

# LANDSAT 2

## Land Satellite 2

Spacecraft Sketch	Mission Objective
	<p>The primary objective of the Land Satellites 182 (Landsat 1&amp;2) missions is to use two imaging systems to achieve periodic and complete coverage of the United States via multispectral, high spatial resolution images of solar radiation reflected from the Earth's surface. Secondary objectives include acquisition of multispectral images over important major land masses other than the United States at least once per season and the relay of data acquired by ground based platforms via the Landsat to a central analysis facility to support the modelling of earth resource oriented processes.</p>

TYPE OF MISSION	PROGRAM OFFICE	PROJECT LEAD CENTER	MANAGEMENT APPROACH	S/C CONTRACTOR	I&T CONTRACTOR
EARTH SCIENCES & APPLICATIONS	SPACE SCIENCE & APPLICATIONS	GSFC	OUT-OF-HOUSE	GE	GE

Payload Description
<p>The Land Satellites 1&gt;;2 Landsat 1B2 payload consists of: 1) a four-band radiometric Multispectral Scanner (MSS); 2) a Return Beam Vidicon (RBV) multispectral television camera system; 3) a data collection system (DCS) for relaying sensor data to earth locations; and 4) two wide-band video tape recorders to provide operational flexibility. The Landsat 1 &amp;2 spacecraft includes extensive design inheritance and hardware commonalty from the Nimbus 4 spacecraft. The spacecraft consists of a two-body configuration that provides a near-polar orbiting earth-oriented, stabilized platform used to obtain mapping images of the earth's surface. The lower body houses electronic equipment for battery modules, communications, data handling and other accessory functions. The upper body includes an attitude control package which is a self-contained module housing electronics, sensors, and actuators for the stabilization and control of the spacecraft. Two solar arrays are attached to a solar array drive mechanism which is also housed in the upper body. The command antenna is mounted to the attitude control package.</p>

INSTRUMENT NAME	ACRONYM	PI AFFILIATION	PRINCIPAL INVESTIGATOR	I&T CONTRACTOR
MULTISPECTRAL SCANNER	MSS	GSFC	S. C. FREDEN	HAC/SBRC
RETURN BEAM VIDICON	RBV	GSFC	O.WEINSTEIN	RCA

Instrument Descriptions
<p>The Landsat 2 Multispectral Scanner (MSS), Data Point 79, is the same as the instrument which flew on Landsat 1. The MSS includes four multispectral energy bands - two for visible light energy and two for reflected infrared energy. The instrument detectors consist of 24 photosensors. Resolution for all four bands is 80 x 80 meters. Hughes Aircraft Corporation (HAC) is the prime contractor and Santa Barbara Research Center (SBRC) is responsible for development of the basic instrument.</p>
<p>The Landsat 2 Return Beam Vidicon (RBV) is a 3-camera color system designed and built by RCA to transmit video pictures in three spectral ranges. Camera operation is controlled by a camera controller and video combiner. The 2-inch return beam vidicon tubes used in the cameras combine features of vidicon and orthicon tubes.</p>

Launch
7/23/72(LSAT 1)
1/22/75(LSAT 2)

