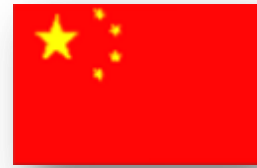




M89 - People's Liberation Army



人民解放军

Revision date: 30 October 2011
© Numbers & Oddities
www.numbersoddities.nl



Source: Central Intelligence Agency 1996.

BACKGROUND

The PLA is composed of three services, the Army, Navy and Air Force, and an independent arm, the Second Artillery Force which is responsible for the strategic missile unit, conventional missile unit, and other specialized units. The PLA has seven military area commands, namely, Shenyang, Beijing, Lanzhou, Jinan, Nanjing, Guangzhou and Chengdu.

In addition to these services the PLA runs the Academy of Military Science, the National Defense University, and the National University of Defense Technology. The Chinese People's Armed Police Force undertakes the task of maintenance of security entrusted by the state. It is under the dual leadership of the State Council and the Central Military Commission, and has responsibility of internal security forces, and gold mine, forest, water and power, and transportation security forces.

PLA's Head Quarters are composed of the following departments:

- General Staff Department
- General Political Department
- General Logistics Department
- General Armaments Department

MILITARY INTELLIGENCE

The General Staff Department carries out staff and operational functions for the PLA. Its Second Department is responsible for collecting military intelligence . Activities include military attachés at Chinese embassies abroad, clandestine special agents sent to foreign countries to collect military information, and the analysis of information publicly published in foreign countries.

The Second Department oversees military human intelligence (HUMINT) collection, human intelligence (HUMINT), signals intelligence (SIGINT), and imagery intelligence (IMINT), and disseminates finished intelligence products to the Central Military Commission and other users of intelligence products. Preliminary fusion is carried out by the Second Department's Analysis Bureau which mans the National Watch Center, the focal point for national-level indications and warning. In-depth analysis is carried out by regional bureaus.

The Third Department of the General Staff Headquarters is responsible for monitoring the telecommunications of foreign armies and producing finished intelligence based on the military information collected.

Monitoring stations

China's main SIGINT effort is in the Third Department of the General Staff Department of the Central Military Commission, with additional capabilities, primarily domestic, in the Ministry of State Security. SIGINT stations, therefore, are scattered through the country, for domestic as well as international interception. Prof. Desmond Ball, of the Australian National University, described the largest stations as the main Technical Department SIGINT net control station on the northwest outskirts of Beijing, and the large complex near Lake Kinghathu in the extreme northeast corner of China. As opposed to other major powers, China focuses its SIGINT activities on its region rather than the world. Ball wrote, in the eighties, that China had several dozen SIGINT stations aimed at Russia, Japan, Taiwan, Southeast Asia and India, as well as internally.

Of the stations apparently targeting Russia, there are sites at Jilemutu and Jixi in the northeast, and at Erlian and Hami near the Mongolian border. Further two Russian-facing sites in Xinjiang, at Qitai and Korla, probably focused on missile and space activity. Other stations aimed at South and Southeast Asia are on a net controlled by Chengdu, Sichuan. There is a large facility at Dayi, and, according to Ball, "numerous" small posts along the Indian border. Other significant facilities are located near Urumqi (see picture below), Yongxing Dao on Woody Island, Xixiang, Shenyang, near Jinan and in Nanjing and Shanghai. Additional stations are in the Fujian and Guangdong military districts opposite Taiwan. On Hainan Island, near Vietnam, there is a naval SIGINT facility that monitors the South China sea, and a ground station targeting US and Russian satellites. China also has ship and aircraft platforms in this area, under the South Sea Fleet headquarters at Zhanjiang immediately north of the island. Targeting here seems to have an ELINT as well as COMINT flavor. There are also truck-mounted mobile ground systems, as well as ship, aircraft, and limited satellite capability. There are at least 10 intelligence-gathering auxiliary vessels. As of the late nineties, the Chinese did not appear to be trying to monitor the US Pacific Command to the same extent as does Russia. In future, this had depended, in part, on the status of Taiwan.

The Fourth Department (ECM and Radar) of the General Staff Headquarters Department has the electronic intelligence (ELINT) portfolio within the PLA's SIGINT apparatus. This department is responsible for electronic countermeasures, requiring them to collect and maintain data bases on electronic signals. 25 ELINT receivers are the responsibility of the Southwest Institute of Electronic Equipment (SWIEE). Among the wide range of SWIEE ELINT products is a new KZ900 airborne ELINT pod. The GSD 54th Research Institute supports the ECM Department in development of digital ELINT signal processors to analyze parameters of radar pulses.



M89

M89 is a Chinese military network. Extensive direction finding activities have pinpointed transmitter sites near Guangzhou, Qingdao and the Dalian/Lushan areas. The network also has various other locations throughout the country, like Lanzhou and Xi'an. Qingdao is the HQ of China's North Sea Fleet. Lushan is another major base of the North Sea Fleet and in Dalian is one of the largest training facilities of the navy. Guangzhou is one of the largest bases of the South Sea Fleet. Other locations are deep inside the country. The various call signs are being transmitted via all stations. The call signs and frequencies change regularly.

Marker tapes

2DKI 2DKI 2DKI de 9CNV 9CNV	
6DNG 6DNG 6DNG de 2NX2 2NX2	
7NPE 7NPE 7NPE DE CI4W CI4W	
7NPE 7NPE 7NPE de QV5B QV5B	
9UQW 9UQW 9UQW de 5ZBD 5ZBD	
9VUP 9VUP 9VUP DE JR5U JR5U	
ABYZ ABYZ ABYZ de 6PXJ 6PXJ	
AU34 AU34 AU34 de 567D 567D	
B7TZ B7TZ B7TZ de 8PNX 8PNX	
BFR7 BFR7 BFR7 de 4XML 4XML	
CP17 CP17 CP17 de L9CC L9CC	
DKG6 DKG6 DKG6 de 3A7D 3A7D	
DKLO DKLO DKLO de SDKL DEKL	
FXP4 FXP4 FXP4 DE YZL6 YZL6	
GKVZ GKZV GKVZ de Q7NW Q7NW	
GM1W GM1W GM1W de B7UA B7UA	
GM3Z GM3Z GM3Z de GNW9 GNW9 1)	
GM3Z GM3Z GM3Z de PNM9 PNM9 1)	
GUGM GUGM GUGM DE Z702 Z702	
H2FL H2FL H2FL DE DRV8 DRV8	
HJ4I HJ4I HJ4I de YI4K YI4K	
HNR2 HNR2 HNR2 de CN9R CN9R	
HRT6 HRT6 HRT6 de U4NP U4NP	
IBEH IBEH IBEH de L4FC L4FC	
	IQDW IQDW IQDW de IZJT IZJT
	JA3L JA3L JA3L DE UM2T UM2T 6)
	JA3L JA3L JA3L DE UN2T UN2T
	JAH3 JAH3 JAH3 de CI4W CI4W
	JS4X JS4X JS4X de 6DUO 6DUO
	K0WT K0WT K0WT de O9VE O9VE
	KS8Q KS8Q KS8Q de 51JU 51JU
	LA5H LA5H LA5H de NH8T NH8T 1)
	LA5S LA5S LA5S de NH8T NH8T 1)
	MB3B MB3B MB3B de YA6X YA6X
	MW3D MW3D MW3D de 2SLC 2SCL
	NQ3J NQ3J NQ3J de PLDR PLDR
	ONMT ONMT ONMT de B9VW B9VW
	OPN9 OPN9 OPN9 DE GYVR GYVR
	QPZM QPZM QPZM de WOXN WOXN
	RXP7 RXP7 RXP7 de CZT2 CZT2
	T3AP T3AP T3AP de QF3K QF3K
	TA6EU TA6EU TA6EU de MB3R MB3R 2)
	TLU1 TLU1 TLU1 de SSC5 SSC5
	U8OV U8OV U8OV de 1RMK 1RMK
	V 8TNKT 8TNKT 8TNKT DE K6WG K6WG
	WITN WITN WITNDE GNXG GNXG
	XY5V XY5V XY5V de 4PPW 4PPW
	YAV8 YAV8 YAV8 de OTUV OTUV
	YELM YELM YELM de FC1T FC1T

Variants

VVV BJCC BJCC BJCC de 3SA 3SA	3)
VVV BJCQ BJCQ BJCQ de 3SW 3SW	3)
VVV XSV86 XSV86 XSV86 de 3SY 3SY	3)
8TNKT 8TNKT 8TNKT DE K6WG K6WG	3)
VVV Q2M Q2M Q2M de NYZ NYZ	4)
CQMSG SQMSG CQMSG de CQMSG CQMSG	5)

1. LA5H and PNM9 are most probably the correct calls. The other call signs appeared several times. Possibly a faulty tape.
2. Probably a faulty tape. Only reported once.
MB3R's usual tape is V MB3B MB3B MB3B DE YA6X YA6X
3. 3 and 5-character call signs. Same kind of callsigns as V26 and V27.

4. The only variant with a different appearance. The messages and behavior is however similar to the other stations. NYZ always uses parallel frequencies 4860 and 6840 kHz. Interesting choice!!
5. This test tape has been heard on 3639//4146 kHz on 16-11-2003. Both frequencies are often used by M89.
6. UN2T is the correct callsign. UM2T appeared several times. Probably a mistake.

Frequencies

Note that the frequencies are +/- 2 kHz.

3197.0	4227.0	5332.0	6506.5	7053.5	7077.5	8050.0
3297.0	4365.0	5376.0	6508.0	7054.0	7078.0	8061.0
3298.0	4415.0	5382.0	6509.0	7054.5	7078.5	8110.0
3327.0	4439.0	5383.0	6509.5	7056.0	7079.0	8120.0
3330.0	4440.0	5384.0	6510.0	7056.5	7079.5	8121.0
3397.0	4474.0	5386.0	6667.0	7057.0	7080.0	8189.5
3398.0	4523.0	5402.0	6668.0	7057.5	7081.5	8301.0
3399.0	4532.0	5416.5	6773.0	7058.0	7082.0	8308.0
3440.0	4567.0	5418.0	6785.0	7058.5	7088.0	8318.0
3529.0	4592.0	5423.0	6788.0	7059.0	7103.0	8321.0
3536.0	4602.0	5428.0	6789.0	7059.0	7145.0	8378.0
3536.5	4670.0	5432.0	6840.0	7059.5	7153.0	8437.0
3542.0	4673.0	5436.5	6925.5	7060.0	7310.0	8438.0
3543.5	4727.0	5439.0	6982.0	7060.5	7320.0	8442.0
3544.5	4767.0	5488.0	6982.5	7061.0	7414.0	8455.0
3546.5	4770.0	5498.0	6985.0	7061.5	7416.0	8457.0
3547.5	4770.5	5500.0	6992.0	7062.0	7568.0	8728.0
3549.5	4771.5	5580.0	6995.0	7062.5	7582.0	8787.0
3551.0	4778.0	5588.0	7000.0	7063.0	7598.0	8802.0
3552.0	4831.0	5600.0	7025.0	7063.5	7598.5	8876.0
3553.0	4860.0	5628.0	7030.0	7064.0	7599.0	9071.0
3553.0	4870.0	5629.5	7033.0	7064.5	7600.0	9220.0
3554.0	4873.0	5631.0	7034.0	7065.0	7601.0	9422.0
3556.0	4874.0	5633.5	7036.0	7065.5	7601.5	9435.0
3556.5	4927.0	5634.0	7036.5	7066.0	7602.0	10475.0
3557.5	4928.0	5635.0	7039.0	7066.5	7603.0	10588.0
3558.5	4929.0	5636.0	7039.5	7067.0	7604.0	10640.0
3561.0	4983.0	5636.5	7041.0	7067.5	7623.0	10643.0
3561.5	5017.0	5643.0	7042.5	7068.0	7718.0	10779.0
3562.0	5018.0	5643.5	7043.0	7068.5	7737.0	10822.0
3565.5	5032.0	5644.0	7043.5	7069.0	7741.0	10830.0
3570.0	5051.5	5645.0	7044.0	7069.5	7779.0	10831.0
3639.0	5086.0	5696.5	7045.0	7070.0	7816.0	10864.0
3642.0	5227.0	5719.0	7045.5	7070.5	7833.0	11083.0
3645.0	5237.0	5725.0	7048.0	7072.0	8024.0	11084.0
3797.0	5237.5	5727.0	7049.9	7072.5	8038.0	11432.0
3846.0	5240.0	5728.0	7050.0	7073.0	8040.0	12585.0
3847.0	5278.0	5756.0	7051.0	7073.5	8042.0	16663.0
4146.0	5302.0	5873.0	7051.5	7074.0	8044.0	16720.0
4224.0	5304.0	5875.0	7052.0	7075.5	8046.0	20589.0
4225.0	5310.0	6458.0	7053.0	7077.0	8047.0	

Transcripts

Besides the channel markers that I have listed here, the network transmits coded messages like the ones below.

COMM/0804/LZ186/9708/9707
282/8240/8090/12/30/0340/041/A/43/45 AR
SVC 0262315 RMKS

More transcripts

v mw3d mw3d mw3d de 2slc 2slc (endless string)
v mw3d mw3d de 2slc 2slc hr cq msg nr
msg nr 226 ck 3t1 16 1t27 162t =
msg nr 226 ck 3t1 16 1t27 162t =
d3n5 tdn5 at64 43a6 7un3 a463 u57t 4t75 tt55 ttaa
73ta 65ua un34 a46t 6dan dun3 ud5n nad6 4a6u 6535
5u6t 76un u64d 5a3u u547 a6tn 5d3n d4a5 d53a dua3
a6n5 6and 3t3n un67 4uad dtnt 4ndu u3da 4td3 5n7u
6437 5tdu dau7 745a d6t5 576u dt45 7u6t 4n5d un6t
37t4 a67t a6du nu6d u4an 47nu u4t5 dta3 3475 4t7n
nadn 4na3 d74t d537 u36u t75n 3a4d 7t65 3a7n 4au6
7u56 64da 435a 73t6 5da3 nunt 5dt4 53a7 6347 ud7u
63d3 74tn 35dt 543n 3675 a64n 7a5n at65 d4u7 467t
3nu4 7tdu a6t6 3n34 d67t 6at7 nd7u 7u4t 57ta 73an
iii =
n67n au3a 3t73 an4t 4na5 td65 6n7a 5tau tt55 ttau
7453 4a36 atdt a364 ada4 adat 53nt n547 6dau 73du
u634 ua37 n536 at~3 n7d4 tn66 dt76 u644 75u7 3ta4
uda5 ud53 ta5a 4d47 64a7 743t 6u37 733n 3aad n3at
d463 ta34 t76t utu4 54t4 3t5t 67d7 au6u 5~u3 u365
u4nd a5u4 57d4 5n47 3a34 5t3n ud54 4ana 5u6d 5na3
6td6 3d65 n6an 5376 t373 tdt6 6d73 t46t a6u5 n~65
a763 7nun 76du tn76 3t5a u7a4 6tn7 dund ud53 n7td
nu74 7nu5 7467 n7nu t53n 5d57 6tda d456 7atu 5ua5
a3d7 d35u n6n5 n4d5 53d5 4tu6 nut3 5u74 64nn ddtu
iii =
4tn3 tdaa t4u6 ut7u 53nt 6u35 u6d5 6dna tt55 tta3
dta7 3u63 67dt 3ud7 47t7 nan5 4u64 734t nt47 4dud
45d7 n3u3 tt4u 7653 4n6u 4a56 a3tn an63 d73u 636u
nat7 duat tn73 43d7 5t3t 4563 5au6 74ua 6au6 634t
d55t nd56 6d57 td4u nuau 45a5 dna4 4ant 567u d4n4
7n7d 7367 43at 76du t5d5 tan6 73ad ntn6 uau5 7n74
d6n6 4n4t dad7 5n37 u5tu t75n tnt4 a7d4 a63a n474
7a45 udad dt5n ataa 3d37 a4d5 u53t 5n64 53a3 3d5u
7a67 347t utd6 adn7 u5u3 nant 5a4a au4n u7n4 3n56
6un5 73td n35d t356 56tn 744a 65t6 ud53 u57n u436
iii =
774a ar
msg nr 226 ck 3t1 16 1t27 162t =
... (rpt rdo)
v mw3d mw3d mw3d de 2slc 2slc (endless string)

v la5s la5s la5s de nh8t nh8t (endless string)
ugt comm = 361/5952/5885/58/53/8288/5/558/a ar
ugt comm = 361/5952/5885/58/53/8288/5/558/a ar
ugt comm = 361/5952/5885/58/53/8288/5/558/a ar
v la5s la5s la5s de nh8t nh8t (continue)

v dklo dklo dklo de sdkl sdkl (rptd)
msg nr vvv

msg nr t1t8 ck t842 22 1116 2t45 =
msg nr t1t8 ck t842 22 1116 2t45 =
msg nr t1t8 ck t842 22 1116 2t45 =
1p = =
a3ta t7tt 73ut uud5 5u55 n3t7 7dd3 uun3 aa64 3u33
4a67 nt34 56tn tt45 7n75 53n4 n33a 3tat 5u6n tat6
7647 3nd7 74ud an67 tnu7 tuan 4dtt dn44 7a7a nu7t
443d 5d33 a377 3665 66a5 6a5d 6d3a d5ua 5tu7 u55u
673n tnd3 74ta 6a77 5n5a u65n 3466 d6tu 7a6n n433
u5a5 5t~n 6544 n5ua n633 du7t 74nn 3nt5 a6t4 3dda
5773 natu 36nt nn5u n5tu d33d an36 75d5 a6ud t74t
tn46 utan nd4d 6dd4 4dnt 5tdu 43an 3675 5446 a65t
ud3t 543d u7nn 3d4d 3ana ntuu 6u43 77au d3a4 7d36
7n66 4n5d a7td 57t6 55dn u~55 d53a a556 d6n7 67ua
iii iii iii
2p = =
3a7t 3a6n 757n un76 545t n457 65tu 3utn aa33 6nu6
6d44 76a4 t6d7 unat 7n6n dn55 dntu 6dn6 33un n6an
u6t5 4ta5 n35t 43da 7nt3 363d dtu7 aud4 atn7 3ua6
a76t 5n75 nta4 ...

vvv xsv86 xsv86 xsv86 de 3sy 3sy 3sy msg (R4)
msg ga nr o6o5 ck 215 24 o324 o9o5 = =
u545 65t7 3nt7 6ta5 67d4 6dau 35du tan3 6na4 7utd
at5d tu34 un4a ~67d 7nt3 6au7 67nu 553d dn5t a353
5dtn 7536 un6t u74~ ~4t 3uut 457d n~du 637a 3~3~
73n5 a73t 74u6 na34 56da u456 d4t5 at~7 dnt4 3dnt
d64n u456 7dnt aud3 4a5n au56 7dt3 37n6 5tu4 a37t
at5u n74u 7na3 456d d76~ tu63 n356 73dt 5utd 3a4t
u34~ ~n56 un76 d37t a3t6 a756 dnt5 d47n da53 t64a
d65n u3nd 647n a3t5 ua75 6a5u t457 dnt6 a375 utd4
45ad 53u4 3u45 67dt a6n5 n4ta 73a6 3nut n~7t 7d6u
6ud3 t6un ndta u346 7ta3 567a t47u nd55 na57 d354
iii 2p = =
5576 ~ud4 aun7 7t~3 5na6 adn~ ~463 t657 453t 4u6d
tn~5 t356 43n6 ~a3u dut7 t5~6 4an7 dnu4 a457 5a7n
5dn~ 3au6 d537 ~54n 46td ut4n tau4 35d~ 6u7a 57tn
6un7 534u t75a 6nt3 57ad td47 dua3 7643 n65u 4atn
63~ ~tdn dta7 ~46n u345 5~ ~td5 67t4 53au t6n7
dd4u n6at d75n 76na 34d5 ~6a7 n~ ~5ta4 a4~7 3u~
~576 53td 7~4 d5a4 ~t~n a3~ ~5t 74au 76n3 6d4~
63n7 a73d 5u6t t45d nu47 5n3a t6a3 tud4 d456 tn7a
753d a34u tua3 467n ntu6 5t7d 65dn 34ua 6tda 547n
74da a5un 7dnt tu35 na6t 5u7n 63dn 6d34 374u a465
iii 3p = =
47~4 34t6 35u4 5n6a 5dta 746d 3~5tu 73ut dan5
d6nu td65 a5dt d73n 35n6 u453
ar * * *
znn sk znn sk
ar * * *

bjcq bjqc bjqc de 3sw 3sw 3sw (rptd)
msg nr 4oo3/3o5 ck 85 o325 o91o ==
4u7t unu7 nt5t unu7 7547 5d47 4un4 naa5 n3un u7un
aa7 74un 675d nuun 7nau 5u74 45tt 67t5 aa7n 6t7n
udu4 n4u6 77n4 aa5t uaaa 4334 t3uu 7t3u 5u67 du4n
u6n4 4464 u6t4 4545 5aan u5du t67n u6t5 67u6 duu6
5t3u 4uaa u67n u6u6 7udu t7un udut unu6 t7na t6tn
un4u 4uun u634 u75t 74dt 5uu6 n467 4u75 47du u6tt
3unt 3uu6 n334 4645 45n4 5aa5 t467 4674 7n4u udun
3u64 4754 du5d 4754 67tt 5d47 u5u6 n47t nt34 7nun
7tt5 t75u 5uun nu7t 7nu6

ar * * *
agn nr 4oo3/3o5 ck 85 o325 o91o ==
4u7t unu7 nt5t unu7 7547 5d47 4un4 naa5 n3un u7un
aa7 74un 675d nuun 7nau 5u74 45tt 67t5 aa7n 6t7n
udu4 n4u6 77n4 aa5t uaaa 4334 t3uu 7t3u 5u67 du4n
u6n4 4464 u6t4 4545 5aan u5du t67n u6t5 67u6 duu6
5t3u 4uaa u67n u6u6 7udu t7un udut unu6 t7na t6tn
un4u 4uun u634 u75t 74dt 5uu6 n467 4u75 47du u6tt
3unt 3uu6 n334 4645 45n4 5aa5 t467 4674 7n4u udun
3u64 4754 du5d 4754 67tt 5d47 u5u6 n47t nt34 7nun
7tt5 t75u 5uun nu7t 7nu6
ar sk

SOURCES AND RELATED WEBSITES

1. The M89 data was derived from the many logs submitted by dxers on forums like WUN, UDXF and Spooks or sent directly to the author.
 2. China's Signals Intelligence (Sigint): Satellite Programs by Desmond Ball
 3. Wikipedia http://en.wikipedia.org/wiki/People's_Liberation_Army
 4. Federation of American Scientists <http://www.fas.org/irp/world/china/index.html>
 5. Military Power of the People's Republic of China 2009.
Annual report of the U.S. Office of the Secretary of Defense
http://www.defense.gov/pubs/pdfs/China_Military_Power_Report_2009.pdf
 6. Ministry of National Defence <http://eng.mod.gov.cn/>
 7. Intelligence regions map: Central Intelligence Agency 1996.
-