1
00:00:00,000 --> 00:00:01,000
Music.

2
00:00:19,000 --> 00:00:25,400
From touch down after a mission -- through processing for the next flight -- to liftoff again --

3
00:00:26,000 --> 00:00:30,200
NASA's Space Shuttle fleet calls the Kennedy Space Center home.

4
00:00:31,000 --> 00:00:37,133
It takes a vast array of facilities and workers to prepare, launch, and land the Shuttles --

5
00:00:38,000 --> 00:00:41,533
a process KSC has handled for more than twenty years.

6
00:00:45,000 --> 00:00:54,533
The first Shuttle flight blasted off from Pad 39-A at KSC on April 12, 1981. After this successful mission to test t

7
00:00:58,000 --> 00:01:06,000
it returned to Earth as scheduled -- landing at Edwards Air Force Base, Calif. -- with a KSC landing convoy star

8
00:01:06,000 --> 00:01:13,466
The California landing required a return ride to KSC aboard one of the two massive 747 Shuttle Carrier Aircraft

9
00:01:14,000 --> 00:01:14,666
Those piggy-back flights became less frequent after February 11, 1984,

10
00:01:18,000 --> 00:01:18,200
when the first Shuttle touched down at KSC's Shuttle Landing Facility -- one of the world's longest runways.

11
00:01:25,000 --> 00:01:25,666
Since then, primarily weather has kept returning Shuttles from making the roundtrip directly to KSC,

12
00:01:31,000 --> 00:01:34,000
since landing here saves both time and money.

13
00:01:36,000 --> 00:01:43,066

But no matter which landing site is used, KSC's skilled crews are on call to handle the returning orbiter.

14
00:01:44,000 --> 00:01:44,200
Landings and launches are the most visibly recognizable Shuttle events at KSC,

15
00:01:49,000 --> 00:01:49,400
drawing live coverage by news media from across the country and around the world.

16
00:01:54,000 --> 00:01:55,666
Permanent facilities for the major networks and news organizations are part of the Launch Complex 39

17
00:01:59,000 --> 00:02:03,400
Press Site area, where reporters monitor the huge countdown clock.

18
00:02:04,000 --> 00:02:05,000
Music.

19
00:02:16,000 --> 00:02:25,066
Leading up to each mission, flight hardware is prepared at Kennedy Space Center. Astronauts practice and tra

20
00:02:28,000 --> 00:02:37,400
quarters of the Operations and Checkout building. Launch dress rehearsals are staged that include practice em

21
00:02:38,000 --> 00:02:38,066
Between missions, the fleet of orbiters and other flight hardware are constantly undergoing processing by KSC

22
00:02:47,000 --> 00:02:48,000
Music.

23
00:02:53,000 --> 00:02:53,866
After the first two minutes of a Shuttle's climb toward space, the two reusable solid rocket boosters separate fr

24
00:03:01,000 --> 00:03:09,600
and parachute back toward Earth for a splash down in the Atlantic Ocean. Divers aboard two special ships -- k

25
00:03:11,000 --> 00:03:11,800
and Freedom Star -- retrieve the boosters. The ships tow them back by way of Port Canaveral so the refurbishi

26
00:03:19,000 --> 00:03:19,733
Hangar AF at Cape Canaveral Air Force Station. Even the parachutes are recovered from the ocean using

27
00:03:25,000 --> 00:03:32,666
large reels and returned to the Parachute Refurbishment Facility where they are washed, dried and stored for r

28
00:03:36,000 --> 00:03:37,000
Music.

29
00:03:43,000 --> 00:03:43,266
When a Shuttle returns to KSC, it's met by the Orbiter Convoy --

30
00:03:47,000 --> 00:03:47,400
which normally begins its operations about two hours before the scheduled return.

31
00:03:52,000 --> 00:03:59,400
The convoy consists of about 25 specially designed vehicles or units of a team of around 150 trained personne

32
00:04:00,000 --> 00:04:08,733
They help the crew exit the orbiter and "safe" the vehicle. They tow it to the Orbiter Processing Facility within h

33
00:04:12,000 --> 00:04:12,600
It is here -- in one of the three high bays -- that processing begins for the next mission. Separate facilities and c

34
00:04:20,000 --> 00:04:20,533
the multitude of components that go into the final integrated launch vehicle. One is the Thermal Protection Syst

35
00:04:28,000 --> 00:04:29,666
houses the repair and manufacture of the materials that protect the exterior of each orbiter from the heat of lau

36
00:04:35,000 --> 00:04:35,866
Several facilities accommodate payload processing -- including the Space Station Processing Facility --

37
00:04:41,000 --> 00:04:48,466
which serves as the central preflight check out point for hardware destined for the International Space Station.

38
00:04:49,000 --> 00:04:50,000

Music.

39
00:04:55,000 --> 00:05:02,600
The heart of Launch Complex 39 is the huge Vehicle Assembly Building -- one of the largest buildings in the w

40
00:05:06,000 --> 00:05:12,666
and certainly the most recognizable at KSC. It is in the VAB that all the components -- the orbiter,

41
00:05:14,000 --> 00:05:22,733
external tank and solid rocket booster segments -- are assembled before being moved to the launch pad. Movi

42
00:05:25,000 --> 00:05:25,600
one of the massive crawler transporters has the heavy task of moving the Mobile Launcher Platform and asse

43
00:05:33,000 --> 00:05:39,066
with a combined weight of 12 million pounds -- to one of the two launch pads at Complex 39.

44
00:05:42,000 --> 00:05:49,933
There -- after final preparation -- it awaits liftoff and another mission in space. "We have a go for main engine s

45
00:05:50,000 --> 00:05:56,933
-- 4 -- 3 -- 2 -- 1 -- zero. We have booster ignition and liftoff of the Space Shuttle Discovery as NASA

46
00:06:00,000 --> 00:06:04,000
embarks on the final mission ■" And when that mission ends,