

सउनि(रेडियो) का कार्य विवरण एवं उत्तरदायित्व : -

1. शाखा/टेबल के कार्यों के लिए प्र.आर(रे) न होने पर, प्र.आर(रे) से अपेक्षित कार्य करना।
2. कार्यालयीन पत्राचार एवं MER/अन्य प्रोफार्मा में जानकारी बनाना, पत्राचार व्यवहृत करना, प्र.आर(रे) के ड्राफ्ट की चैकिंग, स्पेलिंग त्रुटि सुधार, तथ्यात्मक जानकारी का सही होना चैक करना, सही संदर्भ, विषय अंकित होना चैक करना।
3. डायल-100 की सम्पूर्ण (FRV, MDT, Net Viewer, SPOC, SOP Etc.) डिस्पेचर एवं डिस्पेचर सुपरवाइजर कार्य।
4. CCTV, V.C., BAS, ROIP, UAV आदि के तकनीकी आपरेशनल कार्य।
5. व्हीएचएफ, एचएफ नेटवर्क एवं रिपीटर स्टेशन स्थापित करना।
6. स्टोर/प्रशासन/एमटी/संचार शाखा/भवन आदि सभी शाखाओं के कार्य तथा प्रभारी के शाखा/टेबल पर उप निरी./निरीक्षक नहीं होने पर दायित्व कार्य निर्वहन।
7. संचार उपकरणों की रिपेयरिंग।
8. वर्कशॉप एवं विभिन्न शाखाओं के रिकॉर्ड का रखरखाव का कार्य, सभी प्रकार के वायरलैस सेटों का सुधार कार्य।
9. पत्र लेखन शैली, शासकीय पत्राचार एवं जानकारियों को निर्धारित प्रोफार्मा में तैयार करना।
10. कल्याणकारी गतिविधियों का संचालन।
11. शाखा प्रभारी के कार्यों के कार्यकारी दायित्वों के निर्वहन।
12. अधीनस्थ आरक्षकों को प्रशिक्षण देना।
13. पुलिस रेडियो के संबंधित प्रावधान एवं आचरण नियमों के प्रावधानों का पालन करना/कराना, इयूटियों लगाने में प्रभारी की सहायता करना, इमरजेन्सी में अधिनस्थों से अपेक्षित इयूटी स्वयं करना।
14. जोन में कार्यरत बल को जिला कंट्रोल रूम में एवं कंट्रोल रूम में पदस्थ बल को समय-समय पर आपस में बदलना आवश्यक है जिससे कि शासकीय सेवक सभी प्रकार के कार्य करने में सक्षम हो सके।

(अ.म.नि. (द्व.सं.) मडो. द्वारा अनुमोदित)

सहायक पुलिस महानिरीक्षक
रेडियो मुख्यालय, भोपाल

marks=50)

Training Module for P.P. HC(R) to ASI(R)

S. No	Topic	Topic details
1	A.C. theory & Networks analysis	Brief introduction only 1. Brief theory of Alternating Current. 2. Concept of Power, voltage, current, impedance & power factor etc. 3. Basic R,L,C components , resonance, & basic circuit idea. (filter, coils & coupling etc.)
2	Power electronics	2. Definitions and specifications of basic electronic circuitry Voltage regulator, Power supply, SMPS and different batteries(Li-ion , Li-polymer & VRLA Battery)
3	Electronic devices and circuits	3. Semi conductors, Diode, Transistors/MOSFET, Opto-electronic devices, Amplifier , Oscillator & MODEM definitions , properties & specifications.
4	Digital electronics	4. Introduction to multiplexer, Flip flops, resistors and micro processor application in radio sets.
5	Radio communication technique	5. Modulation techniques (AM, FM, PM, FDMA TDMA, & PCM,) Transmitter & Receiver
6	Transmission line, antenna and wave propagation	6. Types of transmission line, antenna and brief introduction of wave propagation SWR, impedance match, types of regular cables in use.
7	Brief Introduction of Radio Operating Procedure on following points.	1. Pro sign, Authorized abbreviation. Operating signals. 2. Types of message, Section and component of formal message, Component used in procedure message, Service message. 3. General instruction on message writing. Use of priorities, security. 4. Out message, In message, Through message, N.R slip, delay memo. 5. Call and call sign, preliminary calling and answering, establishing communication, discipline to be exercised when calling and answering, offering message. 6. Transmitting message, Reception of message. Identification, Checks, Repetitions and correction check, repetition and correction of group count, control working break in working .Time signal, Emergency silence, Authentication. 7. "F" method , "G" method, Broadcast method (B.C.) difficult communication method (D.C.) 8. Operating rules, Radio log, Recording of message, Handing and taking over charge the watch. 9. Abbreviated procedure. 10. Distress signal, Alarm signal, Urgency signal, Safety signal. 11. General types of R/T communication, How to speak, Preliminary calling and answering, Control working, initiating R/T conversation, Transmitting and receiving formal message, Abbreviated R/T procedure, Security. 12. Q code and P code. 13. D.S.R. 14. Basic knowledge of communication security, PWCC. 15. Duties of OIC (R) watch and S.S.O. Signal security. 16. Handling of CSD/Cipher document.
8	Message receiving/sending by e-mail.	Message receiving/sending by e-mail. (each 5 message practice)

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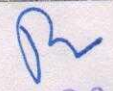
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II. Technical Knowledge (Theory)
Training Module for P.P. HC(R) to ASI(R)

Duration 04 Week

S. No	Topic	Topic details	No. of Period 50	Faculty/ Resource
1	Basic Radio Operating	<ol style="list-style-type: none"> 1. Messaging - Receiving & Sending Skills, message drafting, Dictation, correction & brief report preparations. 2. Message priority, message clarity, message keeping and Record handling. 3. DSR preparation- VHF R/T messaging at control station, maintenance of call signs for destination stations, DSR preparation & time bound distribution. 4. E-mail messaging - Creation of E-mail account, maintenance & updation of address directory, composition of brief messages, attaching files, folders, images, pdf, jpeg etc. download attachment & save records procedures. 	02	PRTS Faculty
2	Radio Procedure (PWCC)	<p>Complete new wireless procedure (D.C.P.W. addition) Duties of OIC (R) watch and S.S.O., Signal security.</p>	05	PRTS Faculty
3	Basic Radio Theory	<ol style="list-style-type: none"> 1. Wireless Communication Sets- Brief introduction to VHF Sets like GP 338/328, & GM 300, kenwood manpack TK 2317, 2170 and digital sets, UHF trunking sets, study of specifications, signal flow diagram, Theory of LOS, losses in communication and ways to minimize them. 2. HF Sets, Specifications of common HF sets, Digital HF system, choice of day and night frequencies, installation of dipole antenna and matching unit 3. Communication devices - Antenna, Transmission line, different cables, SWR theory and measuring. 4. Test equipments- Theory of operations- VSWR meter, Radio Test Set equipment, A.V.O. Meter, S.S.G. and S.W.R. meter, RF Watt meter, Through Line Watt Meter. 5. Basic communication networking - VHF and HF networking in MP, allotted frequency to districts, frequency reuse, networking during special duties, Types of Repeater, Simplex, Semi duplex, Full duplex, parallel, serial repeaters. Patch unit, 1D1R, SIMOCO Repeater etc. General maintenance of Repeaters and their importance. 	10	PRTS Faculty
4	Digital Trunking System	<ol style="list-style-type: none"> 1.1- Introduction to Trunking concept & System Operations. 1.2- Field operation, talk group management, Fail- soft status. 1.3- Working function of main components and handling precautions. 1.4- System advantages over conventional systems, Introduction to APCO & TETRA system, Specifications & features. 	02	PRTS Faculty
5	Dial-100 :- System architecture & System operations	<p>(A) Define objective role of officer incharge Dial-100.</p> <ol style="list-style-type: none"> 1. Introduction to Dial-100 system & system architecture. 2. Job description- Duties & responsibilities of Call Taker, Dispatcher, SPOC. 3. Detailed study of SOP 1 & 2 of Dial-100. <p>(B) Role in execution of Dial-100</p> <ol style="list-style-type: none"> 1. Role & responsibilities of Supervisor in Dial-100. 2. FRV management in district <ol style="list-style-type: none"> (2.1) Control room Dial-100 management. (2.2) Tools & Instruments of FRV. (2.3) Staff training for Net viewer/Desk/FRV 3. MDT- Introduction & use of MPS software. <p>(C) GIS Mapping</p> <ol style="list-style-type: none"> 1. Introduction, importance & utility of P.O.I. in mapping. 2. Collection of P.O.I. in field. 3. Precautions during field data collection. 	02	PRTS Faculty/ BVG Company

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		<p>(D) General Operations (on dashboard)</p> <ol style="list-style-type: none"> 1. Complaint ticket generation. 2. Helpdesk operation & uses. 3. E-ticket generation. 4. Data analysis & report generation. <p>(E) Operation on dash board.</p> <ol style="list-style-type: none"> 1. Introduction of AWAYA phone system of Dial-100 call center. 2. Introduction of I-call center & I-Dispatcher software. 3. Use of dashboard for report generation. <p>(F) Feedback & public response.</p> <ol style="list-style-type: none"> 1. Feedback 2. Whatsapp Desk 3. Social Media- Facebook & Twitter handling. 4. Cyber security precautions. 		
6	Communication Networking 3.1 VHF Network :-	<ol style="list-style-type: none"> 1. Introduction to VHF Networks, installation process, Site selection, Height of Antenna. Repeaters & Patch units. 2. Frequency programming in VHF sets/repeaters. 	04	SP(Commn.) RHQ BPL / PRTS Faculty
	3.2. Practical approach to field operation & communication management.	<ol style="list-style-type: none"> 1. Frequency allotment in VHF network & frequency monitoring. 2. Wireless frequency spectrum licensing & Indian wireless telegraphy act 1893. 3. Geographical maps, radio mobile software & installation of radio station/tower. 4. Power Source - Battery & Generator management. 5. Active lightening arrester, types & specifications. 		
	3.3 HF Network	<ol style="list-style-type: none"> 1. HF installation, networking & tuning. 2. Types of HF sets and specifications. 3. Introduction of digital HF installation, programme of set as per encryption key, with the help of programming software. 		
7	CCTV	<p>(A) City surveillance system –</p> <ol style="list-style-type: none"> 1- CCTV System introduction, network architecture, operation and uses. 2- CCTV System implementation in cities of M.P. 1st and 2nd phase in brief. 3- Types of cameras used in CCTV system specification and working. 4- CCTV field unit / outdoor equipment and maintenance. 5- CCTV indoor/Control room equipment, maintenance & system software. 6- District/City CCTV police control room working. 7- SCMRC control room monitoring and working. 8- VMS, NMS, Command & Control, Helpdesk working, CCTV Networking basics and SOP. 9- ANPR system. 10- Location, Equipment and system etc. checking before & after installation of CCTV system. 11- RLVD system. 12- Mobile surveillance vehicle viewing and retrieving video. <p>(B) PS CCTV System – system features, network architecture, working and operation.</p>	02	Honeywell / PRTS Faculty
8	Introduction of 1-Video Conferencing	<ol style="list-style-type: none"> 1. Introduction 2. Parts of video conferencing 3. Modes of video conferencing 4. Video conferencing component & equipments. 5. Component functions 6. Remote control button & there use 7. Installation procedure of video conferencing 8. Benefits of video conferencing 	02	Honeywell / PRTS Faculty

8	2- UAV	<ol style="list-style-type: none"> 1. Introduction to UAV. 2. Main features 3. Performance parameters 4. Specifications 5. Surveillance tool 6. Application areas 7. Deployment method 8. Benefits 9. Precautions before, after & during UAV flight 10. Govt. regulations regarding UAV flight. 11. Handling of UAV & precautions. 12. Parts of UAV 13. Software introduction. 	02	DSP(R) Rishi Kumar Sirothiya + PRTS Faculty
	3- Biometric	<ol style="list-style-type: none"> 1. Overview 2. Working Procedure 3. BAS use in organization 4. Registration method 5. Requirements for BAS 6. Precautions in installation of BAS Machine 7. Types of report and there analysis. 	02	PRTS Faculty
	4- ROIP	<ol style="list-style-type: none"> 1. Overview 2. Working procedure 3. ROIP use in organization 4. Components of ROIP, Advantages of ROIP System. 5. Common frequent problems & there Solution methods for ROIP System. 	02	RHQ + PRTS Faculty
9	Computer	<p>(A) Computer hardware and networking, data centre hardware introduction, working and data centre network architecture. Description of computer architecture, Input and Output devices. Introduction with computer language and volatile and Non volatile memories.</p> <p>(B) MS Office (Word/Excel/Powerpoint) Basic</p>	6	Mr. Piyush Solanki Mob.No.958 90- 50964 + PRTS Faculty
10	Social Media	<p>Computer.Operation of Social networking like Whatsapp, Twitter, Facebook , SMS & Cyber Security.</p> <ol style="list-style-type: none"> 1. Whatsapp - Installation, Profile updating, Privacy settings, Number saving, Group making, Message sending etc. 2-Twitter - Installation, Profile updating, Privacy settings. 3. SMS - Message sending procedure. 4. Facebook - ID creation, Profile settings, Privacy settings, News & photo updating, Likes-comments-sharing, Searching people, relatives & friends. 	03	Mr. Akashay Kumar Jadhav Mob.No. 8225959966 + PRTS Faculty
11	Communication Network	VHF and HF networking. Way of transmission (Simplex, Half Duplex and Full Duplex). Need of repeater and its importance in VHF networking, Squelch voltage and importance in fabrication of repeater/patch unit. Advantage s of repeater and limitations. Trouble shooting in repeater, fault finding and remedy. Integration Techniques of digital trunking/tetra system with VHF Network.	02	PRTS Faculty
12	Solar System	Working principle of Solar PV cell. How to install solar PV panel working of intelligent BTY. charger and role of MPPT charging. Designing of a power pack.	02	PRTS Faculty
13	Behavioral Science	Telephone talk, Wireless talk and their etiquettes .	02	Mr. Gourav Rawal Mob.No. 9926260023

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III. Professional/Official Approach (Administrative Role)

Training Module for P.P. HCR(R) to ASI(R)

S. No	Topic	Topic details	No. of Period 20	Faculty/Resource
1	Disaster Management	Definition of Natural calamities & disaster, Role of NDRF and SDRF, Role of police during disaster.	02	DSP(R) Subhash Singh
2	Administrative function of district (radio) incharge	Administrative set up of MP Police, Role of workshop, Store, Office, PRC in Zonal and State Head Quarters, function of various branches, DCPW.	02	PRTS Faculty
3	Store & Purchase Rules	Introduction to GOP 126/07, sanctioning authority of officers in police, procedure of keeping store ledgers. Condemnation and write off of store items, recovery of losses.	03	PRTS Faculty
4	Handling of Cipher documents and communication	Introduction & definition of security, Types of message, Security destruction maintenance of records etc. General idea of wireless operating license procedure, scrabbling techniques, communication breaches, cipher software.	03	RHQ + PRTS Faculty
5	Office Administration	Role of department in changing telecom scenario, Official correspondence and filling Proper way of documentation in PC, leave rules, TA rule, Medical rules, Orderly Rooms, Police organization, Police regulation, Maintenance, Maintenance of registers in admin, duties of OIC(R) watch, record keeping.	02	PRTS Faculty
6	Role & Functions of MTO	Maintenance of vehicles and vehicle records.	01	PRTS Faculty
7	Project handling	Short term task management (POI, SPOC Data, Major Technical Installations etc.)	01	PRTS Faculty
8	Communication skills	Brief media reporting, Social Media - Brief messaging and event report writing.	01	PRTS Faculty
9	Role of SRC	Record maintenance of service book, OB & compilation	01	PRTS Faculty
10	Operating functional skills	<p>General ability to receive, sending, cipher message code/decoding.</p> <ol style="list-style-type: none"> 1. Skills in Computer typing & moderate speed. 2. E-mail message composition, message downloading, save records files & mail forwarding operations. <p>Introduction to Radio Procedure</p> <ol style="list-style-type: none"> 1. Familiarize with type of messages, section component of formal message. 2. General instructions regarding message writing. (use of priorities & securities) 3. Call signs, establishing communication, communication discipline. 4. Operating rules, Radio log, recording of message, H/O of charge during shift change. 5. DSR preparation & distribution. 6. Basic knowledge of communication security, handling of CSD/cipher documents. 7. Type of classified messages to encoded for transmission. 8. Introduction to computer based automated Cipher system. 9. Security classification of classified message. 10. Security of classified files, papers, message and other materials. 11. Security of equipments/installation. 12. Importance of secrecy devices in communication security. 13. Communication procedure for classified message, prevention of compromise. 14. Maintenance of records of destruction/disposal. 	04	PRTS Faculty

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III. Practical approach and innovation
Practical Training Module for P.P. HC(R) to ASI(R)

S. No	Module Categories	Practical Topic	No. of Period 50	Faculty/ Resource	
1	Instruments	1.1	Radio test set - parameter testings & specifications.	05	PRTS Faculty
		1.2	Specification & operation of various types of radio sets.		
		1.3	Study of block diagram of VHF radio sets.		
		1.4	Parameter testing of radio sets.		
		1.5	Solar system- auto switch/PCB/MPPT charge controller/ intelligent charge controller, Battery charging system.		
2	Software uses	2.1	Working of GPS.	03	
		2.2	To locate line of sight using radio mobile.		
		2.3	Frequency programming in radio sets		
3	Fault finding	3.1	General fault in radio sets.	08	
		3.2	Tracing & fault finding in radio circuitry .		
4	Demonstration/ Visits	4.1	Study the connectivity of repeater with radio set.	08	
		4.2	Introduction, operation of Dial- 100, Technical visit of Dial-100 control room/ CCTV control room.		
		4.3	Operation & handling of U.A.V. – Exposure level introducing idea.		
		4.4	Operation of VC system.		
5	Fabrication	5.1	Elementary knowledge of light, Fan and power wiring.	04	
		5.2	Earthing and cable jointing , graded fuse.		
		5.3	Transistor, Transformer, Relay, Diode & Bridge testing.		
6	Procedural	6.1	(A)Wireless frequency spectrum licensing related rules and regulations and relevant legal provisions regarding wireless act. Indian telegraphic act. (B) Proposal request form no. 11 send to WPC. Letter of intend, submission of license fees and royalty charge as spectrum charge, decision letter/agreement in principal SACFA-citing clearance, wireless operating license	04	
		6.2	Legal instructions and related provisions in UAV operations.(active searching regarding related topics)		
7	Communication Network Installation	7.1	Installation of 60 ft. and 80 ft. Mast/Haidrolic Mast for VHF antenna.	05	
		7.2	Installation temporary VHF/ HF radio set for VIP/ VVIP duty.		
		7.3	VHF networking. Integration of Trunking/Tetra with VHF Network		
		7.4	Basic installation & operation of CCTV, P.S. CCTV system, ANPR camera operation.		
		7.5	Installation & operation of biometric.		
8	Practical Demonstration	8.1	Cyber Security - Precautions to be taken while working on Internet/ using pen drive / Do's & Don'ts for E-mail.	08	
		8.2	Integrated Control Room		
		8.3	CCTNS		
		8.4	ROIP – (A) General description ROIP interface box, software, installation and configuration. (B) Radio configuration.		
		8.5	CUG Portal – Updation of database		
		8.6	Installation & operation of MDT.		
		8.7	Operation of net viewer		
		8.8	Operation of Biometric attendance system(BAS)		
9	Social Media Handling	9.1	Social media – Legal aspects and instructions of Information technology (IT), Precautions on handling of Internet use. Brief messaging and summary report writing in 50-150 words	05	
		9.2	Identification of resource persons in districts as a pool of expertise regarding specialized trainings/TOT.		
		9.3	Active searching of advanced technical topics and its relevant presentation.		

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