

VESQ tp tech

- You set a CP
- You TP back. When you TP back, game checks for the last direction that you grabbed a ladder. If it matches the ladder youre TP'ing in front of, you grab it. If not, you don't.
- Range is 10u only if you have the movetype set to ladder (only when grabbing) instead of walk
- TP'ing back sets you back to your movetype when you checkpointed
- Spectating and coming back acts as a teleport

Danvari

- 270/128 in 1 tick, 2.109375u of offset
- Set CP > TP to CP > jump off ladder for 1 tick, immediately set CP > TP

Video format

- Show OG danvari on KZT - this is danvari
- Show that doing KZT way doesn't work on VNL

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<https://vnl.kz/> website announcement before vid starts yes?

<skip to XX:XX to find how to do danvari tech>

Intro / lore

This is what we call Danvari tech in KZT/SKZ. It allows players to push themselves away from ladders up to a maximum of 10u. This can be very useful in some situations, and allow a player to pass obstacles or make jumps much easier. It was discovered by a player named Danvari back in late 2017 while he was messing around ladders. What makes this tech so powerful is that you can get offset mid air. Offset in this context, being the distance between you and the face of the ladder.

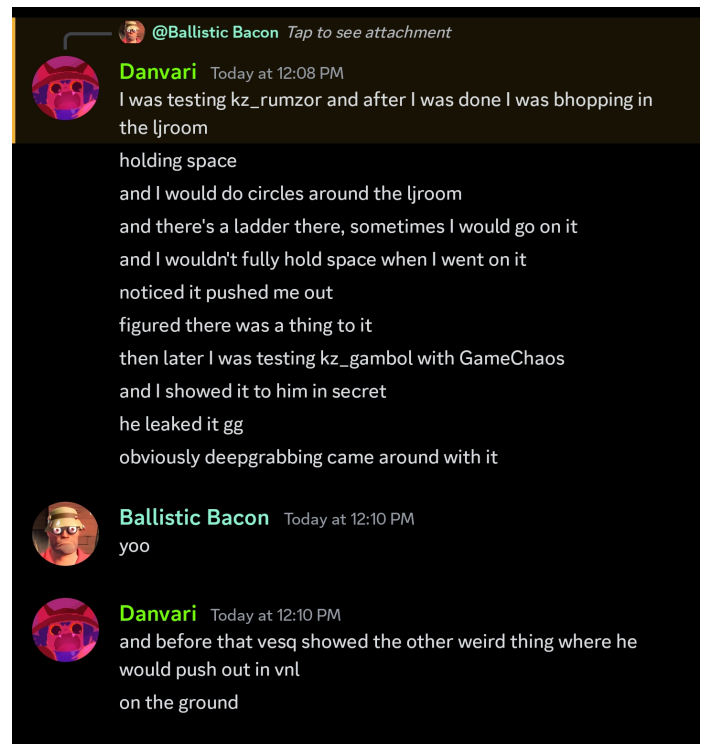
To do it, go on a ladder, look into it, hold your forward key while looking at an angle that will cause you to barely move, and finally, hold your jump key for a split second. Doing those steps correctly should look something like this. <show clip in GOTV or smth to make it fancy>

Up until the start of 2023, this tech was thought to be exclusive to KZT/SKZ, until zer0.k found a way to do it... albeit inconsistently. With the help of dyalite, a consistent way was found that same day, and danvari on VNL was born. Turns out, danvari tech is one of the results of the 0.2s ladder mechanic that also makes ladder gliding possible. (show vnl-spreadsheet chat logs)

Before danvari tech, people used vesq tech to get offset on ladders in VNL. It has two main variants, one with, and one without teleports (more on that later <timestamp>). However, the downside is that the player needs a standable surface close to the ladder to make it possible. Being able to get offset mid-air opened new possibilities... and possibilities, there were many.

The aftermath

This discovery was game changing, making kz_dzy_beyond_v2 possible and dropping the VNL difficulty of several other maps (lume and correaguachin), all within the following couple of weeks. It allowed players to get up to about 10u closer to where they wanted to go, making jumps thought to be impossible, possible, and making hard jumps easier. <show clips of the jumps>



Deep grab / late grab VS early grab

First, some technical terms <say during transition>. Grabbing a ladder while holding a direction key will cause you to get a random offset up to about 2u <show side by side clip of early VS late grab>. Getting as close as possible to the ladder is critical for danvari tech to work on VNL. Therefore, you need to do what we call a late grab/deep grab to get as close as possible to the ladder. To do this, you just need to hit the ladder first while not holding any direction key, then grab it so that you have an offset of zero. <show different ways to late grab>. This will be important for the next part, which is <say “how to actually do danvari tech on VNL” during transition>.

How to Danvari tech on VNL?

You can danvari tech in two ways, either with a TP bind, or, with precise timing. Using the bind makes it easier to get maximum offset, but since it uses checkpoints and teleports, it is not usable during PRO runs. Having the showpos plugin or any plugin that allows you to know your position is critical to know your exact offset from the ladder <put text saying: zer0.k's showpos plugin link in the description>.

- *Danvari tech with precise timing*

The first step is to get zero offset on the ladder by hitting it first without holding any direction keys, then grabbing it. This is also known as a late grab/deep grab.

Once you have zero offset, look directly up or down and approximately parallel to the ladder, climb, and finally, hold your jump key for a split second while climbing. If you do it correctly, it should look something like this <show clip>. Note that you cannot do this with jump on scroll since you need to hold your jump key for several ticks. <<https://youtu.be/UY8fBMobcRs>>

- *Danvari with TP bind*

bind <key> "+jump 1; -jump 1; sm_checkpoint; sm_gocheck" (by foxy - [video](#)) - **SHOW VNL KZ BINDS/ALIASES DOC**

Just get on the ladder and press the bind, that's about it. It will automatically jump, set a checkpoint, and TP back to that checkpoint for you. Just press it a couple of times and you should be good to go. Shoutout foxy for this one <show foxy video>.

How to get maximum offset using the danvari bind

Jumping off a ladder launches you at 270 u/s. Since the game works in discrete time intervals called tick rate, you will move 2.11u (3 s.f) every tick, or $270/128u$. This is where the bind comes in handy, as it allows you to be pushed out for 1 tick only, pushing you 2.11u every time you use it. Sure enough, the theory checks out and we get pushed out by approximately 2.11u everytime the bind is used <show clip of 2.11 increments>. Since 10 is not divisible by 2.11, it's the reason why simply spamming the bind will not get you the 10u of maximum offset.

Therefore, to get this maximum offset, your initial position (or offset in our case) needs to be such that $([4*2.11] + \text{your initial position})$ equals $(\text{zero offset position} + 10)$.

Let x be the initial offset

Max offset

$$= x + (4*2.11) \leq 10$$

Example:

Zero offset coordinate is 100.

What you want is to go to 110.

Therefore, you need to start at coordinate $[100 + (10 - 4*2.11)] = 101.56$ (1.56u of initial offset).

Once you get close to that coordinate, each time you press the bind, you will be pushed 2.11u away.

Initial coordinate - 101.56

Coordinate after 1st bind use - $101.56 + 2.11 = 103.67$

Coordinate after 2nd bind use - $103.67 + 2.11 = 105.78$

Coord after 3rd = 107.89

Coord after 4th and final bind use = 110

In practice, getting maximum offset requires precise lineups, and this is not always feasible. Therefore, you will have to settle for slightly less in many cases (~9.95u)

MORE ON GETTING OFFSET ON LADDERS IN VNL

Vesq tech

Vesq tech is a way to get offset on a ladder using the ground. It was found by Vesq in the same time period... in late 2017 <show OG vesq clip> . The neat thing was that it also worked on VNL, and was the only known way to get offset on ladders at the time. Despite the limitations, the applications were massive.

All you have to do to vesq tech is to grab the ladder, look down and climb up and down, touching the ground each time. Late grabbing the ladder is useful because it allows you to be pushed out by around 9.5 units by touching the ground a couple of times.

A superior version is to use teleports to vesq tech, or as I like to call it, vesq TP tech. As the name suggests, it uses teleports to allow a player to get offset on a ladder.

All you gotta do is find the zero offset coordinate, go about 10u away from it, set a checkpoint, climb on the ladder, and TP back to your checkpoint. TP'ing back will cause you to automatically grab the ladder.

On PRO, you can just go to spectators and come back instead of using checkpoints and teleports. Just touch the ladders, go 10u away, go to spectators and come back.

TP vesq tech exploits the way the KZ plugin puts the player on a ladder upon teleporting. This only works in KZ, and not in typical competitive gameplay.

Put a wall of text for 1 sec to explain movetype and stuff.

Final words/conclusion

People in the past have accidentally done danvari tech but could not find a way to reproduce it. All it took was a 5Head code reader and a yellow duck to have a breakthrough. The discovery of Danvari tech on VNL might have been the biggest since ladder gliding, having more applications and forever changing ladders in VNL map running.

References and research

zer0.k - for finding danvari VNL and massive help

<https://youtu.be/S3tPC3UF2b8> - nykan ladder and danvari tutorial @timestamp

vesq OG VESQ tech clip

<https://youtu.be/UY8fBMobcRs> - danvari on VNL by dyalite

<https://youtu.be/DPpSC9FK4DU> - danvari bind by foxy

Ballistic bacon, Danvari, and vesq - KZT danvari and vesq tech lore

GMC discord - danvari VNL lore

Maps where danvari tech is useful:

kz_lume - super hard ladder
kz_whereyoufrom - hard ladder much easier
kz_dzy_beyond - makes an unfeasible ladder very hard
kz_correguachin_reseido - makes some ladder jumps much easier
kz_bhop_mosaic_od2 - makes a ladder much easier
kz_ziggurath_final - makes a ladder much easier
kz_zxp_final4 - makes super hard ladder easier
kz_vittu_mika_persse - makes LAJ > WS much easier
kz_drops_od - makes it possible to LAJ > ws
vnl_sewers - makes multiple ladders much easier

VIDEO DESCRIPTION

"I just discovered you can danvari tech on vnl" - zer0.k (09/01/23) and everything that followed forever changed ladders in VNL map running. This video talks about Danvari tech in general, but is focused on its relation to VNL.

Danvari bind: bind "key" "+jump 1; -jump 1; sm_checkpoint; sm_gocheck" - by foxy
(<https://youtu.be/DPpSC9FK4DU>)

***Other links:

More binds can be found here:

<https://docs.google.com/document/d/10FU22VLNa0cUIMEh2bBbRhnEzQxigm3pAcigNZ9K0mw/edit>

GMC discord: <https://discord.gg/xJXhMjHcGV>

VNL Website: <https://vnl.kz/>

VNL Map Running Spreadsheet:

<https://docs.google.com/spreadsheets/d/1avMaSsZ5h7u21LpRz04kk6cn-PPHucA95T745Jj21MM/edit#gid=0>

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***Music:

Mi Flow - https://youtu.be/CihmFK_vg_I?t=146

Runnin' Thru The 7th With My Woadies instrumental (\$uicide Boy\$) - <https://youtu.be/7FVi27uTbUM>

Relax (prod. Tower B. x L.E.M.) - <https://youtu.be/fbv5tDdxiD0>

***Behind the scenes:

Draft 1 - <https://youtu.be/Y0Bgdvuh2CU>

Draft 2 - <https://youtu.be/CPCMZdWrER8>

Draft 3 - <https://youtu.be/ZyISyK8OeNs>

Research -

<https://docs.google.com/document/d/18dZNU3FEtxZ27Tyj-ZQDdtXH5hLwAN6Bw3BPFCwnHbA/edit?usp=sharing> (thanks ze-rok)

***Contributors:

zer0.k, Ballistic Bacon, Danvari, dyalite, vesq, and the VNL spreadsheet team

***Timestamps:

0:00 Timestamps

0:03 Intro/lore

2:37 Late grab/deep grab

3:13 How to Danvari tech VNL?

4:43 Getting max offset (10u)

6:14 Vesq tech

6:39 How to vesq tech?

7:55 Conclusion/final words

8:20 Outro

=====BELOW WAS ORIGINAL DRAFT=====

Intro / lore

This is what we call Danvari tech in KZT/SKZ. It allows players to push themselves away from ladders up to a maximum of 10u. This can be very useful in some situations, and allow a player to pass obstacles or make jumps much easier. It was discovered by a player named Danvari back in late 2017 while he was messing around ladders. What makes this tech so powerful is that you can get offset mid air. Offset in this context, being the distance between you and the face of the ladder.

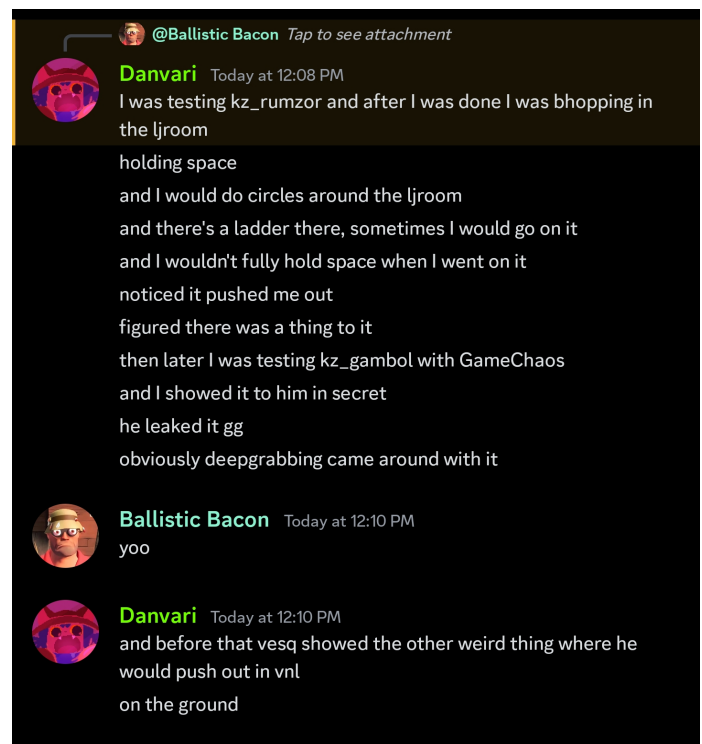
To do it, go on a ladder, look into it, hold your forward key while looking at an angle that will cause you to not move, and finally, hold your jump key for a split second. Doing those steps correctly should look something like this. <show clip in GOTV or smth to make it fancy>

Up until the start of 2023, this tech was thought to be exclusive to KZT/SKZ, until zer0.k found a way to do it... albeit inconsistently. With the help of dyalite, a consistent way was found that same day, and danvari on VNL was born. Turns out, danvari tech is one of the results of the 0.2s ladder mechanic that makes ladder gliding possible. (show vnl-spreadsheet chat logs)

Before danvari tech, people used vesq tech to get offset on ladders in VNL. It had two main variants, one with, and one without teleports (more on that at <timestamp>). However, the downside of that was that the player needed to stand on something close to the ladder to do it. Being able to get offset mid-air opened new possibilities... and possibilities, there were many.

The aftermath

This discovery was game changing, making kz_dzy_beyond possible and dropping the VNL difficulty of several other maps (lume, whereyoufrom, correaguachin), all within the following couple of weeks. It allowed players to get up to 10u closer to where they wanted to go, making



jumps thought to be impossible, possible, and making hard jumps easier. <show clips of the jumps>

How to Danvari on VNL?

You can Danvari on VNL in two ways, one is with a bind, and the other is manually. To get the maximum offset (which is the distance between you and the ladder), it's better to use the bind, more on that later.

Manual danvari

The first step is to get zero offset by either hitting the ladder first, then grabbing it (also called a late grab), or by slowly moving to its very top. Once you have zero offset, you want to look directly down and parallel to the ladder, climb up, and while climbing up, press your jump key for a split second. If you do it correctly, it should look something like this. Note that this will likely not work with jump on scroll. (<https://youtu.be/UY8fBMobcRs>)

Danvari with bind

bind <key> "+jump 1; -jump 1; sm_checkpoint; sm_gocheck" (by foxy - [video](#))

Just get on the ladder and press the bind. It will automatically jump, set a checkpoint, and TP back to that checkpoint for you. Just press the bind a couple of times and you should be good to go.

Having the showpos plugin or any plugin that allows you to know your position is critical to know your exact offset from the ladder. This is similar to how edge works, and how it can be impossible to get zero edge depending on your starting position... due to tickrate.

How to get maximum offset using the danvari bind

Your initial position (or offset in our case) needs to be such that $([4*2.11] + \text{your initial position})$ equals (zero offset coordinate + 10).

Let x be the initial offset

Max offset

$$= x + (4*2.11) \leq 10$$

Example:

Zero offset coordinate is 100.

What you want is to go to 110.

Therefore, you need to start at coordinate $[100 + (10 - 4*2.11)] = 101.56$ (1.56u of initial offset).

Once you get close to that coordinate, each time you press the bind, you will be pushed 2.11u away.

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Coord after 3rd = 107.89

Coord after 4th and final bind use = 110

In practice, you will probably never get 10u, therefore you need to aim for slightly less.

Jumping off a ladder (aka pressing your jump key while on a ladder), launches you at 270 u/s. Since the game works in discrete time intervals called tick rate, you will go at $270/128$ or 2.11u (3 s.f) every tick. This is where the bind comes in handy, as it allows you to be pushed out for 1 tick only, pushing you 2.11u every time you use it. Well, you might think that it's just as simple as getting on the ladder and pressing the bind till you get 10u of offset, but acshually (point_up: 🤪), this will probably not work due to tick rate.

This is similar to how edge works, and how it can be impossible to get zero edge depending on your starting position... due to tickrate.

MORE ON GETTING OFFSET ON LADDERS IN VNL

Vesq tech

Vesq tech is a way to get offset on a ladder using the ground. It was found by Vesq in the same time period... in late 2017 <show vesq clip> . The neat thing was that it also worked on VNL, and was the only known way to get offset on ladders at the time. Despite the limitations, the applications were massive.

All you have to do to vesq tech is to grab the ladder, look down and slowly climb down and up, touching the ground. It is not really consistent but it works.

A superior version is to use teleports to vesq tech, or as I like to call it, vesq TP tech. As the name suggests, it uses teleports to allow a player to get offset on a ladder.

All you gotta do is find the zero offset coordinate, go about 10u away from it, set a checkpoint, climb on the ladder, and TP back to your checkpoint. TP'ing back will cause you to automatically grab the ladder.

On PRO, you can just go to spectators and come back instead of using checkpoints and teleports. Just touch the ladders, go 10u away, go to spectators and come back.

TP vesq tech exploits the maximum range the game checks to see if a player can grab a ladder and movetype (perhaps elaborate to a low level on this).

Final words/conclusion

People in the past have accidentally done danvari tech in VNL but could not find a way to reproduce it. All it took was a 5Head code reader and a yellow duck to have a breakthrough. The discovery of Danvari tech on VNL might have been the biggest since ladder gliding, having more applications and making a bigger difference in map running.

References and research

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GMC discord - danvari VNL lore

Maps that can use/need Danvari tech VNL:

kz_lume - super hard ladder

kz_whereyoufrom - hard ladder much easier

kz_dzy_beyond - makes an unfeasible ladder very hard

kz_correguachin_reseido - makes some ladder jumps much easier
kz_bhop_mosaic_od2 - makes a ladder much easier
kz_ziggurath_final - makes a ladder much easier
kz_zxp_final4 - makes super hard ladder easier
kz_vittu_mika_persse - makes LAJ > WS much easier
kz_drops_od - makes it possible to LAJ > ws? Go check
kz_betterdunjun - makes it possible to LAJ > ws? Go check
kz_arrebol - makes jump off ladder > ws easier
kz_waterhole - makes LAJ > ws possible?
kz_exemplum_fix - makes the ladder (LJ from surf > ladder) slightly easier
kz_legoland - probably makes a ladder easier
kz_lost_marketplace_gfix - probably makes a ladder easier but is redundant and not useful
kz_rumzor - perhaps go to the side of the ladder and try danvari? Go check
vnl_sewers - probably makes some ladders easier