

Foreign night vision (Page 2 of 3)

Previous Page

Page: - 2 - / 3

Message

New Topic

Reply

Forward

Subscribe

Next Page

last_lancer

Member

Joined: Oct 2007

DEU

Posts: 262

Offline

Feedback Soon!

Posted: 31/10/2009 8:37:20 PM AWST

[Last Edit: 31/10/2009 8:42:53 PM AWST by last_lancer]

David, you are quite wrong this time.. These devices are Russian-made, only front lens look domestic.
The 'RaySun' is nothing else but a venerable 'Russian PVS-14', called Katod NVM. Is it also included in this thread in one of my responses.
The PVS-7 knockoff is Russian Katod ONV-2 goggle. It is also known under the name Alpha-1034.

Everything from 'Shenzen Ronger factory' you have listed is Russian, as well. Goggles and monos by Katod and Dipol, weapon sights by Dedal

User Info	IM User	Email User	Reply	Quote	Report
last_lancer Member Joined: Oct 2007 DEU			■ Posts: 263		Offline

 - Feedback Soon!

Posted: 31/10/2009 8:41:38 PM AWST

Do you folks recognize this device? Fairly well known in the States, as well, called N-Vision Optics GT-14..


User Info

IM User

Email User

Reply

Quote

Report

last_lancer

Member

Joined: Oct 2007

 DEU

Posts: 264

Offline

 - Feedback Soon!

Posted: 31/10/2009 9:02:09 PM AWST

Originally Posted By cj7hawk:

I know it's a contentious subject, but Japanese technology in this area rivals the US. They use NV for research quite extensively and are more than capable of making very advanced tubes. Some of their 3rd generation tubes provide an order of magnitude more gain than the best available US tubes - with gain figures nearing a million (Best US are about 100,000) and with a >1500 uA/lm GaAs PC. They also make InGaAs tubes which can see laser designators and illuminators that are invisible to US NV devices - up to a full 300nm higher than Gen3 and that allow "Night Glow" to be utilised- ie, every night looks like full moon. They also make both filmless and filmed GaAs tubes.

Hamamatsu Tube Information

It could be a US tube in the picture, but given Japanese national pride I'd take a stab at it being a Hamamatsu. Then again, sometimes it's easier to just buy whatever's available. I can't really base that on any evidence since I can't see what tube is in it - Though Last Lancer might actually know for certain.

David

David, Hamamatsu are well known in the lab intensifier business. They don't do any MilSpec stuff yet. But they are well known for being able to make any tube you can order and pay. Thus, there already was some effort made to let them do tubes in slim-ANVIS configuration, these are called V6833P, they are Gen3 with fairly good specs. Of course, MilSpec tests require much more than just pure performance, whether this tube would be able to pass thru drop test or to withstand rifle recoil remains a mystery.

Here some images, tech data, as well as a shot made through the Hamamatsu V6833P.





IIT-V6833P

Gen III- MIL Lead Wire
18mm, inverting
Image Intensifier Tube

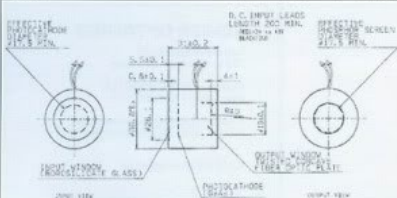
Description:

The IIT-V6833P is a 18mm, inverting Gen III Image Intensifier tube.

It is a high-gain, high-photosensitivity Image Intensifier Tube suitable for passive night-vision systems and monocular systems, as well as goggles.

The IIT-V6833P consists of a high-efficiency (GaAs) extended photo-cathode on a glass input window, a micro-channel plate (MCP) current amplifier and a fiber optic phosphor screen. The IIT-V6833P has a high-voltage power supply that incorporates (ABC) automatic brightness control, as well as a bright source protection (BSP) to guard the tube against exposure to high levels of light. The IIT-V6833P is a completely self-contained Image Intensifier Tube encapsulated within a hard surface insulating sleeve.

Performance	units	min.	max.	typical
Luminous Sensitivity at 2856°K	μA/lm	1600		1700
Radiant Sensitivity at 830 nm	mV/W	100		
Signal to Noise Ratio (@ 108μlx)		30		32
EBI	10^{11} lm/cm ²		2.0	0.75
Luminous Gain (lm/m ²)/lx	(lm/m ²)/lx	30.000	45.000	40.000
Supply Current	mA		22	
Output Uniformity @ 2856°K			3:1	
Limiting Resolution	Lp/mm	64		68
MTF @ 2.5 lp/mm	%	90		
MTF @ 7.5 lp/mm	%	65		
MTF @ 15 lp/mm	%	45		
Effective photocathode diameter	mm	17.5		
MTTF	hrs	10,000		



HAMAMATSU

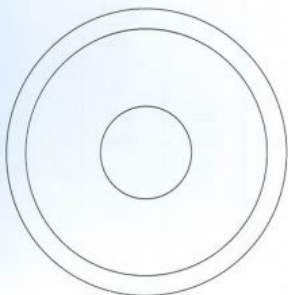
The Night Vision Authority

IIT-6833MIL

Gen III- MIL
18mm, non- inverting
Image Intensifier Tube

Maximum allowed number of black spots:

Spot Size (microns)	Zone 1	Zone 2	Zone 3
401-500	0	0	0
301-400	0	1	2
251-300	0	3	3
151-250	1	6	9
75-150	3	10	14



HAMAMATSU
Phosphor is your advantage

User Info IM User Email User Reply Quote Report

cj7hawk

■ Posts: 76

Online

💰 - Feedback Soon!



Member
Joined: Nov 2008
AUS

Posted: 31/10/2009 10:08:05 PM AWST

Originally Posted By last_lancer:

Originally Posted By cj7hawk:

I can't really base that on any evidence since I can't see what tube is in it - Though Last Lancer might actually know for certain.

David

David, Hamamatsu are well known in the lab intensifier business. They don't do any MilSpec stuff yet. But they are well known for being able to make any tube you can order and pay. Thus, there already was some effort made to let them do tubes in slim-ANVIS configuration, these are called V6833P, they are Gen3 with fairly good specs. Of course, MilSpec tests require much more than just pure performance, whether this tube would be able to pass thru drop test or to withstand rifle recoil remains a mystery.

Here some images, tech data, as well as a shot made through the Hamamatsu V6833P.

Thanks for the info LL.

The Hamamatsu specs are already held to a "higher" standard than Milspec in some areas - The Limiting resolution (Min) for Hamamatsu is 5% MTF whereas for US Milspec it's 3% - That's quite a significant increase in performance for the Hamamatsu tube and would (should) translate to a higher resolution for the Hamamatsu if compared "apples for apples".

Also I doubt it would be a Weapons Grade tube in the 14 and you are correct that you can't just go and use a research grade tube for military purpose and expect that it will behave as well as a Milspec unit.

I thought the Chinese just manufactured the Russian units under "license" - It certainly looked a little rougher around the edges than I would expect from something made in Russia... But I'll defer to your knowledge there since you've seen a lot more of them than I have - I did track down the video output model on a russian site and it looks like it's a modified version of a standard russian device - Do you know if the Russian model has CCTV output as well?

David.

User Info IM User Email User Reply Quote Edit Report

cj7hawk

■ Posts: 77

Online

 - Feedback Soon!



Member
Joined: Nov 2008
 AUS

Posted: 31/10/2009 10:50:29 PM AWST

[Last Edit: 31/10/2009 10:51:03 PM AWST by cj7hawk]

Australia... Our contribution to the world of night vision is, well, not much... We steal it all from the Yanks when they aren't looking while on exercise.

The Simrad KN 203.



The rail bit (Mount) is Australian... :) Simrad Oprtronics make the rest though, but I reckon our Rail design is better than the US PVS-22 Rail design. ;)

That's out little bit to the world of NV - At least we're not ripping off Russian designs like the Chinese :)

Given how much our government spent on them, I'm guessing we have 30 or so tops... That's one sniper per 1000km of coastline. If it wasn't for the dropbears, we would have been invaded by boat people long ago.

David

User Info IM User Email User Reply Quote Edit Report

last_lancer

■ Posts: 268

Offline

 - Feedback Soon!



Member
Joined: Oct 2007
 DEU

Posted: 1/11/2009 1:22:29 AM AWST

[Last Edit: 1/11/2009 1:25:13 AM AWST by last_lancer]

Now to modern Russian NV weapon sights. The old 1PN34 NSPU posted earlier is an early 70s standard and is not very representative for this thread anymore.

1PN93 (PN-6K) family covers five models with various optics, they are mostly Gen3 now (roughly of OMNI III/OMNI IV standard). Just for clarification, the 1PN** nomenclature covers all Russian NV systems, something like AN/PVS-**, the PN-6K is manufacturer's name.

1PN93-1 for AK-74 type



1PN93-3 for SVD Dragunov



© Vitaly V. Kuzmin



© Vitaly V. Kuzmin

1PN93-4



1PN111 Gen3 weaponsight (PN-15K) - tough as nails, sort of 'Russian Raptor' 😊



PN-17K Russian weaponsight, popular in Chinese Army as AHQ-17K, here mounted on their Type88 rifle



PN-18K Russian weaponsight



PN-19K Russian weaponsight



User Info IM User Email User Reply Quote Report

ChampFerguson

Posts: 564

Offline



Member
Joined: Mar 2006
TX, USA

- Feedback Soon!

Posted: 1/11/2009 3:40:01 AM AWST

This thread HAS to be a tacky. WAAAY too much info here to lose.

User Info IM User Email User Reply Quote Report

last_lancer

Posts: 269

Offline



Member
Joined: Oct 2007
DEU

- Feedback Soon!

Posted: 1/11/2009 6:44:43 AM AWST

[Last Edit: 1/11/2009 11:07:41 AM AWST by last_lancer]

If we already mentioned Russian NV devices, let me complete the picture by showing at least few hi-spec image intensifiers. Russians have at least three big factories for the tubes and they produce a wide variety of types, it's almost impossible to cover them all since they have more formats that Americans do. It's sufficient to say, that next to direct drop-in replacements for MX-10160 and MX-10130 tubes they also have various versions of these with different contacts. Further types include slim tubes with straight output, shortened MX-10130s (only 22,5mm long instead of 29,4mm) or the in the US long abandoned fat-ANVIS types.

All these formats exist in both Gen2+ (S25) and Gen3 (GaAs) configurations, while each generation has three subtypes, A, B and S. It could roughly be compared to 'Select Alpha', 'Select Beta' and 'Special category'. Translated into numbers:

Gen3 GaAS
A type - 57 lp/mm, SNR 24, 1800 micA/lm, 150 mA/W
B type - 51 lp/mm, SNR 22, 1500 micA/lm, 180 mA/W
S type - 64 lp/mm, SNR 25, 1800 micA/lm, 180 mA/W

Gen2+ S25
A type - 57 lp/mm, SNR 22, 550 micA/lm, 35 mA/W
B type - 51 lp/mm, SNR 20, 500 micA/lm, 45 mA/W
S type - 64 lp/mm, SNR 24, 600 micA/lm, 50 mA/W

MTBF for all types is 10000 hours, max. EBI 0.25

Note that Russians, too, have export regulations, although not based on FOM but on cathode sensitivity. Everything over 350 micA/lm requires export permit. Another export parameter is 'hole' diameter in the MCP, 12 micron is the boundary value, I think..

User Info IM User Email User Reply Quote Report



cj7hawk
Member
Joined: Nov 2008
AUS

■ Posts: 78

Online

 - Feedback Soon!

Posted: 1/11/2009 8:48:21 AM AWST

Originally Posted By last_lancer:

Note that Russians, too, have export regulations, although not based on FOM but on cathode sensitivity. Everything over 350 micA/lm requires export permit. Another export parameter is 'hole' diameter in the MCP, 12 micron is the boundary value, I think..

This is the same terminology that ITAR uses - though the specification is about twice what ITAR allow -

From ITAR.

[Note: Special Definition. For purposes of this subparagraph, second and third generation image intensifier tubes are defined as having:](#)

[A peak response within the 0.4 to 1.05 micron wavelength range and incorporating a microchannel plate for electron image amplification having a hole pitch \(center-to-center spacing\) of less than 25 microns, and having either:](#)

- [\(a\) An S-20, S-25 or multialkali photocathode; or](#)
- [\(b\) A semiconductor photocathode;](#)

I think they use the Micron measurement since it's absolute and was based on manufacture rather than lp/mm which can change depending on the tube and would create an international market in "failed" tubes that were only just sub-par.

Australia's version of ITAR is even simpler... They just use "Microchannel Plate" as the differentiator.

David.

User Info IM User Email User Reply Quote Edit Report





DinoSnyder
★ Team Member
Joined: Oct 2006
USA

Member
■ Posts: 490

Online

 **User Blog**
 **Media Collections**
 - Feedback Soon!

Posted: 1/11/2009 9:59:09 AM AWST

Great job you Two. Nice to see all these scopes from around the world. We don't get to see much of this here in the US.

User Info IM User Email User Reply Quote Report





TNVC
Industry Partner
Joined: Jan 2002
USA

Tactical Night Vision Corporation
■ Posts: 14712

Online

 **User Blog**
 **Media Collections**
 - Feedback Soon!

Posted: 4/11/2009 10:44:37 PM AWST

Bump up and considering a **tacked** thread here?

Tactical Night Vision Corporation - TNVC, INC.
http://www.tnvc.com
sales@tnvc.com
(909) 796-7000
http://www.tacticalgunfan.com/index.php?option=com_content&task=view&id=369&Itemid=74

User Info IM User Email User Reply Quote Report

johnelot

■ Posts: 20

Offline

 - Feedback Soon!



Member
Joined: Jan 2008
 GBR

Posted: 5/11/2009 3:46:50 AM AWST

so i guess there is going to be a difference between "hole diameter " and "center-to-center spacing" depending on the thickness of the bits between the holes - makes it difficult to compare the two -

User Info IM User Email User Reply Quote Report



karma

It does spin.

■ Posts: 2981

Offline



Team Member
Joined: Jan 2003
 TX, USA



User Blog



Media Collections

 - Feedback Soon!

Posted: 5/11/2009 4:11:56 AM AWST

Originally Posted By TNVC:
Bump up and considering a **tacked** thread here?

I would like to see it up, Victor

Ident Marking- We're pretty good at speling stuff on gunns.

User Info IM User Email User Reply Quote Report

last_lancer

■ Posts: 272

Offline

 - Feedback Soon!



Member
Joined: Oct 2007
 DEU

Posted: 5/11/2009 7:30:30 AM AWST

[Last Edit: 5/11/2009 7:36:55 AM AWST by last_lancer]

I would love to see that, as well, Vic.

Now, let me continue with another more-than-newcomer into night vision stuff. Czech Republic.

Czechs feature only one major optic company, Meopta. Next to the well-known line of hunting scopes, Meopta makes the whole line of specialized military optics.

The tubes are DEP-Photonis, standard issue stuff from early 90s has Gen2+ tubes, newly issued things are exclusively XD-4 or XR5 (especially with weapon scopes)

Standard weapon scope is MEO50, which is a licensed version of French Thales/Sopelem OB50 scope. These exist in several versions depending on reticles used (for vz58 rifle, through SVD sharpshooter rifle, vz59 machine gun or RPG-7V)



Meopta ZN 6x represents own design of crew served weaponsight, used on heavy MGs or OP96 Falcon 50cal sniper rifles





Latest scope is called NV Mag3, it has first appeared in 2008 and I suspect it will be a replacement of the ME050. I don't think these have been issued yet



Standard issue NV goggles are called KLARA, they are licensed version of French Sagem/Sopelem CLARA goggles. This is a rare design used in few countries.



MonoKLARA monocular, licensed version of French Sagem/Sopelem CLARA mono



Czech SOG operator in Afghanistan, with ME058S night vision scope on the vz58



A photo of my friend in Czech Army, stationed in Kosovo. It shows a KLARA goggle, MEO58S and his personal AN/PVS-14



Czech Army operator with AN/PAS-13D LTWS and MonoKLARA night vision monocular



MonoKLARA and KLARA - size comparison. The tube in between is DEP XX2050 (XD-4)



User Info IM User Email User Reply Quote Report



TNVC
Industry Partner
Joined: Jan 2002
USA

Tactical Night Vision Corporation
Posts: 14726 [Online](#)

[User Blog](#)
[Media Collections](#)
[Feedback Soon!](#)

Posted: 6/11/2009 12:20:15 AM AWST

LL, CJ and to all the rest, GREAT thread....This deserves a **TACK**

Tactical Night Vision Corporation - TNVC, INC.
<http://www.tnvc.com>
sales@tnvc.com
(909) 796-7000
http://www.tacticalgunfan.com/index.php?option=com_content&task=view&id=369&Itemid=74

User Info IM User Email User Reply Quote Report



TNVC
Industry Partner
Joined: Jan 2002
USA

Tactical Night Vision Corporation
Posts: 14727 [Online](#)

[User Blog](#)
[Media Collections](#)
[Feedback Soon!](#)

Posted: 6/11/2009 12:32:20 AM AWST

Meopta has always been underrated in our eyes, their optics are VERY good. It is VERY interesting to see their MRS atop their NV platform LL is showing. They are ahead of the curve compared to most. Just recently (last year) when SOCOM solicited for a new MRS, they finally had a prevision that all NV dedicated optics along with magnified optics were to have provisions for mounting a MRS. I might also add MEOPTA is also using our Scope Accessory Ring on their line of optics as well and their MRS is also being considered by SOCOM along with a few other big name players most know. 😊

Vic

Tactical Night Vision Corporation - TNVC, INC.
http://www.tnvc.com
sales@tnvc.com
(909) 796-7000
http://www.tacticalgunfan.com/index.php?option=com_content&task=view&id=369&Itemid=74

User Info IM User Email User Reply Quote Report



km2006dmax

Member

Posts: 244

Offline



Team Member
Joined: Nov 2008
TX, USA

User Blog

Media Collections

Feedback Soon!

Posted: 6/11/2009 8:46:08 AM AWST

Meopta has always been underrated in our eyes, their optics are VERY good. It is VERY interesting to see their MRS atop their NV platform LL is showing. They are ahead of the curve compared to most. Just recently (last year) when SOCOM solicited for a new MRS, they finally had a prevision that all NV dedicated optics along with magnified optics were to have provisions for mounting a MRS. I might also add MEOPTA is also using our Scope Accessory Ring on their line of optics as well and their MRS is also being considered by SOCOM along with a few other big name players most know.

I have been slowly changing out all my optics to Meopta. Most people have never heard of them before, but for the money they are very hard to beat. Great glass!

A friend of mine who is a dealer was telling me they made alot of highend stuff for vehicle weapon systems overseas.

User Info IM User Email User Reply Quote Report

last_lancer

Posts: 273

Offline

Feedback Soon!



Member
Joined: Oct 2007
DEU

Posted: 6/11/2009 8:58:22 AM AWST

Yes, they are doing lot of vehicle based systems and fire control systems, but also high-end medical stuff (X-Ray image intensifier tubes etc.)

User Info IM User Email User Reply Quote Report



FREEFALLE7

Ranger

Posts: 8273

Offline



Team Member
Joined: Mar 2002
FL, USA

User Blog

Media Collections

Feedback Soon!

Posted: 12/11/2009 11:12:34 AM AWST

Damn....

I guess we don't own the night anymore 🌑

No free man shall ever be debarred the use of arms
Thomas Jefferson

How fucked are we as a Nation that two dudes kissing is more acceptable than an American holding a rifle or serving his Country

User Info IM User Email User Reply Quote Report



TNVC

Tactical Night Vision Corporation

Posts: 14846

Online



Industry Partner
Joined: Jan 2002
USA

User Blog

Media Collections

Feedback Soon!

Posted: 14/11/2009 10:29:47 AM AWST

Originally Posted By FREEFALLE7:

Damn....

I guess we don't own the night anymore 🌑

I've been preaching this for a long time now to the powers that be... 🙄

Tactical Night Vision Corporation - TNVC, INC.
http://www.tnvc.com
sales@tnvc.com
(909) 796-7000
http://www.tacticalgunfan.com/index.php?option=com_content&task=view&id=369&Itemid=74

User Info IM User Email User Reply Quote Report

last_lancer

Posts: 276

Offline

Feedback Soon!

Joined: Oct 2007
DEU

Posted: 14/11/2009 11:27:41 PM AWST

Originally Posted By FREEFALLE7:

Damn....

I guess we don't own the night anymore

That was to be expected, anyway. The opponents have already developed tanks, fighter aircraft, assault rifles, APVs and SAMs, it would be straight insane to think that they absolutely omitted night vision devices.

User Info IM User Email User Reply Quote Report

last_lancer

Posts: 277

Offline

Feedback Soon!



Member

Joined: Oct 2007

DEU

Posted: 15/11/2009 2:38:56 AM AWST

[Last Edit: 15/11/2009 2:55:23 AM AWST by last_lancer]

Now, let me continue with Hellenic night vision industry. For those less known in the history, we are talking about Greece.

Hellenic army is a traditional user of American hardware and they relied upon American devices, as well. Mostly AN/PVS-5, AN/PVS-7 goggles and AN/PVS-4 weapon sights. The first attempts to produce their own stuff were scopes by HAI (Hellenic Aerospace Industry). The smaller PVS-4 based thing is called Polyphimos, the larger crew served WS has unknown designation





The primary company for NV devices in Greece today is Theon Sensors. They only make fully indigenous stuff, tubes are usually DEP XD-4, XR5 or US-made exportable stuff (FOM limited 1250/1600)

Theon NS-467C



Theon NS-685A crew served weapon sight (now discontinued)



Theon NS-685C crew served weapon sight



Theon NX-135B night vision attachment



Theon NX-135C night vision attachment



Theon NX-122A monocular - a very new model, introduced 2008, might soon become a standard NV mono of the Hellenic Army





Now few pics from the field

FN Minimi of Hellenic Army with Theon NS-685A crew served weapon sight mounted



EAS 40mm grenade launcher with Theon NS-685C crew served weapon sight



Greek sniper with M82A1 - the NV attachment module in use is Theon NX-135B



User Info IM User Email User Reply Quote Report

last_lancer

Posts: 278

Offline

Feedback Soon!



Member
Joined: Oct 2007

DEU

Posted: 15/11/2009 10:39:24 AM AWST

[Last Edit: 15/11/2009 10:46:29 AM AWST by last_lancer]

Another unexpected source of high quality night vision devices is Bulgaria. This ex-commie country has quickly gotten rid of reproducing legacy Soviet systems and proceeded to their own designs.

Opticoelectron Group is specialized for visible and infrared military lasers (ILTD-1/RILTD-1, PSR-IR) but they also got their own monocular design, the MNV-50





Optix Co. is the primary producer of night vision devices and they cover practically the whole spectrum, from NV monoculars up to thermal weapon sights

Optix Diana M-50 night vision monocular





Optix Diana night vision goggles



Optix Diana 6X long range night observation binoculars



Optix Diana TT infantry night vision biocular goggles





Optix Diana A aviators night vision goggles



Irish Air Corps pilot of AW139 utility helicopter with Diana A goggles



Optix SON-3 light night vision weapon sight



Optix ONS-4 night weapon sight





Optix ONS-4M night weapon sight - new version



Optix NVA-8 night vision attachment. The guy with the gun is Bulgarian president, if I am not mistaken. 😊



Optix NVA-75 night vision attachment.



Optix OTS-50 LTWS thermal weapon sight



Optix IdentifyR series thermal weapon scopes (MTWS and HTWS class)



Optix IdentifyR 50 MTWS thermal weapon scope



Optix IdentifyR 100 HTWS thermal weapon scope



User Info IM User Email User Reply Quote Report

cj7hawk

■ Posts: 86

Online



Member
Joined: Nov 2008
AUS

- Feedback Soon!

Posted: 5/12/2009 5:39:05 PM AWST

I'm all out of extra images to post... LL, you are still the "King" of NV :)

David.

User Info IM User Email User Reply Quote Edit Report



Dino1130

Member

■ Posts: 847

Online



Team Member
Joined: Oct 2006
USA

User Blog

Media Collections

- Feedback Soon!

Posted: 17/4/2010 7:54:14 AM AWST

[Last Edit: 17/4/2010 7:55:54 AM AWST by Dino1130]

Found some Australian night vision.

Believe it is called a Dave Industries PVS-514 with a US Gen 2

Seems like a nice piece of kit ! 🇺🇸

Engineered by our friends Down Under. 🇺🇸

<http://aunv.blackice.com.au/cgi-bin/nightvision/forum?index=projects&story=monocular>

Nice work and job well done ! 😊

User Info IM User Email User Reply Quote Report

➡ Previous Page

Page: - 2 - / 3

Next Page ➡

Foreign night vision (Page 2 of 3)

New Topic

Reply

Forward

Subscribe

📁 Armory » Night Vision

Library AR-15 AK-47 Handgun Armory Training General Outdoors Hometown Industry Equipment Exchange

Copyright© 1996-2009 AR15.Com LLC. All Rights Reserved.

Advertising Information Team Memberships Join the NRA Discussion Forums Help Privacy Policy About Us

