North East Radio Group 70cm RT85A Frequency List EPROM Rev 7.8

Applies to NERG78K8 and NERG78K2 EPROMs, 25/7/2007 (see revisions below...)

Only for models marked as AWA RT85 type 1LM82273 (or 1LM82273A) 403-420 MHz,
containing plug-in control board having either HD6305Y2P CPU & 27(c)64 EPROM or
146805G2 CPU & 27(c)16 EPROM (PCB part numbers 82347 or 82288 respectively).
This EPROM is not directly suitable for standard RT85 or RT85C models.
Link-D must be removed on CTCSS PCB board for 91.5 Hz tone operation.

Channel organisation notes:

- Channels 01-79 cover the receive range from 438.025 to 439.975MHz in 25kHz steps, with -5MHz
transmitter offset for prescribed repeater channels (with the exception of channels 30-33, which do not follow
this rule).
- Channels 80-99 are simplex channels in the 433.775-434.250MHz range and have greatly reduced
sensitivity due to the narrow bandwidth of the RT85 receiver. Retune the front end if operation is required
on these channels at the expense of channels 0-79 (e.g. for packet radio).

Features:

- Link terminals P302 to P303 at rear on control head to select Low output power.

- All channels within the LIPD frequency band are programmed by default to
  transmit a standard 123Hz CTCSS access tone since many repeaters require
  this tone as protection from LIPD interference. Where known, specific repeater
  channels used in Victoria have been programmed for 91.5 Hz or 88.5 Hz

- Channel 30 has 88.5Hz CTCSS tone to enable crossband links on VK3RHF
  repeater. WARNING: Foundation licensees must not use this repeater
  as they will be transmitting outside their frequency allocation (on 6m & 23cm).

- The Red Emergency button found on the District Nursing radios has been disabled in software.

Front panel keys:

UP key   - Selects channel.
DOWN key   - Selects channel.
SCAN key   - Press to start or stop scan mode.
DELETE key   - Remove busy channel from scan sequence.
SILENT key   - Press to enable Priority channel monitoring.

Key functions during scan mode:
 - During scanning, pressing the PTT will emit beep, stop scanning and return
   to the previously selected channel. Press PTT a second time to transmit.

 - If scanning is stopped on busy channel, pressing PTT stops scan
   mode and transmits on the busy channel. Press SCAN to restart scanning.

 - Press UP key to skip over a busy channel and continue scanning.

 - DOWN key removes a current busy channel from scan list.
   (up to 4 channels can be excluded from scan).
   The deleted channels list is cleared if the SCAN key is used to stop scanning.
   The deleted channels list is not cleared if scanning is stopped with PTT.

 - Pressing SILENT while scanning causes the radio to check the priority
   channel every few seconds, even when stopped on another active channel
   in the scan group.
   The Priority channel is the channel selected before scanning was started.

EPROM notes:
 - The personality data in the EPROM for the RT85A is different to the standard RT85. While this EPROM
may function in the standard RT85, the radio may not function as expected.

Table legend:
TONE = CTCSS freq; S(can): Y=Scanned; M(ode): S=Simplex, R=Repeater

CH	Rx freq (MHz)	Tx freq (MHz)	ctcss Hz	S	M	Usage & Victorian Repeaters
0	439.000	439.000			S	National simplex FM call channel
1	438.025	433.025	123		R	3REG Mt Cann, E/Gippsland,VK3EME IRLP 6063
2	438.050	433.050	123		R	VK7RVH
3	438.075	433.075	123		R	3RDU Mt Major
4	438.100	433.100	123	Y	R	3RCC Melbourne City
5	438.125	433.125	123		R	
6	438.150	433.150	91.5		R	3RIR Arthur's Seat 6391
7	438.175	433.175	123		R	3RUG Devil's River, Eildon/Alexandra
8	438.200	433.200	123		R	
9	438.225	433.225	123	Y	R	3ROU Olinda IRLP 6360
10	438.250	433.250	123		R	
11	438.275	433.275	123	Y	R	3RWE Portable WICEN
12	438.300	433.300	123		R	
13	438.325	433.325	123	Y	R	3RMH Wattle Glen,N/E Melb NERG IRLP 6350
14	438.350	433.350	123		R	3RBN Burrumbeet (proposed)
15	438.375	433.375	123		R	3RGU Mt Carrajung, E.Gippsland
16	438.400	433.400	123	Y	R	3RFY Hillside, N/W MElb (WANSRC) 6079
17	438.425	433.425	123		R	3RCU Mt Moliagul, Bendigo
18	438.450	433.450	123		R	
19	438.475	433.475	123		R	3RBU Mt Hollowback, Ballarat
20	438.500	433.500	123		R	
21	438.525	433.525	123	Y	R	3RAD Mitcham;3RNU Wangaratta;3RRU Mildura 6320
22	438.550	433.550	123		R	VK7RAB ?
23	438.575	433.575	123		R	3RWD Drouin, W.Gippsland; VK2RAY Albury
24	438.600	433.600	91.5	Y	R	3RTL Niddrie (S/W Melb.) 6390, echo#1046; VK7
25	438.625	433.625	123	Y	R	3RWI Portable WICEN
26	438.650	433.650	123		R	
27	438.675	433.675	123	Y	R	3RWU Mt William, Grampians
28	438.700	433.700	123		R	3RBM Bacchus Marsh (proposed)
29	438.725	433.725	123		R	
30	438.750	433.750	88.5	Y	R	3RHF Olinda (linked to 10m/6m/23cm)
31	438.800	433.800	123	Y	S	WICEN repeater split reverse
32	438.800	438.800	123		S	WICEN simplex on 438.8 repeater output
33	433.800	433.800		Y	S	WICEN simplex on 433.8 repeater input
34	438.850	438.850			S	National ARDF foxhunting
35	438.875	438.875			S	
36	438.900	438.900			S	
37	438.925	438.925			S	
38	438.950	438.950			S	
39	438.975	438.975			S	
40	439.000	439.000			S	National Simplex FM calling
41	439.025	439.025			S	VK3RM echolink #315392
42	439.050	439.050			S	Packet
43	439.075	439.075			S	Packet
44	439.100	439.100			S	
45	439.125	439.125			S	
46	439.150	439.150			S	
47	439.175	439.175			S	
48	439.200	439.200			S	Packet
49	439.225	439.225			S	Packet

CH	Rx freq (MHz)	Tx freq (MHz)	ctcss Hz	S	M	Usage & Victorian Repeaters
50	439.250	439.250			S	Packet
51	439.275	434.275	123		R	
52	439.300	434.300	123		R	
53	439.325	434.325	123		R	3RGH Green Hill, Macedon Ranges
54	439.350	434.350	123		R	
55	439.375	434.375	123	Y	R	3RMC Berwick/Narre Warren 6300
56	439.400	434.400	123		R	
57	439.425	434.425	123		R	3RNE Wodonga 6380; 3RSU Chesney Vale,N.E.Vic
58	439.450	434.450	91.5	Y	R	3RMN Kinglake
59	439.475	434.475	123	Y	R	3RLP Frankston 6794
60	439.500	434.500	123		R	3RGC Montpellier, Geelong
61	439.525	434.525	123		R	3RTU Mt Taylor, Bairnsdale
62	439.550	434.550	123		R	
63	439.575	434.575	123	Y	R	3RGL Mt Anakie, Geelong
64	439.600	434.600	123		R	WICEN portable
65	439.625	434.625	123	Y	R	3RBY Bayswater
66	439.650	434.650	123		R	3RWL Mt Warrnambool
67	439.675	434.675	123		R	3RZU Mt Buller
68	439.700	434.700	123		R	
69	439.725	434.725	123	Y	R	3RPU Arthurs Seat
70	439.750	434.750	123		R	
71	439.775	434.775	123		R	3RGV Mt Wombat,NE Vic 6992
-	434.790					<< No LIPDs above this point (434.790MHz) >>
72	439.800	434.800		Y	R	3RMU Mt St.Leonards
73	439.825	434.825	91.5		R	3RPU Arthurs Seat
74	439.850	434.850		Y	R	3RMM Mt Macedon WICEN
75	439.875	434.875			R	3RDU Mt Major, Goulburn Valley
76	439.900	434.900		Y	R	3RSE Glen Waverley
77	439.925	434.925		Y	R	3RWP Portable WICEN
78	439.950	434.950			R	3RMG Mt Broughton, Yea-Seymour (linked to 3RUG)
79	439.975	434.975		Y	R	3RSS Portable Scouts (link to 2m 3RSR)
80	433.775	433.775			S	SSTV/FAX(AFSK)
81	433.800	433.800			S	WICEN simplex
82	433.825	433.825			S	
83	433.850	433.850			S	
84	433.875	433.875			S	
85	433.900	433.900			S	
86	433.925	433.925			S	
87	433.950	433.950			S	
88	433.975	433.975			S	
89	434.000	434.000			S	
90	434.025	434.025			S	
91	434.050	434.050			S	Packet
92	434.075	434.075			S	Packet
93	434.100	434.100			S	Packet
94	434.125	434.125			S	Packet
95	434.150	434.150			S	Packet
96	434.175	434.175			S	Packet
97	434.200	434.200			S	Packet
98	434.225	434.225			S	Packet
99	434.250	434.250			S	Packet (Glen Waverley)

Revisions:

Rev 7.5:
  8kROM contains patch 1 to fix scan delete key delay, scan above ch 30, etc.

Rev 7.6:
- Added 123Hz CTCSS Tx for new Melbourne repeaters on chans 09,16,24,55.
- CTCSS 123Hz added to all other repeaters in LIPD band for future protection.
  (Currently only chans 4,9,15,16,21,24,30(6m link) and 55 require CTCSS).
- Changed chan 31 from 438.775 simplex to 438.800 MHz duplex for WICEN
  repeater (freq pair also used by WICEN in simplex mode via chans 32 & 81).
- Removed non-operational and added new repeaters to scan list.
  Includes repeaters servicing Melbourne Metro Area and some DX repeaters.
- Added chans 16,24,31,59,77 and removed chan 28 from scan group.

Rev 7.7:
- Changed channel 33 to WICEN simplex 433.800 (grouped with ch 31 & 32
  WICEN repeater).
- Added chan 33 to scan list.

Rev 7.8:
- VK3RMM moved from ch51 to ch74, updated comments and scan list.
- VK3RMU moved from ch03 to ch76, updated comments and scan list.
- VK3RMN changed CTCSS to 91.5Hz
- VK3RIR changed CTCSS to 91.5Hz
- VK3RTL changed CTCSS to 91.5Hz
- VK3RBN added to ch14
- VK3REO deleted, added 3RBM on ch28
- VK3RM Echolink on ch41, comment added
- VK3ROK deleted, VK3RGH added on ch 53
- VK3RWL added to ch66
- VK3RPU added to ch73 with CTCSS 91.5Hz

Further RT85 information:

http://qsl.net/vk3byy
http://users.on.net/~gbear/index.html
http://skinny.8k.com/rt85/rt86.html
http://groups.yahoo.com/group/rt85/ (documentation, software, requires free membership registration)
http://www.qsl.net/vk2kfj/index.html   (conversion notes for low band RT85 to 6m)
http://www.radioprogrammers.com/70-1000X.html (commercial programmer for the Standard RT85 EPROM
module Z-273. Not suitable for RT85A).