

**NATIONAL TRANSPORTATION SAFETY BOARD
Vehicle Recorders Division
Washington, D.C. 20594**



SPECIALIST'S FACTUAL REPORT OF INVESTIGATION

DCA05MA004

by

**Albert G. Reitan
Transportation Safety Specialist**

Warning

The reader of this report is cautioned that the transcription of a CVR tape is not a precise science but is the best product possible from an NTSB group investigative effort. The transcript, or parts thereof, if taken out of context, could be misleading. The attached CVR transcript should be viewed as an accident investigation tool to be used in conjunction with other evidence gathered during the investigation. Conclusions or interpretations should not be made using the transcript as the sole source of information.

NATIONAL TRANSPORTATION SAFETY BOARD
Vehicle Recorders Division
Washington, D.C. 20594

November 15, 2004

Cockpit Voice Recorder - 12

**Group Chairman's Factual Report
by Albert G. Reitan**

A. ACCIDENT

Location: Kirksville, Missouri
Date: October 19, 2004
Time: 19:37 P.M. central daylight time (CDT)
Aircraft: Corporate Airlines, Jetstream 32, N875JX
NTSB Number: DCA05MA004

B. GROUP

Chairman: Albert G. Reitan
Transportation Safety Specialist (CVR)
National Transportation Safety Board

Member: Eric E. West
Air Safety Investigator
Federal Aviation Administration

Member: Captain Wayne D'Amico
Corporate Airlines/STL

C. SUMMARY

A Fairchild A-100A, thirty minute, cockpit voice recorder (CVR), s/n 55843, was brought to the audio laboratory of the National Transportation Safety Board on October 20, 2004. The Cockpit Voice Recorder committee convened on October 21, 2004. A transcript was prepared of the entire 30:12 minute recording and is attached to this report.

D. DETAILS OF INVESTIGATION

The exterior of the CVR showed significant evidence of structural damage. The recorder was compressed at both ends. It was necessary to cut away the outer casing to access the memory module. The interior of the recorder and the tape sustained no apparent heat or impact damage. A Dukane underwater locator beacon (ULB) was installed and when tested in the laboratory, was found to operate satisfactorily.

The recording consisted of four channels of good quality audio information. One channel contained the cockpit area microphone audio information. Two other channels contained the Captain and First Officer audio panel information. The fourth was not used on this recording.

Correlation of the CVR recording to central standard time (CST) was established using times from the Kirksville Air Route Surveillance Radar (ARSR) data, the aircraft digital flight data recorder (DFDR) information, and the Air Traffic Control (ATC) transcript developed by the FAA. This data were then correlated to microphone keying and other events that are common to the CVR and FDR. A detailed explanation of the time correlation procedure is available in the Aircraft Performance Group Chairman's factual report.

The flight originated at the St. Louis International Airport (STL) for revenue passenger flight to Kirksville, Missouri. The recording started at 1906:46 CDT (central daylight time) as the flight was climbing to the cruise altitude of twelve thousand feet. The transcript contained the short cruise segment, the descent and preparation for the localizer approach to Kirksville's runway three six. The recording and transcript continued uninterrupted until 1936:58 when the aircraft impacted terrain and power was removed from the recorder.

(original document signed)

Albert G. Reitan
Transportation Safety Specialist (CVR)

Attachment:

Transcript of a Fairchild A100A, 30 minute, Cockpit Voice Recorder (CVR), s/n 55843, installed on a Jetstream 32, N875JX, which was involved in a collision with terrain during approach to the Kirksville, Missouri Regional Airport, on October 19, 2004.

LEGEND

HOT	Crewmember hot microphone voice or sound source
RDO	Radio transmission from accident aircraft
CAM	Cockpit area microphone voice or sound source
CTR1	Radio transmission from first Kansas City center controller
ACFT?	Radio transmission from unidentified aircraft
CTR2	Radio transmission from second Kansas City center controller
AWOS	Radio transmission from Kirksville Automated Weather Observation System
KOPS	Radio transmission from Kirksville operations
-1	Voice identified as Pilot-in-Command (PIC)
-2	Voice identified as Co-Pilot (SIC)
-3	Voice identified as aircraft mechanical voice
-B	Sound heard over both pilot channels
-?	Voice unidentified
*	Unintelligible word
@	Non-pertinent word
#	Expletive
- - -	Break in continuity
()	Questionable insertion
[]	Editorial insertion
...	Pause

Note 1: Times are expressed in central daylight time (CDT).

Note 2: Generally, only radio transmissions to and from the accident aircraft were transcribed.

CVR Quality Rating Scale

The levels of recording quality are characterized by the following traits of the cockpit voice recorder information:

Excellent Quality	Virtually all of the crew conversations could be accurately and easily understood. The transcript that was developed may indicate only one or two words that were not intelligible. Any loss in the transcript is usually attributed to simultaneous cockpit/radio transmissions that obscure each other.
Good Quality	Most of the crew conversations could be accurately and easily understood. The transcript that was developed may indicate several words or phrases that were not intelligible. Any loss in the transcript can be attributed to minor technical deficiencies or momentary dropouts in the recording system or to a large number of simultaneous cockpit/radio transmissions that obscure each other.
Fair Quality	The majority of the crew conversations were intelligible. The transcript that was developed may indicate passages where conversations were unintelligible or fragmented. This type of recording is usually caused by cockpit noise that obscures portions of the voice signals or by a minor electrical or mechanical failure of the CVR system that distorts or obscures the audio information.
Poor Quality	Extraordinary means had to be used to make some of the crew conversations intelligible. The transcript that was developed may indicate fragmented phrases and conversations and may indicate extensive passages where conversations were missing or unintelligible. This type of recording is usually caused by a combination of a high cockpit noise level with a low voice signal (poor signal-to-noise ratio) or by a mechanical or electrical failure of the CVR system that severely distorts or obscures the audio information.
Unusable	Crew conversations may be discerned, but neither ordinary nor extraordinary means made it possible to develop a meaningful transcript of the conversations. This type of recording is usually caused by an almost total mechanical or electrical failure of the CVR system.

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1906:46			
	START of RECORDING		
	START of TRANSCRIPT		
1906:48			
HOT-B	****.		
1906:50			
HOT-1	hello.		
1906:51			
HOT-2	[sound of laughter]		
1906:52			
HOT-1	there, my hair was down to my breast pockets.		
1906:55			
HOT-2	are you serious?		
1906:56			
HOT-1	right here, I could hold my hair like this.		
1906:58			
HOT-2	I cannot see you with long hair like....		
1906:59			
HOT-1	just, just like that.		
1907:01			
HOT-2	[sound of laughter]		
1907:01			
HOT-1	I used to wear this black derby, with the uh, rim turned down. it was my concert hat. had a Fu Manchu.		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1907:08 HOT-2	[sound of laughter] ohhh.		
1907:11 HOT-1	[sound of laughter] yeah, it was, it was fun.		
1907:13 HOT-2	[sound of laughter] I cannot imagine you being like that.		
1907:16 HOT-1	yeah, when I show people the pictures they say, who is this?		
1907:19 HOT-2	that's me.		
1907:20 HOT-1	who's this freak? that's me. no way.		
1907:23 HOT-2	d', no way. I was gonna say. we're gonna have to have a fifteen fifteen five card.		
		1907:29 CTR1	CorpEx fifty nine sixty six, climb and maintain one two thousand, twelve thousand.
		1907:34 RDO-2	one two thousand, Corporate Ex fifty nine sixty six.
1907:37 HOT-2	twelve 'er, thousander 'er, 'er.		
1907:38 HOT-1	twelve 'er thousander 'er. I detected a slight attitude on his part.		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1907:44 HOT-2	I know I didn't miss a call the first time.		
1907:46 HOT-1	I'd might have to call him a #.		
1907:49 HOT-2	uh, better yet, QB.		
1907:51 HOT-1	yeah, you # QB.		
1907:57 HOT-1	hey no #.		
1908:09 HOT-1	no pilots.		
1908:16 HOT-1	I guess I could give it a little juice.		
1908:18 HOT-2	[sound of chuckle] that might help it a little bit.		
1908:21 HOT-1	I say, why's this # climb performance blows? it's pretty tough when you got a torque setting around eighteen.		
1908:28 HOT-2	[sound of chuckle]		
1908:30 HOT-1	yeah, you ##.		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1908:32 HOT-2	this # thing ain't climbing....		
1908:33 HOT-1	[sound of chuckle]		
1908:34 HOT-2	...what the hell.		
1908:35 HOT-1	dowee.		
1908:36 HOT-1	oh yeah, now you're going to burn up on me you #. you # #.		
1908:43 HOT-2	[brief humming sound]		
1908:48 HOT-1	I keep pushing the call button. I don't know if it's ringing.		
1908:51 HOT-2	[makes verbal ringing sound]		
1908:52 HOT-1	give 'em something to think about. oh, something * pinging back here.		
1908:55 HOT-2	[makes verbal ringing sound]		
1908:56 HOT-1	oh, that's the shut up uh....		
1908:58 HOT-2	the shut up bell.		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1908:58 HOT-1	yeah, that's it.		
1908:59 HOT-2	the shut up bell.		
1909:00 HOT-1	that's the shut the # your mouth, you #. go turbulence.		
1909:08 HOT-2	[sound of chuckle]		
1909:13 HOT-1	eleven thousand twelve thousand.		
1909:14 HOT-B	[sound similar to altitude alerter]		
1909:15 HOT-2	eleven for twelve.		
1909:18 HOT-2	'er thousander.		
1909:19 HOT-1	'er thousander.		
1909:23 HOT-1	[several grunting sounds]		
1909:24 HOT-2	* have a good time flying with you.		
1909:26 HOT-1	yeah, me too.		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1909:27 HOT-2	just let you know that.		
1909:30 HOT-1	gotta have fun.		
1909:31 HOT-2	that's truth man. gotta have the fun.		
1909:35 HOT-1	too many of these # take themselves way too serious, in this job. I hate it, I've flown with them and it sucks. a month of # agony.		
1909:39 HOT-B	[sound similar to frequency change alert]		
1909:47 HOT-1	all you wanna do is strangle the ## when you get on the ground.		
1909:50 HOT-2	oh',... @ [sound of laughter]		
1909:52 HOT-1	oh *, yeah, oh well, he was one but I didn't, I didn't have to fly with him that much 'cause....		
1909:56 HOT-2	I know.		
1909:57 HOT-1	it was kinda a fluke. but uh, some of the guys that aren't here any more you wanted to just # kick 'em in the #. lighten the # up #.		
1910:09 HOT-2	have you ever flown with @?		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1910:11 HOT-1	yeah.		
1910:12 HOT-2	how's he?		
1910:12 HOT-1	a #.		
1910:13 HOT-2	is he?		
1910:14 HOT-1	yeah. at least he was, three and a half years ago.		
1910:21 HOT-2	see, I'm glad I'll never have to fly with him 'cause he's a Nashville guy. but for being a Nashville guy, he's up in St. Louis all the time.		
1910:29 HOT-1	yeah, the difference between Nashville and the rest, lot of those guys, @ uh.... well not @@, @@and @ and @ uh.... can't think of his last name. there's three @ that were from Nashville that were in the crew room today.		
1910:45 HOT-2	oh God.		
1910:46 HOT-1	and uh, @@@@ whatever the hell they call them.		
1910:51 HOT-2	blow me.		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1910:52 HOT-1	blow me. yeah, lotta guys were Nashville based. @, it just really doesn't mean anything. I mean they they come out of Nashville but they fly a lot of the routes up here. same # routes. the only difference is that you may get an Atlanta run and a Tri-Cities run, which is kinda fun. that's like working for a different company, 'cause you fly over slightly mountainous area, which is kinda cool.		
1911:04 HOT-B	[sound of tone similar to altitude alerter]		
1911:19 HOT-2	yeah, we get the shaft.		
		1911:21 RDO-1	####.
		1911:25 ACFT?	nice tone.
1911:26 HOT-1	[sound of chuckle]		
1911:30 HOT-2	that was a good one.		
1911:32 HOT-1	[sound of chuckle] yeah, I had to share that.		
1911:44 HOT-2	[sound of sigh]		
1911:47 HOT-1	cruise power cruise check. you push his foot away?		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1911:52 HOT-2	trying to # close it up. all right. stop # around with it.		
1911:59 HOT-1	cruise power, cruise check.		
1912:08 HOT-2	all you do is push the curtain to the side a little bit. it's like man....		
1912:15 HOT-1	some people I invite their feet up to make them comfortable but # I'll, I, I've dropped my book on em purposely one time, right on the top part of the arch of the foot.		
1912:26 HOT-2	oooh.		
1912:27 HOT-1	oh yeah, they were #. I told 'em to remove his foot twice. and then I dropped them the uh, red book....		
1912:33 HOT-2	[sound of grunting] your power levers.		
1912:34 HOT-1	...right on 'em.		
1912:35 HOT-2	[sound of laughter] the power spiked up a little bit.		
1912:41 HOT-1	yyeaaaa.		
1912:43 HOT-2	you want it at ninety seven not ninety seven and a quarter.		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1912:46 HOT-1	yeah.		
1912:47 HOT-2	oh well. tough #.		
1912:49 HOT-1	that will do.		
1912:51 HOT-2	cruise power.		
1912:51 HOT-1	all I'm thinking of is a Philly # cheese steak and an iced tea.		
1912:55 HOT-2	sounds good. cruise power's set. altimeters are two niner niner zero, set and cross-checked.		
1913:00 CAM	[sounds similar to CVR tape splice]		
1913:02 HOT-2	how did I get two niner niner zero?		
1913:03 HOT-1	cause you're a #.		
1913:04 HOT-2	* two niner niner two?		
1913:06 HOT-1	'cause you never set it when we changed it to Alpha or whatever it was. soon as he was telling us that they cleared us onto the runway.		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1913:16 HOT-2	and I've been sitting here living a lie for the rest for the the last twenty minutes.		
1913:21 HOT-1	yeah, you lying scum bucket.		
1913:22 HOT-2	# boost pumps are off, pressurization's checked and external lights....		
1913:25 HOT-1	you blustering scabby pustuille.		
1913:27 HOT-2	are externalized. your # cruise checklist is # done.		
1913:31 HOT-1	thank you.		
1913:32 HOT-2	you're welcome.		
1913:33 HOT-B	[sound of tone similar to frequency change alert]		
		1913:34 AWOS	not available....
1913:36 HOT-1	you get a ##.		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
		1913:37 AWOS	...Kirksville Regional Airport automated weather observation zero zero one three Zulu. wind zero four zero at zero six. visibility four. mist. sky condition overcast three hundred....
1913:54 HOT-1	ahh.		
		1913:55 AWOS	...temperature zero niner Celsius. dew point zero niner Celsius. altimeter two niner niner five. remarks....
1914:06 HOT-1	we're not getting in.		
1914:10 HOT-2	Kirksville uh.... that was Quincy that the ILS... was out of service.		
1914:18 HOT-1	we don't have an ILS.		
1914:19 HOT-2	I know.		
1914:20 HOT-1	three hundred sixty feet.		
1914:21 HOT-2	Jesus Christ. [spoken in a whispered voice]		
1914:26 HOT-2	go all this # way.		
1914:30 HOT-2	well, let's try it.		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1914:31 HOT-1	yeah, we'll try it.		
1914:39 HOT-2	that # sucks.		
1914:41 HOT-1	does suck.		
1914:42 HOT-2	[sound of sigh]		
1914:45 HOT-1	[sound of humming]		
1914:49 HOT-1	so it went down.		
1914:50 HOT-2	[sound of humming]		
1914:51 HOT-1	but that's a # a # AWOS there anyway.... we'll see what happens.		
1915:03 HOT-1	[sound of humming, yawning and tapping] I don't want to get, go all the way out here for nothing tonight. it's gonna blow #..... it's gonna blow the butt, blow the butt, blow the butt. what have we got here. three sixty, thirteen twenty.		
1915:32 HOT-1	I'll be so happy when we have an ILS everywhere we go.		
1915:42 HOT-2	what'd you say?		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1915:43 HOT-1	one twenty one. I said I'll be so happy we'll have an ILS, the next job everywhere we go will be an ILS.		
1915:47 HOT-2	yep.		
1915:48 HOT-1	[sound of burp] I thought we were gonna have it easy tonight. it was gonna be....		
		1915:58 CTR1	**** fifty nine sixty six, contact Kansas City center one three two point six.
1916:02 HOT-2	I, I don't know if that was us.		
1916:04 HOT-1	yeah.		
1916:04 HOT-2	it was?		
1916:05 HOT-1	one two three point six.		
		1916:06 RDO-2	Kansas City one thirty two point six, CorpEx fifty nine sixty six.
1916:13 HOT-B	[sound similar to frequency change alert]		
1916:17 HOT-2	man, I'm glad I caught that. man this frequency's way too loud.		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1916:23 HOT-1	turn it down. we don't give a # about company.		
		1916:24 RDO-2	Kansas City, CorpEx fifty nine sixty six is checking in with you one two thousand. good evening.
		1916:28 CTR2	CorpEx fifty nine sixty six, Kansas City center, good evening. uh, do you have the Kirksville weather yet?
		1916:34 RDO-2	yes sir, we do.
		1916:36 CTR2	CorpEx fifty nine sixty six, roger. uh, what approach you want over there?
		1916:41 RDO-2	we'd like vectors for the localizer DME runway three six into Kirksville.
		1916:45 CTR2	roger. have your request.
1916:50 HOT-2	ah, I remembered.		
1916:50 HOT-1	very good.		
1917:06 HOT-2	I'm a #.		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1917:10 HOT-2	all right, we got supposedly six miles before we have to flip it up. want me to flip it.	1917:17 CTR2	CorpEx fifty nine sixty six, descend at pilots discretion maintain eight thousand.
1917:20 HOT-1	sure.	1917:19 RDO-2	pilot's discretion down to eight thousand, CorpEx fifty nine sixty six.
1917:23 HOT-1	discretion eight thousand.		
1917:25 HOT-2	discretion eight thousand my friend. [sound of humming]		
1917:28 HOT-1	descent checklist when you get a chance.	1917:28 CTR2	CorpEx fifty nine sixty six, fly your present heading vectors for localizer three six approach.

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
		1917:35 RDO-2	present heading vectors for a localizer, fifty nine sixty six.
1917:49 HOT-2	one ten.... would be that one... that. okay, your descent checklist. [sound of humming] altimeters are... two niner niner.... five... set right.		
1918:21 HOT-1	niner five. set. left.		
1918:24 HOT-2	okay, altimeters are set and crosschecked. fuel pres, pressurization is set and checked. fuel balance is go ahead and do it.... checked. and seat belt sign/external lights are on. your descent checklist is complete. one ten. one eleven point five.		
1918:48 HOT-1	thank you.		
1918:51 HOT-2	well you got it *, up already?		
1918:53 HOT-1	DME on uh, three if you want it. I guess there's DME on the localizer. looks like there's a D there is there?		
1919:04 HOT-2	yeah, there's a localizer DME.		
1919:06 HOT-1	yeah. that would make sense, wouldn't it?		
1919:09 HOT-2	yes it would.		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1919:09 HOT-1	yes it would.		
1919:11 HOT-2	yes in deede doody, daudy, deede.		
1919:13 HOT-1	yes in deede doody, daudy.		
1919:20 HOT-1	[sound of humming]		
		1919:37 AWOS	wind zero four zero at zero five....
1919:39 HOT-1	the one bad thing about these covers is they reflect the light off of this of thing too much and you can't see #. thirteen twenty. oh shut the # up back there.		
		1919:42 AWOS	...visibility three. mist. sky condition overcast three hundred. temperature zero niner Celsius. dew point zero niner Celsius. altimeter two niner niner five.
1920:05 HOT-2	[sound of sigh]		
1920:20 HOT-2	it's three miles and mist now. [sound of sigh]		
1920:22 HOT-1	*. really?		
1920:25 HOT-2	yep.		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1920:25 HOT-1	so it's going down the tubes.... #.		
1920:35 HOT-2	[sound of whistling]		
1921:27 HOT-1	Charlie India.		
1921:44 HOT-2	you know, I think you're gonna need to just shut the # up.		
1921:49 HOT-1	love to poke my head back around and say that. you know ladies and gentlemen uh, we've thought about it....		
1921:55 HOT-2	[sound of laughter] it was unanimous up here.		
1921:57 HOT-1	* we've come to the conclusion that you people should all shut the # up.		
1921:59 HOT-B	[tone similar to altitude alerter]		
1922:02 HOT-2	niner thousander for eight thousander.		
1922:04 HOT-1	niner thousander for eight thousander. today er. tonight er.		
1922:06 HOT-2	tonight er.		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1922:07 HOT-B	[continuation of above sentences for several repetitions]		
1922:16 HOT-2	five point to KEMMY, huh?		
1922:17 HOT-2	on the Richter scale.		
1922:20 HOT-1	five point two is KEMMY, correct?		
1922:22 HOT-2	that is correct.		
1922:22 HOT-1	roger.		
1922:23 HOT-2	roooooooooooger.... almost sounded like a burp, didn't it?		
1922:34 HOT-1	did.		
1922:36 HOT-2	amazing. we're forty three point eight miles from IRK, eye rk.		
1922:44 HOT-1	"e kirk".		
1922:59 HOT-2	[sound of sigh] let's see. speeds are off the fifteen five card. fifteen, twenty one and thirty. be darned. I already had that in there.		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1923:16 HOT-1	thank you.... localizer DME runway three six. one eleven five.	1923:117 CTR2	CorpEx fifty nine sixty six, descend at pilot's discretion, maintain three thousand.
1923:27 HOT-1	discretion three thousand.	1923:23 RDO-2	pilot's discretion maintain three thousand, CorpEx fifty nine sixty six.
1923:28 HOT-2	three thousand.		
1923:29 HOT-1	one eleven point five, three fifty seven's the inbound. twenty five hundred at KEMMY. thirteen twenty is our MDA. and we have a three hundred sixty foot approach set in the radar altimeter.		
1923:43 HOT-2	three sixty. [sound of yawn] aw, I had it on three sixty.		
1923:47 HOT-1	thank you.		
1923:48 HOT-2	you're welcome.		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1923:50 HOT-1	nine sixty six for the appr, airport elevation. nine sixty four is the touchdown zone elevation. speeds as previously briefed, fifteen, twenty one and thirty. if we have to go missed we'll set max power, flaps ten positive rate, gear up.... and we'll climb to three thousand feet then direct Kirksville VOR, and hold, and that will be a parallel.... parallel entry, or teardrop, either one.		
1924:17 HOT-2	oh, I was being.... teardrop.		
1924:18 HOT-1	it's probably a teardrop, I'll go with teardrop.... and I'll have you walk me through that if we need it.		
1924:25 HOT-2	no problem.		
1924:26 HOT-1	and that's it. questions?		
1924:34 HOT-2	negative. [sound of humming]		
1924:36 HOT-1	negative, we're going into the crap. look, ooh, it's so eerie and creepy.		
1924:38 HOT-2	ooh, negative.		
1924:40 HOT-1	get a suffocating feeling when I see that.		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1924:48 HOT-2	[pilot makes barking sound followed by groan]		
1924:58 HOT-1	I'm drowning.... MSA is thirty one hundred.		
1925:00 HOT-2	correcto mundo.		
1925:02 HOT-1	how is he able to put us down at three thousand?		
1925:05 HOT-2	beats the # out of me.		
1925:16 HOT-1	thirty five miles from the, east.		
1925:19 HOT-2	well we can level off at thirty one hundred feet. how about that?		
1925:26 HOT-1	yeah... yeah baby.		
1925:44 HOT-2	cause we know our #.... [sound of yawn]		
1925:46 HOT-1	[sound of humming]		
1925:53 HOT-2	[sound of humming] and they have a VASI on the left hand side.		
1926:00 HOT-1	yeah. wish we had an ILS on the front hand side.		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1926:00 HOT-2	[sound of laughter] yeah, that'd be nice.		
1926:03 HOT-1	nice.		
		1926:52 CTR2	CorpEx fifty nine sixty six, turn ten degrees right now vectors to localizer uh, uh, runway three six final approach course.
		1927:01 RDO-2	ten right for vectors for final approach course for runway three six, CorpEx fifty nine sixty six.
		1927:05 CTR2	CorpEx fifty nine sixty six, say your new heading.
1927:10 HOT-1	three one zero.		
		1927:10 RDO-2	three one zero, CorpEx fifty nine sixty six.
		1927:13 CTR2	thank you.
1927:15 HOT-1	new heading.		
1927:18 HOT-2	just ask, say new heading.		
1927:19 HOT-1	new heading.		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1927:20 HOT-2	[sound of chuckle] I'd like to do that just once to see if I'd get a crack.		
1927:29 HOT-2	all right smart ass. I need you to hold. [sound of chuckle]		
1927:34 HOT-1	no say uh, cancel IFR.		
1927:38 HOT-2	yeah, noooooo. [sound of whistling] all right, we're within range, again.		
1927:53 HOT-1	again.		
1927:55 HOT-2	got one?		
1927:55 HOT-1	I got one.		
		1928:03 RDO-2	Kirksville ops, CorpEx fifty nine sixty six.
		1928:11 KOPS	fifty nine sixty six.

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
		1928:11 RDO-2	yeah, we're within range. it's gonna be about one point seven on the fuel.
		1928:15 KOPS	one point seven.
		1928:18 RDO-2	see ya a little bit.
1928:23 HOT-2	back on one.		
1928:25 HOT-1	no changes.		
1928:26 HOT-2	no, no a changeeee.		
1928:33 HOT-2	[sound of humming]		
1928:46 HOT-1	how's uh, Kirksville looking weather wise? getting' any worse?		
		1928:50 AWOS	... niner Celsius. dew point zero niner Celsius. altimeter two niner niner five. remarks, thunderstorm, information not available....
1929:00 HOT-1	temp 'n dew point's right where you don't want it.		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1929:01 HOT-2	yeah, dead nuts.		
		1929:03 AWOS	... Kirksville Regional Airport, Automated Weather Observation zero zero two eight Zulu. wind zero three zero at zero six. visibility three. mist. sky condition overcast three hundred. temp....
1929:19 HOT-2	still three hundred.		
1929:21 HOT-1	yep.		
1929:27 HOT-2	[sound of yawn] *. how would you like approach checklist?		
1929:33 HOT-1	that would be a beautiful thing.		
1929:36 HOT-2	all right, approach briefing?		
1929:37 HOT-1	complete.		
1929:39 HOT-2	ah let's see, landing data. we briefed, right?		
1929:41 HOT-1	* left.		
1929:41 HOT-2	flight instruments and radios, set checked on the right?		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1929:43 HOT-1	set checked left.		
1929:45 HOT-2	* * crossfeed on normal. passenger briefing is started. approach checklist is complete.		
1929:50 HOT-1	thanks.		
1929:51 HOT-2	sure.		
1929:57 HOT-B	[tone similar to altitude alerter]		
1929:59 HOT-2	four thousand three thousand.		
1930:00 HOT-1	four thousand for three thousand.		
1930:13 HOT-2	actually we should do thirty-one hundred.		
1930:15 HOT-1	yeah, that's what I'm gonna do.		
1930:17 HOT-2	should I put it on here?		
1930:18 HOT-1	yep. is a good thing.		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
		1930:30 CTR2	CorpEx fifty nine sixty six uh, one one miles south of uh, KEMMY. turn right heading three, three zero. maintain three thousand until established on the localizer. cleared localizer DME runway three six approach at Kirksville.
		1930:41 RDO-2	three thousand feet 'til established uh, heading three three zero. cleared for the localizer DME runway three six into Kirksville CorpEx fifty nine sixty six.
1930:50 HOT-2	thirty three, three thousand 'til established. cleared for the approach.		
1930:54 HOT-1	cleared the approach.		
1931:00 HOT-2	cleared for the approach.		
1931:01 HOT-1	# the approach. you're #. approach #. [sound of chuckle]		
1931:11 HOT-2	[sound of chuckle] ** [vibrating lip noise] that's funny when it happens too. [vibrating lip noise] is that a #? yeah. [sound of laughter] he #. thirty one.		
1931:27 HOT-1	thirty *.		
1931:30 HOT-1	[humming sound] thank you.		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1931:34 HOT-2	course alive. cross check, no flags except for the vertical.		
1931:41 HOT-1	the vertical. get up there ##. keep it slow. all the time we need. [sound of humming]		
1932:06 HOT-1	let's go flaps ten and we'll configure early too.		
1932:11 HOT-2	all right. flaps ten....		
1932:12 HOT-1	give ourselves as much time as we can.		
1932:13 HOT-2	selected indicating ten.... since we're not going to doing holds like that one #.		
1932:22 HOT-1	right.		
1932:24 HOT-2	**.		
1932:30 HOT-1	and it, was it five point?		
1932:31 HOT-2	five point two.		
1932:32 HOT-1	five point two.		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1932:33 HOT-2	I'll call it out for you.		
1932:35 HOT-1	okay. we can go to what, twenty five right now?		
1932:37 HOT-2	twenty five right now.		
1932:38 HOT-1	okay, gear down, flaps twenty, before landing check.		
1932:45 HOT-2	[sound of a sigh] all right.		
1932:46 HOT-2	dow, gear down, three green.		
1932:48 HOT-1	three green.		
1932:49 HOT-2	uh, prop syncs are off, speeds are high. flaps selected indicating twenty. hydraulic brake pressure normal. standing by the flows.		
1933:07 HOT-1	[sound of humming]		
1933:17 HOT-2	twenty five.		
		1933:41 CTR2	CorpEx fifty nine sixty six, frequency change approved. report the down time on this frequency or through flight service.

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
		1933:46 RDO-2	all right, frequency change approved. we'll cancel with you on the ground, CorpEx fifty nine sixty six. so long.
		1933:51 CTR2	roger.
1933:52 HOT-B	[sound similar to frequency change alert]		
1933:55 HOT-1	make sure those lights are up please.		
1933:56 HOT-2	all right.		
1933:57 HOT-1	thanks.		
		1933:57 RDO-2	[sound similar to seven microphone clicks]
1934:04 HOT-2	seven times I clicked it. I cleeted it.		
1934:08 HOT-1	what we can do is, well is call Kirksville ops and ask them to confirm that they're up.		
1934:13 HOT-2	all right.		
1934:13 HOT-1	that would be kinda nice.		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
		1934:14 RDO-2	Kirksville ops, CorpEx fifty nine sixty six.
1934:22 HOT-2	aw speeds.		
		1934:21 KOPS	fifty nine sixty six.
		1934:23 RDO-2	yeah, can you tell me if uh, the approach lights are up?
		1934:37 KOPS	lights are on.
		1934:39 RDO-2	cool, thanks.
1934:51 HOT-1	come on you ##.		
1934:52 HOT-2	# it. pig, isn't it?		
1934:55 HOT-1	sure is.		
1935:06 HOT-1	what happened to our identifier?		
1935:09 HOT-B	[sound of Morse code identifier] R-K.		
1935:10 HOT-1	I don't have it any more. do you? localizer?		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1935:16 HOT-B	[sound of Morse code identifier] I-I-R-K.		
1935:19 HOT-2	I got it.		
1935:20 HOT-1	okay.		
1935:22 HOT-1	DME went off line.		
1935:26 HOT-2	not on my side. five point seven.		
1935:28 HOT-1	okay.		
1935:29 HOT-2	five point six.		
1935:30 HOT-1	okay, mine's back.		
1935:31 HOT-2	five point five.		
1935:38 HOT-1	I can hear it.		
1935:39 HOT-2	there you go, KEMMY. down to thirteen twenty.		
1935:42 HOT-1	thirteen twenty, here we go.		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1936:02 HOT-1	when we get within a hundred feet if you'd uh, arm that uh....		
1936:06 HOT-2	disarm it?		
1936:06 HOT-1	... director again yeah uh, altitude.		
1936:08 HOT-2	oh for * [one member heard "altitude"], okay.		
1936:18 HOT-1	c'mon, go down there.		
1936:23 HOT-2	five hundred, four hundred feet to go.		
1936:24 HOT-1	*.		
1936:30.6 HOT-3	five hundred.		
1936:33.9 HOT-2	thirteen twenty.		
1936:35.7 HOT-1	what do you think?		
1936:35.9 HOT-1	thank you.		
1936:36.8 HOT-1	I can see ground there.		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1936:37.2 HOT-3	minimums, minimums.		
1936:41.9 HOT-2	I can't see #.		
1936:43.5 HOT-1	yeah, oh there it is. approach lights in sight.		
1936:44.2 HOT-3	two hundred.		
1936:44.7 HOT-2	* in sight.		
1936:46.6 HOT-2	continue.		
1936:47.7 HOT-1	we get rid of the director.		
1936:48.6 HOT-B	[sound of beep]		
1936:50.5 CAM	[sound similar to increase in engine RPM]		
1936:50.5 HOT-1	getting a little slow.		
1936:50.6 HOT-2	flaps thirty five?		
1936:51.9 HOT-1	no....		

INTRA-COCKPIT COMMUNICATION

AIR-GROUND COMMUNICATION

TIME (CDT) & SOURCE	CONTENT	TIME (CDT) & SOURCE	CONTENT
1936:52.2 HOT-3	sink rate.		
1936:52.8 HOT-1	...no.		
1936:53.2 HOT-2	trees.		
1936:54.0 HOT-B	[sound similar to stall warning horn]		
1936:54.4 HOT-1	no, stop.		
1936:55.2 CAM	[sound of impact]		
1936:56.6 HOT-1	oh, my God.		
1936:57.0 CAM	[sounds of numerous impacts]		
1936:57.5 HOT-2	holy #.		
1936:58.6 END of TRANSCRIPT END of RECORDING			