MARSHRUT MES OPERATOR

Operator quick guide

The main rule: press the button at the moment it happens.



Start of shift

1. Sign in: “By badge” tab → scan your card → PIN.
2. “Start shift” → choose your machine (work center).
3. “My tasks” — work through them from top to bottom. Only the foreman changes the order.

Work

1. Scan the **operation QR code** on the route sheet (or find the task in the list).
2. 🔧 **Setup** — you started setting up the machine. ✔ **Setup done** — you finished.
3. ▶ **Start** — the first part is running.
4. ⏸ **Pause** — you stepped away or the machine is idle. **Always choose a reason.**
5. ✔ **Hand in** — enter good parts and scrap.

Handed in less than the task

- **Hand in part** — the rest will be finished later by you or your relief. *Choose this if in doubt.*
- **Close at N pcs** — no more will be made. Only by the foreman's decision.

If something is wrong

What happened	Press
No material, program or drawing; a question about the part	**Problem** + reason
The machine broke down	**Breakdown**
A part is defective	When handing in — scrap, reason, **photo**
The QR code won't scan	Scanner → “By order number” or “Manual entry”
Can't sign in	Check the keyboard layout and Caps Lock; otherwise see the foreman

> “Start” won't press? The program shows the reason: no open shift, the order isn't released or is in “Problem”, the previous operation isn't closed or is scrapped. This is a safeguard, not a failure.

End of shift

1. **Don't close** an unfinished operation — use “Hand in part”.
2. **Hand over shift** — briefly: setup, tooling, batch status.
3. **End shift.**

Never give your badge or PIN to anyone: your output is counted by them.

MARSHRUT MES FOREMAN

Foreman quick guide

The foreman runs the queue and removes problems. Tasks are not handed out verbally — only through the queue.

Morning, before the shift (10–15 minutes at the board)

1. Board → “Needs attention”: problems, breakdowns, defects.
2. Overdue orders and “Starting today”. Are the CNC programs ready (Tech prep) and the material (Warehouse → Requirements)?
3. **Shift plan**: each machine's queue by time; ↑↓ — order, ⇆ — to another (alternative) WC, “Print” — a sheet for the machine.
4. “Capacity load”: overloaded work centers → move operations (✎ on the operation → another work center).

During the shift

Signal	What to do
“Problem” on an order	Go to the machine, solve it, clear the problem **with a comment: cause and solution**
“Breakdown”	Maintenance has received a request; move operations to another work center or wait
Handed in less than the task	Decide: finish later (“Hand in part”) or “Close at N”
Defect	Decide by the defect report: rework or write-off; the shortfall — as a new order
An extra operation is needed	Order card → add an operation (at the start, in between, ✎)
Urgent order	Priority “High”, operations to the top of the queue; a large batch — “Split batch” onto a free WC
Operation done outside	“Send to outsourcing”; when it's back — Orders → “Outsourcing” → “Receive”

End of shift

- Read the shift handovers. No “hanging” operations or unclosed shifts (Admin panel → Shifts).
- Time standards control: red operations — find out why.

Once a week

“Weekly summary” + “Losses (Pareto)” → one main cause of losses → owner and deadline → check a week later.

> Actual time is always worse than the standard? Don't adjust the records — ask the process engineer to revise the standard.

MARSHRUT MES STOREKEEPER

Storekeeper quick guide

Materials

1. **Warehouse → Requirements**: what is missing for released orders → “Order”.
2. Purchase: draft → sent → **receipt**. On receipt always enter the **lot** (heat, certificate).
3. **Reserve** for an order — so the material isn't taken for another one.
4. Issue to the shop — **per order**, not “to the section”.

Products

1. When the last operation is closed, parts appear in **“Awaiting acceptance”** automatically. Receipts are not created by hand.
2. **Acceptance**: count and confirm the actual quantity. Doesn't match what was handed in — see the foreman, don't “accept as is”.
3. **Kitting**: enter the order or specification number → you see what is available. A completed kit writes the parts off the warehouse. Assembly won't start until the order is kitted.
4. **Shipment**: order card → “Shipment” → quantity → “Ship”; print the **delivery note** and **passport** right away.

If something is wrong

What happened	What to do
More arrived than needed	Accept — the surplus goes to the next kit; tell the foreman
Less arrived	Don't accept blindly — check with the foreman
Material arrived without documents	Accept with a note, get the lot from the supplier — no lot, no traceability
The order was cancelled	Finished parts — to the warehouse, release the material reserve

Stock must match the shelves. Once a month — **Warehouse → Stocktake**: actual count → “Post” → report. A tool at “replace now” — replace it and press “Replaced”.

MARSHRUT MES PROCESS ENGINEER · CNC PROGRAMMER

Process engineer quick guide

Items and routing — before the order

1. The **code** is unique: the program won't let you create a duplicate (including Latin/Cyrillic look-alikes, case, spaces) — look for the existing card.
2. **Operations** in steps of 5 (005, 010, 015…): choose the work center first — the name fills in automatically.
3. **Run time** — per part, **setup time** — per batch. Zeros in the standards break due dates, capacity load and pay.
4. **Lead time** — days from release to completion: release dates are calculated from it.
5. **Material consumption rates** — without them there are no requirements or purchases.
6. **CNC** — a checkbox on the operation; **files** — drawing, CNC program (versions), setup sheet. The operator sees the latest version at the machine.
7. Changed a drawing or routing — **“Issue change notice”** and decide for open orders: “Apply” or “Keep old”.

Time standards

- Initial: by analogy, by calculation (program cycle + loading), by time study (5–10 cycles + 10–15 %), or from the actuals of the first batches.
- Revise when the deviation in time standards control is **steady for 3 batches or more**. New orders will take the new standard.

Tech prep (CNC programmer)

1. Tech prep → “By order”: which programs are missing and by when.
2. Take in work → upload the program (each upload is a new version) → “Done”.
3. A one-off request without an item → when the part appears, **link** the request to it.

Quality

- A control plan for critical parts: dimension, nominal, tolerance, instrument, frequency (first part, every N-th).
- A defect repeats — a “5 whys” analysis, the measure goes into the routing, the setup sheet or the control plan.