Retranslators

How to pass your vehicles' data to a second monitoring system

1 What it is and why

A retranslator is a channel through which a copy of your devices' data goes to another system. Most often this is required by the customer of a haul or by a state system: Rostransnadzor, a regional navigation system. We keep receiving and storing everything as usual: a copy goes out, and only for the vehicles you choose. Without such a channel there is nothing to report to the second system with, and a **second device** is fitted in the vehicle just for that. A retranslator saves you from it: one device, two systems.

2 What to ask the receiving side

There is nothing to invent: ask them for this in a single email.

What to ask	Notes
Address and port	Where to connect, for example `egts.example.ru` and `20629`.
Is authorisation needed	This is the choice of protocol. Needed: **EGTS**. Not needed: **EGTS OID**. Ask directly: they often do not mention it themselves. If the receiver expects Wialon devices, it is **Wialon IPS**, and you need the object identifiers (usually the IMEI) and the password, if one is set.
Dispatcher ID	For EGTS only. A number issued to you specifically. If you were not given one, they almost certainly use EGTS OID.
Object numbers	Under which numbers the vehicles are registered on their side. If they answer 'we will register them under your numbers', there is nothing to enter.
Is access open	Many receivers accept connections only from addresses they know. Our address is `91.200.84.194`; ask them to allow connections from it.

> **Why mixing up the protocol is dangerous**
>
> The receiver will not tell you clearly. If it needs authorisation and the channel is set up without it, it **accepts the packets and silently throws them away**: on our side everything looks fine, and on theirs there is nothing. That is why 'is authorisation needed' is in the list above.

3 How to set up a channel

1. **Open the Retranslators section**
   It is in the left menu, right after Buildings.
2. **Press "+ Retranslator"**
   Name, address, port, protocol. The name can be anything; it is only for you.
3. **Decide which vehicles to send**
   All of them by default, and new ones are picked up automatically. Clear the "All devices of the account" tick box if you need only some of them.
4. **Check the object numbers**
   In the channel card, the Objects table. The numbers are already filled in; if you have been given your own, enter them and press "Save numbers". Do this **before** turning the channel on.
5. **Turn on the switch in the list**
   In half a minute the state becomes "Running", and the counter of sent records starts to grow.

4 How to tell that everything works

The state is shown in the first column of the list. The switch and the label next to it answer *different* questions: the switch says whether the channel is on, and the label says whether sending is going on right now.

State	What it means and what to do
Running	There is a connection, and the receiver confirms the records. Nothing to do.
Connecting	A connection is being made. This is normal in the first seconds after turning on. If it lasts for more than a minute, look at the log.
Waiting	There is nothing to send yet: the channel has no vehicles. Check the list of objects in the card.
Error	The receiver cannot be reached or refuses. The reason is written in words in the log at the bottom of the card: see the table below.
Suspended	The account's access is suspended for non-payment. Sending resumes automatically after payment.

5 If something is wrong

What you see	Almost always it is
"Error", and in the log "Could not connect"	A wrong address or port, or their side does not let us in. Ask them to open access from `91.200.84.194`.
"Error", and in the log "Authorisation refused"	A wrong dispatcher ID, or they do not need authorisation at all, and the EGTS OID protocol should be chosen.
"Running", the counter grows, but they have nothing	Object numbers. They do not know our numbers and throw the data away. Get the numbers from them and enter them in the card.
In the log "The receiver rejected records"	Some vehicles are not registered on their side. The card shows which objects have a sent counter stuck at zero.
One vehicle has 0 sent	The vehicle has not been online or stands without a satellite signal. We deliberately do not send points without a signal: at such moments the device repeats its last coordinate, and on their side this would look like a stop in the wrong place.

6 Resending a past period

The channel card has “Retranslation for a past period”: two date fields and the “Start” button. A bar shows the progress, and the job history shows what was resent and when.

When you need it and when you do not

- **Not after a connection drop.** The channel recovers by itself and sends what has piled up without your help.
- **Needed for the time the channel was off**: for example, if you connected to the receiver later than the trips began.
- At one time: no more than 31 days. How far back: the track retention period.

Resent points are marked as ‘data from the device’s memory’. Without this mark, the receiver would show the dispatcher a week-old point as the vehicle’s current position.

7 What goes out and what does not

Sent	Not sent
Time, coordinates, speed, heading, altitude, mileage, ignition; the number of visible satellites; fuel level and on-board voltage, if the device sends them.	Video and camera snapshots; alarms and events; vehicle names and number plates; your geofences, users and settings; the data of your other channels.

A limitation worth knowing in advance

A voltage above 25.5 V cannot be sent. This is a limitation of the EGTS protocol, not ours: one byte is set aside for voltage in it. For 24-volt vehicles the value in the other system will be cut off; in our telemetry it stays real.

8 Frequently asked questions

Question	Answer
How many channels can I set up?	As many as you need. The same vehicle can go to several systems at once and by different protocols: the channels do not know about each other.
Does this affect our work with the system?	No. Retranslation takes nothing away from monitoring: the map, reports and alerts work as before.
What if I turn a channel off and back on a week later?	It carries on from where it stopped, and the week follows to the receiver. If that is not wanted, the card has “Start from now”: it skips what has piled up and writes in the log how many records were skipped.
Can sent data be recalled?	No. Deleting a channel stops sending, but what the other system has already received stays with it.
Who can set up retranslators?	The account owner and operators. A viewer sees the state and the log but cannot change anything.
Is the data sent unencrypted?	The EGTS and Wialon IPS protocols do not provide encryption: this is how data is exchanged between monitoring systems. Only the coordinates and telemetry listed in section 7 go out.