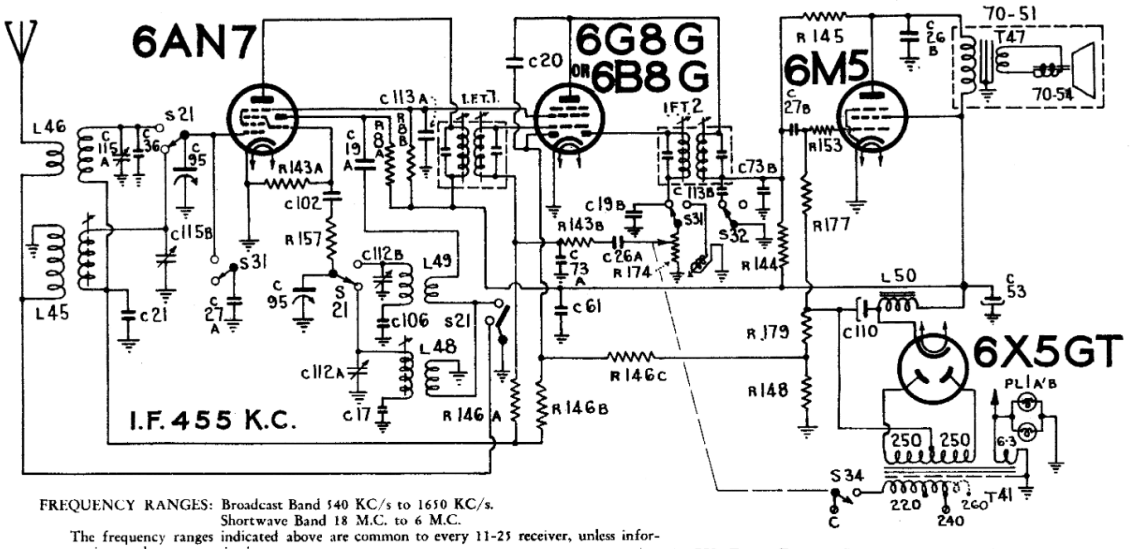
A Bluetooth speaker from a Kriesler model 11-25 tablegram

By Graham Parslow

This tablegram cleaned up very well and achieved the unexpected result of getting me to like it. It is the end of the line for Bakelite cases and 78rpm record players using disposable steel needles. Most of the tablegrams I have seen are dirty and neglected and I have not previously regarded this category as collectable. This is a shared view because a similar Astor tablegram in fair condition could not get anyone to take it away for free at the end of a trading-table session for the Melbourne group. This Kriesler came to me from an owner who had it in his family since purchase in 1950. Bruce routinely listens to ABC jazz radio and wanted the tablegram to be converted to a Bluetooth speaker that he could pair to his digital radio. Some other "professional" technician had suggested $1,000 for the job and made it seem like a great challenge. I assured Bruce that the $1,000 quote was extortionate. Bruce was not a HRSA member and he accepted my quote of $200 for parts and labour which would include a thorough cleaning and polish. I mention this because we can be conflicted in doing restorations for others who are not really "mates" and it is reasonable to ask for fair recompense.



FREQUENCY RANGES: Broadcast Band 540 KC/s to 1650 KC/s.
Shortwave Band 18 M.C. to 6 M.C.
The frequency ranges indicated above are common to every 11-25 receiver, unless information to the contrary is given

R8AB	Res. 30000Ω 1W.Carb.	± 10%	
R143AB	Res. 50000Ω ½W.Carb.	± 10%	
R144	Res. 15000Ω 1W.Carb.	± 10%	
R145	Res. 0.5megΩ ½W.Carb.	± 10%	
R146ABC	Res. 1 megΩ ½W.Carb.	± 10%	
R148	Res. 35Ω ½W.Carb.	± 10%	
R157	Res. 20Ω ½W.Carb.	± 10%	
R177	Res.300000Ω ½W.Carb.	± 15%	
R179	Res. 150Ω ½W.Wire	± 10%	
R153	Res. 40,000Ω ½W.Carb.	± 15%	
R174	Switch Pot..5Ωmeg. 1W	± 20%	
C95	Cond. Var.2 Gang.		
C115AB	Cond. Trim. 3.20pF		
C1T	Cond., 435pF.Mica.SM	± 2½%	
C19AB	Cond. 250pF Mica PT.	± 15%	
C20	Cond. 25pF. Mica S.M.	± 15%	
C21	Cond...05μF.,200v.Pap.	± 15%	
C26AB	Cond...005μF.600v.Pap.	±15%	
C27AB	Cond..101μF.,600v.Pap.	±15%	
C36	Cond..10pF.Mica DS.	-15%	
C53	Cond.Elect. 8mfd.350V. E.T.	-10% +40%	
C61	Cond...05μF.400v.Pap.	-15%	
C73AB	Cond.500pF,Mica,P.T.	±15%	
C113AB	Cond.,.03μF.400v.Pap.	±15%	
C102	Cond.,50pF,300v.MicaPT	-15%	
C106	Cond..009 F.600v.Pap.	±10%	
C110	Cond.Elect.30 F.350V.	-10% +40%	
C112AB	Cond.,Wire Trim.		
L45	Coil B/C Aerial		
L46	Coil,S/W Aerial		
L48	Coil,B/C Oscillator		
L49	Coil,S/W Oscillator		
L50	Choke,12H.50milliamp.		
1FT1	1st I.F. Trans.,455 K.C.		
1Ft2	2nd I.F. Trans.,455 K.C.		
P41A/B	Pilot Light 6.3V,.3Amp, MES Base.		
S32	Switch-Tone Control.		
S21	Switch-Ware Change.		
S31	Switch-Radio Gramo.		
T41	Trans. Power 40-60 c.p.s.		
T47	Transformer Output. Speaker, 8 inch Permag.		

S21 Wave Change Switch shown in Broadcast Position.
S32 Tone Control Switch shown in "Bass" Position.
S34 Mains Switch actuated by Potentiometer Spindle.
S31 Radio Grammo Switch shown in Radio Position.

MODEL 11-25C

CIRCUIT: Same as 11-25 issue 1 except the filter choke has been deleted, a 1,500Ω resistor taking its place.
COIL KIT: Part No. 15-14 (A.W.A. Gang).
DIAL GLASS: Part No. 70-54.
OUTPUT TRANSFORMER: Part No. 18-48.
POWER TRANSFORMER: Part No. 18-42 (H.T. 250 volts each side of centre tap.
MOTOR AND PICK-UP UNIT: Part No. 29-5 (Garrard S).

MODEL 11-25D

CIRCUIT: Same as 11-25 issue 1 except the filter choke is deleted, a 1,500Ω resistor taking its place.
COIL KIT: Coils mounted direct on chassis.
DIAL GLASS: Part No. 70-54.
OUTPUT TRANSFORMER: Part No. 18-48.
POWER TRANSFORMER: Part No. 18-42 (H.T. 250 volts each side of centre tap).
MOTOR AND PICK-UP UNIT: Part No. 29-5 (Garrard S).

The circuit is a modest 4-valve design that performs better than might be expected due to the 8” Rola speaker. This one has a choke in the HT filtering circuit that helps reduce hum, particularly important in its new role as a Bluetooth speaker. The revised model 11-25C deleted the choke and used a 1.5K resistor. Also marking the transition from 1940s to the 1950s, two valves are miniature (6AN7 and 6M5) and two valves are heritage octal (6B8 and 6X5). At least the 6X5 rectifier has an indirectly heated cathode rather than a directly heated 5Y3. The carbon resistors are old style 20% tolerance types.

If you think that the chassis looks much like a Kriesler model 11-20 plum pudding you would be spot-on. The side of this chassis is stamped model 11-20, although it has an additional GRAM-RADIO switch and different dial stringing to the classic plum pudding.

The phonogram section is also a transitional type that was about to disappear. It has a single speed 78rpm platter driven by an idler wheel rotated by a brass shaft from a synchronous motor. This still worked very well on this gram. The tone arm is positively historic. It has a pick-up coil of 2.1K Ohms in the large head and a moving magnet coupled to the stylus. That magnet must have weakened because the output was so low that full volume was needed to raise the level above the sound being produced at the record face by the stylus. More accurately it was a steel phonograph needle, the type used on acoustic record players. The screw at the end of the tone arm allows needles to be

replaced and I needed to do just that to get reasonable reproduction. It is not an easy concept these days that around 5 playings of a 78 will so erode the tip of a steel needle that reproduction is clearly degraded. Because of the low level of sound, I have to rate my Gloriola acoustic 78 player a clear winner in listenability.

moving magnet Kriesler arm has at least survived as a working entity. The tartrate crystals were soon to be replaced by ceramic materials that were stable piezo-electric transducers. The advent of 45 and 33 and 1/3 rpm disks were soon to make this one speed Kriesler tablegram even more obsolete.

However, this obsolete item has been thrust forward in a *back to the future* upgrade to Bluetooth speaker (not stereo unfortunately).

Other tone arms at the time were offering crystal cartridges with a sapphire stylus (see the Scharnberg Strauss advertisement). Sadly, most of those hydrated sodium-potassium tartrate crystals, that produced output by the piezo-electric effect, have now dehydrated and are non-functional. So the archaic

The compact Logitech Bluetooth Audio Adapter that I purchased from Harvey Norman boasts the following features.

- Connect the Logitech Bluetooth Audio Adapter to any powered speakers that have an RCA or 3.5mm input to stream your music.
- Pair with either a smartphone or tablet with Logitech Bluetooth Adapter's multipoint Bluetooth wireless technology.
- No need to worry about re-connecting as the audio adapter's Automatic re-pairing feature takes care of it for you.

What's In The Box?

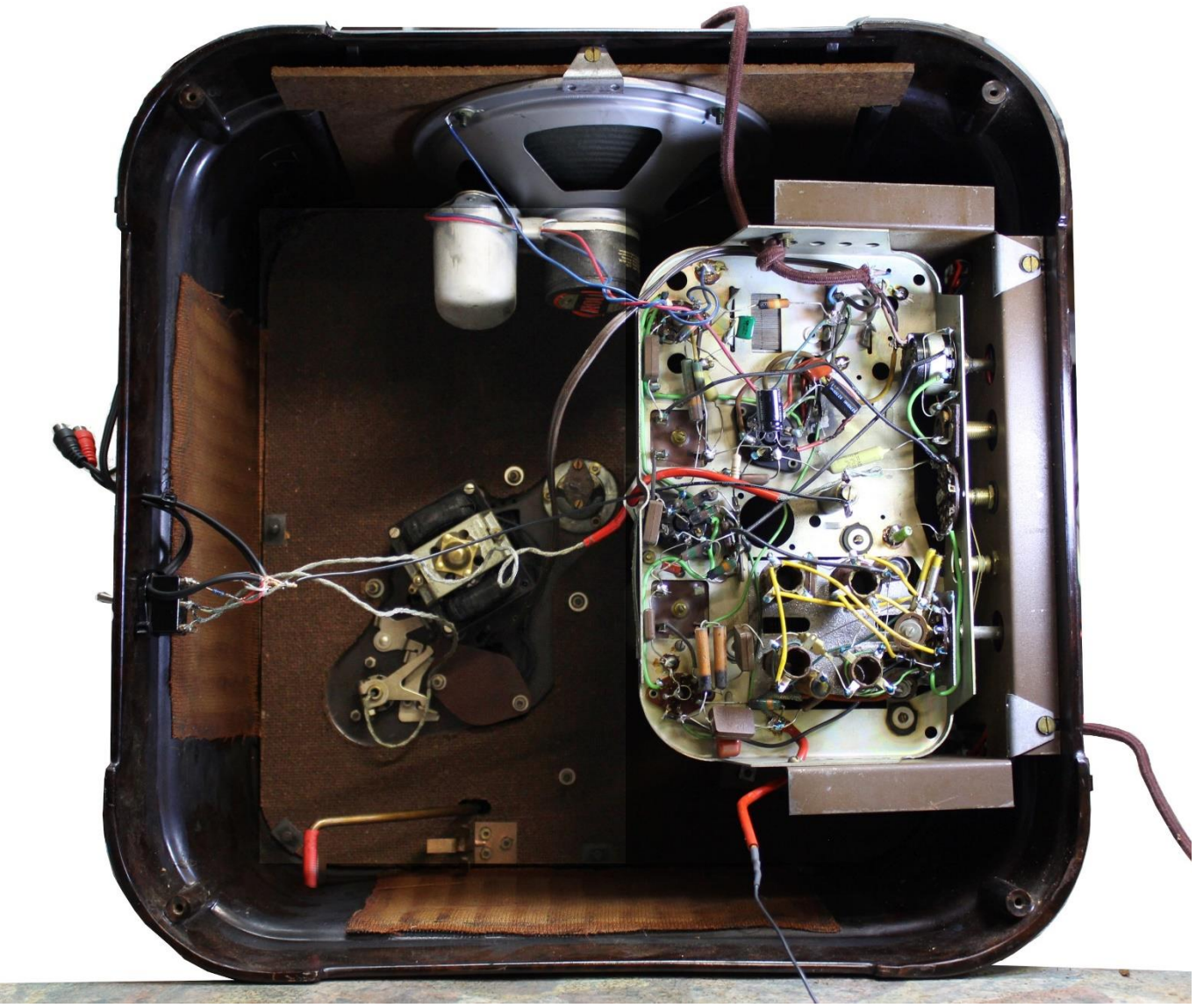
1 x Bluetooth Audio Adapter

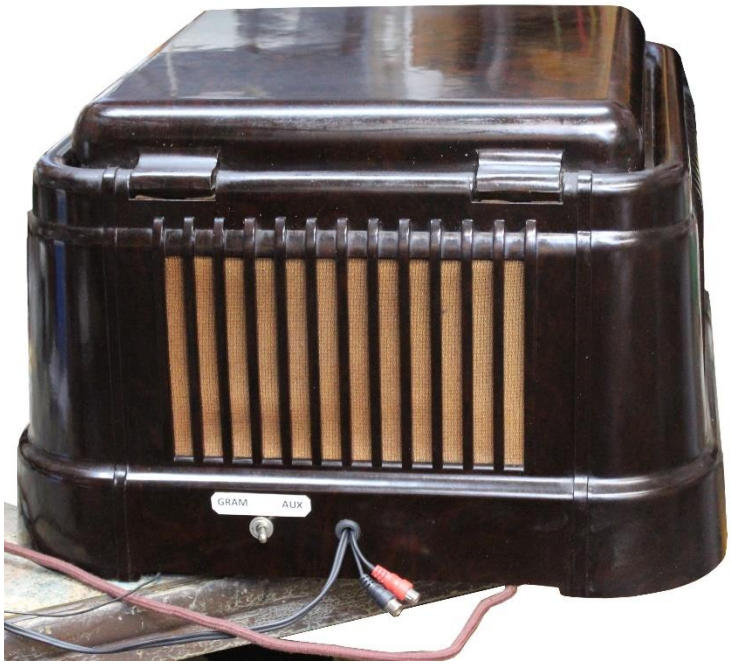
1 x RCA to 3.5mm Cable

1 x Power Cable (9V plug pack).

So I spliced into the phono input with a SPDT switch that allowed GRAM-AUX selection. Stereo input L and R channels were fed to the single audio input via a series 4.7K resistor in each channel (i.e. 9.4K resistance between L and R). RCA male and female sockets for input were created in tandem. The female sockets were used to connect a CD player for initial testing. The result was excellent. The Logitech Bluetooth unit was then connected via the male RCA plugs and paired to my phone. No problems at all.

In the end I was very happy with the outcome and Bruce the recipient was delighted to bring his family heirloom into the 21st century. He emailed me "Thank you, it worked a treat this evening."




GRAM
AUX


SA 5
QLD 4
VIC 3
NSW 2
6 WA
7 TAS
3 VIC
2 NSW
SHORT WAVE
16
19
25
31
40
50
SHORT WAVE

What is Bluetooth?

Bluetooth is most familiar in transmitting audio between adjacent devices. For example, a mobile phone streaming music from the web can pair with Bluetooth active speakers for better reproduction. Pairing requires that the receiving and transmitting devices have Bluetooth enabled. In contemporary cars the audio system can be programmed to look for a specific Bluetooth source, usually the driver's mobile phone. When that phone has Bluetooth enabled the phone pairs with the car entertainment hub at the time that the car ignition is turned on. If the phone receives an incoming call it signals the car to mute any entertainment audio. The call is then taken hands-free using the car's speakers and a microphone in the car located somewhere near the driver such as the rear vision mirror.

My 1965 Ford Mustang has been retro fitted with this Bluetooth transmitter purchased from Kogan online.

I have loaded it with 32GB of music as mp3 files on a micro SD card. The unit transmits music as an FM signal to my car radio. When paired to my mobile phone, an incoming call turns off the music and the call is broadcast to my radio speakers. A microphone is built into the unit for two-way communication.

Bluetooth is a low power wireless transmission protocol for digital data with transmission frequencies in the band 2.402 GHz to 2.48 GHz. Power is typically 2.5mW with a range around 10m. The data rate is 1 Mbits/sec or higher depending on the version of Bluetooth. Any data can be transmitted, but at lower speeds than usually achieved by wifi or USB cable links. This paragraph was keyed on a stand-alone Bluetooth keyboard communicating with a laptop with a Bluetooth dongle connected to a USB port. The same dongle additionally receives instructions from a cordless mouse. Billions of Bluetooth chips have been incorporated into wireless devices (see https://en.wikipedia.org/wiki/Bluetooth).

Harald Bluetooth was a 10th century King of Denmark. The name Bluetooth was proposed in 1997 by Jim Kardach of Intel as a place-holder name for the new technology. It stuck and has more appeal than the suggested alternative of PAN (Personal Area Network). The name of Harald Bluetooth can be written in Norse runes. The Bluetooth logo merges ᚼ and ᛒ, Harald's initials.