ITAR and Amateur Radio

Introduction Guide

In the true open spirt of Amateur Radio this presentation is just my opinion, use at your own risk!

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- **Background of ITAR / EAR**
- **What is ITAR/EAR and why should I care?**
- **What should Ascent do?**

Background of ITAR / EAR

What is ITAR/EAR and why should I care?

- **ITAR** (International Traffic in Arms Regulations) and the **EAR** (Export Administration Regulations) are export control regulations run by different departments of the US Government . Both of them are designed to help ensure that defense related technology does not get into the wrong hands. An export license is a general term for both ITAR and EAR controlled items in which the US Government has granted permission to transport or sell potentially dangerous items to foreign countries or parties. So for someone like AMSAT, they could get a license to exchange HW/SW/TAA with another organization in a country like Great Britain or Germany (a pain, but possible).

Paraphrased from this site: https://gov-relations.com/itar/

What is ITAR/EAR and why should I care?

- **ITAR:** The more stringent of the two sets of regulations was written for articles with direct defense-related applications. Articles specifically designed or otherwise intended for military end-use are enumerated on the United States Munitions List (USML) or the Missile Technology Control Regime (MTCR) Annex and therefore controlled by International Traffic in Arms Regulations (ITAR) which is administered by the Directorate of Defense Trade Controls (DDTC) at the ***State Department***. Items, services, and information are all covered by the ITAR regulations. The most controlled items are Significant Military Equipment such as tanks, high explosives, naval vessels, attack helicopters, etc. Some examples include; exchanging technical emails or teaching how to repair an ITAR-covered item which requires a Technical Assistance Agreement (TAA), and allowing a foreign company to manufacture an item requires a Manufacturing License Agreement (MLA).

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- **EAR:** Most other items not specifically listed in the USML, but with the capability to be used for either civilian or military purposes are considered "dual use" and controlled under the Export Administration Regulations (EAR) which is administered by the Bureau of Industry and Security (BIS) at the ***Department of Commerce*** (DoC). The Commerce Control List (CCL) is the equivalent list at the DoC to the State Department's USML. The CCL specifically controls for Chemical & Biological Weapons, Nuclear Nonproliferation, National Security, Missile Technology, Regional Stability, Firearm Convention, Crime Control, and Anti-Terrorism. The level of control depends on the Export Control Classification Number (ECCN). Specifically there are "600 Series" and "500 Series" items that are more strictly controlled than the rest of the CCL, but less strictly controlled than the articles on the USML.

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Commodity Jurisdiction

- The first step is to determine if the item we manufacture (or export out of country) is on the USML or CCL. If a Amateur Radio Operator chooses to pursue this determination without an export control expert (hard to find a volunteer for that!), you can file a form DS-4076 with the DDTC. The DDTC has final rule on all Commodity Jurisdictions, so that the BIS (Dept. of Commerce) cannot challenge any Commodity Jurisdiction rulings. The difficulty for us working without an export control expert is that the DDTC can rule very cautiously. This determination may force an item that should not be controlled under ITAR to be more strictly (and hence expensively) regulated.

DDTC Registration

- If an item manufactured or exported by a company is ITAR controlled then the company needs to register with the Directorate of Defense Trade Controls (DDTC). DDTC registration, sometimes called ITAR registration, is mandatory and done with a DS-2032 form. It requires a fee of $2,250, $2,750, or more (depending on circumstances) directly payable to the State Department. In succeeding years, the registration fee is determined by the volume of export licenses submitted to the DDTC. This would probably be required if someone like AMSAT wanted to have another country launch it's satellite.

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What is ITAR/EAR and why should I care?

What is ITAR/EAR and why should I care?

- The US Government cares, and enforces a policy to limit access to non-US persons
- ITAR/EAR controls not just Hardware, but also Software and Technical Advice and Assistance
- This is true for Ground and Space systems
- The rules changed since 2009's Export Control Reform, so the old process some may remember is not valid
- Sounds scary, but can be managed, with care

How do Hams get involved in the ITAR/EAR system?

- We design Hardware
- We design Software
- We design Systems
- We give lots of Advice
- We even Assist fellow hams

The question is, do we cross the line into the restricted export area, even though we may consider the above categories Public Domain?

What is ITAR/EAR and why should I care?

In case your thinking the categories that are relevant to amateur radio are few and far between, think again.

In true government tradition they have divided up the world we live in into a quantifiable numbered databases, One for U.S. Munitions List, ***USML,*** and another for Commerce Control List, ***CCL***.

- There are 21 categories on the U.S. Munitions List, (found in part 121 of the ITAR regulations). For Hams Items XV (space and related articles) and XXI (Articles, Technical Data and Defense Services Not Enumerated) are most relevant. The USML is generally platform driven (e.g., vehicles, missiles, aircraft), and contain both classified and unclassified items.
- Dual use commodities and technologies covered under the EAR part 774 For the CCL there are 10 broad categories and 5 product groups. Most of these are applicable to Ham radio except Category 0, Nuclear & Miscellaneous! The CCL is function and capability driven (e.g. the CCL covers navigation, not what it goes into. There numbering system generates Export Controlled Classification Numbers, ***ECCNs,*** to track the functions like 9A654.x for category 9, Aerospace, Product Group A, Systems, Equipment and Components and function 654.x. The 654.x is also broken down. In this example the 6 (or 600 series) means it probably was on the ITAR list and moved to the CCL list, 54 track the specific function and the last letter is for a specially designed category (for instance, take a commercial product and modify it for space radiation)
- So unless you determine the item is **not** specially designed, you should not share HW/SW/TAA with non US Persons
  - **US Persons are**: U.S. citizen; permanent resident who does not work for a foreign company, a foreign government, or a foreign governmental agency/organization; a political asylee; part of the U.S. government, or a corporation, business, organization (like AMSAT?), or group that is incorporated in the United States under U.S. law

USML and EAR Info can be found online here:
http://www.ecfr.gov/cgi-bin/text-idx?node=pt22.1.121#se22.1.121_11
https://www.bis.doc.gov/index.php/regulations/commerce-control-list-ccl

What is ITAR/EAR and why should I care?

- So our goal is to determine if it's on a ITAR or CCL list. If it's not on the list then it falls under the EAR99 catch all category (the lowest level of control).
- Now that we have the category we have "caught" the identity of the HW/SW. I say caught because the new rules allow "catch and release".
- ITAR part 120.41 and EAR part 772 define what "catch" is
- The release means that a previous determination of a similar number was determined. **If** the determined function was "commercial product or service not requiring control", **then** we are free to share with anyone. If not we are required not to share with non-US persons.
- Now the hard part, finding out what is on the release side.

What is Released?

"The release paragraphs of the ITAR and EAR "specially designed" definitions;

- Apply only to parts, components, accessories, attachments and software
- Are a series of fact based questions, to which the answer is Yes or No
- Only require that one exclusion applies in order to "release" a commodity from that control text

There are 5 releases under ITAR and 6 releases under the EAR, but the same principles apply. The releases relate to prior U.S. government determinations, specific types of parts, and those with dual use in mind. Usually for us the release would be the use of an item with the same function and performance capability, but have modifications to form for fit purposes only."

Digging through the prior "releases" is a task best left to professionals*

For ITAR go to: http://www.ecfr.gov/cgi-bin/text-idx?SID=8606bdffd1fb2e79cc5df41a180750a&node=22:1.0.1.13.58&rgn=div5

For EAR go to: https://www.bis.doc.gov/index.php/regulations/export-administration-regulations-ear

- What if it can't be found anywhere:
- At this point if a group of technical people believe that it should not be controlled, then that is the conclusion and it is Okay to share it!*

* In my humble opinion

What should Ascent do?

- Get AMSAT to search the released items to give all team members guidance what can be broken out items for open discussion and collaboration

- Get AMSAT to search the released items to give all team members guidance what **CAN NOT** be broken out items for open discussion and collaboration
  - All paper, hardware and software should be marked appropriately

- For those items not found anywhere, post to the ITAR group and solicit opinions on if it should be controlled.
  - If Controlled is determined, then we will keep it closed within our group and not publish it outside of the US Persons group with all paper, hardware and software marked appropriately
  - If we determine it should not be controlled, then it's open for discussion and collaboration