



GYRO PENDULOUS INTEGRATING ACCELEROMETER T/A, DEVICE 6D7

TRAINING CATEGORY:

BASIC SCIENCE (2) (Physics-Nuclear)

ORIGINATING AGENCY:

NAVTRASYSSEN

SECURITY CLASSIFICATION:

Device 6D7 is unclassified.

INTENDED USE:

- (1) To identify all parts of the PIGA.
- (2) To locate spin, torque, and precession axes.
- (3) To illustrate function of parts.
- (4) To demonstrate action and reaction by the device.

FUNCTIONAL DESCRIPTION:

Device 6D7, a training model of the Pendulous Integrating Gyro Accelerometer (PIGA), is a component part of Training Aid, Ballistic Missile Demonstrator, Inertial Guidance, Device X3G51.

The model of the PIGA is a double-scale cutaway unit with movable color-coded parts. The device can be used to identify parts and to demonstrate relative motion of parts, but it cannot generate any signals or motion.

Device 6D7 enables the instructor to demonstrate manually how the PIGA functions in an inertial guidance stable reference platform to overcome departures from built-in orientation references. It facilitates the illustration of gyroscopic action and reaction under typical conditions of physical displacement of the PIGA with respect to reference axis.

DIRECTORY OF NAVAL TRAINING DEVICES

PHYSICAL INFORMATION:
COLOR CODED MOVABLE PARTS:

Yellow	-	Accelerometer Housing
Red	-	(1) Torque Motor (positioner)
		(2) Inner PIGA Housing
		(3) Gyro Motor
		(4) Torque Motor
		(5) Pickoff Sensor
Blue	-	(1) Pendulous Weight
		(2) Viscous Fluid
Orange	-	(1) PIGA Housing
		(2) Shaft
White	-	Adjustable Blocks
Green	-	Inner Gimbal
Gray and Black	-	Photo Cells
Black	-	Shaft
Silver	-	Shaft
Clear Plastic	-	(1) Stationary encoding disc
		(2) Rotating encoding disc
		(3) Lamp

EQUIPMENT REQUIRED:

QTY	NAME/NOMENCLATURE
1	Training Aid Model, Pendulous Integrating Gyro Accelerometer, Device 6D7

REFERENCE PUBLICATIONS:

1. NAVEXOS P-2085: Instructor's Guide for Training Aid, Ballistic Missile Demonstrator, Inertial Guidance.
2. Device X3G51: Ballistic Missile Demonstrator, Inertial Guidance (Training Aid).
3. NAVEXOS P-2323: Device 6D8, Inertial Reference Integrating Gyro (Training Aid).

RELATED TRAINING DEVICES:

Device 6D7 is a component part of Training Aid, Ballistic Missile Demonstrator, Inertial Guidance, Device X3G51.

CONTRACT IDENTIFICATION:

Manufactured by G.P. Engineering Service's Inc. under NAVTRASYSNEN Contract No. N61339-20458.

LOCAL STOCK NUMBER:

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