

VIVAX

METROTECH



Calibration Certificate

RDG SUPPLY SDN BHD

No.13-2, Kuchai Entrepreneur Park, Jalan Kuchai Maju 2

58200 Kuala Lumpur, MALAYSIA

Tel: +60 3 7980 7788

e-mail: ricky.douglas@rdg.com.my

http: www.rdg.com.my

| | | | |
|---------------|--------------------------|-------------|-----------|
| Manufacturer: | Vivax-Metrotech | Model: | vLoc3-Pro |
| Serial No.: | 21901153421 | Asset No.: | |
| Work Order: | RDG_240066-JL GLOBAL INV | Report No.: | |
| Customer: | JL GLOBAL INVISION SB | | |

We certify that the instrument meets or exceeds the manufacturer published electrical specifications at the points tested. All measurements are traceable to national or international standards or have been derived by approved ratio techniques. This certificate may not be reproduced other than in full.

Calibration Information

Calibration Date: 11-NOV-2024 13:10:42 Status: Passed

| Top Coils | | | | | | | | |
|--------------|-------------|------|------------|----|------------|----|-------------|----|
| Frequency | Current(mA) | Gain | H response | | V response | | 90 response | |
| 1024 | 152.0 | High | 0.52200568 | ok | 0.52197069 | ok | 0.62175167 | ok |
| | | Low | 0.01208154 | ok | 0.01209049 | ok | 0.01446505 | ok |
| 4096 | 38.9 | High | 0.51786500 | ok | 0.51667434 | ok | 0.59011406 | ok |
| | | Low | 0.01205968 | ok | 0.01204465 | ok | 0.01382810 | ok |
| 8150 | 20.9 | High | 0.50929743 | ok | 0.50721395 | ok | 0.54127127 | ok |
| | | Low | 0.01208874 | ok | 0.01205669 | ok | 0.01295689 | ok |
| 10000 | 18.1 | High | 0.51786524 | ok | 0.51555151 | ok | 0.53407854 | ok |
| | | Low | 0.01244731 | ok | 0.01241214 | ok | 0.01289895 | ok |
| 10001 | 66.8 | High | 0.48273998 | ok | 0.47716579 | ok | 0.60853773 | ok |
| | | Low | 0.01161080 | ok | 0.01148722 | ok | 0.01470512 | ok |
| 32788 | 26.4 | High | 0.48087019 | ok | 0.47250047 | ok | 0.59912097 | ok |
| | | Low | 0.01519438 | ok | 0.01496770 | ok | 0.01899914 | ok |
| 65500 | 19.9 | High | 0.48453695 | ok | 0.47582799 | ok | 0.60206968 | ok |
| | | Low | 0.02363502 | ok | 0.02329413 | ok | 0.02933822 | ok |
| 83000 | 18.9 | High | 0.49567938 | ok | 0.48798677 | ok | 0.59706646 | ok |
| | | Low | 0.02930636 | ok | 0.02896530 | ok | 0.03526076 | ok |
| 131000 | 18.1 | High | 0.49869242 | ok | 0.49318272 | ok | 0.47513872 | ok |
| | | Low | 0.04440041 | ok | 0.04409702 | ok | 0.04217102 | ok |
| 199980 | 21.2 | High | 0.44584572 | ok | 0.43158904 | ok | 0.30771562 | ok |
| | | Low | 0.05958954 | ok | 0.05795686 | ok | 0.04081869 | ok |
| Bottom Coils | | | | | | | | |
| Frequency | Current(mA) | Gain | H response | | V response | | 90 response | |
| 1024 | 152.0 | High | 0.50965559 | ok | 0.51935691 | ok | 0.62119877 | ok |
| | | Low | 0.01180824 | ok | 0.01200401 | ok | 0.01444633 | ok |
| 4096 | 38.9 | High | 0.50563937 | ok | 0.51494569 | ok | 0.58820421 | ok |
| | | Low | 0.01179004 | ok | 0.01197995 | ok | 0.01379070 | ok |
| 8150 | 20.9 | High | 0.49822086 | ok | 0.50648171 | ok | 0.53705657 | ok |
| | | Low | 0.01184880 | ok | 0.01201947 | ok | 0.01286637 | ok |
| 10000 | 18.1 | High | 0.50723344 | ok | 0.51523638 | ok | 0.52892566 | ok |
| | | Low | 0.01222076 | ok | 0.01238739 | ok | 0.01284940 | ok |
| 10001 | 66.8 | High | 0.46410877 | ok | 0.47462326 | ok | 0.60743111 | ok |

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|--------|------|------|------------|----|------------|----|------------|----|
| | | Low | 0.01118612 | ok | 0.01141460 | ok | 0.01471093 | ok |
| 32788 | 26.4 | High | 0.45880824 | ok | 0.46887660 | ok | 0.58812630 | ok |
| | | Low | 0.01462828 | ok | 0.01490160 | ok | 0.01897840 | ok |
| 65500 | 19.9 | High | 0.46069252 | ok | 0.47105539 | ok | 0.57994807 | ok |
| | | Low | 0.02280233 | ok | 0.02322439 | ok | 0.02921805 | ok |
| 83000 | 18.9 | High | 0.47204563 | ok | 0.48258671 | ok | 0.57468063 | ok |
| | | Low | 0.02835062 | ok | 0.02886782 | ok | 0.03520826 | ok |
| 131000 | 18.1 | High | 0.48060206 | ok | 0.48944622 | ok | 0.45501083 | ok |
| | | Low | 0.04352513 | ok | 0.04414733 | ok | 0.04208270 | ok |
| 199980 | 21.2 | High | 0.43683454 | ok | 0.43763351 | ok | 0.29760918 | ok |
| | | Low | 0.05943407 | ok | 0.05928346 | ok | 0.04106620 | ok |

| Alignment Matrix | | | | | | | | |
|------------------|--|------|-------------|--|-------------|--|-------------|--|
| Position | | Coil | X response | | Y response | | Z response | |
| Top | | X | 0.99998140 | | 0.00209195 | | -0.00368479 | |
| | | Y | 0.00223541 | | 0.99998462 | | -0.00254828 | |
| | | Z | 0.00633629 | | 0.00790584 | | 0.99995661 | |
| Bottom | | X | 0.99991047 | | -0.00626615 | | 0.00550114 | |
| | | Y | 0.00867172 | | 0.99993157 | | -0.00340057 | |
| | | Z | -0.00636953 | | 0.00407582 | | 0.99995089 | |

| B/T Antenna Balance | | | | | | | | |
|---------------------|-------------|------|-----------|----|-----------|----|-----------|----|
| Frequency | Current(mA) | Gain | H ratio | | V ratio | | 90 ratio | |
| 1024 | 152.0 | High | 0.9763411 | ok | 0.9949925 | ok | 0.9991107 | ok |
| | | Low | 0.9773787 | ok | 0.9928473 | ok | 0.9987058 | ok |
| 4096 | 38.9 | High | 0.9763922 | ok | 0.9966543 | ok | 0.9967636 | ok |
| | | Low | 0.9776412 | ok | 0.9946283 | ok | 0.9972954 | ok |
| 8150 | 20.9 | High | 0.9782513 | ok | 0.9985563 | ok | 0.9922133 | ok |
| | | Low | 0.9801518 | ok | 0.9969129 | ok | 0.9930138 | ok |
| 10000 | 18.1 | High | 0.9794699 | ok | 0.9993888 | ok | 0.9903518 | ok |
| | | Low | 0.9817993 | ok | 0.9980060 | ok | 0.9961586 | ok |
| 10001 | 66.8 | High | 0.9614053 | ok | 0.9946716 | ok | 0.9981815 | ok |
| | | Low | 0.9634237 | ok | 0.9936782 | ok | 1.0003951 | ok |
| 32788 | 26.4 | High | 0.9541208 | ok | 0.9923304 | ok | 0.9816487 | ok |
| | | Low | 0.9627428 | ok | 0.9955838 | ok | 0.9989084 | ok |
| 65500 | 19.9 | High | 0.9507892 | ok | 0.9899699 | ok | 0.9632574 | ok |
| | | Low | 0.9647688 | ok | 0.9970061 | ok | 0.9959040 | ok |
| 83000 | 18.9 | High | 0.9523205 | ok | 0.9889340 | ok | 0.9625070 | ok |
| | | Low | 0.9673880 | ok | 0.9966346 | ok | 0.9985111 | ok |
| 131000 | 18.1 | High | 0.9637244 | ok | 0.9924237 | ok | 0.9576379 | ok |
| | | Low | 0.9802867 | ok | 1.0011409 | ok | 0.9979057 | ok |
| 199980 | 21.2 | High | 0.9797886 | ok | 1.0140052 | ok | 0.9671566 | ok |
| | | Low | 0.9973910 | ok | 1.0228894 | ok | 1.0060636 | ok |

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58200 Kuala Lumpur, MALAYSIA

Tel: +60 3 7980 7788

e-mail: ricky.douglas@rdg.com.my

http: www.rdg.com.my

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|---------------|--------------------------|-------------|-----------|
| Manufacturer: | Vivax-Metrotech | Model: | vLoc3-Pro |
| Serial No.: | 21901162190 | Asset No.: | |
| Work Order: | RDG_240050-JL GLOBAL INV | Report No.: | |
| Customer: | JL GLOBAL INVISION SB. | | |

We certify that the instrument meets or exceeds the manufacturer published electrical specifications at the points tested. All measurements are traceable to national or international standards or have been derived by approved ratio techniques. This certificate may not be reproduced other than in full.

Calibration Information

Calibration Date: 10-SEP-2024 11:38:08 Status: Passed

| Top Coils | | | | | | | | |
|--------------|-------------|------|------------|----|------------|----|-------------|----|
| Frequency | Current(mA) | Gain | H response | | V response | | 90 response | |
| 1024 | 152.0 | High | 0.49848235 | ok | 0.51014411 | ok | 0.62403595 | ok |
| | | Low | 0.01154075 | ok | 0.01181757 | ok | 0.01447670 | ok |
| 4096 | 38.9 | High | 0.49528861 | ok | 0.50496364 | ok | 0.60003728 | ok |
| | | Low | 0.01154003 | ok | 0.01177787 | ok | 0.01400573 | ok |
| 8150 | 20.9 | High | 0.48890731 | ok | 0.49594504 | ok | 0.55559963 | ok |
| | | Low | 0.01162021 | ok | 0.01180953 | ok | 0.01321279 | ok |
| 10000 | 18.1 | High | 0.49817917 | ok | 0.50420177 | ok | 0.54862648 | ok |
| | | Low | 0.01199623 | ok | 0.01217041 | ok | 0.01321387 | ok |
| 10001 | 66.8 | High | 0.45255780 | ok | 0.45953599 | ok | 0.61146891 | ok |
| | | Low | 0.01090479 | ok | 0.01109503 | ok | 0.01473629 | ok |
| 32788 | 26.4 | High | 0.44638076 | ok | 0.44810614 | ok | 0.60669547 | ok |
| | | Low | 0.01424642 | ok | 0.01441446 | ok | 0.01916757 | ok |
| 65500 | 19.9 | High | 0.44853091 | ok | 0.44720271 | ok | 0.60738868 | ok |
| | | Low | 0.02223811 | ok | 0.02246055 | ok | 0.02960145 | ok |
| 83000 | 18.9 | High | 0.45758554 | ok | 0.45559388 | ok | 0.60262328 | ok |
| | | Low | 0.02754026 | ok | 0.02780063 | ok | 0.03558628 | ok |
| 131000 | 18.1 | High | 0.46903351 | ok | 0.46405748 | ok | 0.49209508 | ok |
| | | Low | 0.04258804 | ok | 0.04277172 | ok | 0.04375339 | ok |
| 199980 | 21.2 | High | 0.43594530 | ok | 0.42083934 | ok | 0.33021399 | ok |
| | | Low | 0.05951982 | ok | 0.05834417 | ok | 0.04387811 | ok |
| Bottom Coils | | | | | | | | |
| Frequency | Current(mA) | Gain | H response | | V response | | 90 response | |
| 1024 | 152.0 | High | 0.50321484 | ok | 0.50138044 | ok | 0.62557465 | ok |
| | | Low | 0.01165532 | ok | 0.01165525 | ok | 0.01458973 | ok |
| 4096 | 38.9 | High | 0.49952769 | ok | 0.49713588 | ok | 0.60082299 | ok |
| | | Low | 0.01163958 | ok | 0.01163322 | ok | 0.01411376 | ok |
| 8150 | 20.9 | High | 0.49289384 | ok | 0.48901638 | ok | 0.55565441 | ok |
| | | Low | 0.01170113 | ok | 0.01167663 | ok | 0.01331812 | ok |
| 10000 | 18.1 | High | 0.50226206 | ok | 0.49749595 | ok | 0.54848236 | ok |
| | | Low | 0.01207096 | ok | 0.01203747 | ok | 0.01332642 | ok |
| 10001 | 66.8 | High | 0.45823833 | ok | 0.45366120 | ok | 0.61115849 | ok |

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|--------|------|------|------------|----|------------|----|------------|----|
| | | Low | 0.01102066 | ok | 0.01098179 | ok | 0.01480679 | ok |
| 32788 | 26.4 | High | 0.45635480 | ok | 0.44516432 | ok | 0.60328943 | ok |
| | | Low | 0.01435705 | ok | 0.01429251 | ok | 0.01922328 | ok |
| 65500 | 19.9 | High | 0.46072453 | ok | 0.44531751 | ok | 0.60361528 | ok |
| | | Low | 0.02230723 | ok | 0.02224134 | ok | 0.02974825 | ok |
| 83000 | 18.9 | High | 0.46964473 | ok | 0.45338327 | ok | 0.59932482 | ok |
| | | Low | 0.02754137 | ok | 0.02749384 | ok | 0.03586109 | ok |
| 131000 | 18.1 | High | 0.47985771 | ok | 0.46171319 | ok | 0.48893750 | ok |
| | | Low | 0.04235013 | ok | 0.04225561 | ok | 0.04405577 | ok |
| 199980 | 21.2 | High | 0.45384100 | ok | 0.42647979 | ok | 0.32555264 | ok |
| | | Low | 0.06016825 | ok | 0.05867947 | ok | 0.04374031 | ok |

| Alignment Matrix | | | | | | | | |
|------------------|--|------|-------------|--|-------------|--|-------------|--|
| Position | | Coil | X response | | Y response | | Z response | |
| Top | | X | 1.00002873 | | 0.00581616 | | -0.00430734 | |
| | | Y | 0.00405737 | | 1.00000429 | | -0.00223384 | |
| | | Z | -0.00115488 | | 0.00873216 | | 0.99998569 | |
| Bottom | | X | 0.99993742 | | -0.00573426 | | 0.00740930 | |
| | | Y | 0.01142081 | | 0.99992484 | | -0.00182586 | |
| | | Z | 0.00044999 | | 0.00508052 | | 0.99999368 | |

| B/T Antenna Balance | | | | | | | | |
|---------------------|-------------|------|-----------|----|-----------|----|-----------|----|
| Frequency | Current(mA) | Gain | H ratio | | V ratio | | 90 ratio | |
| 1024 | 152.0 | High | 1.0094938 | ok | 0.9828212 | ok | 1.0024657 | ok |
| | | Low | 1.0099274 | ok | 0.9862645 | ok | 1.0078077 | ok |
| 4096 | 38.9 | High | 1.0085588 | ok | 0.9844984 | ok | 1.0013094 | ok |
| | | Low | 1.0086265 | ok | 0.9877185 | ok | 1.0077133 | ok |
| 8150 | 20.9 | High | 1.0081540 | ok | 0.9860294 | ok | 1.0000986 | ok |
| | | Low | 1.0069637 | ok | 0.9887464 | ok | 1.0079718 | ok |
| 10000 | 18.1 | High | 1.0081956 | ok | 0.9867001 | ok | 0.9997373 | ok |
| | | Low | 1.0062295 | ok | 0.9890768 | ok | 1.0085176 | ok |
| 10001 | 66.8 | High | 1.0125521 | ok | 0.9872158 | ok | 0.9994923 | ok |
| | | Low | 1.0106256 | ok | 0.9897936 | ok | 1.0047841 | ok |
| 32788 | 26.4 | High | 1.0223442 | ok | 0.9934350 | ok | 0.9943859 | ok |
| | | Low | 1.0077655 | ok | 0.9915397 | ok | 1.0029065 | ok |
| 65500 | 19.9 | High | 1.0271857 | ok | 0.9957845 | ok | 0.9937875 | ok |
| | | Low | 1.0031082 | ok | 0.9902402 | ok | 1.0049592 | ok |
| 83000 | 18.9 | High | 1.0263540 | ok | 0.9951478 | ok | 0.9945265 | ok |
| | | Low | 1.0000403 | ok | 0.9889646 | ok | 1.0077224 | ok |
| 131000 | 18.1 | High | 1.0230777 | ok | 0.9949483 | ok | 0.9935834 | ok |
| | | Low | 0.9944137 | ok | 0.9879334 | ok | 1.0069110 | ok |
| 199980 | 21.2 | High | 1.0410503 | ok | 1.0134029 | ok | 0.9858839 | ok |
| | | Low | 1.0108944 | ok | 1.0057469 | ok | 0.9968595 | ok |

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Calibration Certificate

RDG SUPPLY SDN BHD

No.13-2, Kuchai Entrepreneur Park, Jalan Kuchai Maju 2

58200 Kuala Lumpur, MALAYSIA

Tel: +60 3 7980 7788

e-mail: ricky.douglas@rdg.com.my

http: www.rdg.com.my

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|---------------|--------------------------|-------------|-----------|
| Manufacturer: | Vivax-Metrotech | Model: | vLoc3-Pro |
| Serial No.: | 21901171838 | Asset No.: | |
| Work Order: | RDG_240050-JL GLOBAL INV | Report No.: | |
| Customer: | JL GLOBAL INVISION S.B | | |

We certify that the instrument meets or exceeds the manufacturer published electrical specifications at the points tested. All measurements are traceable to national or international standards or have been derived by approved ratio techniques. This certificate may not be reproduced other than in full.

Calibration Information

Calibration Date: 18-SEP-2024 10:17:47 Status: Passed

| Top Coils | | | | | | | | |
|--------------|-------------|------|------------|----|------------|----|-------------|----|
| Frequency | Current(mA) | Gain | H response | | V response | | 90 response | |
| 1024 | 152.0 | High | 0.50873160 | ok | 0.52331072 | ok | 0.63824153 | ok |
| | | Low | 0.01181927 | ok | 0.01216845 | ok | 0.01482529 | ok |
| 4096 | 38.9 | High | 0.50500256 | ok | 0.51786315 | ok | 0.61841607 | ok |
| | | Low | 0.01180276 | ok | 0.01211257 | ok | 0.01445098 | ok |
| 8150 | 20.9 | High | 0.49970877 | ok | 0.51064509 | ok | 0.57762903 | ok |
| | | Low | 0.01189519 | ok | 0.01215977 | ok | 0.01375362 | ok |
| 10000 | 18.1 | High | 0.50713778 | ok | 0.51759475 | ok | 0.56906778 | ok |
| | | Low | 0.01221902 | ok | 0.01247222 | ok | 0.01371815 | ok |
| 10001 | 66.8 | High | 0.46382654 | ok | 0.47652936 | ok | 0.62755501 | ok |
| | | Low | 0.01118292 | ok | 0.01148161 | ok | 0.01511816 | ok |
| 32788 | 26.4 | High | 0.46444488 | ok | 0.47815847 | ok | 0.63060880 | ok |
| | | Low | 0.01460471 | ok | 0.01492232 | ok | 0.01982317 | ok |
| 65500 | 19.9 | High | 0.47179368 | ok | 0.48844713 | ok | 0.63441908 | ok |
| | | Low | 0.02277016 | ok | 0.02326623 | ok | 0.03062538 | ok |
| 83000 | 18.9 | High | 0.48148578 | ok | 0.49949661 | ok | 0.62906641 | ok |
| | | Low | 0.02812790 | ok | 0.02875643 | ok | 0.03677326 | ok |
| 131000 | 18.1 | High | 0.49346343 | ok | 0.51108897 | ok | 0.51395845 | ok |
| | | Low | 0.04334141 | ok | 0.04418788 | ok | 0.04516327 | ok |
| 199980 | 21.2 | High | 0.45885897 | ok | 0.46182171 | ok | 0.34424454 | ok |
| | | Low | 0.06049095 | ok | 0.05991593 | ok | 0.04518722 | ok |
| Bottom Coils | | | | | | | | |
| Frequency | Current(mA) | Gain | H response | | V response | | 90 response | |
| 1024 | 152.0 | High | 0.51465231 | ok | 0.51980805 | ok | 0.63227129 | ok |
| | | Low | 0.01196594 | ok | 0.01210489 | ok | 0.01469917 | ok |
| 4096 | 38.9 | High | 0.51054168 | ok | 0.51507443 | ok | 0.61265278 | ok |
| | | Low | 0.01194174 | ok | 0.01206727 | ok | 0.01432404 | ok |
| 8150 | 20.9 | High | 0.50471771 | ok | 0.50804919 | ok | 0.57247525 | ok |
| | | Low | 0.01202316 | ok | 0.01212406 | ok | 0.01363254 | ok |
| 10000 | 18.1 | High | 0.51202202 | ok | 0.51490146 | ok | 0.56416303 | ok |
| | | Low | 0.01234530 | ok | 0.01243915 | ok | 0.01359704 | ok |
| 10001 | 66.8 | High | 0.46737278 | ok | 0.47382787 | ok | 0.62287349 | ok |

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|--------|------|------|------------|----|------------|----|------------|----|
| | | Low | 0.01127762 | ok | 0.01145072 | ok | 0.01500842 | ok |
| 32788 | 26.4 | High | 0.46812564 | ok | 0.47380838 | ok | 0.63036078 | ok |
| | | Low | 0.01472646 | ok | 0.01492075 | ok | 0.01974365 | ok |
| 65500 | 19.9 | High | 0.47692806 | ok | 0.48234624 | ok | 0.64419776 | ok |
| | | Low | 0.02302124 | ok | 0.02330078 | ok | 0.03090155 | ok |
| 83000 | 18.9 | High | 0.48800337 | ok | 0.49293429 | ok | 0.64134324 | ok |
| | | Low | 0.02851118 | ok | 0.02882125 | ok | 0.03723723 | ok |
| 131000 | 18.1 | High | 0.50096166 | ok | 0.50419503 | ok | 0.51193768 | ok |
| | | Low | 0.04400679 | ok | 0.04433225 | ok | 0.04466663 | ok |
| 199980 | 21.2 | High | 0.45500311 | ok | 0.45373955 | ok | 0.32685962 | ok |
| | | Low | 0.05997222 | ok | 0.05986392 | ok | 0.04251087 | ok |

| Alignment Matrix | | | | | | | | |
|------------------|--|------|------------|--|-------------|--|-------------|--|
| Position | | Coil | X response | | Y response | | Z response | |
| Top | | X | 0.99994159 | | -0.00556845 | | -0.00503474 | |
| | | Y | 0.00612469 | | 0.99995577 | | -0.00133521 | |
| | | Z | 0.00487329 | | 0.00770388 | | 0.99996531 | |
| Bottom | | X | 0.99994779 | | -0.00602159 | | -0.00229938 | |
| | | Y | 0.00807638 | | 0.99995136 | | 0.00009806 | |
| | | Z | 0.00157652 | | -0.00069660 | | 0.99999630 | |

| B/T Antenna Balance | | | | | | | | |
|---------------------|-------------|------|-----------|----|-----------|----|-----------|----|
| Frequency | Current(mA) | Gain | H ratio | | V ratio | | 90 ratio | |
| 1024 | 152.0 | High | 1.0116382 | ok | 0.9933067 | ok | 0.9906458 | ok |
| | | Low | 1.0124094 | ok | 0.9947767 | ok | 0.9914929 | ok |
| 4096 | 38.9 | High | 1.0109685 | ok | 0.9946149 | ok | 0.9906806 | ok |
| | | Low | 1.0117752 | ok | 0.9962601 | ok | 0.9912158 | ok |
| 8150 | 20.9 | High | 1.0100237 | ok | 0.9949164 | ok | 0.9910777 | ok |
| | | Low | 1.0107581 | ok | 0.9970633 | ok | 0.9911965 | ok |
| 10000 | 18.1 | High | 1.0096310 | ok | 0.9947965 | ok | 0.9913811 | ok |
| | | Low | 1.0103347 | ok | 0.9973485 | ok | 0.9911716 | ok |
| 10001 | 66.8 | High | 1.0076456 | ok | 0.9943309 | ok | 0.9925401 | ok |
| | | Low | 1.0084683 | ok | 0.9973096 | ok | 0.9927412 | ok |
| 32788 | 26.4 | High | 1.0079251 | ok | 0.9909024 | ok | 0.9996067 | ok |
| | | Low | 1.0083364 | ok | 0.9998948 | ok | 0.9959885 | ok |
| 65500 | 19.9 | High | 1.0108827 | ok | 0.9875096 | ok | 1.0154136 | ok |
| | | Low | 1.0110267 | ok | 1.0014850 | ok | 1.0090177 | ok |
| 83000 | 18.9 | High | 1.0135364 | ok | 0.9868621 | ok | 1.0195160 | ok |
| | | Low | 1.0136263 | ok | 1.0022541 | ok | 1.0126170 | ok |
| 131000 | 18.1 | High | 1.0151951 | ok | 0.9865113 | ok | 0.9960682 | ok |
| | | Low | 1.0153521 | ok | 1.0032672 | ok | 0.9890035 | ok |
| 199980 | 21.2 | High | 0.9915969 | ok | 0.9824994 | ok | 0.9494983 | ok |
| | | Low | 0.9914247 | ok | 0.9991320 | ok | 0.9407720 | ok |

VIVAX

METROTECH



Calibration Certificate

RDG SUPPLY SDN BHD

No.13-2, Kuchai Entrepreneur Park, Jalan Kuchai Maju 2

58200 Kuala Lumpur, MALAYSIA

Tel: +60 3 7980 7788

e-mail: ricky.douglas@rdg.com.my

http: www.rdg.com.my

| | | | |
|---------------|--------------------------|-------------|-----------|
| Manufacturer: | Vivax-Metrotech | Model: | vLoc3-Pro |
| Serial No.: | 21901171837 | Asset No.: | |
| Work Order: | RDG_240063-JL GLOBAL INV | Report No.: | |
| Customer: | JL GLOBAL INVISION SB. | | |

We certify that the instrument meets or exceeds the manufacturer published electrical specifications at the points tested. All measurements are traceable to national or international standards or have been derived by approved ratio techniques. This certificate may not be reproduced other than in full.

Calibration Information

Calibration Date: 07-NOV-2024 12:07:07 Status: Passed

| Top Coils | | | | | | | | |
|--------------|-------------|------|------------|----|------------|----|-------------|----|
| Frequency | Current(mA) | Gain | H response | | V response | | 90 response | |
| 1024 | 152.0 | High | 0.51225978 | ok | 0.51442230 | ok | 0.63942254 | ok |
| | | Low | 0.01190695 | ok | 0.01192780 | ok | 0.01482535 | ok |
| 4096 | 38.9 | High | 0.50635493 | ok | 0.50923550 | ok | 0.60805768 | ok |
| | | Low | 0.01185883 | ok | 0.01187810 | ok | 0.01421088 | ok |
| 8150 | 20.9 | High | 0.50226778 | ok | 0.50251979 | ok | 0.55996168 | ok |
| | | Low | 0.01195110 | ok | 0.01193995 | ok | 0.01334837 | ok |
| 10000 | 18.1 | High | 0.50956172 | ok | 0.50956911 | ok | 0.54993469 | ok |
| | | Low | 0.01228058 | ok | 0.01225534 | ok | 0.01327362 | ok |
| 10001 | 66.8 | High | 0.46694571 | ok | 0.46542269 | ok | 0.62456226 | ok |
| | | Low | 0.01125478 | ok | 0.01119648 | ok | 0.01501585 | ok |
| 32788 | 26.4 | High | 0.46799800 | ok | 0.46429935 | ok | 0.61729324 | ok |
| | | Low | 0.01465788 | ok | 0.01454080 | ok | 0.01934592 | ok |
| 65500 | 19.9 | High | 0.47457179 | ok | 0.47172850 | ok | 0.61905313 | ok |
| | | Low | 0.02276078 | ok | 0.02264688 | ok | 0.02978644 | ok |
| 83000 | 18.9 | High | 0.48412609 | ok | 0.48198944 | ok | 0.61485237 | ok |
| | | Low | 0.02812063 | ok | 0.02799621 | ok | 0.03581754 | ok |
| 131000 | 18.1 | High | 0.49659592 | ok | 0.49499565 | ok | 0.50348705 | ok |
| | | Low | 0.04337242 | ok | 0.04321571 | ok | 0.04407448 | ok |
| 199980 | 21.2 | High | 0.46065539 | ok | 0.45603758 | ok | 0.33666670 | ok |
| | | Low | 0.06039275 | ok | 0.05977920 | ok | 0.04398808 | ok |
| Bottom Coils | | | | | | | | |
| Frequency | Current(mA) | Gain | H response | | V response | | 90 response | |
| 1024 | 152.0 | High | 0.51782316 | ok | 0.52314311 | ok | 0.63680214 | ok |
| | | Low | 0.01204390 | ok | 0.01211939 | ok | 0.01482124 | ok |
| 4096 | 38.9 | High | 0.51340914 | ok | 0.51845336 | ok | 0.60914576 | ok |
| | | Low | 0.01201474 | ok | 0.01208375 | ok | 0.01418279 | ok |
| 8150 | 20.9 | High | 0.50427157 | ok | 0.51140696 | ok | 0.55657101 | ok |
| | | Low | 0.01203314 | ok | 0.01214556 | ok | 0.01329661 | ok |
| 10000 | 18.1 | High | 0.51184195 | ok | 0.51830840 | ok | 0.54658341 | ok |
| | | Low | 0.01237202 | ok | 0.01246099 | ok | 0.01322970 | ok |
| 10001 | 66.8 | High | 0.47176218 | ok | 0.47527575 | ok | 0.61986452 | ok |

| | | | | | | | | |
|--------|------|------|------------|----|------------|----|------------|----|
| | | Low | 0.01139183 | ok | 0.01143128 | ok | 0.01494670 | ok |
| 32788 | 26.4 | High | 0.47098473 | ok | 0.47382241 | ok | 0.61339164 | ok |
| | | Low | 0.01482582 | ok | 0.01489161 | ok | 0.01930472 | ok |
| 65500 | 19.9 | High | 0.47744361 | ok | 0.48107740 | ok | 0.61965704 | ok |
| | | Low | 0.02314802 | ok | 0.02324636 | ok | 0.02996386 | ok |
| 83000 | 18.9 | High | 0.48651412 | ok | 0.49144405 | ok | 0.61599159 | ok |
| | | Low | 0.02855803 | ok | 0.02875579 | ok | 0.03607529 | ok |
| 131000 | 18.1 | High | 0.49636531 | ok | 0.50267959 | ok | 0.49449542 | ok |
| | | Low | 0.04382953 | ok | 0.04425656 | ok | 0.04353392 | ok |
| 199980 | 21.2 | High | 0.45510581 | ok | 0.45483771 | ok | 0.32019871 | ok |
| | | Low | 0.06033105 | ok | 0.06008309 | ok | 0.04201234 | ok |

| Alignment Matrix | | | | | | | | |
|------------------|--|------|-------------|--|-------------|--|-------------|--|
| Position | | Coil | X response | | Y response | | Z response | |
| Top | | X | 0.99996746 | | -0.00272410 | | -0.00528145 | |
| | | Y | 0.00197448 | | 0.99996758 | | -0.00230530 | |
| | | Z | 0.00516891 | | 0.01178067 | | 0.99994564 | |
| Bottom | | X | 0.99993265 | | -0.00636053 | | -0.00002212 | |
| | | Y | 0.01061538 | | 0.99993008 | | -0.00087354 | |
| | | Z | -0.00545267 | | 0.00273006 | | 0.99999774 | |

| B/T Antenna Balance | | | | | | | | |
|---------------------|-------------|------|-----------|----|-----------|----|-----------|----|
| Frequency | Current(mA) | Gain | H ratio | | V ratio | | 90 ratio | |
| 1024 | 152.0 | High | 1.0108605 | ok | 1.0169526 | ok | 0.9959019 | ok |
| | | Low | 1.0115017 | ok | 1.0160625 | ok | 0.9997228 | ok |
| 4096 | 38.9 | High | 1.0139314 | ok | 1.0181014 | ok | 1.0017894 | ok |
| | | Low | 1.0131472 | ok | 1.0173134 | ok | 0.9980233 | ok |
| 8150 | 20.9 | High | 1.0039895 | ok | 1.0176852 | ok | 0.9939448 | ok |
| | | Low | 1.0068646 | ok | 1.0172203 | ok | 0.9961224 | ok |
| 10000 | 18.1 | High | 1.0044749 | ok | 1.0171504 | ok | 0.9939060 | ok |
| | | Low | 1.0074459 | ok | 1.0167804 | ok | 0.9966912 | ok |
| 10001 | 66.8 | High | 1.0103148 | ok | 1.0211701 | ok | 0.9924783 | ok |
| | | Low | 1.0121770 | ok | 1.0209709 | ok | 0.9953949 | ok |
| 32788 | 26.4 | High | 1.0063819 | ok | 1.0205106 | ok | 0.9936795 | ok |
| | | Low | 1.0114573 | ok | 1.0241259 | ok | 0.9978704 | ok |
| 65500 | 19.9 | High | 1.0060514 | ok | 1.0198184 | ok | 1.0009755 | ok |
| | | Low | 1.0170135 | ok | 1.0264708 | ok | 1.0059564 | ok |
| 83000 | 18.9 | High | 1.0049327 | ok | 1.0196158 | ok | 1.0018528 | ok |
| | | Low | 1.0155544 | ok | 1.0271315 | ok | 1.0071962 | ok |
| 131000 | 18.1 | High | 0.9995356 | ok | 1.0155232 | ok | 0.9821413 | ok |
| | | Low | 1.0105392 | ok | 1.0240850 | ok | 0.9877353 | ok |
| 199980 | 21.2 | High | 0.9879529 | ok | 0.9973689 | ok | 0.9510852 | ok |
| | | Low | 0.9989784 | ok | 1.0050835 | ok | 0.9550847 | ok |

VIVAX

METROTECH



Calibration Certificate

RDG SUPPLY SDN BHD

No.13-2, Kuchai Entrepreneur Park, Jalan Kuchai Maju 2

58200 Kuala Lumpur, MALAYSIA

Tel: +60 3 7980 7788

e-mail: ricky.douglas@rdg.com.my

http: www.rdg.com.my

| | | | |
|---------------|--------------------------|-------------|-----------|
| Manufacturer: | Vivax-Metrotech | Model: | vLoc3-Pro |
| Serial No.: | 21901203381 | Asset No.: | |
| Work Order: | RDG_240059-JL GLOBAL INV | Report No.: | |
| Customer: | JL GLOBAL INVISION SB. | | |

We certify that the instrument meets or exceeds the manufacturer published electrical specifications at the points tested. All measurements are traceable to national or international standards or have been derived by approved ratio techniques. This certificate may not be reproduced other than in full.

Calibration Information

Calibration Date: 09-OCT-2024 15:08:05 Status: Passed

| Top Coils | | | | | | | | |
|--------------|-------------|------|------------|----|------------|----|-------------|----|
| Frequency | Current(mA) | Gain | H response | | V response | | 90 response | |
| 1024 | 152.0 | High | 0.51325178 | ok | 0.51852316 | ok | 0.63003552 | ok |
| | | Low | 0.01189258 | ok | 0.01205923 | ok | 0.01464180 | ok |
| 4096 | 38.9 | High | 0.50883585 | ok | 0.51251352 | ok | 0.60396820 | ok |
| | | Low | 0.01186223 | ok | 0.01199138 | ok | 0.01413003 | ok |
| 8150 | 20.9 | High | 0.50243437 | ok | 0.50468105 | ok | 0.55895162 | ok |
| | | Low | 0.01193410 | ok | 0.01202915 | ok | 0.01334944 | ok |
| 10000 | 18.1 | High | 0.51151747 | ok | 0.51339221 | ok | 0.55164224 | ok |
| | | Low | 0.01230119 | ok | 0.01238699 | ok | 0.01334659 | ok |
| 10001 | 66.8 | High | 0.46843073 | ok | 0.47418314 | ok | 0.62012321 | ok |
| | | Low | 0.01126898 | ok | 0.01144504 | ok | 0.01494532 | ok |
| 32788 | 26.4 | High | 0.46668679 | ok | 0.47278455 | ok | 0.61243874 | ok |
| | | Low | 0.01470477 | ok | 0.01487210 | ok | 0.01941143 | ok |
| 65500 | 19.9 | High | 0.47181374 | ok | 0.47984082 | ok | 0.61154503 | ok |
| | | Low | 0.02289465 | ok | 0.02315765 | ok | 0.02992628 | ok |
| 83000 | 18.9 | High | 0.48081291 | ok | 0.49026614 | ok | 0.60455877 | ok |
| | | Low | 0.02826269 | ok | 0.02863493 | ok | 0.03588942 | ok |
| 131000 | 18.1 | High | 0.48828077 | ok | 0.49836776 | ok | 0.48939016 | ok |
| | | Low | 0.04319591 | ok | 0.04376472 | ok | 0.04378210 | ok |
| 199980 | 21.2 | High | 0.44825426 | ok | 0.44418570 | ok | 0.32576934 | ok |
| | | Low | 0.05955770 | ok | 0.05854240 | ok | 0.04353376 | ok |
| Bottom Coils | | | | | | | | |
| Frequency | Current(mA) | Gain | H response | | V response | | 90 response | |
| 1024 | 152.0 | High | 0.51072830 | ok | 0.51514566 | ok | 0.62700617 | ok |
| | | Low | 0.01190999 | ok | 0.01196194 | ok | 0.01457200 | ok |
| 4096 | 38.9 | High | 0.50601643 | ok | 0.51017904 | ok | 0.59864336 | ok |
| | | Low | 0.01187110 | ok | 0.01191895 | ok | 0.01401960 | ok |
| 8150 | 20.9 | High | 0.49976212 | ok | 0.50326300 | ok | 0.55288333 | ok |
| | | Low | 0.01194260 | ok | 0.01197695 | ok | 0.01320207 | ok |
| 10000 | 18.1 | High | 0.50900805 | ok | 0.51234037 | ok | 0.54541779 | ok |
| | | Low | 0.01231256 | ok | 0.01234214 | ok | 0.01318994 | ok |
| 10001 | 66.8 | High | 0.46653053 | ok | 0.46983767 | ok | 0.61407322 | ok |

| | | | | | | | | |
|--------|------|------|------------|----|------------|----|------------|----|
| | | Low | 0.01129195 | ok | 0.01132265 | ok | 0.01481515 | ok |
| 32788 | 26.4 | High | 0.46562383 | ok | 0.46903309 | ok | 0.60899156 | ok |
| | | Low | 0.01471698 | ok | 0.01473205 | ok | 0.01917312 | ok |
| 65500 | 19.9 | High | 0.47144049 | ok | 0.47545448 | ok | 0.61263883 | ok |
| | | Low | 0.02289533 | ok | 0.02290963 | ok | 0.02963726 | ok |
| 83000 | 18.9 | High | 0.48060068 | ok | 0.48498982 | ok | 0.60756963 | ok |
| | | Low | 0.02825554 | ok | 0.02828084 | ok | 0.03558025 | ok |
| 131000 | 18.1 | High | 0.48918700 | ok | 0.49300191 | ok | 0.49008399 | ok |
| | | Low | 0.04325241 | ok | 0.04321528 | ok | 0.04314665 | ok |
| 199980 | 21.2 | High | 0.45178303 | ok | 0.45135257 | ok | 0.32439268 | ok |
| | | Low | 0.05997267 | ok | 0.05937720 | ok | 0.04254784 | ok |

| Alignment Matrix | | | | | | | | |
|------------------|--|------|-------------|--|-------------|--|-------------|--|
| Position | | Coil | X response | | Y response | | Z response | |
| Top | | X | 0.99995291 | | -0.00330580 | | -0.01057781 | |
| | | Y | 0.00231668 | | 0.99999022 | | -0.00051768 | |
| | | Z | 0.00374042 | | 0.00431027 | | 0.99995828 | |
| Bottom | | X | 0.99996412 | | -0.00873011 | | -0.00346171 | |
| | | Y | 0.00586815 | | 0.99994183 | | -0.00155563 | |
| | | Z | -0.00439989 | | 0.00452631 | | 1.00000834 | |

| B/T Antenna Balance | | | | | | | | |
|---------------------|-------------|------|-----------|----|-----------|----|-----------|----|
| Frequency | Current(mA) | Gain | H ratio | | V ratio | | 90 ratio | |
| 1024 | 152.0 | High | 0.9950833 | ok | 0.9934863 | ok | 0.9951918 | ok |
| | | Low | 1.0014639 | ok | 0.9919323 | ok | 0.9952328 | ok |
| 4096 | 38.9 | High | 0.9944591 | ok | 0.9954450 | ok | 0.9911836 | ok |
| | | Low | 1.0007478 | ok | 0.9939598 | ok | 0.9921847 | ok |
| 8150 | 20.9 | High | 0.9946814 | ok | 0.9971902 | ok | 0.9891434 | ok |
| | | Low | 1.0007122 | ok | 0.9956605 | ok | 0.9889606 | ok |
| 10000 | 18.1 | High | 0.9950942 | ok | 0.9979512 | ok | 0.9887165 | ok |
| | | Low | 1.0009243 | ok | 0.9963793 | ok | 0.9882629 | ok |
| 10001 | 66.8 | High | 0.9959435 | ok | 0.9908359 | ok | 0.9902439 | ok |
| | | Low | 1.0020383 | ok | 0.9893063 | ok | 0.9912903 | ok |
| 32788 | 26.4 | High | 0.9977223 | ok | 0.9920652 | ok | 0.9943714 | ok |
| | | Low | 1.0008303 | ok | 0.9905830 | ok | 0.9877232 | ok |
| 65500 | 19.9 | High | 0.9992089 | ok | 0.9908588 | ok | 1.0017886 | ok |
| | | Low | 1.0000297 | ok | 0.9892899 | ok | 0.9903423 | ok |
| 83000 | 18.9 | High | 0.9995586 | ok | 0.9892378 | ok | 1.0049803 | ok |
| | | Low | 0.9997470 | ok | 0.9876343 | ok | 0.9913855 | ok |
| 131000 | 18.1 | High | 1.0018560 | ok | 0.9892332 | ok | 1.0014177 | ok |
| | | Low | 1.0013080 | ok | 0.9874456 | ok | 0.9854861 | ok |
| 199980 | 21.2 | High | 1.0078723 | ok | 1.0161349 | ok | 0.9957741 | ok |
| | | Low | 1.0069675 | ok | 1.0142598 | ok | 0.9773527 | ok |

Customer: JL GLOBAL INVISION SERVICES
 Address: No 69, Jalan Teratai 7, Taman Johor Jaya,
 Johor Bahru, Johor, 81100 Malaysia

Certificate No. 250521-00128
 Date: 21 May 2025

Summary Verification

| Description | Conducted by | Result |
|--|---------------|--------|
| Checked and calibrated in accordance to the standard set by the manufacturer | Farah Danieza | Pass |
| Checked and service locator for mechanical & component fault. | Farah Danieza | Pass |
| Checked and service transmitter (power gain/output and measurement, frequencies, connectors and accessories) are good working condition. | Farah Danieza | Pass |
| Equipment updated to the factory latest firmware release. | Farah Danieza | Pass |

Note: Service by non-approved service centers or operators may void the manufacturer's warranty.

General

The Radiodetection locator and transmitter are robust, durable and weatherproof. However you can extend your equipment's life by the following these care and maintenance guidelines.

Storage

Store the equipment in a clean and dry environment. Ensure all terminals and connection sockets are clean, free of debris and corrosion and are undamaged. Do not use this equipment when damaged or faulty.

Batteries and power supply

Use good quality Alkaline or NiMH batteries only. When using an AC adapter, use only Radiodetection approved adapters. Only use Radiodetection approved Li-Ion battery packs.

Cleaning

WARNING! Do not attempt to clean this equipment when it is powered or connected to any power source, including batteries, adapters and live cables.

Ensure the equipment is clean and dry whenever possible. Clean with a soft, moistened cloth. If using this equipment in foul water systems or other areas where biological hazards may be present, use an appropriate disinfectant. Do not use abrasive materials or chemicals as they may damage the casing, including the reflective labels. Do not use high pressure hose.

Service and Maintenance

All safety equipment, it is recommended (and may be required by law) that they are serviced at least once a year, either at Radiodetection or a Radiodetection approved repair center.

Authorised Service Centre

RD-PALMER TECHNOLOGY (M) SDN BHD

Co. Reg. 200301008331 (610731-W)

No. 63, Jalan Seri Utara 1, Sri Utara Kipark, 68100 Kuala Lumpur.

Tel: +603 6250 2071 ● Fax: +603 6250 2072 ● Email : info@rd-palmer.com.my

SCAN ME !



PASS

Certificate of Calibration

Product: RD8K1RX
Serial Number: 10/81PDL-3578
Order Number: -

Date of Issue: 21/05/2025
Calibration Due Date: 21/05/2026

Customer:
ecal@rd-palmer.my - RD-PALMER TECHNOLOGY SDN BHD,63, JLN SERI UTARA 1, ,SRI UTARA KIPARK,,KUALA LUMPUR,MALAYSIA,68100

Radiodetection Calibration Data:

Location of Calibration: Radiodetection Ltd,Western Drive,Bristol,BS14 0AF,United Kingdom

Environmental Temperature: N/A

Relative Humidity: N/A

Test Procedure: RD8K1 Full Test (TEST3) R2&3.xml

Revision: 7.5.0.1

Traceability Information: Reference Calibration

Technician ID: GlenN

Equipment used at reference Calibration:

| Model Number | Model Description | Serial Number | Last Cal Date | Cal Due Date |
|--------------|------------------------------------|---------------|---------------|--------------|
| 33120A | Hewlett Packard Function Generator | US36038595 | 03/08/2017 | 03/08/2018 |
| 34401A | Agilent Digital Multimeter | MY47002133 | 04/05/2017 | 04/05/2018 |
| QL355TP | Thurby Thandar Power Supply | 251105 | 04/05/2017 | 04/05/2018 |

Calibration Results:

| Frequency | H Ratio High | H Ratio Low | V Ratio High | V Ratio Low | Measurement Uncertainty | High Limit | Low Limit | Pass/Fail |
|-----------|--------------|-------------|--------------|-------------|-------------------------|------------|-----------|-----------|
| 315.0 | 0.9653 | 0.9653 | 1.0008 | 1.0013 | 0.0005 | 1.200 | 0.800 | PASS |
| 645.0 | 0.9656 | 0.9655 | 1.0007 | 1.0011 | 0.0005 | 1.200 | 0.800 | PASS |
| 870.0 | 0.9658 | 0.9656 | 1.0009 | 1.0010 | 0.0005 | 1.200 | 0.800 | PASS |
| 1090.0 | 0.9661 | 0.9658 | 1.0007 | 1.0010 | 0.0005 | 1.200 | 0.800 | PASS |
| 1415.0 | 0.9666 | 0.9662 | 1.0008 | 1.0012 | 0.0005 | 1.200 | 0.800 | PASS |
| 4091.0 | 0.9717 | 0.9696 | 1.0006 | 1.0019 | 0.0005 | 1.200 | 0.800 | PASS |
| 8172.0 | 0.9768 | 0.9727 | 1.0002 | 1.0026 | 0.0005 | 1.200 | 0.800 | PASS |
| 9820.0 | 0.9772 | 0.9734 | 1.0001 | 1.0028 | 0.0005 | 1.200 | 0.800 | PASS |
| 22170.0 | 0.9827 | 0.9765 | 1.0005 | 1.0038 | 0.0005 | 1.200 | 0.800 | PASS |
| 32788.0 | 0.9881 | 0.9814 | 1.0016 | 1.0049 | 0.0005 | 1.200 | 0.800 | PASS |
| 65550.0 | 0.9927 | 0.9855 | 1.0027 | 1.0061 | 0.0005 | 1.200 | 0.800 | PASS |
| 83000.0 | 0.9959 | 0.9883 | 1.0031 | 1.0066 | 0.0005 | 1.200 | 0.800 | PASS |
| 131100.0 | 1.0102 | 1.0007 | 1.0021 | 1.0055 | 0.0005 | 1.200 | 0.800 | PASS |
| 199930.0 | 1.0324 | 1.0217 | 0.9939 | 0.9974 | 0.0005 | 1.200 | 0.800 | PASS |

1. This certifies that the above product was tested and calibrated to the company's specifications and that the purpose built equipment performing these functions has been calibrated by instruments whose calibration is traceable to national standards.
2. The calibration was performed using procedures that are subject to periodic review.
3. The Company's Quality Management System is in accordance with BS EN ISO 9001:2008 Cert Number FM12608.

Traceability Information: eCERT Calibration

Operator Name: Farah
Operator Function: Service Engineer
Operator ID: 2025

Calibration Validation Results:

| Frequency | Factory Top | Factory Bottom | Measured Top | Measured Bottom | Pass/Fail |
|------------|-------------|----------------|--------------|-----------------|-----------|
| Horiz High | 0.0264502 | 0.02682346 | 0.02650737 | 0.02690428 | PASS |
| Horiz Low | 0.0447036 | 0.04538431 | 0.044792 | 0.04545747 | PASS |
| Vert High | 0.02732814 | 0.02735917 | 0.02739624 | 0.02743042 | PASS |
| Vert Low | 0.04636349 | 0.04617669 | 0.04645739 | 0.04627059 | PASS |

This certificate has been produced using the eCert™ remote calibration program. eCert does not perform a complete functional check of the unit and cannot check the mechanical integrity of the unit under test, or the correct operation of the mechanical controls and LCD screen. Under the eCert program, Radiodetection cannot accept responsibility for validating these areas, and the operator should thoroughly check these areas for issues or damage before use. Users should also periodically check the time and date accuracy of their unit. The unit should be returned to a Radiodetection approved service centre in the case of any concern.

Copyright© 2018 Radiodetection Ltd - All rights reserved. Radiodetection is a subsidiary of SPX Corporation.

Customer: JL GLOBAL INVISION SERVICES
 Address: No 69, Jalan Teratai 7, Taman Johor Jaya,
 Johor Bahru, Johor, 81100 Malaysia

Certificate No. 250521-00129
 Date: 21 May 2025

Summary Verification

| Description | Conducted by | Result |
|--|---------------|--------|
| Checked and calibrated in accordance to the standard set by the manufacturer | Farah Danieza | Pass |
| Checked and service locator for mechanical & component fault. | Farah Danieza | Pass |
| Checked and service transmitter (power gain/output and measurement, frequencies, connectors and accessories) are good working condition. | Farah Danieza | Pass |
| Equipment updated to the factory latest firmware release. | Farah Danieza | Pass |

Note: Service by non-approved service centers or operators may void the manufacturer's warranty.

General

The Radiodetection locator and transmitter are robust, durable and weatherproof. However you can extend your equipment's life by the following these care and maintenance guidelines.

Storage

Store the equipment in a clean and dry environment. Ensure all terminals and connection sockets are clean, free of debris and corrosion and are undamaged. Do not use this equipment when damaged or faulty.

Batteries and power supply

Use good quality Alkaline or NiMH batteries only. When using an AC adapter, use only Radiodetection approved adapters. Only use Radiodetection approved Li-Ion battery packs.

Cleaning

WARNING! Do not attempt to clean this equipment when it is powered or connected to any power source, including batteries, adapters and live cables.

Ensure the equipment is clean and dry whenever possible. Clean with a soft, moistened cloth. If using this equipment in foul water systems or other areas where biological hazards may be present, use an appropriate disinfectant. Do not use abrasive materials or chemicals as they may damage the casing, including the reflective labels. Do not use high pressure hose.

Service and Maintenance

All safety equipment, it is recommended (and may be required by law) that they are serviced at least once a year, either at Radiodetection or a Radiodetection approved repair center.

Authorised Service Centre

RD-PALMER TECHNOLOGY (M) SDN BHD

Co. Reg. 200301008331 (610731-W)

No. 63, Jalan Seri Utara 1, Sri Utara Kipark, 68100 Kuala Lumpur.

Tel: +603 6250 2071 • Fax: +603 6250 2072 • Email : info@rd-palmer.com.my

SCAN ME !



Certificate of Calibration

PASS

Product: RD8K1RX

Serial Number: 10/81PDL-3887

Order Number: -

Date of Issue: 21/05/2025

Calibration Due Date: 21/05/2026

Customer:

ecal@rd-palmer.my - RD-PALMER TECHNOLOGY SDN BHD, 63, JLN SERI UTARA 1, , SRI UTARA KIPARK,, KUALA LUMPUR, MALAYSIA, 68100

Radiodetection Calibration Data:

Location of Calibration: Radiodetection Ltd, Western Drive, Bristol, BS14 0AF, United Kingdom

Environmental Temperature: N/A

Test Procedure: RD8K1 Full Test (TEST3) R2&3.xml

Relative Humidity: N/A

Revision: 7.5.0.1

Traceability Information: Reference Calibration

Technician ID: JoshM

Equipment used at reference Calibration:

| Model Number | Model Description | Serial Number | Last Cal Date | Cal Due Date |
|--------------|------------------------------|---------------|---------------|--------------|
| 33120A | Agilent Function Generator | MY44030486 | 12/04/2018 | 12/04/2019 |
| 34401A | Agilent Digital Multimeter | MY 45024994 | 05/04/2018 | 05/04/2019 |
| QL355TP | Thurlby Thandar Power Supply | 281719 | 28/06/2018 | 28/06/2019 |

Calibration Results:

| Frequency | H Ratio High | H Ratio Low | V Ratio High | V Ratio Low | Measurement Uncertainty | High Limit | Low Limit | Pass/Fail |
|-----------|--------------|-------------|--------------|-------------|-------------------------|------------|-----------|-----------|
| 315.0 | 0.9904 | 0.9896 | 0.9932 | 0.9931 | 0.0005 | 1.200 | 0.800 | PASS |
| 645.0 | 0.9906 | 0.9917 | 0.9937 | 0.9932 | 0.0005 | 1.200 | 0.800 | PASS |
| 870.0 | 0.9907 | 0.9881 | 0.9937 | 0.9932 | 0.0005 | 1.200 | 0.800 | PASS |
| 1090.0 | 0.9908 | 0.9905 | 0.9941 | 0.9933 | 0.0005 | 1.200 | 0.800 | PASS |
| 1415.0 | 0.9910 | 0.9910 | 0.9945 | 0.9933 | 0.0005 | 1.200 | 0.800 | PASS |
| 4091.0 | 0.9926 | 0.9945 | 1.0002 | 0.9939 | 0.0005 | 1.200 | 0.800 | PASS |
| 8172.0 | 0.9934 | 0.9977 | 1.0073 | 0.9944 | 0.0005 | 1.200 | 0.800 | PASS |
| 9820.0 | 0.9937 | 0.9986 | 1.0090 | 0.9946 | 0.0005 | 1.200 | 0.800 | PASS |
| 22170.0 | 0.9956 | 1.0020 | 1.0133 | 0.9947 | 0.0005 | 1.200 | 0.800 | PASS |
| 32788.0 | 0.9996 | 1.0063 | 1.0195 | 1.0002 | 0.0005 | 1.200 | 0.800 | PASS |
| 65550.0 | 1.0032 | 1.0098 | 1.0192 | 0.9995 | 0.0005 | 1.200 | 0.800 | PASS |
| 83000.0 | 1.0044 | 1.0109 | 1.0194 | 0.9996 | 0.0005 | 1.200 | 0.800 | PASS |
| 131100.0 | 1.0075 | 1.0137 | 1.0258 | 1.0057 | 0.0005 | 1.200 | 0.800 | PASS |
| 199930.0 | 1.0061 | 1.0121 | 1.0382 | 1.0183 | 0.0005 | 1.200 | 0.800 | PASS |

1. This certifies that the above product was tested and calibrated to the company's specifications and that the purpose built equipment performing these functions has been calibrated by instruments whose calibration is traceable to national standards.
2. The calibration was performed using procedures that are subject to periodic review.
3. The Company's Quality Management System is in accordance with BS EN ISO 9001:2008 Cert Number FM12608.

Traceability Information: eCERT Calibration

Operator Name: Farah

Operator Function: Engineer

Operator ID: 2025

Calibration Validation Results:

| Frequency | Factory Top | Factory Bottom | Measured Top | Measured Bottom | Pass/Fail |
|------------|-------------|----------------|--------------|-----------------|-----------|
| Horiz High | 0.02688881 | 0.02709131 | 0.02694944 | 0.02714531 | PASS |
| Horiz Low | 0.04539984 | 0.04552318 | 0.04548715 | 0.04557737 | PASS |
| Vert High | 0.02749104 | 0.0281345 | 0.02752655 | 0.02818072 | PASS |
| Vert Low | 0.04647082 | 0.0469362 | 0.04651655 | 0.04700923 | PASS |

This certificate has been produced using the eCert™ remote calibration program. eCert does not perform a complete functional check of the unit and cannot check the mechanical integrity of the unit under test, or the correct operation of the mechanical controls and LCD screen. Under the eCert program, Radiodetection cannot accept responsibility for validating these areas, and the operator should thoroughly check these areas for issues or damage before use. Users should also periodically check the time and date accuracy of their unit. The unit should be returned to a Radiodetection approved service centre in the case of any concern.

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OMU Calibration Certificate

This document is only valid if provided with a holographic Authentication Seal

System information

| | |
|-------------------------|-----------------------------------|
| OMU serial number | 84445402 |
| OMU Type | ABM-90 |
| Calibration valid until | September 11 th , 2025 |

Calibration process information

| | | | |
|------------------------------|-----------------------------------|---------------------------------|--------------------|
| Calibration date | September 11 th , 2024 | Operator | Thivagar Sarawanan |
| Calibration robot type | DR-CR-01307 | Manufacturer | Reduct NV |
| Valid temperature range | 0°C to 50°C | Valid inclination (pitch) range | -60° to 60° |
| Static calibration positions | 220 | Dynamic calibrations | 220 |

Calibration results

(See reverse for the process description)

Sine Curve Test (SCT test)

Primary nine inertial sensors

■ Pre-calibration (See chart)

■ Post-calibration (See chart)

Criterion SCT-test:

Post-calibration match
better than 0.4% of scale.

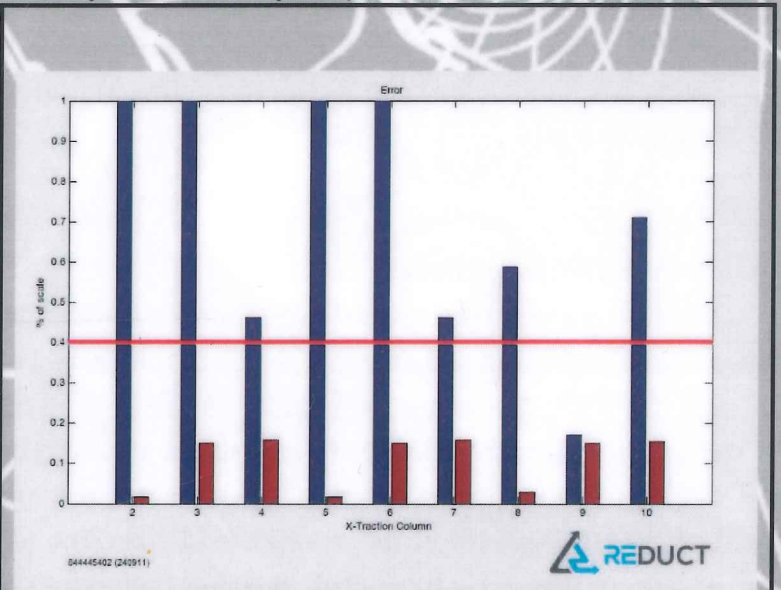
PASS

Measurement Verification Test (MVT test)

Number of runs:

• Forward 2 • A to B 2
• Backward 1 • B to A 1

| Plane | Maximum Allowed Spread | Observed Spread TVT test | Result |
|-------|------------------------|--------------------------|-------------|
| XY | 0.25% | 0.08% | PASS |
| Z | 0.10% | 0.05% | PASS |



Overall Calibration Result

PASS



Authentication Seal

Verified by,



O. Ballintijn
Otto Ballintijn, Managing Director

Calibration Procedure

Objective

Reduct pipeline mapping probes are manufactured and assembled using state of the art machinery and the best materials and components. The primary nine inertial measurement sensors are assembled such that they are placed as accurately as possible on the X, Y or Z axis of the probe. However, all mechanical assembly is invariably imperfect, i.e. the angles between the nine key inertial sensors are not exactly 90 degrees. The objective, therefore, of the Reduct calibration procedure is to measure the angular errors and compensate them mathematically.

Method

Reduct has developed the DR-CR-01307, a proprietary calibration robot. Over a period of about two hours, the robot moves a probe through over 440 static positions and dynamic moves in an inclination range between -60° to $+60^{\circ}$ (red arrows) while rotating the unit 360° around its X-Axis (yellow arrow) and 360° around its Y-Axis (blue arrows).

Upon completion of the calibration procedure the data gathered by the probe during the calibration procedure is uploaded to the calibration software for further analysis.



Mathematical adjustment

A perfectly assembled system calibration data yields perfect sine curves. The data gathered from a probe is processed and an initial match to the perfect sine curve is made in the form of a scaling to the curve (BLUE columns in the table on the reverse side). Then, a series of proprietary algorithms will make mathematical adjustments to the assembly angle of each primary sensor until it finds the best fit to the perfect sine curve. The remaining scaling values for the primary inertial sensors must be below 0.4% for the probe to pass the SCT test. The resulting calibrated settings are then uploaded into the X-Traction software that matches the probe's serial number.

Measurement validation

As a final check the probe pre and post calibration performance is validated on a recent measurement. The owner will provide the raw data file (.mat) of a recent measurement that has height and azimuth variations, has at least 4 runs and preferably has a length of 100-300 meters.

OMU Calibration Certificate

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System information

| | |
|-------------------------|-----------------------------------|
| OMU serial number | 84445667 |
| OMU Type | ABM-90 |
| Calibration valid until | September 21 st , 2024 |

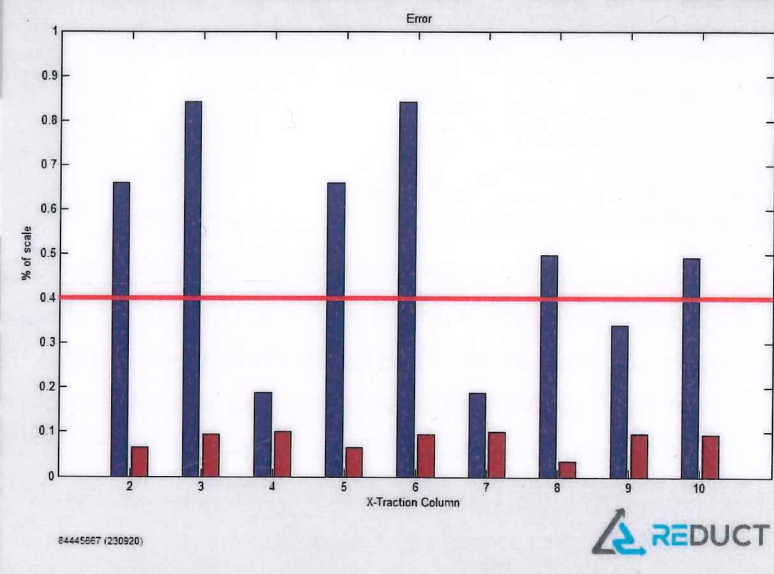
Calibration process information

| | | | |
|------------------------------|-----------------------------------|---------------------------------|----------------------|
| Calibration date | September 21 st , 2023 | Operator | Hans Van Niewenhuyze |
| Calibration robot type | DR-CR-002 | Manufacturer | Reduct NV |
| Valid temperature range | 0°C to 50°C | Valid inclination (pitch) range | -60° to 60° |
| Static calibration positions | 220 | Dynamic calibrations | 220 |

Calibration results

(See reverse for the process description)

| Sine Curve Test (SCT test) Primary nine inertial sensors ■ Pre-calibration (See chart) ■ Post-calibration (See chart) | | | |
|---|------------------------|--------------------------|-------------|
| Criterion SCT-test: Post-calibration match better than 0.4% of scale. | | | PASS |
| TrackVerificationTest (TVT test) Number of runs: • Forward 4 • A to B 4 • Backward 4 • B to A 4 | | | |
| Plane | Maximum Allowed Spread | Observed Spread TVT test | Result |
| XY | 0.25% | 0.14% | PASS |
| Z | 0.10% | 0.03% | PASS |



Overall Calibration Result

PASS



Authentication Seal



Verified by,

Otto Ballintijn, Managing Director

OMU Calibration Certificate

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System information

| | |
|-------------------------|----------------|
| OMU serial number | 84445673 |
| OMU Type | ABM-90 |
| Calibration valid until | See X-Traction |

Calibration process information

| | | | |
|------------------------------|---------------------------------|---------------------------------|----------------------|
| Calibration date | December 5 th , 2023 | Operator | Hans Van Niewenhuyze |
| Calibration robot type | DR-CR-002 | Manufacturer | Reduct NV |
| Valid temperature range | 0°C to 50°C | Valid inclination (pitch) range | -60° to 60° |
| Static calibration positions | 220 | Dynamic calibrations | 220 |

Calibration results

(See reverse for the process description)

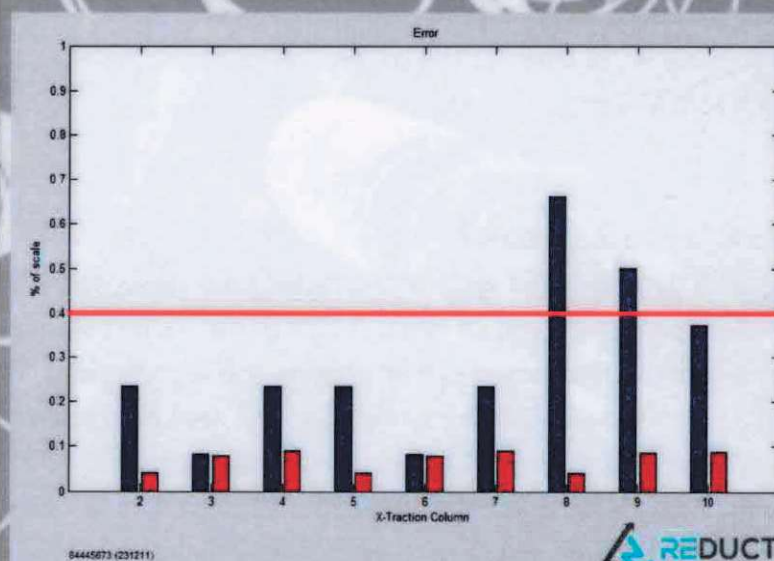
| | | | |
|--|------------------------|--------------------------|-------------|
| Sine Curve Test (SCT test) | | | |
| Primary nine inertial sensors | | | |
| <div><div></div> Pre-calibration (See chart)</div> <div><div></div> Post-calibration (See chart)</div> | | | |
| Criterion SCT-test: | | PASS | |
| Post-calibration match better than 0.4% of scale. | | | |
| TrackVerificationTest (TVT test) | | | |
| Number of runs: | | | |
| • Forward 4 | | • A to B 4 | |
| • Backward 4 | | • B to A 4 | |
| Plane | Maximum Allowed Spread | Observed Spread TVT test | Result |
| XY | 0.25% | 0.08% | PASS |
| Z | 0.10% | 0.03% | PASS |
| Overall Calibration Result | | | PASS |

Error

| X-Traction Column | Pre-calibration (% of scale) | Post-calibration (% of scale) |
|-------------------|------------------------------|-------------------------------|
| 2 | 0.24 | 0.04 |
| 3 | 0.08 | 0.08 |
| 4 | 0.24 | 0.09 |
| 5 | 0.24 | 0.04 |
| 6 | 0.08 | 0.08 |
| 7 | 0.24 | 0.09 |
| 8 | 0.66 | 0.04 |
| 9 | 0.50 | 0.08 |
| 10 | 0.38 | 0.08 |

04445873 (231211)

REDUCT



Authentication Seal



Verified by,

Otto Ballintijn, Managing Director



RDG SUPPLY SDN BHD

CERTIFICATE OF CONFORMITY

This is to certify that

IDS Georadar Opera Duo 4 Wheeled

S/N : 010-20-000445

under JL Global Invision Sdn Bhd

are designed and manufactured by IDS Georadar, Italy

**For and Behalf of
RDG SUPPLY SDN BHD**



Date : 4th Nov 2020