

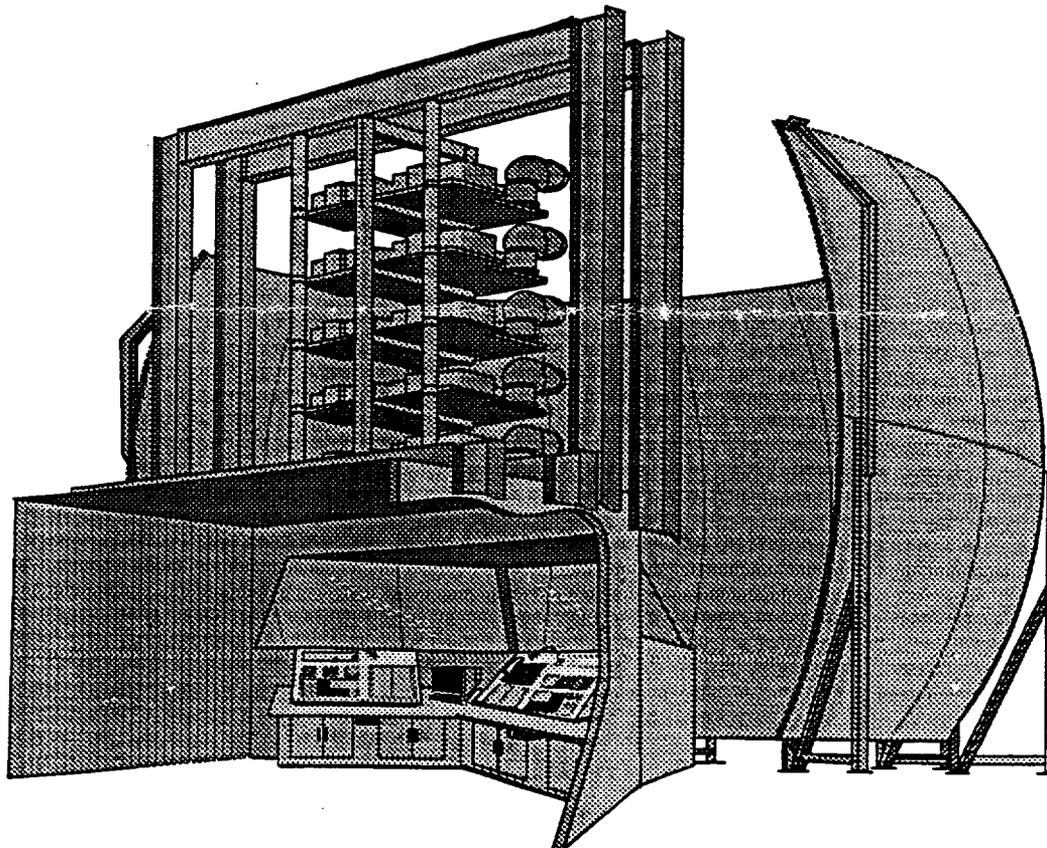
SUMMARY OF
TOWER OPERATOR TRAINING SYSTEM SIMULATOR

February 1992

Device 15G32

NAVAL TRAINING SYSTEMS CENTER

ORLANDO, FLORIDA



TRAINING CATEGORY:

Air Traffic Control (Tower)

ORIGINATING AGENCY:

DCNO/AIR

SECURITY CLASSIFICATION OF DEVICE:

Device 15G32 is unclassified.

PURPOSE OF DEVICE:

To provide realistic training and practice in control of air traffic in the environment surrounding a Naval Air Station Tower.

INTENDED USE:

In Air Traffic Controller school for laboratory training of enlisted Navy and Marine Corps air traffic controllers with varying degrees of proficiency in controlling air traffic.

FUNCTIONAL DESCRIPTION:

The TOTS Laboratory is a computer driven VFR Air Traffic Control Facility trainer that simulates visual environment of a tower cab. The trainer provides training for LOCAL, GROUND, and FLIGHT DATA air traffic activities.

Tactical & Training Systems

The trainer is comprised of two tower cabs, situated back-to-back and separated by a space consisting of a computer room, Debrief room, and Voice Training room, and two Screen rooms which contain the partial spherical screens and the image projection equipment. The TOTS features an automated voice recognition/synthesizer sub-system to enable direct student interaction with simulated pilots. An Instructor Operator Station in each cab, provides for lesson scenario selection, lesson review and student monitoring/intervention.

The trainer provides for an ATC visual gaming area with a radius of 7 statute miles and altitudes between zero and 4,000 feet, with weather, wind and degree of daylight selectable by the Instructor.

A communications network is provided for voice communications between the simulated pilots and each of the student consoles as well as the Instructor Operator Station.

PHYSICAL INFORMATION:

Number of pieces: XX units
Sizes: (2) Screens, 18' radius,
23' high, 210°
horizontal
(2) Projector Structures,
20'x10'x25'
(20) Projector Assembly
84"x36"x30"
(2) Tower Cabs, 19'x18'4"x7'
(2) IOS 84"x42"x30"
(6) Trainee Positions
72"x38"x30"
(7) Computers 24"x30"x40"
(4) Graphics Controllers
24"x30"x72"
(1) UPS 16"x22"x42"
(1) Debrief Station 60"x30"x30"
(6) Voice Training Station
36"x18"x28"

Weight: Screen: 10,000 lbs
Projector Structure: 33,000 lbs
Projector: 150 lbs
Tower Cab: 2,000 lbs
IOS: 550 lbs
Trainee Positions: 280 lbs

Computer: 350 LBS
Graphics Controller: 700 lbs
UPS: 500 lbs
Debrief Station: 250 lbs
Voice Training Station 780 lbs
TOTAL (not including cables)
95,000 lbs

EQUIPMENT REQUIRED (NOT SUPPLIED)

None

POWER REQUIREMENTS:

120/208 Vac 3 phase, 4-wire, 60
Hz, 160 amp capacity

PUBLICATIONS FURNISHED:

Operation and Maintenance
Manual with Parts List, NTSC
P-6183
PMS Documentation, NTSC
P-6184
Commercial Computer Document-
ation Set, NTSC P-6185
Instructor's Utilization Hand
book - NTSC P-6186
On-The-Job Training Handbook,
NTSC P-6187

PERSONNEL:

Instructor: (2) Chief or 1st class
PO, qualified to use TOTS for
tower operator instruction.

Trainees: Class of up to 24

Maintenance: 1 each Electronics
Technician, Visual Systems
Technician, Computer Technician

CONTRACT IDENTIFICATION:

Manufactured by Logicon, Inc.
San Diego, CA, under NTSC Contract
No. N61339-87-C-0111.

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