



1
00:00:06,309 --> 00:00:04,630
hi i'm mike massimino for the past few

2
00:00:08,549 --> 00:00:06,319
shuttle flights we've taken you behind

3
00:00:10,150 --> 00:00:08,559
the scenes to meet the crews as they

4
00:00:11,990 --> 00:00:10,160
train for their flights and the people

5
00:00:13,910 --> 00:00:12,000
around the country who make those

6
00:00:15,749 --> 00:00:13,920
missions fly but there's a lot of

7
00:00:17,510 --> 00:00:15,759
footage that we haven't shown you yet so

8
00:00:19,590 --> 00:00:17,520
we'd like to take you back to some of

9
00:00:21,510 --> 00:00:19,600
our recent flights and introduce you to

10
00:00:24,550 --> 00:00:21,520
more of the people who do everything at

11
00:00:36,069 --> 00:00:24,560
nasa we hope you enjoy this episode of

12
00:00:39,270 --> 00:00:37,590
so you've hung up their clothes their

13
00:00:40,630 --> 00:00:39,280

spacesuits here they are

14

00:00:42,229 --> 00:00:40,640

all seven of them you can see with the

15

00:00:44,549 --> 00:00:42,239

flags on the left side including the

16

00:00:46,069 --> 00:00:44,559

japanese flag from naoko so we have six

17

00:00:48,389 --> 00:00:46,079

americans and naoki this is the pilot

18

00:00:50,229 --> 00:00:48,399

for the mission this is jimmy

19

00:00:52,709 --> 00:00:50,239

this is his actual

20

00:00:54,869 --> 00:00:52,719

this is the actual suit he will fly in

21

00:00:57,110 --> 00:00:54,879

and it has been prepped and leak checked

22

00:00:59,349 --> 00:00:57,120

in houston and then after we arrive here

23

00:01:01,990 --> 00:00:59,359

we do another leak check here

24

00:01:03,750 --> 00:01:02,000

and then uh on fit check day jen gets in

25

00:01:05,750 --> 00:01:03,760

the suit and he makes sure it fits when

26

00:01:08,710 --> 00:01:05,760

was that that was on

27

00:01:10,950 --> 00:01:08,720

that was last night last night okay yeah

28

00:01:13,350 --> 00:01:10,960

for jim because in addition to the fit

29

00:01:14,870 --> 00:01:13,360

checks jim and commander

30

00:01:16,390 --> 00:01:14,880

alan poindexter they have the

31

00:01:19,270 --> 00:01:16,400

opportunity to fly

32

00:01:20,870 --> 00:01:19,280

uh sta flights which simulate the

33

00:01:22,630 --> 00:01:20,880

landing approach that they will do on

34

00:01:24,390 --> 00:01:22,640

the actual shuttle training aircraft

35

00:01:26,710 --> 00:01:24,400

right so they get to train

36

00:01:27,910 --> 00:01:26,720

um in in their actions

37

00:01:30,069 --> 00:01:27,920

hardware all right so you had to suit

38

00:01:31,910 --> 00:01:30,079

him up yesterday last night and he went

39

00:01:33,830 --> 00:01:31,920

out to the airplane and flew practice

40

00:01:35,990 --> 00:01:33,840

approaches correct wearing all this

41

00:01:37,749 --> 00:01:36,000

stuff correct because that's what i mean

42

00:01:39,749 --> 00:01:37,759

it's a lot different wearing that than

43

00:01:41,030 --> 00:01:39,759

wearing your flight suit right right so

44

00:01:42,710 --> 00:01:41,040

we get the

45

00:01:44,710 --> 00:01:42,720

makes the training more realistic and

46

00:01:46,389 --> 00:01:44,720

then makes it most beneficial yeah

47

00:01:48,230 --> 00:01:46,399

having the helmet on to restrict their

48

00:01:50,469 --> 00:01:48,240

what they can see and the gloves on this

49

00:01:53,030 --> 00:01:50,479

hand to on the controller and all that

50

00:01:54,069 --> 00:01:53,040

damn go on oxygen supply the whole bit

51
00:01:55,830 --> 00:01:54,079
just like they're going to do on the

52
00:01:58,389 --> 00:01:55,840
shuttle just all right

53
00:02:00,069 --> 00:01:58,399
this is the pilot's actual

54
00:02:02,310 --> 00:02:00,079
flight

55
00:02:03,910 --> 00:02:02,320
helmet this is the real helmet this is

56
00:02:06,230 --> 00:02:03,920
not the ones we practice with in houston

57
00:02:09,270 --> 00:02:06,240
correct this is the one that is actually

58
00:02:11,750 --> 00:02:09,280
going to fly away although for training

59
00:02:13,910 --> 00:02:11,760
purposes we install uh a training

60
00:02:15,270 --> 00:02:13,920
sunshade just to keep protect the the

61
00:02:18,229 --> 00:02:15,280
clear visor we're going to want to

62
00:02:20,630 --> 00:02:18,239
scratch the clear visor

63
00:02:24,229 --> 00:02:20,640

so on flight day we will remove this

64

00:02:27,910 --> 00:02:24,239

sunshade install a brand new sunshade

65

00:02:30,070 --> 00:02:27,920

but the but the helmet itself is um

66

00:02:31,190 --> 00:02:30,080

is just as you see it here it will fly

67

00:02:34,309 --> 00:02:31,200

in space

68

00:02:37,190 --> 00:02:34,319

all right the real thing

69

00:02:39,430 --> 00:02:37,200

these are his actual flight gloves

70

00:02:42,309 --> 00:02:39,440

they've already been leak tested

71

00:02:43,190 --> 00:02:42,319

and he wore them last night on his uh in

72

00:02:46,150 --> 00:02:43,200

his

73

00:02:48,070 --> 00:02:46,160

flight training sta

74

00:02:50,309 --> 00:02:48,080

and this is his comb cap which is worn

75

00:02:53,030 --> 00:02:50,319

inside the helmet this is it contains

76

00:02:54,790 --> 00:02:53,040

the microphones and earphones that

77

00:02:56,869 --> 00:02:54,800

he will use to fly

78

00:02:58,869 --> 00:02:56,879

uh on launch today

79

00:03:01,270 --> 00:02:58,879

all real stuff now one the one

80

00:03:03,030 --> 00:03:01,280

interesting thing here uh ray we've seen

81

00:03:05,670 --> 00:03:03,040

this other times too is that each crew

82

00:03:08,149 --> 00:03:05,680

member has a color

83

00:03:10,070 --> 00:03:08,159

so we know it's his stuff and so jim

84

00:03:10,869 --> 00:03:10,080

being the pilot right john is going to

85

00:03:15,350 --> 00:03:10,879

be

86

00:03:17,110 --> 00:03:15,360

has yellow on it

87

00:03:18,710 --> 00:03:17,120

his gloves have a yellow marker

88

00:03:20,949 --> 00:03:18,720

somewhere there you go right here and

89

00:03:22,229 --> 00:03:20,959

his helmet

90

00:03:23,750 --> 00:03:22,239

also has there you go

91

00:03:25,670 --> 00:03:23,760

for the color blind it also has the

92

00:03:27,030 --> 00:03:25,680

letter b on the helmet right

93

00:03:28,869 --> 00:03:27,040

you see that as the letter b which means

94

00:03:30,869 --> 00:03:28,879

he's the second guy so

95

00:03:33,670 --> 00:03:30,879

dex the commander is a and then jimmy's

96

00:03:35,509 --> 00:03:33,680

b and yes and then so on and so forth so

97

00:03:37,589 --> 00:03:35,519

this is the harness that they they will

98

00:03:40,070 --> 00:03:37,599

wear on flight day this is the actual

99

00:03:42,309 --> 00:03:40,080

flight item that they will wear

100

00:03:43,830 --> 00:03:42,319

uh it has their parachute harness that

101
00:03:45,270 --> 00:03:43,840
they will connect to their parachute

102
00:03:47,589 --> 00:03:45,280
this is dotty stuff i see because it's

103
00:03:48,550 --> 00:03:47,599
green right and she's the ms2 all right

104
00:03:49,430 --> 00:03:48,560
all right

105
00:03:51,509 --> 00:03:49,440
okay

106
00:03:52,949 --> 00:03:51,519
and uh she was saying the parachute is

107
00:03:54,550 --> 00:03:52,959
in the orbiter

108
00:03:55,429 --> 00:03:54,560
the actual flight parachutes are not

109
00:03:57,030 --> 00:03:55,439
here

110
00:03:58,630 --> 00:03:57,040
although you have spares and i can show

111
00:03:59,910 --> 00:03:58,640
you one of those okay

112
00:04:00,710 --> 00:03:59,920
but that's the harness that you were

113
00:04:03,509 --> 00:04:00,720

saying

114

00:04:06,949 --> 00:04:03,519

that that daddy would like okay

115

00:04:09,990 --> 00:04:06,959

on launch day and it contains a a number

116

00:04:10,869 --> 00:04:10,000

of uh emergency equipment items that she

117

00:04:13,270 --> 00:04:10,879

will

118

00:04:15,589 --> 00:04:13,280

fly with and hopefully not need but she

119

00:04:17,430 --> 00:04:15,599

will have it with her just in case right

120

00:04:19,110 --> 00:04:17,440

what's she got

121

00:04:21,990 --> 00:04:19,120

yeah show us what you can

122

00:04:23,189 --> 00:04:22,000

uh she has oxygen bottles

123

00:04:25,990 --> 00:04:23,199

that that

124

00:04:30,790 --> 00:04:26,000

contain a minimum of 10 minutes of pure

125

00:04:34,790 --> 00:04:33,270

she has a life preserver

126
00:04:36,390 --> 00:04:34,800
so in case something happens and they

127
00:04:37,990 --> 00:04:36,400
can't make it back to the landing site

128
00:04:39,749 --> 00:04:38,000
they have the capability to bail out

129
00:04:41,590 --> 00:04:39,759
over open water

130
00:04:43,909 --> 00:04:41,600
and we have a life preserver that's

131
00:04:47,430 --> 00:04:43,919
built into the harness here

132
00:04:47,440 --> 00:04:54,710
water packs

133
00:04:58,230 --> 00:04:56,629
for survival water we have emergency

134
00:04:59,510 --> 00:04:58,240
drinking water because you need water

135
00:05:00,710 --> 00:04:59,520
that's absolutely right so if you're

136
00:05:01,990 --> 00:05:00,720
stuck out in the middle of the ocean you

137
00:05:03,909 --> 00:05:02,000
got to drink you can't drink the sea

138
00:05:05,990 --> 00:05:03,919

water correct you got to drink that

139

00:05:07,749 --> 00:05:06,000

stuff it could be a little while before

140

00:05:09,670 --> 00:05:07,759

the rescue force is coming together so

141

00:05:12,070 --> 00:05:09,680

she needs a little something to drink

142

00:05:13,590 --> 00:05:12,080

it's absolutely important

143

00:05:15,270 --> 00:05:13,600

but there are rescue forces out there

144

00:05:16,550 --> 00:05:15,280

ready to come get us okay we'll get

145

00:05:18,310 --> 00:05:16,560

these you know

146

00:05:19,189 --> 00:05:18,320

and there it should be pretty quick

147

00:05:20,550 --> 00:05:19,199

right

148

00:05:21,909 --> 00:05:20,560

but

149

00:05:23,270 --> 00:05:21,919

it may take a while it'll be the open

150

00:05:25,909 --> 00:05:23,280

ocean but there are people ready to come

151

00:05:28,070 --> 00:05:25,919

get us every astronaut carries uh an

152

00:05:30,230 --> 00:05:28,080

emergency beacon so they can be found

153

00:05:31,990 --> 00:05:30,240

rapidly and they also have the survival

154

00:05:33,350 --> 00:05:32,000

radio so they can speak directly to the

155

00:05:35,510 --> 00:05:33,360

rescue forester

156

00:05:37,510 --> 00:05:35,520

uh absolutely essential items

157

00:05:38,950 --> 00:05:37,520

for emergency only right all right

158

00:05:40,950 --> 00:05:38,960

what's that blue thing you just put on

159

00:05:42,950 --> 00:05:40,960

there this is a comfort pad every

160

00:05:44,310 --> 00:05:42,960

astronaut has a comfort pad that they

161

00:05:46,150 --> 00:05:44,320

wear on the back because they're going

162

00:05:47,510 --> 00:05:46,160

to be the ones since they're watching in

163

00:05:49,510 --> 00:05:47,520

the vertical position they're going to

164

00:05:51,830 --> 00:05:49,520

be laying on their backs for for a

165

00:05:55,029 --> 00:05:51,840

couple of hours it's sometimes it's not

166

00:05:57,110 --> 00:05:55,039

easy but uh this this back pad makes it

167

00:05:58,790 --> 00:05:57,120

a little more comfortable so they don't

168

00:06:00,870 --> 00:05:58,800

uh they can concentrate on their jobs

169

00:06:02,230 --> 00:06:00,880

and not concentrate on the

170

00:06:03,270 --> 00:06:02,240

on the pain that they're having in the

171

00:06:04,870 --> 00:06:03,280

shoulders

172

00:06:06,150 --> 00:06:04,880

this is what you guys wear this is what

173

00:06:07,909 --> 00:06:06,160

we wear on launch day all right that's

174

00:06:09,670 --> 00:06:07,919

john's

175

00:06:11,110 --> 00:06:09,680

that'll be mine yep

176

00:06:12,469 --> 00:06:11,120

all right now i want to explain

177

00:06:14,390 --> 00:06:12,479

something this is not your usual set of

178

00:06:16,870 --> 00:06:14,400

clothes so what are the some of the

179

00:06:18,950 --> 00:06:16,880

interesting uh characteristics of this

180

00:06:20,469 --> 00:06:18,960

of this fancy uh jumpsuit you got there

181

00:06:22,790 --> 00:06:20,479

well besides the fact that it doesn't

182

00:06:25,350 --> 00:06:22,800

fit very well but it is comfortable all

183

00:06:27,110 --> 00:06:25,360

right uh the reason why uh it has all

184

00:06:29,189 --> 00:06:27,120

the green stripes on here these are pull

185

00:06:30,950 --> 00:06:29,199

strip uh pull tapers so you can just

186

00:06:32,230 --> 00:06:30,960

grab it and pull it for your down for

187

00:06:34,150 --> 00:06:32,240

let's say an accident happened on the

188

00:06:35,749 --> 00:06:34,160

pad and we need to get out of there your

189

00:06:37,430 --> 00:06:35,759

friends or colleagues can grab you and

190

00:06:39,590 --> 00:06:37,440

drag you away from any danger that you

191

00:06:41,510 --> 00:06:39,600

have okay the reason why we have numbers

192

00:06:45,430 --> 00:06:41,520

on these is so the

193

00:06:47,749 --> 00:06:45,440

lcc the launch control center ntd ntd is

194

00:06:49,270 --> 00:06:47,759

uh nasa test director the person who's

195

00:06:52,629 --> 00:06:49,280

kind of running the show right there the

196

00:06:54,230 --> 00:06:52,639

launch director's deducer right okay

197

00:06:56,150 --> 00:06:54,240

but they need to know who we are and

198

00:06:58,150 --> 00:06:56,160

since our name tags are really small and

199

00:06:59,990 --> 00:06:58,160

so we don't have one on the back

200

00:07:01,589 --> 00:07:00,000

right they need to know really quick who

201
00:07:03,350 --> 00:07:01,599
we are so we have numbers back there and

202
00:07:04,950 --> 00:07:03,360
each number designate who you are and

203
00:07:07,589 --> 00:07:04,960
what you do up there on the pad it's

204
00:07:09,990 --> 00:07:07,599
like a ball player exactly yeah so like

205
00:07:11,589 --> 00:07:10,000
a number three is uh a suit tech and he

206
00:07:12,790 --> 00:07:11,599
works on the mid deck he'll be strapping

207
00:07:15,110 --> 00:07:12,800
in the middle

208
00:07:17,589 --> 00:07:15,120
uh you have a number one who's in obcc

209
00:07:19,110 --> 00:07:17,599
the orbiter vehicle crew chief

210
00:07:20,950 --> 00:07:19,120
and he he's the one that's overall in

211
00:07:21,749 --> 00:07:20,960
charge of all the closeout crew all

212
00:07:24,230 --> 00:07:21,759
right

213
00:07:26,309 --> 00:07:24,240

the number two is an astronaut or an ask

214

00:07:28,070 --> 00:07:26,319

as we're called that's asp

215

00:07:31,110 --> 00:07:28,080

astronauts because that's the answer

216

00:07:32,790 --> 00:07:31,120

that's support personnel and uh he's the

217

00:07:34,469 --> 00:07:32,800

guy who's going to be inside there

218

00:07:35,990 --> 00:07:34,479

assisting with switch throwing for the

219

00:07:38,150 --> 00:07:36,000

astronauts making sure that all the

220

00:07:39,990 --> 00:07:38,160

switches are correct reading a checklist

221

00:07:41,430 --> 00:07:40,000

doing context with the astronauts after

222

00:07:43,270 --> 00:07:41,440

they're strapped in

223

00:07:45,510 --> 00:07:43,280

and dealing with all their needs that

224

00:07:47,110 --> 00:07:45,520

they need prior to liftoff right uh the

225

00:07:49,270 --> 00:07:47,120

number three will be in the flight decks

226

00:07:51,589 --> 00:07:49,280

dropping in the pilot commander ms1 and

227

00:07:54,550 --> 00:07:51,599

ms2 that's you that would be me on this

228

00:07:56,309 --> 00:07:54,560

flight all right uh the four and five

229

00:07:58,230 --> 00:07:56,319

they're the hatch techs they're the ones

230

00:07:59,430 --> 00:07:58,240

that will be closing the hatch ooh they

231

00:08:01,189 --> 00:07:59,440

got to close the door got to close the

232

00:08:03,430 --> 00:08:01,199

door they have the key as well they

233

00:08:06,309 --> 00:08:03,440

should lock the door all right all right

234

00:08:07,830 --> 00:08:06,319

all right uh the number seven

235

00:08:09,909 --> 00:08:07,840

is uh another suit deck and he's

236

00:08:11,990 --> 00:08:09,919

strapping in the mid deck which is ms

237

00:08:13,510 --> 00:08:12,000

five six and seven in this case that

238

00:08:15,430 --> 00:08:13,520

will be ray cuevas

239

00:08:17,189 --> 00:08:15,440

that's right right there right there all

240

00:08:19,270 --> 00:08:17,199

right okay number seven like mickey

241

00:08:21,029 --> 00:08:19,280

mantle right that's right there you go

242

00:08:22,790 --> 00:08:21,039

and then the number six which one forgot

243

00:08:24,150 --> 00:08:22,800

is the nasa quality he's the one that's

244

00:08:26,230 --> 00:08:24,160

making sure all the paperwork and all

245

00:08:27,749 --> 00:08:26,240

the jobs are done to the checklist all

246

00:08:29,909 --> 00:08:27,759

right those are the seven people on the

247

00:08:32,149 --> 00:08:29,919

pad that you'll see in the white room in

248

00:08:34,550 --> 00:08:32,159

addition to the spacesuits we also prep

249

00:08:36,870 --> 00:08:34,560

uh on some miscellaneous things so they

250

00:08:38,469 --> 00:08:36,880

can have it right there handy on launch

251

00:08:40,230 --> 00:08:38,479

day so all right

252

00:08:41,350 --> 00:08:40,240

whatever so so he's got a little let's

253

00:08:43,110 --> 00:08:41,360

look what he's got let's go a little

254

00:08:44,630 --> 00:08:43,120

closer here because we've got uh we've

255

00:08:45,990 --> 00:08:44,640

got some cool stuff here

256

00:08:47,350 --> 00:08:46,000

this is going to be on his it's a strap

257

00:08:48,710 --> 00:08:47,360

like this so it goes on his leg right

258

00:08:50,070 --> 00:08:48,720

yes it goes around that's going to strap

259

00:08:52,150 --> 00:08:50,080

around his leg we call it a knee board

260

00:08:54,150 --> 00:08:52,160

because it's kind of on your knee and uh

261

00:08:55,430 --> 00:08:54,160

it's got some pens and pencils but you

262

00:08:56,389 --> 00:08:55,440

know but these are not your average i

263

00:08:58,230 --> 00:08:56,399

mean this is kind of like a regular

264

00:09:00,790 --> 00:08:58,240

pencil right but look it's got some

265

00:09:02,470 --> 00:09:00,800

special features it's got a it's it's

266

00:09:03,509 --> 00:09:02,480

actually pretty ordinary this is the

267

00:09:05,110 --> 00:09:03,519

kind of thing

268

00:09:08,310 --> 00:09:05,120

it's got but it's got a lanyard on it it

269

00:09:11,110 --> 00:09:08,320

has a nomex lanyard yeah uh but and has

270

00:09:12,710 --> 00:09:11,120

some uh hook velcro uh tape to it but

271

00:09:14,630 --> 00:09:12,720

other than that it's just an ordinary

272

00:09:16,230 --> 00:09:14,640

pencil that anybody can buy in in the

273

00:09:17,990 --> 00:09:16,240

store yeah i don't i don't see it as

274

00:09:20,310 --> 00:09:18,000

being any really any different but what

275

00:09:22,150 --> 00:09:20,320

you need to do is you because it's gonna

276

00:09:23,509 --> 00:09:22,160

float and so you don't illusionist you

277

00:09:24,790 --> 00:09:23,519

know i can lose pens and pencils all the

278

00:09:26,389 --> 00:09:24,800

time on the earth

279

00:09:27,430 --> 00:09:26,399

you know in space it's it's easier to

280

00:09:28,790 --> 00:09:27,440

lose it because it's gonna float away

281

00:09:30,470 --> 00:09:28,800

from you so you have it on a lanyard you

282

00:09:33,030 --> 00:09:30,480

know you can't lose it and you have the

283

00:09:34,790 --> 00:09:33,040

velcro so you can stick it to another

284

00:09:36,790 --> 00:09:34,800

matching piece of velcro so that it'll

285

00:09:38,790 --> 00:09:36,800

stay put so that's one of the the first

286

00:09:40,790 --> 00:09:38,800

things astronauts learns and things

287

00:09:42,790 --> 00:09:40,800

things float away by themselves right

288

00:09:44,470 --> 00:09:42,800

they learn in training and through the

289

00:09:46,070 --> 00:09:44,480

experience of others to

290

00:09:47,350 --> 00:09:46,080

right and tether things down so they

291

00:09:48,870 --> 00:09:47,360

don't move but it really becomes obvious

292

00:09:50,470 --> 00:09:48,880

when you get there and your stuff's

293

00:09:52,550 --> 00:09:50,480

floating everywhere and you got a

294

00:09:53,990 --> 00:09:52,560

flashlight as well yes and that

295

00:09:56,230 --> 00:09:54,000

flashlight of course is on the lanyard

296

00:09:57,750 --> 00:09:56,240

with velcro flashlight is is basically

297

00:10:00,070 --> 00:09:57,760

the same type of flashlight that you can

298

00:10:01,829 --> 00:10:00,080

buy in a store but it has an extra

299

00:10:04,550 --> 00:10:01,839

feature built into it

300

00:10:06,550 --> 00:10:04,560

uh we've replaced the the normal cap

301

00:10:09,030 --> 00:10:06,560

that goes on the back of the

302

00:10:11,110 --> 00:10:09,040

the flashlight with a special specially

303

00:10:12,949 --> 00:10:11,120

made device that's used to pull on

304

00:10:15,110 --> 00:10:12,959

circuit breakers so he can he can take

305

00:10:16,630 --> 00:10:15,120

this flashlight and not only use it as

306

00:10:18,389 --> 00:10:16,640

an ordinary flashlight you can turn it

307

00:10:20,550 --> 00:10:18,399

around there's the back end of the

308

00:10:23,430 --> 00:10:20,560

flashlight as a tool yeah so throw

309

00:10:24,949 --> 00:10:23,440

switches pull on circuit breakers and a

310

00:10:26,310 --> 00:10:24,959

couple other miscellaneous things that

311

00:10:28,630 --> 00:10:26,320

you can use this this is a very good

312

00:10:31,110 --> 00:10:28,640

idea yeah it's a it's a two in one thing

313

00:10:33,110 --> 00:10:31,120

and uh it works very well and yeah and

314

00:10:34,870 --> 00:10:33,120

it's easy to use and it's it's always

315

00:10:37,030 --> 00:10:34,880

there so that's why that's why it's so

316

00:10:39,670 --> 00:10:37,040

popular the gold clips

317

00:10:42,470 --> 00:10:39,680

the famous gold clips yes these are just

318

00:10:44,949 --> 00:10:42,480

ordinary uh paper clips uh

319

00:10:46,710 --> 00:10:44,959

uh with all the computer technology that

320

00:10:48,630 --> 00:10:46,720

we have we still have lots of paper

321

00:10:51,190 --> 00:10:48,640

floating around we have a lot of paper

322

00:10:53,430 --> 00:10:51,200

instructions paper procedures and they

323

00:10:55,750 --> 00:10:53,440

need uh they need paper clips in space

324

00:10:57,269 --> 00:10:55,760

just like we do here on earth so and

325

00:10:59,030 --> 00:10:57,279

this is what they use they have velcro

326

00:11:01,110 --> 00:10:59,040

on them so they can attach them to a

327

00:11:02,630 --> 00:11:01,120

wall and they won't float away and

328

00:11:05,190 --> 00:11:02,640

they're nice and big so they can hold

329

00:11:07,430 --> 00:11:05,200

lots of lots of paper yeah and uh the

330

00:11:10,710 --> 00:11:07,440

astronauts

331

00:11:12,389 --> 00:11:10,720

use these very very frequently yeah it's

332

00:11:13,750 --> 00:11:12,399

the little things that we need to to

333

00:11:15,269 --> 00:11:13,760

keep you keep being able to work like

334

00:11:17,190 --> 00:11:15,279

you do on the earth

335

00:11:17,829 --> 00:11:17,200

so stuff don't float away from you you

336

00:11:19,030 --> 00:11:17,839

know

337

00:11:20,630 --> 00:11:19,040

you can keep track of what you're doing

338

00:11:22,150 --> 00:11:20,640

all that stuff is very important correct

339

00:11:23,750 --> 00:11:22,160

we take lots of that stuff lots of

340

00:11:25,509 --> 00:11:23,760

things all right what else we got right

341

00:11:27,509 --> 00:11:25,519

we have a stowage bag and this is the

342

00:11:29,430 --> 00:11:27,519

bag that commander will use to stow his

343

00:11:31,030 --> 00:11:29,440

helmet after he gets on or but he's

344

00:11:32,790 --> 00:11:31,040

going to take off his helmet and he has

345

00:11:35,030 --> 00:11:32,800

to put it somewhere so this is a bag

346

00:11:37,269 --> 00:11:35,040

that he's going to use to put his helmet

347

00:11:39,190 --> 00:11:37,279

in and and stow it because he won't need

348

00:11:40,550 --> 00:11:39,200

it again until it's time for him to come

349

00:11:42,630 --> 00:11:40,560

home right so he needs to put it

350

00:11:45,269 --> 00:11:42,640

somewhere right and this is the bag that

351
00:11:46,949 --> 00:11:45,279
he's going to use to stow his helmet

352
00:11:49,030 --> 00:11:46,959
gloves and cca

353
00:11:50,230 --> 00:11:49,040
cca is his comcap he's comcap right

354
00:11:52,069 --> 00:11:50,240
that's correct

355
00:11:53,350 --> 00:11:52,079
this is a headset that they'll use on

356
00:11:55,509 --> 00:11:53,360
orbit

357
00:11:57,750 --> 00:11:55,519
after they get in space they can remove

358
00:11:59,350 --> 00:11:57,760
their helmet and cca

359
00:12:01,750 --> 00:11:59,360
and just use this lightweight headset

360
00:12:03,030 --> 00:12:01,760
for for communications purposes

361
00:12:06,790 --> 00:12:03,040
but they don't need it for launch so

362
00:12:10,790 --> 00:12:08,829
okay we've got uh

363
00:12:13,269 --> 00:12:10,800

timers

364

00:12:15,590 --> 00:12:13,279

time is just ordinary just ordinary uh

365

00:12:17,990 --> 00:12:15,600

kitchen style timers that anybody can

366

00:12:19,750 --> 00:12:18,000

buy and but they come in handy for for a

367

00:12:21,670 --> 00:12:19,760

multitude of different reasons and

368

00:12:22,629 --> 00:12:21,680

because a lot of things we do are on

369

00:12:24,230 --> 00:12:22,639

time

370

00:12:25,670 --> 00:12:24,240

the things that you know you do this at

371

00:12:26,949 --> 00:12:25,680

this time and you said you can set up a

372

00:12:28,470 --> 00:12:26,959

little alarm or you want to time how

373

00:12:29,750 --> 00:12:28,480

long something takes because they want

374

00:12:31,910 --> 00:12:29,760

you know do something in 30 seconds

375

00:12:33,670 --> 00:12:31,920

later do something else you have uh

376

00:12:35,350 --> 00:12:33,680

all these little timers to help you do

377

00:12:37,350 --> 00:12:35,360

that correct and it's excellent in

378

00:12:39,750 --> 00:12:37,360

addition to the time it also has a clock

379

00:12:41,350 --> 00:12:39,760

built in so you can use that as a watch

380

00:12:42,949 --> 00:12:41,360

so you know what time it is

381

00:12:45,030 --> 00:12:42,959

all right and then you've got your uh

382

00:12:46,949 --> 00:12:45,040

let's see you have mirror mirrors

383

00:12:49,030 --> 00:12:46,959

commander has requested a mirror and we

384

00:12:51,430 --> 00:12:49,040

will stow this in the orbiter for him

385

00:12:52,870 --> 00:12:51,440

and uh the mirror comes in handy because

386

00:12:54,470 --> 00:12:52,880

after they get in their seat if they

387

00:12:55,350 --> 00:12:54,480

drop something they can use the mirror

388

00:12:55,990 --> 00:12:55,360

to go

389

00:12:57,030 --> 00:12:56,000

yeah

390

00:12:58,710 --> 00:12:57,040

he probably doesn't need that because he

391

00:13:00,550 --> 00:12:58,720

wants to you know he's worried about his

392

00:13:02,629 --> 00:13:00,560

appearance

393

00:13:04,310 --> 00:13:02,639

it's a useful tool because because you

394

00:13:05,509 --> 00:13:04,320

can't see so well around the helmet so

395

00:13:06,790 --> 00:13:05,519

you need a mirror to show you what's

396

00:13:08,230 --> 00:13:06,800

going on behind you

397

00:13:09,590 --> 00:13:08,240

or to get some of the switches too i bet

398

00:13:11,509 --> 00:13:09,600

you're behind him that he can't see

399

00:13:12,710 --> 00:13:11,519

necessarily absolutely kind of over his

400

00:13:13,750 --> 00:13:12,720

shoulder he can use that mirror to make

401
00:13:15,590 --> 00:13:13,760
sure he's got his hand in the right

402
00:13:16,470 --> 00:13:15,600
place to uh you know to get the right

403
00:13:17,430 --> 00:13:16,480
switch

404
00:13:18,870 --> 00:13:17,440
yeah

405
00:13:20,550 --> 00:13:18,880
these are what we call portable suit

406
00:13:21,590 --> 00:13:20,560
testers they don't look very portable

407
00:13:23,590 --> 00:13:21,600
but

408
00:13:25,670 --> 00:13:23,600
these are the testers that we use to do

409
00:13:28,470 --> 00:13:25,680
our final leak checks with the with the

410
00:13:30,150 --> 00:13:28,480
crew when the crew comes in on on launch

411
00:13:32,470 --> 00:13:30,160
morning they'll walk in

412
00:13:34,310 --> 00:13:32,480
wearing their liquid cooled underwear

413
00:13:35,350 --> 00:13:34,320

they'll they'll be suited right here in

414

00:13:37,190 --> 00:13:35,360

this room

415

00:13:38,069 --> 00:13:37,200

in this chair this is one of the big

416

00:13:41,350 --> 00:13:38,079

chairs

417

00:13:44,069 --> 00:13:41,360

did neil armstrong sit in that chair

418

00:13:45,990 --> 00:13:44,079

uh i i don't think neil armstrong did

419

00:13:47,269 --> 00:13:46,000

but um

420

00:13:49,509 --> 00:13:47,279

he was in his room

421

00:13:51,030 --> 00:13:49,519

yes uh do you have so hollow astronauts

422

00:13:52,710 --> 00:13:51,040

did suit up in this room so the

423

00:13:54,550 --> 00:13:52,720

configuration of the room was very

424

00:13:55,509 --> 00:13:54,560

different so before let's just get this

425

00:13:57,189 --> 00:13:55,519

straight

426
00:14:00,470 --> 00:13:57,199
before any shuttle astronaut has ever

427
00:14:04,310 --> 00:14:00,480
gone to space and probably that any

428
00:14:06,790 --> 00:14:04,320
moonwalking apollo astronaut or any any

429
00:14:08,389 --> 00:14:06,800
apollo era astronaut before they went

430
00:14:10,629 --> 00:14:08,399
and made that famous walk out to the

431
00:14:13,189 --> 00:14:10,639
launch pad and got in their saturn v

432
00:14:15,189 --> 00:14:13,199
rocket on apollo 11 or any of the moon

433
00:14:16,949 --> 00:14:15,199
flights or any of the shuttle flights

434
00:14:18,629 --> 00:14:16,959
they were in this room this is the same

435
00:14:20,470 --> 00:14:18,639
version this room is where where the

436
00:14:22,470 --> 00:14:20,480
where the day started for that look over

437
00:14:24,230 --> 00:14:22,480
here on the wall

438
00:14:26,389 --> 00:14:24,240

we don't use these connections anymore

439

00:14:27,829 --> 00:14:26,399

but that's the reason for these extra

440

00:14:30,790 --> 00:14:27,839

pipes here they used to have the test

441

00:14:33,829 --> 00:14:30,800

stands built into the wall here and uh

442

00:14:36,310 --> 00:14:33,839

the power astronauts had uh at

443

00:14:39,030 --> 00:14:36,320

couches and this wall did not exist i

444

00:14:40,629 --> 00:14:39,040

was told that this wall that wall there

445

00:14:42,069 --> 00:14:40,639

but okay

446

00:14:44,230 --> 00:14:42,079

the test equipment was hooked up to

447

00:14:45,829 --> 00:14:44,240

those bulkheads there

448

00:14:47,829 --> 00:14:45,839

but this this whole facility was used

449

00:14:49,910 --> 00:14:47,839

for the same purpose it's being used now

450

00:14:51,910 --> 00:14:49,920

so they all came in here neil armstrong

451

00:14:54,550 --> 00:14:51,920

neil buzz and mike collins we're all in

452

00:14:57,430 --> 00:14:54,560

here getting ready to go to the moon

453

00:14:58,790 --> 00:14:57,440

uh on apollo 11 just like

454

00:15:00,470 --> 00:14:58,800

shuttle astronauts today get to come

455

00:15:02,069 --> 00:15:00,480

into this room and that's right on the

456

00:15:03,509 --> 00:15:02,079

morning of the launch and

457

00:15:05,670 --> 00:15:03,519

get ready to go