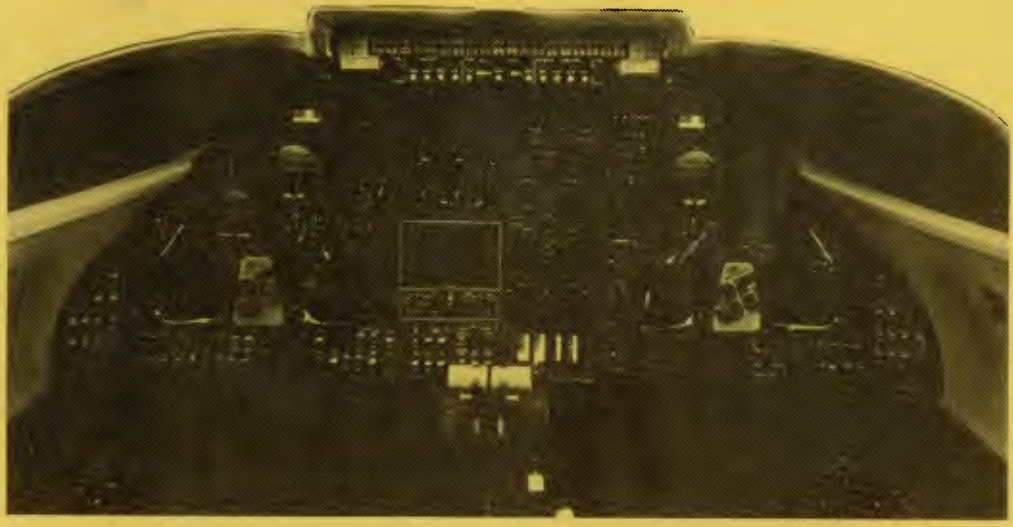
LEARJET



AIRCRAFT OPERATING MANUAL & GENERAL INFORMATION HANDBOOK

ERRATA SHEET

For owners of VZ-200 computers whose BASIC is Vs 1.2 or later, the following modification to the program will be required. Please insert a semi-colon in line 290 between the end of the word "INFO" and the colon. i.e. "INFO";:

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INTRODUCTION

The object of the game is to test your skills as a "Learjet" pilot. Once you have chosen a route, it is then up to you to successfully take-off, fly and land the aircraft, from departure to destination using the least amount of fuel. Your skills may be further tested by problems that could be encountered en route such as an in-flight cabin de-pressurisation or possibly a single, or total engine failure. Of course this would be highly unlikely in a real Learjet... that's why we have simulators!

A basic knowledge of aviation is assumed, however a brief explanation of some aeronautical terminology is given below:

1 Knot = 1 nautical mile per hour.

IAS (Indicated airspeed) The airspeed prior to altitude and temperature correction.

TAS (True airspeed) The actual speed of the aircraft moving through the air. This will equal G/S (ground speed) in nil wind conditions. TAS increases with altitude.

MACH No. The ratio of aircraft speed relative to the speed of sound for that altitude.

FL Flight Level is the altitude in feet divided by 100 and expressed as a three figure altitude (A) or flight level (F),
e.g. 19,500 ft = F195.

FLAP produces both lift and drag. While climbing, rate of climb will increase, but airspeed will decrease. On descent, increasing flap will lessen the descent rate, but will also decrease the air-speed to a greater extent, causing the aircraft to hit the ground sooner.

A STALL is when the IAS is too slow to keep the aircraft flying and consequently it cannot maintain its present height. If a stall occurs, the correct procedure is to increase the IAS by increasing the thrust, till above stalling speed then re-establish a level or climbing altitude.
To use minimum runway length the aircraft should take-off and land into a headwind (G/S lower than true airspeed).
Failure to do this may result in overrunning or overshooting the runway.

V_{ne} Velocity never to exceed. This is the maximum structural speed of the aircraft. Above this, airframe break-up or disintegration will occur.

VSI Vertical speed indicator, expressed in feet per minute (fpm).

EOL Effective operational length of runway.

GENERAL INFORMATION

- Glide speed (clean aircraft) 150 knots IAS.
- Empty weight, equipped 4140 kg (+154 kg/2 pax +200 kg/cargo). i.e. zero fuel weight = 4494 kg
- Minimum TKOF distance 4608 ft (nil wind, 20 deg flap, weight 5400 kg, standing start).
- Minimum Landing distance 3182 ft (nil wind, 30 deg flap, weight 4994 kg, touchdown at 112 knots, reverse thrust selected).
- Maximum flap extension speed 292 knots IAS.
- Maximum gear extension speed 295 knots IAS.
- V_{ne} Mach .93 (548 knots TAS @ F370).
- Drag induced by landing gear fully extended 14 knots.
- Drag induced by flaps 5 knots per 10 degrees of flap extended.
- Stalling speed / Flap selected

Stalling speed	Flap selected
126 k IAS	0 degrees
118	10
110	20
102	30
94	40
86	50

- Aircraft may not be turned while taxying in excess of 20 knots.
- Brakes may only be applied at less than 31 knots.
- CAUTION: Undershoot or overshoot shear (sudden change of wind direction), may be encountered around 500 ft above ground level.
- Flight above flight level 120 when encountering cabin pressure problems is not permitted. If flight is conducted under these conditions above FL 120, an "Oxygen Blackout" will occur after approximately seven minutes causing the control keyboard to lock in its present status, simulating a complete blackout.
- Distance Measuring Equipment (DME) stations are sighted near the taxiway and runway intersection (½ way along the runway length).
- Initial heading is ninety degrees to the runway, positioning the aircraft on the taxiway at the holding point. If a turn is not executed from this heading the aircraft will crash into the perimeter fence on the far side of the runway, 600 ft from the holding point.
- Slower acceleration, reduced vertical climb rate and increased vertical descent rate will be experienced when operating with a

heavy fuel weight (long distance) as compared to a light fuel weight (short haul trips).

- Auto Pilot Height Lock may only be selected on climb, when assigned flight level (ASS FL) is higher than present altitude, and on descent when ASS FL is less than present altitude. When selected the altitude is captured as the aircraft approaches within 200 ft of the assigned level and the climb or descent rate is reduced to automatically level out and hold the aircraft at the assigned level. Once selected, deselection is necessary before "climb", "level out" or "descend" commands are inputted.
- Normal intake turbine temperature (ITT) should be 497 degrees celsius at idle, and not exceed 997 degrees celsius at 100% thrust.
- 20% thrust must be selected prior to executing an automatic start. Once start is selected, both turbines are control started and the fuel fed in automatically once 17% turbine r.p.m. is achieved.
- Airframe speed limitation warning will sound within 20 knots of V_{ne}.
  If V_{ne} is exceeded the aircraft will enter into a high speed nose dive and the control keyboard will lock, simulating an in-flight airframe disintegration.
- Certified ceiling 49,100 ft.
- Low fuel warning (visual and aural) is given when approximately 422 kg remain (therefore operating on fixed reserve).
- An altitude warning will sound passing 1000 ft either side of assigned flight level regardless of whether auto pilot height lock is selected.
- Gear warning (visual and aural) will be given if wheels are not down and locked within 1000 ft of ground when less than 50% thrust is selected.
- When at or below FL 220 the surface wind at the nearest major aerodrome will be displayed, otherwise the display will read Automatic Terminal Information Service (ATIS) not within range.
- Engine serviceability is indicated at the top of the cockpit between the stall and cabin pressure warning indicators. If an engine failure occurs, a considerable increase in thrust is required to compensate for the loss of power due to single engine operation. If both engines fail, thrust settings become irrelevant, and descent should be commenced before airspeed is reduced to stalling speed.

DESCENT & APPROACH PROFILE

(Calculated on aircraft weight of 5400 kg, i.e. 906 kg fuel)

Flight Level	Zero wind distance	50 knot (to FL 120) distance increment
FL 450	87 nm	7 nm
FL 430	84 nm	7 nm
FL 410	81 nm	7 nm
FL 390	78 nm	6 nm
FL 370	74 nm	6 nm
FL 350	71 nm	6 nm
FL 330	68 nm	5 nm
FL 310	64 nm	5 nm
FL 290	60 nm	5 nm
FL 270	57 nm	4 nm
FL 250	53 nm	4 nm
FL 230	49 nm	3 nm
FL 210	45 nm	3 nm

Wind component correction:

Increase zero wind distance by distance increment for each 50 knot tailwind.

Decrease zero wind distance by distance increment for each 50 knot headwind.

Descent power of 30% should be selected down to FL 120 giving 300 knots IAS. On leaving FL 120 (within 30 DME) 20% thrust should be selected reducing speed to 200 knots IAS. Once established on the localiser at around 12 DME the undercarriage should be lowered and the wheels checked down and locked. Descent should be adjusted to reach 3000 ft at a point 10 nm from touchdown, keeping in mind that the runway threshold (if EOL is 8506 ft) is .7 DME from the DME station and continues through to .7 DME on the far side. On leaving 2000 ft extend 10 degrees of flap and on leaving 1000 ft extend flaps out to 30 degrees, at this stage thrust should be reduced to the idle/cut off position.

NB: The above information should be taken as a guide only and adjusted according to the actual wind being experienced on the approach.

To adjust approach profile:

TOO HIGH . . . Reduce power and/or lower landing gear and/or extend flaps and/or enter a holding pattern by continuously turning onto a reciprocal heading.

TOO LOW . . . Increase power and/or level off and/or if at safe altitude, raise flaps as required and/or if landing gear was lowered too early, raise wheels.

Final approach altitude distance check:

To be on the correct glide path, or approach profile, you should be at the following altitudes for the corresponding DME distance (runway length 8506 ft, touchdown point .7 DME).

10.7 DME	3,000 ft
7.4 DME	2,000 ft
5.7 DME	1,500 ft
4.0 DME	1,000 ft
2.4 DME	500 ft

STANDARD CRUISE PROCEDURE

* Operate within the heavy black lines for optimum performance and economy.

** A strong tailwind or headwind may make flight more favourable at a level different to that stated below. Flight above FL 430 up to Fl 490 is permitted, but unless a strong tailwind exists at those upper levels, it would be outside the economy guidelines to do so.

FL 430 Thrust 54Pc 449 kg/hr ********** Wt : Total/Fuel only	FL 410 Thrust 56Pc 485 kg/hr ********** Wt : Total/Fuel only	FL 390 Thrust 58Pc 523 kg/hr ********** Wt : Total/Fuel only	FL 370 Thrust 60Pc 562 kg/hr ********** Wt : Total/Fuel only	FL 350 Thrust 62Pc 604 kg/hr ********** Wt : Total/Fuel only	FL 330 Thrust 64Pc 647 kg/hr ********** Wt : Total/Fuel only	FL 310 Thrust 66Pc 692 kg/hr ********** Wt : Total/Fuel only	FL 290 Thrust 68Pc 740 kg/hr ********** Wt : Total/Fuel only
6400 / 1906 kg M.73 (Mach) 423 k (TAS)	6400 / 1906 kg M.74 (Mach) 431 k (TAS)	6400 / 1906 kg M.75 (Mach) 437 k (TAS)	6400 / 1906 kg M.76 (Mach) 443 k (TAS)	6400 / 1906 kg M.77 (Mach) 449 k (TAS)	6400 / 1906 kg M.78 (Mach) 454 k (TAS)	6400 / 1906 kg M.79 (Mach) 458 k (TAS)	6400 / 1906 kg M.79 (Mach) 462 k (TAS)
6200 / 1706 kg M.74 (Mach) 430 k (TAS)	6200 / 1706 kg M.75 (Mach) 437 k (TAS)	6200 / 1706 kg M.76 (Mach) 444 k (TAS)	6200 / 1706 kg M.77 (Mach) 450 k (TAS)	6200 / 1706 kg M.78 (Mach) 456 k (TAS)	6200 / 1706 kg M.79 (Mach) 461 k (TAS)	6200 / 1706 kg M.80 (Mach) 465 k (TAS)	6200 / 1706 kg M.81 (Mach) 469 k (TAS)
6000 / 1506 kg M.75 (Mach) 437 k (TAS)	6000 / 1506 kg M.76 (Mach) 444 k (TAS)	6000 / 1506 kg M.78 (Mach) 451 k (TAS)	6000 / 1506 kg M.79 (Mach) 457 k (TAS)	6000 / 1506 kg M.80 (Mach) 463 k (TAS)	6000 / 1506 kg M.80 (Mach) 468 k (TAS)	6000 / 1506 kg M.81 (Mach) 472 k (TAS)	6000 / 1506 kg M.82 (Mach) 476 k (TAS)
5800 / 1306 kg M.76 (Mach) 444 k (TAS)	5800 / 1306 kg M.78 (Mach) 451 k (TAS)	5800 / 1306 kg M.79 (Mach) 458 k (TAS)	5800 / 1306 kg M.80 (Mach) 465 k (TAS)	5800 / 1306 kg M.81 (Mach) 470 k (TAS)	5800 / 1306 kg M.82 (Mach) 476 k (TAS)	5800 / 1306 kg M.83 (Mach) 480 k (TAS)	5800 / 1306 kg M.83 (Mach) 484 k (TAS)
5600 / 1106 kg M.78 (Mach) 451 k (TAS)	5600 / 1106 kg M.79 (Mach) 459 k (TAS)	5600 / 1106 kg M.80 (Mach) 466 k (TAS)	5600 / 1106 kg M.81 (Mach) 472 k (TAS)	5600 / 1106 kg M.82 (Mach) 478 k (TAS)	5600 / 1106 kg M.83 (Mach) 483 k (TAS)	5600 / 1106 kg M.84 (Mach) 488 k (TAS)	5600 / 1106 kg M.85 (Mach) 492 k (TAS)
5400 / 906 kg M.79 (Mach) 458 k (TAS)	5400 / 906 kg M.80 (Mach) 466 k (TAS)	5400 / 906 kg M.81 (Mach) 473 k (TAS)	5400 / 906 kg M.82 (Mach) 480 k (TAS)	5400 / 906 kg M.84 (Mach) 486 k (TAS)	5400 / 906 kg M.84 (Mach) 491 k (TAS)	5400 / 906 kg M.85 (Mach) 496 k (TAS)	5400 / 906 kg M.86 (Mach) 500 k (TAS)
5200 / 706 kg M.80 (Mach) 466 k (TAS)	5200 / 706 kg M.81 (Mach) 474 k (TAS)	5200 / 706 kg M.83 (Mach) 481 k (TAS)	5200 / 706 kg M.84 (Mach) 488 k (TAS)	5200 / 706 kg M.85 (Mach) 494 k (TAS)	5200 / 706 kg M.86 (Mach) 499 k (TAS)	5200 / 706 kg M.87 (Mach) 504 k (TAS)	5200 / 706 kg M.87 (Mach) 508 k (TAS)
5000 / 506 kg M.81 (Mach) 474 k (TAS)	5000 / 506 kg M.83 (Mach) 482 k (TAS)	5000 / 506 kg M.84 (Mach) 490 k (TAS)	5000 / 506 kg M.85 (Mach) 496 k (TAS)	5000 / 506 kg M.86 (Mach) 503 k (TAS)	5000 / 506 kg M.87 (Mach) 508 k (TAS)	5000 / 506 kg M.88 (Mach) 513 k (TAS)	5000 / 506 kg M.89 (Mach) 517 k (TAS)

***Appropriate thrust settings and fuel burn for flight above flight level 430:

FL 490	FL 470	FL 450
Thrust 48 pc	Thrust 50 pc	Thrust 52 pc
350 kg/hr	382 kg/hr	414 kg/hr

CLIMB & DESCENT PERFORMANCE

Climb Performance at 300 knots IAS
(90% Thrust)

Sea level
4282 f.p.m.

A 090
3665 f.p.m.

F 180
3049 f.p.m.

F 270
2432 f.p.m.

F 360
1815 f.p.m.

F 450
1199 f.p.m.

Descent Performance at 300 knots IAS
(30% Thrust)

F 450
–5741 f.p.m.

F 330
–4339 f.p.m.

F 210
–2936 f.p.m.

Descent Performance at 200 knots IAS
(20% Thrust)

F 128
–2790 f.p.m.

A 060
–1751 f.p.m.

Sea level
–713 f.p.m.

* Best performance climb power 90% thrust

** Above figures calculated on aircraft weight of 5400 kg, i.e. 906 kg fuel.

FLIGHT PLAN DATA

Fuel calculations include: 20 kg start up and taxi
166 kg climb and descent
422 kg 45 min. reserve (60% thrust 562 kg/hr @ FL 370)
+ 10% variable reserve + normal trip fuel.

ROUTE	DISTANCE (nm.)	DIRECT TRACK (deg mag)	FUEL ON BOARD (kg)
A) SYDNEY – MELBOURNE	384	224	1103
B) NOUMEA – PORT VILA	282	013	971
C) SYDNEY – ADELAIDE	639	249	1431
D) ALICE SPRINGS – TENNANT CR.	249	358	929
E) MELBOURNE – BRISBANE	767	026	1596
F) SYDNEY – HOBART	573	185	1346
G) WILLIAMTOWN – SYDNEY	76	195	761
H) SYDNEY – COFFS HARBOUR	244	015	922
I) PERTH – CARNARVON	445	348	1181
J) SYDNEY – PARKES	153	275	805

AERODROME INFORMATION

AERODROME:	DME Channel	EOL (full length)	EOL (from taxiway intersection)	**ABBREV.
ADELAIDE	(9)	8506 ft	4523 ft	AAAD
ALICE SPRINGS	(9)	8506	4523	ASAS
BRISBANE	(6)	8506	4523	ABBN
CANBERRA	n.a.	6076	3038	ASCB
CARNARVON	(8)	8506	4523	APCR
COFFS HARBOUR	(4)	8506	4523	ASCH
COWRA	n.a.	6076	3038	CWR
GERALDTON	n.a.	6076	3038	APGN
GRIFFITH	n.a.	6076	3038	GTH
HOBART	(3)	8506	4523	AMHB
LIFOU	n.a.	6076	3038	LFU
MALLACOOTA	n.a.	6076	3038	MCO
MELBOURNE	(7)	8506	4523	AMML
MILDURA	n.a.	6076	3038	AMMI
NOUMEA	(7)	8506	4523	NWWW
NOWRA	n.a.	6076	3038	ASNW
ORANGE	n.a.	6076	3038	ORG
PARKES	(1)	8506	4523	PKS
PERTH	(2)	8506	4523	APPH
PORT MACQUARIE	n.a.	6076	3038	PMQ
PORT VILA	(5)	8506	4523	NHHH
SYDNEY	(5)	8506	4523	ASSY
TAMWORTH	n.a.	6076	3038	ASTW
TENNANT CREEK	(5)	8506	4523	ADTC
WAGGA	n.a.	6076	3038	ASWG
WILLIAMTOWN	(0)	6076	3038	ASWM
WOODGREEN HOMESTEAD	n.a.	6076	3038	n.a.

** Four letter abbreviations, in some cases use only the last two letters.
(6076 ft = 1 nm 8506 ft = 1.4 nm) (3038 ft = 0.5 nm 4523 ft = 0.7 nm)

"COMPUTER LEARJET" FLIGHT SCENARIO

(or how to fly your Learjet in one easy lesson!)

Selecting a route:

After the program has been loaded from the cassette into the computer using the "CRUN" command (approx. 5 minutes), the flight simulator is ready for operation.

We are asked to select a route from the ten displayed. Let's choose route "A" by pressing "A". A map of the route to be flown from Sydney to Melbourne is displayed for a few seconds. Notice that in the event of a major emergency the only other airport that can be landed at is Canberra.

Pre-start checks:

The cockpit display is then brought up automatically, and once shown we can see the surface wind at Sydney. For this trip let's say that it is 044 degrees at 24 knots (ASSY SURFACE WIND 044/24). Select brakes on (press "B"). The word "ON" will now appear under the abbreviation "BR". In most cases keys need only to be pressed once, but acknowledgement of the entry may take up to 5 seconds.

To determine the best cruising altitude for economy, we must refer to the "Standard Cruise Procedure" chart. Now the weight must be determined. On this trip we have 1103 kg of fuel on board (from flight plan data). We will use about 190 kg taking-off and on climb, so will be left with about 913 kg of fuel when we level off. Refer to the chart where a figure between 906 kg and 1106 kg appears within the black lines, run up to the top and the most economical altitude will be shown along with the appropriate thrust setting. For this trip we choose Flight Level 350 (35,000 ft) with a thrust setting of 62%. This can now be entered in the assigned flight level box (ASS FL) (by pressing "+" and leaving your finger on this button until "200" appears, then releasing your finger and it will automatically increase one more unit to "300"). Now press "*" in the same manner until "350" appears.

Now we select the airport DME (Distance Measuring Equipment) channel by pressing "5" for Sydney. If you forget which channel to select, press "Z" to give you the map display or refer to the manual. On the map the DME channel will be written next to the appropriate airport at the very top in brackets. En route airports like Canberra do not have a DME in this simulator. If you pressed "Z", now press "N" to return to the normal cockpit display.

Preparing for Take-off:

We know the wind is from the north-east (044 degrees) so we will have to taxi down to the southern end of the runway to take-off into wind to use the least amount of runway. Select 20% thrust by pressing "↑" to increase or "↓" to decrease thrust. Now by pressing "S" the turbine engines will start. Once started we can reduce the thrust to 10%, and release the brakes (press "R"). The IAS (indicated airspeed) will slowly increase, as it does we can turn onto the runway and head south-west to the end of the runway, (press either "←" or "→" to turn either left or right to make the heading 224 degrees). The aircraft will only turn onto headings 180 degrees apart, except for this initial turn from the taxiway onto the runway which is 90 degrees. Only one touch of the button is necessary. When the DME gets to about 000.5 we should slow down and turn around to be ready for take-off. Reduce the thrust to 0% (press "↓"), and when we are below 20 knots turn the aircraft left or right as before.

Now the flaps must be set to the correct settings, 20 degrees is normal for take-off. Press "F" to lower the flaps or "U" to raise them. Your finger must remain on the key until 10 degrees is reached then lift it off and the flaps will continue to 20 degrees, as was the case before with the thrust.

The fuel can now be checked so that there is sufficient for the journey.

Next in the pre-take-off checks is to check the ITT (intake turbine temperatures) and HDG (heading) to see they are both stable and O.K. The heading should now read 044.

Take-off:

Thrust can now be increased to 100% by pressing "shift" and "↑" at the same time until 100% thrust is reached. The IAS will increase and once above about 120 knots it is safe to lift off by pressing "C" (for climb).

After take-off press "W" to raise the wheels, "↓" to reduce to 90% thrust, "U" to lift up the flaps and as we are currently heading north-east we must turn onto a heading of 224 degrees by pressing either "←" or "→" as before.

In flight:

Once we are on track and everything is OK we can again check the assigned flight level and press "H" to engage the automatic pilot height lock. As we climb through about 34,500 ft the thrust can gradually be reduced to 60%, then increased to 62% by pressing "shift" and "↑" at the same time just once. We should now settle down to cruising level at 35,000 ft. Once the fuel gets down to around 900 kg it becomes uneconomical to remain at FL 350 so we should climb up to the most economical height for the continually reducing weight of the aircraft (refer to "Standard Cruise Procedure" chart). FL 390 or FL 410 looks like the best. We'll choose FL 410 (41,000 ft). Press letter "O" to switch off the auto pilot height lock, press "C" to climb, and then increase thrust to climb power of 90%. Now enter in FL 410 into the ASS FL box as before (refer to manual if necessary). Once entered correctly, press "H" to engage the auto pilot height lock again. As FL 410 is approached, thrust should be reduced to 56% for cruise at this level.

If "T" is pressed the true airspeed will be displayed and when compared to ground speed, the outside wind can be determined as either a headwind or tailwind component. Assuming nothing goes wrong we should have a successful flight to Melbourne arriving in around 45 mins. If you wish to see the exact position of the aircraft en route, press "Z" for the map display, the flashing marker will give the position of the aircraft according to its distance from Sydney and Melbourne.

If an engine fails now it is up to you to take the appropriate action as any good Learjet captain would. Even in the event of a cabin pressure failure, action needs to be taken without delay as explained in the front pages of the manual.

Descent

As we approach Melbourne, we will need to descend. Let's say at the moment we have no wind outside. That makes our descent point from FL 410 at 81 DME from Melbourne. By now you should have selected DME channel "7" for Melbourne.

Now for the pre-descent checks. Press "O" to switch off the auto pilot height lock, enter in A030 (altitude 3,000 ft) into the ASS FL box, reduce to 30% thrust as we near 81 DME from Melbourne, and at 81 DME press "D" to commence descent.

Descent rate should be monitored all the way down in case adverse winds are encountered, and the thrust adjusted or early lowering of gear or flaps performed if necessary.

Within 30 DME we should now be able to reduce to 20% thrust. Also now we can read the Melbourne surface wind. On this trip let's say it is 224 degrees at 12 knots (AMML SURFACE WIND 224/12), so we can make a straight in approach on present heading.

We should be planning to be 3000 ft at 10 nm from touchdown (10.7 DME). As we are on profile (in this example flight) there was no need to level off at 3,000 ft.

At about 12 nm from touchdown we can lower the landing gear by pressing "G", and ensuring three green lights appear to show the wheels are down and locked. Flap may have already been lowered earlier if necessary, but in any case some flap should be lowered now to reduce airspeed. If flap is lowered too early, we may end up under-shooting the runway and not reach the airport. Power may need to be applied and a temporary level off executed ("L") if the aircraft is getting too low (refer to descent & approach profile for final approach altitude checks). The runway starts when we are 000.7 DME so plan to touchdown as soon after that as possible (NOT BEFORE!).

After landing

Once on the ground press "V" to reduce thrust and apply reverse thrust. When the airspeed is below 30 knots the brakes may be applied ("B").

When the aircraft has halted the after landing checks can be done; raise the flaps ("U"), press "X" to select thrust normal and shut down both turbines by pressing "shift" and "S" at the same time. "LANDING" should now be displayed and hopefully a successful journey has been completed.

Now it's your turn. Good luck on your "first solo" as captain of your very own Computer Learjet!

Written by *J. Keech & P. Russell*
COMPUTER SOFTWARE

CHECK LISTS

PRE-START

Brakes on.
Assigned flight level entered.
Select airport DME channel.
Check effective operational length (EOL) of runway.
Calculate minimum TKOF distance from all up weight and head or tail wind component by extrapolation or interpolation.
Check surface wind.
Determine taxi and take-off direction.
Select thrust levers to 20%.

PRE-TAKE-OFF

Flaps set.
Fuel OK.
Intake turbine temps OK and stable.
Heading (HDG) checked OK and stable.

AFTER TAKE-OFF

Wheels up.
Reduce thrust to desired climb power (recommended 90%).
Retract flaps.
Establish aircraft onto track.
Check assigned flight level and select auto pilot height lock on.

TOP OF CLIMB

Check auto pilot height lock on.
Within 500 ft of assigned flight level . . . reduce thrust to 60%.
Monitor airspeed/mach no. in reference to V_{ne}.

CRUISE

Refer to "Standard Cruise Procedure" chart and select appropriate power/thrust relevant to weight and altitude.
Check DME channel selected.
Check IAS, Mach No. and TAS against ground speed (G/S) in reference to head or tail wind component being experienced at that altitude.

EN ROUTE CLIMB

Auto pilot height lock off.
Enter new altitude into ASS FL indicator.
Increase power to 70%, commence climb, increase power to 90%.
Auto pilot height lock on.

PRE-DESCENT

Auto pilot height lock off.
Assigned level selected as appropriate.
Reduce to descent power (30% 300 k IAS) (20% 200 k IAS).
Commence descent.

PRE-LANDING

Check surface wind and appropriate landing direction and runway length.
Lower landing gear . . . wheels down & locked . . . three greens.
Extend flap as desired.
Check fuel . . . sufficient for go-round?

AFTER LANDING

Select reverse thrust until stopped.
At 30 knots apply brakes.
When aircraft is halted, retract flaps, select thrust normal and shut down both turbines.

CONTROL KEYBOARD EXPLANATION

+	Increase assigned FL (10,000's)
*	Increase assigned FL (1000's)
P	Decrease assigned FL (10,000's)
-	Decrease assigned FL (500's)
I	Airspeed display: IAS
T	Airspeed display: TAS
Q	Airspeed display: MACH No.
0 thru 9	DME channel
W	Wheels up
G	Gear down
R	Release brakes
B	Apply brakes
"Shift" ←	Minor thrust decrease (-2%)
"Shift" →	Minor thrust increase (+2%)
V	Expidited thrust decrease & reverse thrust selection on.
X	Thrust normal (reverse thrust off)
F	Flaps down
U	Flaps up
H	Auto Pilot Height Lock on
O	Auto Pilot Height Lock off
S	Auto start
"Shift" S	Shut down both turbines
D	Descend
L	Level Out
C	Climb
Z	Map display
N	Normal cockpit display
←	Turn Left
→	Turn Right
↑	Increase thrust (increments of 10%)
"Shift" ↑	Increase thrust (increments of 30%)
↓	Decrease thrust (increments of 10%)

N.B. : Up to a 5 second lag or delay occurs between keyboard entry and acknowledgement. Do not make another entry until previous entry is acknowledged, otherwise the previous entry may be ignored.