31st MEU – Scout/Sniper Replacement Reticles and Realistic Ballistics

ArmA 2 Modification

Version 2.0

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Introduction

The purpose of this reticle pack is to properly calibrate the rifle reticles within ArmA 2, to allow for range estimation and to transform the task of long-distance shooting from a guessing game into an exercise in range estimation and bullet drop compensation. This pack also includes more realistic zero's and accurate ballistics, created by NonWonderDog.

This pack accurately displays milliradian distances between the mil-dot and hash marks on the reticles. While our unit is not affiliated with the real 31st MEU, a lot of us are Military, Law Enforcement, or in some form of public service. Some of us have specialized training in real life, including sniper training. This pack is for those of us who want to be able to use ArmA 2 for more than just a game. I also created this pack to allow for more effective and popular reticles to be used, in addition to the mil-dot system. And frankly...I wanted my rifle reticle in the game.

I HIGHLY recommend using this mod with the GMJ's Sight Adjustment. If you want to range estimate, what's the point without being able to adjust your scope? I have included updated range cards for GMJ's sight adjustment as well. The range cards include with this pack include data for the M24/M40, Mk12 SPR, DMR, M107, SVD, KVSK, VSS Vintorez, M16, and AK 74 PSO.

Credits

NonWonderDog – 90% of this mod is his work. I take no credit for the work he has done. This mod was originally an Armed Assault mod, which I then tweaked to create the first version of the 31st MEU Replacement Reticle pack. I have since ported this reticle pack to ArmA 2. I would not have been able to do this had it not been for his work, and permission.

Yakavetta – That's me. I did most of the leg work on this, outside of NWD's already amazing work. I did the reticle calibrations and creation, as well as some minor config.bin changes to make it compliant with ArmA 2. I also combined NWD's Ballistics mod for ArmA one with this mod, to make it more realistic.

Susnir – Beta testing and feedback. He helped identify some show-stopping bugs, and got me to fix them prior to releasing this mod.

Bowman – Beta testing and feedback. He helped identify a minor bug which caused an error message to display on launch, and helped me tweak my config file to be able to launch without an error. Of course we're no longer friends since he made me rewrite the entire config! He also helped me tweak the zero's and range cards for every weapon. He spent a LOT of time helping me perfect this.

Mabes, Adair, Binkowski – All beta testers, and all helped get this mod out the door.

zGuba – Identified a bug with the G36.

kju – Identified some dependency issues within the config file which have now been fixed.

Installation notes

Pack Contents:

This mod contains multiple .7z files, along with this readme. You should have the following files:

31st MEU Scout-Sniper Recommended #1.7z
31st MEU Scout-Sniper Recommended #2.7z
31st MEU Scout-Sniper Recommended #3.7z
31st MEU Scout-Sniper Recommended #4.7z
BDC.7z
Circle-X.7z
Crosshair.7z
Default NWD Mil-Dot Reticles.7z
Duplex.7z
German #1.7z
Mil Dot Gen 2.7z
SPR.7z
TMR.7z
Turkey Pro.7z
USMC Mil Dot.7z
Range Cards.7z
31stmeu.bikey
Readme.pdf

To Install:

Three simple steps: Extract, Select, Instruct

1)To install this package, *extract* all of the contents to your ArmA 2 directory, so you have all of the above .7z files in that directory. For people who bought it over Steam, that will most likely be c:\Program Files\Steam\Steamapps\Common\ArmA 2\. For everyone else, you need to navigate to your ArmA 2 directory and copy all of the .7z files into the root directory.

You will need to use your favorite unzip program which supports .7z. Winrar will work just fine for those who use Winrar.

2)Next *select* which .7z file you want. You can read about what each .7z package modifies on the next page. You can only use one .7z at a time. If you extract one, and then later decide you want to use a different one, simply extract the one you want and over-write the files you previously extracted. Once you've completed the next step, you wont have to do that again. All you will have to do to change which reticle pack you use is simply unzip the pack in your ArmA 2 folder, and let it overwrite the previous pack you are using.

3)Finally, you need to *instruct* ArmA 2 to actually use this mod folder. There are three ways to do this:

For Steam users, open steam. Click on the "My Games" tab of Steam. Rick-click "ArmA 2" and click "Properties." Click on the "Set Launch Options" button. Type "-mod=@31st_MEU_Replacement_Reticles" If you've already got another mod in there, then simply add the @31st_MEU_Replacement_Reticles to your initilization string, so it should look similar to this: "-mod=@mod1;@mod2;@mod3:@31st_MEU_Replacement_Reticles"

For non-Steam users who use the shortcut method. First, if you don't have a shortcut to ArmA 2, create a shortcut to your ArmA2.exe. Next, right-click that shortcut, and click on "properties." In the "Target" line, you should see something like "C:\Program Files\Publisher\ArmA 2\ArmA2.exe" After the last quotation mark, add a space and then type "-mod=@31st_MEU_Replacement_Reticles" If you've already got another mod in there, then simply add the @31st_MEU_Replacement_Reticles to your initilization string, so it should look similar to this: "-mod=@mod1;@mod2;@mod3:@31st_MEU_Replacement_Reticles"

For people who use an ArmA 2 launcher, make sure you add this addon to your ArmA 2 launcher's list of addons. Then launch ArmA 2!

Non-ACE Users: If you are not using ACE 2, you will need to navigate to "ArmA 2\userconfig\31stMEU\" and open the .hpp file. You will need to change "#define RETICLE_ACE" to "//#define RETICLE_ACE"
NOTE: If you are using GMJ's Sight Adjustment, simply extract the "Range Cards.7z" into your @GMJ_SightAdjustment\Addons folder. It will overwrite the old range cards.

Explanation of Each Reticle Pack (With Pictures!)

Due to feedback of the Armed Assault addon I made, I have decided to spend a lot of time explaining what each reticle pack actually does. Below, I will describe how each pack works, and what it actually modifies. For the most part, the packs only modify the US scoped weapons. There are some tweaks to the Russian weapons, but they remain the same throughout.
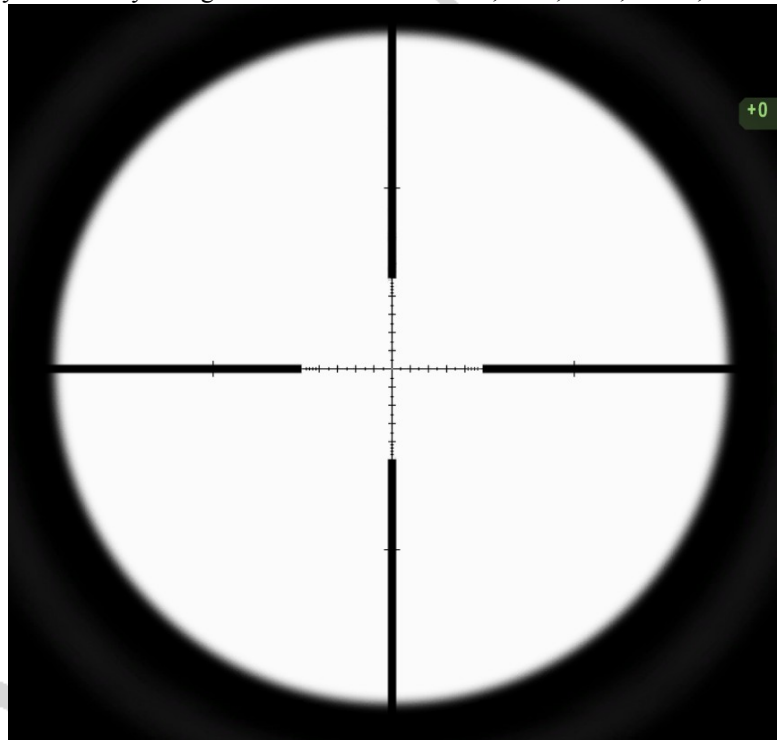
This weapon pack focuses mostly on the Mk12, M24, M40, M107, DMR, and CZ550 rifles. The pack does overwrite the SVD, AK, and ACOG reticles, but only with NonWonderDog's default reticles, as they are more accurate than the default Bis ones. This means when you use a reticle pack, you will only change the reticles on the Mk12, M24, M40, M107, DMR and CZ550 rifles. The SVD, AK and ACOG reticles WILL be changed, but ONLY from the default ones. They will NOT change with each pack.

So here is an explanation of each reticle pack:
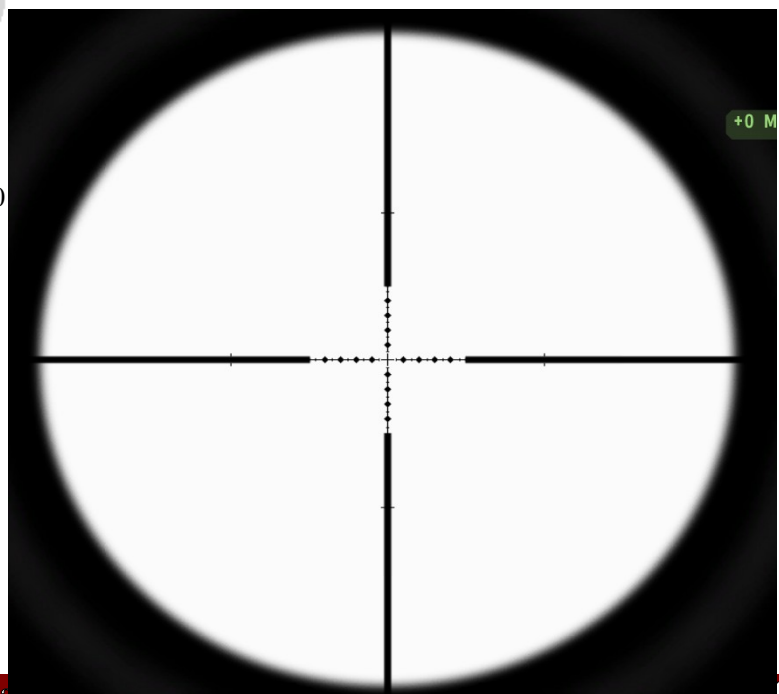
TMR:

The Tactical Milling Reticle, or TMR, is a "next-generation" mil-dot ranging reticle. It replaces the traditional mil-dots with hash marks, and adds incriments of .5 mils. There are hash marks out to 20 mils, and an empty crosshair. All of these allow for more precise range estimation, target acquisition, and a more accurate first shot.

This reticle is being widely adopted on Leupold scopes as a replacement for the aging mil-dot system.

2ⁿᵈ Generation Mil-Dot:

The second generation mil-dot is being widely adopted to replace the current mil-dot system. It uses the same "dot" system to represent 1-mil incriments, but it adds hash marks at .5 mil incriments, to allow for more precise measurements. There are also hash marks out to 20 mils, as opposed to the standard 10 mils found on traditional mil-dots

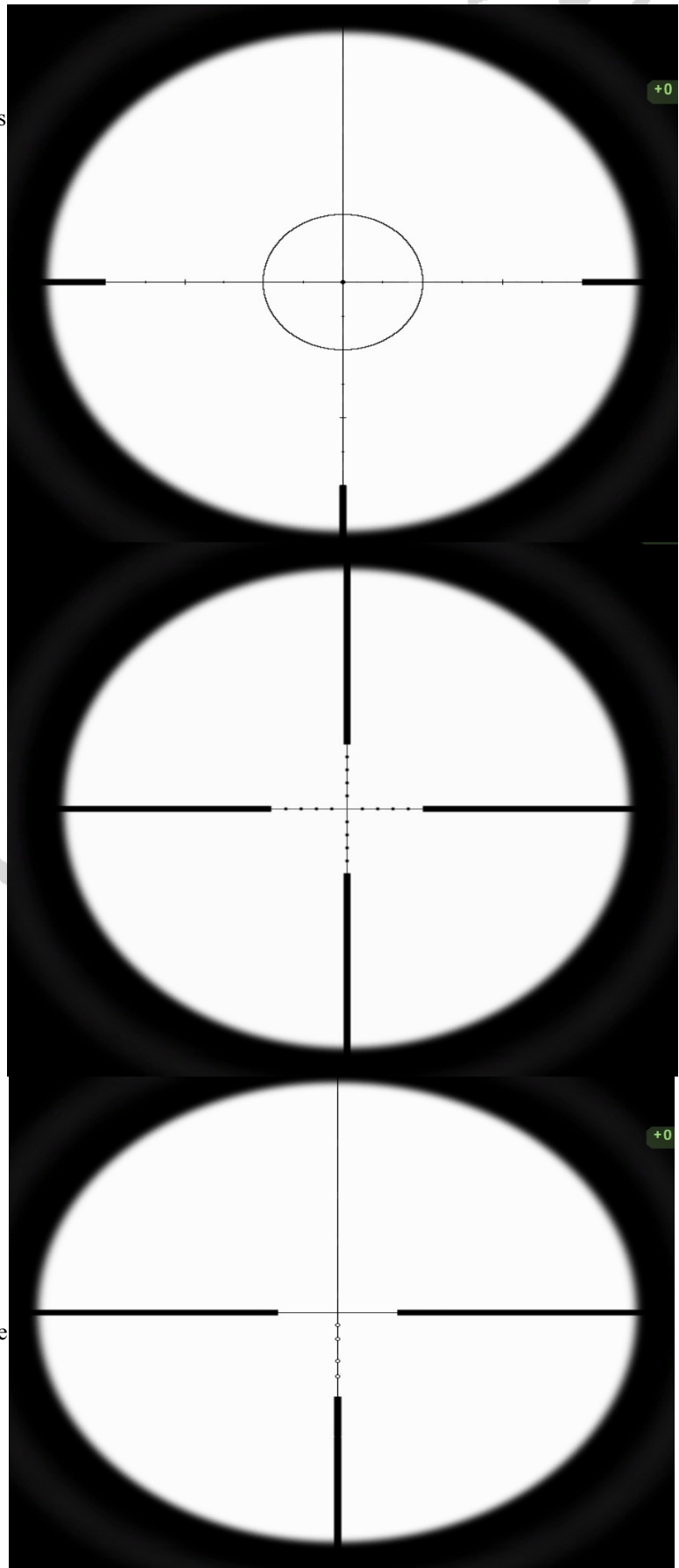# Explanation of Each Reticle Pack Contd.

SPR:

The Special Purpose Reticle, or SPR, is designed with several key aspects. The large circle at has a 10 mil diameter, and aids the shooter to speed up his or her time on target. The reticle only has hash marks every 5 mils, as opposed to every mil or .5 mils. This makes more precise range estimation more difficult, but allows for a less cluttered reticle and easier follow up shots.

NonWonderDog's Default Mil-Dot:

NonWonderDog's mil-dot is the same as the standard mil-dot made popular by military forces around the world. NWD has spent time calibrating his mil-dot reticle to be precise, and aid shooters in range-estimation. The mil-dot reticle is accurate, and will work if the shooter is able to calculate the range.
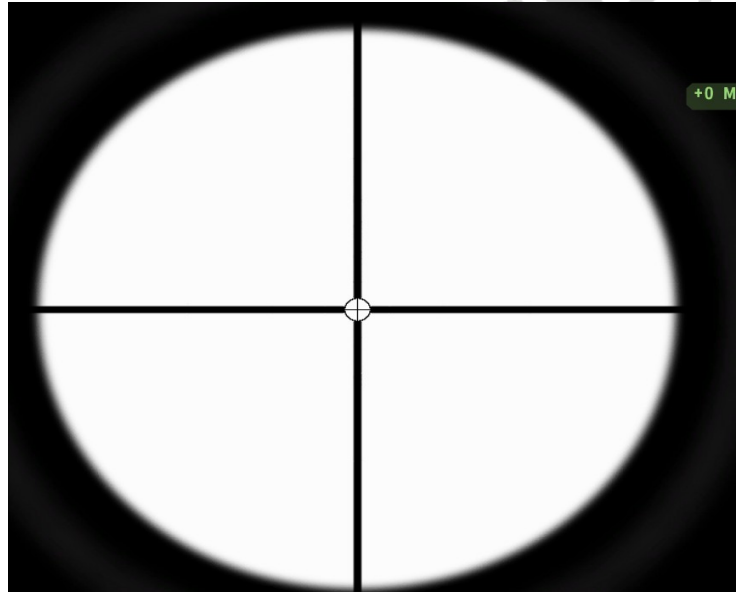
BDC:

The Bullet Drop Compensator, or BDC, reticle has been calibrated for 100-yard increments, based on the weapon's zero. The M24/M40 are zero'd at 300 meters, so the BDC has circles indicating the bullet drop at 400, 500, 600 and 700 meters. The SPR is zero'd at 300 meters, so it has circles indicating the bullet drop at 400, 500, 600 and 700 meters. The M107 is zero'd at 500, so it has circles indicating the bullet drop at 600, 700, 800 and 900 meters.
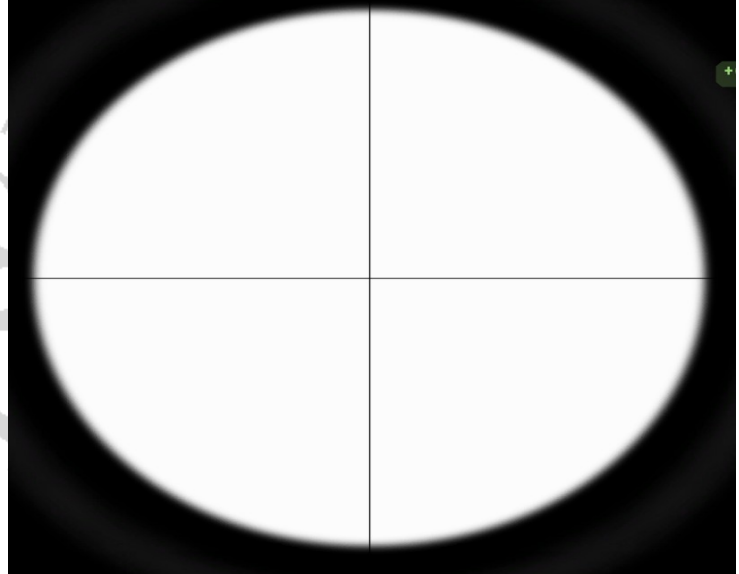
Explanation of Each Reticle Pack Contd.

Circle-X:

A popular hunting rifle reticle with a thin center, and circle around the center to aid the shooter in target acquisition
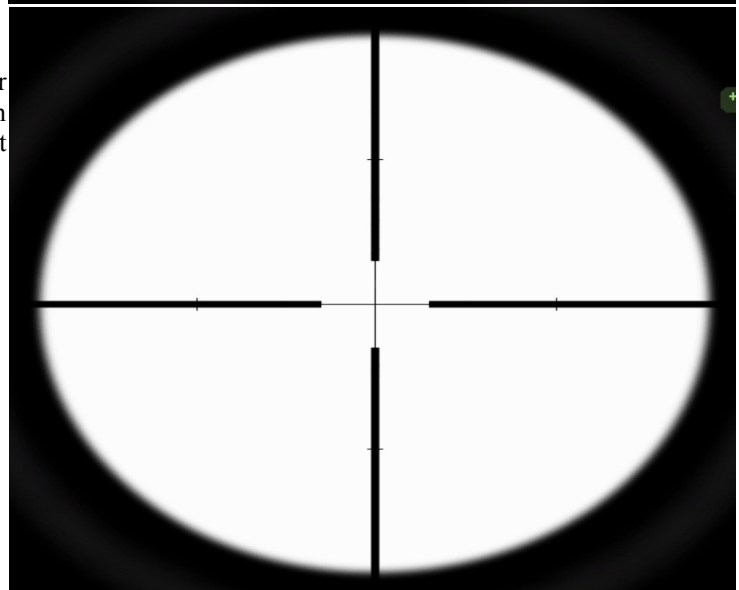
Crosshair:

A basic, and functional reticle, with no clutter to allow for a clean sight-picture.

Duplex:

Another fairly basic, clutter-free reticle. This has larger posts on the perimeter of the center to aid the shooter in acquiring a target quicker. There are also hash marks at 20 mils for fundamental range estimation.

Explanation of Each Reticle Pack Contd.
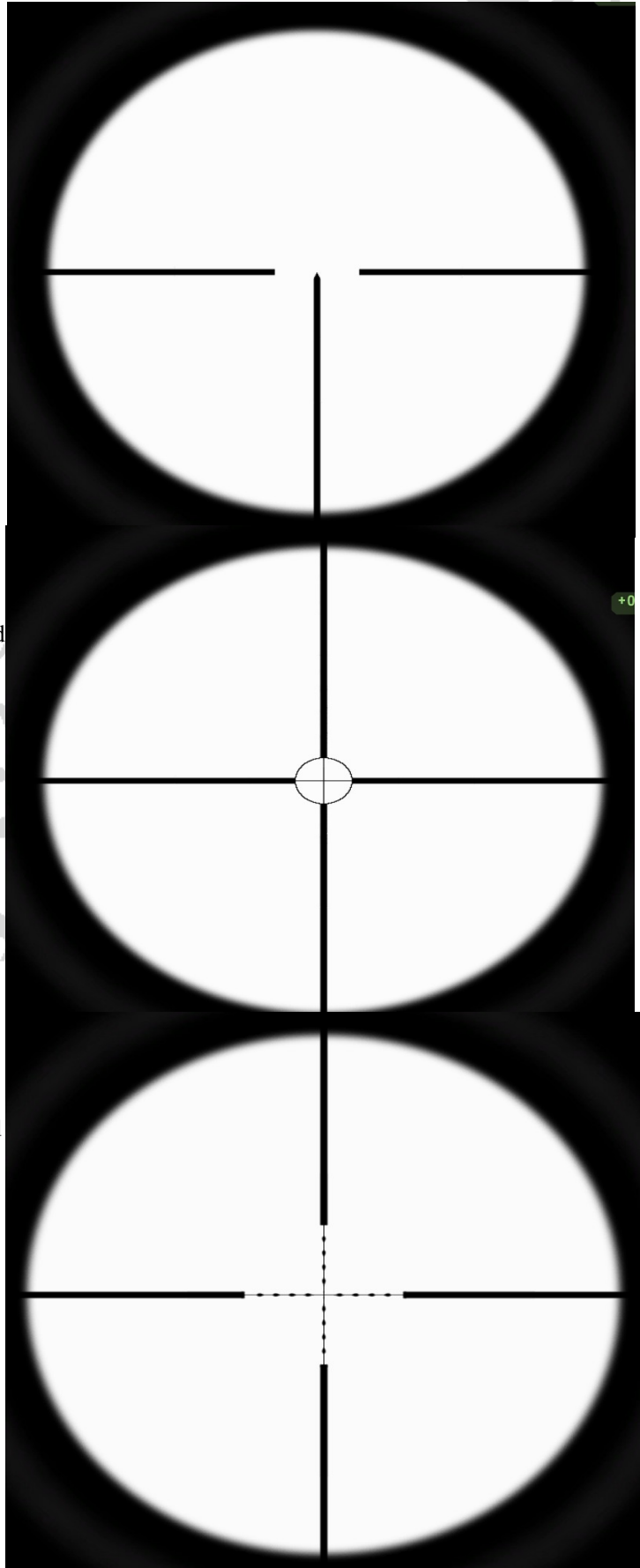
German #1:

A classic reticle, with minimal clutter. The clean face allows the shooter to have more of his or her scope free for observation and threat detection.

Turkey Pro:

Another popular hunting reticle, with a larger circle, and thin crosshair.

USMC Mil Dots:

The standard oval-shaped mil-dot system currently used by the USMC. This system works identically to the standard circle-shaped mil-dot, except each oval represents .25 moa along the longest axis, instead of .2.

Explanation of Each Reticle Pack Contd.

31st MEU Scout-Sniper Recommended Pack #1:

In this pack, the M24 and M40 both have TMR reticles. The Mk12 SPR, DMR, CZ550, and M107 all have 2nd Generation Mil Dots.

31st MEU Scout-Sniper Recommended Pack #2

In this pack, the M24 and M40 both have 2nd Generation Mil Dots.   The Mk12 SPR, DMR, CZ550, and M107 all have a TMR reticle.

31st MEU Scout-Sniper Recommended Pack #3

In this pack, the M24 and M40 both have TMR reticles. The Mk12 SPR, DMR, and CZ550 all have SPR Reticles, and the M107 has a 2nd Generation Mil Dot reticle.

31st MEU Scout-Sniper Recommended Pack #4

In this pack, the M24 and M40 both have USMC Mil-Dot reticles. The Mk12 SPR, DMR, and CZ550 all have TMR Reticles, and the M107 has a 2nd Generation Mil Dot reticle.

Ballistics Table

Weapon	Zero
M9	50m
M1911	50m
Makarov	50m
MP5	75m
M4	100m
M16	100m
AK74	100m
AK107	100m
CZ 550	100m
G36	200m
Mk 12 SPR	250m
SVD	250m
M24/M40	300m
M21 DMR	300m
VSS Vintorez	300m
M107	400m
KSVK	500m

Known Bugs

-The biggest bug so far is that I can't rename each .pbo. When I rename them from NWD_ScopeFix.pbo to anything else, the mod breaks. This makes it slightly harder to keep track of each .pbo. However, to compensate for this, I created each .7z file to be ready for extraction. This keeps things simple, and easy to maintain. I know why this happens (since I took NWD's Scope Fix mod as a base), and I'm sure with enough time I can fix it. However, right now I'm very happy with how this mod turned out, so I don't know that I'll spend the time and energy into fixing it.

-Not really a bug, but with this pack, the SVD, VSS, and AK's are all less accurate than their US counterparts. It kind of makes it unbalanced, but it's more realistic.

Changelog

V0.1 – Initial beta release
V0.2 – Fixed a bug where no reticle appeared on the Javelin, and fixed a bug where the M4/M16 series didn't recognize magazines.
V0.3 – Cleaned up the Gen 2 Mil Dot for the DMR
V0.4 – Fixed the public keys.
V0.5 – Fixed a bug which caused the error "no entry....bin\config.bin/CfgWeapons/M16A4_ACG_GL.namesound," and other similar bugs. Removed server keys for now. Will add them once it hits 1.0.
V0.6 – Fixed a bug where M4A1, M4A1 w/CCO, M4A1 w/CCO Camo, HWS W/GL HWS W/GL Camo all wouldn't pick up a magazine or fire with one. Also fixed a bug where the AK's w/PSO wouldn't pick up a magazine.
V0.7 - Added NWD_Ballistics config information for realistic ballistics and zeros. Added range cards.
V0.8 – Tweaked range cards to be more accurate.
V0.9 – Tweaked the zero's for every weapon to be more accurate. Adjusted DMR to be slightly less accurate than M24/M40 and have lower muzzle velocity. Tweaked Mk12 to be slightly more accurate than stock. Added VSS Vintorez range card.
V1.0 – Initial Public Release. Added server keys again.
V1.1 – Tweaked Mil Dot Gen 2
V1.2 – Fixed an issue some people were having with the M4 SD models and the G36 SD.
V1.3 – Added USMC Mil Dots and 31st MEU Scout-Sniper Recommended #4 pbo
V2.0 – Added ACE 2 compliance. Adjusted optics on M107 and M110. Fixed dependency issues in config.

Contact

If you need to contact me about this release, I can easily be contacted on www.31stmeu.org. If you have any questions that you can't ask on that forum, you can send a private message to "Yakavetta" on 31stmeu.org or on the Bohemia forums.

Permissions

If you would like to use my work, I have no problem with that. I ask that give credit where it is due. If you want to use NonWonderDog's work, you have to ask him. I have not asked for permission to give out his work. He allowed me to use his work for my mod pack, so if you want to use his mod pack, you need to ask him. The reticles I listed above, however, I designed and am free to distribute. I just ask that you give me credit when you do, and include a link to www.31stmeu.org.

Due to the nature of this mod, I can not give out permission to use the ballistics. While some of the ballistics I redid, a lot of them are still NWD's. So in order to use the ballistics for any other mods, you would need to obtain NWD's permission as well.

Thanks, and I hope you find this pack as useful as I do!