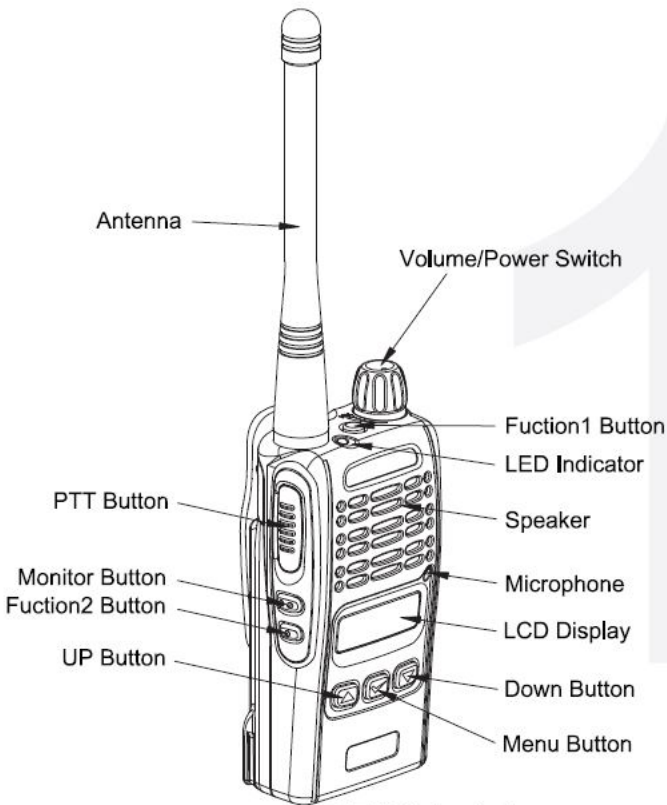


# NEW-Series User Manual



## LCD Display & Icons



Channel: 001

Symbol	Description
	Transmission or Reception Status
HL	Power level Indicator "H" is high power, "L" is low power.
	Key Lock When Key power, "L" is low power
	Alert(Beep) When beep sound is on
	Battery Level
	VOX

Symbol	Description
	Scan
	Scrambler
	Talkaround
T	Tone Indicator When Tone is set up with frequency
	Monitor Indicator When you press Monitor button

# 1. Package Contents

- Main body (NEW-Series)
- Lithium ion battery
- Desktop rapid charger
- Antenna
- Hand strap
- Adapter
- Belt clip
- User Manual

\* The contents may be changed on request.

# 2. Getting Started

## 2-1 Turning Your Radio On/Off

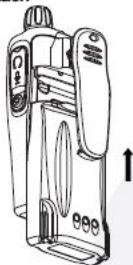
- Turn the volume/power switch clockwise to turn the radio on.
- Turn the volume/power switch counter-clockwise to turn the radio off until you hear ticking sound.

## 2-2 Installing the Antenna

- Turn the antenna clockwise on the antenna connector of the main body.

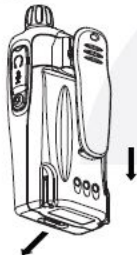
## 2-3 Installing the Battery

### <How to attach>



- Turn off the radio if it is on.
- Fit the battery as shown in the above figure and push upward to attach.
- After attachment, push the catch sideways to prevent the battery from falling off.

### <How to detach>



- Turn off the radio if it is on.
- If the catch is locked, push it sideways to unlock.
- Push the catch in the direction of arrow and pull the battery downward to separate it from the device.

## When You Charge

New batteries or unused batteries for long time should be charged before using the radio. If the voltage of battery is reduced, call distance will shorten, and the device cannot work its full performance.

Please charge the battery when it is in the following state.

- When red lamp on the front side of the product flickers during transmission or reception (0.5s cycle)
- When the battery icon on the LCD flickers
- When low battery alarm sound of "Beep~ Beep~" occurs during use.

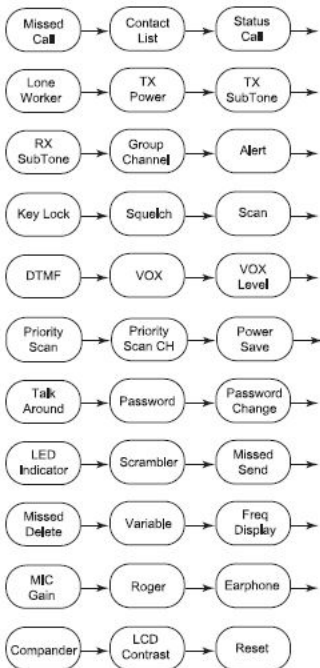
## How to Charge

- Insert the charger adapter into general power outlet. (AC100-240V)
- Turn off the radio when charging the radio attached with battery.
- The charger has two slots. The front slot can charge the radio attached with the battery, and the back slot can only charge a battery.
- After charging is done, the green lamp is on, but additional charging for about 30 minutes is continued for complete charging.
- Charging display lamp

Operation Status	Color
Charging	Red LED on
Completed	Green LED on
Error occurred	Red LED flickers

## 3. Function

### 3-1 Menu Navigation Chart



\* Functions can be changed without notice for performance improvement

### 3-2 Missed Call List

If there is a call unchecked, the display is on. The list is saved by order of arrival, and the recent call is on the display. If Status Call is set, the status call transmits when you have a call.

- 1)  Menu.



- 2) Use   buttons until 'Missed' appears.

- 3) Select .

- 4) Use   and check the list.

If there is no missed call, "Not Found" is displayed. Up to 16 calls can be stored, so that the 17th call is saved after the 1st call is deleted. If it is the status call, "S-" displays.

- 5) Select .

### 3-3 Contact List

The contact list is the call received.

- 1)  Menu



- 2) Use   buttons until 'Missed' appears.

- 3) Select .

- 4) Use   and check the list.

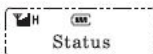
If there is no missed call, "Not Found" is displayed. Up to 16 calls can be stored, so that the 17th call is saved after the 1st call is deleted. If it is the status call, "S-" displays.

- 5) You can send the list selected when pushing the PTT button.

### 3-4 Status Call List

You can send the short message.

- 1)  Menu



- 2) Use   buttons until 'Status' appears.

- 3) Select .

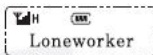
- 4) Use   and choose the message you want to send.

- 5) Press the PTT button, then the message sends

### 3-5 Lone Worker

Option for use of Lone Worker function can be selected.

- 1)  Menu



- 2) Use   buttons until 'Lone Worker' appears.

- 3) Select .

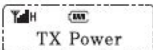
- 4) Use   to set ON or OFF.

- 5) Select .

### 3-6 TX Power

TX power can be selected.

- 1)  Menu

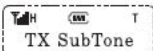








- 2) Use   buttons until 'TX Power' appears.
- 3) Select 
- 4) Use   to set HIGH or LOW.
- 5) Select 

### 3-7 TX Sub Tone

TX sub tone can be changed.

- 1)  Menu

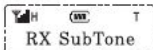








- 2) Use   buttons until 'TX Sub Tone' appears.
- 3) Select 
- 4) Use   to set wanted sub tone, 'CTCSS: 001 ~ 053', 'CDCSS: 101 ~ 204', 'CUSTOM: 001 ~ 073'
- 5) Select 

### 3-8 RX Sub Tone

RX sub tone can be changed.

- 1)  Menu

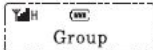







- 2) Use   buttons until 'RX Sub Tone' appears.
- 3) Select 
- 4) Use   to set wanted sub tone, 'CTCSS: 001 ~ 053' or 'CDCSS: 101 ~ 204'
- 5) Select 

### 3-9 Group Channel

Use of group channel function can be selected.

- 1)  Menu



- 2) Use   buttons until 'Group' appears.
- 3) Select 
- 4) Use   to move to the wanted group channel. (Channels: 01 ~ 10)
- 5) Select 

### 3-10 Alert Sound

Use of alert sound can be selected.

- 1)  Menu

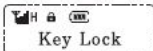


- 2) Use   buttons until 'Alert' appears.
- 3) Select
- 4) Use   to set ON or OFF.
- 5) Select

### 3-11 Key Lock

Use of key lock function can be selected.

- 1)  Menu



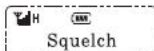
- 2) Use   buttons until 'Key Lock' appears.
- 3) Select
- 4) Use   to set ON or OFF.
- 5) Select

### 3-12 Squelch Level

Squelch level can be adjusted.

(Squelch level is between 00 ~ 09.)

- 1)  Menu



- 2) Use   buttons until 'Squelch' appears.
- 3) Select
- 4) Use   to move from default level (level: 04) to the wanted level.
- 5) Select

### 3-13. Scan

Use of scan function can be selected.

- 1)  Menu



- 2) Use   buttons until 'Scan' appears.
- 3) Select  (Scan starts right away)
- 4) Press the PTT button to stop

### 3-14 DTMF

Use of DTMF function can be selected.

- 1)  Menu



- 2) Use   buttons until 'DTMF' appears.
- 3) Select 
- 4) Use   to set Disable / Encoder / Encoder + Decoder.
- 5) Select 

### 3-15 VOX

Use of VOX function can be selected.

- 1)  Menu

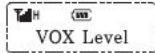








- 2) Use   buttons until 'VOX' appears.
- 3) Select 
- 4) Use   to set ON or OFF.
- 5) Select 

### 3-16 VOX Level

VOX detection level can be configured.

- 1)  Menu









- 2) Use   buttons until 'VOX Level' appears.
- 3) Select 
- 4) Use   to move from default level (level: 08) to the wanted level. (Range of VOX level is 01 ~ 15.)
- 5) Select 

### 3-17 Priority Scan

Use of scanning function for priority channel can be selected.

- 1)  Menu



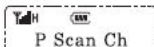
- 2) Use   buttons until 'P Scan' appears.
- 3) Select 
- 4) Use   to set ON or OFF.
- 5) Select 



### 3-18 Priority Scan Channel

Channel to be scanned when using scan function can be configured.

- 1)  Menu



- 2) Use   buttons until 'P Scan Ch' appears.
- 3) Select
- 4) Use   to move to the channel for which priority scan is to be used.
- 5) Select

### 3-19 Power Save

Use of power save mode can be selected.

- 1)  Menu

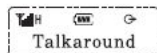


- 2) Use   buttons until 'Power Save' appears.
- 3) Select
- 4) Use   to set ON or OFF.
- 5) Select

### 3-20 Talkaround

Use of Talkaround function can be selected.

- 1)  Menu

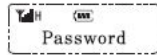


- 2) Use   buttons until 'Talkaround' appears.
- 3) Select
- 4) Use   to set ON or OFF.
- 5) Select

### 3-21 Password

Use of password function can be selected.

- 1)  Menu

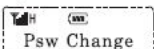


- 2) Use   buttons until 'Password' appears.
- 3) Select
- 4) Use   to set ON or OFF.
- 5) Select

### 3-22 Password Change

Password can be changed.  
(Old Password is '1234')

- 1)  Menu

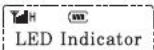


- 2) Use   buttons until 'Psw Change' appears.
- 3) Select
- 4) Use   to select numbers and letters. Move digits with  and enter the old password, "1234".
- 5) Use   to selected wanted number (0 ~ 9) or alphabet (A ~ Z). Select  (move digit) and enter new password. Once 4-digit password is entered, the device automatically exits to menu screen.

### 3-23 LED Indicator

Use of LED indicator lamp function can be selected.

- 1)  Menu

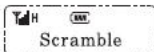


- 2) Use   buttons until 'LED Indicator' appears.
- 3) Select
- 4) Use   to set ON or OFF.
- 5) Select

### 3-24 Scramble Setting

Use of scramble function can be selected.

- 1)  Menu



- 2) Use   buttons until 'Scramble' appears.
- 3) Select
- 4) Use   to set ON or OFF.
- 5) Select

### 3-25 Send Missed Call

Re-send the missed call list.

- 1)  Menu









- 2) Use   buttons until 'Miss Send' appears.
- 3) Select
- 4) Use   and choose the list you want to send.
- 5) Press the PTT button, then the list sends.

### 3-26 Delete Missed Call

You can delete the missed call list.

- 1)  Menu

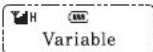





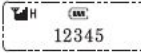



- 2) Use   buttons until 'List Delete' appears.
- 3) Select 
- 4) Use   and choose the list you want to delete.
- 5) Select 

### 3-27 Send Variable Codes

Send a call with a prearranged code

- 1)  Menu



- 2) Use   buttons until 'Variable' appears.
- 3) Select  
- 4) Use   (change numbers),  (move digits), and set the code.
- 5) Press the PTT button, and then send the code.

### 3-28 Frequency Display

You can display the frequency on the LCD.

- 1)  Menu









- 2) Use   buttons until 'Freq Display' appears.
- 3) Select 
- 4) Use   and choose 'On': frequency, or 'Off': channel.
- 5) Select 

### 3-29 MIC Gain

You can adjust the microphone sensitivity.

- 1)  Menu

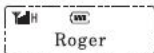


- 2) Use   buttons until 'MIC Gain' appears.
- 3) Select 
- 4) Use   choose the gain level (00-05).
- 5) Select 

### 3-30 Roger

Use of roger sound function can be selected.

- 1) Menu



- 2) Use buttons until 'Roger' appears.

- 3) Select

- 4) Use to set ON or OFF.

- 5) Select

### 3-31 Earphone

(When accessories are used) Use of earphone function can be selected to prevent a hearing loss.

- 1) Menu



- 2) Use buttons until 'Earphone' appears.

- 3) Select

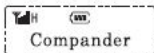
- 4) Use to set Normal / Earphone Only / Earphone Auto.

- 5) Select

### 3-32 Comander

Use of Comander function can be selected.

- 1) Menu



- 2) Use buttons until 'Comander' appears.

- 3) Select

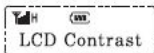
- 4) Use to set ON or OFF.

- 5) Select

### 3-33 LCD Contrast

LCD contrast can be adjusted.

- 1) Menu



- 2) Use buttons until 'LCD Contrast' appears.

- 3) Select

- 4) Use to adjust the contrast.

- 5) Select

### 3-34 Reset

Use of reset function can be selected.

- 1)  Menu

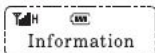


- 2) Use   buttons until 'Reset' appears.
- 3) Select
- 4) Use   to set ON or OFF.
- 5) Select

### 3-35 Information

You can check the information of the radio.

- 1)  Menu



- 2) Use   buttons until 'Information' appears.
- 3) Select
- 4) Use   to see.
- S/W: 1.20.00
- Voltage: 8.13V
- A/S Center: 032-328-3184
- (+82-32-328-3184)

# CTCSS/DCS TONE

## CTCSS

<b>NO</b>	Freq (Hz)	<b>NO</b>	Freq (Hz)	<b>NO</b>	Freq (Hz)	<b>NO</b>	Freq (Hz)
<b>001</b>	67.0	<b>015</b>	110.9	<b>029</b>	179.9	<b>043</b>	196.6
<b>002</b>	71.9	<b>016</b>	114.8	<b>030</b>	186.2	<b>044</b>	199.5
<b>003</b>	74.4	<b>017</b>	118.8	<b>031</b>	192.8	<b>045</b>	206.5
<b>004</b>	77.0	<b>018</b>	123.0	<b>032</b>	203.5	<b>046</b>	229.1
<b>005</b>	79.7	<b>019</b>	127.3	<b>033</b>	210.7	<b>047</b>	254.1
<b>006</b>	82.5	<b>020</b>	131.8	<b>034</b>	218.1	<b>048</b>	71.0
<b>007</b>	85.4	<b>021</b>	136.5	<b>035</b>	225.7	<b>049</b>	165.5
<b>008</b>	88.5	<b>022</b>	141.3	<b>036</b>	233.6	<b>050</b>	171.3
<b>009</b>	91.5	<b>023</b>	146.2	<b>037</b>	241.8	<b>051</b>	177.3
<b>010</b>	94.8	<b>024</b>	151.4	<b>038</b>	250.3	<b>052</b>	198.0
<b>011</b>	97.4	<b>025</b>	156.7	<b>039</b>	069.3	<b>053</b>	202.7
<b>012</b>	100.0	<b>026</b>	162.2	<b>040</b>	159.8		
<b>013</b>	103.5	<b>027</b>	167.9	<b>041</b>	183.5		
<b>014</b>	107.2	<b>028</b>	173.8	<b>042</b>	189.9		

## DCS

<b>NO</b>	Code	<b>NO</b>	Code	<b>NO</b>	Code	<b>NO</b>	Code	<b>NO</b>	Code	<b>NO</b>	Code
<b>101</b>	023	<b>119</b>	131	<b>137</b>	261	<b>155</b>	431	<b>173</b>	654	<b>191</b>	252
<b>102</b>	025	<b>120</b>	132	<b>138</b>	263	<b>156</b>	432	<b>174</b>	662	<b>192</b>	255
<b>103</b>	026	<b>121</b>	134	<b>139</b>	265	<b>157</b>	445	<b>175</b>	664	<b>193</b>	266
<b>104</b>	031	<b>122</b>	143	<b>140</b>	271	<b>158</b>	464	<b>176</b>	703	<b>194</b>	274
<b>105</b>	032	<b>123</b>	152	<b>141</b>	306	<b>159</b>	465	<b>177</b>	712	<b>195</b>	325
<b>106</b>	043	<b>124</b>	155	<b>142</b>	311	<b>160</b>	466	<b>178</b>	723	<b>196</b>	332
<b>107</b>	047	<b>125</b>	156	<b>143</b>	315	<b>161</b>	503	<b>179</b>	731	<b>197</b>	356
<b>108</b>	051	<b>126</b>	162	<b>144</b>	331	<b>162</b>	506	<b>180</b>	732	<b>198</b>	446
<b>109</b>	054	<b>127</b>	165	<b>145</b>	343	<b>163</b>	516	<b>181</b>	734	<b>199</b>	452
<b>110</b>	065	<b>128</b>	172	<b>146</b>	346	<b>164</b>	532	<b>182</b>	743	<b>200</b>	454
<b>111</b>	071	<b>129</b>	174	<b>147</b>	351	<b>165</b>	546	<b>183</b>	754	<b>201</b>	455
<b>112</b>	072	<b>130</b>	205	<b>148</b>	364	<b>166</b>	565	<b>184</b>	053	<b>202</b>	462
<b>113</b>	073	<b>131</b>	223	<b>149</b>	365	<b>167</b>	606	<b>185</b>	122	<b>203</b>	523
<b>114</b>	074	<b>132</b>	226	<b>150</b>	371	<b>168</b>	612	<b>186</b>	036	<b>204</b>	526
<b>115</b>	114	<b>133</b>	243	<b>151</b>	411	<b>169</b>	624	<b>187</b>	145		
<b>116</b>	115	<b>134</b>	244	<b>152</b>	412	<b>170</b>	627	<b>188</b>	212		
<b>117</b>	116	<b>135</b>	245	<b>153</b>	413	<b>171</b>	631	<b>189</b>	225		
<b>118</b>	125	<b>136</b>	251	<b>154</b>	423	<b>172</b>	632	<b>190</b>	246		



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E-mail : [etechsales@etech2004.co.kr](mailto:etechsales@etech2004.co.kr)

**E-TECH Co., Ltd.**

## SAFETY TRAINING INFORMATION



Your FM radio generates RF electromagnetic energy during transmit mode. This radio is designed for and classified as “Occupational Use Only”, meaning it must be used only during the course of employment by individuals aware of the hazards, and the ways to minimize such hazards.

This radio is **NOT** intended for use by the “General Population” in an uncontrolled environment.

This radio has been tested and complies with the FCC RF exposure limits for “Occupational Use Only.” In addition, your FM radio complies with the following Standards and Guidelines with regard to RF energy and electromagnetic energy levels and evaluation of such levels for exposure to humans:

- FCC OET Bulletin 65 Edition 97-01 Supplement C, Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields.
- American National Standards Institute (C95.1 – 1992), IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.
- American National Standards Institute (C95.3 – 1992), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields – RF and Microwave.



**Restricted to occupational use to satisfy  
FCC RF energy exposure limits.  
See user manual for awareness and  
control info.**

- **DO NOT** operate the radio without a proper antenna attached, as this may damage the radio and may also cause you to exceed FCC RF exposure limits. A proper antenna is the antenna supplied with,



this radio by the manufacturer or an antenna specifically authorized by the manufacturer for use with this radio.

- **DO NOT** transmit for more than 50% of total radio use time (“50% duty cycle”). Transmitting more than 50% of the time can cause FCC RF exposure compliance requirements to be exceeded. The radio is transmitting when the “TX indicator” lights red. You can cause the radio to transmit by pressing the “PTT” switch.
- **ALWAYS use** Icom authorized accessories (antennas, batteries, belt clips, speaker/mics, etc). Use of unauthorized accessories can cause the FCC RF exposure compliance requirements to be exceeded.
- **ALWAYS keep** the antenna at least 2.5cm (1 inche) away from the body when transmitting and only use the belt-clips which supplied when attaching the radio to your belt, etc., to ensure FCC RF exposure compliance requirements are not exceeded. To provide the recipients of your transmission the best sound quality, hold the antenna at least 5 cm (2 inches) from mouth, and slightly off to one side.

The information listed above provides the user with the information needed to make him or her aware of RF exposure, and what to do to assure that this radio operates within the FCC RF exposure limits of this radio.

## **Electromagnetic Interference/Compatibility**

During transmissions, your Icom radio generates RF energy that can possibly cause interference with other devices or systems. To avoid such interference, turn off the radio in areas where signs are posted to do so. **DO NOT** operate the transmitter in areas that are sensitive to electromagnetic radiation such as hospitals, aircraft, and blasting sites.

**Any changes or modifications to the equipment not expressly approved by the party responsible for compliance could void user’s authority to operate the equipment.**