

# Small Layout Design | Dagun

by Anthony Veness

All Model photos by the Author

## Introduction

Dagun's genesis began back at the 2016 Modelling the Railways of Queensland convention, with a chance purchase of an old Black Diamond Models 1460 class Locomotive.

What has a mainline loco got to do with a Branch Line. Absolutely Nothing. It just happens to be my favourite class of QR locomotive and my first real introduction to modelling QR in Hon3.5.

Realising quickly that I had no room for an empire in which to run my newly found treasure and having been bitten by the bug I had caught at the MRQC, I looked around for ideas for a small layout as an alternative.

By definition a small layout or a micro layout is a design that is 4 square feet or less in area.

I must admit to being very daunted at the prospect of creating a huge empire. I never seem to have the time, nor the effort required to commit to such a grand project. I prefer to create something that I can finish to a high level. A small layout seemed to fit the bill.

For readers of the online US magazine Model Railroad Hobbyist, the concept of TOMA will be familiar. For those that aren't, TOMA stands for "The One Module Approach". Fairly explanatory. The development of the modules is purely up to the modeller, in terms of quantity and size. The underlying theme being completion of one at a time to develop a sense of achievement and to improve your skills as you go. Subsequent modules can be improvements on previous ones, older ones can be re-done to suit skill development. Extensions in additional modules can be undertaken as the modeller wishes as time, space and budget permits.

Granted this idea isn't new, as there are many and varied groups with a similar theme and purpose.

In addition to a TOMA approach, there are many Modular systems.

These include.....

N TRACK

T TRACK

FREMO

All these systems follow a construction and track standard, that is adhered to for joining modules together to form one larger layout. They are mostly used by groups.

There is also an approach that well-known US modeller Tony Koester and his associates coined back in the 90's known as a Layout Design Element or LDE.

It uses the notion of fitting a prototypical location into a modellable space.

Being a prototypical modeller at heart, this idea has always struck a chord with me, and combining this notion with the TOMA approach, I decided to locate a suitable prototypical location to model, keeping it small to fit my space requirements, lightweight and portable for ease of transport and storage. It also had to be able to display all those lovely QR models I had discovered.

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The next question I asked myself was 'do I want to be a builder or an operator in this new-found interest?'

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Well, a little of both.

Will I model from the Prototype or will I freelance with a prototypical feel?

Do I want to be bothered with either?

Yes, I wanted to magnify my modelling experience, in the confines of a small layout, highly detailing the scene to the best of my ability, maximising its potential in a prototypical scenario.

Will it be a Terminus?

In my case I wasn't fussed, but if I wanted to exhibit in a hands-free style, then a continuous run would be an advantage.

Will I incorporate Switching?

Some form of switching was desirable to me as well so that I had the best of both worlds.

Having said all that, if you have selected a Prototypical approach a lot of these questions will have been decided for you.

What are your constraints? Is it Room size/space available at home?

It certainly is for me.

What equipment do you want to run?

Again, prototypical modelling largely dictates this for you, but we are modellers, and we all have Licence to do whatever we want. I'm not ashamed to Run my 1460/1502's on Dagun, and I still consider myself a Prototypical modeller !

### Selecting a place to Model

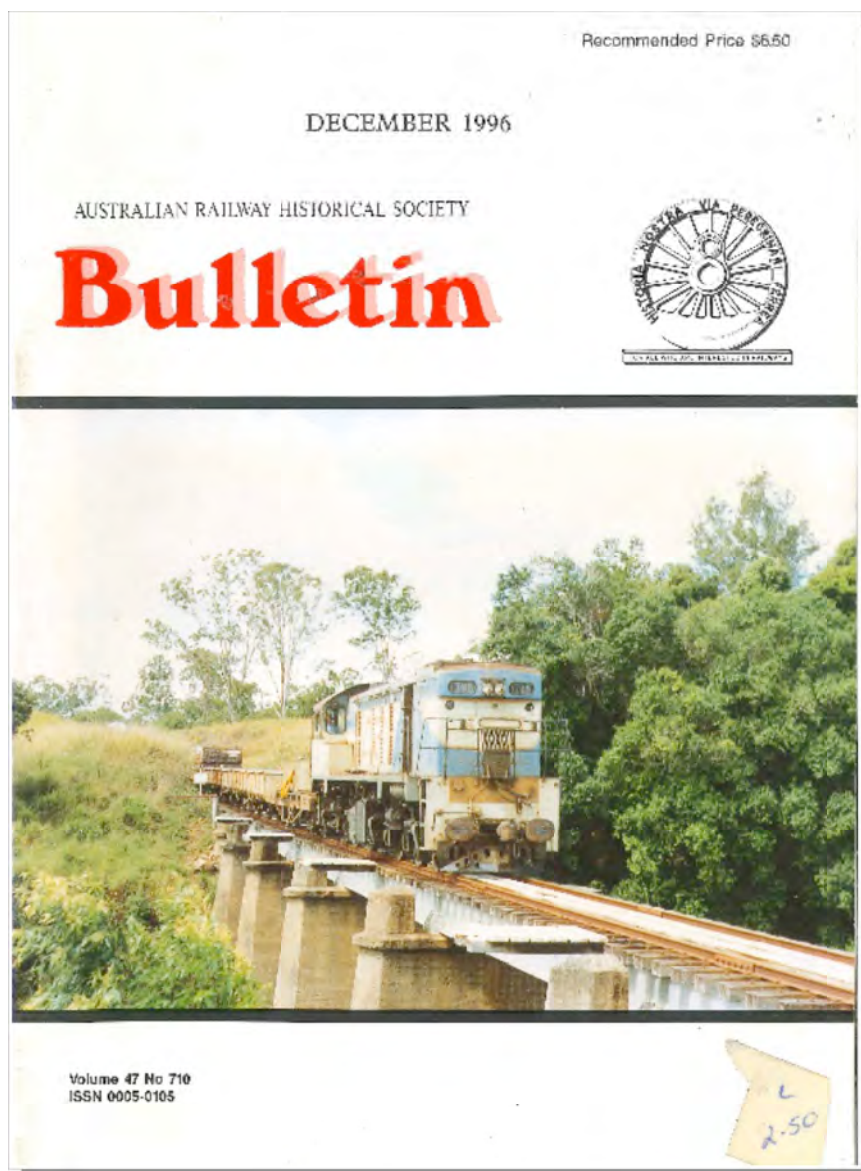
So enough of all this Background stuff, Lets have a look at Dagun.

Notwithstanding the preamble for choosing a direction, the sequence of events that followed just fell into place.

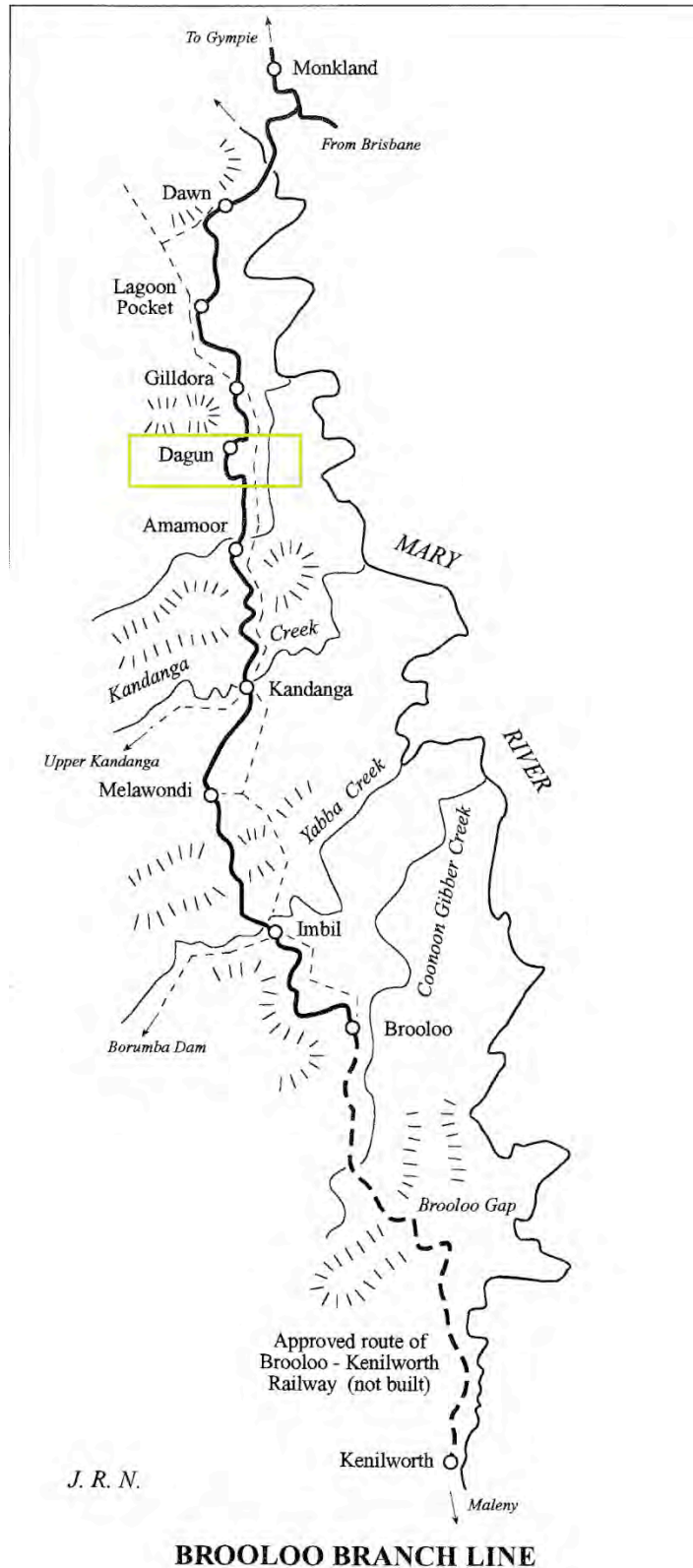
I consider myself Lucky in lots of ways. I also seem to have a lot of chance meetings 😊

At a Buy and sell day at Caloundra I stumbled upon an issue of the ARHS Bulletin [see next page].

It contained article by Rod Milne on The Brooloo or as it is better known, The Mary Valley Branch.



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Map by Rod Milne

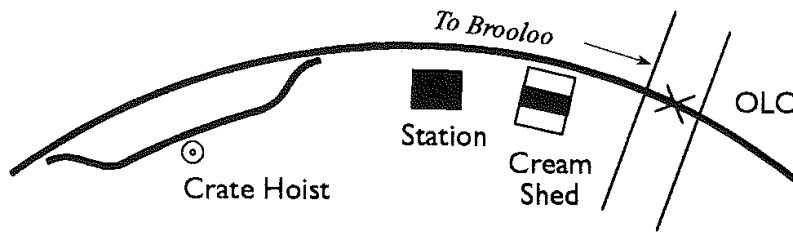
As I was looking for ideas, I grabbed the magazine and poured over it when I got home. It was there that I discovered Dagun as a prototype to model. Better yet, I could drive there from my Home in half an hour! The Die was cast.

It's a unique place, located on a curve that boasted a goods loop serving a timber yard and Various fruit growing farms in the area. Pineapples were loaded in their ubiquitous crates here and transported to

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Brisbane Canneries via Gympie. The timber yard was also known to supply sleepers for the QR system. The loop had a loading bank with a Dereck type loading crane, that was known as a Crate Hoist.

Dagun Road cuts across the railway line, South of the Station, and was protected by Crossing Gates.



### DAGUN 1974

Map by Rod Milne



Photo from [stations past website](#)

Today the line serves as a tourist line that we all know as the Mary Valley Rattler.



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Photo by Author

Much of the Railway infrastructure exists today, although it has been modified to suit the new era of OHS with a high-level platform serving the raised station. The combined goods/cream shed still exists as a wine and cheese tasting co-op. Additional buildings have been added along the raised platform to suit the local community needs. Even the Timber yard is still there and is known as Mary Valley Timbers. Sadly, the Crossing gates and the Loading facilities are long gone.



Photo by Author



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In 1963 the goods shed (originally built in 1938) was shifted and merged with the cream shed, sited at its present location. At the same time a loop was formed out of the siding.

A Station Mistress was in attendance until 1988. This still stands today.



Photo by Author

Now that I had my prototype to model, where do I start?

As it was built on a curve I decided to try and shoehorn a continuous run into a small space.

The turnout/switch located in front of the station area was a curved turnout.

Now, Peco curved turnouts have a 24" outside/18" inside radius.

This was just perfect as I could construct a 24" / 610mm radius as a minimum on the visible section enabling a wide range of equipment to be operated, even my un-prototypical use of those 1460/1502's. The entrance to the loop would be fine at 18"

Getting creative I decided to split it in two for ease of transport and storage.

For reasons outlined below I wanted a continuous run, and as I had limited space this seemed like a reasonable solution.

Using my predetermined minimum 24" radius resulted in a space of 4'6" x 4'6" or 54" x 54" or 1370 x 1370mm, shaped at the front to follow the curve.

The prototype was perfect for transferring onto a small layout design element (LDE).

I could run a reasonable variety of Traffic, locos and Rolling stock over several eras.



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The steam era saw PB15's, C16's and C17's on the line with railmotors used for passenger services.

Post steam era saw a variety of Diesel locomotives including 1600's, 1620's, 1700's and 1720's. DH's also got a look in.

A variety of goods traffic was transported on the line. All manor of timber and Fruit products were transported in open and flat wagons as well as box type wagons. The occasional livestock train was recorded on the line and even Dairy Products made their way back to Gympie.

### Planning the Build

The first step for me was to determine what key areas to model. I believe this is critical to create a proper feel of the location. Remember, it is only a model, so compromises will need to be made.

The first is some form of selective compression. Remember, I'm working with a 24" radius curve.

Let's look at that in real terms. The real life equivalent of 24" is a 174-foot radius. I'm not an expert in QGR railway geometry but Dagun's curve is much broader than that. Instantly we must selectively compress to make it fit in.

With so much compression, we need to find a way to make the Layout seem believable. To do so we need to select those key elements and place them logically. We also need to consider an era, as prototype locations vary over time. In Dagun's history there have been a few incarnations due to fire. There have been changes to the siding as noted earlier. There have been variations in paint schemes on the buildings. Then there are the changes we see today. I have sort of settled on a late 60's to early 80's era for my model.

I figured I could run anything from the steam era (just) to the QR red noodle scheme on Diesels.



Photo

from Google Earth



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Photo from Google Earth

Here is my list of key elements that I thought would translate from the prototype.

1. Station
2. Goods/Cream Shed
3. Crossing Gates/Dagon Road
4. Kimlin Ln going up the hill leading into the Timber Yard
5. The Timber Yard
6. The Loop
7. Loading Bank and Crate Hoist
8. Station Mistress Residence

The Station and Goods shed were key and no compromise was made here. Same for the Crossing Gates and Dagon Rd.

Kimlin Lane is a loop road, a dirt one at that, and enables the timber to be transported down to the yard area for loading. I didn't have room to loop it back onto Dagon Rd, so I truncated it and just let it work its way up into the Timber Yard. The yard is perched up on the hill.

I decided not to create an accurate model of the timber yard, just a rendition that would serve its purpose in the background. I was fast running out of background due to the 24" radius curve.

This Timber mill is now called Mary Valley timbers, and still operates successfully.

The loop and its turnout in front of the station are fairly accurate. The Turnout at the north (Gympie) end is on a straight. I have used modellers licence to shoehorn it into the space. My turnout is on the curve instead.

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The Loading Bank and the crate Hoist are also non-negotiable. They are located within the curve confines. I am still struggling with plans and a clear set of photos with which to build the crate hoist. If anyone can help me, please come see me! This is the only real image I have!



[Still from Youtube Footage](#)

The Station Mistress was going to have to miss out on having a home on my layout. I simply ran out of space! I opted to model the fence alongside the property and a Jacaranda tree. I guess this dates the layout from late September to November in the spring!

The General store is an embellishment, as it was on the other side of Dagun road, further west. For the sake of getting a small township feel I needed something to hide the fact that Kimlin Lane doesn't loop around onto Dagun Road plus it helps disguise the road running off into the backscene.

### The Build

I wanted something lightweight and easily transportable, so I used Extruded polystyrofoam. Its available at Bunnings and is called Knauf board. For some rigidity on the edges, MDF facias were wrapped around the perimeter and glued. Gorilla Glue seems to work well gluing these materials together.

Cork roadbed was installed and Peco 12mm gauge code 75 track was installed.



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The staging yard was constructed in a similar fashion.

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DC control is used at present, with a view to DCC for the future. It is a simple line with insulfrog turnouts. As I expand, DCC may become more viable. The only real advantage for DCC on this layout now is sound for locos.

The Hill was added from Polystyrene bead board that came out of some packing. I smoothed out the contours with joint compound and painted everything an earth brown coloured acrylic paint.

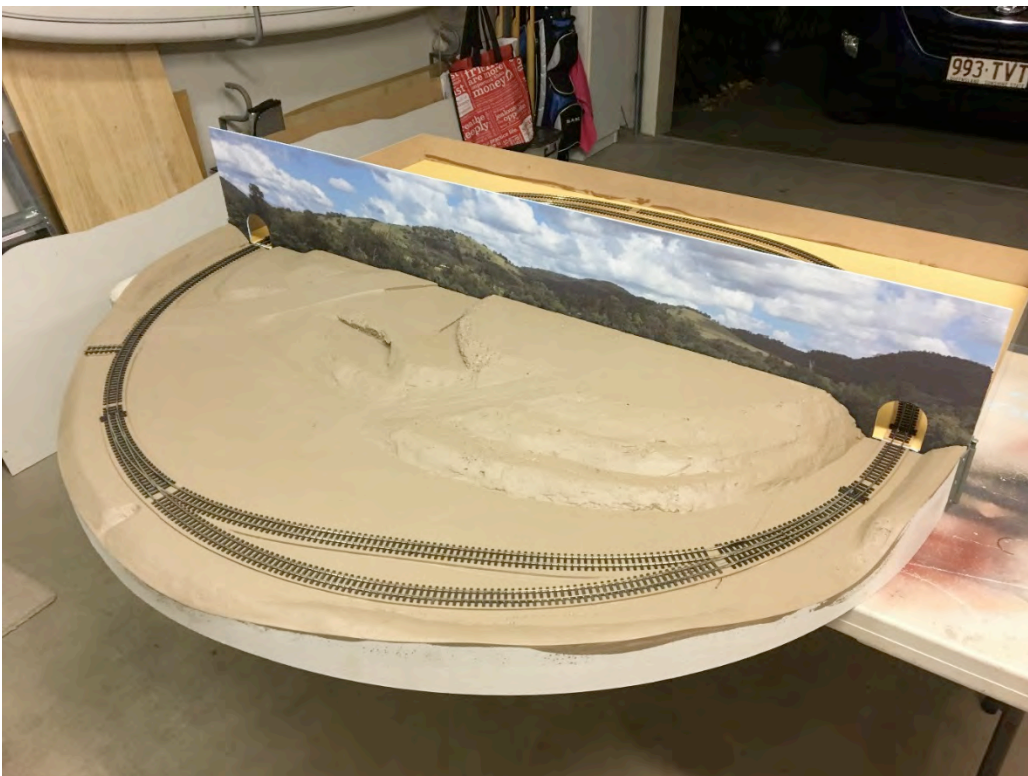




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The backdrop was cut from MDF and painted a sky blue. This gets wedged between the scenic section and the staging area at the rear. I have used door hinges to connect everything together. Rail joiners connect the rails and carry the power. All pretty simple stuff that works for me.



I took a photo of the hills surrounding Dagun standing on the side of the road heading towards Amamoor, looking back towards the range as you would see from the Dagun township.

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This was printed out on paper in one continuous length and applied to the backscene. I deliberately left it blurry without trying to clean up the image, as I wanted it to look like it was off in the distance and not steal the limelight from the foreground scenery. I'm satisfied with the result, the execution in Construction is a little off, so a revisit will be made down the line.

Armed with some sieves, I spent an hour or so in 43-degree heat digging and Sifting dirt from the actual Dagun yard. I got several strange looks, but it was too hot for anyone to argue or yell at me, so I think I got away with it! This was further refined at home with finer sieves and applied around some Martin Whelburg scenic mats. If you haven't used these before, give them a go. Modellers Warehouse stocks them (shameless plug Dave!) Its best to randomly break them apart, applying them dry and leaving them in place for a few days. Move them around to get the best fit and feel before glueing them down permanently.









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Additional material from Woodland Scenics, Heki, Mininatur and JTT was used.

Track ballasting was done with fine Woodland Scenics Brown ballast. This colour matched some of the prototype photos I have.

A fantastic range of Eucalyptus style trees from JTT was available from Riot Art and Craft Stores. I would snap them up whenever I saw them. Sadly, they haven't been available for some time, but I managed to build up quite a stash to use on the Layout. They were spray painted with various shades of green to achieve spring effect, then planted in clumps.





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On one of my field trips I measured up the Station Building and developed a set of drawings that I then used to scratch build the structure.



[Photo from stations past website](#)





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I was lucky when it came to the Goods/Cream shed. Jim Hutchinson had an AMRM article in issue 201, December 1996 on QR sheds. In this article he drew plans and scratch built the shed. I used these plans and scratch built my own. You saved me a lot of ground work. Thanks Jim!



Photo by Author

One thing to be aware of when researching and taking pictures of surviving structures is the possibility of additions. You will notice the annex added to the shed in this photo. Not part of the original structure! Note also the high-level platform added as well as the additional structures along the now raised platform.



Photo by Author

Prior to building the structures, I mocked them up in cardboard and used these place makers to get a feel for the overall size and positioning. This helped me visualise and determine their final location in the scene.



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[Photo from stations past website](#)



The Crossing gates were built using Evergreen strip, utilising Standard QR drawings.



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Photo from Web. Unknown.



The General store was kit bashed from a Structorama kit. It was shortened, and the additional Kitchenette kit was added to the rear.



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So far, the buildings that form the timber yard are from the Structorama range. I will go back and add an open air shed in the future.



Dagon Road was built with fine grit sanding paper that had a realistic asphalt texture. Strips were cut to width and glued in place. Various weathering powders were applied to simulate wear and dirt tracking off Kimlin Lane.



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A wealth of detailing items have been added, from fences to power poles. Cars, people also add a level of believability and purpose. They also set the era for you, as does the rolling stock.

Additional items around the layout include garbage cans, timber products for loading onto waiting wagons and even point levers. These are great little pewter castings from uneeek.

I had the boys from Queensland scale models print up some station signs, so there can be no mistaking the layouts location.

There are still lots of little items to be added. I still need to finish the Timber yard and there is a retaining wall in front of the General Store that needs sorting out. I haven't talked about weathering! It seems that there is always something to do. Even a small Layout is never truly finished.

I still have a drawer full of Rolling stock kits. This might take me some time!

Thank you for Listening.

# FIN !

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Photo from [Web](#). Unknown.