

## Profit Share model in PATS Pro SE

This document explains details of Profit Share model in PATS Pro SE script. Explanation is given on sample configuration.

### *Model settings example:*

Say, model settings have the following values:

Max % for earnings on Upgrade:	125%
Daily Profit Share Percentage:	8%
Admin Percentage:	5%
Reserve Percentage:	5%
Investments Percentage:	90%
Minimum Daily Percentage:	3%

For example, daily upgrade amount is \$1000, active upgrades amount is \$400, payment for surfing amount is \$500, referral commissions amount is \$100, upgrade cost amount is \$10 and excess account fund amount is \$100.

First of all, Script calculates Admin Percentage and Reserve Percentage for daily upgrade amount:

$$\begin{aligned}\text{Admin Amount} &= \$1000 \times 5\% / 100 = \$50; \\ \text{Reserve Amount} &= \$1000 \times 5\% / 100 = \$50.\end{aligned}$$

Secondary, Script calculates Daily ROI, using this formula:

$$\text{Daily ROI} = (\text{Daily upgrade amount} - \text{Referral Commission} - \text{Payment For Surfing} - \text{Admin Amount} - \text{Reserve Amount} + \text{Excess account fund amount}) / \text{Active upgrades amount};$$

$$\text{Daily ROI} = (\$1000 - \$100 - \$500 - \$50 - \$50 + \$100) / \$400 = \$400 / \$400 = \$1.$$

Then Script calculates Daily ROI Percent:

$$\text{Daily ROI Percent} = 100 \times \text{Daily ROI} / \text{Upgrade Cost} = 100 \times \$1 / \$10 = 10\%.$$

Because Daily ROI Percent (10%) is greater than Daily Profit Share Percentage (8%), Script uses Daily Profit Share Percentage.

Finally, for each member Script calculates ROI and Profit.

Let's see in details how it will be done for a member with active upgrade amount \$100, currently its upgrade got \$122 and upgrade will be expired when it gets \$125:

$$\text{ROI} = \text{Active upgrade amount} \times \text{Daily ROI} / \text{Upgrade Cost} = \$100 \times \$1 / \$100 = \$10;$$

$$\text{Profit} = \text{Active upgrade amount} \times \text{Daily Profit Share Percentage} / 100 = \$100 \times 8\% / 100 = \$8;$$

As we mentioned above, Script uses Daily Profit Share Percentage (8%) instead of Daily ROI Percent (10%). It means, than member gets only \$8 to its upgrade, and \$10 - \$8 = \$2 goes to Excess account fund.

But currently member's upgrade got \$122 and it must be expired when it gets \$125.

Therefore, upgrade gets not \$8, but \$125 - \$122 = \$3. And \$8 - \$3 = \$5 goes to Excess account fund.

If Daily ROI percent was less than Minimum Daily Percentage, then Script uses Reserve fund to take necessary amount for members Daily ROI payouts. In this case Script calculates Daily ROI following way. First, Script calculates how much it needs to take from Reserve fund:

$$\begin{aligned}\text{Necessary Sum Per Update} &= \text{Minimum Daily Percentage} \times \text{Upgrade Cost} / 100 \\ &= 3\% \times 10\$ / 100 = \$0.3;\end{aligned}$$

$$\begin{aligned}\text{Necessary Sum} &= \text{Necessary Sum Per Update} \times \text{Active Upgrades amount} - \\ &\quad (\text{Daily upgrade amount} - \text{Referral Commission} - \text{Payment For} \\ &\quad \text{Surfing} - \text{Admin Amount} - \text{Reserve Amount} + \text{Excess account} \\ &\quad \text{fund amount}).\end{aligned}$$

Let's say than Active Upgrades amount is \$300, Referral Commission amount is \$250, Payment For Surfing amount is \$600, active upgrades amount is \$400 and Excess account fund amount is \$0. Then Necessary Sum will be:

$$\begin{aligned}\text{Necessary Sum} &= \$0.3 \times \$300 - (\$1000 - \$250 - \$600 - \$50 - \$50 + \$0) = \\ &= \$90 - \$50 = \$40.\end{aligned}$$

Then Daily ROI will be calculated this way:

$$\begin{aligned}\text{Daily ROI} &= ((\text{Daily upgrade amount} - \text{Referral Commission} - \text{Payment For} \\ &\quad \text{Surfing} - \text{Admin Amount} - \text{Reserve Amount}) + \text{Excess account} \\ &\quad \text{fund amount} + \text{Necessary Sum}) / \text{Active upgrades amount} = \\ &= ((\$1000 - \$250 - \$600 - \$50 - \$50) + \$0 + \$40) / \$400 = \\ &= \$0.225\end{aligned}$$

If calculated Daily ROI less than zero, Script sets it to zero. Then program calculating ROI and Profit for members as usual.