



NOTE:

PLEASE DISCONNECT YOUR PRINTER AND OR
Any other Interface before Loading

Instruction Manual

MICRO MART SOFTWARE
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LOADING INSTRUCTIONS

Please follow the loading instruction in your Computer Manual.

1. Connect the ear socket of the Spectrum to the ear socket of your cassette recorder.
2. Make sure that the tape is wound to the beginning.
3. Set the volume control to a suitable level.
4. Set maximum treble minimum bass on the tone controls.
5. Type LOAD " "
6. Press ENTER.
7. Start the cassette recorder.
8. The program will RUN itself once loaded

If the program does not load correctly, try a different volume level.

BACKGROUND

This is a "Simulated Attack Profile" (SAP) of a "Strike Attack" aircraft en route to its target. You are the "Navigator/Weapons Systems Operator" (WSO pronounced Wizzo) of the aircraft. You are presented with information by instrumentation or by visual means, including information based on "Radar Warning Receiver" (RWR) data about imminent attack. It is then up to you to provide manoeuvring information to enable the pilot to take the necessary action to achieve the following aims in order of priority:

- a. Stay Alive
- b. Negate All Threats
- c. Attack your target.

THE SCENE

You are flying at 10,000 feet, 90% r.p.m. (revolutions per minute) throttle setting, 400 knots, heading 090°. The target will be set up at random within ± 30 degrees of your heading at a range of 70 nm.

SUMMARY OF COMMANDS

- ↑ — Increase rate of climb or decrease rate of descent.
- ↓ — Increase rate of descent or decrease rate of climb.
- — Increase rate of turn to right or decrease rate of turn to left.
- ← — Increase rate of turn to left or decrease rate of turn to right

- A — Break to left/port at 6G.
- S — Break to left/port at 4G.
- K — Break to right/starboard at 4G.
- L — Break to right/starboard at 6G.
- O — Turn right by 2 degrees without banking
- R — Turn left by 2 degrees-without banking
- Y — Level the wings and reduce all rates of turn to zero.
- V — Airbrake in/out
- B — "Pickle Button" ... Bomb Release
- Q — Increase throttle setting by 5%
- Z — Decrease Throttle setting by 5%

SPACE KEY — Freezes the game. Any Key to begin again.

PRECISE MEANING OF COMMANDS

- ↑ — UP Increase rate of climb or decrease rate of climb by 100 feet. The new rate of climb/descent will then be maintained. Note also that there will be associated speed changes related to the climb or descent.
- ↓ — DOWN As for "↑" but reciprocal.
- — RIGHT Increase rate of turn to starboard or reduce rate of turn to port.
- ← — LEFT As above but to left or port.

The settings are as follows:

Hdg.	90°	45°		45°	90°
Changes	Port	Port	Level	starboard	starboard
per cycle	-9°	-5°	0°	+5°	+9°

- A — 6G Break Left -20° per cycle at 90° bank
- S — 4G Break Left -15° per cycle at 90° bank
- L — 6G Break Right +20° per cycle at 90° bank
- K — 4G Break Right +15° per cycle at 90° bank

During all "Breaks" there will be a speed loss depending on the type of break and speed available

- V — Airbrake Reverses previous setting of airbreak — If IN then OUT; If OUT then IN
If put out then it has the effect of reducing speed and height by 5 knots and 10 feet respectively until it is brought back in.

- O — Turn right by 2° - Used for fire control during bombing run.

- R — Turn left by 2° - Used for fire control during bombing run.

- Y — Steady Level Wings. Reduce all rates of turn to zero and restore speed appropriate to throttle setting.
- Q — Throttles Up Increase throttle setting by 5%. If throttle already at A/B (After Burner >100%) then it will restore speed appropriate to A/B.
- Z — Throttles Back Decreases throttle setting by 5%. Minimum 70% rpm - not to be recommended.

NOTE: STALL = 200 knots

Fuel flow will be affected by throttle setting. The speed is increased or decreased after a time lag to simulate actual acceleration or deceleration.

Throttle %	70	75	80	85	90	95	100	A/B
Speed Knots	200	250	300	350	400	450	500	550
Fuel Flow lbs/min	40	50	60	70	80	90	100	200

B — Pickle Button Releases the BOMB. Score is based on following factors:

1. Range to target (must be less than 3nm) ideal 600 years.
2. Height — Ideal 200 feet.
3. Speed — Ideal 500 knots
4. Difference between Heading and Bearing — Ideal 0° difference
5. Angle of Bank — Ideal 0° (level)
6. Rate of Climb/Descent — Ideal level.

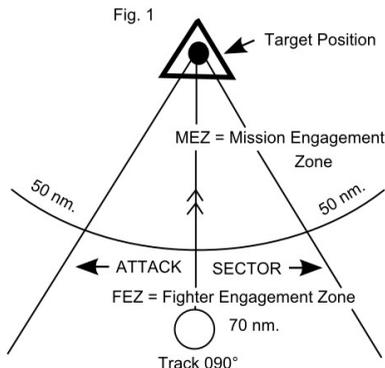
* Note: also if Heading < 70° or > 130° or Bearing < 60° or >120° then there will be NO SCORE Note also if range ≥ 3 nm, then NO SCORE

*** HARD RULES FOLKS! ***

TYPES OF THREAT

Within 50 nm of the target no enemy fighters will be allowed, so the only threat to you is from the ground forces. You will be attacked at random by Anti-Aircraft Artillery (AAA or Triple A) or Surface—To—Air Missiles (SAMs). You are in the MEZ (see Fig. 1).

Beyond 50 nm. range from the target you will only be attacked by Fighters. You're in the FEZ (see Fig. 1)



a) FIGHTERS — The attack will come at random from 5 o'clock, 6 o'clock or 7 o'clock. If the attack comes from 6 o'clock then there will also be the flashing caption "M" to indicate a missile has probably been fired at you. Otherwise there is a 20% chance of a missile launch.

b) AAA — The attack comes at random from 11 o'clock, 12 o'clock or 1 o'clock.

c) SAM — The attack also comes at random from 11 o'clock, 12 o'clock or 1 o'clock. If the attack is from 12 o'clock then there will be the flashing caption "M" to indicate a probable missile launch. Otherwise there is a 20% probability of missile launch.

TERMINOLOGY

a. CLOCK CODE — Consider the nose of your aircraft to be the 12 o'clock position on the clock face. All positions called are horizontally relative to the clock face. Therefore, 5 o'clock for example, is behind and right. See Fig. 2.

b. BREAK — A hard turn at 4G or 6G.

c. G — The force of gravity e.g. 4G = 4 times the force of gravity. Pulling 'G' forces blood towards the base of your body and makes your body proportionally heavier. Ultimately you can black-out and die.

d. STEADY — Roll wings level and stop the turn

e. HEADING (HDG) The compass direction of movement of your aircraft expressed in degrees from 1° to 360° e.g. 360° = North, 90° = East, 180° = South and 270° = West.

f. STARBOARD — Right

g. PORT — Left

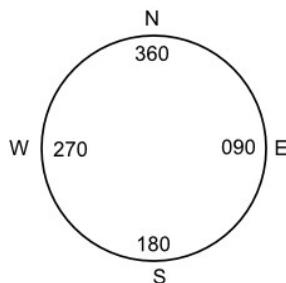
h. BEARING — The compass direction from the aircraft towards the target, expressed also from 1° to 360°

j. A/B — AFTER BURNER — Burning of fuel and air at rear of engine to increase thrust.

i. NM — NAUTICAL MILE — There are 60 minutes in a degree of latitude. Each minute is equal to 1 nautical mile. There are also 2000 yards in a nautical mile, so the maths is easy, 1 nm = 2000 yards, 2 nm = 4000 yds.

k. RWR — RADAR WARNING RECEIVER This is an instrument that warns a modern STRIKE-ATTACK aircraft's crew of a ground or airborne radar that is illuminating their own aircraft. Nowadays most ground-to-air launched weapons (including AAA) are radar directed, and so are most air-to-air weapons. The RWR adds an element of genuine realism in an air-combat world in which technological advances play an ever increasing role.

In STRIKE-ATTACK 2 the RWR is simulated by the flashing symbols in the appropriate clock positions around the map/position display.



PROBABILITY OF ATTACK

- No attack when range 7 nm.
- If height ≥ 8000 feet then 40%
- If height ≥ 2000 feet but < 8000 feet then 20%
- If height < 2000 feet then 10%

SO STAY LOW BUDDY

HOW TO DEFEAT AN ATTACK

Fighter Attack

- From 7 o'clock: Break Port at minimum 4G
- From 6 o'clock: Break Port/Starboard at 6G
- From 5 o'clock: Break Starboard at minimum 4G.

Note 1: If "M" flashes then minimum break 6G

Note 2: If speed less than 300 knots you may be shot down – beware.

SAM ATTACK

- From 11 o'clock: Break Starboard minimum 4G.
- From 12 o'clock: Break Port/Starboard at 6G
- From 1 o'clock: Break Port minimum 4G

Note 1: If "M" flashes then minimum 6G

Note 2: If speed less than 350 knots you may be shot down – beware!

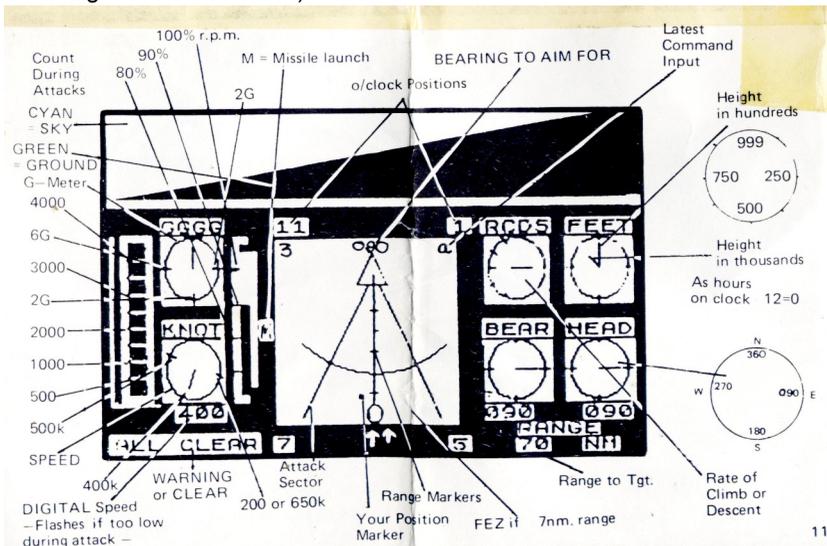
AAA ATTACK - If height 8000 feet then ignore THREAT.

- From 11 o'clock: Break Starboard minimum 4G
- From 12 o'clock: Break Port/Starboard minimum 4G
- From 1 o'clock: Break Port minimum 4G

Note 1: If speed less than 500 knots at any stage then vary height or you may be shot down

Note 2: Minimum height variation is as follows

- Height > 2000 feet then 300 feet
 - Height < 2000 feet then 100 feet
- (based on height at start of attack)



INTERPRETATION OF DATA

Your aim is to fly as close to your planned track of 090° as possible and to, at all cost, be within the bearing sector of 060° to 120° for the attack. The black dot represents your position on the map. Aim to put the dot on the central line, while still maintaining a generally easterly progression. Use the Bearing & Heading Dials to help you as well as the digital data presented.

When your range falls to $< 7\text{nm}$. then the ranges marked on the map are from 2 to 7 nm. In the latter stages of attack use the digital data to make your heading exactly equal to the bearing. Remember that keys "O" and "R" will give you a once only turn of 2° without changing angle of bank, thus simulating a small rudder input. Here once again is the way to interpret the bearing and heading dials:

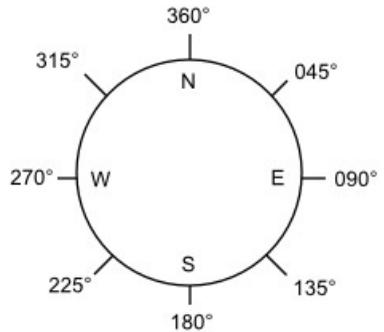
Pointer is at 045° :

Now if that was the **bearing Pointer** then the black dot would be to the right of the centre line. So you need to come left onto at least about 010° or 020° of Heading.

This is because you are now outside the allowed attack sector of 060° - 120° of bearing.

Finally, remember your first priority;
STAY ALIVE

Familiarise yourself with the various audio warnings and information. Keep the command key pressed until your "pilot" accepts the information and responds by displaying the key just below the 1 o'clock marker. This simulates a reaction delay between requesting an action from your pilot and obtaining the action requested. Those who fly "fast-jets" know what I mean!



GOOD LUCK