



ATTACHMENT A

FINAL AFV MESSAGES

To South Vietnam (From Army Office)

**VSA622 HH
CO RAMARL
DE RAYWC 086 3492318**

**O R 160005Z DEC71
FM ARMY CANBERRA
TO RA ARL/AUSTFORCE VIETNAM**

**IN O RAYAFN/6 SIG REGT
RAMAAK/110 SIG SQN
BT**

RESRICTED SIGS67691 FOR CSO

ON THE OCCASION OF THIS CMM THE LAST MESSAGE TO PASS FROM AUSTRALIAN TO SOUTH VIETNAM OVER THE DIRECT HF RADIO CIRCUIT CMM RA SIGS MAY FEEL JUSTLY PROUD OF ITS RECORD IN MAINTAINING SUCH A HIGH STANDARD OF CONTINUOUS SERVICE ON THIS DIFFICULT CIRCUIT. OVER THE SIX AND A HALF YEARS OF OPERATION APPROXIMATELY ONE AND THREE QUARTER MILLION MESSAGES HAVE BEEN PASSED AND DELIVERED TO ADDRESSEES. THIS OCCASION MARKS THE END OF AN ERA IN SIGNALS HISTORY AND NO DOUBT THE CORPS STILL WILL GO ON TO EVEN GREATER DEEDS IN THE FUTURE.

**INT ZKJ
BT**





To Army Office (From CSO, Lt. Col. Mapson)

PRECEDENCE - ACTION: **PRIORITY**
PRECEDENCE - INFO: **ROUTINE PRIORITY**
DATE - TIME GROUP: **160005Z DEC 71**
SECURITY CLASSIFICATION AND SPECIAL HANDLING INSTRUCTIONS: **RESTRICTED**
ORIGINATOR'S NUMBER: **SIGS 17643**
FROM: **AUSTFORCE VIETNAM**
TO: **ARMY CANBERRA**
INFO: **6 SIG REGT, 110 SIG SQN**

FOR D SIGS/CO/OC FROM CSO
THIS IS THE FINAL MESSAGE TRAMITTED OVER THE HF RADIO LINK FROM VUNG TAU TO MELBOURNE. THE REAR LINK HAS BEEN A PART OF RA SIGS HISTORY SINCE THE BEGINNING OF AFV. DESPITE MANY PROBLEMS IT HAS FUNCTIONED EFFICIENTLY AND HAS PROVIDED CHANNELS FOR MILLIONS OF MESSAGES OVER THE SIX YEARS HAS BEEN OPERATING. THE SUCCESS ACHIEVED IS FITTING TRIBUTE TO THE SKILL AND DEDICATION OF UNITS AND PERSONEL INVOLVED IN ITS ENGINEERING AND TRAFFIC MANAGEMENT. FOR THE CLASS OF EQUIPMENT AND THE PATH LENGTH IT WILL ALWAYS REMAIN AN OUTSTANDING EXAMPLE OF ACHIEVEMENT IN HF RADIO ENGINEERING. CONGRATULATIONS TO BOTH UNITS INVOLVED. ON BEHALF OF COMD AND STAFF XXX XXX XXX XXX XXX XXX PROVISIONING OF COMMUNICATIONS BETWEEN AUSTRALIA AND SOUTH VIETNAM. FOR D SIGS FROM CSO WITH XXX XXX. INT

DRAFTER'S NAME & APPOINTMENT: MAPSON CSO
TELE No: 4031
REF FILE No: R197-1-3
DATE: 14/12

XXX = illegible part of message

Note: The last circuit message from Vietnam was transmitted on the 17 December 1972 by AAAGV (Signal Detachment) noting that 1,790,000 messages had been transmitted over the circuit since it had been established by 709 Signal Troop on 30 June 1965.





CHRONOLOGY - RASIGS IN VIETNAM

DATE	EVENT
3 August 1962	Captain B. R. Tinkler arrives in South Vietnam to serve with AATTV - First member RA Sigs deployed in the war.
1963-1964	RA Sigs re-organised and re-equipped with US Radios (AN/PRC-25, AN/VRC-12 and AN/TRC-75) and Shelter Equipments.
8 July 1964	Warrant Officer Class Two Kevin Conway becomes the first Australian to die on active service in South Vietnam.
10 November 1964	The Prime Minister announces introduction of national service to increase the Army's strength from 22,750 to 37,500.
April 1965	2 Signal Regiment in Watsonia, Victoria, received warning order to form a composite troop of 50 to move to a concentration area in Ingleburn, NSW - The start of the deployment of 709 Signal Troop to South Vietnam.
29 April 1965	The Prime Minister announces the dispatch of an infantry Battalion to South Vietnam, with an armoured personnel carrier (APC) troop, a signals troop and logistic support company.
25 May 1965	Captain Twiss, OC 709 Signal Troop, arrives in Saigon with small Force reconnaissance party.
June 1965 (Early)	709 Signal Troop advance party arrives in Saigon by RAAF C130 aircraft - 7 members in South Vietnam with two AN/TRC-75's and four Generators.
June 1965 (Next day)	First communications (CW) by 709 Signal Troop to Australia (6 Signal Regiment - Melbourne, Victoria) day after arrival.
8 June 1965	Main body of 709 Signal Troop arrive in Vung Tau, South Vietnam with the bulk of the 1 RAR Group on HMAS Sydney.
30 June 1965	First intake of National Servicemen starts recruit training in Australia.
July 1965 (Mid)	709 Signal Troop having trouble manning rear and forward links (Saigon) and providing services to 1 RAR Group at Bien Hoa.
July 1965 (Mid)	Major W.R.T. Bodger sent to South Vietnam to assess the Signals situation.
14 Sept 1965	527 Signal Troop arrives with 2 nd Lieutenant Jock Lonie and 29 NCO's and other ranks to assist 709 Signal Troop.
October 1965 (Late)	HQ AAFV moved into the Free World Military Assistance Organisation building - New Communications Centre required but installed to fixed station standards by detachment from 127 Signal Squadron.
November 1965	104 Signal Squadron raised for service in South Vietnam at Wacol, Brisbane, Queensland.
December 1965	103 Signal Squadron raised by 1 Signal Regiment for deployment to South Vietnam at Ingleburn, Sydney, New South Wales.
April 1966	Australian forces in South Vietnam increased to a Task Force (1 ATF) with two battalions with supporting combat units plus RAAF Iroquis helicopters, Caribou Transport aircraft and Canberra bombers. Also RAN maintained a destroyer on station off Vietnam.
1 April 1966	First elements of 145 Signal Squadron arrived in South Vietnam. - 145 Signal Squadron included a HQ Troop, 506, 520, 552, 527, 581 and 709 Signal Troop's. Note: 527 and 709 Signal Troop's already in South Vietnam.





DATE	EVENT
May 1966 (Early)	103 Signal Squadron, commanded by Major P.D. Mudd, arrive in South Vietnam by air and HMAS Sydney and set up at Back Beach, Vung Tau.
26 May 1966	First National Serviceman KIA.
June 1966 (Early)	103 Signal Squadron deploys to Nui Dat by road and Chinook helicopters.
June 1966	The Australian signal centre and switchboard at Bien Hoa closed and SDS from Saigon to Bien Hoa ceased.
4 June 1966	Concentration of 1 ATF at Nui Dat is completed.
8 June 1966	547 Signal Troop advance party arrives in Vung Tau.
14 June 1966	547 Signal Troop arrives and deploys to Nui Dat.
17 June 1966	3 SAS Squadron with its Signal Troop from 152 Signal Squadron deploy to Nui Dat.
24 June 1966	547 Signal Troop starts EW operations.
July 1966 (Mid)	145 Signal Squadron installed VHF radio relay trunks using the AN/MRC-69 system interconnected HQ AFV at Cholon to 1 ALSG at Vung Tau via a repeater at VC Hill in the Vung Tau area. Another link from Nui Dat to Vung Tau provided channels from HQ 1 ATF to 1 ALSG and HQ AFV.
7 July 1966	Communications centre opened at Vung Tau by 581 Signal Troop (part of 145 Signal Squadron). At Nui Dat, the task force signal squadron (103 Signal Squadron) opened its communications centre, along with cipher, radio, switchboard and SDS services.
29 July 1966	547 Signal Troop detect enemy 275 Regiment transmitter moving towards Nui Dat.
14 August 1966	547 Signal Troop detect enemy 275 Regiment transmitter in the area of Long Tan.
18 August 1966	Battle of Long Tan - Task Force, 6 RAR and Artillery Command Radio Nets provided good communications to support the battle.
January 1967	SAS RA Sigs members now Detachment 152 Signal Squadron. Note: 152 Signal Squadron part of SAS Regiment.
March 1967	139 Signal Squadron raised as a reinforcement unit for 104 Signal Squadron at Enoggera, Brisbane.
March 1967	Elements of 110 Signal Squadron, commanded by Major E.H. Hynes, arrived to begin the relief of 145 Signal Squadron and by end of May, 110 Signal Squadron had taken over all responsibilities for force signals.
28 March 1967	Signalman B. A. Logan of 552 Signal Troop, 145 Signal Squadron KIA whilst attached to US 11 ACR on Operation PORTSEA.
16 April 1967	104 Signal Squadron Farewell Parade part of the Corps Day Parade by 4 Signal Regiment, 7 Signal Regiment and 129 Signal Squadron at Wacol.
April 1967	104 Signal Squadron deploys to Vietnam under the command of Major G.L. Lawrence to replace 103 Signal Squadron at Nui Dat and takes over the 1 ATF signals communications.
July 1967	Signalman Reginald Armstrong from 104 Signal Squadron WIA at Blackhorse.
August 1967	547 Signal Troop starts ARDF missions in Cessna 180A aircraft.
9 August 1967	Corporal D. J. Donnelly of 104 Signal Squadron accidentally killed cleaning F1 Sub Machine Gun in unit lines at Nui Dat.
September 1967	6 Signal Regiment (Melbourne, Australia) converted their end of the link to AFV to fully automatic operation.





DATE	EVENT
6 May 1968	Viet Cong force reached the north west corner of the Phu Tho compound (Saigon) and rear link communications to Australian cut.
11 May 1968	The AUSTCAN Receiver Station located at Long Binh (with US STRATCOM receivers) was attacked with 120mm rockets. Signalman James Cole 110 Signal Squadron WIA.
12 May 1968	Elements of 104 Signal Squadron with advance party of HQ 1 ATF deployed to FSPB Coral.
13 May 1968	Main body of 1 ATF arrives at FSPB CORAL to bring the 104 Signal Squadron signals group to 51 including two 3 man detachments from 110 Signal Squadron and the 7 man detachment of US 53 Signal Battalion. Signalman Rowan Gamble 104 Signal Squadron WIA.
16 May 1968	Signalman A.H. Young from 104 Signal Squadron KIA at FSPB Coral and two other 104 Signal Squadron Signalmen WIA (John Koosache and Ian Crosthwaite).
1 June 1968	Signalman John Veall from 110 Signal Squadron WIA at the Canberra BEQ in Saigon.
August 1968	110 Signal Squadron relocated its HQ and Q Store from Saigon to Vung Tau.
9 August 1968	AUSTCAN Transmitter Station installed and began continuous operation from Nui Dat.
29 September 1968	Signalman D. E. Abraham from 104 Signal Squadron, KIA near Blackhorse (Long Khanh Province) in US Huey Helicopter.
September 1968	AUSTCAN Receiver Station installed and operating Type 1 Rhombic Antennas at Long Binh.
October 1968	547 Signal Troop deploys experimental DF equipment at Nui Dat. Known as 'The Cell'.
November 1968	104 Signal Squadron deploys COMMCEN to FSPB Lion in ACV for the first time.
27 December 1968	104 Signal Squadron started section patrols for one or two days outside the 1 ATF base perimeter.
6 May 1969	Warrant Office Class Two M.W.T. Gill a member of RA Sigs KIA while serving with AATTV. Warrant Office Class Two Simpson received the Victoria Cross trying to save Gill.
November 1969	AUSTCAN Receiver Station relocated from Long Binh to Vung Tau.
February 1970	547 Signal Troop new ARDF equipment located in Pilatus Porter aircraft.
June 1970	104 Signal Squadron patrol under the command of SSM WO2 A.B. Huston engage 20 enemy 4 kilometres east of Nui Dat.
25 August 1970	Signalman S. T. Moore from 110 Signal Squadron dies of neuroblastoma in Repatriation General Hospital, Heidelberg, Victoria after becoming ill in Vietnam in September 1969.
September 1970	Signalman D. A. B. Wallis from 110 Signal Squadron returns to Australia and died on the 17 March 1972 in the Repatriation General Hospital, Heidelberg, Victoria.
30 October 1970	MRS Vung Tau activated with MRS Saigon closing a few days later.
November 1970	Call home service opened for Australian Soldiers using 4 wire telephones.





DATE	EVENT
January 1971	AUSTCAN Transmitter Station relocated from Nui Dat to Vung Tau.
February 1971	EMU Switchboard (Vung Tau) TC-10 replaced with an AN/MTC-1.
May 1971	110 Signal Squadron handled 156,000 messages of which 117,800 passed through the MRS, the greatest number ever handled by RA Sigs MRS in Vietnam.
August 1971	EMU Switchboard handled an average of 8,000 calls a day - the highest load ever.
August 1971	547 Signal Troop relocate to Vung Tau with only the ACV detachment remaining at Nui Dat.
18 August 1971	The Prime Minister of Australia announced that the Vietnam Force would be withdrawn.
Mid October 1971	104 Signal Squadron relocated to Vung Tau with a few detachments remaining at Nui Dat to help complete the withdrawal.
October 1971	Last members of Detachment 152 Signal Squadron (SAS) leave Vietnam.
17 October 1971	547 Signal Troop - AVC last vehicle to leave Nui Dat.
6 November 1971	104 Signal Squadron main body boarded HMAS Sydney for the return trip to Australia and its new home in Ingleburn.
13 December 1971	547 Signal Troop stops operations in South Vietnam.
16 December 1971	HF rear link to Melbourne was formally closed at 0005z after 6 ¹ / ₂ years of continuous operations and carrying 1.3 million messages.
23 December 1971	547 Signal Troop departs South Vietnam for Australia.
19 January 1972	MRS Vung Tau closed and reopened in Saigon. EMU switchboard cut over to SB-86/PT.
1 February 1972	Vung Tau Area COMMCEN (110 Signal Squadron) closed at 2400z.
February 1972	AUSTRALIAN ARMY ASSISTANCE GROUP VIETNAM (AAAGV) - Signal Detachment formed and starts taking over communications to Australia from 110 Signal Squadron.
February 1972 (Late)	EMU switchboard (110 Signal Squadron) closed.
29 February 1972	SDS and ADS (110 Signal Squadron) discontinued.
12 March 1972	110 Signal Squadron leaves Vietnam.
17 December 1972	Last message transmitted from South Vietnam by AAAGV. Total of 1,790,000 messages transmitted by RA Sigs during the war.
18 December 1972	Australia's military commitment to South Vietnam ends with AAAGV leaving Vietnam, with its Signal Detachment.
30 April 1975 (Noon)	North Vietnam Army tanks smash through the gates of the presidential palace in Saigon - The war is over.
18-24 November 1979	The remarkable and striking painting 'Signals in Vietnam' is hung in the foyer of the School of Signals at Watsonia and dedicated by Brigadier K. P. Morel during RA Sigs Corps Week.
3 October 1987	25,000 men and women of the Australian Vietnam Veterans community march through Sydney, which marked their 'Welcome Home' from Vietnam.
3 October 1992	Australian Vietnam Forces National Memorial is dedicated at its sacred site on ANZAC Parade in Canberra.





LIST OF TERMS

1 ALSG	1 st Australian Logistic Support Group.
1 ATF	1 st Australian Task Force.
11 ACR	11 th Armored Cavalry Regiment (US Unit based at Blackhorse). Motto "Find the bastards – then pile on"
173 Abn Bde	173 rd Airborne Brigade (US Army Unit in which 1 RAR Group was attached). Nickname 'The Herd'.
1 Sig Bde	1 st Signal Brigade (US Army Unit providing communications to all of Vietnam). It operated five Signal Groups throughout Vietnam and Thailand.
AAAGV	Australian Army Assistance Group Vietnam - Final Australian organisation in Vietnam (1972) which included a Signal Detachment.
AATTV	Australian Army Training Team Vietnam (The most highly decorated unit in the Australian Army).
AAFV	Australian Army Force Vietnam.
ACP 125	US Operating procedures that replaced the pre Vietnam 'Signal Training All Arms Pamphlet 7' (based on British procedures).
ACV	Armoured Command Vehicle.
ADS	Air Delivery Service.
AFVT	Australian Forces Vung Tau. Radio broadcast station run by the RAAF at Vung Tau for Australian Forces.
AFV	Australian Forces Vietnam.
AK	Accidentally Killed (on Active Service).
AN/GRA-39	Remote transistorized, battery-operated equipment for AN/PRC-25 (AN/PRC-77) and other Radio equipment - It enables an operator to transmit and receive voice communication through a radio set from a distance up to 3.2 km remotely.
AN/GRC-106	Field 400 watt HF Radio Set - It operates on CW and USB, full coverage from 2 to 30MHz. It's synthesizer has a crystal oven for ultra high stability. It emits 400W PEP on USB and 120W on CW. The GRC-106 consists of a RT-662 receiver exciter (bottom) and a AM-3349 linear amp (top). A modem unit can be connected for RTTY applications.





AN/MGC-17	Teletypewriter Central Office, Voice frequency telegraph, 12 lines, Major components: SB-22, 3 x TH-5 or TH-22, 6 x CV-425 or TA-182, TA-312, TT-4, TT-76 and 2 x KW-7 (normally terminates 1 x Duplex Circuit) - TM 11-5815-205-14.
AN/MRC-69	Radio Relay Shelter using the AN/TRC-24 VHF/UHF Radio Equipment. Carrier equipment was the F1830, which was different to the USA version.
AN/MTC-1	Manual Telephone Central Office, 196 local or common battery line and 20 trunk lines, Major components: AN/MTA-3 (Switchboard Shelter) and AN/MTA-4 (Control Shelter) - TM 11-5805-284-14.
AN/MTC-7	Small Switchboard Shelter (1 x SB-86/PT) - 60 lines max.
AN/PRC-25	Man pack VHF Radio Set, 30-76MHz, 920 channels, 50kHz spacing, FM, 1-2 watts, 12VDC from BA-4386 mil-type battery.
AN/PRC-47	Man pack HF Radio Set (very large man pack load) - Full coverage synthesized from 2 to 12MHz. It emits 100W PEP (low power 20W), on either CW or USB. An FSK converter allows the use of RTTY.
AN/PRC-64	Small HF Radio Set normal only used by SAS in Vietnam - Built by Delco in the US in the sixties. Fully solid state, designed for field use, but there is no facility for use on the move. Only wire antennas are provided. Both transmitter and receiver are crystal controlled. Output power is about 5 watts. Frequency coverage is 2.2 to 6 MHz.
AN/PRC-77	Fully transistorised updated version of the AN/PRC-25 design. It also had a wideband mode for secure operations with the TSEC KY-38 speech security equipment.
AN/TGC-5AX	Transmit/Receive/Monitor HF Consoles.
AN/TRC-75	Medium power HF Radio Set, Vehicular, 2-30 MHz, 1 KW, AM, SSB, CW (Vehicular version of ARC-58) Consists of R-761, T-730, C-3341, CU-749, C-2848, AM-2306 and CV-786.
AN/VRC-12	Vehicle mounted FM VHF Radio Set Series - Short-range VHF, vehicular, aircraft, and fixed-station mounted units. Receiver-Transmitter RT-524/VRC is the major component of the AN/VRC-12 series radio configuration. The RT-524 frequency range is 30 to 75.95 MHz and it is equipped with a built-in loudspeaker. High power output is 35 watts. AN/VRC-46 and AN/VRC-49 are two configurations of the AN/VRC-12 series.
ANZUK	Australian. New Zealand and United Kingdom.
ARDF	Airborne Radio Direction Finding.
ARVN	Army of the Republic of Vietnam.
AUSTCAN	Australian Communications Army Network.





BAUDOT	Telegraph transmission code using five bits for character representation with one start and one and a half stop bits.
BEQ	Bachelor Enlisted Quarters. Accommodation in Saigon for Australian Soldiers was in a old Vietnamese Hotel named the 'Canberra BEQ'.
C11/R210	HF Radio Set C11/R210 was developed for medium range HF communication and primarily operated by signals. A set comprised four units: Transmitter C11, Receiver R210, Power Supply Unit and Tuner RF Antenna No. 7. The set has frequency coverage of 2-16 MHz in 3 ranges and facilities are provided for amplitude modulation speech, CW Morse and frequency shift keying. The RF output is 50 watt on high power and 5-10 watt on low power.
C130	Four engine Hercules tactical transport aircraft. Flights to and from Vietnam by RAAF 36 and 37 Squadrons.
C42/C45	VHF Radio Sets. The C42 and the C45 are 1950s vintage VHF transmitter-receiver sets. The C45 cover low band VHF and the C42 covers high band VHF. These radios generally used in vehicular applications such as in tanks and LandRovers. Not being synthesised, they tend to drift severely and have a reputation for a very broad transmission. These radios were used in the Centurion Tanks during the war and caused many headaches for communication planners, because of their tuning/non compatibility with the more modern US VHF radios used by RA Sigs during the war.
Caribou	De Havilland Canada DHC-4A (RAAF) - STOL tactical transport aircraft - Two flight crew plus 32 troops. Callsign 'Wallaby'. Nickname 'Wallaby Airlines'.
CB	Common Battery - Signaling used with field telephone system.
Centurion	Main Battle Tank MK V/1 (Aust) weighting 54 tonnes. They provided intimate direct fire support to the infantry and with shock action and devastating fire power provided the Australian Forces with a definite edge against fortified Viet Cong positions and also in defensive roles in their four years in Vietnam. Many variants of the Centurion were available including bridgelayer, tank dozer and an armoured recovery vehicle. See C42/C45 also.
Cessna 180A	Cessna 180A observation and liaison aircraft - Seating for four, usually one or two - Used with early ARDF equipment by 547 Signal Troop. Callsign 'Possum'.
Chieu Hoi	Open arms program run by the South Vietnamese Government allowing VC or NVA carrying a Chieu Hoi leaflet to surrender and get better treatment than soldiers captured on the battlefield.
Chinook	CH-47 medium lift twin-rotor cargo helicopter. Not in service with the RAAF during the Vietnam war.





Clive Steele	AV1356 Clive Steele, 1000 ton Landing Ship Medium (LSM) - Operated by 32 Small Ship Squadron, Royal Australian Engineers (RAE).
CO	Commanding Officer.
COMMEN	Communication Centre. Also "COMCEN".
Corps	Royal Australian Corps of Signals.
CP	Command Post.
CP Op	Command Post Operator.
CSO	Chief Signals Officer.
CW	Continuous Wave.
D10	Common name for Cable Telephone WD-1/TT - A general purpose field cable for telephone and telegraph circuits. - Range 19 Km for 19dB loss.
Dannet	Free standing coiled barbed wire.
DCA	(US) Defense Communications Agency.
DCS	(US) Defense Communications System.
Deeco mast	Common name for Mast Triangular Lattice 22m - Used standard mast sections (1.83m) that bolt to together as require.
DF	Direction Finding - The process of determining the bearing of an electromagnetic emission.
DR	Dispatch Rider.
Ducting	Meteorological conditions. Ducts can cause radio waves to propagate to anomalously long or short ranges. Radio waves can be trapped in a duct and propagate along a path following the curvature of the earth's surface, instead of travelling in a straight line.
Duplex mode	Operations of a common communication link where transmissions are possible in both directions at the same time.
DUST OFF	Radio callsign of casualty evacuation helicopters normally a 'Huey'.
E514 or E513	Australian made High Powered (5Kw) High Frequency (HF) manual tuned Transmitters. The E514 had a lower frequency range (2.5Mhz) then the E513 (3.5Mhz). Both used 4 x 3J160E valves in parallel pull-pull in the final stage.





EBONY	Switchboard designation for 1 ATF at Nui Dat (103 then 104 Signal Squadron's).
EMU	Switchboard designation for 1 ALSG at Vung Tau (145 then 110 Signal Squadron's).
EW	Electronic Warfare - The military action involving the use of electromagnetic energy to determine, exploit, reduce or prevent hostile use of the electromagnetic spectrum and action which retains friendly use of the electromagnetic spectrum.
F1830	FDM (Frequency Division Multiplexing) carrier equipment use with the Radio Equipment AN/TRC-24 in the Australian AN/MRC-69 Radio Relay Shelter.
FFV	US Headquarters - Field Force Vietnam. Command subordinate to MACV (Military Assistance Command (South) Vietnam) that exercised direct control over all US Forces. Army units operating in particular corps tactical zone. Field Force I commanded II Corps and Field Force II commanded III and IV Corps (including 1 ATF).
FM 24/400	Siemens Halske commercial microwave Radio Relay System - 12 or 24 channel, 400MHz.
FSPB	Fire Support Patrol Base or Fire Support Base (FSB).
FWMAO	Free World Military Assistance Organisation.
Harry Chauvel	AV1353 Harry Chauvel, 1000 ton Landing Ship Medium (LSM) - Operated by 32 Small Ship Squadron, Royal Australian Engineers (RAE).
HE	High Explosive.
HF	High Frequency.
HMAS Jeparit	Ship used to resupply AFV - HMAS Jeparit did 43 voyages to South Vietnam. Term used by many Australian Soldiers during the war "on the next Jeparit".
HMAS Sydney	Old aircraft carrier used to ferry troops and equipment to and from Vietnam - Also known as the Vung Tau Ferry. The Vung Tau Ferry did 22 voyages as a troopship to South Vietnam.
HQ	Headquarter.
Huey	Common nickname for the Bell UH-1B (UH-1H) Iroquois utility assault and gunship Helicopter (RAAF). Utility helicopters used the callsign 'Albatross' and gunships used the callsign 'Bushranger'.
JTC	Jungle Training Centre - Australian Army base in Canungra, Queensland where Australian soldiers did their final three-six weeks battle efficiency training before leaving for Vietnam.





K Phone	Australian made field general purpose telephone. Design for operation in forward areas under all climatic conditions. Working range 16 km on WD-1/TT (D10).
KIA	Killed in Action.
Kingstrand Hut	Pre-fabricated steel huts - normally built on a concrete slab.
Kiowa	Bell OH-58A Light observation helicopter (Army) - Seats for five, including the pilot - Leased Kiowa's replaced Sioux helicopters early in 1971. Callsign 'Possum'. Australian built version is the Bell 206B.
Kleinschmidt	Manufacturer of telegraph equipment - See TT-4/TG and TT-76/GGC.
LO	Liaison Officer.
LUP	Lay up position.
Lowers	Slang for plain text. Cipher equipment code door open.
M577-A1	See ACV.
Magneto	Telephone signaling using hand generated current.
Ma Rung	Vietnamese term 'phantoms of the jungle'.
MID	Mentioned in Despatches.
Montagnards	Montagnards (French for "mountain people") are the members of more than 30 primitive societies located mainly in the mountainous, forested spine separating Vietnam and Laos.
MRS	Major Relay Station.
Napalm	Jellied petrol firebomb.
NCO	Non-Commissioned Officer, eg Corporal.
NVA	North Vietnamese Army.
OC	Officer Commanding.
OTC	Overseas Telecommunications Commission (Australia).
OTLP	One Time Letter Pad – Used for the encryption of radio transmissions.
OMC	Owen Machine Carbine - Australian designed and made 9mm sub-machine gun.
Pilatus Porter	Pilatus PC-6 Turbo Porter STOL Light utility observation and liaison aircraft (Army) - Two crew and six passengers. Callsign 'Possum'.





Pronto	Radio appointment title for 'Signals' - low grade security.
QRN	Q Code - I am troubled by static (used with morse code).
US	United States of America.
USAF	United States Air Force.
R-391/URR	HF Radio Receiver.
R5232	HF Radio Receiver.
RA Sigs	Royal Australian Corps of Signals.
RAAF	Royal Australian Air Force.
RAN	Royal Australian Navy.
RAR	Royal Australian Regiment or Battalion if number in front.
RC-292	VHF field antenna system - The RC-292 is a general purpose, stationary, ground-plane antenna used to increase the transmission/reception range of tactical FM radio sets. The radiating and ground plane elements must be adjusted to the proper length for a particular operating frequency.
RT-524	The receiver/transmitter of the vehicular borne AN/VRC-12 series VHF equipment.
RTT or RTTY	Radio TeleType.
SAL Block	Toilets - Ablutions.
SAS	Special Air Service (Regiment).
SB-22/PT	Manual telephone switchboard, Tactical, Portable, 12 Line, 2-wire, Local battery (2 BA-30), 90 VAC 20 Hz ringing - TM 11-5805-262-12.
SB-86/PT	Manual telephone switchboard, Tactical, Portable, 30 Line, 2-wire, Local battery (5 BA-200 + 4 BA-30), 90 VAC 20 Hz ringing, Major components: SB-248, TA-207 and PP-990 - TM 11-2134 or 11-4134.
SDS	Special Delivery Service.
SEACOM	Coaxial cable in the 1960's between Singapore and Hong Kong.
Shelter	Packaged communication equipment in pre wired aluminum housing that is transportable either by vehicle or aircraft.
SIGCEN	Signal Centre.





Simplex mode	One-way link transmission - Receive then Send.
Sioux	Bell 47G-3B Utility and Training Helicopter (Army) - One pilot and up to two passengers. Callsign 'Possum'.
SO Sigs	Staff Officer Signals (Senior Signals Officer HQ 1 AFV).
SOI	Standard Operation Instructions.
SOP	Standard Operation Procedures.
Spiral 4	Field Quadded Cable with four conductors - Quadded cable formed of multiples of quads, paired and separately insulated, and contained under a common jacket.
Spooky	AC47 (DC3) aircraft equipped with illumination and six machine guns (normally gattling guns). Also called Puff the Magic Dragon (so named after the saccharine song of the same name).
Squadron	Group approximately the size of a company (100+ men).
SQMS	Squadron Quartermaster Sergeant. A senior NCO with responsibility for the stores aspects of a signals unit.
SSB	Single Side Band.
SSM	Squadron Sergeant Major - A warrant officer responsible, among other things, for good order and military discipline.
STRATCOM	The U.S. Army Strategic Communications Command (STRATCOM) was the major field command serving as the single manager directly controlling the Army portion of the global Defense Communications System (DCS), under the Defense Communications Agency (DCA).
STT	Supervisor Technical Telecommunications. A senior NCO with responsibility for the Technical aspects of a signals unit.
SYSCON	System Control.
TAOR	Tactical Area of Responsibility.
TC-10	200 Line switchboard first used in the Second World War.
Tet	Lunar New Year, the most important Vietnamese holiday.
TF	Task Force - Group approximately the size of a military brigade.
Troop	Group approximately the size of a platoon.
TT-4/TG	Teletypewriter, Lightweight, Portable, Keyboard and printer, 20/60 ma loop, half or full duplex, 60, 66, 75 or 100 wpm, 105-125 VAC 50-60 Hz - TM 11-5815-206-12 (Kleinschmidt).





TT-76/GCC	Teletypewriter, Lightweight, Transportable, Keyboard/Transmitter-distributor and printer/paper-tape punch, 20/60 ma loop or polar, half or full duplex, 60, 66, 75 or 100 wpm, 115 VAC 50-60 Hz - TM 11-5815-238-10 (Kleinschmidt).
VC	Viet Cong. Also 'Victor Charlie'.
VHF	Very High Frequency.
VZ 12K	Siemens Halske Channeling equipment.
ZGN	Z Code - When was I last heard?
ZKJ	Z Code - Close down.





LIST OF LOCATIONS



- Ba Queo** Suburb of Saigon near Tan Son Nhut airport. Location of Australian HF Receivers.
- Balcombe** Suburb of Melbourne, Victoria, Australia. Location of the School of Signals (RA Sigs) until late 1960's.
- Baria** In the south-west corner of Phuoc Tuy Province, South Vietnam and is the province capital and largest town. Population 17,000 including hamlets on the west bank of the Song Dinh (river) (1968).
- Bearcat** Royal Thai Army/American base on highway 15 near Long Binh in Bien Hoa Province. Used as a VHF retransmission site for some 1 ATF operations.
- Bien Hoa** City on the Dong Nai River, Saigon. The city is on a main railroad; manufactures include rubber and timber products, tiles, and pottery. The military airfield at Bien Hoa was the site of the initial buildup of United States air power following the Tonkin Gulf incident of 1964. During the Vietnam War (1959-1975), Bien Hoa was headquarters for the surrounding military region. 1 RAR Group (Det 709 Signal Troop) located with the 173 Airborne Brigade at Bien Hoa 1965.





Blackhorse	American base in southern Long Khanh Province, 30 kilometres north of Nui Dat - Home of the US 11 ACR. Their motto 'Find the bastards - then pile on'. Used as a VHF retransmission site for some 1 ATF operations.
Canberra	Capital City of Australia. Australian Army (Defense) HQ and 135 Signal Squadron location.
Canungra	Location of the Jungle Training Centre - Australian Army base in Queensland where Australian soldiers did their final three-six weeks battle efficiency training before leaving for Vietnam.
Cholon	Suburb of Saigon. Location of HQ AAFV and 709 Signal Troop in 1965.
Clark Air Base	Large USAF Base in the Philippines.
Courtenay's Plantation	Old French rubber plantation to the north of Nui Dat, Phuoc Tuy Province, South Vietnam.
Da Nang	City, east central Vietnam, on Da Nang Bay of the South China Sea, near Hue in Quang Nam Province. A major port and an air and naval base, Da Nang was the site of one of the first landings of U.S. troops in Vietnam. An immense military complex grew up near the city, and Da Nang's population increased greatly in the late 1960s and early '70s.
Duc Thanh	On route 2, 15km north of Nui Dat, Phuoc Tuy Province, South Vietnam
Enoggera	Australian Army base in Brisbane, Queensland, Australia. 104 Signal Squadron deployed to South Vietnam from this base in 1967. 139 Signal Squadron raised in 1967 and located during the Vietnam war.
Gospers	Exercise area in the Blue Mountains (north of Sydney), New South Wales, Australia. 1 RAR Group (including 709 Signal Troop) exercise area before deployment to South Vietnam.
Guam	Territory of the USA. Extensive military installations in mid Pacific.
Hiep Thanh	Near Hue, South Vietnam.
Hill 837	Nui Chua Chan (Hill) east of Xuan Loc, Long Khanh Province, South Vietnam. VHF retransmission site for 1 ATF and US operations.
Hoa Long	4.5 kilometres northeast of Baria on Route 2 near Nui Dat, Phuoc Tuy Province, South Vietnam.
Ingleburn	Australian Army base near Sydney in New South Wales, Australia. 103 Signal Squadron raised in 1965 by 1 Signal Regiment for deployment to South Vietnam.





Khe Sanh	Site of a siege of US Marines and South Vietnam Rangers in 1968 near the DMZ (demilitarized zone - seventeenth parallel). Lasted 77 days.
Kontum	Town, central South Vietnam, in the Annam highlands. 40 kilometres north of Pleiku, in Kontum Province, South Vietnam.
Long Binh	Fifteen miles North of Saigon and was a massive American Logistical complex. Location of Australian HF Receivers.
Long Son Island	North of Vung Tau and south-west of Baria in Vinh Ganh Rai (Bay), Phuoc Tuy Province, South Vietnam.
Long Tan	Northeast of Nui Dat, Phuoc Tuy Province, South Vietnam. Famous battle site - on the 18 August 1966, D Company, 6 RAR killed 245 VC/NVA for the lost of 18 Australians.
Nui Dat	Location of 1 ATF base and Luscombe airfield, Phuoc Tuy Province, South Vietnam
Nui Dat 2	Small hill to the east of Nui Dat near Long Tan, Phuoc Tuy Province, South Vietnam.
Perth	Capital City of the State of Western Australian. SAS Regiment is located in a Suburb of Perth 'Swanbourne'.
Phan Rang	245 kilometres northeast of Saigon. Location of 2 Squadron, RAAF (Canberra Bombers) - Callsign 'Magpie'.
Phu Tho	Suburb of Saigon, near racecourse and Tan Son Uhut airport. Location of Australian HF Transmitters and HQ 145 Signal Squadron then 110 Signal Squadron until 1968.
Phu Bai	Near Hue (southeast), South Vietnam.
Pleiku	Town, central South Vietnam, in the Annam highlands, Pleiku Province, South Vietnam. Pleiku was at the center of many critical actions of the Vietnam War, including a guerrilla attack on a U.S. special forces camp in 1965, which provoked the first sustained U.S. air raids of the war.
Rockhampton	Queensland, Australia. Near Shoalwater Bay Training Area.
Saigon	Capital of South Vietnam until 1975 - Now called 'Ho Chi Minh City'.
SWBTA	Shoalwater Bay Training Area - Near Rockhamton, Queensland, Australia.
Tan Son Nhut	Saigon Airport, South Vietnam.
VC Hill	Vung Tau, Phuoc Tuy Province, South Vietnam. Site for some of 145 then 110 Signal Squadron communications equipment.





Vung Tau	Town with port and all-weather airfield, Phuoc Tuy Province, South Vietnam. 1 ALSG location. 145 then 110 Signal Squadron main location.
Wacol	Australian Army base in Brisbane, Queensland, Australia. 104 Signal Squadron raised at this base in November 1965.
Watsonia	Suburb of Melbourne, Victoria, Australia. 6 Signal Regiment locations. AUSTCAN gateway to Australia.
Xuyen Moc	On route 23 about 32 Kilometres east of Baria (and Nui Dat), Phuoc Tuy Province, South Vietnam.





104 SIGNAL SQUADRON
APR 67 to DEC 71

MAJ G.L. LAWRENCE	APR 1967 - JAN 1968
MAJ N.C. MUNRO	JAN 1968 - JAN 1969
MAJ K.P. MOREL	JAN 1969 - JAN 1970
MAJ N.R. BERGIN	JAN 1970 - JAN 1971
MAJ A.G. ROBERTS	JAN 1971 - NOV 1971

110 SIGNAL SQUADRON
MAR 67 to FEB 72

503, 532, 557, 561, 704, 527 and 709 Signal Troops.
(Element from 2 SIGNAL REGIMENT)

MAJ E.H. HYNES	MAR 1967 - MAR 1968
MAJ C.R. HOOK	MAR 1968 - JUL 1968
MAJ P.L. PERMAN	JUL 1968 - JUL 1969
MAJ M.R. RAMSAY	JUL 1969 - NOV 1969
MAJ M.J. LEMON	NOV 1969 - FEB 1970
MAJ M.R. RAMSAY	FEB 1970 - JUL 1970
MAJ D.R. OVERSTEAD	JUL 1970 - JUN 1971
MAJ P.G. WILKINS	JUN 1971 - FEB 1972

DET 152 SIGNAL SQUADRON
JAN 67 to OCT 71

(Element from SPECIAL AIR SERVICE REGIMENT)

SGT D.A. CROUCHER (3 SAS)	JUN 1966 - MAR 1967
SGT M.P. LYON	MAR 1967 - FEB 1968
SGT D.M. LOWSON	FEB 1968 - SEP 1968
2LT P.J. FITZPATRICK	SEP 1968 - SEP 1969
2LT B.R. SCHWARZ	AUG 1969 - AUG 1970
2LT C. LAWSON-BAKER	AUG 1970 - AUG 1971
2LT R.P. GURNEY	AUG 1971 - OCT 1971

AUSTRALIAN ARMY ASSISTANCE GROUP VIETNAM - SIG DET
FEB 72 to DEC 72

(Element from 2 SIGNAL REGIMENT)

CAPT P.R. MONTGOMERY	FEB 1972 - MAR 1972
WO2 W.J. BANNIGAN	MAR 1972 - MAY 1972
WO2 W.W. RITCHIE-ROBINS	MAY 1972 - DEC 1972





HQ AFV CSO (also SO Sigs - early days)
APR 66 to DEC 72

MAJ J.H. BIRD	MAR 1966 - MAR 1967
MAJ D.J. COMMERFORD	MAR 1967 - OCT 1967
MAJ K.P. CAREY	OCT 1967 - AUG 1968
MAJ C.R. HOOK	AUG 1968 - JAN 1969
LT COL B.H. HOCKNEY	JAN 1969 - JAN 1970
LT COL R.E.P. COWLEY	JAN 1970 - JAN 1971
LT COL G.J. MAPSON	JAN 1971 - DEC 1971





THE HISTORY OF THE SIGNALS IN VIETNAM PAINTING **(From Signalman Vol. 1 No 1 1978)**

During the withdrawal from Vietnam, the three RA Sigs units serving in the theatre banded together to create an RA Sigs Vietnam Memorial Project and Fund. The units (110 Signal Squadron, 104 Signal Squadron and 547 Signal Troop) made initial contributions totaling \$2670. 110 Signal Squadron, which was thought at the time to be due for disbandment, made the largest contribution (\$1790).

On the return of the three units to Australia, an outline charter was drawn up and a Canberra based committee formed. The initial chairman of the Committee LTCOL P.G. Wilkins (then MAJ Wilkins) was the OC 110 Signal Squadron at the time of the withdrawal from Vietnam. The Committee was tasked to represent the interests of all members of the Corps who had served in the three units (and the direct predecessor units) in Vietnam. The charter was later expanded to include representation for all RA Sigs personnel who served in Vietnam in other appointments.

The initial objective of the Committee was to determine the type of memorial most preferred by the majority of the members of the Corps and then having made this determination to select an appropriate theme for the memorial. It was decided that these objectives would best be achieved by means of the competition.

The winners of the competition were:

Lieutenant Colonel C.R. Hook
Major N.L. Horn
Major R.O. Cook
Warrant Office Class Two E.W. Millington

As a result of this competition, it was decided that the memorial was to be a painting following the tradition established by the First and Second World War paintings already held by the Corps and displayed at the School of Signals. Letters were sent to various artists seeking their interest and inviting them to prepare preliminary sketches for selection by the Committee. The Committee finally commissioned Mr. Ken MacFadyen of Melbourne to complete the memorial painting.

Mr MacFadyen is currently head of the Art Department with ABC Channel 2 in Melbourne. He served in Vietnam from 13 August 1967 to 12 March 1968 as Official War Artist. Most of his time in Vietnam was spent with the Task Force on operations where he saw at first hand RA Sigs units under operational conditions and this is reflected in his painting.





The theme for the painting was determined by the Committee and was to highlight a helicopter deployment into a fire support base, with involvement of the ACV communications centre of 104 Signal Squadron and the AN/MRC-69 radio relay shelter of 110 Signal Squadron.

Many hours of painstaking work has gone into the production of this painting. Two small sketches were first submitted and after agreement had been reached on basics, works began on the full size painting which measures 180cm by 120cm.

This remarkable and striking painting is hung in the foyer of the School of Signals at Watsonia and was dedicated by Brigadier K. P. Morel during RA Sigs Corps week 18-24 November 1979.



Painting - Signals in Vietnam

