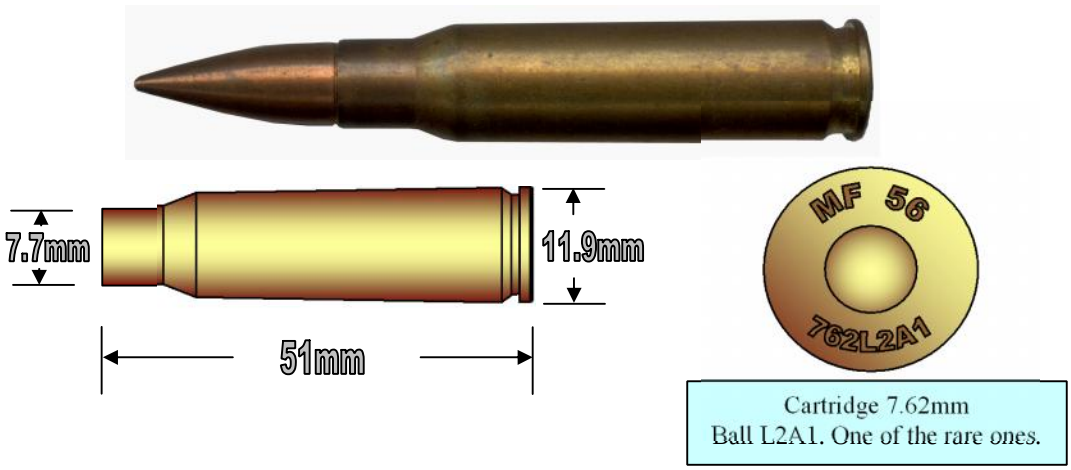
7.62x51 BALL



Cartridge 7.62mm
Ball L2A1. One of the rare ones.

In the early fifties Australia began looking for a replacement cartridge for the aging and venerable .303 SMLE. Quite possibly this had something to do with the fact that the United Kingdom had at that time finally put to pasture their .303 which had been in service since 1888. When Britain adopted the 7.62 x 51 Australia selected the same cartridge and commenced production in 1956

Historically the 7.62mm cartridge goes back to the end of the Second World War when all the combatants began looking for smaller cartridges than the 30-06, 7.92 mm et al. This search was spurred by the German investigations of what were then called small-bore weapons. The introduction of the 7.92 Kurtz cartridge in 1944 immediately convinced the Russians, and just about everyone else, that this was the way to the future. The reduction in calibres continues today. The Americans began by reducing their standard 30.06 to 47.4mm calling it the .30 T65. Some feedback from trials indicated that modifications were needed, resulting in the production of the .30 T104. More trials were conducted and some fine-tuning applied which resulted in the adoption of the .30 T 1 E2 case. The factory then made some very minor adjustments to angles and dimensions, which culminated in what we know today as the standard NATO 7.62mm. All this word took place between 1945 and 1948. The standard was adopted in 1954 even though weapons for the cartridge were not available until 1956. I believe that American pressure to have a NATO standard cartridge in .30 calibre was one of the reasons for the United Kingdom dropping their excellent 7mm assault rifle cartridge.

Australia did some assessments of available weapons and eventually settled on the Belgian-made FN-FAL (Fabrique Nationale- Fusil Automatic Ligere) which our small arms factory at Lithgow modified slightly. The modified weapon we called the SLR. (Self-Loading Rifle). The first cartridge introduced for this weapon was the 7.62mm Ball L2A1, which appeared in 1956.

This cartridge was produced at the Government factory at Maribyrnong in Melbourne, as were all subsequent 7.62mm rounds. Problems were encountered immediately as it was discovered that the neck had been made too thin. This caused it to crack on firing. The initial run was halted after some 27,400 cartridges, most of which were destroyed. Some cartridges were converted to drill cartridges and these are also very rare today. The neck was thickened up and production recommenced under the new model number L2A2. This model proved to be successful and large scale production runs were commenced.

Cartridge 7.62 mm Ball L2A2

This was the last of the standard L2A2.

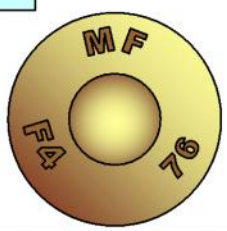
No significant changes were made until 1960 when Australia somehow or other got the idea that we were making ammunition to NATO standards. We therefore began producing it with the NATO symbol in the headstamp. This practice continued until mid 1961 when the error was discovered. The headstamp was changed by dropping the symbol and simply leaving a blank space, thus one may find four different headstamps in this period. A change also took place in that the layout was altered to 4x90 from 2x180 and the calibre was dropped from the headstamp.

NATO symbol added and calibre dropped

Second year of sin

Error discovered and guilty looking blank space left dangling.

The 7.62mm cartridge settled down to a long run until 1978 when the propellant composition was changed from the original AR 2201 to AR 2206 (see notes for an explanation of Australian propellant codes). For a short time the cartridge was loaded with AR 2206 but still retained the L2A2 headstamp. In 1976 the cartridge became the 7.62mm Ball F4.



This was the first of the new propellant load using AR 2206

In 1988 the factory in Melbourne made a name change from MF to AFF, (incidentally the MF never *stood for Military Forces* as is sometimes believed. It stood for Maribyrnong Footscray) the original layout was with all the lettering at 12 O'clock but this was soon changed to 2x180 layout.

The first of the new name change from MF to AFF.

A variation of the AFF layout.

Just to confuse things further the factory made another name change in 1991 when it decided to call itself ADI (Australian Defense Industries)

Believed to be the last of the standard Australian 7.62 to have been made at Maribyrnong.

7.62mm ball cartridges in linked belt as used in the GPMG M60 used by Australia until the introduction of the 5.56mm cartridge.

OTHER BALL CARTRIDGES

In addition to the standard run-of-the mill ball cartridges there are several varieties not often encountered.

Ballistic Standard. This is a ball cartridge that has been assembled using components specially selected for their close adherence to specifications. Assembling these components into a cartridge ensures that you have a cartridge that produces regular ballistics and against which other batches of ammunition may be measured. It is identified by the addition of an "S" in the headstamp.

Ballistic standard made in 1976.

7.62 L4A1 Proof cartridge

PROOF CARTRIDGES these are ball cartridges that are loaded to produce chamber pressures well in excess of that found in the normal service round. They are, as the name implies, used to prove a firearm after its manufacture. The overloaded cartridge applies very severe pressure to the firearm above and beyond that normally expected. The firearm passing this test is said to have passed proof. The use of these cartridges in any situation other than a controlled proof one is to be avoided at all costs. Unfortunately the cartridges are not clearly marked and they can, under some circumstances be mistaken for a service ball round. Inspection of the headstamp will clearly identify the cartridge as a proof. The supposed identification is the copper wash applied to the case and as the case ages the colour changes so that it does not look very coppery at all.

Palma Match Ball during Australia's Bicentennial we hosted a shooting match that is American in origin and is normally held there as a National Match competition. We struck a Commemorative headstamp for this event.