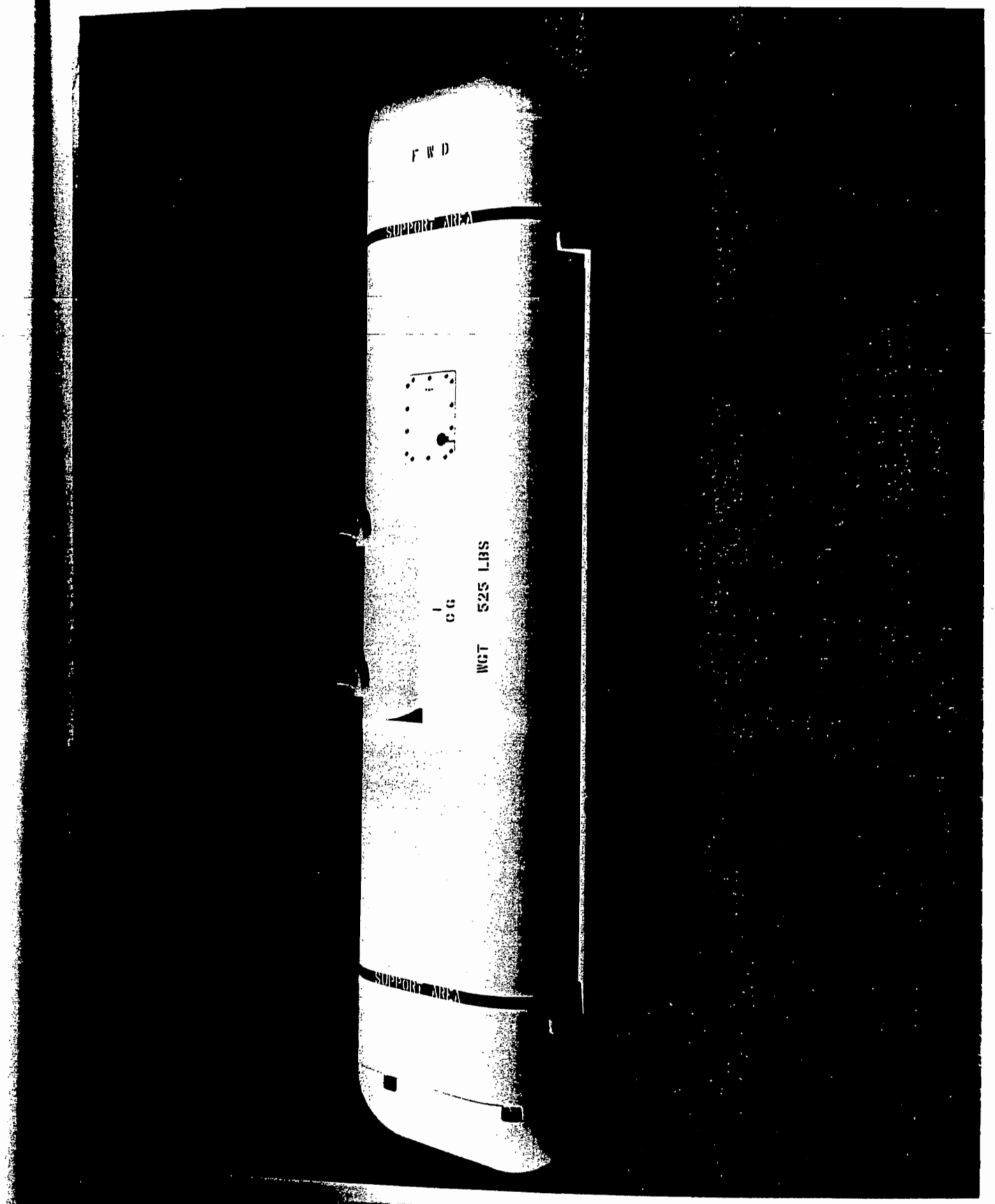
C G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SUPPORT AREA
CG
WGT 525 LBS
SUPPORT AREA

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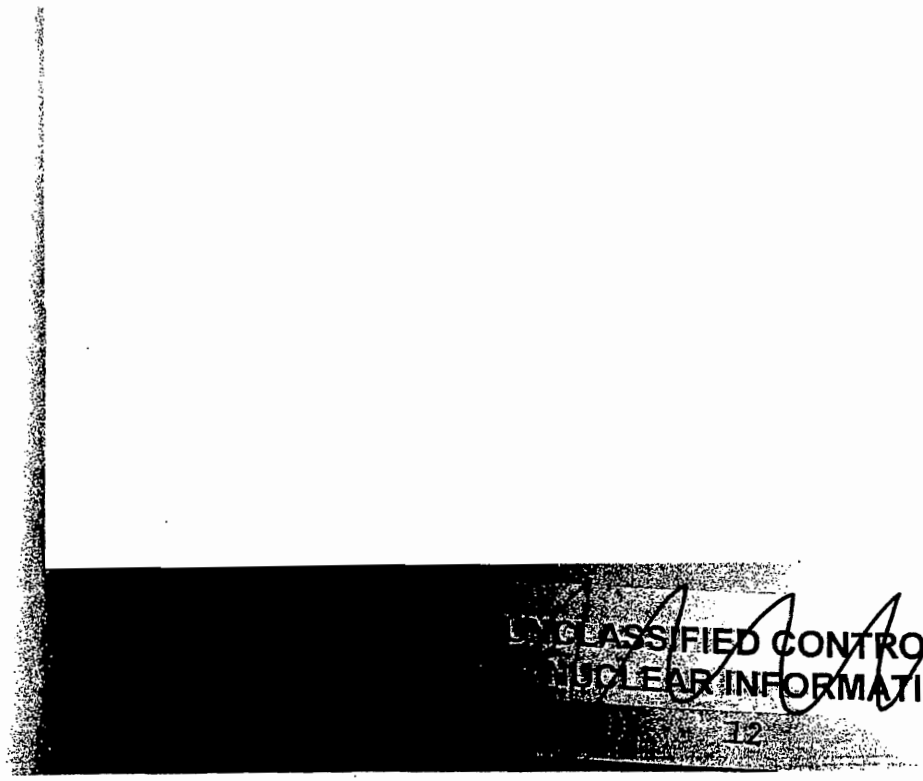

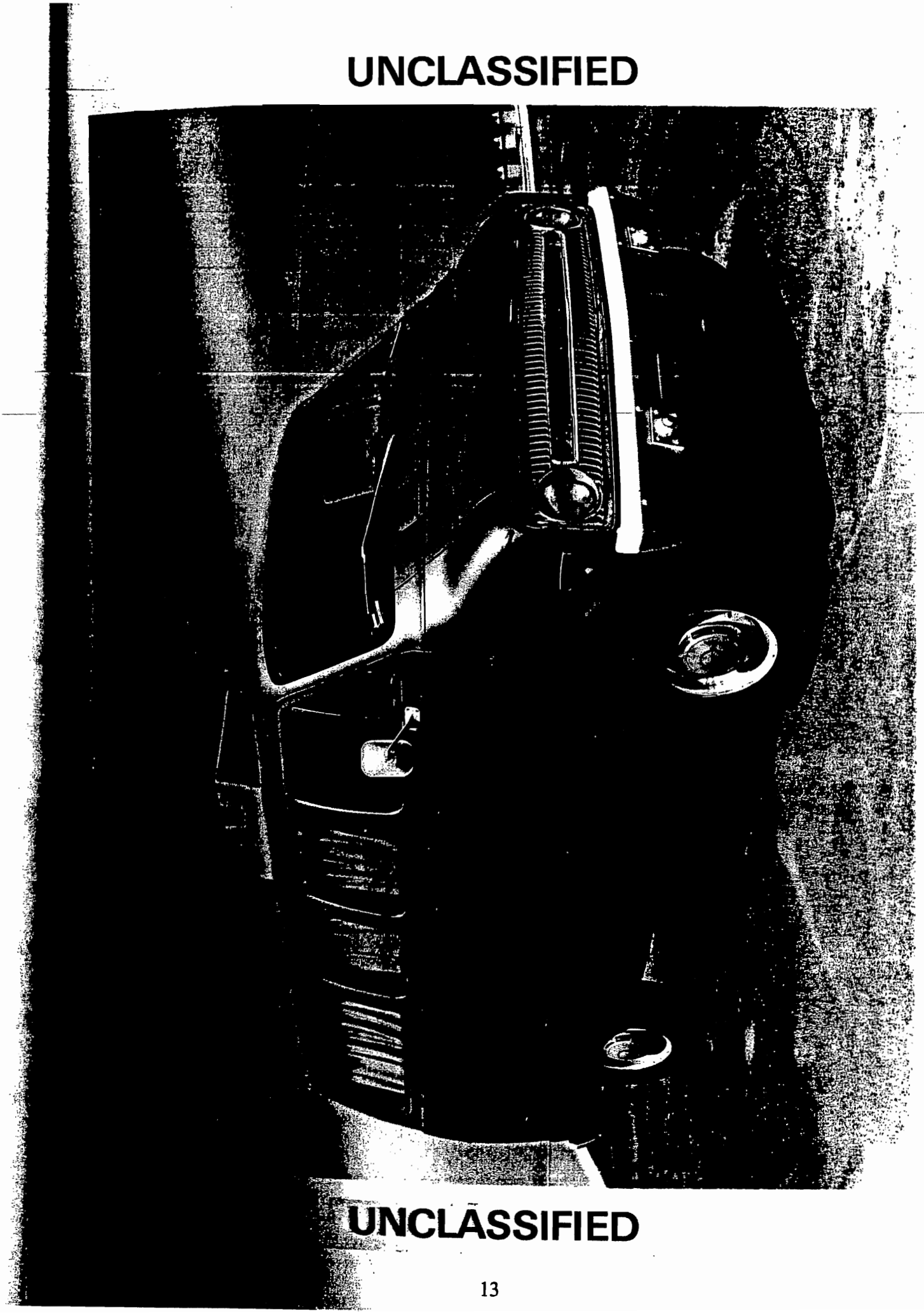

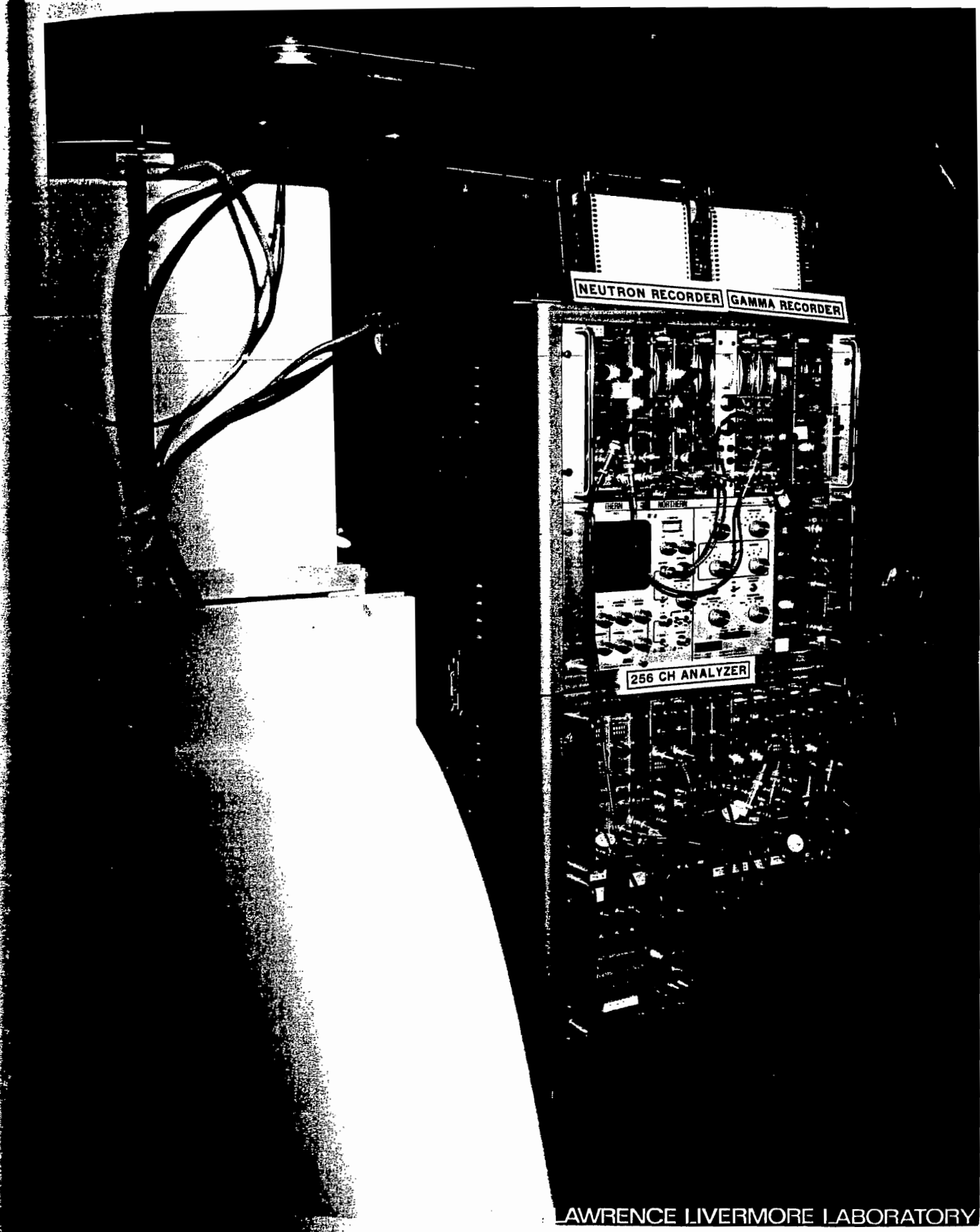


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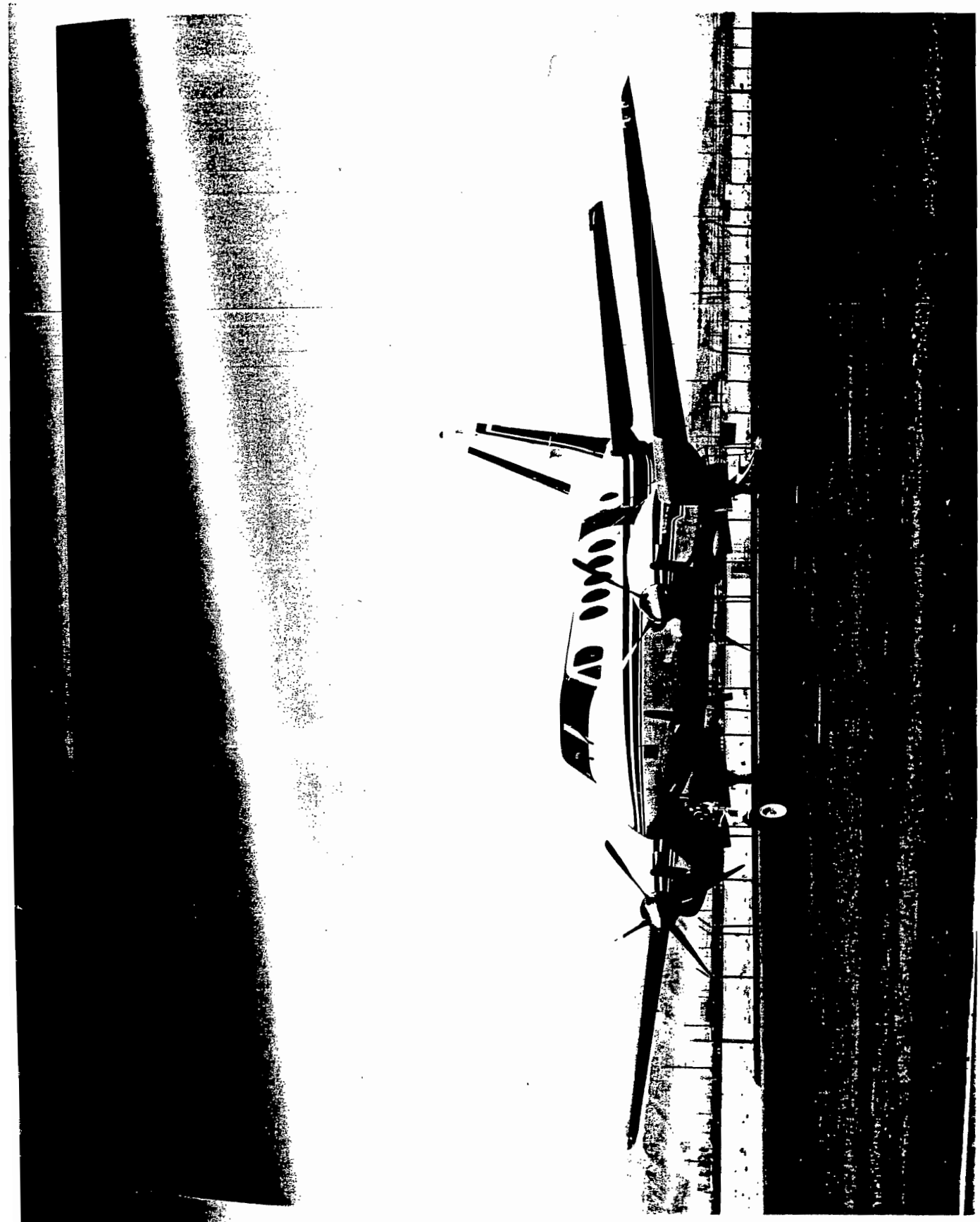

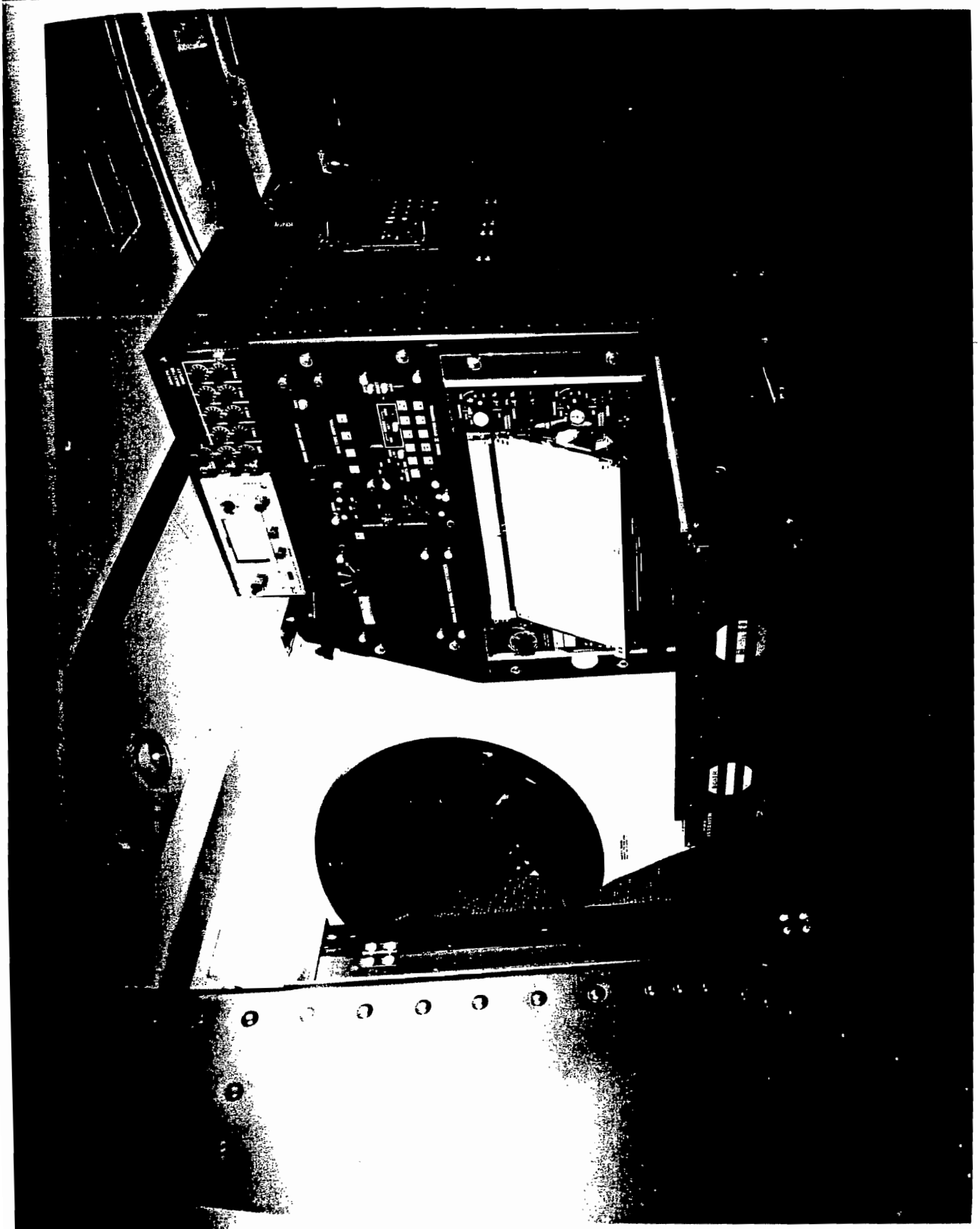

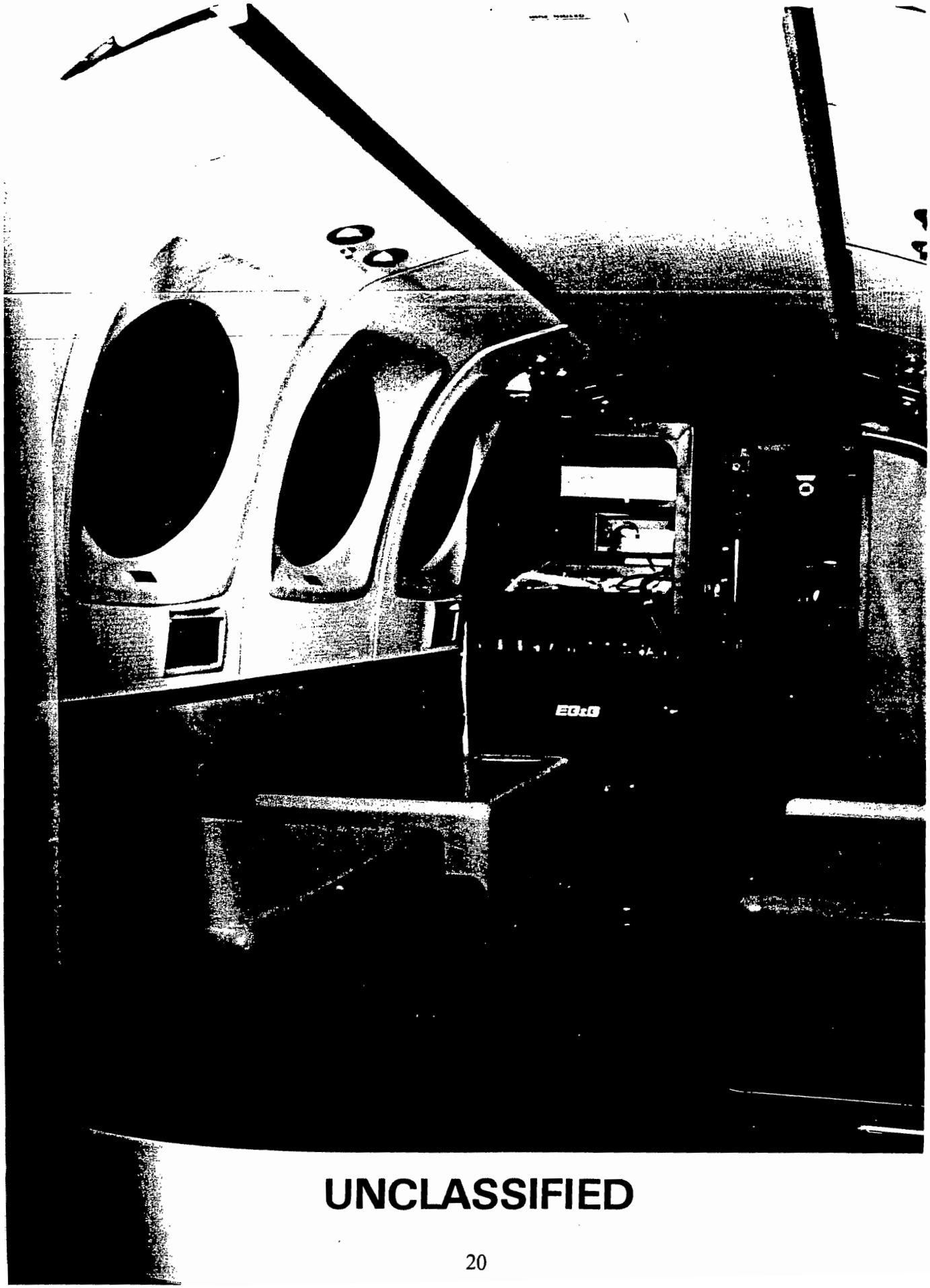
EG&G

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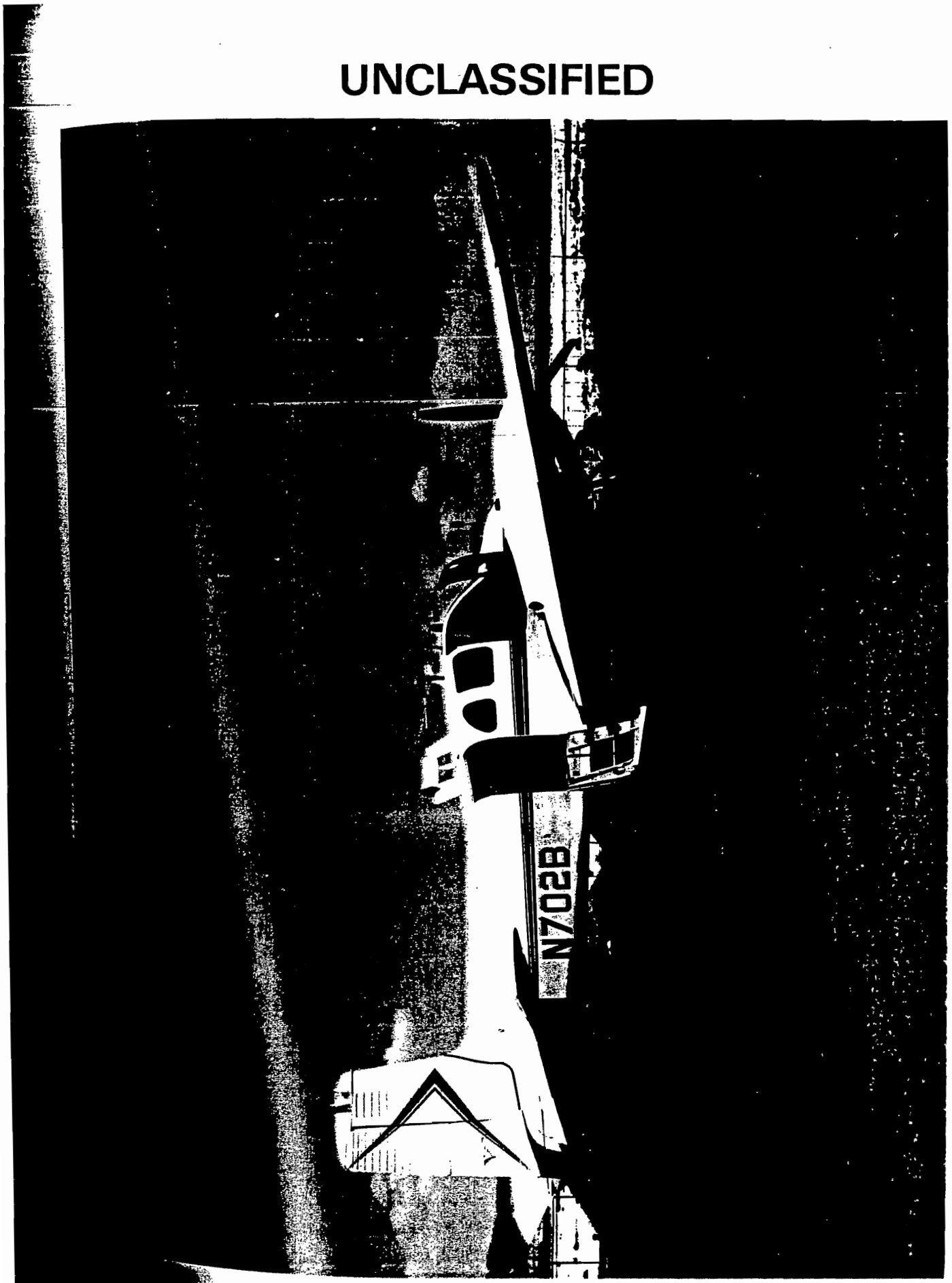
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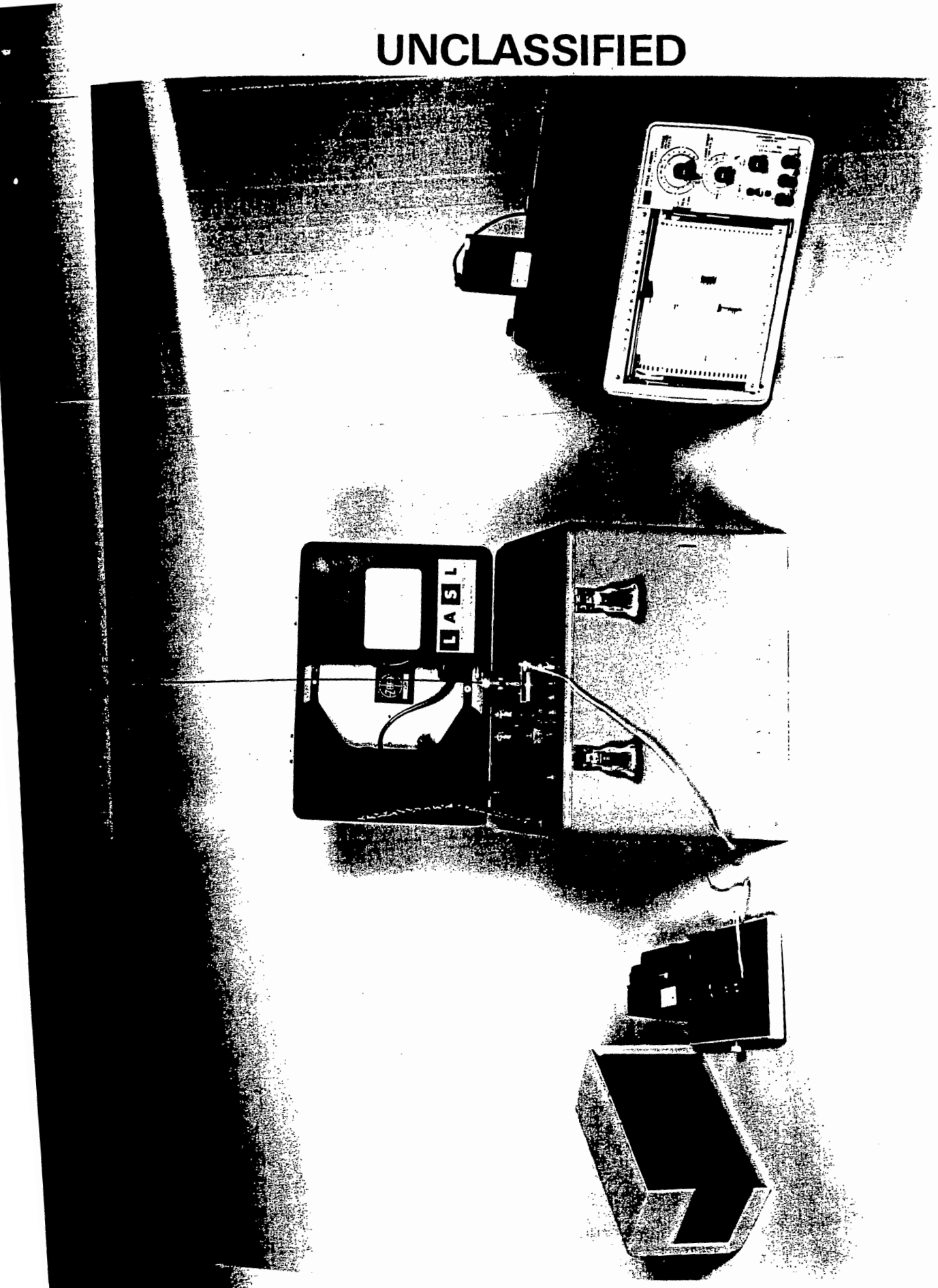
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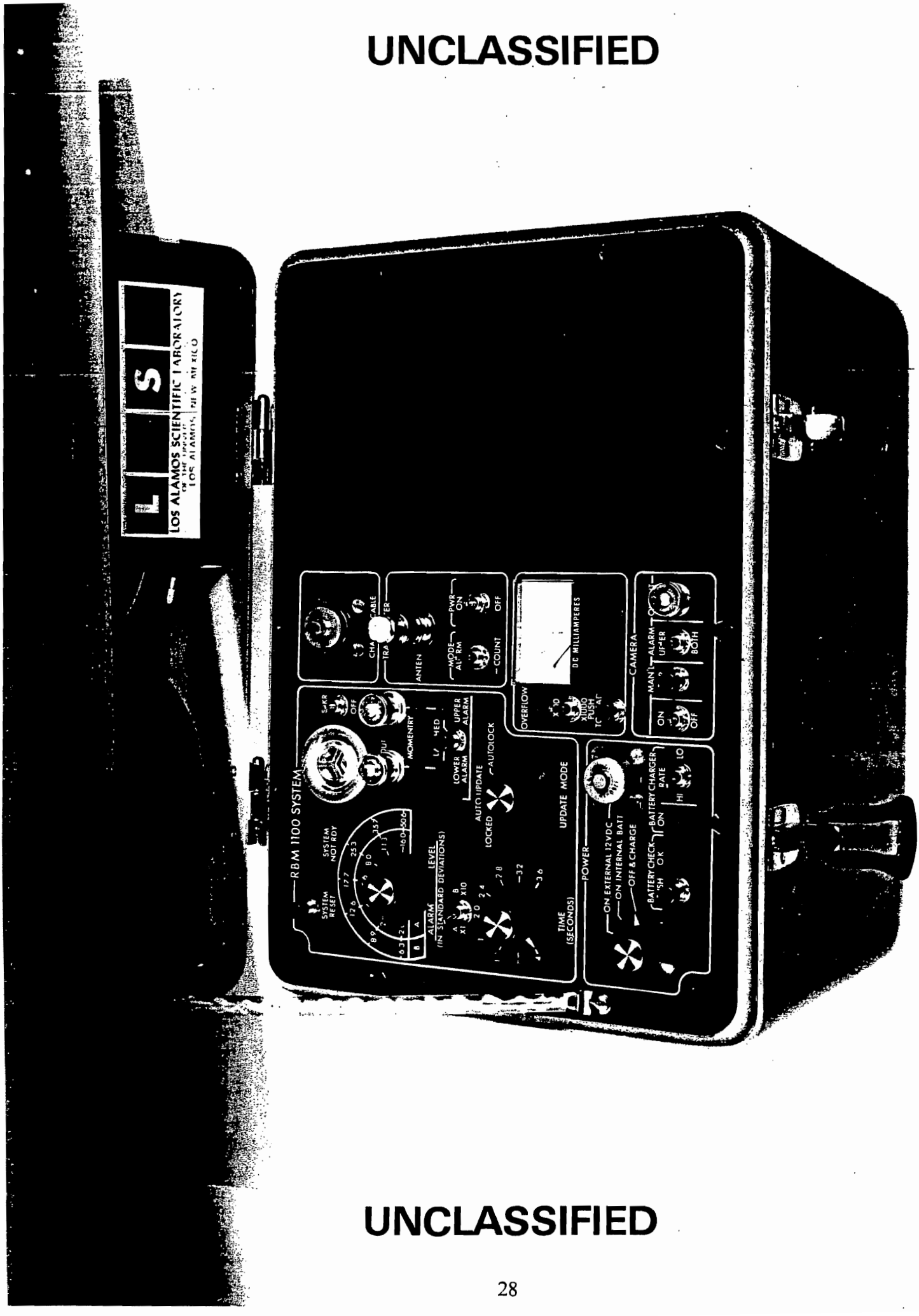
LOS ALAMOS SCIENTIFIC LABORATORY
RBM 1100 SYSTEM
SYSTEM RESET
SYSTEM NOT RDY
ALARM
LEVEL
(IN STANDARD DEVIATIONS)
MOMENTRY
LOWER ALARM
UPPER ALARM
AUTO UPDATE
LOCKED
AUTOLOCK
UPDATE MODE
TIME (SECONDS)
POWER
ON EXTERNAL 12VDC
ON INTERNAL BATT
OFF & CHARGE
BATTERY CHECK
BATTERY CHARGER
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LO
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DC MILLIAMPERES
CAMERA
ON
OFF
BOTH
ANTEN
COUNT
OFF

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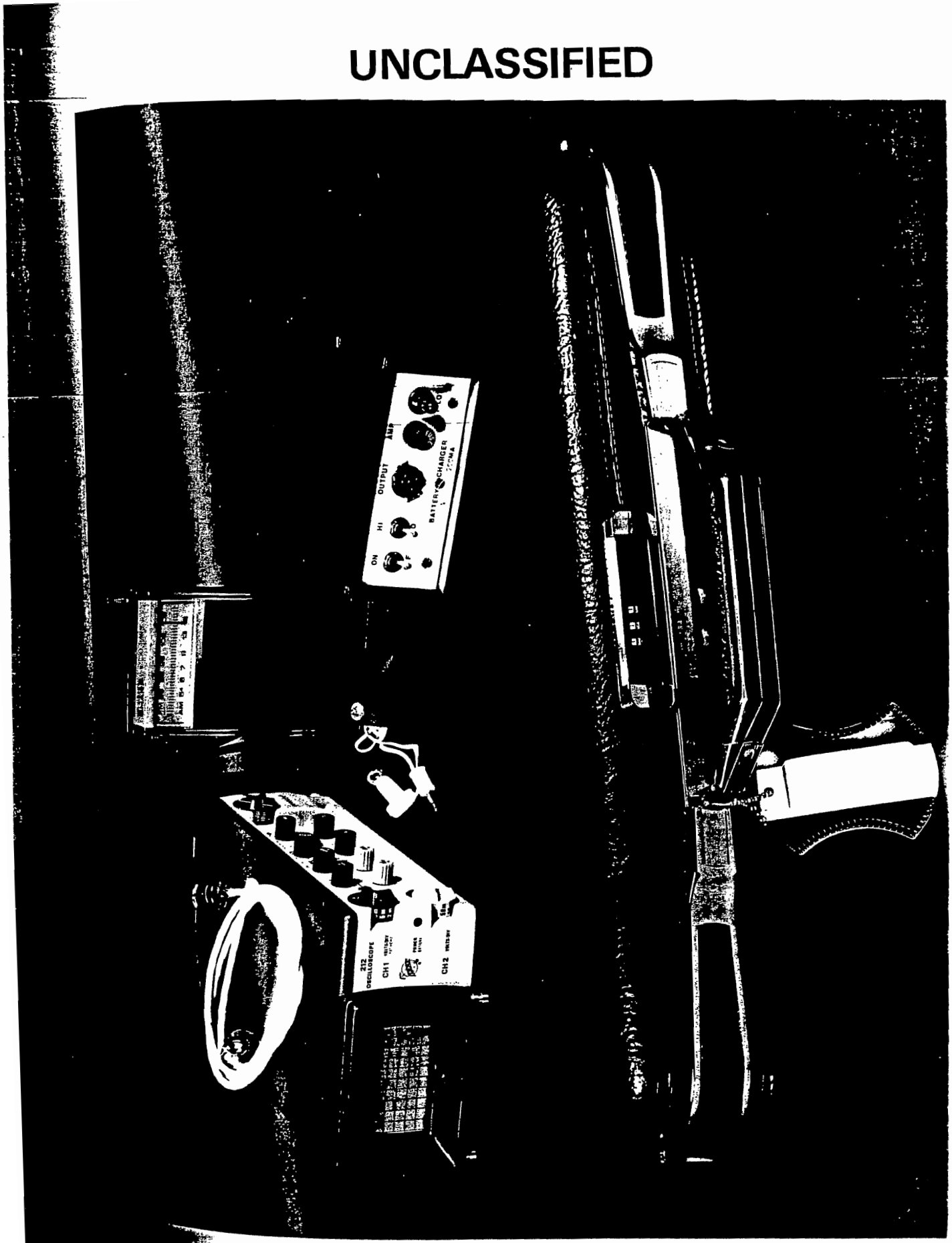
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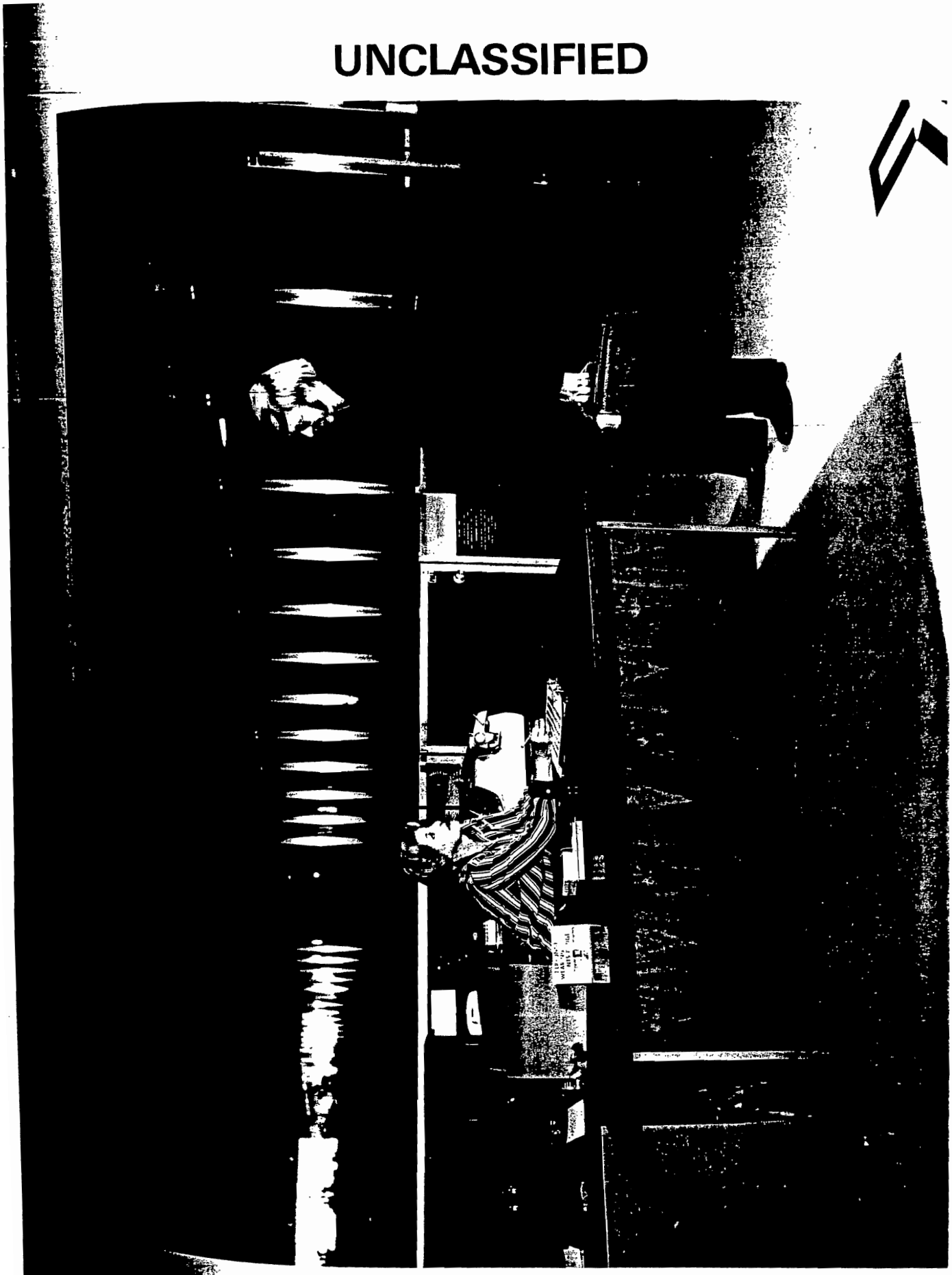
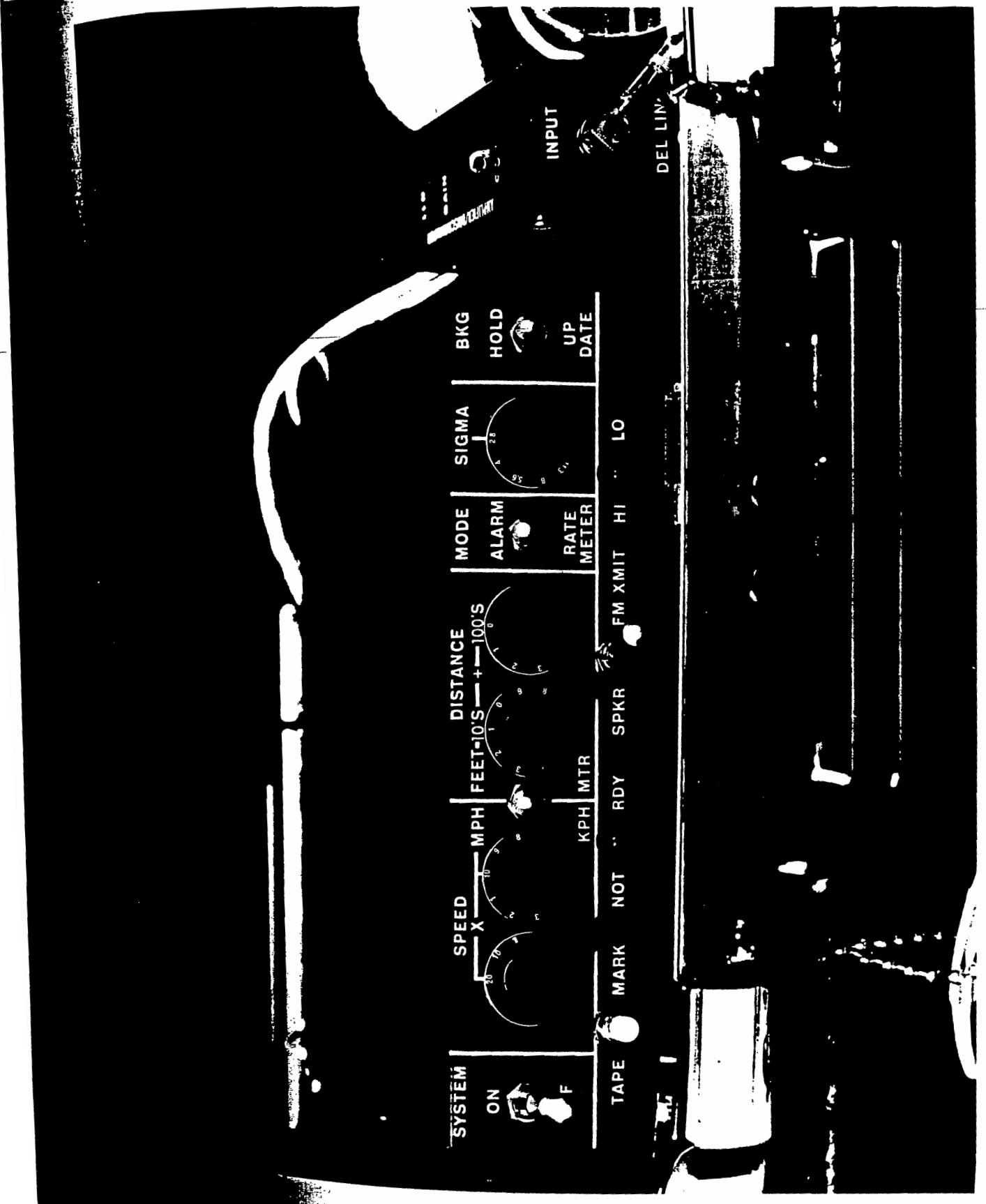
BATTERY CHARGER
212
OSCILLOSCOPE
CH1
CH2




SYSTEM
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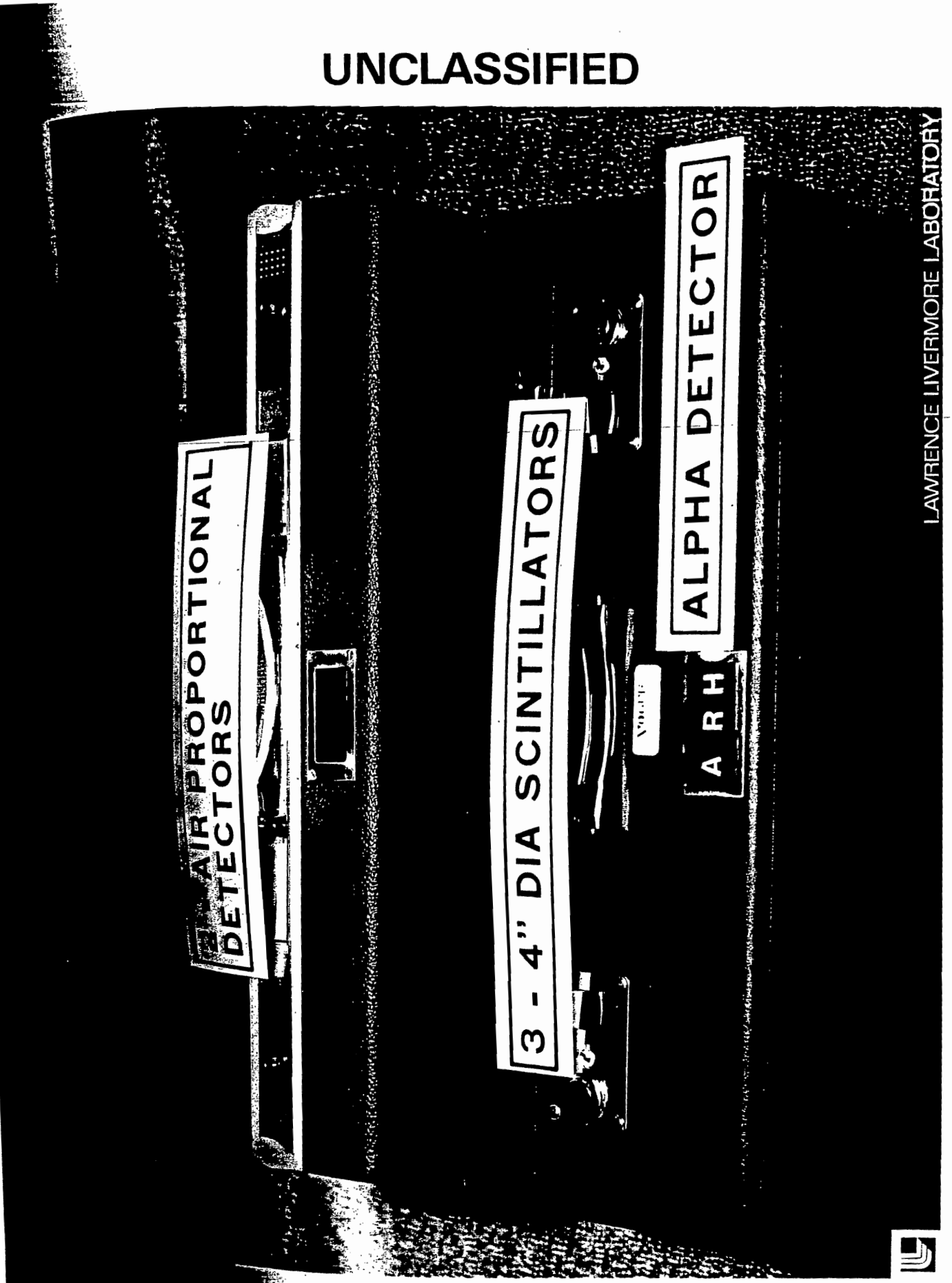
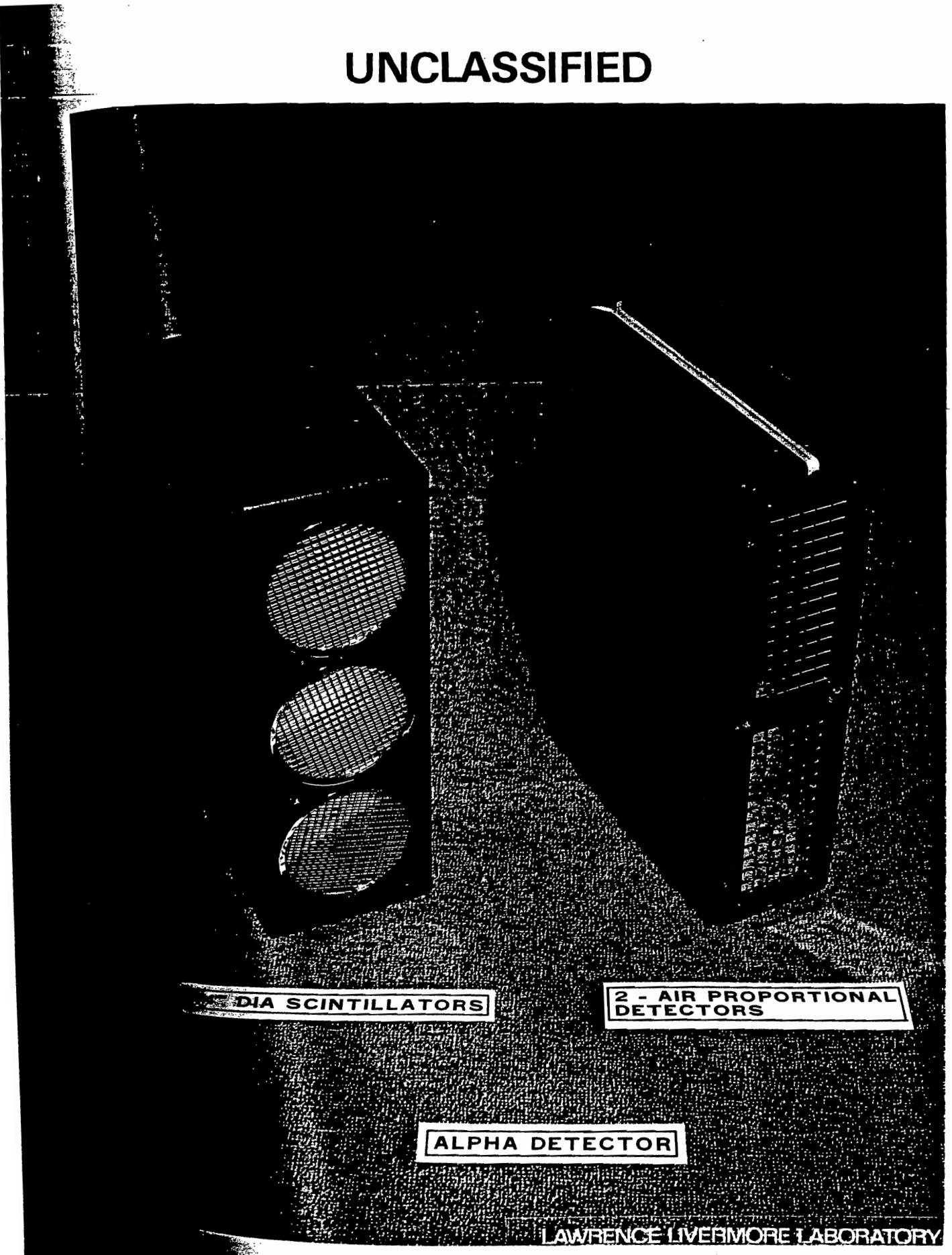

AIR PROPORTIONAL DETECTORS
3 - 4" DIA SCINTILLATORS
ALPHA DETECTOR
LAWRENCE LIVERMORE LABORATORY


DIA SCINTILLATORS
2 - AIR PROPORTIONAL DETECTORS
ALPHA DETECTOR
LAWRENCE LIVERMORE LABORATORY

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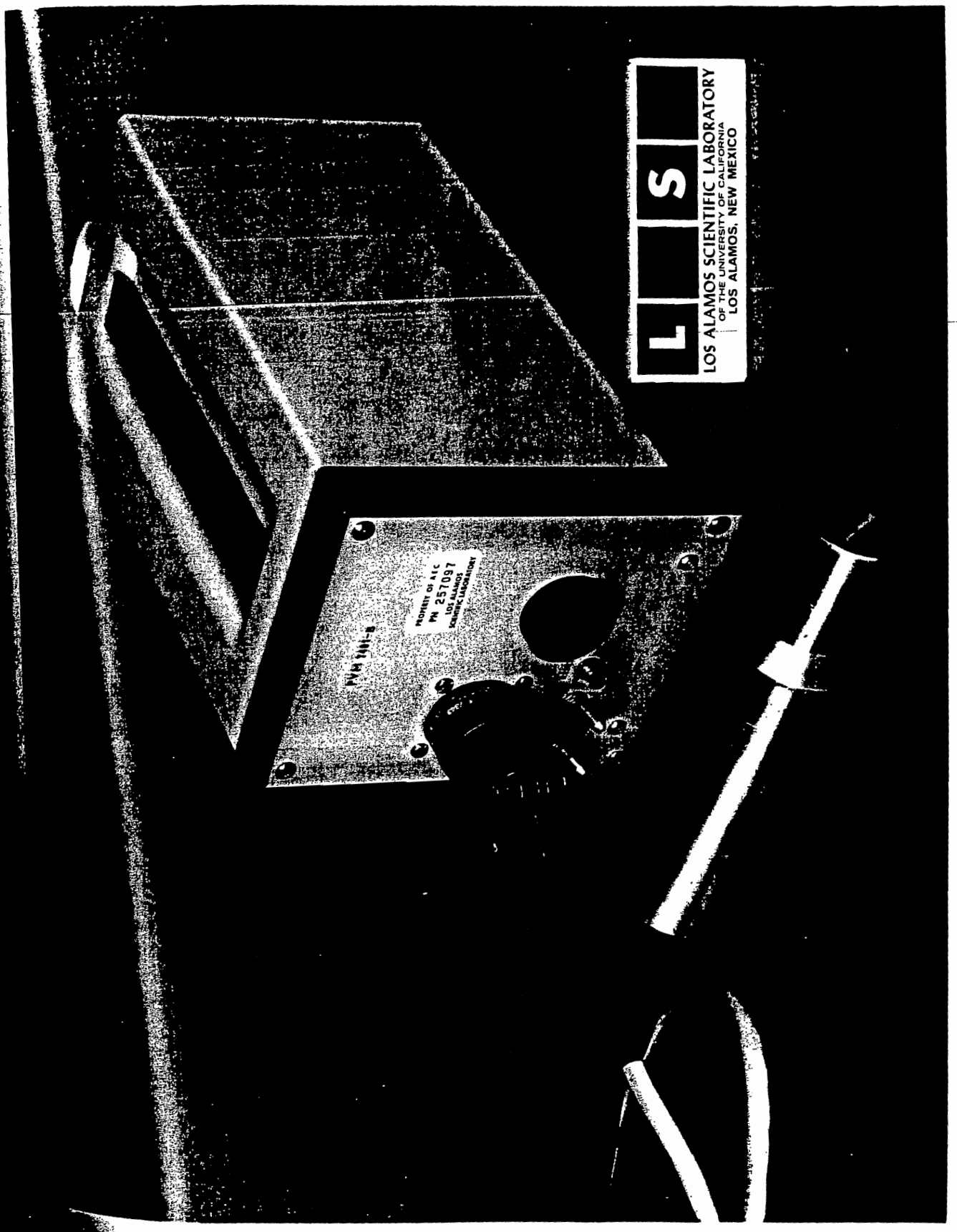
L S
LOS ALAMOS SCIENTIFIC LABORATORY
OF THE UNIVERSITY OF CALIFORNIA
LOS ALAMOS, NEW MEXICO
PROPERTY OF A.E.C.
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SCIENTIFIC LABORATORY
PM 257097

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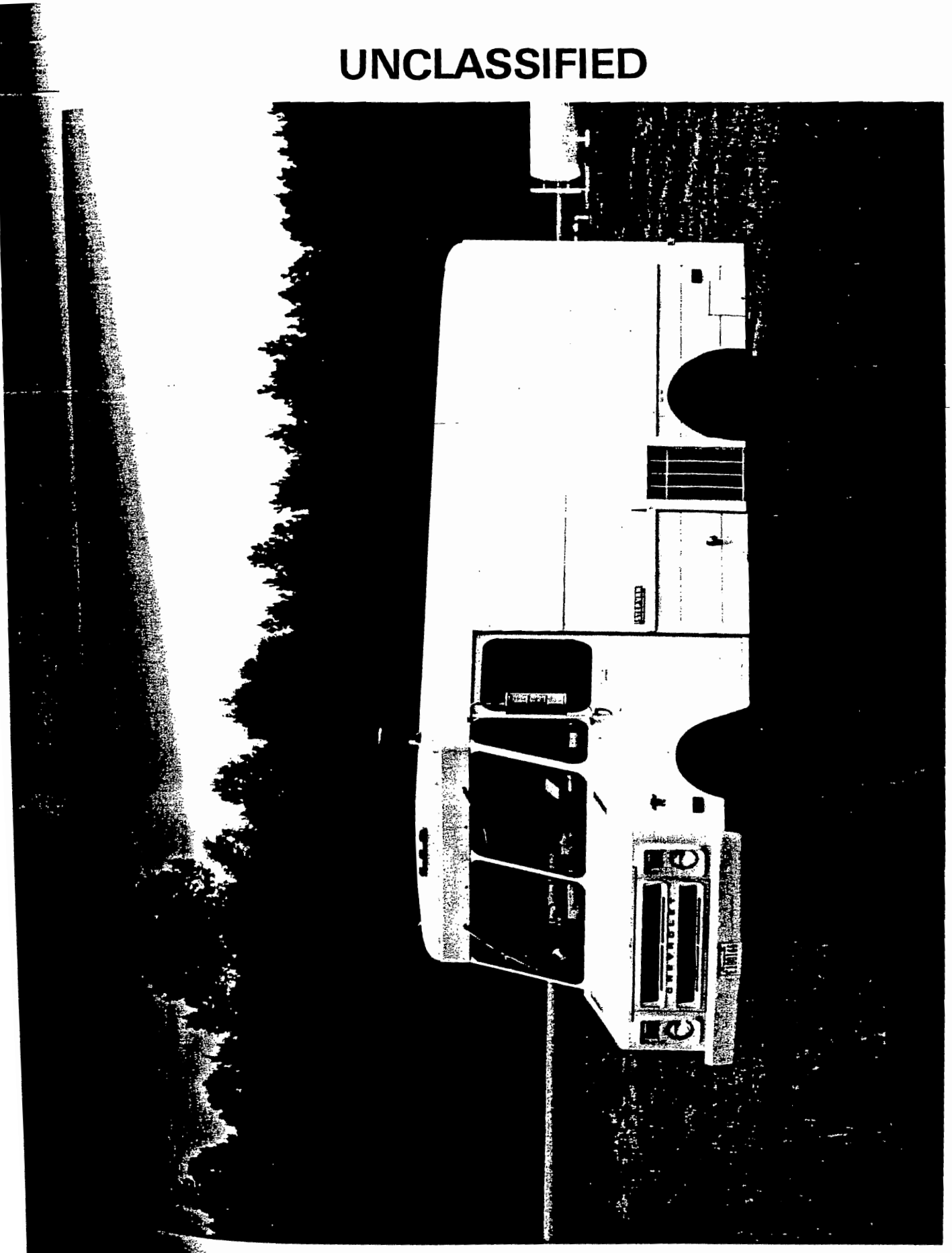

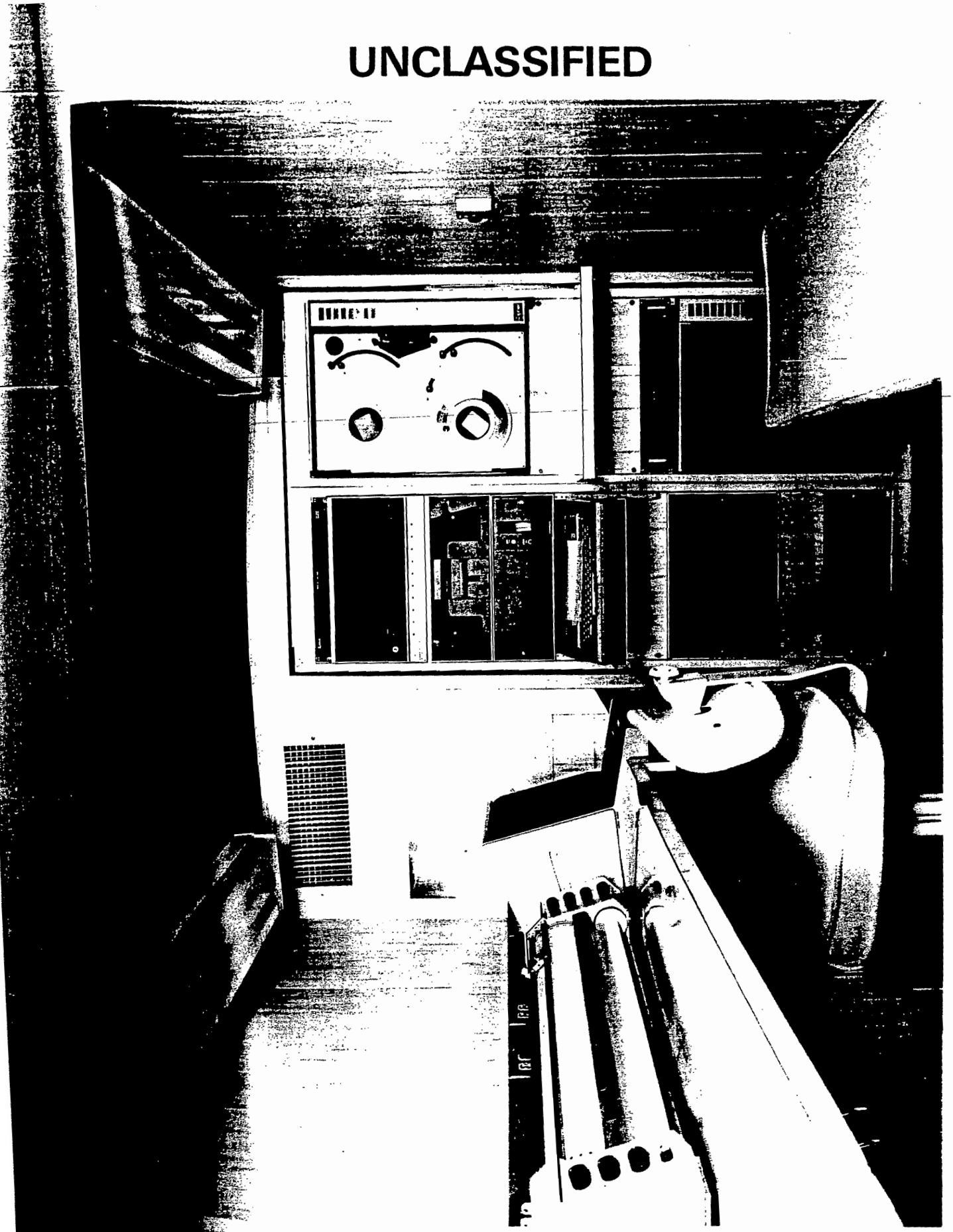

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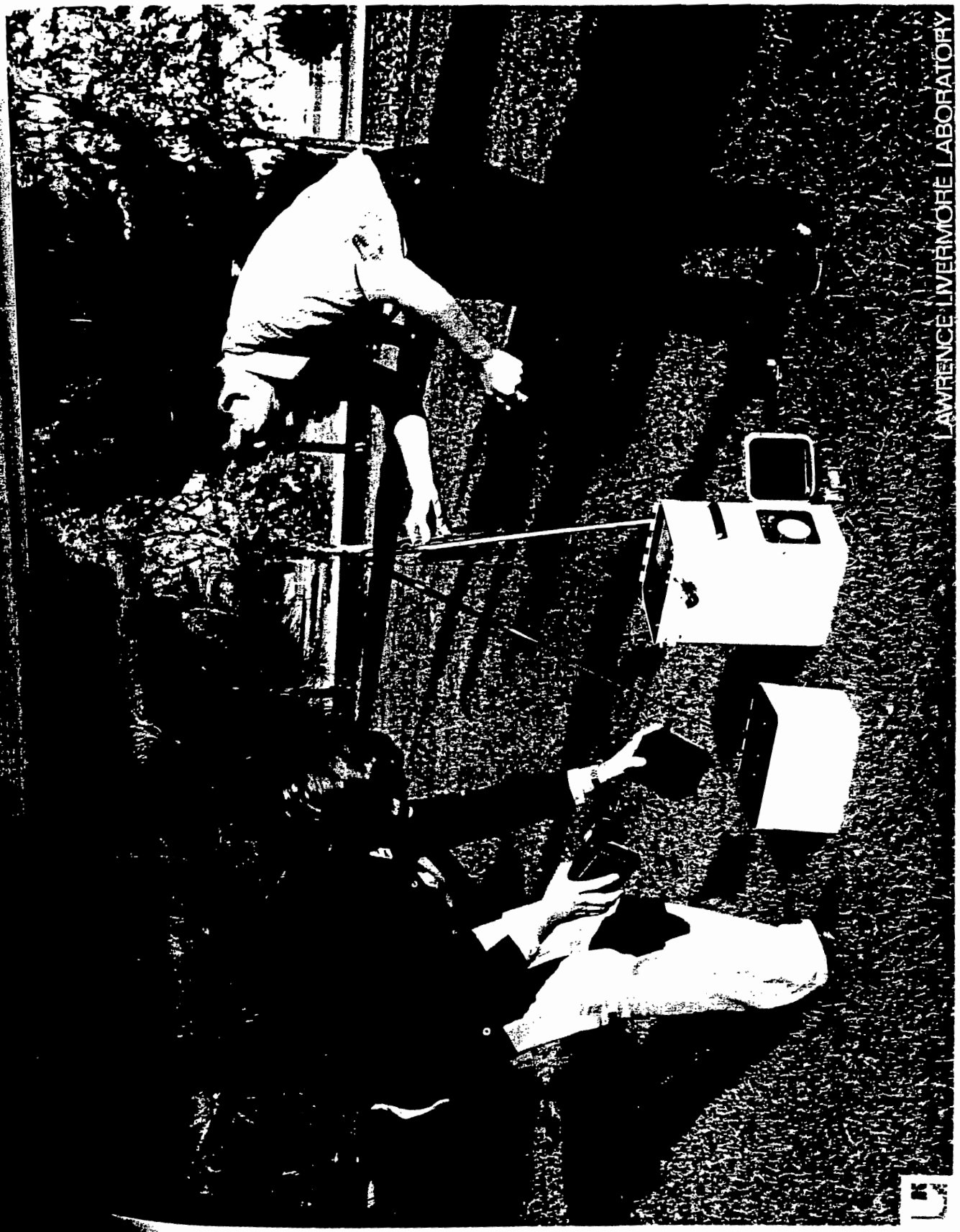
LAWRENCE LIVERMORE LABORATORY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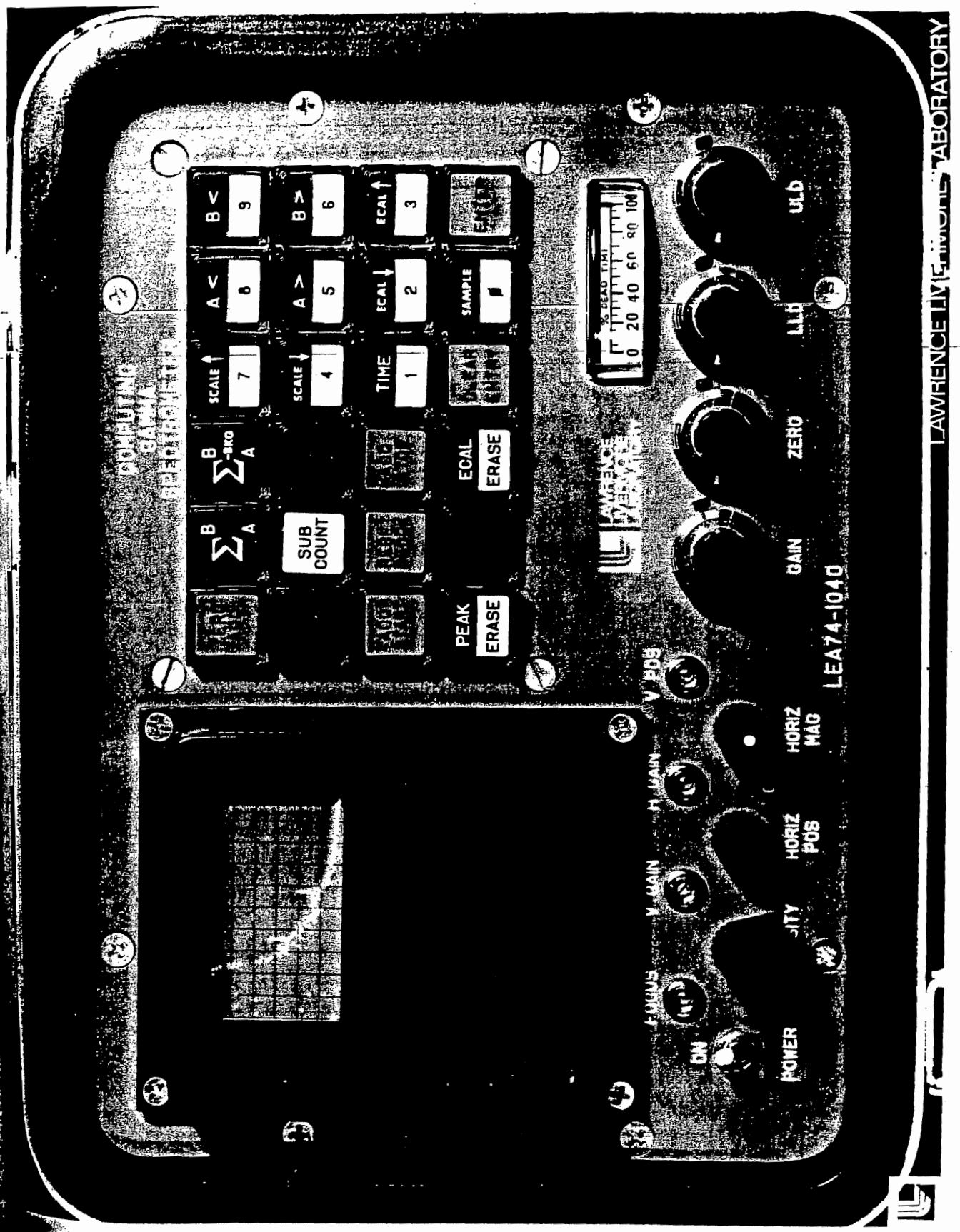
LAWRENCE LIVERMORE LABORATORY
LEA74-1040
SUB COUNT
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ECAL ERASE
SCALE
TIME
SAMPLE
ECAL
% DEAD TIME
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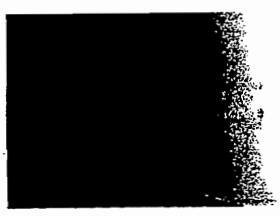

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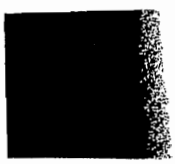

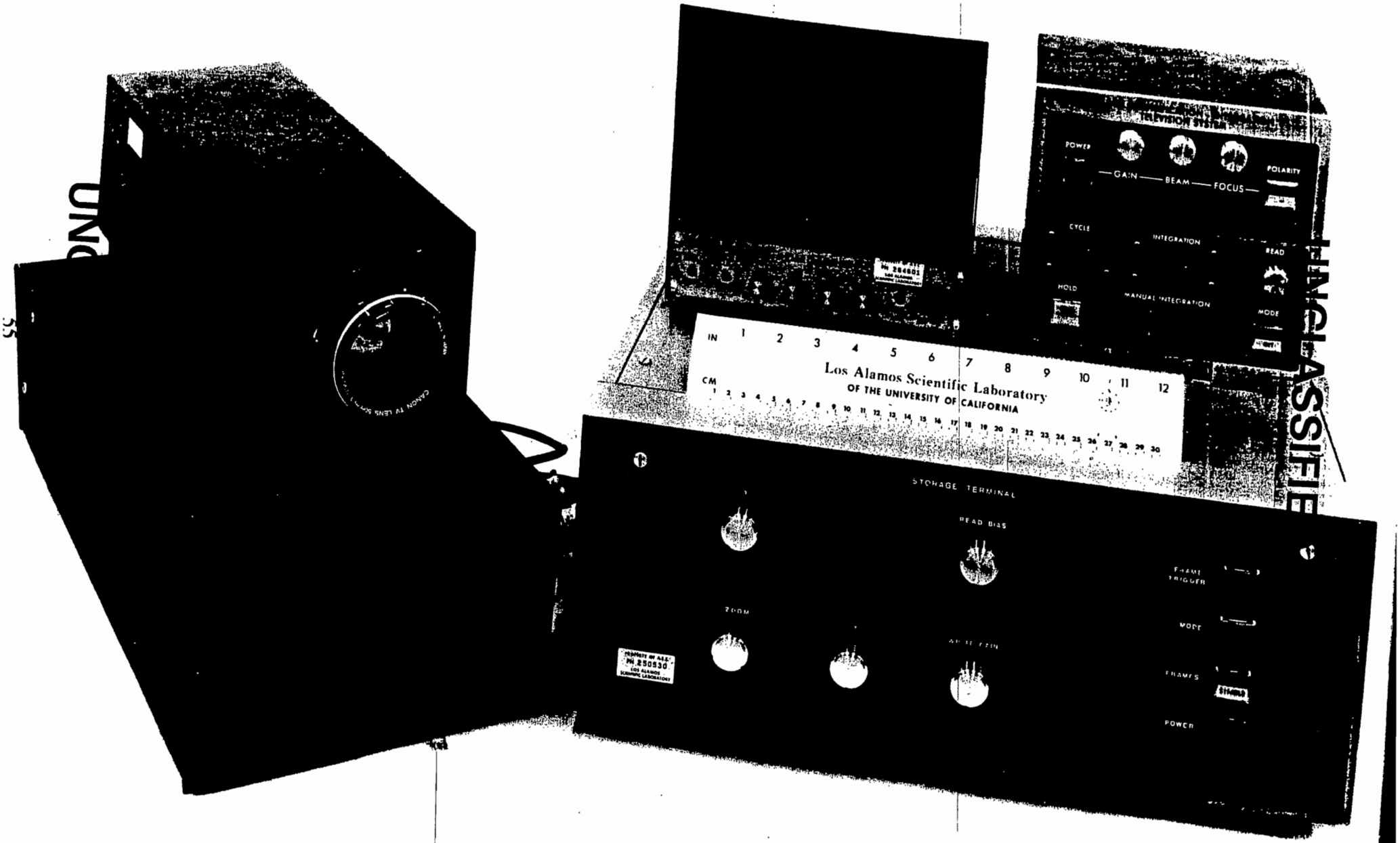


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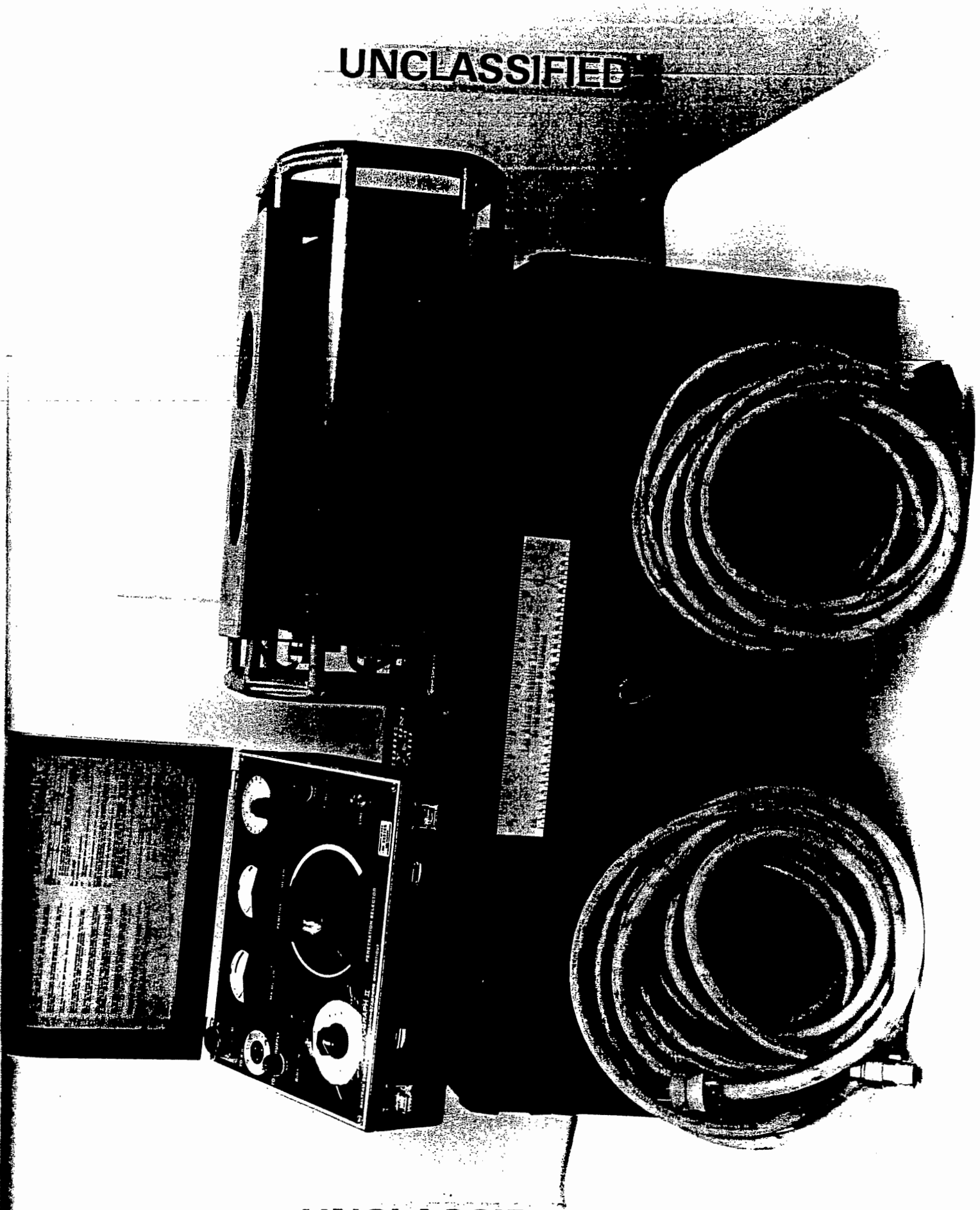

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