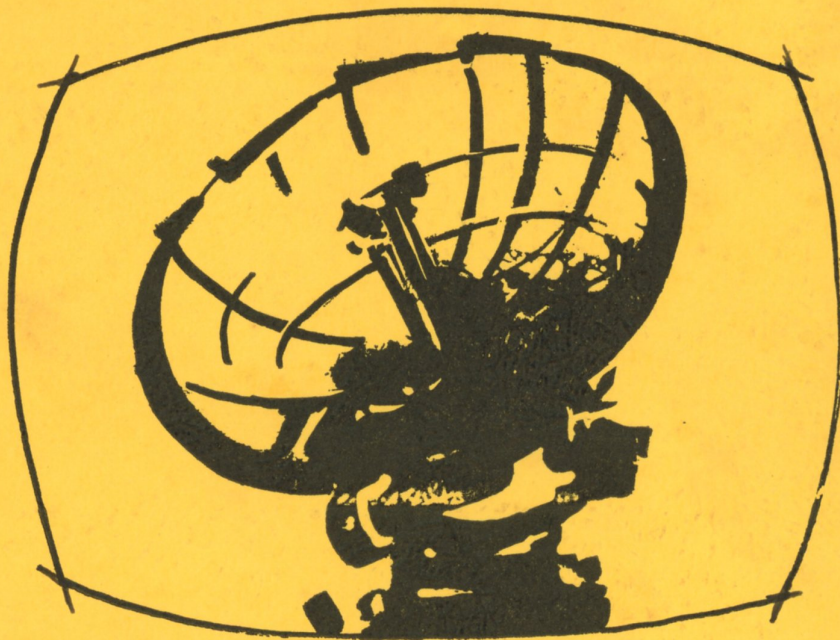


# APOLLO 11

COLOR TV  
COVERAGE  
OF  
SPLASHDOWN  
AND  
RECOVERY



The World at your Fingertips via WUI

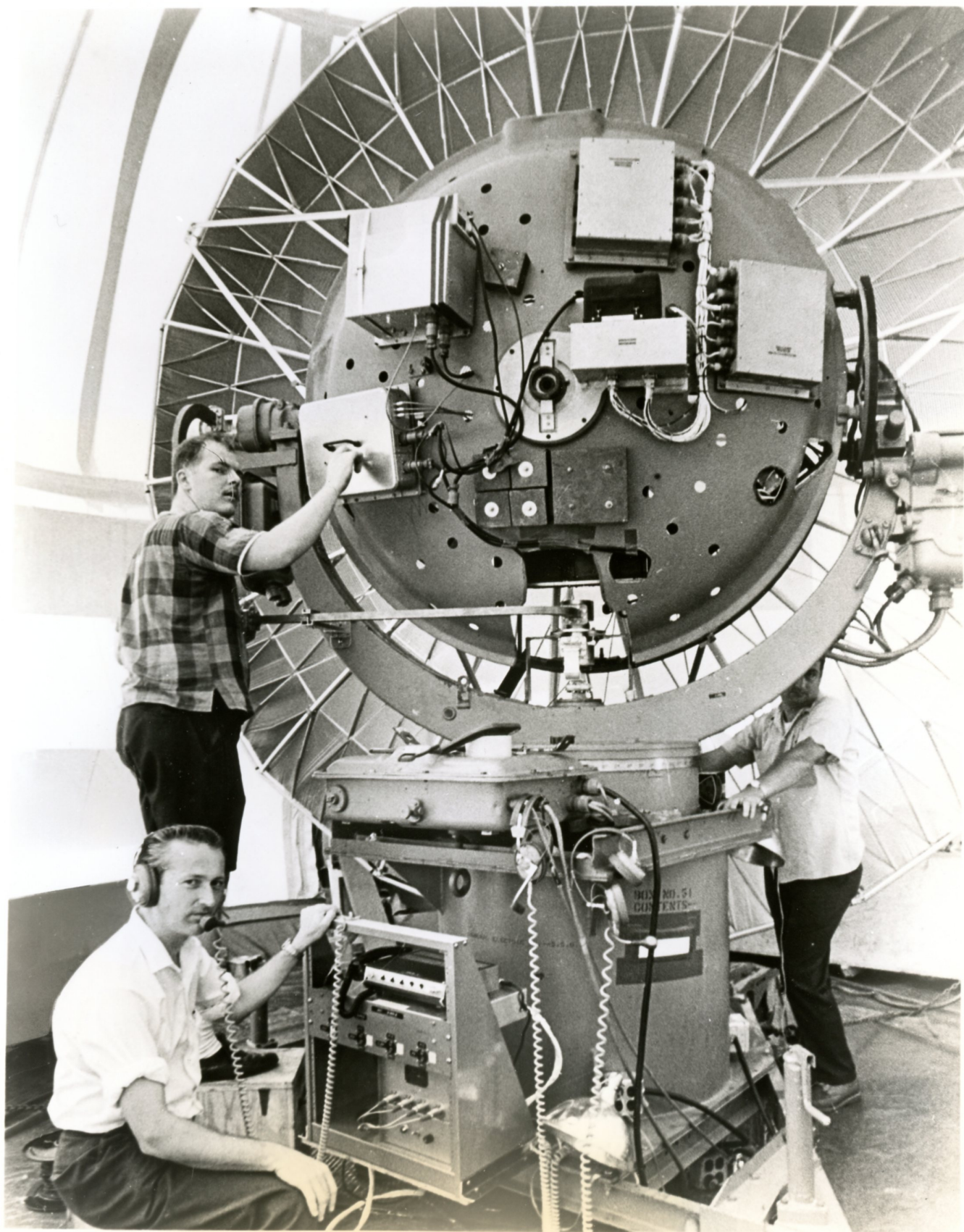
CABLEGRAMS  
TELEX  
LEASED CHANNELS  
DATA/VOICE SERVICES



Western Union International, Inc.

World Headquarters • 26 Broadway, New York, N.Y. 10004 • U.S.A.





# News Release

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212 363-8644 S. J. Wilson  
212 363-8645 R. M. Cudahy



or

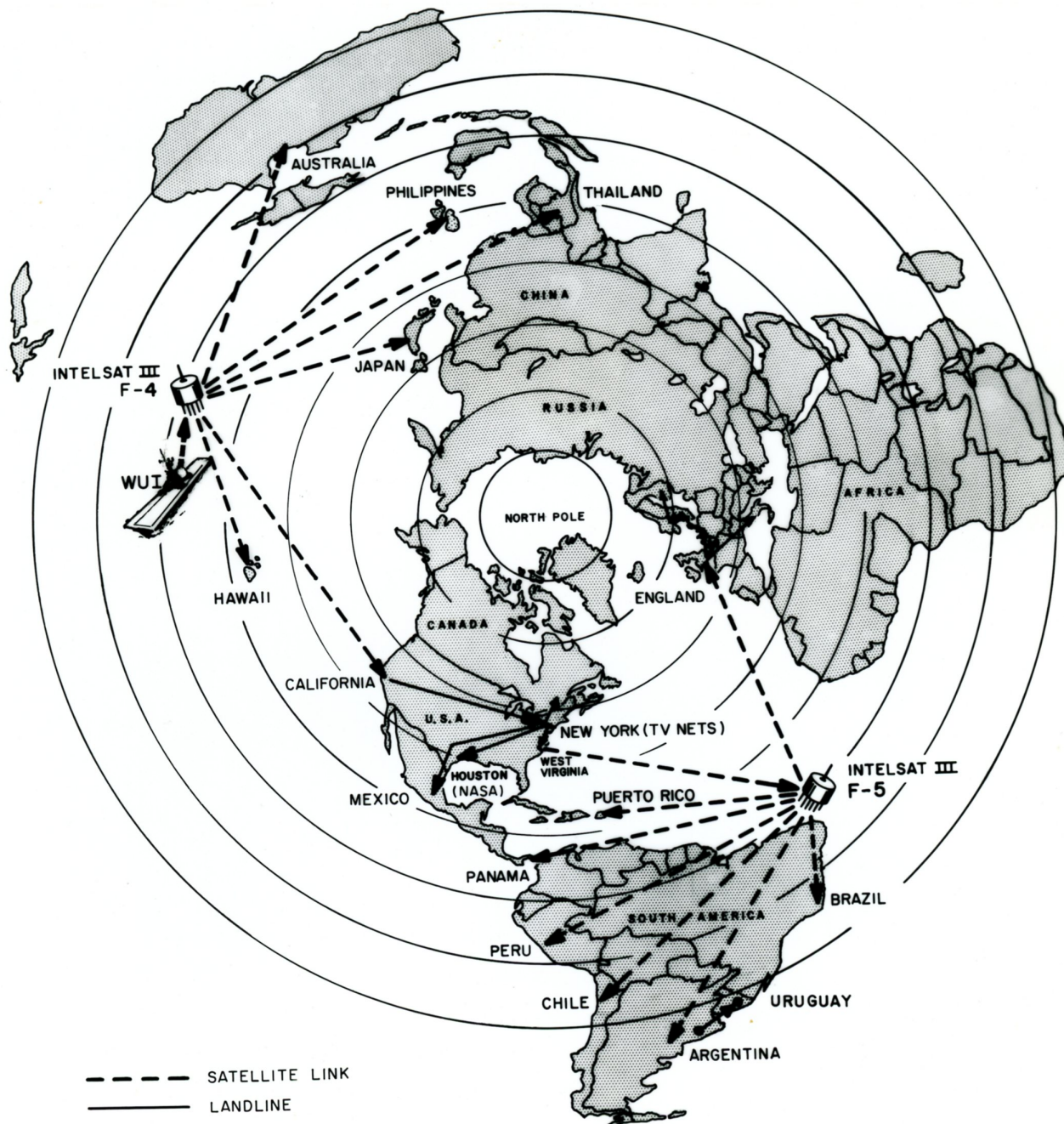
Alec Jordan Associates, Inc.  
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FOR IMMEDIATE RELEASE

A GYRO-STABILIZED PLATFORM supports the small, 15-foot parabolic reflector antenna on Western Union International's portable earth station aboard the USS Hornet, maintaining its base in a fixed position regardless of the motion of the ship. The only motion that does take place, in relation to any fixed point in space, is that of the antenna moving as necessary to hold contact with a satellite overhead. Mounted at the rear of the antenna and pedestal (above) are the operating controls, gyro and tracking motors and electronic equipment.

# # #







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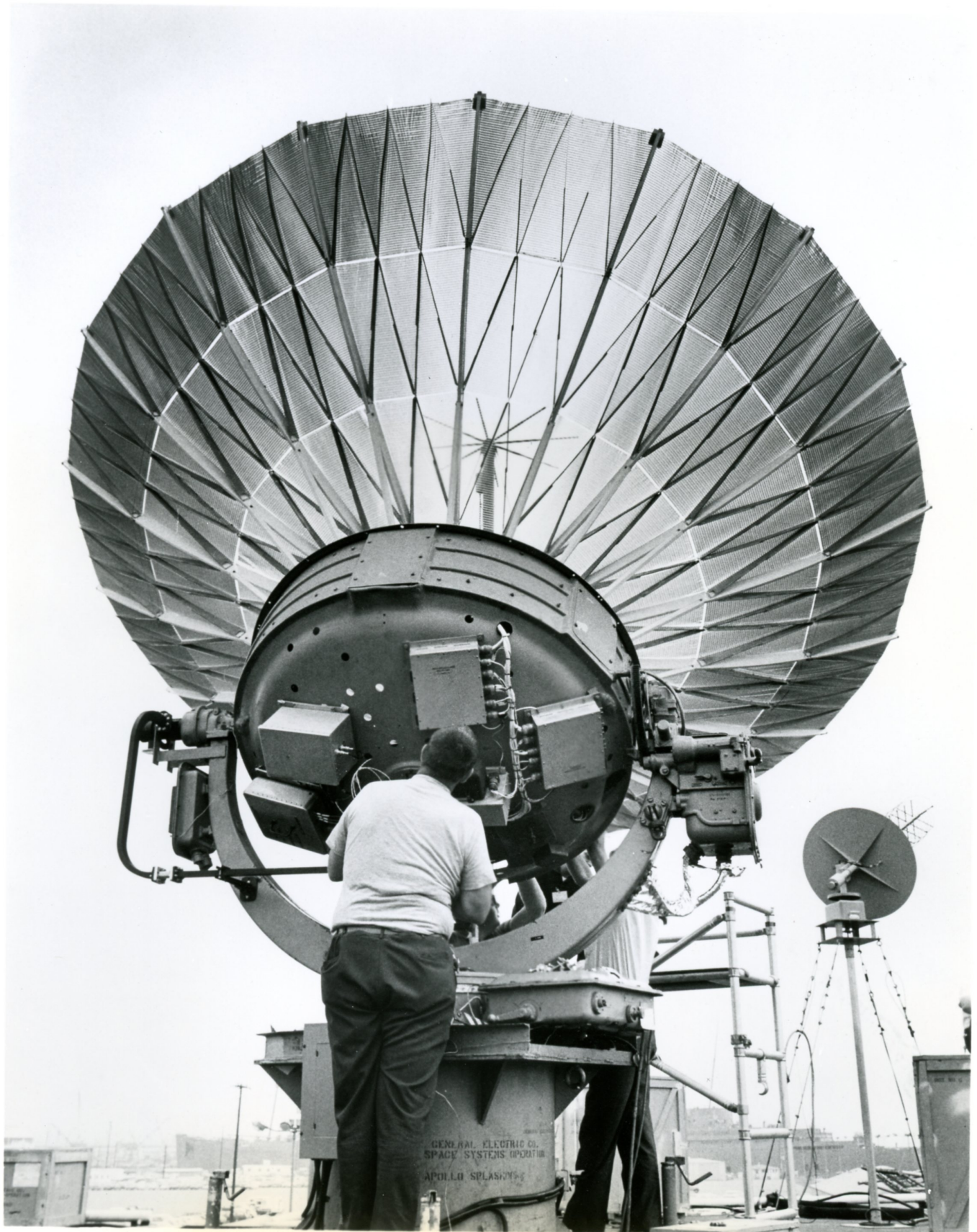
FOR IMMEDIATE RELEASE

AN ESTIMATED 500 MILLION VIEWERS in 49 countries will see the Apollo 11 splashdown, July 24, on television. Through a complex network of satellites, ground stations and landlines shown on this polar projection of the globe, the "live" colorcast travels along multiple paths totaling about one-third of a million miles to reach the 1000 television stations expected to carry the event.

The broadcast from Western Union International's uniquely portable TV transmitter aboard the USS Hornet is beamed to a commercial global satellite, Intelsat III-F-4, 22,300 miles above the Pacific Ocean. The signal from this satellite can be received by permanent earth stations in Hawaii, Japan, the Philippines, Australia, Thailand, and at Jamesburg, Calif. The Jamesburg reception is sent by landline to New York City where it is distributed to the ABC, CBS, and NBC networks. It is also sent by landline from New York to NASA Manned Space Flight headquarters in Houston, Tex., and to an earth station at Etam, W. Va. The Etam station beams its signal to another commercial global satellite, Intelsat III F-5, over the Atlantic Ocean for pickup at earth stations in Panama, Puerto Rico, Brazil, Chile, Argentina, Peru and Goonhilly Downs, England. The latter station sends the signal to Europe by the landlines of the European Broadcast Union.

# # #







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FOR IMMEDIATE RELEASE

TESTING FOR "LIVE" TV TRANSMISSION: Aboard the USS Hornet, recovery ship for the Apollo 11 splashdown in the Pacific, Western Union International's portable earth station is readied for its role in transmitting "live" TV color coverage of the event. This rear view shows the mobile transmitter's 15-foot parabolic antenna mounted on its gyro-stabilized platform.

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FOR IMMEDIATE RELEASE

## APOLLO 11 SPLASHDOWN TO BE SPLASH SCENE 'ROUND THE WORLD ---- "LIVE" AND IN COLOR

An estimated 500 million viewers in 49 countries will be able to see the Apollo 11 splashdown to be broadcast "live" and in color from the recovery ship, USS Hornet.

To bring off this remarkable feat in seconds, the picture signal will be bounced back and forth between two commercial global satellites and 14 earth stations and travel across thousands of miles of landlines to reach over 1000 TV stations for final transmission to millions of homes over the greater part of the world.

The most critical link in this chain of communication is the initial one--the uplink transmission of the actual scene from a small, mobile transmitter station aboard the USS Hornet, located 1,038 miles southwest of Hawaii, to a satellite 22,300 miles above the Pacific Ocean. The transmitter--a uniquely portable earth station--was developed by the Space Systems Center of the General Electric Company for Western Union International, Inc.

- More -



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The transmitting antenna of the WUI unit is mounted on a gyro-stabilized platform that allows it to track the satellite precisely and continuously regardless of the ship's roll or pitch or of its maneuvers as it proceeds to the Apollo 11 splashdown site. Once the antenna is locked onto an electronic signal beacon emitted by the satellite, it unerringly transmits its prime quality color picture back to the satellite unaffected by any motion of the ship.

Network TV cameras on the USS Hornet will focus on the splashdown, the recovery and the lifting of the capsule onto the carrier with the astronauts still inside. Transmission will continue as the astronauts emerge into a tubular plastic tunnel through which they will walk to a decontamination chamber where they will remain for 21 days.

This quarantine period is a safety measure against the possible, though unlikely, introduction of "moon germs" to the earth. As the USS Hornet heads for port during the quarantine, color broadcasts of interviews with the astronauts may be initiated periodically by means of the WUI portable earth station.

# # #



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FOR IMMEDIATE RELEASE

## TV COVERAGE OF APOLLO 11 SPLASHDOWN TO TRAVEL OVER 300,000 MILES IN SECONDS

The "live" color broadcast of the Apollo 11 splashdown, initiated by Western Union International's newest compact, mobile transmitter aboard the USS Hornet, will have traveled--in seconds--over 300,000 miles when it reaches more than 1,000 television stations throughout the world that are expected to carry the event.

The recovery area for Apollo 11 is a point in the Pacific Ocean only 1,038 nautical miles southwest of Hawaii but the live, color broadcast of the splashdown will follow a path almost 50,000 miles long to reach viewers in our 49th state. For viewers in South America and Europe, the signal will travel nearly 100,000 miles--equivalent to four times around the earth.

The reason for this apparent paradox is that a TV signal travels in a straight line, cannot follow the curvature of the earth and so cannot span distances between two points on earth as much as 100 miles apart.

- More -



The use of communications satellites is, of course, the answer to the problem of transmitting over long distances where land lines do not exist.

The powerful little Western Union International mobile transmitter aboard the USS Hornet aims the color signal (plus audio signals) at Intelsat III F-4 hanging stationary 22,300 miles above a point on the equator in mid-Pacific. The downlink signal from the satellite can be received at earth stations in Hawaii, Japan, the Philippines, Australia, Thailand and at Jamesburg, Calif. The round trip between earth stations and satellite adds up to nearly 50,000 miles.

The signal received at Jamesburg is sent to New York City where it is distributed to the television networks. From New York, it is also sent by landline to an earth station at Etam, W. Va., for transmission to Intelsat III-F-5 over the Atlantic Ocean which relays it to earth stations in the Caribbean, South and Central America and Europe.

These signals, having made two round trips between earth stations and satellites, plus landline transmission, will have traveled nearly 100,000 miles. Total lengths of the paths taken by the "live" telecast add up to approximately one-third of a million miles.

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FOR IMMEDIATE RELEASE

## NEW WUI NEWS CENTER TO SPEED REPORTS OF APOLLO 11 SPLASHDOWN

Making life easier for reporters is--according to reporters--the last item anyone ever worries about but not so for those aboard the USS Hornet to cover the Apollo 11 splashdown.

Western Union International, Inc., which will initiate "live" color telecasts from the ship using its portable earth station, will have a special WUI News Center pressroom aboard. It will operate six teletype channels for two hours each day for simultaneous transmission of news reports via satellite to the U.S. mainland.

The expanded WUI news filing system--unique to the Apollo missions--will greatly speed up the movement and receipt of news filed for wire services, newspapers and other printed news outlets. In previous splashdowns, only a single circuit link to Hawaii was available with copy being retransmitted to the mainland.

- More -



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WUI teletype operators will be on special assignment to the News Center for pressroom duty. Press copy will be delivered to a NASA representative who will give each story a priority sequential number for transmission in the order they are received. Each teletype channel, operates at 66 words per minute so that a considerable volume of news can be transmitted during the operating period.

The WUI News Center will have its six teletype channels transmitting for one hour in the morning and one hour in the afternoon each day of the mission except on splashdown day, July 24, when teletype operations will begin three hours prior to splashdown and continue for three hours after the astronauts board the ship.

# # #

- More -

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FOR IMMEDIATE RELEASE

## NEW MOBILE TV TRANSMITTER CAN COVER EVENTS ALMOST ANYPLACE ON THE GLOBE

A new and more compact version of Western Union International's mobile color TV transmitter---easily transportable by cargo jet---will be used for the first time to transmit "live" coverage of the Apollo 11 splashdown in the Pacific, July 24th.

The new version will share honors with the first WUI mobile unit---used to transmit "live" TV color coverage on previous Apollo missions--which will serve as a backup system on Apollo 11. Developed for WUI by General Electric's Space Systems organization, the systems provide a total breakthrough to "live", color TV coverage of news events over vast areas of the earth that were previously inaccessible to such reportage.

The completely self-contained portable earth stations can operate almost anywhere in the world from which their antennas can "see" a commercial global satellite. These satellites are in synchronous orbits which maintains them in fixed positions relative to the earth at various points over the equator.

- More -



WUI's portable earth stations can operate dependably up to 70° north or south stretching from just north of the Arctic Circle to slightly south of the Antarctic Circle. In effect, this comprises about 94 per cent of the earth's surface from which "live" color TV transmissions could be originated.

"Live" satellite telecasts on an intercontinental basis have become almost commonplace from the major capital cities. This capability makes it easy to overlook the fact that they can originate only from very limited areas where video quality landlines can combine with giant earth stations and communications satellites. Until now, no transmissions could originate from anywhere in the oceans covering more than 70 per cent of the globe, from the many countries which do not have their own large earth stations, nor from tens of thousands of islands.

These blacked-out areas that almost blanket the earth are suddenly opened up with the advent of the new mobile units. By truck, ship or cargo aircraft, the newest mobile transmitting station and its operating personnel can be quickly transported to any important news scene on land or sea to transmit events in live colors as they occur.

-----

The components of the new portable earth station are mounted for operation in air cargo IATA-type containers suitable for efficient mechanized loading and unloading with standard equipment. They can be transported by commercial cargo jet aircraft such as the Boeing 707 and the Douglas DC-8. The total weight of the portable earth station is 13,650 pounds.

For shipboard service, a 15-foot-diameter parabolic reflector is mounted on a gyro-stabilized platform to aim the half degree beam at the satellite regardless of the ship's motions. A simple tripod mount can be used for landbased operations where larger antennas are available for increased communications capacity.

Transmission capability includes one video channel, one program audio channel and up to twelve standard voice channels. Receiving capability includes six voice channels, using a parametric amplifier; or one video, one program and several voice channels using a parametric amplifier and a fixed 28-foot reflector.

Prime power required is a 44 v., three-phase, 60 Hz., from local power sources or a portable power generator. Maximum transmitter power is 14 kw., which is boosted to an effective radiated power level of approximately 800 million watts. Width of the beam is approximately 30 minutes of arc.

EVENTS ALMOST ANYPLACE ON THE GLOBE

A new and more compact version of the Union International's mobile color TV transmitter---easily transportable by cargo jet---will be used for the first time to transmit "live" coverage of the Apollo 11 splashdown in the Pacific, July 24th.

# # #

The new version will share honors with the first WII mobile unit---used to transmit "live" TV color coverage on previous Apollo missions---which will serve as a backup system on Apollo 11. Developed for WII by General Electric's Space Systems organization, the system provides a total breakthrough to "live" color TV coverage of news events over vast areas of the earth that were previously inaccessible to such reporting.

The new, fully self-contained portable earth stations can operate almost anywhere in the world from which their antennas can "see" a commercial global satellite. These satellites are in synchronous orbits which maintains them in fixed positions relative to the earth at various points over the equator.



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## FACT SHEET

WESTERN UNION INTERNATIONAL INC., PROVIDES  
COLOR TELEVISION COVERAGE OF APOLLO 11 RECOVERY

Mission Objective.....To provide "live" color TV coverage  
of Apollo 11 recovery operations on  
July 24, 1969.

Location.....On aircraft carrier USS Hornet in  
Pacific Ocean about 1,038 miles  
southwest of Hawaii.

Description.....A new small transportable terminal  
system consisting of a fourteen  
kilowatt television transmitter,  
video processing equipment, power  
supplies, two-way audio transmission  
equipment, related control, monitoring  
and test equipment, a 15-foot diameter  
paraboloid antenna of a space-related  
folding design, a gyro-stablized  
pedestal and monopulse tracking antenna  
system, and an air-inflated 20-foot  
high, 22-foot in diameter protective  
antenna "radome."

How it functions.....Transmits, via Western Union Interna-  
tional, Inc., the splashdown and  
recovery operations viewed by network  
TV cameras to a commercial global  
Satellite, Intelsat III F-4, 22,300  
miles above the Pacific at 174° E  
longitude above the equator. Satellite  
then redirects signal to satellite

- 2 -

tracking station at Jamesburg, Calif., which in turn routes signal overland to network headquarters in New York.

System contractor.....General Electric Space Systems Organization, Valley Forge, Pa.

Service contractor.....Western Union International, Inc. New York, N.Y.

Previous system usage....."Live" color TV coverage of Apollo 7, 8, 9 and 10 recoveries on board USS Essex, USS Yorktown, USS Guadalcanal and USS Princeton respectively, through facilities of Western Union International, Inc.

Location.....System employed ATS-3 satellite for Apollo 7 and 9 recoveries in the Atlantic and ATS-1 for Apollo 8 and 10 missions in the South Pacific.

Description.....A new small transportable terminal system consisting of a fourteen kilowatt television transmitter, video processing equipment, power supplies, two-way audio transmission equipment, related control, monitoring and test equipment, a 15-foot diameter paraboloid antenna of a space-related design, a gyro-stabilized pedestal and monopulse tracking antenna system, and an air-inflated 20-foot high, 22-foot in diameter protective antenna "radome."

# # #

How it functions.....Transmits, via Western Union International, Inc., the splashdown and recovery operations viewed by network TV cameras to a commercial global satellite, Intelsat III F-4, 22,300 miles above the Pacific at 176° E longitude above the equator. Satellite then redirects signal to satellite